

SCHOOL OF ENGINEERING

APPENDIX III ANCILLARY SAFETY STATEMENT

SAFE WORK PRACTICE SHEET & RISK ASSESSMENT DOCUMENT

NOTE:

In most cases the majority of hazards can be controlled by adhering to procedures detailed in the below School of Engineering **Safe Work Practice Sheets (SWPS) & Risk Assessment Document.** These are developed on an as needed basis as identified through the regular risk assessment process, and are available in the School Administrative offices and on line at https://www.dkit.ie/health-safety/safety-statements/engineering. More generic college-wide SWPS are also to be adhered to and are available at:

https://www.dkit.ie/health-safety/safety-statements/routine-safe-work-practice-sheets

SCHOOL OF ENGINEERING SWPS

REVISION LIST

Revision No.	Date of Rev.	Brief Description of Revision	Location (Section No; Page etc.)
N/A	N/A	Original Document issued July 2009 Updated Feb 2014 Subject to annual review.	
1	April 2018	**General Review** • Modernisation of document / change to font & format; SWPS remunerated. • Legislation reviewed and brought up to date	**Throughout**
2	Nov 2018	**Technician Review** • Amendment to '*School of Engineering – General SWPS*' ▪ SWPS 002 smoking amended to include vaping & e cigarettes in line with revised Institute wide No Smoking Policy ▪ SWPS 002 to include visitors ▪ SWPS 009 – heading amended to include 'lab' ▪ SWPS 012 – control measure added - Access to sharp knives / blades to be restricted to students who may be under the age of 18 years. • Section 3 SWPS ▪ SWPS 333 – Amended to read LOW risk • Section 4 SWPS - Amended ALL Risk Reduction Rating to correct LOW rating • Section 5 SWPS –SWPS 513 Marked no longer in use. • Section 6 SWPS – Inclusion of new SWPS 643 Door Hanging • Section 8 SWPS ▪ Amended SWPS 818 to reflect engine change to SEAT ▪ Amended SWPS 820 to reflect engine changes ▪ SWPS 825 – work description section amended	**Sch Eng. General SWPS** **Section 3** **Section 4** **Section 5** **Section 6** **Section 8**

Revision No.	Date of Rev.	Brief Description of Revision	Location (Section No; Page etc.)
Cont. 2	Nov 2018	▪ SWPS 827 - work description section amended ▪ SWPS 844 - Marked no longer in use ▪ SWPS 845 – Marked no longer in use ▪ SWPS 847 – Title amended to include 'to be read in conjunction with SWPS 810 compressed air' ▪ Inclusion of new SPWS – SWPS 854 Cylinder Leakage Tester, SWPS 855 Strut and Spring Compressing Station, SWPS 856 Bosch/Yuasa Battery Testers, SWPS 857 Exhaust Fume Extractor System & SWPS 858 Launch Petrol Injector Tester / Cleaner	**Section 8**
3	Jan 2019	Following review from Head of Department and Technicians; • Amendments to SWPS 903: Grit, belt and grinder, SWPS 907: Rigid mobile threading machine, SWPS 914: Manually operated plumbing hand tools & SWPS 915: Testing of heating / hot water systems in line with current practices. • Inclusion of New SWPS: SWPS 917: Wiring / building and testing of heating control panels , SWPS 918: Preparation of student work materials, SWPS 919: Hand held tools for electrical works and SWPS 920: Gas soldering. • Update to Table of Contents to reflect changes detailed above.	**Section 9** **Table of Contents**
4	Nov 2019	Following review from Head of Department and Technicians; • Amendment to SWPS 700, SWPS 701, SWPS 703, SWPS 704, SWPS 705, SWPS 706, SWPS 707, SWPS 708, SWPS 710 and SWPS 711 in line with current practices. • Removed SWPS 709 (Soldering) – no longer part of course • Removed SWPS 702 (Electrical Test Bed) – no longer used in this section. Used in the Electronic Engineering Lab and covered in SWPS 108-FH2 Test Beds.	**Section 7**

Revision No.	Date of Rev.	Brief Description of Revision	Location (Section No; Page etc.)
Cont. 4	Nov 2019	• Inclusion of New SWPS 712 (Storage, Handling & Use of Cable Drums) • Update to Table of Contents to reflect changes detailed above.	**Section 7** **Table of contents**
	August 2021	Following review from Technicians; • Amendment to SWPS 700, SWPS 701, SWPS 703, SWPS 704, SWPS 705, SWPS 707, SWPS 708, SWPS 711 and SWPS 712 in line with current practices.	**Section 7**
	Sept 2021	Following review from Head of Department: • Inclusion of New SWPS 921 (Tungsten Grinder) • Inclusion of New SWPS 922 (Corded and Cordless Power Tools)	**Section 9**
	Oct 2021	Following review from Head of Department: • Amendment to SWPS 611, SWPS 615, SWPS 620, SWPS 625, SWPS 626, SWPS 628, SWPS 629 & SWPS 642	**Section 6**
	Aug 2023	Following review from Technicians; • Removal of SWPS 910 (Rem Push, Pressure Test Buckets) – no longer applicable (not is use) • Amendment to SWPS 912 Ridgid, Portable **Tristand** – now reads SWPS 912 Ridgid, Portable **Tripod** • Addition of control to SWPS 922 – included - 'Students own tools brought to class for use are the sole responsibility of the student and must be in good working order"	**Section 9**
	Oct 2023	Following review from Technicians; • Removal of SWPS 309 Steelworker Powered Guillotine – No longer in Use • SWPS 311 updated to include the new lathes model Colchester Student. Same hazards & risks apply. • Removal of SWPS 313 Unimolder Plastics Molding Machine – No longer in use	**Section 3**

		• New SWPS added – SWPS 334 Laser Engraving Machine • SWPS 803 updated from SWPS 803 AG Block, Diesel Engines (Peugeot, Citroen & Golf) to read SWPS 803 AG Block & Auto Edu Diesel Engines (Audi A5 & Golf) • SWPS 806 updated from SWPS 806 AG Bloc, Petrol Engines (Audi, Opel Vectra, Ford Mondeo) to SWPS 806 AG Block & Auto Edu Petrol & Diesel Engines (Audi, Ford) • SWPS 812 updated from SWPS 812 AG Bloc Electric Power Steering Simulator to SWPS 812 AG Bloc Hydraulic & Electric Power Steering Simulator • SWPS 812 updated to include new hazards – Electricity & Ejected Hydraulics • SWPS 812 updated to include new work description section • SWPS 812 updated to include new control measures • SWPS 813 updated from SWPS 813 Maha Scissors Lift to SWPS 813 Maha, Space & Redmount Scissors Lifts • SWPS 815 updated from SWPS 815 RAV & Wheel force 1900 Wheel Alignment to SWPS 815 Wheel force 1900,Hunter & Geolux Wheel Alignment • SWPS 815 updated to include new hazard – laser beams • SWPS 815 updated to include new control measure. • SWPS 820 updated from SWPS 820 Ford, Peugeot and Opal Test Engines (Non Live) to SWPS 820 Ford, Peugeot and Kia Test Engines (Non Live) • SWPS 831 updated from SWPS 831 Churchill Engine Stands to SWPS 831 Block automotive Engine Stand • SWPS 839 updated from SWPS 839 Mobile Bosch Bat 490 Charging Unit to SWPS 839 Mobile Bosch BAT 490&SP Smart Charging Unit • SWPS 849 updated from SWPS 849 Mobile Sun Air Conditioning Units to SWPS 849	**Section 8**

		Mobile Sun & Moratech Air Conditioning Units • SWPS 821 1966 Ford Anglia Engine and SWPS 828 Blue Point Mobile Engine & Gear Box Mounted Stands No longer in use • New SWPS 859 Auto ETU Mercedes Can Bus Board added • New SWPS 860 Block Automotive Brake Rig Trainer added • New SWPS 861 Delphi Diesel Injector Tester added • New SWPS 862 Nissan Leaf Electric Vehicle added • Update to Table of Contents to reflect changes detailed above.	**Table of contents page**
	Oct 2023	Following review from Technicians; • Addition of new SWPS – SWPS 120 PLC Training Rigs • Update to Table of Contents to reflect changes detailed above.	**Section 1** **Table of contents page**
	Dec 2023	• Addition of new SWPS to Sch of Engineering General SWPS Register – SWPS 019 Use of Forklift – Combi Lift C4000 Side loader multidirectional	**School of engineering – General SWPS**
	Jan 2024	Revision to SWPS to Sch of Engineering General SWPS Register – SWPS 019 Use of Forklift – Combi Lift C4000 Side loader multidirectional. *'Only members of DkIT staff who have been trained and certified are permitted to drive the fork lift'* added.	**School of engineering – General SWPS**
	Jan 2025	Following review from Technicians; • Section 7 reviewed and updated in line with current practices. Revisions to SWPS 700 Wiring / Building and Testing of Electrical Panels, SWPS701 Rotation of Electrical Workstations, SWPS 703 Final Testing of Student Exercise, SWPS 704 Demonstration of Various Alarm Systems, SWPS 705 Preparation of Student Work Materials, SWPS 707 Trolley with Three motors, SWPS 708 Use of Handheld Tools,	**Section 7**

		SWPS 710 Cleaning of the Electrical Workshop, SWPS 711 Disposal of Waste in Bins and SWPS 712 Storage, Handling & Use of Cable Drums. Following review from Head of Department; • Section 9 Plumbing. Addition of new SWPS to register – SWPS 923 Plumbing Laboratory	**Section 9**
	June 2025	Following review from Head of Department & Technicians; • Section 3 Mechanical Engineering Machinery Workshops (N105 N108). Addition of new SWPS to register – SWPS 335 - Universal Robot ur5e. • Section 9 Plumbing Labs/Workshops. Addition of new SWPS to register – SWPS 924 Bevelling Machine.	**Section 3** **Section 9**
	Dec 2025	Following review from Head of Department; • Section 9 Plumbing – Addition of new SWPS's to register – SWPS 925 Electric Pallet Stacker & Mini Lifter, SWPS 926 Augmented Reality Welder & SWPS 927 Mobile Fume Extractor.	**Section 9**
	April 2026	Following review from Head of Department & Technicians; • Section 7 – Addition of new SWPS 713 Cable Stripping Machine, SWPS 714 Chop Saw and SWPS 715 400 Watt Bench Grinder.	**Section 7**
	Oct 2026	The following sections of the SWPS were reviewed and updated: • Section 2 – SWPS 212 Mitutoyo (501) Surface Measuring Instrument: Work description and risk rating updated. • Section 8 – Wheel Force 1900, Hunter and Geolux Wheel Alignment: Additional hazards and control measures identified and incorporated.	**Section 2** **Section 8**

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SECTION	ITEM	PAGE NUMBER
	School of Engineering – General SWPS	
Section 1	Electronic Engineering Laboratories (1)	
Section 2	Electronic Engineering Laboratories (2)	
Section 3	Mechanical Engineering Machinery Workshops (N105 N108)	
Section 4	Mechanical Engineering Thermo	
Section 5	Built Environment	
Section 6	Carpentry Joinery Workshops/Labs	
Section 7	Electrical Trades Workshops / Labs	
Section 8	Motor Engineering Labs/Workshop	
Section 9	Plumbing Labs/Workshops	

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			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
	SCHOOL OF ENGINEERING – GENERAL SWPS					
001	General Rules		√	√	√	All Areas
002	Access and Egress		√	√	√	All Areas
003	Fire Safety		√	√	√	All Areas
004	Electrical Safety		√	√	√	All Areas
005	Chemical Agents		√	√	√	All Areas
006	Slips, Trips & Falls		√	√	√	All Areas
007	Lone Person Working		√	√	√	All Areas
008	Manual Handling		√	√	√	All Areas
009	General Workshop Safety		√	√	√	All Areas
010	Use of hand tools		√	√	√	All Areas
011	Use of Ladders / Stepladders		√	√	√	All Areas
012	Use of cutters, scalpel and stanley knives		√	√	√	All Areas
013	Noise		√	√	√	All Areas
014	Storage Areas		√	√	√	All Areas
015	Workshop Floor Cleaning		√	√	√	All Areas
016	Gas Safety		√	√	√	All Areas
017	Corded and Cordless Hand Held Drills		√	√	√	All Areas
018	Storage of Equipment		√	√	√	All Areas
019	Use of Forklift – Combi Lift C4000 Side loader multidirectional		√	√	√	All Areas

			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
SEC 1	**ELECTRONIC ENGINEERING LABORATORIES**					
100	Soldering – (Manual Soldering Iron)		√ (e)			
101	Mega UV Exposure Unit (Developing PCBs)		√(e)			
102	Bungard Spray, Etching PCBs		√(e)			
103	Mega Roller Tinning Machine		√(e)			
104	Circuit Board Testing		√(e)			
105	Transporting Test Equipment		√(e)			
106	CIF Roller Tinning Machine		√(e)			
107	RS PCB Guillotine		√(e)			
108	FH2 Test Bed		√(e)			
109	Light Bulb, Capacitor, Inductor etc. Test Apparatus		√(e)			
110	Logic Tutors		√(e)			
111	Prima Drilling Machines		√(e)			
112	Standard Electronic Equipment (Signal Generation, Measurement & Power Supply		√(e)			
113	Heat Shrink Guns		√(e)			
114	Equipment, Component Storage & Distribution		√(e)			
115	Hand Held Tools for Electronics		√(e)			
116	Hand Held Electric Glue Guns		√(e)			
117	Projects Design		√(e)			
118	Temperature Control Apparatus		√(e)			

			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADE**	**OTHER**
119	Bytronic Industrial Control Trainer		√(e)			
120	PLC Training Rigs		√(e)			
SEC 2	**ELECTRONIC ENGINEERING LABORATORIES**					
200	Accuforce Elite Materials Tester		√(m)			Mech Labs
201	Hounsfield Universal Test Machine		√(m)			Mech Labs
202	Impact Testing Machine		√(m)			Mech Labs
203	Magnetic Particle Flaw Detection		√(m)			Mech Labs
204	Placing Test Weights on Load Hangers		√(m)			Mech Labs
205	Whirling of Shafts Apparatus		√(m)			Mech Labs
206	Fatigue Machine		√(m)			Mech Labs
207	Indentec Rockwell Hardness Test		√(m)			Mech Labs
208	Metaserv Hand Grinder		√(m)			Mech Labs
209	Metaserv Universal Polisher		√(m)			Mech Labs
210	Metaserv Mounting Press		√(m)			Mech Labs
211	Journal Friction Apparatus		√(m)			Mech Labs
212	MituToyo (501) Surface Measuring Instrument		√(m)			Mech Labs
213	NeoView Ultra Violet Inspection Lamp		√(m)			Mech Labs
214	TV, Video and DVD Players		√(m)			Mech Labs
215	Torsion Testing Machine		√(m)			Mech Labs

216	Universal Vibration Apparatus		√(m)			Mech Labs
217	Flat and V Belt Apparatus		√(m)			Mech Labs
			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
218	Worm & Gear Wheel Apparatus		√(m)			Mech Labs
219	Fly Wheel Apparatus		√(m)			Mech Labs
220	Strut Testing Apparatus		√(m)			Mech Labs
221	Thin Cylinder Apparatus		√(m)			Mech Labs
222	Strain Indicators Gauges		√(m)			Mech Labs
223	Force Boards		√(m)			Mech Labs
224	Linear Air Track		√(m)			Mech Labs
225	Rolling Disk Apparatus		√(m)			Mech Labs
226	Leapfrog 3D Printer		√(m)			Mech Labs
SEC 3	**MECHANICAL ENGINEERING MACHINERY WORKSHOPS**					
300	Arc Welding (MMA, MIG, TIG)		√(m)			WS
301	Sheet Metal Bending and Folding Machines		√(m)			
302	Degreasing Bath		√(m)		√(Plu))	WS
303	Bench and Pillar Drilling Machines		√(m)			WS
304	Flame-Fast Furnace		√(m)			WS
305	Gas Welding and Cutting		√(m)			WS
306	Grinding Machines (Pedestal)		√(m)			WS
307	Grinder (Surface Grinder)		√(m)			WS

308	Guillotine (Pedal Operated)		√(m)			WS
~~309~~	~~Steelworker Powered Guillotine~~		~~√(m)~~			~~WS~~
310	Hot Wire Strip Heater		√(m)			WS
311	Lathes (Harrison 300/400/ Colchester Student)		√(m)			WS
312	Milling Machines		√(m)			WS
~~313~~	~~Unimolder Plastics Molding Machine~~		~~√(m)~~			~~WS~~
314	Portable Electric Angle Grinder		√(m)			WS
315	Portable Electric Shears		√(m)			WS
316	Portable Spot Welder		√(m)			WS
317	Thermo Forming Centre - Portable		√(m)			WS
318	Vacuum Form Plastic Cutter		√(m)			WS
319	Air Compressor & Hoses		√(m)			WS
320	Portable Hand Guillotine		√(m)			WS
321	Fixed Guillotine		√(m)			WS
322	Fly Press		√(m)			WS
323	Transportation & Storage of Metal Stock		√(m)			WS
324	Carif 260, Semi-Automatic Band Saw		√(m)			WS
325	Portable Optimum Bit Grinder		√(m)			WS
326	Hurco TM 6		√(m)			WS
327	Hurco VM 10		√(m)			WS
328	Edwards Bench Mounted Bending Machine		√(m)			WS
329	Mitutoyu Optical Comparator		√(m)			WS
330	Scrolling Apparatus		√(m)			WS
331	Colchester Universal Workbenches		√(m)			WS

			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
332	Hand Tools in Mechanical Engineering		√(m)			WS
333	Soldering in Mechanical Engineering		√(m)			WS
334	Laser engraving machine		√(m)			WS
335	SWPS 335 - Universal Robot ur5e		√(m)			WS
SEC 4	**MECHANICAL ENGINEERING THERMO**					
400	Air Conditioning Test Unit		√(m)			Thermo – Fluid Lab
401	Internal Combustion Engine Test Bed		√(m)			Thermo – Fluid Lab
402	Parker Hydraulics Training Unit		√(m)			Thermo – Fluid Lab
403	Pneumatics Training Boards		√(m)			Thermo – Fluid Lab
404	Electric Reciprocating Water Pump Test Unit (Serial No. TE83/1976)		√(m)			Thermo – Fluid Lab
405	Electric Piston Water Pump Test Unit (Serial No. TE52/1943)		√(m)			Thermo – Fluid Lab
406	Electric Oil Gear Pump Test Unit (Serial No. TE74/1971)		√(m)			Thermo – Fluid Lab
407	Portable Solar Panel		√(m)			Thermo – Fluid Lab
408	Concentric Tube Heat Exchanger		√(m)			Thermo – Fluid Lab
409	Safe Work Practice Sheet Cussons (P6112/223/224) Water Flow Measuring Apparatuses		√(m)			Thermo – Fluid Lab

			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
410	Photovoltaic Energy Stand		√(m)			Thermo – Fluid Lab
411	Air Flow Test Unit		√(m)			Thermo – Fluid Lab
412	Hot Box Oven		√(m)			Thermo – Fluid Lab
413	Carbolite Furnace		√(m)			Thermo – Fluid Lab
414	Osborne Reynolds Apparatus		√(m)			Thermo – Fluid Lab
SEC 5	**BUILT ENVIRONMENT**					
500	2000kN Concrete Testing Machine			√	√	
501	Pin Jointed, Shear Force and Bending Moment Apparatus / Deflection of Beams Apparatus / Structural Frames			√	√	
502	Heating and Bitumen Handling			√	√	
503	Bitumen Penetrometers (Electrical & Manual)			√	√	
504	50kn California Bearing Ratio Test Apparatus			√	√	
505	Cement and Concrete Handling, Mixing and Batching			√	√	
506	Compacting Factor Test			√	√	
507	Drying Ovens			√	√	
508	Flow Channel / Stability of Floating Objects Apparatus			√	√	

509	Force Boards / Moment Boards / Centre of Gravity Boards / Spring Testing Kits			√	√	
			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
510	Land Surveying			√	√	
511	Oedometer			√	√	
512	Permeability Test Apparatus			√	√	
~~513~~	~~Plastics & Materials Testing – Flammability~~ NO LONGER IN USE			~~√~~	~~√~~	
514	Shear Box Apparatus			√	√	
515	Soil Compactor			√	√	
516	Soil Sample Extruder			√	√	
517	Soil Sample Preparation			√	√	
518	Timber Grading			√	√	
519	Triaxial Compression Test Apparatus			√	√	
520	Portable Weighing Scales			√	√	
521	Buckling Apparatus			√	√	
522	Bearing Capacity of Shallow Foundations			√	√	
523	Bearing Capacity of Deep Foundations			√	√	
524	Flexure Bending Machine			√	√	
525	Dry Brick Formation Building			√	√	
526	Dust Extractor Machine			√	√	
527	Rifle Boxes & Sieves			√	√	
528	Sieve Shaking Machines			√	√	
529	Compactor for Gravel			√	√	
530	Slump Test			√	√	

531	Cube, Cylinder and Beam Molds			√	√	
			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
532	Vibrating Table			√	√	
533	Cement Mixer			√	√	
534	Curing Tank			√	√	
				√	√	
SEC 6	**CARPENTRY JOINERY WORKSHOPS/LABS**					
600	Woodworking General Requirements				√ (C/J)	
601	Manually Operated Mortising Machine				√ (C/J)	
602	Woodworking Panel Saw				√ (C/J)	
603	Band Resaw				√ (C/J)	
604	Centauro 600 & FBR 400 Wood Working Bandsaws				√ (C/J)	
605	Wadkin Bursgreen				√ (C/J)	
606	Woodworking Lathe				√ (C/J)	
607	Portable Woodworking Routers Trend (PRT), Festool (Basis Plus), Trend (Router)				√ (C/J)	
608	Single ended Tenoner Machine Concept 4				√ (C/J)	
609	Woodworking Machine Fourcutters Quanttromat 23P				√ (C/J)	
610	CB Wood Working Sander				√ (C/J)	
611	Spindle Mini Max T45F (Curved Cutting)				√ (C/J)	
612	CNC Machine				√ (C/J)	
613	Wadkin Bursgreen Woodworking Thicknessing Machine				√ (C/J)	
614	Carpentry Joinery Hand Tools				√ (C/J)	

615	Spindle Moulder (Robland Straight Cutting)				√ (C/J)	
			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
616	Wilson Spindle Machine				√ (C/J)	
617	Tormek 200 Grinder				√ (C/J)	
618	Viceroy Sharpedge Grinder TDS 12/16				√ (C/J)	
619	Centauro CBO Mortising Machines				√ (C/J)	
620	Pillar Drilling Machine				√ (C/J)	
621	Viceroy Pedestal Grinding Machine				√ (C/J)	
622	Graule Grinding Machine				√ (C/J)	
623	Grifo Grinding Machine				√ (C/J)	
624	LG 150 Disc and Belt Sander				√ (C/J)	
625	Stromab Up Cut Saw				√ (C/J)	
626	Ingersoll Rand Compressor				√ (C/J)	
627	Pneumatic Nailer & Stapler Hand Tools				√ (C/J)	
628	Corded and Cordless Hand Held Skill Saws				√ (C/J)	
629	Corded and Cordless Hand Held Jig Saws				√ (C/J)	
630	Hand Held Belt Sanders				√ (C/J)	
631	Hand Held Orbital Sanders				√ (C/J)	
632	Portable Chop Saws				√ (C/J)	
633	Handheld Planners				√ (C/J)	
634	Hand Operated Clamps				√ (C/J)	
635	Wood Working Benches				√ (C/J)	
636	Transportation of Materials				√ (C/J)	

637	Disposal of Class Projects				√ (C/J)	
			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
638	Timber Stores				√ (C/J)	
639	Dusting Down of Exhibit Pieces				√ (C/J)	
640	Workshop Extraction Pipe Cleaning				√ (C/J)	
641	Cleaning of Workshop Machinery				√ (C/J)	
642	Waste and Dust Extraction Silo				√ (C/J)	
643	Door Hanging				√ (C/J)	
SEC 7	**ELECTRICAL TRADES WORKSHOPS / LABS**					
700	Wiring / Building and Testing				√ (ELT)	
701	Rotation of Electrical Workstations				√ (ELT)	
~~702~~	~~Electrical Test Beds~~ (Not in use in this area)				~~√ (ELT)~~	
703	Final Testing of Student Work Materials				√ (ELT)	
704	Demonstration of Various Alarm Systems				√ (ELT)	
705	Preparation of Student Work Materials				√ (ELT)	
706	Portable Wheeled White Boards				√ (ELT)	
707	Trolley with Three Motors				√ (ELT)	
708	Hand Held Tools for Electrical				√ (ELT)	
~~709~~	~~Soldering – (Manual Soldering Iron)~~ (No longer applicable to course)				~~√ (ELT)~~	
710	Cleaning of Electrical Workshop				√ (ELT)	
711	Disposal of White Rubbish in Bins				√ (ELT)	

712	Storage, Handling & Use of Cable Drums				√ (ELT)	
713	Cable Stripping Machine				√ (ELT)	
714	Chop Saw				√ (ELT)	
715	400 Watt Bench Grinder				√ (ELT)	
			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
SEC 8	**MOTOR ENGINEERING LABS/WORKSHOP**					
800	Alternator Test Bench				√(MOT)	
801	Brake Systems				√(MOT)	
802	Diesel Engine Fuel System				√(MOT)	
803	AG Block & Auto Edu Diesel Engines (Audi A5 & Golf)				√(MOT)	
804	Four Post Lift				√(MOT)	
805	Petrol Engine Fuel Systems				√(MOT)	
806	AG Block & Auto Edu Petrol & Diesel Engines (Audi, Ford)				√(MOT)	
807	Roller Brake Test (NCT Lane)				√(MOT)	
808	Steering / Suspension Systems				√(MOT)	
809	Transmission Systems				√(MOT)	
810	Compressed Air				√(MOT)	
811	Strands bench & Pillar Drilling Machine				√(MOT)	
812	AG Bloc Hydraulic & Electric Power Steering Simulator				√(MOT)	
813	SWPS 813 Maha,Space & Redmount Scissors Lifts				√(MOT)	

814	Engine Blocks & Cyclinder Heads				√(MOT)	
815	Wheel force 1900,Hunter &Geolux Wheel Alignment				√(MOT)	
816	60 Tonne Press				√(MOT)	
817	Christensen 10 Tonne Press				√(MOT)	
818	Seat, Clio & Starlet Demonstration Engines				√(MOT)	
			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
819	Diesel Injector Tester and Aspirator				√(MOT)	
820	Ford, Peugeot and Kia Test Engines (Non Live)				√(MOT)	
~~821~~	~~1966 Ford Anglia Engine~~ NO LONGER IN USE				~~√(MOT)~~	
822	ABS Display Boards				√(MOT)	
823	AG Bloc Ford Mondeo Engine Simulator Board				√(MOT)	
824	AG Bloc Window Winders Simulator Board				√(MOT)	
825	AG Block Central Locking Simulator Board				√(MOT)	
826	AG Bloc Air Bag System				√(MOT)	
827	AG Bloc Air Conditioning Mobile Unit				√(MOT)	
~~828~~	~~Blue Point Mobile Engine & Gear Box Mounted Stands~~ NO LONGER IN USE				~~√(MOT)~~	
829	AG Bloc Ignition Turret Trainers				√(MOT)	
830	Draper Engine Bloc Stand				√(MOT)	
831	Block automotive Engine Stand				√(MOT)	
832	Epco Manual Hydraulic Hoist				√(MOT)	
833	Sealey Manual Hydraulic Trolley and Stand				√(MOT)	
834	Mobile Bosch FSA 740 Diagnostic Testing				√(MOT)	

835	Mobile Sun DGA Diagnostic Testing				√(MOT)	
836	Mobile Verus, Pico and HDS Diagnostics Testing				√(MOT)	
837	Cryton Armature Testing Growler				√(MOT)	
838	Draper and Cryton Battery Chargers				√(MOT)	
839	Mobile Bosch BAT 490&SP Smart Charging Unit				√(MOT)	
			APPLICABLE TO (√)			
	SAFE WORK PRACTICE SHEETS		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
840	Portable Battery Boost Starter				√(MOT)	
841	Electric Power Steering Unit				√(MOT)	
842	Portable Trolley Jacks				√(MOT)	
843	Car Jack Stands				√(MOT)	
~~844~~	~~Sun Battery Load Tester~~ NO LONGER IN USE				~~√(MOT)~~	
~~845~~	~~CAN BUS Diagnostic Board~~ NO LONGER IN USE				~~√(MOT)~~	
846	Grease Gun				√(MOT)	
847	Air Gun & Air Pressure Gauges				√(MOT)	
848	Degreasing Bath				√(MOT)	
849	Mobile Sun & Moratech Air Conditioning Units				√(MOT)	
850	Hand Tools in Motor Engineering				√(MOT)	
851	AG Bloc Headlights Board				√(MOT)	
852	AG Bloc Ignition Systems Rig				√(MOT)	
853	Mobile Air Compressor				√(MOT)	
854	Cylinder Leakage Tester				√(MOT)	
855	Strut and Spring Compressing Station				√(MOT)	
856	Bosch/Yuasa Battery Testers				√(MOT)	

857	Exhaust Fume Extractor System				√(MOT)	
858	Launch Petrol Injector Tester / Cleaner				√(MOT)	
859	Auto ETU Mercedes Can Bus Board				√(MOT)	
860	Block Automotive Brake Rig Trainer				√(MOT)	
861	Delphi Diesel Injector Tester				√(MOT)	
			APPLICABLE TO (√)			
REF.	**SAFE WORK PRACTICE SHEETS**		**ELEC (E) & MECH (M)**	**BUILT ENVIR**	**ENG TRADES**	**OTHER**
862	Nissan Leaf Electric Vehicle				√(MOT)	
SEC 9	**PLUMBING LABS/WORKSHOPS**					
900	Plumbing Engineering Arc Welding				√(PLU)	
901	Plumbing Engineering Mig and Tig Welding				√(PLU)	
902	FMB Phoenix, Manually Operated Band Saw				√(PLU)	
903	Grit, Belt and Grinder				√(PLU)	
904	Mobile Air Compressor				√(PLU)	
905	Bench & Pillar Drilling Machines				√(PLU)	
906	Gas Welding				√(PLU)	
907	Ridgid, Mobile 1224 Threading Machine				√(PLU)	
908	FMB Jupiter, Automatic Assist Band Saw				√(PLU)	
~~910~~	~~Rem Push, Pressure Test Buckets~~ No longer in use				~~√(PLU)~~	
911	Ridgid, Manual Hydraulic Pipe Bender				√(PLU)	
912	Ridgid, Portable Tripod				√(PLU)	
913	Record, Portable Free Standing Bender				√(PLU)	

914	Manually Operated Hand Held Tools				√(PLU)	
915	Test Heating Systems				√(PLU)	
916	Portable Mig Welder Gas Cylinder Replacement				√(PLU)	
917	Wiring / building and testing of heating control panels				√(PLU)	
918	Preparation of student work materials				√(PLU)	
919	Hand held tools for electrical works				√(PLU)	
920	Gas soldering				√(PLU)	
921	Tungsten Grinder				√(PLU)	
922	Corded and Cordless Power Tools				√(PLU)	
923	Plumbing Laboratory				√(PLU)	
924	Bevelling Machine				√(PLU)	
925	Electric Pallet Stacker & Mini Lifter				√(PLU)	
926	Augmented Reality Welder				√(PLU)	
927	Mobile Fume Extractor				√(PLU)	

Safe Work Practice Sheet **General Rules**	Ref: SWPS 001 Approved by: Breda Brennan

Hazards

There is always an ever-present risk of accidents occurring due to lack of vigilance and awareness of staff and students

Person Exposed to Risk

✓ Students ✓ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Everyday working environment

Controls

- Smoking (including vaping & e cigarettes), eating and drinking is prohibited in all areas other than designated areas. Smoking is prohibited in all areas.
- Exercise care when opening or closing doors on entering or leaving rooms. Never run.
- Conduct yourself in a responsible manner and do not act in a way that could be dangerous to yourself or others. Refrain from indulging inappropriate behavior as it could have serious consequences.
- No student or member of staff should ever work alone in a Laboratory, Workshop, Service Duct or Plant Room, without prior notification to Line Manager.
- All bags and coats are to be left in designated areas. All work and teaching areas should be kept tidy when in use and left tidy when finished.
- All accidents however minor must be reported to immediate superior.
- No member of staff or student is to interfere with any workplace equipment.
- Report any malfunctioning or dangerous or defective equipment to immediate supervisor without delay. Never attempt to effect repairs, no matter how trivial.
- Become familiar with position and use of safety equipment for each area in which you work.
- Study carefully and obey the Safe Work Practice Sheets for any area in which you are required to work.
- Co-operate with Employer in fulfilling duties imposed under Section 13(1)(a- h) of the Safety, Health & Welfare Act 2005

Checks & Inspections
Constant vigilance and awareness

Information, Instruction & Training

Not applicable

Personal protective equipment required (last resort)

Not applicable

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 high risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 low / medium risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Access and Egress**	Ref: SWPS 002
	Revision Date: Oct 2026
	Approved by: Breda Brenna

Hazards

Inadequate access and egress in the workplace can result in slips, trips and falls.

Obstructed access roads and paths can also pose a risk of injury to pedestrians and to vehicle operators and can also delay emergency escape and emergency vehicle access.

Person Exposed to Risk

✓ Students ✓ Employees ☐ Public ☐ Contractors ✓ Visitors

Work Description

Everyday working environment on campus

Controls

- All doorways and access points in the workplace must be kept clear of obstructions.
- All passageways and pedestrian routes must be kept clear from obstructions.
- Materials must be stored in designated areas away from pedestrian and vehicular routes.
- All stairways with more than 3 steps should be provided with handrails and maintained in good condition.
- Adequate lighting must be provided throughout the Institute at all entry points, exit points and along corridors and passageways.
- Workplaces must be kept clean and tidy at all times.
- All spillages must be cleaned up immediately.
- All cabling and hosing must be neatly tied off or ramped in order to prevent tripping.
- Workplace floors must be kept in a level and even condition where possible in so far as is practicable. All holes and trip hazards should be removed, filled in or covered.
- Trip hazards which cannot be removed must be clearly visible or signed as such.
- Chairs, desks or drawers should never be used to access shelving or any other elevated area.
- Stepladders or kick stools must always be used.
- Vehicle drivers must exercise extreme caution when driving on Institute site.
- All defects in flooring, lighting, stairwells, etc must be reported to the Estates Office via the Maintenance Request online system.

Checks & Inspections

Constant vigilance and awareness.

Information, Instruction & Training

Not applicable

Personal protective equipment required (last resort)

Not applicable

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**3**	= Risk Factor	**6**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Fire Safety**	Ref: SWPS 003
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

The outbreak of fire can lead to:

- Serious bodily injury or fatality
- Damaged property or plant
- Disruption of premises causing loss of facilities **Person**

Person Exposed to Risk

✓ Students ✓ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

There is always an ever-present risk of fire occurring in all workplaces. Common fire hazards include improperly stored combustible or flammable materials, the use of naked flames, faulty electrical equipment, the use of flammable fuels, the use of inappropriate equipment, the build up of flammable materials or wastes in the workplace and smoking in undesignated areas. The accidental release of chemical material may also lead to the outbreak of fire, especially if the material is pyrophoric, extremely flammable or is a strong oxidiser.

Controls

The Institute is committed to providing a fire safety programme that guards against the outbreak of fire in all areas and also makes provisions for the safety of all persons in the event of a fire. The Institute would like to reiterate to all staff at this point that every employee has a responsibility to guard against the outbreak of fire in the workplace through the implementation of good fire safety practises and where applicable the adherence to the control measures outlined below.

Employees should also refer to specific fire risk assessments that apply to their specified places / type of work.

Fire Detection, Equipment & Emergency Lighting

Layout drawings, detailing the location of the fire detection and alarm systems, throughout the campus have been prepared by the Estates Office. Copies of these drawings are held by members of the Caretaking Staff, to assist in the identification of the location of any alarm signal.

Fire detection and alarm systems are installed and maintained in accordance with current standards. Emergency lighting systems are in operation in all parts of the Campus. These are installed to and regularly maintained in accordance with current standards.

Fire mains and Hydrants and Fire Hose Reels are inspected and maintained in accordance with current standards The date of the most recent inspection is noted on each hose reel. Test reports on ring mains and hydrants are held in the Estates Office and Fire Registers.

Portable fire extinguishers are inspected and maintained in accordance with current standards. The date of testing is noted on each extinguisher.

Copies of all testing and certificates are held in Estates Office in the Fire Register.

Emergency Response

1. Each building has in place an emergency plan detailing the response to be taken in the event of the sounding of a fire alarm or the discovery of a fire. Refer to http://ww2.dkit.ie/about_dkit/health_safety/emergency_evacuations_procedures_manual for further details.
2. Fire response procedures are displayed in prominent locations within the area covered by their provisions.
3. Emergency response procedures are tested at least annually by use of a fire drill.

Procedural Controls

1. It is prohibited to use a naked flame (outside of a laboratory area) or to engage in 'hot' work (outside of designated workshops) anywhere within the Institute without first obtaining a 'Hot Work Permit' from the Institute Estates Office. Hot work is defined as grinding, welding (all types), hot cutting, and any other work with the potential to generate a spark or an ignition source.
2. It is prohibited to disengage a fire detection device, remove a fire extinguisher from its designated location or to isolate a component of a fire safety system without the express permission of the Institute Estates Office.

Training

1. It is the responsibly of individuals within the Institute to ensure that they are familiar with the provisions of any relevant emergency procedures.
2. Fire safety training is available through the Staff Training & Development Officer for all interested parties.

Means Of Escape

1. All Institute premises will be provided with clearly signed suitable means of escape and emergency exits for use in the event of a fire.
2. All escape routes and emergency exits throughout a building / premises must be kept clear at all times.
3. It is the responsibility of all Institute employees to ensure that escape routes and emergency exits in their working area are kept free from obstruction.

4. No individual may obstruct or remove from service an escape route or emergency exit without prior arrangement with the Institute Estates Office.
5. In the event that employees have a concern regarding means of escape then they must contact their manager immediately. Urgent concerns can be conveyed directly to the Institute Estates Office.

Hazardous Agents

1. As part of a hazardous agent risk assessment fire safety provisions for handling the agent(s) in question must be detailed.
2. Flammable materials may only be handled and stored in accordance with the requirements of their Material Safety Data Sheets, with due regard being paid to their fire risks.
3. Flammable materials must be stored in a suitable storage area. The requirement for low voltage or flame proof wiring should be considered.
4. The large scale storage of flammable materials (>200l / kg) in a single location requires completion of a specific risk assessment prior to storage taking place.

General

1. Where new buildings are constructed by the Institute or existing buildings are substantially modified the requirements of Part B of the Building Regulations (1997) Technical Guidance Documents will be adhered to.
2. Smoking is prohibited in all indoor workplaces within the Institute.
3. Employees are encouraged to make themselves familiar with the location of alarm activation points and escape routes in their working areas.
4. Employees must not attempt to repair any electrical equipment unless they are competent to do so. All electrical repairs and installations within the University must only be completed by a competent person, following the rules laid down in the National Rules for the Electrical Installations, as prepared by the Electro-Technical Council of Ireland.
5. The amount of combustible materials stored within the workplace should be kept to a minimum.
6. In the event of an evacuation all persons must leave the workplace without exception and assembly at their designated assembly point.
7. Employees must adhere to any instructions given by Institute Fire Wardens or emergency services personnel in the event of an emergency.
8. Persons must not fight workplace fires unless they have been trained to do so and it is safe to do so.

All employees are reminded of their statuary obligation to protect their own and their co-workers safety by guarding against the outbreak of fire in the workplace through the use of safe systems of work

Checks & Inspections:

Constant vigilance and awareness.

Information, Instruction & Training

- Fire Drills
- Fire Warden Training
- Use of fire fighting equipment

Personal protective equipment required (last resort)

Not applicable

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**3**	= Risk Factor	**6 high risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Electrical Safety	Ref: SWPS 004
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

- Electrocution
- Electric shock
- Burns
- Inadvertent starting of machines

Person Exposed to Risk

✓ Students ✓ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

A range of electrical appliances are used in the Institute. This Safe Work Practice Sheet covers Portable Appliance Testing and general electrical safety

Controls

General

- Installation or repair work may only be carried out by qualified electricians.
- New installations will comply with the requirements of the General Application Regulations and the Electro-Technical Council of Ireland publication 'National Rules for Electrical Installations.
- Flexible cables will be adequately protected against external mechanical and heat damage.
- Flexible cables should not be run across floors or walkways. Where electrical cables have to be run across open floor areas ramps will be placed over them to prevent the tripping and damage to cables.
- Adequate fusing or excess protection, e.g. circuit breakers, must be provided for all fixed and portable equipment.
- RCDs should be tested at the beginning of each term.
- Areas around fuse boards will be kept clear of flammable materials and the fuse board cabinets will be kept closed at all times.
- Work on electrical appliances by contractors or work requiring isolation of electrical supplies requires an Electrical Work Permit. Buildings and Estates must be contacted.
- Staff must report defective equipment and take out of service Portable AC electrical appliances that may be subject to deterioration as a result of their use such as power supplies and oscilloscopes must be visually inspected and tested at regular intervals. The schedule of testing should be determined by following the Electrical Technical Councils guidelines available at www.etci.ie/docs/ET215(2008).pdf. A record of testing and inspection must be kept by the relevant departments.

- Live working is prohibited except in circumstances where it is not possible to carry out the work in any other manner.

The following precautions must include as appropriate;

- the use of people who are properly trained and competent to work safely on live equipment
- the provision of adequate information to the person carrying out the work, about the live parts involved, the associated electrical installation and the likely risks
- the use of suitable tools including insulated tools
- equipment and protective clothing For example, insulating gloves, insulating boots and insulating rubber matting
- the use of suitable insulated barriers or screens
- the use of suitable instruments and test probes
- accompaniment by a second person who is trained and able to act in an emergency, e.g. switch off power and give first aid treatment for electric shock
- effective control of any area where there is danger from live parts
- A safe system of work must be drawn up

Checks & Inspections

- Portable appliance testing must be carried out on certain portable AC electrical equipment
- RCDs tested once per term
- Electrical circuits tested every 3 years

Information, Instruction & Training

- Trained First Aider/CPR (available when live working is carried out)

Personal protective equipment required (last resort)

Safety boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Chemical Agents	Ref: SWPS 005
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Exposure to certain chemical agents can cause a range of injuries from minor to serious long term damage. Exposure may be through ingestion, inhalation, skin absorption, absorption through the mucous membranes.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Staff and students may be exposed to a range of chemicals in the School including but not limited to;

- Petrol
- Cutting/cooling fluids
- Ferric chloride
- Solder
- Glues
- Cement/ Bitumen
- Hardwood dust
- Welding fume

Exposure frequency and duration is variable depending on the activity.

Controls

- Material safety data sheets are obtained for all potentially hazardous chemicals or chemical agents and hard copies are kept with the School Safety Statement.
- A chemical agent's risk assessment form (attached to this Safe Work Practice Sheet) is completed for each activity involving the use of chemicals as required by the Chemical Agents Regulations.
- Where a number of chemicals are associated with an activity they must be assessed together.
- The hazards associated with each chemical substance and the precautions that must be taken are brought to the attention of the users through the chemical agents risk assessment form.
- Where necessary local exhaust ventilation is installed and maintained.
- Appropriate personal protective equipment (PPE) is provided for staff. Students are alerted to the requirement for PPE.
- Hazardous chemicals are stored in accordance with the requirements set out in the Material Safety Data Sheet. Chemicals re not decanted into unmarked containers. Where chemicals are placed in other containers an appropriate hazard warning label is attached.
- Gas lines are marked with the gas name at intervals along their length.

Checks & Inspections

Local exhaust ventilation should be checked annually to ensure it is extracting efficiently.

Information, Instruction & Training

The hazards associated with each chemical substance are brought to the attention of the users (Senior technical staff are responsible for informing other technical staff, lecturers are responsible for informing students)

Personal protective equipment required (last resort)

Care must be taken in the selection of personal protective equipment, e.g. select the correct glove to ensure that the chemical does not readily break through
Personal protective Equipment should be CE marked.

Initial Risk Rating (without any control measures)

Probability :	**2-3**	x	Severity	**2-3**	=	Risk Factor	**4-9**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**variable**	x	Severity	**variable**	=	Risk Factor	**variable**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Slips, Trips & Falls	Ref: SWPS 006
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Slips are caused by the presence of substances such as water, grease, oil, fats, soaps, granules, plastic sheets, packaging, leaves, ice etc deposited on the floor arising from the working conditions or in some cases the weather. Slip hazards can be found on both wet and dry surfaces.

Trips can be caused by such features as electric cables or compressed-air lines across walkways, curled-up or worn carpets, uneven floor surfaces and steps, or discarded work items.

Falls may be caused by slips or trips or when adjacent surfaces are at different levels leading to persons losing their balance because they had not anticipated the change in level. Slips or trips on stairs are particularly dangerous.

The hazards listed above are so ordinary and commonplace that people often accept them as part of normal living until they or someone close to them has an accident and is seriously hurt.

Person Exposed to Risk

✓ Students ✓ Employees ✓Public ✓ Contractors ✓ Visitors

Work Description

Everyday activity on campus

Controls

Observe & Adhere to Health & Safety Authority Guidelines as below

- The starting point lies with everybody becoming aware of these hazards and taking appropriate action.
- Management must take responsibility for controlling these hazards and must assign appropriate responsibilities to staff. Clear policies should address what people need to do to identify and monitor slip, trip and fall hazards and the action to take once they identify a hazard.
- Slips, trips and falls must be considered in the workplace hazard assessment that is required by law. This assessment should take account of:
- The type of hazard including how likely it is to occur
- Characteristics of the workplace such as the nature and condition of floor surfaces, quality
- of lighting
- Influence of the weather (e.g. rain, frost or leaves)
- Maintenance and cleaning procedures
- Workplace users

- Where workplaces are being modified or constructed there is an excellent opportunity to prevent slips and trips by selecting appropriate floor materials that are slip resistant and
- installed so as to minimise trip hazards.

Nature of the hazard

- In some work areas such as certain food processing activities slip hazards may not always
- be completely avoidable and the control measures will need to assume the hazard is
- always present.
- In other situations the floor surface may be non-slippery for most of the time but leaks from plant or bad weather may lead to the creation of a slip hazard. It only takes a small amount of liquid on a smooth floor to create a hazard. In these situations the immediate control measures will focus upon detection of liquids and the actions to be taken to remove the hazard or reduce it by the provision of warnings and cordoning off areas.
- Permanent trip hazards should be removed as far as possible by such measures as the rerouting of pipes or cables, provision of more sockets to reduce long cable lengths, use of battery powered tools and the repair of uneven floor and stair surfaces.
- A good housekeeping regime will go a long way to reduce intermittent hazards from badly stored or discarded items. Materials should never be left or stored on stairs.
- Where changes in floor level cannot be avoided they should be clearly marked and the provision of handrails to control the movement of persons may be appropriate.
- Changes in level should not take people by surprise.

Characteristics of your workplace

- It is better to eliminate slip hazards by choosing a suitable surface rather than depending on cleaning regimes to keep a floor safe. Building designers should ensure that the intended appearance of a building does not compromise the choice of inherently safer floor options.
- Macro-rough surfaces (i.e. those that contain an aggregate) are recommended for areas that are expected to experience high levels of contamination. Floors that have hard particles throughout their thickness can maintain their slip resistance throughout their life but floors with a superficial layer of grit or slip resistant paint can become slippery as the layer is worn away.
- Profiled floors (ridges or blisters) are sometimes used in areas subject to slip hazards but these can become slippery over time as the profile becomes worn and contaminants can be left trapped within the profiles.
- Carpets or mats placed on smooth floors can pose both slip and trip hazards and, if used, should be securely fixed to the floor at their edges and at any joints.
- The slip resistance of steps is improved by the fitting of nosings which protect the edge of the step from wear and help users to the place their feet more accurately on it. Care has to be taken that the nosing itself does not constitute a hazard.
- The design of stairways in buildings will need to take account of Technical Guidance Documents B (Fire Safety), K (Stairways, etc) and M (Access for People with

Disabilities) produced by the Department of Environment, Heritage and Local Government.

- Adequate lighting, including the avoidance of glare and shadows, is necessary to expose slip /trip hazards. Higher lighting levels are needed where older people are present.
- Poorly sited or excessive signage can distract people who are then less likely to notice slip or trip hazards.

The weather

- Building entrances can become slippery due to the ingress of moisture, mud and debris in bad weather. Measures such as having a slightly higher internal air pressure in the vestibule or the provision of a suitably designed shelter or canopy above the entrance can reduce the ingress of rain. Another simple measure is the installation of doors that do not blow open in the wind.
- Where matting is provided it should be aligned with the way pedestrians use the entrance. It should be laid immediately inside the door entrance and extend across the full width of the door. The existence of wet footprints beyond the entrance or matting is usually a sign that existing controls are not sufficient.
- Where mats in mat-wells are prone to becoming waterlogged the provision of drainage holes should be considered.

Maintenance and cleaning procedures

- Floor cleaning procedures should be incorporated in the operation and maintenance procedures for a company. The procedure should specify the methods and materials to be used as the use of the wrong cleaning method can increase the area of hazard and level of risk. The cleaning agent used should be suitable for the floor surface and the type of contamination encountered. A build -up of polish or detergent residues should be avoided. The drying of floors after cleaning is most important for the control of slip hazards. Staff should be informed, trained and supervised with regard to: Cleaning and drying floors & the importance of dealing with spillages/leaks

"Cleaning as you go"

- Reporting hazards as they arise and any equipment defects contributing to slip hazards or problems with the cleaning equipment itself
- Prompt incident reporting
- Use of suitable footwear
- Cleaning should, where practical, be carried out when there are less people around.
- Cleaning activity should be organised so as to provide dry paths through areas being cleaned. It is better to restrict access to areas that are being cleaned by the use of barriers rather than depending on the use of cones or signs alone.
- Research has shown that forewarning people of a hazard can lead them to modifying their gait so as to anticipate the situation but attention must be paid to removing signs when the hazard has been dealt with; otherwise people will tend to ignore them if their experience tells them that the signs are always displayed irrespective of the conditions underfoot.

- Where existing unsuitable floor surfaces are identified, the hazard can be reduced by controlling contamination, using mats, treating the surface or in some cases replacing it altogether with a safer material.

Workspace users

- Where there is control over access to the workspace, the risk of falls can be reduced by the introduction of a "sensible shoe" policy i.e. no high heels or loose fitting shoes. In addition: Shoe soles should have deep cleating and a well defined tread pattern.
- Safety footwear may not always be slip-resistant and purchasers should check that it is suitable for the conditions under which it is going to be used.
- Slip resistant shoes will not remain so if they become worn or contaminated underfoot.
- The risk of slipping while barefoot is often greater than when wearing shoes, so this factor needs to be taken into account in shower areas and in other tiled areas associated with swimming pools, etc
- Disposable plastic overshoes can have poor resistance on smooth floors
- In other workspaces where there is general public access there will greater dependence on the selection of floor material in combination with maintenance regimes to control slip, trip and fall hazards.

Checks & Inspections

- Visual checks and Risk Assessments as required in each Functional Area

Information, Instruction & Training

Not applicable

Personal protective equipment required (last resort)

Not applicable

Initial Risk Rating (without any control measures)

Probability:	**2**	x Severity	**3**	= Risk Factor	**6 High RISK**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	2	=	Risk Factor	2 Low Risk

Risk Assessment Review
As and when process changes or yearly

Safe Work Practice Sheet **Lone Person Working**	Ref: SWPS 007
	Revision Date: Oct 2026
	Assessed by: Breda Brennan

Hazards

- Persons working alone using hazardous chemicals or equipment may not be able to summons help in the event of an accident or spillage.
- Certain exit routes may not be available during out of hours working.
- Entrapment in areas or spaces due to negligence or accident

Person Exposed to Risk

☐ Students ✓ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Definition of lone working

Lone working/out of hours working is defined as follows

- Any Laboratory / Experimental work carried outside of 9 am - 5 pm Monday – Friday when there are no persons aware of your work within calling distance.
- Any other work undertaken outside of 7 am-10 pm Monday – Friday and during the hours of 9am - 6pm on Saturday, Sunday & Bank Holidays.

All buildings must be vacated by 6pm on Saturdays, Sundays and Bank holidays to allow for full lock up. At Christmas & Easter the campus will close down for a specified number of
days and access will only be granted under exceptional circumstances .

Lone working includes carrying out field work in hazardous terrain or in areas where there is a risk to personal safety.

Lone working may also include carrying out routine maintenance work in isolated areas such as roofs or plant-rooms.

Controls

General

- Lone working in laboratories is not permitted unless a risk assessment has been carried out in conjunction with an academic supervisor and the risk is deemed to be low. Typical work that may be allowed includes work on PCs, microscope work, viewing plates, taking items in and out of incubator.
- The supervisor may allow working on high risk activities if the person is competent (typically an experienced member of staff) and a buddy is in attendance.
- The supervisor may allow work on medium risk activities for competent researchers (with or without a buddy present).
- Where a person is working alone without other persons within shouting distance then a phone or mobile phone must be readily available. They must also notify a colleague of their intention, how long they intend to be working in the isolated area, and check

back with the colleague at an agreed, pre-determined time, when the work in the isolated area is complete.
- Field work in hazardous terrain or where there is a risk of personal injury as a result of confrontation must not be carried out alone (see SWPS Fieldwork).
- Hazardous experiments must not be left unattended overnight.

Out of hours access

- If out of hours work is required permission must be sought from the Head of Department.
- All persons requiring 'Out of Hours' access must be aware of what to do in the event of an emergency, i.e. what emergency exit doors are available, how to raise the alarm, where to go etc.
- The Head of School must provide Security with the names and locations of persons working out of hours. The person must contact Security on leaving the building.
- Persons authorised to work out of hours must not admit any other person to the building out of hours. Persons claiming to be authorised but without a swipe access card or key should be referred to Security for access.
- Where the fire alarm is activated in the building after hours, those evacuating the building must assemble at the building fire assembly point. Otherwise emergency services will assume that they are still in the building.
- Researchers or Staff members who in exceptional circumstances, due to the nature of their research work, require access during 'Lock-Up' must seek authorisation for such access from Buildings and Estates.

Checks & Inspections
Visual checks and Risk Assessments as required in each Functional Area

Information, Instruction & Training
Not applicable

Personal protective equipment required (last resort)

Not applicable

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2-3**	=	Risk Factor	**4-6**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2-3**	= Risk Factor	**2-3**

Risk Assessment Review

As and when process changes or yearly

Lone working/Out of Hours working

	Name	Position	Date
Prepared by			
Reviewed by:			
Approved by			

Revision	Date	By	Description
1			
2			
3			

Safe Work Practice Sheet **Manual Handling**	Ref: SWPS 008
	Revision Date: Oct 2026
	Assessed by: Breda Brennan

Hazards

Incorrect method of lifting
Attempting to lift something which is to heavy
Lifting sharp/awkward shapes

The main injuries associated with manual handling and lifting are:
Back strain, slipped disc, hernia,
Lacerations, crushing of hands or fingers.
Repetitive Strain Injury.
Bruised or broken toes or feet.
Various sprains, strains, etc.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Staff and students may be required to lift or move heavy items from time to time including large pieces of wood, bags of aggregate, metal piping, moving rotating electrical boards, pushing/pulling trolleys

Controls

- Risk assessments must carried out on manual handling tasks normally performed by staff As a rule of thumb an assessment is required where weights are above the guideline weights set out by the Health and Safety Authority and reproduced overleaf in figure 1. The assessment should be in writing and set out on form 1 Manual handling assessment attached to this procedure.
- Manual handling will be avoided where possible. Mechanical or other means of moving or lifting will be used such as trolleys and winches.
- Staff will be provided with manual handling training where manual handling is a regular part of their job.
- Seek assistance where possible when lifting heavy items.
- Consideration must be given to the arrangement of stored items so that heavier items are not stored near floor or above shoulder height.

Checks & Inspections

- Senior technician to monitor that correct manual handling technique is being used.
- Trolleys should be visually checked before use. Trolleys with damaged wheels should be taken out of service.

Information, Instruction & Training

- Manual Handling Training provided to relevant staff

Personal protective equipment required (last resort)

As per Risk Assessment e.g. gloves, safety shoes/boots.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	2			**1-2**			**2-4 Low-medium risk**

Risk Assessment Review

As and when process changes or yearly

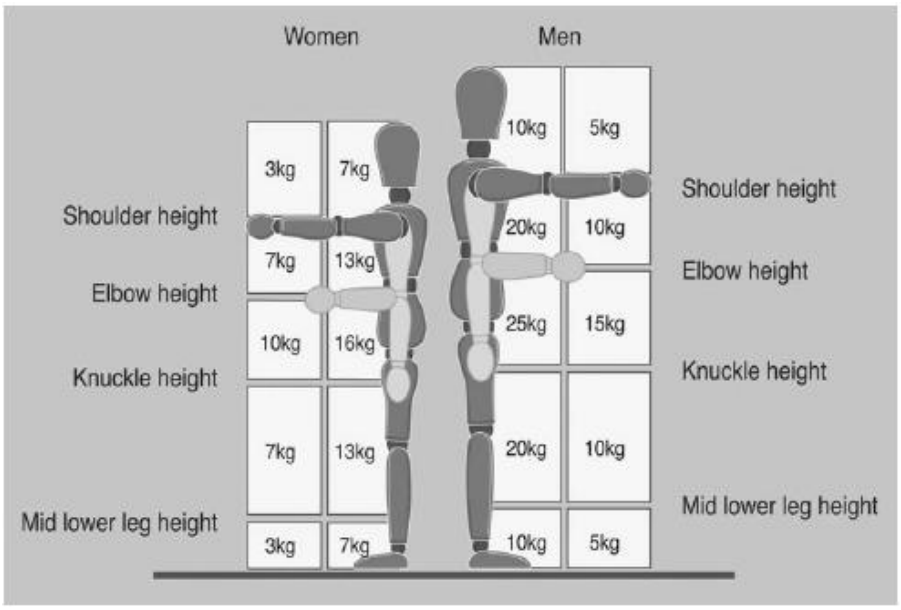


Figure 1. Guideline weights issued by the Health and Safety Authority.

Form 1 Manual handling risk assessment

Section A – Preliminary	*** Circle as appropriate**
Job Description Factors beyond the limits of the guideline weights? (See SWPS Manual handling)	Is an assessment needed? (i.e. Is there a potential risk for injury, and are the factors beyond the limits of the guidelines?) Yes / No*

If 'yes' continue. If 'no' the assessment need go no further.

Operations covered by this assessment (detailed description): Locations: Personnel involved: Date of assessment:	Diagrams or other information:

Section B – See over for detailed analysis

Section C – Overall assessment of the risk of injury? Low/Med/High*

Section D – Remedial action to be taken:

Remedial steps that should be taken, in order of priority: 1. 2. 3. 4. 5. 6. 7. 8.
Date by which action should be taken:
Date for reassessment:
Assessor's name: Signature:

Section B – More detailed assessment, where necessary:					
Questions to consider:	If yes, tick appropriate level of risk			Problems occurring from the task (Make rough notes in this column in preparation for the possible remedial action to be taken).	Possible remedial action (Possible changes to be made to system/task, load, workplace/space, environment. Communication that is needed.
	Low	Med	High		
The tasks – do they involve: • holding loads away from trunk? • twisting? • stooping? • reaching upwards? • large vertical movements? • long carrying distances? • strenuous pushing or pulling? • unpredictable movement of loads? • repetitive handling? • insufficient rest or recovery? • a work rate imposed by a process?					
The loads – are they: • heavy? • bulky / unwieldy? • difficult to grasp? • unstable / unpredictable? • intrinsically harmful (e.g. sharp / hot)?					
The working environment – are there: • constraints on posture? • poor floors? • variations in levels? • hot/cold humid conditions? • strong air movements? • poor lighting conditions?					
Individual capability – does the job: • require unusual capability? • hazard those with a health problem? • hazard those who are pregnant? • call for special information / training?					

Other factors: Is movement or posture hindered by clothing or personal protective equipment?	YES / NO		

Safe Work Practice Sheet General Workshop / Lab Safety	Ref: SWPS 009
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Improper storage of items can lead to items falling on staff,

- obstruction of exit routes,
- manual handling injuries,
- fire,
- failure of shelving.
- Operation of diesel or petrol engines in unventilated space may lead to asphyxiation
- Use of cutting equipment without extraction can lead to respiratory problems

Person Exposed to Risk

☐ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

General activities in workshop

Controls

- The Workshop is fitted with fire detection and alarm system and emergency lighting which is serviced regularly.
- Exit routes must be kept clear of obstruction at all times.
- Adequate shelving is provided to allow safe storage of equipment.
- Heavier items should be stored on middle shelves with lighter items above shoulder height & floor height.
- Where heavy items are stored the condition of shelving should be checked every 6 months by the Supervisor.
- Diesel and petrol is stored in appropriate marked containers in small quantities (<20 litres).
- Diesel or petrol engines must not be operated indoors unless ventilation is operational.
- Extraction ventilation must be serviced annually.
- Cutting equipment should be used in conjunction with extraction.

Checks & Inspections

Extraction equipment must be serviced annually

Information, Instruction & Training

Staff must be shown the correct use of extraction equipment

Personal protective equipment required (last resort)

Safety boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Use of hand tools**	Ref: SWPS 010
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Cuts
Ejection of material
Eye damage
Stab injuries
Head injuries

Person Exposed to Risk

☐ Students ✓ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using hand tools such as chisels, Stanley knives, hammers, drills etc.

Controls

- Only staff with appropriate training or experience may use hand tools.
- The tools should be checked before use for signs of wear and tear. Damaged items should be taken out of service for repair or replacement.
- No power tools or electrical equipment of greater voltage than 110 volts shall be used in external locations.
- Where power tools have to be used off the main supply the source of supply must be fitted with residual current devices (ELCB) rated at 30 mAmps at 30 msecs.
- All cable connections must be properly made; under no circumstances is insulation tape to be used for any repair or joint in extension.
- Power tools must be maintained in good condition with casing intact and label fitted showing voltage and other information. An annual formal documented inspection should be carried out by a competent person.
- Mains operated equipment must be electrically tested.
- Where there is a risk of particles hitting the eye, eye protection must be worn.
- Ear defenders will not normally be required as the duration of exposure is expected to be low and infrequent.
- Tools should not be left unattended in public areas when going for breaks.
- Staff should not repair tools unless they are trained to do so.
- Only use tools in the manner in which they were designed to be used.
- Return tools to the workshop at the end of each day.

Checks & Inspections

- Check all tools before each use.
- Annual electrical test for mains operated equipment.

Information, Instruction & Training

- Only trained staff may operate equipment. Training may be provided in house by another
- competent member of staff.

Personal protective equipment required (last resort)

Personal protective equipment varies with tool being used. Where there is a risk of flying particles then eye protection should be worn.

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Use of Ladders / Stepladders**	Ref: SWPS 011
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

- Physical injury due to fall of persons from ladder
- Objects dropped by ladder / stepladder user

Person Exposed to Risk

✓ Students ✓ Employees ☐ Public ☐ Contractors ☐ Visitors

NOTE:
The use of Ladders / stepladders is restricted to activities where the risk is deemed to be low (that it would be unlikely to cause injury), the work is of short duration (30mins max) or brief periods at a time, and where the risk assessment shows the use of other work equipment (e.g. working platforms) is not justified.

Low Risk is considered when: where the operator can maintain a handhold / grip on stile or handrail whilst placing a box on a shelf and where the user's both feet are fully supported on the same step / rung.

Ladders/ stepladders are not suitable for strenuous or heavy work or where the work involves carrying awkward objects, tools or equipment.

Work Description

The use of Ladders / Stepladders by staff is infrequent. As part of their work technicians on occasions access shelving and storage areas to gain access to materials or parts.

Controls

- Ladder work is restricted to work which can be carried out using one hand only and of short duration.
- The base of the ladder must be on firm and level ground.
- For extension ladders they must be at the correct angle of rest 75 degrees or a base to height ratio of 1:4 (1 out to every 4 units up) and made secured (tying at the top or bottom)
- Stepladders must be fully opened out.
- There must be no sideways loading.
- Maintain 3 points of contact (both feet on the same rung, firm grip on the stile or handrail)
- Over reaching from ladders / stepladders will be avoided.
- Do not work on the top 3 rungs of a ladder, or top 2 steps for stepladders (regardless of length)

- Do not straddle (or sit at the top) of an A frame ladder.

Checks & Inspections

- Ladders will be checked for the correct type of equipment for the job at hand.
- Ladders / Stepladders must be visually inspected before use.
- Inspection of ladders must be recorded on form GA3 for every 7 day of use or used for the first time.

Information, Instruction & Training

- Operatives will be instructed to the safe use of ladders and the hazards which are to be avoided.
- Operatives to follow the controls
- Operatives to report any defects
- A further risk assessment will be necessary where the work activity is deemed to be medium or a high risk.

Personal protective equipment required (last resort)

- PPE may be a requirement dependant on the Risk Assessment

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2**

Risk Assessment Review

Risk Assessment will be reviewed periodically

Safe Work Practice Sheet **Use of Cutters, Scalpel and Stanley Knives**	Ref: SWPS 012
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

- Cuts when taking blades in and out of handle
- Cuts while using equipment
- Cleaning staff receiving cuts if blades disposed of to general waste
- Eye injury if blade breaks while used with force for tasks other than cutting

Person Exposed to Risk

✓ Students ✓ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

A range of cutting equipment is used in some areas by staff and students

Controls

- Where possible retractable blades or safety knives will be used.
- Blades must be disposed of to a designated sharps bin with a closable lid. Blades must never be disposed of to general waste.
- Users should use only sharp blades – blunt blades require more force and their use may result in injury
- Users should cut away from the body keeping the restraining hand well away from the blade.
- Unsheathed blades must never be carried in pockets or bags.
- Unsheathed blades must not be left in drawers or toolboxes.
- Access to sharp knives / blades to be restricted to students who may be under the age of 18 years

Checks & Inspections

- Knives cutters used in classroom situations should be visually checked annually and damaged equipment removed from circulation.

Information, Instruction & Training

Students receive specific instruction on safe use of blades

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability:	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x Severity		= Risk Factor	
	1		**2-3**		**2-3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Noise**	Ref: SWPS 013
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazard: Noise

Noise exposure can lead to hearing damage or poor concentration which can lead to incidents. Potential hearing damage due to a given sound depends on the sound level and duration of exposure. "Daily noise exposure level" is expressed as Lex 8h(db)(A) (time weighted average). Continuous noise levels can have the same energy content as varying sound levels. Peak sound pressure or instantaneous noise levels reached under the regulations will require particular measures as below

Person Exposed to Risk

✓ Students ✓Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Noise associated with Workshop Machinery

Controls

As a rule of thumb you may be at risk if:

- you have to shout to be clearly heard by someone 1- 2 metres away
- your ears are still ringing after leaving the workplace
- the noise is intrusive – like a vacuum cleaner – for most of the day
- you work in a noisy environment, e.g. workshop

When noise exposure exceeds the exposure action value (80 dB(A)), information, training and hearing protection must be provided.

If the upper exposure action value (85 dB(A)) is exceeded,

- establish and implement technical and/ or organizational measures to reduce exposure to noise
- restrict access
- hearing protection
- hearing protection must be worn
- provide hearing checks
- Provide adequate information and training

When using tools such as grinders, air operated pumps etc. Hearing protection must be worn.

Checks & Inspections

- Instructions given when machine is shut down

- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction and Training

Supplies of ear defenders or other hearing protection will be made available for any Staff Member where it is not practicable to reduce the noise levels to a safe limit. These where issued must be worn at all times by both Staff and Student when operative is exposed to noise above the Above Upper Action level (85Db) or Exposure Limit(87Db).

Personal protective equipment required (last resort)

hearing protection

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

Noise assessments and Health Surveillance will be part of the safety management programme

Safe Work Practice Sheet **Storage Areas**	Ref: SWPS 014
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Slips, trips, falls
Cut
Back Injury
Sprains
Falling object
Fire

Person Exposed to Risk

✓ Students ✓ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Storage of hazardous and non-hazardous substances and materials

Checks & Inspections

- Keep all pathways clear
- Do not climb on shelves or storage racks
- Do not climb on shelves to reach heights – use stepladders only
- Keep aisleways clear
- Do not keep any hazardous materials and substances in general storage areas – they must be kept in designated protected store located in Maintenance Building.
- Store heavy items at low level.
- Store medium weight items on middle shelves.
- Store light items on high shelves.
- Store items on shelves in such a way that they can not fall off.
- Keep all hazardous materials and substances, papers, boxes, etc. away from electric heaters.
- Store material lengths or racking parallel to the aisle.
- Storage areas to be kept locked at all times.
- Only authorized personnel are allowed access to Storage Areas.
- Do not attempt to lift any loads unless you have received appropriate training in safe manual handling techniques.
- Smoking, eating and drinking is prohibited in all storage areas.

Information, Instruction & Training

Not applicable

Personal protective equipment required (last resort)

Not applicable

Initial Risk Rating (without any control measures)

Probability :	2	x	Severity	2	=	Risk Factor	4

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	2	=	Risk Factor	2

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 015
	Revision Date: Oct 2026
Workshop Floor Cleaning	Approved by: Breda Brennan

Hazards

Electricity
Contact with damaged, loose or poorly maintained electrical cables can result in electrocution-death or minor injuries, first, second and or third degree burns.

Manual Handling
Pushing and pulling hoover/buffer, cleaner, moving furniture, machinery etc. can result in acute or chronic lower back and or musculoskeletal injuries.

Chemicals
Applying cleaning chemicals and emptying machinery can result in chemical burns to the eyes, hands, face and other body parts and contamination of clothing. Damage to the lungs by acute wheezing or chronic asthma from the inhalation of fumes.

Slips Trips and Falls
Poor Housekeeping, wet floors, oil and dirt on the floors, trailing cables can cause slips trips and falls resulting in broken limbs, musculoskeletal injuries, broken fingers, cuts and bruises.

Mechanical
Contact with rotating buffer can result in entanglement of long hair, loose clothing causing asphyxiation, cuts and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☑ Contractors ☑ Visitors

Work Description

Class aid is required to clean the floors of the mechanical work shop by means of electrical hoover, buffer, Taski vacuum liquid sucker and liquid chemicals etc.

Controls

- Floor Cleaning must be carried out when students, contractors, visitors or other staff are not present.
- Food and drink are not permitted in the work shop/ lab at any time.
- Safety signage must be used when cleaning in progress.
- Inspect the electrical cable and plug of the cleaning equipment for damage or defects prior to use. Do not use if damaged or defected in any way and remove from use for repair or replacement.
- Class Assistant must not carry out repairs on cables, plugs or damaged cleaning equipment.
- All electrical repairs must be carried out by a competent person.
- Never transport cleaning equipment by pulling on the electrical cables.

- Chemicals must be stored (under lock and key controlled by class assistant) away in a designated area.
- Chemicals must remain in original containers with original Identification label description.
- Ensure that there is adequate ventilation prior to commencing cleaning and turn on the extract system where available.
- Liquid waste (Taski liquid vac hoover, bucket etc.) must be disposed of to external drains.
- Care must be taken when moving or lifting class furniture (seek assistance if required). Follow manual handling training at all time and seek assistance when required.
- Use a pallet truck for moving work benches or other items of furniture and repeat the process when returning to their original position.
- When cleaning machinery is in use, trailing electrical cables must be draped over shoulder of class assistance.
- Remove and replace any clothing contaminated by chemicals.
- When using a mop bucket do not over fill with water.
- When chemicals are required for cleaning ensure to apply them sparingly.
- On completion of cleaning, all cleaning machinery must be returned to storage.
- Observe where cleaning machinery cables are at all times, avoid walking over cables where possible.
- Always use cleaning equipment and chemicals as intended by their manufacturer.
- Never touch the rotating parts of cleaning machinery with any body part.
- Never wear loose clothing when operating cleaning machinery.
- Long hair must be neatly tied back or a well fitted cap worn.

Checks & Inspections

- Cables and Plugs on electrical machines must be checked before use.

Information, Instruction & Training

- Manual handling training.
- Chemical Handling training.
- PPE training.
- MSDS

Personal protective equipment required (last resort)

- Wear safety glasses, boots and gloves when cleaning in operation

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability :	**1**	x	Severity	**3**	= Risk Factor	**3 Low Risk**	
Risk Assessment Review *As and when process changes or yearly*							

Safe Work Practice Sheet	Ref: SWPS 016
	Revision Date: Oct 2026
Gas Safety	Approved by: Breda Brennan

Hazards

Chemicals
Working with oxygen and ethylene gases can result in asphyxiation.

Temperature
Quick releasing gas from cylinder can result in frostbite to exposed skin parts.

Explosion
Gas exposed to an ignition source can result in an explosion and or fire and result in death or first second and third degree burns. Cylinders left lying on their side when full or empty can explode and cause death.

Manual Handling
Moving cylinders to and from storage can result in acute or chronic lower back injury.

Escaping Gas
Gas escaping from a cylinder under pressure can result in loss of sight.

Falling Cylinders
Unsecure hold of cylinder when transporting to and from storage, not secure on trolley, cylinder left free standing, can result in a falling cylinder and crush injuries to the lower legs and feet.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☑ Contractors ☐ Visitors

Work Description

Use of oxygen and acetylene for welding.

Controls

- Persons required to connect and disconnect cylinders must have gas safety training.
- Material Safety Data Sheets must be available for any gas in use in the School
- Cylinders must be properly marked so that all users are aware of the contents.
- Always ensure that the regulator in use is suitable for the pressure contained within the cylinder. Check the pressure rating of the regulator and the indicated pressure within the cylinder.
- Ensure that gas tubing is in good condition and is suitable for the gas e.g. never use natural rubber tubing with O_2.
- Never lay cylinders on their side unless they are empty and are being stored prior to removal off site. Never lay acetylene cylinders on their side, even when empty.

- When using flammable gases remove potential sources of ignition from the area wherever possible.
- Cylinders must always be securely fastened. Cylinders must never be left freestanding for any length of time.
- Wear safety gloves, glasses and boots as required.
- The use of PTFE tape to seal joints is prohibited
- The use of oil or greases on cylinder threads is prohibited
- Never attempt to catch a falling cylinder
- The regulator should be closed / turned to zero before opening the cylinder valve at the spindle.
- Repairs to damaged regulators may only be undertaken by a competent service provider.
- Regulators must be serviced on a regular basis, as per the manufacturers instructions. As a general rule an annual inspection with a five year replacement or reconditioning is recommended.
- Regulators must be removed before transporting cylinders, even for short distances
- Correctly sized tools should be used when fitting regulators to ensure no damage to the fittings and a secure fit
- A purpose designed detector fluid should be used to check for leaks around a regulator during initial set up and at regular intervals thereafter
- Naked flames must not be used in areas where flammable gases are stored or used and signage to this effect must be erected close by.
- Areas in which compressed gases are in use must be adequately and continuously ventilated
- When a cylinder is not in use the cylinder valve should be closed
- Cylinders must be handled carefully at all times. All persons handling cylinders must be trained in manual handling techniques.
- Cylinders must be transported using a suitably sized cylinder trolley. Cylinders should be properly secured in the trolley and trolleys should be pushed and not pulled.
- Safety shoes and gloves must be worn when handling large compressed gas cylinders
- Cylinders must not be carried in passenger areas of vehicles. Cylinders should be carried in an open vehicle.
- Cylinders should be stored in well ventilated areas protected from the effects of weather and out of direct sunlight.
- Full cylinders should be stored separately to empty cylinders
- Empty cylinders should be returned to the supplier as soon as possible. Regular supplier delivery and collections should be made to ensure rapid turnover of used stock
- The minimum number of cylinders possible should be kept in storage
- Cylinders must be secured in an upright position

Checks & Inspections

- Piping is checked annually and records maintained by the school.
- Slam shut valves are checked annually and records maintained by the school.
- Lecturers and technicians to monitor the compliance with control measures and the wearing of PPE.

Information, Instruction & Training

- The MSDS for each gas must be available
- Manual Handling Training
- Chemical Handling Training
- PPE Training

Personal protective equipment required (last resort)

- Safety gloves
- Glasses
- Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 017
	Revision Date: Oct 2026
Corded and Cordless Hand Held Drills	Approved by Breda Brennan

Hazards

Electricity
Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing electrical cable, hand tool lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical
Entanglement of long hair or loose clothing with rotating tool or chuck head can result in minor cuts and bruises. Cuts to hands and fingers when in contact with rotating cutting tools.

Ergonomics
Operating the tool in crunched awkward positions and for extended periods of time can result in acute or chronic lower back and or upper body musculoskeletal injuries**.**

Vibration / Torque
Drilling various materials can result in vibration and cause hand and vibration injuries (white finger). Drilling various materials can result in sprains to the wrist and elbow when the drill comes to a sudden stop.

Flying Debris
Drilling various materials can generate flying debris (swarf) and result in loss of sight, drill bits can shatter when in use and fly resulting in loss of sight or minor cuts.

Noise
Drilling various materials can result in the generation of noise and cause temporary hearing discomfort**.**

Sharps
Drill bits can contain sharps and result in minor lacerations to the hands and fingers when handled.

Falling Machine
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The hand tools are used for drillings holes or screws into or cleaning down various materials.

Controls

- Students are permitted use of the equipment, under correct instruction and the lecturer or technicians supervision.
- Where possible always use a battery operated or 110v drill. If required to use a 240v drill ensure that it is plugged in to a socket with a Residual Control Device (RCD).
- 240v power tools are not permitted to be used for external work.
- Inspect the electrical cable, plugs and drill for damage or defects prior to use.
- Do not use if cable or drill is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Never leave a hand tool lying on the ground, use a nearby work bench to rest it on.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch a rotating cutting tool.
- Never assist in stopping or slowing down a rotating tool or chuck head.
- Do not use the hand tool for extended periods of time and tend to other duties for periods of rest or split the work load with another work colleague if possible.
- Maintain a firm and secure hold of the hand tool when drilling materials.
- Always place the hand tool in from the edge of a work bench when not in use.
- Wear safety glasses when drilling materials.
- Never touch swarf with bare hands.
- Wear safety hearing protection when required.
- Always use the drill as intended by the manufacturer.
- Never hold or handle a drill bit by its cutting tool head, wear gloves if required.
- Never leave a drill unattended and return to storage when no longer required.
- Always hold the tool with both hands when drilling materials.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.
- Safe use of operating the tool.

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves
- Hearing protection

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 018
	Revision Date: Oct 2026
Storage of Equipment	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, carrying, holding & pushing tripods, levelling staves, GPS, Trundle Wheels, sledge hammers & any other surveying hand held equipment can result in acute or chronic lower back & or musculoskeletal injuries.

Falling Equipment, Failed Racking
Lifting equipment to and from racking, not placed securely on the racking can result in falling equipment or materials and cause impact injuries to the head, racking is not secure resulting in head and upper torso crushing from falling equipment or racking.

Timber Splinters
Manually handling equipment with wooden handles etc. can result in puncture wounds to the hands, fingers and other body parts.

Slips Trips and Falls
Poor housekeeping, personal belongings, materials lying on the ground, wet floor of stores can cause slipping & tripping resulting in fall head & body impact injuries.

Sharps
Feet of tripod, range rod, nails, wooden stakes and other test equipment can cause puncture wounds to the feet hands and other body parts of person carrying equipment or bystanders in the path of equipment being moved.

Biological
Contact with equipment contaminated with earth & soil can result in contacting Weils disease, causing death, flu like symptoms, liver and kidney damage.

Fall from Heights
Climbing on shelving to gain access to equipment can result in a fall and head and body impact injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐Public ☐Contractors ☐Visitors

Work Description

Employees are required to load and unload tripods, levelling staves, GPS, Trundle Wheels, sledge hammers & any other surveying hand held equipment from the stores.

Controls

- Students are not permitted to remove or replace equipment in the stores.
- Lecturer or technician must only carry out this task.
- Follow the manual handling training guidelines at all times.
- Never overload the body with too many pieces of equipment.
- Where required seek assistance when lifting, carrying, loading and unloading the racking.
- Heavy materials must be placed on the bottom of the racking.
- Ensure equipment is not over hanging on the edge of the racking.
- Inspect the racking from damage or defects prior to use, do not use if damage or defected in any way.
- Inspect wooden handles etc. for damage or defects prior to issuing out. Remove from the stores if damaged or defected in any way for repair or safe disposal of.
- Competent persons must carry out repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Maintain dry floors at all times.
- Items must not be stored on the walkway of the stores.
- Exercise caution when handling equipment with pointed ends and always observe for the presence of bystanders.
- The stores must be locked at all times when not in use. Access to the stores must be limited by issuing of key to approved users.
- Wear safety gloves when handling equipment after being used for external purposes.
- Wash hands immediately after handling equipment that was used externally.
- Climbing on the racking is strictly prohibited.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Manual handling training
- PPE Training

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk

Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Use of Forklift – Combi Lift C4000 Side loader multidirectional	Ref: SWPS 019
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Inappropriate fork lift operations
Nips, traps, crushing injuries - pedestrian crush injury, operator crush injury.
Vehicle hazards (traffic movement etc.) -Vehicle to vehicle impact; workplace structure impact.
Impact injury from falling objects.
Unstable load.
Struck by a load falling from the forklift.
Overturn of the truck.
Fall from a height.
Fire
Poor maintenance & checks

Person Exposed to Risk

☑ Students ☑ Employees ☑ Public ☑ Contractors ☑ Visitors

Work Description

Use of fork lift for the loading, unloading and movement of material

Controls

Forklifts must be safe for use and fit for the purpose for which it is intended. Under health and safety legislation, a vehicle is a place of work. The law requires that workplaces are maintained in a condition that is safe and without risk to safety and health. Vehicles must be kept safe and fit for purpose and the driver must be able to get in and out of the vehicle safely. Forklifts also are classed as work equipment. Employers must make sure that drivers are familiar with the vehicle they are driving and that they have been given appropriate instruction, information and training to carry out required prechecks and to use the vehicle in the correct and safe manner, as per the manufacturer's instructions.

Safe Operation

Only members of DkIT staff who have been trained and certified are permitted to drive the fork lift.
Wear appropriate personal protective clothing as provided -Safety helmet, protective footwear and high visibility clothing are recommended as a minimum when working around forklifts.

Always:

- ✓ Carry out a pre-shift check of the forklift
- ✓ Report defects immediately to supervisor
- ✓ Make sure work path is free of obstructions
- ✓ Wear operator restraints, where fitted

- ✓ Look all around before moving off
- ✓ Look in the direction of travel
- ✓ Travel at a speed suitable for the location and the load carried
- ✓ Travel with the forks lowered, but clear of the ground
- ✓ Watch out for pedestrians
- ✓ Avoid sudden stops and violent braking
- ✓ Take care when driving on wet, icy, slippery or loose surfaces
- ✓ Slow down at corners, doorways, and at danger spots
- ✓ Sound the horn several times when approaching blind corners, exits and entrances
- ✓ Switch off and remove the key before leaving the forklift. Place the key in a safe location when driving task is completed
- ✓ Apply the parking brake before leaving the forklift
- ✓ Face the forklift and use the steps and handholds when getting in or out of the vehicle. Use three points of contact
- ✓ Report any accidents or near misses to a supervisor

Never:

- × Operate a forklift unless you are trained, competent and authorised to do so
- × Use a forklift or equipment you know is not working properly
- × Operate controls from outside the cab, unless it is designed so you can do this
- × Stand on or near the controls to reach the load or anything outside the cab
- × Start or stop suddenly
- × Make abrupt or quick turns
- × Travel on uneven ground unless the forklift is suitable for this
- × Run over unprotected cables or flexible pipes
- × Try to carry out repairs – leave this to a qualified maintenance engineer
- × Operate a forklift when under the influence of alcohol or drugs [prescribed or illegal]
- × Use mobile phones or other hand-held devices while operating the forklift
- × Use uncertified attachments
- × Use an attachment unless a competent person, an authorised dealer, or manufacturer has derated the forklift [reduced actual capacity]

Carrying Loads

Always:

- ✓ Assess the load before lifting. Check weight, size, load centre and security
- ✓ Make sure that pallets are in good condition
- ✓ Observe floor loading limits
- ✓ Find out the weight of the laden forklift
- ✓ Check safe working load (SWL) of racking before placing loads onto it

- ✓ Make sure load does not obstruct view. If it does, drive in reverse, looking in direction of travel
- ✓ Make sure there is adequate clearance for the forklift and load, including overhead
- ✓ Make sure the load does not exceed capacity of forklift
- ✓ Make sure the load is stable and can be safely lifted
- ✓ Carry the load as close to ground as possible
- ✓ Use controls smoothly
- ✓ Position forks properly and as widely as possible
- ✓ Make sure the fork arms are fully inserted when travelling with a load
- ✓ Make sure the forklift is stopped before raising the load
- ✓ Use suitable attachments for lifting unusual or wide loads
- ✓ Lower loads at a safe speed
- ✓ Make sure you are properly trained, certified and authorised to operate the forklift with an attachment

Never:

- × Lift loads greater than the capacity of the forklift. Capacity of Combo lift C4000 is 4000kg.
- × Move a load that appears unsuitable or unstable (including on a damaged pallet)
- × Lift load with attachments, unless trained, certified and authorised to do so
- × Travel with a bulky load that blocks your view
- × Travel with a raised load, unless the forklift is designed specifically for this
- × Leave the vehicle with the load raised.

Operating on Slopes

Always:

- ✓ Travel slowly when going down slopes
- ✓ Ensure the forks face uphill when travelling up or down slopes with a load
- ✓ Ensure the forks face downhill when travelling up or down slopes without a load
- ✓ Adjust the tilt (where fitted) to suit the gradient and raise the forks to clear the ground

Never:

- × Turn the vehicle around on or travel across a ramp or a slope
- × Leave a forklift on a slope, except in an emergency. In case of emergency always chock the wheels.

Carrying People

Always:

- ✓ Use a safe work method when using working platforms, i.e. integrated platform. Use of non-integrated platforms should only be permissible in exceptional circumstances under documented controls
- ✓ Remain in control of the forklift while workers are on the platform
- ✓ Watch out for pedestrians
- ✓ Use spotters when operating in congested areas

Never:

- × Lift a person on the forks or on a pallet, or similar, balanced on the forks
- × Move travel or turn with a person lifted at height
- × Carry passengers, unless the forklift is designed for this and has a designated seat and seat belt
- × Allow people to walk under raised forks or loads
- × Leave a truck unattended when people are using a non-integrated platform
- × Pick up a load if someone is standing close to it

When you have finished working

Always:

- ✓ Park the forklift in a safe place, on level ground; never on a slope
- ✓ Leave the forklift with the mast tilted forwards and the forks fully lowered, with the tips on the floor
- ✓ Apply the parking brake, select neutral, switch off the engine and remove the key
- ✓ Return keys or other activating devices to their place of safe-keeping
- ✓ Report any malfunctions or defects immediately to a supervisor

Checks & Inspections

- Visual check prior to use each day
- Weekly Inspection / Forklift Truck Operator Pre-Use Checks – see attached
- Thorough Examination -Thorough examination carried out every 12 months (every 6 months if used to lift persons) by a competent person and test certificate available.

Information, Instruction & Training

- Code of Practice for Rider-Operated Lift Trucks: Operator Training and Supplementary Guidance
- HSA Fork lift safety tips information Sheet
- HSA forklift operator pre checks information sheet
- Safety, Health and Welfare at Work (General Application) Regulations 2007 to 2020
- Safety, Health and Welfare at Work Act 2005

Personal protective equipment required (last resort)

Safety helmet, protective footwear and high visibility clothing

Initial Risk Rating (without any control measures)

Probability :	**3**	**x**	**3**	**= Risk Factor**	**9 High**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	**3**	= Risk Factor	**3 LOW Risk**

Risk Assessment Review

As and when process changes or yearly

Forklift Truck Operator Pre-Use Checks

HEALTH AND SAFETY AUTHORITY
www.hsa.ie

Vehicle Serial / Identification Number _____

Check Items

✔OK ✖DEFECT

Visual Checks

1	**General:** Good condition with no damage, excessive dirt or rust. Any defects previously noted repaired.	☐
2	**Forks:** Correctly positioned, not damaged, cracked, bent or worn. Anchor pins secure and not worn, loose or bent.	☐
3	**Carriage Plate:** No damage or distortion, sitting square to the mast and lubricated. End stop bolts engaged and secure.	☐
4	**Mast:** No damage, distortion or cracks. No undue wear, scoring, dirt or foreign bodies in channels. End stops secure. Rollers, no uneven wear or incorrect tracking. Slides intact and secure.	☐
5	**Back Rest Extension / Load Guard:** In good condition, secure with no distortion or cracks.	☐
6	**Lift Chains:** Not damaged worn or stretched, no broken links or rust. All pins in place.	☐
7	**Tyres:** No damage, excessive dirt or wear, rust, cracks, splits or separation of tyres and rims. Pneumatic tyres correct air pressure.	☐
8	**Wheels:** Undamaged and free from obstruction and debris. All nuts secure and in place.	☐
9	**Overhead Guard / Roll Over Protection Frame:** Secure, undamaged with no loose items.	☐
10	**Energy Source:** • **Gas or Diesel:** Engine oil, fuel and radiator water level correct. Gas bottle secured, no rust, corrosion or damaged pipes, hoses or seals.	☐
	• **Electric:** Electrolyte level, battery plug and connections correct. Power cable intact, connected and secure. No exposed wires, battery brackets secure and battery adequately charged.	☐
11	**Hydraulics:** No damage or fluid leaks, no splits in hoses, no leaks around fittings.	☐
12	**Identification / Rating Plate:** Intact, clean and legible.	☐
13	**Operator's Compartment:** Clean with no loose items.	☐
14	**Access:** Steps and grab handles in good condition and clean.	☐
15	**Lights, Windscreen and Mirrors (if fitted):** Clean and undamaged.	☐
16	**Fire Extinguisher (if fitted):** Secure and charged.	☐

Operational Checks

17	**Seat:** Good condition, secure and adjusted correctly.	☐
18	**Safety Belt:** Accessible, in good condition and working correctly.	☐
19	**Ignition & Electrical System:** Working correctly. All gauges and instruments visible and working.	☐
20	**Reversing Alarm and Horn:** Working correctly and audible.	☐
21	**Warning Lights & Lights (if fitted):** Working correctly.	☐
22	**Hydraulic Controls:** Working smoothly and correctly.	☐
23	**Brakes (Foot & Parking):** Working correctly.	☐
24	**Clutch & Gearshift:** Working smoothly and correctly.	☐
25	**Steering:** Working correctly with no excessive play.	☐
26	**Exhaust:** No excessive smoke, sparks or flames.	☐

Defect Details

Operator's Signature Date

Manager's / Supervisor's Signature Date

Note: This is a sample operator pre-use forklift truck checklist. It is recommended that employers prepare their own operator pre-use checklists, taking account of the manufacturer's recommendations, the type and use of their own forklift trucks.

SECTION 1

ELECTRONIC ENGINEERING LABORATORIES

Safe Work Practice Sheet Soldering – (Manual Soldering Iron)	Ref: SWPS 100 Revision Date: Oct 2026 Approved by Breda Brennan

Hazards

Electricity
Poorly maintained, installed or damaged electrical cables can result in electrocution-Death or first, second and third degree burns.

Hot surfaces
Contact with heated soldering iron or melted metals can result in first second and or third degree burns to the hands and fingers.

Fire
Combustible liquids (alcohol etc.) igniting when in contact with hot soldering iron resulting in fire, minor burns and respiratory illness from smoke inhalation.

Chemicals
Contact with alcohol, flux etc. can result in acute or chronic skin disease and illness and minor skin irritation. Inadvertent ingestion of lead from contaminated hands can result in central nervous system illness and disease.

Fumes
Inhalation of fumes from soldering can result in acute or chronic respiratory illness or disease.

Falling object
Soldering equipment placed at work bench edges can fall and cause minor burns, cuts and bruises to the legs.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Soldering is the process of joining two metals by the use of a solder alloy and heated electrical soldering iron. Solder for electronics is pre manufactured and can be made up of tin and lead of varying mixing ratios, lead free solder can also be obtained. Solder can melt at temperatures from 183 C (361 F) to 261 C (420 F) and change to a flowing hot liquid. The heated flowing liquid solder binds to Printed Circuit Boards and components where heat is also applied via the soldering iron.

Controls

- Food or drinks is not permitted in the electronics lab.

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Students must request soldering iron from the lecturer or technician.
- Students must check the soldering iron tip, cable and plug for defects prior to use.
- Inspect the Iron, cable and plugs for damage or defects prior to use. Do not use if damaged or defected in any way and remove from use for repair or replacement.
- Students must not carry out electrical repairs.
- Electrical repairs must be carried out by a competent person.
- Ensure Iron is switched off prior to use.
- Ensure extraction on the soldering unit is working effectively prior to use.
- Flammable solvents are not permitted in the vicinity of hot surfaces or materials.
- Flammable solvents must be stored in small quantities in the technical support office/store. If solvent is required ask the lecturer, technician for the solvent.
- Where solvents (flux) are being used, use a small plastic pipette for dispensing.
- Soldering irons must be kept clear of combustible materials.
- Allow for soldering Iron to cool sufficiently prior to returning to storage.
- Soldering irons must be switched off when not in use and returned to storage.
- Ensure the Iron is placed in from the workbench edge when in use.
- Ensure the soldering equipment in use is securely placed in from the work bench edge.
- All soldering must be performed on the work bench edge.
- Where possible use substitute non lead solder.
- Never put hands or finger to your mouth when soldering.
- Always wash your hands thoroughly when finished soldering.

Checks & Inspections

- Regular inspections and maintenance to be carried out on all soldering irons and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- Ensure filter on iron is working (replace filter if necessary)

Information, Instruction & Training

- Students must be trained in how to solder before being allowed to carry out soldering.
- Lecturers must inform students of the hazards and dangers associated with soldering.

Personal protective equipment required (last resort)

Safety glasses must be worn when soldering.

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 101
	Revision Date: Oct 2026
Mega UV Exposure Unit (Developing PCBs)	Approved by Breda Brennan

Hazards

Electricity
Poorly maintained, installed or damaged electrical cables can result in electrocution-Death or first, second and third degree burns.

Mechanical
Inadvertent crushing of fingers when closing the lid of the machine. Loose clothing long hair getting trapped in between lid of the machine & frame resulting in neck injuries.

Radiation
Lid of the machine open when machine is started causing acute minor skin burns or chronic skin damage, or cataracts on the eyes.

Chemicals
Splashes to the eyes and exposed skin when mixing photoresist with water can result in acute temporary eye and skin irritation. Contaminated clothing from splashing can result in acute minor skin irritation.

Manual Handling
Lifting and carrying loads can result in neck and lower back injuries.

Fumes
Inhalation of fumes from mixed chemicals can result in acute or chronic respiratory illness and minor eye irritation.

Slips, trip and falls
Poor housekeeping, personal belongings, wet floors can result in trips and slips causing falls and head impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Printing PCB circuitry onto copper based boards by using vacuumed UV light machine.

Controls

- Developing must be carried out in a separate room to the lab class.
- Trained lecturers or technicians must carry out this task.
- Students are not permitted to operate the machine or enter the room.
- Ensure electrical cables are free from damage or defects prior using the machine.

- Do not use the machine if cable or plugs are damaged in any way.
- Competent persons must only carry out electrical repairs to the machine.
- Always place hands and fingers on top of the lid when closing on PCBs & never between moving parts.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied bask or a well fitted cap worn.
- Ensure the lid is down and fastened prior to running the machine.
- Wear appropriate PPE when mixing and handling Photoresist developer.
- Ensure suitable undamaged water tray is chosen for mixing chemical & holding Copper boards.
- Always mix chemicals in a tray in the sink, proceed with adding water and then photoresist.
- If required use a plastic stick to mix the solution and avoid splashing.
- Remove and replace clothing contaminated with photoresist solution.
- Follow the manual handling training at all times when lifting, carrying etc.
- Ensure the extract system is turned on before mixing chemicals or operating the machine.
- Ensure the floor is maintained in a dry condition.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the workspace.
- Follow the manufacturer's machine operating procedures at all times.
- Turn off the machine when it is no longer required.
- Always wash your hands when work is completed.

Checks & Inspections

- Eye wash station to be flushed once per term.
- Operator to check extraction is operational before starting process.
- Machine to be maintained as recommended by the manufacturer and records kept by the School

Information, Instruction & Training

- Only trained staff allowed to carry out procedure. New operator will be trained by technician if required.
- Corrosive. Keep locked up.
- Manual Handling training
- Chemical Handling training
- PPE Training
- MSDS

Personal protective equipment required (last resort)

- Lab coat
- Safety Goggles
- Heavy duty rubber gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 102
	Date: Oct 2026
Bungard Spray, Etching PCBs	Approved by Breda Brennan

Hazards

Electricity
Poorly maintained, installed or damaged electrical cables can result in electrocution-Death or first, second and third degree burns.

Chemicals
Splashes to the eyes and exposed skin when mixing ferric chloride with water can result in acute temporary eye and skin irritation. Contaminated clothing from splashing and dripping PCBs can result in acute minor skin irritation and sever burning. Minor to major skin irritation on hands and fingers from removing ferric chloride powder from its storage container. Ingestion or inhalation can result in death, liver damage, nausea, headache, vomiting upper respiratory tract damage.

Slips, trip and falls
Poor housekeeping, personal belongings, wet floors can result in trips and slips causing falls and head impact injuries.

Fumes
Inhalation of fumes from handling and mixing chemicals can result in acute or chronic respiratory illness and minor eye irritation.

Manual handling
Lifting out chemical from drums, carrying PCBs and heavy loads can result in lower back injuries.

Mechanical
Contact with rotating shaft can result in entanglement and cuts and bruises.

Person Exposed to Risk

☐ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine sprays a liquid chemical solution onto a copper PCB to etch out printed circuitry.

Controls

- The wearing of loose clothing is not permitted when operating eh machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Etching must be carried out in a separate room to the lab class.
- Students are not permitted to operate the machine or enter the room.
- Only trained staff (lecturer / technician) are permitted to carry out procedure.

- Ensure electrical cables are free from damage or defects prior using the machine.
- Do not use the machine if cable or plugs are damaged in any way.
- Competent persons must only carry out electrical repairs to the machine.
- Wear appropriate PPE when handling and mixing ferric chloride.
- Ensure the machine has an adequate level of clean water in it.
- Use a plastic scoop or container to remove ferric chloride from its storage container.
- Carefully decant ferric chloride into machine water container, avoid splashing.
- Remove and replace any clothing contaminated with ferric chloride or mixed solution.
- Eye wash station must be within close proximity of work station.
- Ensure the floor is maintained in a dry condition.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure the extract system is turned on before mixing chemicals or operating the machine.
- Follow the manual handling training at all times.
- Ensure the machine lid is in place when operating the machine.
- Allow PCBs covered in chemical liquid to drain into the machine prior to washing them in the sink.
- Follow the manufacturer's machine operating procedures at all times.
- Do not touch rotating machine parts and ensure machine guards are in place at all times.
- Turn off the machine when it is no longer required.
- Always wash your hands when work is completed.

Checks & Inspections

- Eye wash station to be flushed once per term
- Operator to check extraction is operational before starting process.
- Machine to be maintained as per manufacturers recommendations and records kept by the School.

Information, Instruction & Training

- Only trained staff permitted to carry out procedure. New operators must be trained by technician if required.
- Corrosive chemical. Keep locked up.
- Manual handling training
- Chemical handling training
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Lab coat
- Safety glasses/goggles
- Heavy duty rubber gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 103
	Date: Oct 2026
Mega Roller Tinning Machine	Approved by Breda Brennan

Hazards

Handling cover salt crystals,

Harmful if swallowed. Acute skin and eye irritation if in contact with. Chronic effect of dermatitis from handing.

Fumes

Inhalation of lead or salt and flux fumes may cause acute respiratory illness, Long term exposure may result in severe irreversible damage to the lungs, heart, kidneys, liver and central nervous system.

Liquid flux

Contact dermatitis from long term exposure, minor skin irritation, burns to the eyes from splashing.

Electricity

Poorly installed or maintained, or damaged electrical cable and plugs can result in electrocution-death or first second or third degree burns.

Hot Surfaces

Contact with the solder bath, roller can result in first, second and or third degree burns to the hands and fingers.

Ejected material

Too much flux on the PCBs can result in ejected hot solder from the machine and cause burns to eyes resulting in loss of sight and burns to the skin.

Fire

Flammable materials, nylon clothing in contact with hot solder can ignite resulting in sever burning to the body..

Manual Handling

Moving the machine into position can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Machine

Unsecure machine on work bench edge can fall, resulting in lower leg and feet crush injuries.

Slips trips and falls

Poor housekeeping, personal belongings can result in slipping and tripping & cause head impact injuries from falls.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Process of developing circuit boards for electronics through the use of a soldering machine and chemicals.

Controls

- Work is carried out in a separate room.
- Only trained staff (lecturer or technician) are permitted to carry out this task
- Students are not allowed to carry out this task or to enter room.
- Fumes are extracted by local exhaust ventilation.
- Exposure time is low – work is carried out infrequently.
- Eye wash station must be close to work area (provide additional eye wash bottles as water pressure may be low I this area)
- Lab coats or overalls, approved chemical safety glasses or eye shields, hand protection, gloves to be worn.
- Check that the machine cable and plugs are in good working order and free from defects prior to use.

Information, Instruction & Training

- Eye wash station to be flushed once per term
- Operator to check extraction is operational and effective before starting process. Where there is insufficient extraction suitable respiratory protection must be worn
- Operator to report any symptoms.
- Manual handling training.
- Chemical handling training.
- PPE Training
- MSDS

Personal protective equipment required (last resort)

- Face shield
- Suitable protective gloves
- Where there is insufficient ventilation; suitable respiratory protection must be worn.
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Rik**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk

Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

- Do not use the machine if the electrical cable or plug is damaged in any way.
- Never touch the heated solder bath or rollers with hands.
- Ensure all guards are in place prior to operating the machine.
- Sparingly apply flux to PCBs for soldering.
- Nylon clothing must not be worn when operating the machine.
- Flammable or combustible materials must not be stored at or near the machine.
- Follow the manual handling training guidelines at all times when moving heavy loads.
- Ensure that the machine is secure and not near the edge pf the work bench.
- Ensure that good housekeeping is maintained at all times and free from personal belongings.
- Wash hands after work is complete.
- Wear the appropriate PPE.

Checks & Inspections

- Only trained staff allowed to carry out procedure. New operator will be trained by technician if required.
- Machine to be maintained as per manufacturers recommendations and records kept by the School.

Safe Work Practice Sheet Circuit Board Testing	Ref: SWPS 104 Revision Date: Oct 2026 Approved by Breda Brennan

Hazards

Slips, trips and falls

Trailing cables, personal belongings can cause trips that result in fall impact head and body injuries.

Electricity

Poorly fitted, maintained, damaged or defected electrical cables and plugs can result in electrocution-death, first second and or third degree burns.

Manual Handling

Carrying test equipment to and from storage can result in acute or chronic lower back injury and or musculoskeletal injury.

Fire

Flammable materials in contact with and ignition source can result in first second and or third degree burns.

Explosion

Explosion of components may occur due to incorrect wiring when circuit board is powered up by electricity and result in flying missiles and permanent or temporary damage to the eye/s.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Employees and students are required to test the electrical functionality of their made up Printed Circuit Board (PCB) by wiring them to a required Multi Metre, Power Supply Oscilloscope, Signal Generators etc.

Controls

- Students are permitted to carry out this task, under correct instruction and the lecturer or technician's supervision.
- Food and drink is not permitted to be consumed in the lecture room.

- Workstation must be maintained free from clutter and waste rubbish.
- Carry one testing unit (multi metre etc.) at a time to the work station. Use a trolley to assist in dispensing several test units.
- Avoid the trailing of cables by utilizing sockets mounted on workbenches.
- Never store flammable sources or materials at or near the test area.
- Inspect the power socket of testing equipment, power cable and plug prior to use.
- Do not use testing equipment or power cable if damaged or defected in any way.
- Students must not repair damaged equipment.
- Competent persons must only carry out electrical repairs.
- Wear safety glasses when testing equipment.
- Hand, damaged equipment or parts to the lecturer or technician for repair or replacement.
- Ensure testing equipment is switched off prior to powering up.
- On completion of testing return the testing machine and cable to their storage location.

Checks & Inspections

- Ensure that the testing equipment and power cables are free from defects prior to use. Follow the manufacturer's maintenance of equipment.
- Ensure that the workstation is maintained free from clutter.

Information, Instruction & Training

- PPE
- Manual handling
- Chemical training

Personal protective equipment required (last resort)

- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 105
	Revision Date: Oct 2026
Transporting Test Equipment	Approved by Breda Brennan

Hazards

Manual Handling
Lifting and carrying of test equipment, pushing and pulling trolleys to and from storages can result in acute or chronic lower back injury and or upper body arm and shoulder injuries.

Slips trips and Falls
Trailing cables, poor hose keeping can result in head, arm and hand injuries from falls. Minor cuts and bruises.

Sharps
Damaged cracked steel and plastic trolleys can result in puncture wounds and or major to minor cuts on hands and arms.

Tipping trolley
Damaged wheels or overloading of equipment on the trolley can result in it tipping over and causing lower body impact injuries.

Falling equipment
Unsecure test equipment falls off the trolley and results in lower body impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The technician is required to use a trolley for transporting various testing equipment and other items to the work benches of the students.

Controls

- Maintain good housekeeping and work area free from personal belongings at all times.
- Students are not permitted to transport test equipment on trolleys.
- Lecturers or technicians are only permitted to transport equipment on trolleys.
- Inspect the trolley for damage or defects prior to use and remove from use if damaged or defected in any way.
- Competent person/s must carry out repairs on trolleys.
- Avoid trailing cables from the trolley when transporting equipment.
- Do not overload the trolleys with test equipment.
- Ensure test equipment is secure on the trolley prior to transporting.
- Never stand or sit on a trolley.
- Follow the manual handling safety training guidelines.

Checks & Inspections

- Ensure wheels of the trolley are free from defect.
- Ensure the structure of the plastic and steel trolleys are not damaged.
- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Manual Handling training

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 106
	Revision Date: Oct 2026
CIF Roller Tinning Machine	Approved by Breda Brennan

Hazards

Handling cover salt crystals,
Harmful if swallowed. Possible skin and eye irritation if in contact with. Chronic effect of dermatitis.

Fumes
Inhalation of lead or salt and flux fumes may cause acute respiratory illness, Long term exposure may result in severe irreversible damage to the lungs, heart, kidneys, liver and central nervous system.

Liquid flux
Contact dermatitis from long term exposure, minor skin irritation, burns to the eyes from splashing**.**

Electricity
Poorly installed or maintained, or damaged electrical cable and plugs can result in electrocution-death and or first second or third degree burns.

Hot Surfaces
Contact with the solder bath, roller can result in first, second and or third degree burns to the hands and fingers.

Fire
Flammable materials, nylon clothing in contact with hot solder bath can result in catching fire and causing sever burning to the body.

Manual Handling
Moving the machine into position can result in lower back or musculoskeletal injuries.

Falling Machinery
Unsecure machine on work bench edge falling & causing lower leg and feet crush injuries.

Slips trips and falls
Poor housekeeping, personal belongings can result in slipping and tripping causing head impact injuries from falls.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Process of developing circuit boards for electronics with the aid of chemicals.

Controls

- Work is carried out in a separate room.
- Only trained staff (lecturer or technician) are permitted to carry out this task
- Students are not allowed to carry out this task or to enter room.
- Fumes are extracted by local exhaust ventilation.
- Exposure time is low – work is carried out infrequently.
- Eye wash station must be close to work area (provide additional eye wash bottles as water pressure may be low I this area)
- Lab coats or overalls, approved chemical safety glasses or eye shields, hand protection, gloves to be worn.
- Check that the machine cable and plugs are in good working order and free from defects prior to use.
- Do not use the machine if the electrical cable or plug is damaged in any way.
- Never touch the heated solder bath or rollers with hands.
- Ensure all guards are in place prior to operating the machine.
- Sparingly apply flux to PCBs for soldering.
- Nylon clothing must not be worn when operating the machine.
- Flammable or combustible materials must not be stored at or near the machine.
- Follow the manual handling training guidelines at all times when moving heavy loads.
- Ensure that the machine is secure and not near the edge pf the work bench.
- Ensure that good housekeeping is maintained at all times and free from personal belongings.
- Wash hands after work is complete.
- Wear the appropriate PPE.

Checks & Inspections

- Only trained staff, are permitted to carry out procedure. New operator will be trained by technician if required.
- Machine must be inspected in accordance with manufacturer's recommendations and records kept by the school.

Information, Instruction & Training

- Eye wash station to be flushed once per term
- Operator to check extraction is operational and effective before starting process. Where there is insufficient extraction suitable respiratory protection must be worn
- Operator to report any symptoms of illness or complaint.
- Manual Handling training
- Chemical handling training
- PPE Training
- MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Suitable protective gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk.**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 107
	Revision Date: Oct 2026
RS PCB Guillotine	Approved by Breda Brennan

Hazards

Manual handling
Lifting or carrying the machine into position can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Severing of fingers when in contact with the descending shearing blade and the machine base. Crushing of hand from failed guillotine lever resulting in hand impact injuries.

Falling Machine
Lower leg and feet crush impact injuries from unsecure falling machine.

Lead
Handling and tidying up cut PCBs with bare hands can result in inadvertent ingestion of lead particles and result in acute or chronic damage to the lungs, heart, kidneys, liver and central nervous system.

Slips trips and falls
Poor housekeeping, personal belongings can result in slipping and tripping causing head impact injuries from falls.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The guillotine is used to cut PCB boards into various different sizes.

Controls

- Only trained staff (lecturer or technician) are permitted to carry out this task
- Students are not permitted the use of the machine under any circumstances.
- Students are not permitted to enter the room where the machine is set up.
- Follow the manual handling training guidelines when moving the machine.
- Ensure all machine guards are in place when operating the machine.
- Never place hands or fingers in-between moving parts of the machine.
- Ensure that the machine is placed securely on top of and in from the edge of the workbench.
- Maintain good housekeeping at all times and work area free from personal belongings.
- Wear gloves when using the machine.

- Food or drink is not permitted in the lab.
- Wash hands completely when all work has commenced.

Checks & Inspections

- Regular inspections and maintenance to be carried out on the machine, records kept by the School
- Lecturers and Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- Chemical Handing Training
- PPE Training
- MSDS

Personal protective equipment required (last resort)

Safety glasses to be worn when soldering

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**3**			**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 108
	Revision Date: Oct 2026
FH2 Test Bed	Approved by Breda Brennan

Hazards

Electricity
Incorrectly installed, poorly maintained, damaged electrical cables and plugs can result in electrocution-death or first, second or third degree burns.

Manual handling
Lifting, carrying, pulling and dragging the machine and parts (test motors) etc. into position can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Loose clothing, long hair in contact with rotating motor shaft can result in entanglement and minor cuts and bruises. Contact with rotating motor shaft can result in minor cuts to the hands and fingers.

Falling Machinery & parts
Lower leg and feet crush impact injuries from unsecure falling machinery. Dropping motors and other parts when removing or replacing can result in lower leg and feet crush injuries.

Slips trips and falls
Poor housekeeping (machine parts etc.), personal belongings, trailing cables can result in slipping and tripping causing head impact injuries from falls.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to test the performance of TechQuipment fractional horse power machines including AC and DC motors and generators.

Controls

- Ensure that all electrical cables and are free from damage or defects prior to using the machine.
- Do not use the machine where cables and plugs are damaged or defected in any way.
- Competent persons must only carry out electrical repairs.
- Students are permitted the use of the machine, under correct instruction and the lecturer / technicians supervision.
- Follow the manual handling training guidelines when moving the machine, seek assistance if required.
- Ensure all machine guards are in place when operating the machine.
- Never place hands or fingers on moving parts of the machine.

- Ensure that the machine and parts are placed securely on top of and in from the edge of the workbench.
- Maintain a firm hold of machine parts when removing and installing from the machine.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the machine is plugged into the socket above the selected workbench when in use.

Checks & Inspections

- Regular inspections and maintenance to be carried out on the machine, records kept by the School
- Lecturers and Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	= Risk Factor	9 Medium Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Light Bulb, Capacitor, Inductor etc. Test Apparatus	Ref: SWPS 109
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Electricity

Poorly fitted, maintained, damaged electrical cables and plugs, wrong voltage selected on the main control panel, damaged bulbs, exposed light bulb socket contact points can result in electrocution-death, first second or third degree burns. Inadvertent contact with live current from long hair, jewellery or brushing against.

Slips trips and falls

Poor housekeeping, personal belongings can cause tripping resulting in fall impact head and body injuries. Trailing power cable can result in trips and impact fall head and body injuries.

Falling test equipment

Unsecure, poorly mounted test equipment on the work bench resulting lower leg and feet crushing and or impact injuries.

Manual Handling

Lifting, holding, carrying or pushing test equipment onto work benches can result in acute or chronic lower back and musculoskeletal injuries.

Temperature

Touching light bulbs that are or have been illuminated can result in acute minor burns to the hands or fingers.

Sharps

Inadvertent knocking against light bulbs, removing & replacing light bulbs in test apparatus can result in broken glass and contact with may cause lacerations to the hands and fingers.

Light

Looking into illuminated light bulb can result in acute temporary eye discomfort and partial blind spots.

Fire

Flammable materials, liquids in contact with ignition source (exposed electrical wiring or hot bulbs surfaces) can result in catching fire and causing first, second and or third degree burns.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The testing of electrical components, RLCs and circuits etc.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technicians supervision.
- Ensure that all electrical cables and plugs are in good working order prior to use.
- Do not use damaged or defected electrical cable or plugs.
- Competent persons must carry out electrical repairs.
- Loose clothing or jewellery must not be worn when using test apparatus.
- Long hair must be neatly tied back or a well fitted cap covering the hair.
- Never touch exposed electrical contact points, for example, broken bulb, empty light bulb socket contacts, or electrical wires.
- Lecturer of technician must ensure the correct electrical current is selected on the main control panel prior to using the test apparatus.
- The electrical control panel must be kept under lock & key & under the Lecturer / technicians control.
- Local work bench control boxes must be kept under lock and key, students must request key from lecturer or technician and return the key after switching off the box when testing is completed.
- Main control unit power must be switched off by the lecturer or technician when all testing is competed.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the workbench.
- Avoid the trailing of power cables and use the sockets mounted above the work bench.
- Ensure the test equipment is mounted level and in from the edge of the work bench at all times.
- Follow the manual handling training guidelines at all times.
- Never touch light bulbs that are illuminated, allow sufficient time to cool down before handling.
- Position light bulbs on the bench away from moving people or objects.
- Use a brush and pan to clean up any broken bulbs, dispose of broken glass carefully.
- Lecturer must provide students with experiment test instructions and ensure that they adhere to them at all times.
- Do not gaze or look directly into illuminated light bulbs for long periods of time.
- Flammable sources must not be stored at or near test apparatus or on workbenches.

Checks & Inspections

- Regular maintenance inspections to be carried out in compliance with Part 2 chapter 2 – use of work equipment (General Application) regulations 2007 S.I. No 299 of 2007 and in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 110
	Revision Date: Oct 2026
Logic Tutors	Approved by Breda Brennan

Hazards

Electricity
Incorrectly installed, poorly maintained, damaged electrical cables and plugs can result in electrocution-death or first, second or third degree burns.

Manual handling
Lifting, carrying and holding the machine to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Machine
Unsecure hold of machine when transporting, machine placed on the edge of the workbench can result in a falling machine and lower leg and feet impact injuries.

Slips trips and falls
Poor housekeeping, personal belongings, trailing electrical cables can result in slipping and tripping causing head impact injuries from falls.

Falling Trolley
Wheels of the trolley fail and collapse resulting in a falling trolley and lower leg and feet impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used as an aid for teaching digital circuit concepts.

Controls

- Ensure that all electrical cables and plugs are free from damage or defects prior to using the machine.
- Do not use cable or plug if damaged in any way.
- Competent person/s must carry out electrical repairs.
- Students are permitted the use of the equipment under correct instruction and the lecturer / technicians supervision.
- Follow the manual handling training guidelines when moving the machine.
- Use a trolley to transport the logic tutors to work benches.
- Ensure that the machine is placed securely on top of and in from the edge of the workbench.
- Maintain a secure hold of the machine when moving and installing.
- Maintain good housekeeping at all times and work area free from personal belongings.

- Ensure that the machine is plugged into the socket on the selected workbench when in use.
- Ensure that the trolley and wheels are free from damage prior to using.

Checks & Inspections

- Regular inspections and maintenance to be carried out on the machine, records kept by the School
- Lecturers and Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- PPE Training

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Prima Drilling Machines	Ref: SWPS 111 Revision Date: Oct 2026 Approved by Breda Brennan

Hazards

Electricity

Incorrectly wired, damaged machine power cables or plugs can result in electrocution-death or first second and third degree burns.

Mechanical

Loose clothing, long hair can result in entanglement with rotating drill causing cuts and bruises to the head and arms. Contact with rotating drill piece can result in cuts to the hands and fingers. Entrapment of hand with descending cutting tool and base table.

Slips, trips and falls

Poor housekeeping, personal belongings, waste material, trailing power cables on the ground can cause trips and slips resulting in fall impact head injuries.

Flying Debris / Objects

Waste drilled pieces of PCBs, disintegrated cutting tool can create flying debris and result in loss of sight. Unsecured work piece or clamp/vice can result in flying object and cause impact injuries to the head and body parts.

Sharps / Needle Sticks

Contact with rotating drill piece can result in lacerations to the hands and fingers. Handling drill pieces for replacement or removal can result in puncture wounds to the hands and fingers

Fire

Flammable materials in contact with waste drilled material can result in a fire causing first, second and third degree burns to the skin or respiratory illness from inhalation of smoke.

Manual Handling

Lifting and carrying the drill to and from storage / workbench or from area to area can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Machine

Drilling machine placed at the work bench edge, not secured on trolley, unsecure hold of when carrying can fall and cause lower leg and feet impact injuries.

Dust

Drilling PCBs can result in the inhalation of dust causing acute or chronic respiratory illness. Emptying the dust vacuum canister can result in acute or chronic respiratory illness.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used for drilling holes in to PCBs for projects work.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturers/technicians supervision.
- Inspect the machine power cable and plug prior to use. Do not use if damaged or defected in any way and report to the lecturer or technician for removal from use.
- Electrical repairs must be carried out be a competent person.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Hands or arms must never come between the descending drill piece and material for drilling.
- Follow manual handling training guidelines at all times.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the machine is powered from the mains supply on the workbench.
- Ensure all machine guards are in place prior to use.
- Safety glasses must be worn at all times when operating the machine.
- Inspect the cutting tool prior to use, do not use if damaged, hand back damaged cutting tool and request a new one from the lecturer / technician.
- Ensure to hold the work material firmly or clamp the work piece securely when operating the machine.
- Flammable materials must not be stored at or near the machine.
- Use a trolley when transporting drills from storage to workbenches or area to area.
- Maintain a secure hold of the drill when carrying.
- Always place the machine in from the workbench edge and flat and secure on the trolley when being transported.
- Never leave the machine running unattended.
- Always wait for the machine to come to a complete stop before adjusting or removing drilled material or parts.
- Ensure the cutting tool is adequately tightened before using.
- Ensure that the machine built in dust vacuum is working on the drill prior to use. Wear a mask when emptying dust from the vacuum tube and dispose of waste carefully.
- Ensure that there is adequate ventilation when operating the machine.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Mask

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Standard Electronic Equipment (Signal Generation, Measurement & Power Supply)	Ref: SWPS 112 Revision Date: Oct 2026 Approved by Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged or defected electrical power cables, plugs, poorly maintained equipment can result in electrocution-death or first second and third degree burns.

Slips, trips and falls
Poor housekeeping, personal belongings, trailing power cables on the ground can cause trips and slips resulting in fall impact head injuries.

Manual Handling
Lifting and carrying the equipment to and from storage / workbench or from area to area can result in lower back and or musculoskeletal injuries.

Falling Equipment
Equipment stored over the edge of shelving, workbench or trolley, unsecure hold of equipment when carrying can fall and cause lower leg and feet impact injuries.

Toppling Trolley
Transporting the equipment to and from storage can result in a toppling trolley due to damaged or defected wheels, locked wheels, obstructed walk ways, from carpet to corridors resulting in impact injuries to the lower legs and feet.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The equipment is used for laboratory practical work to assist in the measuring of electronic circuitry and the provision of low voltage.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technicians supervision.
- Inspect the machine power cable and plug prior to use. Do not use if damaged or defected in any way and report to the lecturer or technician for removal from use.
- Electrical repairs must be carried out be a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of power cables by using the electrical power sockets mounted on the workbenches.
- Follow the manual handling training guidelines at all times.

- Use a trolley for transporting the equipment.
- Ensure that equipment is stored in from the edge of shelving and workbenches.
- Ensure that equipment is placed flat and secure and in from the edge of trolleys when being transported.
- Maintain a secure hold of the equipment when lifting to and from storage.
- Heavy items of equipment must be stored on the bottom of shelving.
- Place the heaviest items of equipment on the bottom of the trolley when transporting.
- Inspect the wheels of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Ensure the wheels of the trolley are unlocked prior to moving.
- Ensure walks ways are free from obstructions.
- Slowly wheel the trolley from a carpet surface to a flat level surface on corridors or labs.

Checks & Inspections

- Regular maintenance of the equipment to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 113
	Revision Date: Oct 2026
Heat Shrink Guns	Approved by Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged or defected electrical power cables, plugs, poorly maintained equipment can result in electrocution-death or first second and third degree burns.

Slips, trips and falls
Poor housekeeping, personal belongings, electrical cables, component parts lying on the ground can cause trips and slips resulting in fall impact head injuries.

Temperature
Handling PCBs or cables that are heat treated, hands, fingers and or body parts in direct line of hot air flow can result in first second and or third degree burns.

Fire
Flammable materials in contact with hot air can catch fire resulting in first, second and or third degree burns.

Fumes
Insulation of wiring over exposed to heat can result in burning of plastic resulting in the inhalation of fumes and causing acute or chronic respiratory illness.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The heat gun is used to shrink wrap protective covering for cable connections.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical power cable and plug for damage or defects prior to use. Do not use if damaged or defected in any way and remove from use for repair or replacement.
- Electrical repairs must be carried out be a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that component parts are not lying on the ground.
- Avoid the trailing of electrical cables by using the power sockets mounted on the work benches or walls.
- Allow for heated materials to cool sufficiently prior to handling.

- Never place hands, fingers or body parts in direct line of the air flow from the heat gun. Maintain hands and fingers at a sufficient distance from the material being shrunk wrapped.
- Flammable materials must not be stored at or near the heat shrink gun when in use.
- Do not wear nylon clothing when operating the heat shrink gun.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure that there is good ventilation when operating the heat gun.
- Expose shrink wrap material to temperature as recommended by the manufacturer.
- Always use the heat shrink gun as intended by the manufacturer.
- Never leave the heat shrink gun running idly in hands or on a workbench.
- Never point the heat shrink gun in the direction of individuals.
- Wear safety glasses when operating the machine.
- Return the heat shrink gun to storage when it is no longer required.

Checks & Inspections

- Regular maintenance of the equipment to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 114
	Revision Date: Oct 2026
Equipment, Component Storage & Distribution	Approved by Breda Brennan

Hazards

Manual Handling
Placing and removing materials, components and equipment to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Equipment and Storage Bins
Components, equipment and linbins fall from storage location, carrying equipment or component to and from storage, equipment or components fall from the trolley resulting in head, upper and lower body impact injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, components or storage bins on the ground, water, worn carpets, and unravelled wire cables on reels can result in slipping and tripping causing falls and head and body impact injuries.

Sharps
Using wire cutting snips, wire strippers or knives on components, wiring or XPCB projects can result in lacerations to the hands and fingers.

Toppling Trolley
Transporting the equipment or components to and from storage can result in a toppling trolley due to damaged or defected wheels, locked wheels, obstructed walk ways, from carpet to corridors resulting in impact injuries to the lower legs and feet.

Flying Debris
Snipping wires or component pins can result in flying debris and loss of sight.

Fall from Heights
Using a ladder to gain access to storage space above head height, the ladder fails, ladder not used as intended by the manufacture result in an individual falling and in curing head and body impact fall injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Equipment and component parts are stored in various storage rooms and labs and are distributed to students as they are required.

Controls

- Students are permitted use and access to storage areas under the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times.
- Ensure that equipment, components and storage bins are in from the edge of storage shelving.
- Maintain a secure hold of equipment when transporting to and from storage locations.
- Ensure trolleys are not over loaded with equipment when transporting.
- Maintain good housekeeping and storage areas free from personal belongings at all times.
- Immediately clean and dry up and water lying on the ground.
- Inspect carpets on floors for damage or defects.
- Ensure wire cabling is securely wrapped around reels and not protruding on to the walkways.
- Walkways must be maintained free from loose components and storage bins.
- Always use the correct tool for cutting materials.
- Always cut away from the body when using a knife.
- Never handle a cutting tool by its cutting blade/s.
- Never place hands or fingers in between the closing blades or jaws of a hand tool.
- Inspect the wheels of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Ensure the wheels of the trolley are unlocked prior to moving.
- Ensure walks ways are free from obstructions.
- Slowly wheel the trolley from a carpet surface to a flat level surface on corridors or labs.
- Place equipment and components and storage bins flat and secure on trolleys when in use.
- Wear safety glasses when sipping or cutting wires or components.
- Always snip or cut away from the body and not in the direction of bystanders.
- Where possible cut or snip into waste bins.
- Storage areas under lock and key must be maintained locked at all times.
- Ensure that the store room controlled by combination lock is closed securely when exiting.
- Inspect the step ladder for damage or defects prior to use, do not use of damaged or defected in any way and remove from use for safe disposal of.
- Always use the ladder as intended by the manufacturer.

Checks & Inspections

- Regular maintenance of the equipment to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 115
	Revision Date: Oct 2026
Hand Held Tools for Electronics	Approved by Breda Brennan

Hazards

Electricity
Carrying out repair work on devices connected to the mains can result in electrocution-death or first second and or third degree burns.

Sharps
Incorrect handling and misuse of saws, screwdrivers, snips etc. can result in lacerations, puncture wounds or abrasions to hands and fingers.

Damaged Tools
Poor storage, misuse, wear and tear of tools can result in damage to the handles resulting in minor cuts and blisters to hands and fingers. Repairing or replacing damaged cutting tools, saw blades etc. can result in lacerations the hands and fingers.

Falling Hand Tools
Incorrect hold of, tool lying at the workbench edge, carrying too many at a time can result in a falling hand tool causing lower leg and feet puncture wounds, cuts and bruises.

Slips Trips and Falls
Poor Housekeeping, personal belongings, falling hand tools lying, waste cut offs from wiring. and components etc. on the ground can result in slips, trips and fall impact head injuries.

Ergonomics
Use of tools for extended periods of time can result in work related upper limb disorder.

Flying Debris
Use of various hand tools can result in flying debris from PCBs, wires, connector pins etc. resulting in the loss of sight.

Mechanical
Fingers or hands in between closing jaws or blades of hand tools can result in pinching of fingers or severing of finger tips.

Inadvertent Stabbing
Using your body as resting support for a component, PCB or material etc. resulting in self stabbing.

Manual Handling
Lifting or carrying equipment for repair or modification can result in acute lower back injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Hand held tools are required to enable operators to build and or repair or modify electronic projects. The hand held tools can comprise of files, rasps, screwdrivers, snips, plyers, hack saws, PCB saws, reamers and hand held drills etc.

Controls

- Students are permitted use of the hand held tools, under correct instruction and the lecturer or technicians supervision.
- Students must request the tools from the lecturer or technician.
- Ensure that equipment or machinery being repaired is disconnected and isolated from the mains supply prior to conducting repairs etc.
- Inspect the tool for damage or defects prior to use, do not use if damaged or defected in any way and hand back to lecturer or technician for removal from use.
- Wear safety glasses when using hand held tools.
- Always lift or carry a hand tool by its handle.
- All hand tools must be used in accordance with the manufacturers intended use and design.
- Students are not permitted to carry out repairs to damaged tools. All repairs, replacement blades or cutting tools must be carried out by a lecturer or technician.
- Ensure that tools required are resting in from the workbench edge.
- Falling hand tools must be picked up from the ground immediately.
- Maintain good housekeeping and work area free form personal belongings at all times.
- Ensure that the floors are swept clean from material cut offs as soon as possible.
- Avoid the use of hand tools for extended periods of times by tending to other duties where possible or periodically take small breaks.
- Always cut and snip materials away from the body and never in the direction of bystanders or other workbenches.
- Never place hands or fingers in between the closing jaws of plyers or snips and ensure to keep hands and fingers at a safe distance when in use.
- Never use your body as a supporting aid for work being carried out, always use the work bench as a means of support.
- Follow the manual handling training guidelines at all times.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Manual Handling Training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 116
	Revision Date: Oct 2026
Hand Held Electric Glue Guns	Approved by Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged or defected electrical power cable of the glue gun, plugs or poorly maintained equipment can result in electrocution-death or first second and third degree burns.

Slips, trips and falls
Poor housekeeping, personal belongings, electrical cable, glue sticks lying on the ground can cause trips and slips resulting in fall impact head injuries.

Hot Surfaces
Handling the tip of the glue gun, touching melted glue can result in first, second and or third degree burns to the hands or fingers.

Fire
Flammable materials, liquids or nylon clothing in contact with heated glue gun or glue can catch fire resulting in first, second and or third degree burns.

Fumes
Melting of glue and applying to materials can result in the inhalation of fumes causing acute respiratory illness.

Ergonomics
Working in the same position for extended periods of time can result in acute or chronic lower back and or musculoskeletal injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The glue gun is used to repair cracked or damaged plastic moulds.

Controls

- Students are permitted use of this equipment, under correct instruction and the lecturers or technicians supervision.
- Ensure the glue gun is stored under lock and key.
- Always use the glue gun as intended by the manufacturer's standard operating procedures.
- The gun must only be used indoors in dry conditions.
- Never carry or drag the gun by its electrical cable.

- Inspect the electrical power cable and plug of the glue gun for damage or defects prior to use. Do not use if damaged or defected in any way and remove from use for repair or replacement.
- Electrical repairs must be carried out by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that glue sticks are never lying on the ground and are stored away.
- Avoid the trailing of electrical cables by using the power sockets mounted on the work benches or walls.
- Never touch the tip of the glue gun or heated glue with hands or fingers.
- Allow for heated materials to cool sufficiently if and when required to handle.
- Flammable materials or liquids must not be stored at or near the glue gun when in use.
- Do not wear nylon clothing when operating the glue gun.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure of good ventilation when operating the glue gun.
- Always disconnect the glue gun from the mains supply when it is no longer required.
- Avoid working in the same position for extended periods of times, where possible tend to other duties for periods of rest.
- When in use, do not leave the gun lying on its side, use the stand provided and rest the gun upright.
- Wear safety glasses when operating the equipment.
- Wear a fume mask where required
- Return the glue gun to storage when it is no longer required.

Checks & Inspections

- Regular maintenance of the equipment to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Manual Handling
- Chemical Handling Training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Fume Mask

Initial Risk Rating (without any control measures)

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk

Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet Projects Design	Ref: SWPS 117 Revision Date: Oct 2026 Approved by: Breda Brennan

Electricity
Contact with AC or DC, Loose wires, exposed PCB electrical circuits, incorrectly wired motors, PCBs etc., damaged cables, faulty electrical equipment can result in electrocution-death or first second and or third burns.

Manual Handling
Pulling, pushing, lifting, carrying test equipment, machinery, electrical devices etc. can result in acute or chromic lower back and or musculoskeletal injuries.

Fire
Flammable sources exposed to heat pads, damaged or unprotected electrical wiring, soldering irons, live circuit boards, electrically charged light bulbs can result in fires and first, second and or third degree burns.

Slips trips and falls
Trailing cables, poor housekeeping, personal belongings, project equipment etc. can result in slips and trips causing falls and head and body impact injuries. Wet, icy, uneven surfaces can result in slipping causing fall injuries.

Falling Materials / Equipment
Project materials (motors, materials pieces etc.) test equipment placed on edge of workbench, resulting in crush injuries to the lower legs/feet. Unsecure hold of materials, equipment, over loading of body when carrying to work benches or test area.

Hot Surfaces
Contact with heat pads, soldering irons, light bulbs etc, resulting in first, second & or third degree burns to hands & fingers.

Mechanical
Entanglement, entrapment of long hair, loose clothing with rotating motor shafts, wheels, minor cuts and bruises. Pinching, loss of fingers with shaft, conveyor drive belt etc,

Pneumatics
Operating project piece with air, poorly maintained, damaged or loose air lines resulting in whipping airlines causing loss of sight cuts and bruises.

Sharps
Contact with knives, blades, recycled machine parts and materials etc. can result in severe lacerations to the hands and fingers and other body parts.

Chemicals

The use of lead, glues, paints, oils, and other chemical compounds (powders, aerosols etc.) can result in acute or chronic respiratory illness from inhalation, burns to the eyes & skin. Major organ damage may occur to the liver, kidney etc. when handling.

Outdoor Testing

Crossing road ways without looking, listening etc., struck by moving vehicles, cyclists, pedestrians, resulting in death or severe body injuries, major cuts and bruises. Test pieces striking tester and other outdoor users. Burns form sun exposure, Dehydration from long periods outside.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Level 8 student's project design, electronic and mechanical projects involving PC based simulation to assembly of prototype devices.

Controls

- Ensure all electrical cables and plugs are free from defect and damage prior to using.
- Students are permitted to carry out project work under the lecturer of technician's supervision.
- Ensure that all machinery, electrical motors and components being recycled are free from damage and defects prior to use.
- Follow the manual handling training guidelines at all times and seek assistance if required.
- Flammable materials must not be stored at or near work benches when working with electricity, heat pads, light bulbs, soldering, live circuit boards etc.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing power cables by using work bench power sockets.
- Lab walkways must be maintained clear at all times.
- Ensure project materials and test equipment are placed securely in from the edge of the work bench.
- Never over load the body when carrying project materials and test equipment etc.
- Ensure that all airline fixtures and fittings are in good working order prior to use.
- Allow all heated materials & parts to cool down adequately before handling, if required wear heat resistant gloves.
- Loose clothing must not be worn when working on projects.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never place hands or fingers in-between or on moving or closing parts etc.
- Never remove safety guards from equipment.
- Exercise caution when handling knives and other sharps. Always cut away from the body. Use retractable blades where possible.

- Ensure any recycled machine parts and materials are free from sharps or pointed parts when installing on a project.
- Ensure to obtain the MSDS for all chemicals prior to handling.
- Always consult the MSDS for additional advice on PPE required, storage conditions, First Aid etc.
- Assess the external weather and surface conditions prior to outdoor testing and field work.
- Always follow the safe cross code when negotiating road ways.
- Wear hi visibility jackets when testing outside.
- Be aware of other outside users.
- Avoid exposing skin to Sun UV rays, and cover up where possible.
- Use sun filter protection if required.
- Maintain hydration levels when working outside.
- Follow good hygiene practice at all times and wash hands thoroughly when work in complete.

Checks & Inspections

- Test apparatus and electrical equipment must be inspected in line with machine maintenance program and record kept by the Institute.

Information, Instruction & Training

- Manual Handling Training.
- Chemical Training
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Heat resistant gloves
- Safety gloves
- Safety knives
- Hi visibility jacket

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 118
	Revision Date: Oct 2026
Temperature Control Apparatus	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, poorly maintained, damaged and exposed electrical wires can result in electrocution-death or first second or third degree burns.

Manual Handling
The pulling, pushing, lifting and carrying of test apparatus to and from the work bench can result in lower back and or musculoskeletal injuries.

Fire
Flammable sources exposed to the heat pad, damaged or unprotected electrical wiring can result in fires and first, second and or third degree burns.

Slips trips and falls
Trailing cables, poor housekeeping, and personal belongings can result in slips and trips causing falls and head and body impact injuries.

Falling Test Apparatus
Test apparatus placed at the edge of the workbench can fall resulting in impact injuries to the lower legs and feet.

Hot Surfaces
Contact with electrically heated heat pad or machine internal parts can result in first, second or third degree burns to the hands & fingers.

Mechanical
Entanglement of long hair, loose clothing with exposed cooling fans can result in minor cuts and bruises. Contact with rotating fan blade can result in minor cuts to the fingers.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The test apparatus is used for student designed temperature controllers.

Controls

- Ensure all electrical cables and plugs are free from defect and damage prior to using the test apparatus.

- Do not use the test apparatus if electrical cables are damaged or defected in any way.
- Competent person/s must carry out electrical repairs.
- Follow the manual handling training guidelines at all times when using the test apparatus.
- Ensure that there are no flammable materials stored at or near the test apparatus.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of power cables on the ground by using the power sockets on top of the work benches.
- Ensure the test apparatus is mounted level and flat and in from the work bench edge.
- Ensure the lid of the machine is closed when using the test apparatus, if required to open the apparatus lid, do not touch the heat pad or machine internal parts.
- The wearing of Loose clothing is not permitted when operating the apparatus.
- Ensure that all the fan guard grills are in place prior to operating the apparatus.
- Ensure fan grills are in place.
- Long hair must be tied back or a well fitted cap worn.

Checks & Inspections

- Test apparatus must be inspected in line with machine maintenance program and record kept by the Institute.

Information, Instruction & Training

- Manual Handling Training.

Personal protective equipment required (last resort)

- Safety glasses

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 119
	Revision Date: Oct 2026
Bytronic Industrial Control Trainer	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and carrying of test equipment to and from storage can result in acute or chronic lower back injury and or upper body arm and shoulder injuries.

Slips trips and Falls
Trailing cables and poor housekeeping can result in head, arm and hand injuries from falls. Minor cuts and bruises.

Electricity
Poorly maintained, damaged or defected electrical wiring can result in electrocution-death, first second and or third degree burns.

Falling Machine
Transporting machine to test area, machine not placed firmly on work bench or on edge of bench can result in a falling machine and cause lower leg and feet impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Training in how a factory conveyor system operates by using a scaled down machine.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables by utilising sockets mounted on the work benches.
- Students are not permitted to transport the test equipment.
- Follow the manual handling safety training guidelines.
- Ensure all electrical cables and plugs are free from damage or defects prior to use. Do not use if damaged or defected in any way and remove from use for repair or replacement.
- Competent person must carry out electrical repairs.
- Seek assistance when transporting test machine to test location. Use a trolley if required.
- When in use, always place the machine firm and secure on the workbench and in from the edge.

- Ensure appropriate power control device (PLC, Lap Top, Micro Control etc.) is in good working order prior to use.
- Never leave the machine running unattended.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Manual Handling training

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**9 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet ***Wiring and Testing of PLC Training Rigs***	Ref: SWPS 120 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly or Incorrectly connected, fitted, damaged or defected electrical cables and plugs can result in electrocution-death or first, second and/or third degree burns

Mechanical
Entanglement of Long hair, loose clothing with the rotating motor shafts can results in possible cuts to hands and fingers.

Slips, Trips and Falls
Poor housekeeping, personal belongings can result slips or tips causing falls and broken limbs, musculoskeletal injuries, broken fingers, cuts and bruises.

Person Exposed to Risk

☒ Students ☒Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
The PLC Training rigs are used by students on L7/L8 Undergraduate programmes studying Electrical Automation

Controls

- Students are only permitted access to the Lab during scheduled class hours, under instruction and supervision of the Lecturer and/or Technician
- Inspection of mains plugs and cables prior to use/operation. Do not use if damaged or defected in any way and report to the Lecturer and/or Technician for removal from use.
- Maintain Good housekeeping, keeping the area in front of the stations clear from any personal belongings at all times.
- Do not place finger or any metal objects in the 4mm cable connectors
- 4mm Connecting Cables will be provided to the students as required during the laboratory sessions.
- Students are not permitted to open/remove any of the safety controls/connections on the units.
- Students are not permitted to switch on power to the units without instruction from the lecturer/supervisor.
- Ensure the Plastic Guards are attached to the motors prior to shaft rotation
- The switch Control and PLC units operate at voltage of 24V DC, with 2A fuse fitted for extra protection.
- The Electrical Motors are pre-wired and connected to the training rigs. Students are not permitted to open the protected enclosures or interfere in any way with the pre-configured wiring.

- Each unit is separately fused in case of short circuit/overload protection. Fuses may only be replaced by the Supervisor/Technician if required, following an inspection of the unit.
- Foods and Liquids are prohibited from the Lab area.
- Students should switch off all power to the units once Laboratory session is completed and return all the cables to the storage compartments.
- In case of emergency, there are 3 Emergency Electrical Cut Off switches installed in the Lab Area. Once activated, all electrical power is switched off from all electrical outlets in the Laboratory(NW116).

Checks & Inspections

- Constant vigilance and awareness
- Regular maintenance and period inspections to be carried out to ensure the units are safe for use.
- Regular Testing of units to ensure reliable operation

Information, Instruction & Training

- School of Engineering – General SWPS

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :	3	x Severity	3	= Risk Factor	9

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability:		x Severity		= Risk Factor	

Risk Assessment Review

As and when process changes or yearly

SECTION 2

ELECTRONIC ENGINEERING LABORATORIES

Safe Work Practice Sheet Accuforce Elite Materials Tester	Ref: SWPS 200 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, defected or damaged electrical power cable or plug can result in electrocution-death and or first, second or third degree burns.

Mechanical
Crushing and entrapment of hands & fingers between machine moving bridge to base etc. Crushing when operating machine without guards or limit switches set. Entanglement of long hair or loose clothing with rotating screw resulting in neck or head injuries.

Flying, Ejected material / debris
The crushing of various testing materials in the machine can generate flying materials & result in loss of sight. Testing tensile strength of materials can result in ejected debris and cause permanent eye damage.

Falling Machine & Parts
Test machine is not securely placed on the work bench and falls causing upper and lower leg injuries, cuts and bruises.

Manual Handling
Adjusting and manoeuvring the machine into position can result in acute or lower back injuries.

Slips trips and falls
Poor housekeeping, personal belongings, wet floors can result in slipping and tripping causing falls and head and body impact injuries, cuts and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Accuforce materials testing machine is used to carry out tensile, compressive and cyclical tests on a range of common engineering materials and artefacts.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the machine power cable and plug are free from defects or damage prior to using.

- Do not use the machine if the power cable if damaged or defected in any way and remove from use.
- Competent person/s must only carry out machine maintenance and electrical repairs.
- Do not place fingers or hands between the moving parts of the machine.
- Do not touch rotating screw with hands or fingers.
- Ensure all machine guards and limit switches are in place and working prior to using the machine.
- Ensure that the limit switches are set at the correct height prior to using the machine.
- The wearing of loose clothing or jewellery is not permitted when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Students are not permitted under any circumstance to operate the machine.
- Students are permitted to observe the operation of the machine for the purpose of obtaining test results.
- Safety glasses to be worn when operating the machine and observing for test results.
- Safety guard to be closed during test.
- Ensure that the machine is secure and placed flat, firm and level on the chosen work bench where the test is carried out.
- Maintain a firm grip of machine parts when handling for installing to and from the machine.
- Follow the manual handling training guidelines when lifting, pulling or pushing etc. heavy loads.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at the workspace.
- The consumption of food and drink is not permitted in the lab.
- Switch off the machine when it is no longer required & remove and return the power cable to safe storage.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only a trained lecturer or technician it to operate the machine
- Students are only permitted to observe the operation to the machines
- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	3	x Severity	3	= Risk Factor	9 High Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x Severity	2	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 201
	Revision Date: Oct 2026
Hounsfield Universal Test Machine	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, defected or damaged electrical cable or plug can result in electrocution-death and or first, second or third degree burns.

Mechanical
Crushing and entrapment of hands & fingers between machine moving bridge to base, frame etc. Entanglement of long hair or loose clothing with moving parts resulting in neck or head injuries. Pinching of fingers when operating the tensile chuck.

Manual Handling
Lifting and carrying the tensile chucks and various machine parts required for testing can result in lower back injuries.

Flying, Ejected material / debris
The crushing of various testing materials in the machine can generate flying materials & result in loss of sight. Testing tensile strength of materials can result in ejected debris and cause permanent eye damage.

Falling Machine & Parts
Test machine is not securely placed on the floor and falls causing upper body and lower leg impact injuries, cuts and bruises. Tensile chuck falls from hands or machine and results in lower leg & foot impact injuries.

Slips trips and falls
Poor housekeeping, personal belongings, wet floors can result in slipping and tripping causing falls and head and body impact injuries, cuts and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Hounsfield materials testing machine is used to carry out tensile, compressive and cyclical tests on a range of common engineering materials and artefacts.

Controls

- Students are not permitted under any circumstance to operate the machine.
- Ensure that the machine power cable and plug are free from defects or damage prior to using.
- Do not use power cable if damaged in any way and remove from use.

- Competent person/s must only carry out machine maintenance and electrical repairs.
- Do not place fingers or hands between the moving parts of the machine when in use.
- The wearing of loose clothing or jewellery is not permitted when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Students are permitted to observe the operation of the machine for the purpose of obtaining test results.
- Do not place fingers between moving parts of the tensile chuck.
- Follow the manual handling training guidelines when lifting, pulling or pushing etc. heavy loads.
- Ensure that the machine is secure and placed flat, firm and level on the ground where the test is carried out.
- Maintain a firm grip of machine parts when handling for installing or removal from the machine.
- Follow the manual handling training guidelines when lifting, pulling or pushing etc. heavy loads.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Food and drinks are not permitted in the labs.
- Safety glasses to be worn when operating the machine and observing for test results.
- Students and observers must be positioned at a safe distance from the machine, to be determined by the lecturer or technician, when in operation.
- Switch off the machine when it is no longer required.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Emergency stop buttons to be checked each semester
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only a trained technician or lecturer is permitted to operate this machine.
- Manual Handling Training
- PPE Training

Personal protective equipment required (last resort)

- Safety glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 202
	Revision Date: Oct 2026
Impact Testing Machine	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting the pendulum of the machine into position can result in acute or chronic lower back or musculoskeletal injuries.

Mechanical
Crushing of hands or fingers, severing of fingers if in contact with swinging pendulum.

Slips, tips and falls
Poor housekeeping and personal belongings can cause trips resulting in fall impact head injuries.

Falling Machine
Machine not bolted to the work top can topple and fall resulting in lower leg cuts & brushing & feet crush injuries.

Flying Missile
Impact testing materials in the machine can cause flying missiles resulting in permanent loss of sight.

Metal Sharps
Cuts to fingers from handling tested impact metal pieces.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

An impact test in which a metal test piece is gripped at the end of one pendulum. This pendulum is then released simultaneously with another opposing pendulum. Both pendulums meet at the bottom of the swing creating an impact, normally breaking the test piece.

Controls

- Lecturers or technicians must only carry out the operation of this device.
- Students are not permitted to operate this device.
- Follow the manual handling training guidelines when operating the machine.
- Never place hands or fingers in between moving parts of the machine.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the machine.

- Only trained persons are permitted to operate this machine.
- Follow the manufacturer's machine operating procedures at all times.
- Ensure that the machine is bolted secure to the workbench.
- Exercise caution for metal sharps when handling impact tested metal pieces, wear glove if required.
- Safety glasses to be worn by operators and observers
- All students and other observers must be positioned a safe distance from the machine, to be determined by the lecturer or technician, when in operation
- Machine must be locked in position when not in use
- A special key is required to lock and unlock the machine. The key is kept in the technicians office

Checks & Inspections

- Regular maintenance to be carried out according with manufacturers recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators are permitted to operate this machine.
- Manual handling training

Personal protective equipment required (last resort)

- Safety glasses
- Gloves

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**2**			**6 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 203
	Revision Date: Oct 2026
Magnetic Particle Flaw Detection	Approved by: Breda Brennan

Hazards

Electricity
Contact with a poorly installed, maintained, damaged or defected power cable or foot pedal cable could result in electrocution-death, or first, second and third degree burns.

Manual Handling
Moving of machine into required test position can result in acute or chronic lower back injury & or musculoskeletal injuries.

Falling Machine
Unsecure machine on workbench, moving the machine can result in a falling machine and impact and crush injuries to the feet.

Aerosols
Inhalation of chemicals being sprayed onto metals surfaces can result in acute respiratory tract irritation, coughing & wheezing and chronic illness. Hand and fingers skin irritation from handling contaminated sprayed metal components. Minor irritation to the eyes in contact with aerosols.

Chemicals
Hand and fingers in contact with liquid chemical on face plate of the machine resulting in minor skin irritation.

Slips, trips and falls
Poor housekeeping, personal belongings, trailing power and foot pedal cables can result in slips and trips causing fall impact head injuries.

Falling machine or test piece
Moving the machine into the required test position can result in a falling machine and lower leg and feet impact injuries. Metal test piece slips from hands and results in blunt force injuries to the lower legs and feet.

Mechanical
Entrapment of hands and fingers with holding clamps of the machine resulting in crush injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using magnetic particle techniques to reveal surface flaws in metal components and artefacts.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that all electrical power cables are in good working order and free from defects prior to use, do not use if damaged in any way.
- Competent persons must only carry out repairs on electrical equipment.
- Seek assistance when moving the machine into required testing position on work bench.
- Follow the manual handling training guidelines when moving the machine.
- Ensure the base of the machine is firmly supported on the work bench when placing into test position.
- Ensure the room is well ventilated prior to using aerosol sprays.
- Wear gloves when using aerosol sprays & handling contaminated metal test pieces.
- Apply aerosol spray as per manufacturer's instructions.
- Never try to smell the aerosol spray.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure the machine power cable is plugged into the socket directly above the work bench.
- Ensure the machine foot pedal cable is not training along the workbench walkway when in use.
- Where possible slide the machine along the workbench into the test position.
- Ensure the metal test pieces are firmly held by the hands when placing into the machine for testing.
- Clean and dry off any residual aerosol spray from the machine face plate and parts.
- Safety glasses to be worn.
- Always wash your hands when finished using the test equipment and aerosols.
- Do not place hands or fingers in between the holding clamps of the machine.

Checks & Inspections

- Earth leakage circuit breaker to be fitted to electrical supply and checked every term.
- Regular maintenance to be carried out according with manufacturers recommendations and records kept by the School.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained operators are permitted to operate machine
- Manual handling training.
- PPE training.
- Chemical training MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Safety gloves
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 204
	Revision Date: Oct 2026
Placing Test Weights on Load Hangers	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and placing of weights onto or removing from the machine can result in acute or chromic lower back or musculoskeletal injuries.

Falling machine
Machine not secure on the workbench, damaged or missing legs resulting in falling items causing lower leg and feet impact injuries.

Falling weights
Dropping weights onto the machine can result in impact injuries to the hand and fingers. Lifting and holding too many weights, resting weights on bench edge resulting in falling weight and lower leg and feet impact injuries. Machine cord breaks due to wear and tear or dropping of weights, weights fall due to being loaded in the same way resulting in lower leg and feet impact injuries.

Slips trips and falls
Poor housekeeping, personal belongings can cause slip and trip hazards resulting falls and head and body impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Calibrated weights are used in a range of experimental equipment to load test beams, structures and machines for the purposes of examining deflection, loading and stresses induced in mechanical systems.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that manual handling training guide lines are followed at all time.
- Ensure that the legs of the machine are in place and set in the correct position to stabilise the machine.
- Ensure that the machine is positioned firmly and securely on the work bench and in from the work bench edge.
- Never drop weights from a height onto machine, always slide the weight onto the machine.
- Hold one weight at a time and place and side it onto the machine.
- Inspect the machine cord prior to use, replace the cord if damaged.

- Maintain good housekeeping and work area free from personal belongings at all times
- Follow the manufacture standard operating procedures at all times.
- Good practice as per lecturer's and technician's instructions are employed when handing calibrated weights and when loading experimental and test apparatus.
- Weights must be kept at least 300mm from the edge of the bench
- When loading weights onto hangers, each weight should be rotated through at least 90 degrees from the previous weight loaded on the same hanger. This ensures that a series of weights cannot slip off the hanger at the same time.

Checks & Inspections

- Hangers are inspected annually. Any damaged or weakened hangers are discarded and replaced.

Information, Instruction & Training

- All students are given instruction in the safe use of weights and equipment for which weights are required.
- Manual handling training

Personal protective equipment required (last resort)

- Boots, Gloves

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 205
	Revision Date: Oct 2026
Whirling of Shafts Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and placing the machine onto the required workbench can result in acute or chronic lower back and or musculoskeletal injuries.

Slips trips and falls
Trailing power cable, poor housekeeping, and personal belongings can cause slips and tipping resulting in falls and impact head and body injuries.

Electricity
Poorly fitted, not maintained, damaged or loose electrical wiring can result in electrocution-death or first second or third degree burns.

Falling machine
Carrying the machine or placing on the edge of the work bench can result in a falling machine and cause lower leg and feet crush injuries, cuts and bruising.

Mechanical
Entanglement of long hair, loose clothing or jewellery with rotating shaft can result in minor cuts and bruising to hands, wrists and face.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is used to measure and examine physical or scientific properties of shafts rotating at high speeds.

Controls

- Students are permitted to operate the apparatus, under correct instruction and the lecturer or technician's supervision.
- Follow the manual handling training guidelines when moving and placing the machine.
- Ensure required workbench is free from clutter etc. prior to moving the machine.
- Seek assistance when moving the machine.
- Do not transport the machine with the power cable attached.
- Avoid the trailing of cables by using the power sockets on top of the work bench.
- Personal belongings are not permitted at or near the work bench.
- Maintain good housekeeping at all times.
- Ensure electrical cable and plugs are free from damage or defects prior to use. Do not use the machine if cable or plugs are damaged in any ways and remove from use for repair.

- Competent person must only carry out electrical repairs.
- Always place the machine firmly on top of the work bench and in from the bench edge.
- Do not wear jewellery or loose clothing when operating the machine.
- Long hair must be tied back or a well fitted cap worn.
- Never tamper with the machine safety guards or interlocks.
- Guard must be in place in order for the shaft to continually rotate.
- Ensure that interlock on the safety guard is operating properly.
- Check that the emergency stop is working properly.
- 2 whirl guards must be used for long shafts.
- 1 whirl guard must be used for short shafts.
- Follow the manufacturer's machine operating and set up procedures at all times.
- Return the machine to storage when it is no longer required.

Checks & Inspections

- Regular maintenance inspections to be carried out and records kept by the School
- Check periodically that the emergency stop is working properly
- Check periodically that safety interlock on the safety guard is operating properly
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- All students are given training before being allowed to use this apparatus
- Students are supervised while operating the apparatus
- Manual handling training

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability :	**1**	x	Severity	**3**	= Risk Factor	**2 Low Risk**	
Risk Assessment Review *As and when process changes or yearly*							

Safe Work Practice Sheet	Ref: SWPS 206
	Revision Date: Oct 2026
Fatigue Machine	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, not maintained, damaged or loose electrical wiring can result in electrocution-death or first second or third degree burns.

Slips trips and falls
Trailing power cable, poor housekeeping, and personal belongings can cause slips and tipping resulting in fall impact head and body injuries.

Mechanical
Entanglement of long hair, loose clothing, jewellery with rotating chuck head can result in minor cuts and bruising to hands, wrists and face.

Sharps
Holding, touching, removing fatigued metal can result in minor cuts to the hands and fingers. Minor cuts to the hands from adjusting the chuck clamp.

Falling machine
Vibration of running machine can result in machine falling from the bench and cause lower leg and feet crushing injuries.

Manual Handling
Lifting, placing and pushing the machine on the workbench can result in acute or chronic lower back and musculoskeletal injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine is used to measure and test various engineering materials and their stress levels where loads are applied to it from 2N upwards.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure electrical cable and plugs are free from damage or defects prior to use. Do not use the machine with damaged electrical cables, plugs. Competent person must only carry out electrical repairs.
- Avoid trailing power cables and use the power socket at the back of the machine.
- Personal belongings are not permitted at or near the machine test area.

- Maintain good housekeeping at all times.
- Guard must be in place in order for the machine to operate.
- Ensure that interlock on the safety guard is operating properly.
- Check that the emergency stop is working properly.
- Never tamper with machine guards or interlocks.
- Do not touch or handle metal test pieces by the fatigued end, use gloves if required.
- Avoid touching the chuck clamp when adjusting.
- Ensure the machine is securely placed on the work bench and as near to the back wall as possible.
- Periodically inspect the machine for forward movement when running.
- Follow the manual handling training guide lines at all times, seek assistance if required with heavy loads,
- Insert the specimen through the loading unit into the chuck; so that the edge of the machined radius just meets the front edge of the chuck
- Tighten the chuck onto the specimen and the screw on the loading Unit
- Use the actuator to apply a small load of 2 or 3N ONLY
- Close the guard when the test piece is loaded.
- Do not tamper with machine guards or interlocks.
- Ensure the machine is at least 150mm from the edge of the bench.
- Always follow the manufacturer's standard operating procedures.

Checks & Inspections

- Regular maintenance inspections to be carried out in compliance with Part 2 chapter 2 – use of work equipment (General Application) regulations 2007 S.I. No 299 of 2007 and in accordance with manufacturer's recommendations. Records kept by the School.
- Check periodically that the emergency stop is working properly
- Check periodically that safety interlock on the safety guard is operating properly
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- All students are given training before being allowed to use this machine.
- Students are supervised while operating this machine.
- Manual handling training.

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 medium risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 207
	Revision Date: Oct 2026
Indentec Rockwell Hardness Test	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, maintained, damaged electrical cables and plugs can result in electrocution-death, first second or third degree burns.

Slips trips and falls
Trailing power cables, poor housekeeping, and personal belongings can result in trips and slips causing fall impact head and body injuries.

Falling machine
Unsecure, badly mounted machine can fall and cause lower leg and feet crushing injuries.

Mechanical
Crushing of hands and fingers when in between ascending anvil indenter.

Falling objects
Unsecure hold of or carrying too many pieces of equipment can result in falling objects that cause lower leg or feet impact injuries.

Manual Handling
Lifting, holding or carrying test equipment or materials can cause acute or chronic lower back or musculoskeletal injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to test the hardness of metals.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure electrical cable and plugs are free from damage or defects prior to using the machine.
- Do not use the machine if cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the machine.
- Ensure the machine is mounted level on a firm and solid base.
- Never place hands or fingers between the ascending anvil and indenter piece.

- Use both hands for ascending the anvil.
- Do not carry too many test pieces or materials when setting the machine up.
- Ensure to maintain a secure hold of hand held equipment.
- Follow the manual handling training guidelines at all times.

Checks & Inspections

- Regular maintenance inspections to be carried out in compliance with Part 2 chapter 2 – use of work equipment (General Application) regulations 2007 S.I. No 299 of 2007 and in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 208
	Revision Date: Oct 2026
Metaserv Hand Grinder	Approved by: Breda Brennan

Hazards

Slips trips and falls
Poor housekeeping, personal belongings can result in falls and impact head and body injuries. Water hose pipe not connected into the sink or splashing of water from grinding, can result in slips and fall impact head and body injuries.

Falling machine
Unsecure, badly mounted machine on work bench can fall and cause lower leg and feet impact injuries, minor cuts and bruising.

Manual Handling
Lifting, holding or carrying the hand grinder into position can result in musculoskeletal injuries.

Manually Grinding
Grinding pieces of Bakelite on the grinder can result in fingertip skin abrasions when held too close to grinding surface.

Dust
Grinding pieces of Bakelyte without water can result in inhalation of dust & cause respiratory irritation and illness. Grinding material can result in inadvertent ingestion of particles causing irritation of the stomach and skin on hands.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to manually grind pieces of test Bakelite.

Controls

- Students are permitted to operate the device, under correct instruction and the lecturer or technician's supervision.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the machine.
- Ensure the machine is mounted level and in from the edge of the work bench beside the sink.
- Ensure that the water drain pipe from the grinder is set up into the sink drain.
- Clean and dry up any water on the floor as soon as possible.
- Follow the manual handling training guidelines at all times.

- Ensure there is an adequate water supply on grinder when grinding materials.
- Ensure that there is adequate ventilation when using the grinder.
- Maintain fingertips at a minimum of 1 centimetre above the grinding surface.
- Always wear gloves when grinding materials on the grinder.
- Dispose of gloves carefully.
- Wash hands thoroughly when work is complete.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- Chemical Training
- PPE Training
- MSDS

Personal protective equipment required (last resort)

- Gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 209
	Revision Date: Oct 2026
Metaserv Universal Polisher	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, maintained, damaged electrical cables and plugs can result in electrocution-death or first second or third degree burns.

Mechanical
Entanglement of Loose clothing, long hair in contact with rotating discs causing minor cuts and bruising.

Slips trips and falls
Poor housekeeping, personal belongings can cause tripping and fall impact head and body injuries. Trailing power cable can result in trips and impact fall head and body injuries. Spilled water from the machine on the floor can result in slipping causing fall impact head injuries.

Aerosol
Spraying Diamond Suspension liquid onto the grinding pad can result in the inhalation of aerosols causing minor respiratory, eye and skin irritation..

Falling machine
Unsecure, badly mounted machine on work bench can fall and cause lower leg and feet impact injuries causing minor cuts and bruising.

Manual Handling
Lifting, holding, carrying or pushing the polisher into position can result in acute or chronic lower back or musculoskeletal injuries.

Machine Polishing
Polishing pieces of Bakelite on the polisher grinding pad can result in fingertip skin abrasions and minor cuts when held too close to the polishing surface.

Dust
Polishing pieces of Bakelyte without water can result in inhalation of dust & cause acute or chronic respiratory irritation and illness. Polishing materials can result in inadvertent ingestion of particles causing irritation of the stomach and skin on hands.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to manually grind pieces of test Bakelite.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that all electrical cables and plug are in good working order prior to use.
- Don't use the machine if electrical cable or plugs are damaged or defected, remove from use for repair.
- Competent persons must carry out electrical repairs.
- Loose clothing must not be worn when operating the polisher.
- Long hair must be neatly tied back or a well fitted cap covering the hair.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the machine.
- Avoid the trailing of power cables and use the sockets mounted above the work bench.
- Ensure the machine is mounted level and in from the edge of the work bench.
- Follow the manual handling training guidelines at all times.
- Clean and dry up any water on the floor as soon as possible.
- Ensure there is an adequate amount of water on the polisher pad when operating.
- Ensure that there is adequate ventilation when using the polisher and equipment.
- When required, apply polishing spray, sparingly.
- Maintain fingertips at a minimum of 1 centimetre above the rotating polishing surface.
- Always wear safety gloves & glasses when machine polishing and grinding.
- Dispose of gloves carefully.
- Wash hands thoroughly when work is complete.

Checks & Inspections

- Regular maintenance inspections to be carried out in compliance with Part 2 chapter 2 – use of work equipment (General Application) regulations 2007 S.I. No 299 of 2007 and in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- Chemical Training
- PPE Training
- MSDS

Personal protective equipment required (last resort)

- Gloves
- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 210
	Revision Date: Oct 2026
Metaserv Mounting Press	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, maintained, damaged electrical cables and plugs can result in electrocution-death, first second or third degree burns.

Mechanical
Entrapment of hand and fingers, loose clothing & long hair in-between ascending cup and cylinder causing minor cuts and bruising. Crushing of hands and fingers in-between ascending cup and cylinder.

Slips trips and falls
Poor housekeeping, personal belongings can cause tripping and fall impact head and body injuries. Trailing power cable can result in trips and impact fall head and body injuries. Leaking hydraulic fluid oil, damaged water hose, loosely connected hoses to the machine can spill onto the floor and result in slipping causing fall impact injuries.

Falling machine and Parts
Unsecure, poorly mounted, manually operating the machine on the work bench can result in a falling machine and cause lower leg and feet crushing and or impact injuries. Unsecure hold to trust cup and machine parts causing fall impact lower leg and feet injuries.

Manual Handling
Lifting, holding, carrying or pushing the press into position can result in acute or chronic lower back and or musculoskeletal injuries.

Dust
Decanting Bakelite powder for extended periods of time, poor ventilation can result in inhalation of fine dust causing acute or chronic respiratory and or skin and eye minor irritation and disease. Inadvertent ingestion of Bakelite particles from placing hands and fingers to mouth resulting in acute minor stomach irritation.

Temperature
Faulty thermostat, water supply not connected, leaking hose or Inadequate flow to the machine can result in first & second degree burns to the hands and fingers when removing test material from the machine. Burnt fingers from touching test plugs.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used as a mounting press for encapsulation of samples using hot mounting resin.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that all electrical cables and plugs are in good working order prior to use.
- Do not use damaged or defected electrical cable or plugs.
- Competent persons must carry out electrical repairs.
- Loose clothing or jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap covering the hair.
- Never place hands or fingers in be-tween moving parts (ascending cup and cylinder) of the machine.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the machine.
- Avoid the trailing of power cables and use the sockets mounted above the work bench.
- Ensure the machine is mounted level and in from the edge of the work bench. Maintain a secure hold of machine parts when handling.
- Seek assistance to further secure the machine when operating it.
- Follow the manual handling training guidelines at all times.
- Ensure there is good water pressure and machine water hose is free from damage and is connected properly to & from the machine prior to use.
- Allow test plugs and any other heated materials to cool adequately before handling.
- Clean and dry up any water or oil leaks on the floor as soon as possible.
- Ensure that there is adequate ventilation when decanting Bakelite powder.
- Wear a dust mask when decanting Bakelite.
- Never place hands or fingers near the mouth during or after handling Bakelite.
- Wear appropriate PPE.
- Dispose of gloves carefully.
- Wash hands thoroughly when work is complete.

Checks & Inspections

- Regular maintenance inspections to be carried out in compliance with Part 2 chapter 2 – use of work equipment (General Application) regulations 2007 S.I. No 299 of 2007 and in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- Chemical Training
- PPE Training

- MSDS

Personal protective equipment required (last resort)

- Gloves
- Dust Mask
- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 211
	Revision Date: Oct 2026
Journal Friction Apparatus	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, maintained, damaged or loose electrical cables and plugs can result in electrocution-death or first second and or third degree burns.

Manual Handling
Lifting, carrying or pushing the machine from the lab stores into the lab lecturing room can result in acute or chronic lower back and musculoskeletal injuries.

Mechanical
Entrapment of fingers or hand, when in contact with machine rotating motor shaft, causing major cuts, bruising, & crushing of hands and fingers. Entanglement of loose clothing, long hair or jewellery resulting in minor cuts and bruises.

Slips trips and falls
Poor housekeeping, personal belongings, trailing power cables can cause tripping and fall impact head and body injuries. Leaking cooling oil from the machine can result in slipping causing fall head impact injuries.

Falling machine and Weights
The machine can fall when manually transporting to and from the stores, causing lower leg and feet crush injuries. Unsecure hold of, overloading of weights for machine can fall resulting in lower leg and feet crush injuries.

Chemicals
Prolonged or repeated exposure to lubricating oil can result in oil acne/ folliculitis and minor irritation.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to determine the friction torque in a plain journal bearing under varying conditions of load, speed and lubrication.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that all electrical cables and plugs are in good working order prior to use.

- Do not use the machine if electrical cable or plugs are damaged or defected in any way and remove form use fro repair.
- Competent persons must carry out electrical repairs.
- Follow the manual handling training guidelines at all times, seek assistance if required when moving the machine
- Long hair must be neatly tied back or a well fitted cap worn when operating the machine.
- Loose clothing or jewellery must not be worn when operating the machine.
- Never touch the rotating shaft of the machine.
- Never place hands or fingers in between rotating shaft and supporting base table.
- Follow the manufacturer's standard operating procedures at all times
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical power cables, plug the machine into the socket mounted on the wall behind the machine.
- Use a plastic tray to catch any leaking oil from the machine.
- Clean any oil in contact with the floor immediately.
- Seek assistance when moving the machine to and from the stores.
- Maintain a secure hold of weights when carrying to and from stores.
- Wear gloves when using machine lubricating oil or cleaning any oil from the floor.
- Dispose of gloves carefully.
- Wash hands thoroughly when work is complete.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Manual Handling
- Chemical Training
- PPE Training
- MSDS

Personal protective equipment required (last resort)

- Gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 212
	Revision Date: Oct 2026
MituToyo (501) Surface Measuring Instrument	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, maintained, damaged or loose electrical cables and plugs can result in electrocution-death or first second and or third degree burns.

Manual Handling
Lifting, carrying or pushing the machine control unit from the work bench can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Entrapment & crushing of fingers or hand, when in between descending motor drive and base table or ascending motor drive and machine column. Entanglement of loose clothing or long hair when in contact with rotating shaft screw.

Slips trips and falls
Poor housekeeping, personal belongings and trailing power cables can cause slipping and tripping resulting in fall impact head and body injuries.

Falling machinery and parts
Machine control unit not mounted properly on the workbench falls resulting in lower leg and feet impact injuries. Unsecure hold of levelling table and machine parts, resulting in lower leg and feet crush injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The instrument is used to measure the surface roughness of materials

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that all electrical cables and plugs are in good working order prior to use.
- Do not use machinery with damaged or defected electrical cable or plugs. Remove from use for repair.
- Competent persons must carry out electrical repairs.
- Follow the manual handling training guidelines at all times, seek assistance if required when moving the machine
- Long hair must be neatly tied back or a well fitted cap worn when operating the machine.

- Loose clothing or jewellery must not be worn when operating the machine.
- Never place hands or fingers in between the machine ascending or descending parts.
- Maintain good housekeeping at all times & work area free from personal belongings.
- Ensure to use the power sockets above the workbench when using the machine.
- Ensure that all machinery is mounted securely and in from the edge of the work bench.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**2**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**1**	=	Risk Factor	**1 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 213
	Revision Date: Oct 2026
NeoView Ultra Violet Inspection Lamp	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, maintained, damaged or loose electrical cables and plugs on UV Lamp can result in electrocution-death or first second and or third degree burns.

Manual Handling
Lifting, carrying or holding the UV machine to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Entanglement of long hair with rotating UV cooling fan causing minor cuts and bruises.

Slips trips and falls
Poor housekeeping, personal belongings, trailing UV power cables can cause slipping and tripping fall impact head and body injuries.

Falling machinery and parts
Machine control unit not mounted properly on the workbench falls resulting in lower leg and feet impact injuries. Unsecure hold of machine when transporting or operating resulting in lower leg and feet impact injuries.

Physical
Short term exposure to UV lamps can result in blindness and severe burns to the skin. Chronic effects of UV exposure can result in carcinoma of the skin and cataracts of the eyes.

Temperature
Contact with the housing of the lamp can result in minor burns to he hands and fingers.

Chemicals
Inhalation of aerosols being sprayed on test materials can result in acute or chronic respiratory illness, wheezing and coughing. Skin exposed to aerosols being sprayed or holding test materials can result in acute or chronic minor skin irritation. Aerosols may cause irritation to the eyes if exposed to.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to identify defects in metal materials.

Controls

- Students are permitted to operate the UV Lamp, under correct instruction and the lecturer or technician's supervision.
- Ensure that all electrical cables and plugs on the UV lamp are in good working order and free from damage or defects prior to use.
- Do not use equipment with damaged or defected electrical cable or plugs, remove from use for repair.
- Competent persons must carry out electrical repairs.
- Follow the manual handling training guidelines at all times.
- Long hair must be neatly tied back or a well fitted cap worn when operating the machine.
- Ensure that UV lamp fan guard is in place prior to operating the machine.
- Maintain good housekeeping at all times & work area free from personal belongings.
- Avoid the trailing of power cables by utilising the power sockets above or on the workbenches.
- Ensure that all machinery is mounted securely in from the edge of the work bench.
- Maintain a secure hold of the machine when transporting or operating.
- Never point the UV lamp directly into the eyes of one's self or bystanders or at exposed skin parts.
- Always use UV safety glasses when operating the lamp.
- Switch on the UV lamp when required.
- Operators of UV lamps must cover up all exposed skin parts where possible.
- Only point the UV lamp in the direction of the test piece material and away from bystanders.
- Students must stand behind the UV lamp when in use and never in between the lamp and test piece.
- Ensure that the room is well ventilated when operating the UV machine and spraying chemicals.
- Ensure that the cooling fan of the UV lamp is working prior to use.
- Wear safety gloves and glasses when handling test materials contaminated with chemical sprays.
- Sparingly apply chemical sprays on test material.
- Never try to smell or inhale aerosols.
- All safety gloves must be disposed of carefully when work is complete.
- Always follow good hygiene practice and wash hands thoroughly.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- Chemical handling

- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- UV approved safety glasses
- Safety gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 214
	Revision Date: Oct 2026
TV, Video and DVD Players	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, maintained, damaged or loose electrical cables and plugs on Television, VHS or DVD Player could result in electrocution-death or first, second and or third degree burns.

Manual Handling
Pulling, pushing or lifting the machinery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Equipment
Television not securely fixed to the top of the trolley, door way saddles or low ramps can cause equipment to fall when being moved resulting in lower leg and feet impact injuries.

Collapsing Trolley
Wheels on the trolley fail and collapse resulting feet impact injuries with trolley frame.

Slips trips and falls
Poor housekeeping, personal belongings, trailing power cables can cause slipping and tripping resulting in fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used as a teaching aid to display various VHS cassette and DVD engineering films.

Controls

- Students are not permitted to transport the equipment to the lab location.
- Ensure that all electrical cables and plugs on the TV, VHS and DVY players are in good working order prior to use.
- Do not use equipment if electrical cables or plugs are damaged or defected in any way.
- Competent persons must carry out electrical repairs.
- Follow the manual handling training guidelines at all times.
- Ensure TV, DVD & VCR is stored on the purpose built trolley for transporting to and from lab.
- Ensure that the TV is securely fixed to the top of the trolley when transporting.
- Inspect the wheels on the trolley prior to use, do not use if damaged in any way and remove from use for repair.

- Good housekeeping must be maintained at all times and lab free from personal belongings.
- Avoid the trailing of power cables. Place the back of the machines as near to the wall possible and use the wall sockets provided.
- When moving the trolley ensure that you slowly push or pull it over any doorway saddle or low lab ramp. Seek assistance if required.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 215
	Revision Date: Oct 2026
Torsion Testing Machine	Approved by: Breda Brennan

Hazards

Manual Handling
Pulling or pushing the machine along or to and from the workbench can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Crushing of fingers when adjusting and sliding machine chuck. Entanglement of long hair of loose clothing resulting in minor injuries.

Falling Machine
Moving the machine along or to another workbench, machine placed at the edge of the workbench can result in a falling machine and cause severe crushing and impact injuries to the lower legs and feet.

Slips trips and falls
Poor housekeeping, personal belongings, cleaning fluids can cause slipping and tripping resulting in fall impact head and body injuries.

Chemicals
Lubricating the ridged box with Tribol lubricant can result in acute minor skin irritation to the hands and fingers, irritation to the lungs if inhaled, irritation to the eyes.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to demonstrate the validity of the elastic torsion equation of over strained materials.

Controls

- Lecturers and technicians are only permitted to set up the machine on the workbench.
- Follow the manual handling training guidelines at all times when moving the machine.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Do not place fingers or hands in between sliding chuck when moving into position.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.

- Incrementally move the machine when sliding along the workbench and keep as far away from the edge of the workbench.
- Seek assistance when moving the machine to another workbench.
- Ensure that the machine is always placed in from the edge of the workbench.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any cleaning liquids from the floor immediately.
- Ensure that the room is well ventilated when applying Tribo aerosol lubricant and apply sparingly.
- Wear gloves when handling Tribo lubricant.
- Follow good hygiene practice at all times and wash hands when finished handling Tribo lubricant.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- Chemical Handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 216
	Revision Date: Oct 2026
Universal Vibration Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling
Pulling, pushing or moving the machine into the required test area, Lifting weights onto and off the machine can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Pinching of skin on hands and fingers if holding the coiled spring when loading and unloading weights. Crushing of fingers if in between the ascending or descending apparatus beam support when load being applied or removed. Pinching of fingers when removing or adding various test equipment.

Falling Weights
Weights not placed securely on the machine weight hanger, unsecure hold of weight being applied to the machine, weights stored on the edge of the apparatus work top can fall causing lower leg and feet impact and crush injuries.

Collapsing Apparatus
Wheels of the apparatus are damaged and fail resulting in the apparatus collapsing to the ground causing crush injuries to the feet.

Slips trips and falls
Poor housekeeping, personal belongings, glycerol oil can cause slipping and tripping resulting in fall impact head and body injuries.

Chemicals
Handling of glycerol with bare hands from contaminated test equipment, accidental spillage may result minor skin irritation.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to establish the parameters for a damped mechanical vibration system.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Follow the manual handling training guidelines at all times.
- Ensure that the trolley wheels are in good working order.
- Never touch or hold the apparatus coiled spring when loading or unloading weights.

- Never fingers in between the beam support when loading or unloading weights.
- Never place fingers in between moving parts of clamps.
- When placing weights on to the apparatus ensure that they are placed at right angles to each other.
- Maintain a secure hold of weights when carrying or holding.
- Never place weights on the edge of the apparatus work top.
- Adjust the apparatus leg support to the ground when in storage or in required test position.
- Adjust the leg support slightly above the ground when moving the apparatus.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any spilled glycerol oil from the floor immediately.
- Use safety gloves if handling equipment contaminated with glycerol or cleaning an accidental spillage.
- Wash any contaminated skin immediately after contact with glycerol.
- Follow good hygiene practice at all times.
- Wash hands thoroughly after handling glycerol.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- Chemical handling training.
- MSDS for Glycerol.

Personal protective equipment required (last resort)

- Safety Boots
- Safety gloves

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 217
	Revision Date: Oct 2026
Flat and V Belt Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting of weights to and from the apparatus can result in acute or chronic lower back and or musculoskeletal injuries.

Falling apparatus
Apparatus not secured to the wall, loose bolts & nuts resulting in a falling apparatus and lower leg and feet crush and impact injuries.

Mechanical
Entanglement of loose clothing, long hair, jewellery with manually operated drive wheel resulting in minor neck injuries and bruising.

Falling Weights
Weights placed incorrectly onto the apparatus weight hanger, unsecure hold of weight being applied to the apparatus, failed flat or v belt or spring balance, over loading of weights can result in falling weights causing lower leg and feet impact injuries.

Slips trips and falls
Poor housekeeping, personal belongings, weights on the ground can cause slipping and tripping resulting in fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used in determining the coefficient friction and maximum power transmission capacity of a flat and V belt and Pulley.

Controls

- Students are permitted to use the apparatus, under correct instruction and the lecturer or technician's supervision. .
- Follow the manual handling training guidelines at all times when lifting weights.
- Ensure that the apparatus is fix bolted and tightened securely to the wall.
- Check for any loose nuts prior to using the apparatus.
- Loose clothing and jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure to place weights at right angles to each other when loading the weight hanger.
- Maintain a secure hold of weights when loading the apparatus.

- Inspect the spring balance, flat and v belt for any damage or defects prior to use, do not use if damaged or defected in any way and hand to lecturer or technician for removal and replacement.
- Never overload the apparatus with weights.
- Follow the manufacturer's operating and testing guidelines at all times.
- Maintain good housekeeping and work area from personal belongings at all times.
- Weights must not be stored on the ground around the apparatus and returned to workbench storage after use.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 218
	Revision Date: Oct 2026
Worm & Gear Wheel Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting of weights to and from the apparatus can result in acute or chronic lower back and or musculoskeletal injuries.

Falling apparatus
Apparatus not secured to the wall, loose bolts & nuts resulting in a falling apparatus and lower leg and feet crush and impact injuries.

Mechanical
Entanglement of loose clothing, long hair, and jewellery with rotating worm screw and cog wheel resulting in minor neck injuries and bruising. Crushing and pinching of fingers with rotating worm screw and cog wheel and rotating cog wheel and worm wheel holding brackets,

Falling Weights
Weights placed incorrectly onto the apparatus weight hanger, unsecure hold of weight being applied to the apparatus, failed string for holding weights, over loading of weights can result in falling weights causing lower leg and feet impact injuries.

Slips trips and falls
Poor housekeeping, personal belongings, weights on the ground can cause slipping and tripping resulting in fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used to find the velocity ratio, mechanical advantage and efficiencies or a worm and gear wheel.

Controls

- Students are permitted to use the apparatus, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times when lifting weights.
- Ensure that the apparatus is fix bolted and tightened securely to the wall.
- Check for any loose nuts prior to using the apparatus.
- Loose clothing and jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Do not touch the apparatus worm or gear wheel or holding brackets when loading with weights.

- Ensure to place weights at right angles to each other when loading the weight hanger.
- Maintain a secure hold of weights when loading the apparatus.
- Inspect the string for holding weights for damage or defects prior to use, do not use if damaged or defected in any way and hand to lecturer or technician for removal and replacement.
- Never overload the apparatus with weights.
- Follow the apparatus manufacturer's operating and testing guidelines at all times.
- Maintain good housekeeping and work area from personal belongings at all times.
- Weights must not be stored on the ground around the apparatus.
- Return weights to workbench storage after use.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 219
	Revision Date: Oct 2026
Fly Wheel Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting of weights to and from the apparatus removing and replacing the apparatus to and from the wall can result in acute or chronic lower back and or musculoskeletal injuries.

Falling apparatus
Apparatus not secured to the wall, loose bolts & nuts, removing and replacing the apparatus to and from the wall resulting in a falling apparatus and lower leg and feet crush and impact injuries.

Falling Weights
Weights not tied securely onto string, unsecure hold of weight being applied to the apparatus, failed string for holding weights, string over loaded with weights can result in falling weights causing lower leg and feet impact and crush injuries.

Slips trips and falls
Poor housekeeping, personal belongings, weights on the ground can cause slipping and tripping resulting in fall impact head and body injuries.

Mounted Object
The apparatus fixed onto wall may be walked into resulting head and body impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used to determine the movement of inertia of a fly wheel.

Controls

- Students are permitted to use the apparatus, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times when lifting weights.
- Ensure that the apparatus is fix bolted and tightened securely to the wall.
- Check for any loose nuts prior to using the apparatus.
- Loose clothing and jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure to tie the weight securely onto the string and apparatus.
- Maintain a secure hold of weights when loading the apparatus.
- Inspect the string for damage or defects prior to use, do not use if damaged or defected in any way and hand to lecturer or technician for removal and replacement.

- Never overload the string with weights.
- Follow the apparatus manufacturer's operating and testing guidelines at all times.
- Maintain good housekeeping and work area from personal belongings at all times.
- Weights must not be stored on the ground around the apparatus and returned to workbench storage after use.

Recommendation

- The apparatus should be set up in a different area of the lab so as to prevent students and employees from inadvertently walking into the apparatus. The new location would also allow for permanent fixing of the apparatus to the wall, reducing the manual handling of the apparatus.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 220
	Revision Date: Oct 2026
Strut Testing Apparatus	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, damaged or defected apparatus electrical cable or plug can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting, carrying, pulling and pushing the machine to and from the workbench can result in acute or chronic lower back and or musculoskeletal injuries.

Slips trips and falls
Poor housekeeping, personal belongings, apparatus trailing power cable, metal struts lying on the ground can cause slipping and tripping resulting in fall impact head and body injuries.

Falling apparatus
Unsecure hold of the apparatus when moving, apparatus placed at the edge of the workbench can result in a falling apparatus and lower leg and feet crush and impact injuries.

Flying Missile
Overloading of the metal strut can result in the strut fatiguing and snapping in two and causing flying metal fragments resulting in loss of sight.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used to determine the critical buckling load of metal struts.

Controls

- Students are permitted to use the apparatus, under correct instruction and the lecturer or technicians supervision.
- Inspect the apparatus electrical power cable and plug prior to using the machine.
- Do not use the machine if the electrical cable or plug is damaged or defected in any way and remove from use for repair or replacement.
- Competent person/s must carry out electrical repairs.
- Follow the manual handling training guidelines at all times when moving the machine.
- Seek assistance when required to move the apparatus from one bench to another.
- Maintain good housekeeping and work area from personal belongings at all times.
- Ensure that the apparatus is plugged in to the sockets on the wall above or on the workbench.
- Never place or leave metal struts lying on the floor.

- Ensure that the machine is placed in from the edge of the work bench when setting up and using.
- Maintain a secure hold of the apparatus when transporting to and from storage.
- Wear safety glasses when operating the apparatus.
- Lecturer must determine safe distance for observing students.
- Ensure that the apparatus is used in accordance with the manufacturers operating procedures.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 221
	Revision Date: Oct 2026
Thin Cylinder Apparatus	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, damaged or defected apparatus electrical cable or plug can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting, carrying, pulling and pushing the apparatus or strain gauge monitor to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Slips trips and falls
Poor housekeeping, personal belongings, apparatus trailing power cable, lying on the ground, leaking hydraulic oil can cause slipping and tripping resulting in fall impact head and body injuries.

Falling apparatus
Unsecure hold of the apparatus when moving, apparatus placed at the edge of the workbench can result in a falling apparatus and lower leg and feet crush and impact injuries

Hydraulic
Leaking hydraulic oil can result in minor skin irritation, leaking hydraulic oil under pressure can result in loss of sight or eye irritation.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used to determine the stresses in an internally pressurised thin wall cylinder.

Controls

- Students are permitted to use the apparatus, under correct instruction and the lecturer or technicians supervision.
- Inspect the apparatus electrical power cable and plug prior to using the machine.
- Do not use the machine if the electrical cable or plug is damaged or defected in any way and remove from use for repair or replacement.
- Competent person/s must carry out electrical repairs.
- Follow the manual handling training guidelines at all times when moving the machine.
- Seek assistance if required to move the apparatus and strain gauge monitor to and from storage.
- Maintain good housekeeping, and work area from personal belongings at all times.

- Ensure that the apparatus is plugged in to the sockets on the wall above or on the workbench.
- Ensure that the machine is placed in from the edge of the work bench when setting up and using.
- Maintain a secure hold of the apparatus when transporting to and from storage.
- Ensure that the apparatus is free from leaking oil prior to using. Do not use if leaking oil.
- Ensure that the machine guards (Perspex windows) & housing are in place when operating the device.
- The apparatus must be used in accordance with the manufacturers operating procedures.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 222
	Revision Date: Oct 2026
Strain Indicators Gauges	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and carrying, the apparatus to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Slips trips and falls
Poor housekeeping and personal belongings can result in slipping and tripping causing fall impact head and body injuries.

Falling apparatus
Unsecure hold of the apparatus when moving, apparatus placed at the edge of the workbench, damaged carrying handles on gauges can fall and result in minor lower leg and feet and impact injuries

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The gauges are used to find by experiment the principal strain and stress values on a stressed material.

Controls

- Students are permitted to use the apparatus, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times when moving the machine.
- Maintain good housekeeping, and work area from personal belongings at all times.
- Ensure that the apparatus is placed in from the edge of the work bench when setting up and using.
- Inspect the handle on the gauges for damage or defects prior to use.
- Maintain a secure hold of the apparatus when transporting to and from storage.
- The apparatus must be used in accordance with the manufacturers operating procedures.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 223
	Revision Date: Oct 2026
Force Boards	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and carrying, the apparatus and weights to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Slips trips and falls
Poor housekeeping and personal belongings, weights lying on the ground, can result in slipping and tripping causing fall impact head and body injuries.

Falling apparatus / weights
Unsecure hold of the apparatus when moving, apparatus placed at the edge of the workbench, damaged spring balance or weight cord can cause apparatus weights to fall and result in minor lower leg and feet impact injuries.

Sharps
Minor cuts to hands and fingers from handling metal lamina boards.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used to measure reactions of two support points, and for exploring vectors..

Controls

- Students are permitted to use the apparatus, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times when moving the machine.
- Maintain good housekeeping, and work area from personal belongings at all times.
- Weights must not be stored on the ground around the test area when using the apparatus.
- Ensure that the apparatus is placed in from the edge of the work bench when setting up and using.
- Inspect the cord on the apparatus for damage or defects prior to use. Does not use cord if damaged in any way and replace with a new one.
- Maintain a secure hold of the apparatus and weights when transporting to and from storage.
- The apparatus must be used in accordance with the manufacturers operating procedures.

- Inspect lamina boards for sharps prior to use.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 224
	Revision Date: Oct 2026
Linear Air Track	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, damaged or defected air blower, electrical digital timer electrical cable or plug can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting, carrying and setting up the apparatus on the workbench, returning apparatus to storage can result in acute or chronic lower back and or musculoskeletal injuries.

Slips trips and falls
Poor housekeeping and personal belongings, weights lying on the ground, trailing electrical cables can result in slipping and tripping causing fall impact head and body injuries.

Falling apparatus / equipment
Unsecure hold of the apparatus and equipment when moving to and from storage, apparatus and equipment placed too close to the workbench edge can fall and result in minor lower leg and feet impact injuries, clamp on retort stand not tightened can slide on shaft, resulting in minor finger impact crush injuries.

Dust
Dust lying on the apparatus slide track or in the apparatus can be blown into the operators eyes causing minor acute eye irritation or acute respiratory illness.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used to determine the velocity and acceleration of a body subjected to a constant accelerating force.

Controls

- Only the lecturer or technician is permitted to set up the apparatus.
- Students are permitted to use the apparatus, under correct instruction and the lecturer or technicians supervision.
- Ensure that all electrical cable, plugs and sockets are in good working order prior to using the electrical equipment.
- Do not use electrical equipment if damaged or defected in any way, report to the lecturer or technician for removal from use and repair.
- All electrical repairs must be carried out by a competent person/s.

- Follow the manual handling training guidelines at all times when moving the apparatus to and from storage.
- Apparatus parts or weights must not be left lying on or stored on the ground.
- Maintain good housekeeping and work area free from personal belongings at all times.
- All electrical power cables must be connected into the sockets mounted on the workbench.
- Use both hands to maintain a secure hold of apparatus & equipment when moving to & from storage.
- Ensure that the apparatus and equipment is setup and maintained in from the workbench edge.
- Ensure that the clamp on the retort stand is clamped tightly.
- Dust down the apparatus slide track with a damp cloth prior to use.
- Cover up both ends of the apparatus slide track when it is not in use.
- Always use the apparatus and equipment as intended by the manufacturer.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x Severity		= Risk Factor	
	3		**3**		**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x Severity		= Risk Factor	
	1		**3**		**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 225
	Revision Date: Oct 2026
Rolling Disk Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, carrying and setting up the apparatus and disc wheel on the workbench, returning apparatus to storage can result in acute or chronic lower back and or musculoskeletal injuries.

Slips trips and falls
Poor housekeeping and personal belongings, apparatus parts lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Falling apparatus / equipment
Unsecure hold of the apparatus and equipment when moving to and from storage, apparatus and equipment placed too close to the workbench edge can fall and result in minor lower leg and feet impact injuries.

Rotating Disc Wheel
Minor impact crush injury to fingers if in between rotating disc wheel and apparatus frame.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used to determine and compare the moment of inertia of a disc.

Controls

- Only the lecturer or technician is permitted to set up the apparatus.
- Students are permitted to use the apparatus, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times when moving the apparatus to and from storage.
- Apparatus parts or weights must not be left lying on or stored on the ground.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Use both hands to maintain a secure hold of apparatus & equipment when moving to & from storage.
- Ensure that the apparatus and equipment is setup correctly and maintained in from the workbench edge.
- Never place or rest fingers in between the rolling disc wheel and apparatus frame.
- Always use the apparatus as intended by the manufacturer.

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 226
	Revision Date: Oct 2026
Leapfrog 3D Printer	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, damaged or defected electrical cable or plug can result in electrocution-death or first, second and or third degree burns.

Mechanical
Entanglement of long hair or loose clothing with rotating belt pulleys causing minor injuries, Minor hand crush injuries with descending base plate.

Thermal
Glass base plate, extruder head, forming and formed material can result in burns to the hands and fingers.

Manual Handling
Pushing, pulling, lifting or carrying the printer onto the workbench can result in acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing cables and pieces of plastic lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Falling Machine
Carrying the machine, machine placed on the work bench edge or trolley can fall and result in major impact injuries to the lower legs and feet.

Falling Trolley
The trolley being used to transport the machine is damaged and results in the trolley falling over and causing lower leg and feet impact injuries.

Sharps
Holding and removing moulded materials with external sharps, using a metal sharp edge to remove / pry materials from the glass plate can result in lacerations or puncture wounds to the hands and fingers.

Flying debris
Metal blade used to remove mould from base plate breaks and fly's resulting in the loss of sight.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for making plastic components.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.
- Ensure that all electrical cables, plugs and sockets are in good working order prior to using the equipment.
- Do not use electrical equipment if damaged or defected in any way, report to the lecturer or technician for removal from use and repair.
- All electrical repairs must be carried out by a competent person/s.
- Long hair must be neatly tied back when operating the machine.
- Loose clothing must not be worn when operating the machine.
- Never place hands or finger into the machine when it is running.
- Never leave the machine running unattended.
- Always use the machine as per manufacturer's standard operating procedures.
- Allow for machine parts and moulded materials to adequately cool prior to handling, wear gloves if required
- Follow the manual handling training guidelines at all times.
- Seek assistance when required to move the machine.
- Always use a trolley for transportation.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of power cables on the lab walkway.
- Immediately clean up any plastic lying on the ground.
- Ensure that the machine is placed in from the work bench and trolley edge if being transported.
- Ensure that there is adequate ventilation when running the machine.
- Inspect the trolley and wheels for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair.
- Never hold a metal blade by the sharp edge.
- Avoid the use of metal blades with sharp edges. Ensure that the metal blades are free from damage or defects prior to use.
- Exercise caution when handling moulded parts, where possible file smooth any sharps.
- Wear safety glasses when operating the machine.
- Ensure there is adequate ventilation when operating the machine

Checks & Inspections

- Regular maintenance inspections to be carried out in accordance with manufacturer's recommendations. Records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling training.
- PPE training.
- Chemical Handling Training.
- MSDS for Filament

Personal protective equipment required (last resort)

- Safety Boots
- Safety Glasses
- Heat Resistant gloves

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

SECTION 3

MECHANICAL ENGINEERING MACHINERY WORKSHOPS

Safe Work Practice Sheet	Ref: SWPS 300
	Revision Date: Oct 2026
Arc Welding (MMA, MIG, TIG)	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained electrical wiring on welders can result in Electrocution-Death. First second and or third degree burns

Slips Trips & Falls
Untidy workspace, trailing electrical cables can cause tripping and result in breaking of limbs, cuts and bruises.

Fumes
Inhalation of fumes from welding can cause respiratory disease and illness. Contact with skin can result in skin irritation.

Manual Handling
Lifting of heavy metal loads or machinery for welding can cause acute or chronic musculoskeletal lower back disc injury.

Fire
Sparks from welding can ignite fuel sources resulting in asphyxiation from smoke. First second and or third degree burns.

Hot Surfaces
Contact with welded metal surfaces can result in first, second or third degree burns.

Radiation
Exposure to ultra violet light from welding can result in acute severe burning to the eyes and skin, long term exposure may result in skin cancer and cataracts of the eyes.

Sharps
Metal for welding may contain sharp edges or corners and result in major or minor lacerations to the hands and fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Welding of metal components or artefacts using Manual Metal Arc (MMA), Metal Inert Gas (MIG) or Tungsten Inert Gas (TIG) method.

Controls

- The consumption of food and drink is not permitted in the work shop.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Loose or nylon clothing is not permitted when welding.
- Long hair should be neatly tied back or wear a well fitted cap.
- Hand jewellery must not be worn.
- Wear proper welding visor with approved filter glass.
- Do not look at welding arc with unprotected eyes.
- Protect the forearms and all exposed skin from exposure to arc rays, do not roll up sleeves.
- Protect the front of the body with suitable leather cape/apron.
- Wear suitable leather gloves to protect the wrists and hands.
- Wear suitable protective footwear.
- Follow the manual handling training when lifting heavy loads.
- Keep working area tidy and free from flammable materials and personal belongings.
- Ensure suitable fire extinguishing equipment is readily available and maintained in good condition.
- Ensure all electric cables, plugs and sockets are in good condition prior to use.
- Stand on a dry floor or duck-board and/or wear rubber-soled shoes/boots.
- Welding area must be properly ventilated. Use extract system at all times.
- Never drape or rap electrical cables around any body part.
- Screen off the area so that persons in the vicinity are protected from directly viewing the welding arc.
- Beware of the danger from hot metal when arc welding. N.B. cuffs on overalls, turn-ups on trousers, exposed long hair and low cut shoes are likely lodging places for sparks or globules of hot metal and slag.
- Allow sufficient cooling time before handling hot metal, use tongs or gloves where necessary
- Exercise caution and use gloves when handling metal sharps
- Use a descaling hammer or brush to remove welding slag.

MIG or TIG Welding

- Do not touch the electrode while H.F. set is switched on
- Switch off the mains-power supply when not in use
- Switch off the contactor before changing the electrode or the nozzle.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- Ensure emergency shutdown devices are checked each term
- RCDs tested once per term
- Electrical circuits tested every 3 years
- Electric cables are inspected annually

Information, Instruction & Training

- Students receive instruction before using equipment
- Students are supervised when using the equipment.
- PPE Training
- Manual handling training
- Chemical Handling training
- MSDS

Personal protective equipment required (last resort)

- Welding Gloves to be worn
- Suitable eye protection must be worn
  - Apron/overalls to be worn
  - **Glass Filters Shade 14GW, Arc-welding, TIG and MIG**
  - **Equipment for eye and face protection BS1592:1949**

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Sheet Metal Bending and Folding Machines	Ref: SWPS 301 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Slips Trips & Falls
Untidy workspace or scrap metal on the ground can result in unsecure footing and slips & falling & breaking of limbs, cuts and bruises. Metal sheets stored against machine can cause trips & result in broken limbs cuts and bruises.

Manual Handling
Carrying large heavy sheets of metal can overload the body and result in acute or chronic lower back disc injury or musculoskeletal injuries to the arms and neck.

Mechanical
Crushing of hands and fingers if inserted into the machine when bending. Struck by moving parts of the machine resulting in concussion, bruising.

Sharps
Sharp edges or corners on sheet metal can cause deep lacerations to the hands & other body parts.

Flying Debris
Bending pieces of metal can result in metal breaking and flying thus resulting in loss of sight from metal flying fragments.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Bending sheet metal and other small cross-sectioned metal articles to particular shapes and angles

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- The consumption of food and drink is not permitted in the work shop.
- Loose clothing or items of jewellery must not be worn.
- Long hair must be neatly tied back.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never sit or stand on the machine.

- Do not store metal sheets or materials on or leaning against the machine
- Measure and mark materials for bending on a work bench prior to bending
- Follow the manual handling training guidelines at all times
- Wear safety glasses.
- Wear leather work gloves when handling sheet metal stock.
- Ensure that hands and fingers are clear of the bending area at all times.
- Take heed of hazard warning notices.
- Observe bending machine surroundings when in use.
- Group gathering is not permitted when the machine is in operation.
- Wear safety glasses when operating the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures.
    - Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- All students are given training before being allowed to use the bending machine.
- All students must be supervised by the leacturer when operating the bending machine.
- Manual handling training
- PPE training.

Personal protective equipment required (last resort)

- Safety glasses
- Leather work gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	2	=	Risk Factor	2 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 302
	Revision Date: Oct 2026
Degreasing Bath	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, poorly maintained or damaged electrical cable or plugs of the degreasing machine can cause electrocution-death or first second and or third degree burns to the hands and body parts.

Manual Handling
Topping up or emptying the degreaser of detergent requires lifting or carrying, lifting engine or gear parts in and out of the degreasing basin can result in acute or chronic lower back and or musculoskeletal injuries.

Chemical
Immersing parts for degreasing with detergent, removing degreased parts for washing, brush cleaning parts, topping up or emptying the degreaser can result in splashing of detergent causing temporary or permanent loss of sight, burns to the hands and fingers or other body parts by contamination of clothing.

Slips, Trips and Falls
Poor housekeeping, personal belongings, parts for cleaning lying on the ground, trailing power cable, spilled detergent lying on the ground can result in slipping and tripping causing fall impact head injuries and cuts and bruises.

Fumes
Topping up the machine with detergent, removing cleaned parts, brushing parts down with detergent can result in the inhalation of detergent fumes causing acute or chronic respiratory illness.

Fire
Detergent or engine components for degreasing can catch fire when in contact with an ignition source and result in first, second and or third degree burns.

Falling Engine Parts
Lifting or removing engine or metal parts to or from the degreaser can slip and fall causing lower leg and feet crush injuries.

Mechanical
Hands or fingers are inadvertently crushed when closing the lid of the degreaser.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for degreasing engine and gear box parts of grease, oil, wax, dirt etc.

Controls

- All degreasing operations must be carried out in the degreasing bath in the Motor Shop.
- Students are not permitted to carry out this task.
- The Lecturer or technician must only carry out this task.
- Inspect the electrical cable and plug of the degreasing machine prior to use.
- Do not use the test unit if electrical cable or plugs are damaged in any way and remove from use for repair.
- Electrical repairs must be carried out by a competent person.
- Follow the manual handling training guide lines at all times when operating the degreaser.
- Always seek assistance when emptying the degreasing barrel or heavy engine parts.
- Safety glasses must be worn at all stages of the use and maintenance of the degreaser.
- Protective clothing i.e. overalls non-absorbent gloves must be worn (See PPE Required).
- Contaminated clothing must be removed immediately when in contact with degreaser.
- Ensure that the machine is plugged into the socket on the wall at the back of the machine.
- Spilled degreaser must be cleaned up immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Parts for cleaning must never be stored on the ground around the machine, use the surrounding work benches.
- Ensure that there is adequate ventilation when operating the degreaser and that the area ventilation system is switched on.
- When possible close the lid of the machine for degreasing or draining parts from detergent.
- Never place hands or fingers between the lid and frame of the degreaser when closing the lid.
- Do not inhale fumes. Wear a mask.
- Do not use in the vicinity of welding operations.
- Do not use in the presence of naked flame or other source of ignition.
- Eating, drinking, smoking and using mobile phones are prohibited from all workshop and laboratory areas.
- Allow parts that are cleaned by detergent to drip dry in the detergent bath before removing.
- Rinse/wash component by immersing, washing or spraying with water.
- Wash both hands thoroughly when finished.

- Adhere to instruction in manufacturers Material Safety Data Sheets.
- All waste solvents must be disposed of according to Material Data Sheets.
- Appropriate fire extinguisher to be close at hand.
- Observe great care when using this process.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturer and technicians to monitor compliance with control measures.
- Operator to check extraction is operational before starting process.

Information, Instruction & Training

- MSDS
- Manual Handling training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety glasses
- Industrial safety gloves (Black Gauntlet Gloves CE 0321, extended length 450mm)
- Protective apron/overalls
- Safety shoes/boots
- Safety Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 303
	Revision Date: Oct 2026
Bench and Pillar Drilling Machines	Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, maintained or damaged electrical wiring can result in Electrocution-Death. First, second and or third degree burns.

Mechanical
Wearing of loose clothing can cause entanglement with rotating drill resulting in cuts and bruises to the body. Crush or puncture injury by hand becoming trapped with descending drill. Blunt force injury from impact of unsecure machine or ejected objects from the machine. Eye/s injury from ejected drilled waste material or unsecured work materials.

Hot Surfaces
Drilling metal objects generates heat and may result in first or second degree burns to the skin when in contact with.

Slips, Trips and Falls
Untidy work area and trailing cables can cause falls that result in broken limbs, minor cuts and bruises.

Ergonomics
Work tables that are too low or high can result in musculoskeletal injuries and cause lower back, neck, arm and hand injuries.

Manual Handling
Lifting heavy objects for drilling can cause musculoskeletal injuries and result in lower back injuries.

Sharps
Drilled material can create sharp surfaces and result in minor cuts to the hands.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Drilling holes in metallic and non-metallic materials, normally clamped in a vice.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- The consumption of food and drink is not permitted in the work shop.

- Safety glasses must be worn at all times.
- Loose clothing such as open jackets, loose jumpers, ties etc. must not be worn when operating this machine.
- Wearing jewellery such as rings, necklaces etc. are not permitted.
- Long hair must be covered by cap or net or neatly tied back.
- Personal belongings must not be stored at or near the machine.
- Clutter must not be allowed to build up around the machine.
- Inspect the electrical cable and plug for any damage or defects prior to use. Do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Adjust the work table to the required working height.
- Inspect the cutting tool prior to use, do not use if damaged, all damaged cutting tools must be handed to the lecturer or technician. Students must not repair any damaged cutting tools, the Lecturer or the technician are only permitted to repair damaged cutting tools. New cutting tools must be obtained from the lecturer or technician.
- Ensure cutting tool is properly secured in machine chuck.
- Ensure work piece is properly secure in machine vice.
- Ensure vice is properly secured to machine table.
- When required, only use a copper or plastic mallet to tap down work piece or to tighten machine vice.
- Machine is never to be left unattended when running.
- Wear gloves or allow drill bit and drilled material to adequately cool down before handling
- Use a brush to clean down drilled material or machine, never use air to clean down.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure emergency shutdown devices are checked each term
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use drilling machines
- Manual Handling
- PPE Training

Personal protective equipment required (last resort)

- Safety glasses
- Gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 304
	Revision Date: Oct 2026
Flame-Fast Furnace	Approved by: Breda Brennan

Hazards

Electricity
Poorly connected or maintained electrical wiring can result electrocution-death First, second and or third degree burns.

Chemicals
Inhalation of propane, molten metal vapours or carbon monoxide may cause Asphyxiation-death or unconsciousness due to the lack of oxygen.

Slips Trips and Falls
Untidy work area and trailing cables can cause trips and falls that result in broken limbs, minor cuts and bruises.

Fire
Sparks or hot surfaces may ignite fuel sources and result in asphyxiation from smoke.

Temperature
Hot surfaces can cause first, second and or third degree burns to the hands and fingers.

Manual Handling
Lifting heavy objects can cause lower back strain, neck and arm injuries.

Explosions
Explosions may occur from flammable gas and result in ejected missiles causing serious to minor injuries to eyes, face and other body parts.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Flame-Fast furnace is used for melting aluminium for the purposes of producing metal castings.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- The consumption of food and drink is not permitted in the work shop.
- Inspect the electrical cable for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair.
- Loose or nylon clothing must not be worn.
- Long hair must be neatly tied back or a well fitted cap worn.

- Work space must be maintained free from clutter.
- Personal belongings are permitted beside or around the furnace.
- Jewellery must not be worn when operating the furnace.
- Fuel sources must not be stored at or near the furnace.
- Follow the manual handling training guidelines at all times
- Propane tank, pipework and fittings must be maintained in good condition.
- Ensure that correct type of fire extinguisher is located nearby.
- Use protective apron.
- Use safety glasses/goggles.
- Use appropriate tongs when handling hot surfaces.
- Use heat resistant gloves.
- Ensure that ventilation systems are switched on and operating properly.
- Take heed of hazard warning notices.

Checks & Inspections

- All pipework, fittings, electrical cables are checked annually
- Flashback arrestors are replaced as soon as a replacement is indicated
- Ventilation system to be checked annually

Information, Instruction & Training

- Student are only permitted to use this facility under close supervision of lecturer and/or technician
- PPE training
- Chemical Training
- Manual Handling Training
- MSDS

Personal protective equipment required (last resort)

- Heat resistant apron
- Heat resistant gloves
- Safety glasses/goggles

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 305
	Revision Date: Oct 2026
Gas Welding and Cutting	Approved by: Breda Brennan

Hazards

Electricity
Incorrect installation, damaged or poorly maintained electrical wiring can result in electrocution-death or major or minor burns.

Chemicals
Inhalation of Acetylene may cause Asphyxiation-death or unconsciousness. Exposure to oxygen may cause eye and respiratory irritation.

Fumes
Inhalation of smut when igniting acetylene can result in acute or respiratory discomfort and illness.

Explosions
Explosions may occur from flammable gas resulting in ejected missiles causing serious to minor injuries to eyes, face and other body parts.

Fire
Sparks or hot surfaces may ignite fuel sources and result in asphyxiation from smoke, first, second or third degree burns to the skin.

Hot surfaces
Contact with hot surfaces can result in burns to the hands and fingers.

Slips Trips and Falls
Untidy work area and trailing cables or hoses can cause falls that result in broken limbs, minor cuts and bruises.

Manual Handling
Lifting or pulling heavy loads can result in acute or chronic lower back injury and or neck and arm injuries.

Ergonomics
Welding pieces of metal that are too high or low can result in lower back and neck injuries.

Bright Light
Burns to the back of the eyes can occur from looking into burning flame and cause permanent eye damage and discomfort

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using oxygen and acetylene for welding

Controls

- Students are permitted to carry out this task, under correct instruction and the lecturer or technician's supervision.
- The consumption of food and drink is not permitted at the workspace.
- Loose or nylon clothing must not be worn.
- Long hair must be neatly tied back or a well fitted cap worn.
- Personal belongings are not permitted beside or around the workspace.
- Jewellery must not be worn when operating gas welder.
- Wear proper welding visor with approved filter glass
- Protect the front of the body with suitable leather cape/apron.
- Wear suitable leather gloves to protect the wrists and hands.
- Wear suitable protective footwear.
- Beware of the danger from hot metal when gas welding and cutting. N.B. cuffs on overalls, turn-ups on trousers, exposed long hair and low cut shoes are likely lodging places for sparks or globules of hot metal and slag.
- Ensure the gas pressure is set correctly.
- Ensure gases and regulator valves are turned off when no longer required.
- Purge used lines into extract hood.
- Ensure extract fan is switched on when gas welding.
- Ensure damper on the extract hood is fully open. Close damper on all hoods not in use.
- Ensure the ignition of the acetylene is conducted directly under the extract hood in use.
- Ensure were possible no trailing gas torch hoses.
- Tidy all gas torch hoses up when no longer required.
- Wear gloves or use tongs when handling metal sharps or hot surfaces.
- Where possible hand file smooth sharp edges.
- Ensure work piece is at an adequate body height when welding.
- Never place gases at or near the mouth, nose or eyes.
- Keep working area tidy and free from flammable material.
- Welding and cutting must be performed in areas free from fire risk.
- Ensure suitable fire extinguishing equipment is readily available and maintained in good condition.
- Welding area must be properly ventilated
- Spark lighters are recommended.
- Follow the manual handling training guidelines at all times.

Checks & Inspections

- All pipework, fittings are checked annually
- Flashback arrestors are replaced as soon as a replacement is indicated
- Ventilation system to be checked annually.

Information, Instruction & Training

- PPE training
- Chemical Training
- Manual Handling Training
- Instruction is given on the safe use of the equipment
- Workshop and laboratory exercises are supervised by college staff
- The MSDS for each gas must be available in the work shop.

Personal protective equipment required (last resort)

- Welding Gloves to be worn
- Approved filter safety glasses / visor must be worn
- Apron/overalls to be worn

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 306
	Revision Date: Oct 2026
Grinding Machines (Pedestal)	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, badly maintained or damaged electrical cables can result in electrocution-death and or first, second or third degree burns.

Manual Handling
Lifting and holding heavy objects for grinding can cause acute or chronic lower back or musculoskeletal injuries.

Mechanical
Moving parts can cause entanglement resulting in major or minor deep wounds to the face hands and arms. Contact with rotating wheel may result in hand/s becoming entrapped, cut and bruised.

Slip Trips And Falls
Poor housekeeping, personal belongings, water on the floor and trailing cables can cause trips and slips causing falls that result in broken limbs, major and minor cuts and bruises.

Vibration
Grinding pieces of metal for long periods of time can result in hand arm vibration – white finger causing damage to the nerves on the fingers and hands.

Hot Surfaces
Grinding pieces of metal generates heat and can result in minor burns to the hands or fingers.

Fire
The generation of sparks may result in a fire when in contact with flammable sources causing first, second and or third degree burns.

Flying Debris
Damaged or defected grinding stone can shatter resulting in debris causing loss of sight and or bodily puncture wounds.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Hand held grinding and shaping of metallic components

Controls

- Operators that have received formal abrasive wheel training may only operate this machine.
- Competent persons must only carry out mounting of an abrasive wheel.
- Group gatherings are not permitted at or around the machine when in use.
- Inspect the wheel for defects or damage prior to use, do not use if damaged in any way and remove from use.
- The consumption of food and drink is not permitted at the workspace.
- Loose or nylon clothing must not be worn.
- Long hair must be neatly tied back or a well fitted cap worn.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Jewellery must not be worn when operating grinder machine.
- Group gathering around the machine is not permitted.
- Inspect the machine electrical cables and plug for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Eye protection must be used at all times.
- Wheel guard/visor to be in position when grinding is being carried out.
- Machine is never to be left unattended when running.
- Never touch the rotating stone with hands or fingers
- Wheel dressing must only be carried out by trained person.
- Water coolant is permitted when using this machine, Water on the floor must be dried immediately.
- Use a tongs or metal grips to hold pieces of metal.
- Avoid using the machine for extended periods of time, tend to other duties for periods of rest.
- Only trained technicians and apprentices in training are permitted to operate this machine.
- Flammable materials must never be stored at or near the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained technicians and apprentices in training are allowed to operate this machine.
- Only trained technicians are allowed to replace a grinding wheel.
- Abrasive wheel training in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.
- PPE Training
- Manual Handling

Personal protective equipment required (last resort)

- Safety glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 307
	Revision Date: Oct 2026
Grinder (Surface Grinder)	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, damaged or badly maintained electrical cables can result in electrocution-death and or first, second or third degree burns.

Manual Handling
Lifting and carrying heavy metal objects can cause acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Rotating parts of the machine can cause entanglement resulting in major or minor deep wounds to the face hands and arms. Contact with rotating wheel may result in hand/s becoming entrapped.

Slip Trips And Falls
Untidy work, oil on ground can cause slips, trips that result falls, broken limbs, major, minor cuts and bruises.

Flying Debris
Shattered grind stone may result in high speed flying debris resulting in loss of sight, major or minor puncture wounds

Chemicals
Contact with machine cooling oil can result in minor skin and eye irritation.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Fine surface grinding of metallic components and artefacts

Controls

- Operators that have received formal abrasive wheel training may only operate this machine.
- Students are not permitted to use this machine.
- The consumption of food and drink is not permitted at the workspace
- Loose or nylon clothing must not be worn.
- Long hair must be neatly tied back or a well fitted cap worn.
- Personal belongings are not permitted beside or around workspace.
- Maintain clear and clean workspace all times
- Jewellery must not be worn when operating grinder machine.
- Group gathering around the machine is not permitted.
- Machine must not be left unattended when running
- Do not run the speed of the machine above the manufacturer's recommendations.
- Do not reach above or around the moving wheel.
- Follow the manufacturer's instruction for mounting grinding wheel.
- Inspect the machine electrical cables and plug for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Safety glasses must be worn at all times
- Work piece must be clamped securely to magnetic table. Ensure magnetic chuck is turned on by trying to remove work from it. Ensure machine guards are in place prior to operating the machine and that the guard covers at least half the grinding wheel.
- Keep face of the wheel evenly dressed.
- Take heed of hazard warning notices
- Only trained technicians may change and set up a grinding wheel.
- Clean the magnetic chuck with a cloth.
- Check that the magnetic chuck has been turned on by trying to remove work from the chuck.
- Check that the wheel clears the work before starting the grinder.
- Run a new grinding wheel for about one minute before engaging the wheel into the work.
- Stand to one side of the wheel before starting the grinder.
- Turn off coolant before stopping the wheel to avoid creating an out-of-balance condition.
- Keep the working surface clear of scraps, tools and materials.
- Keep the floor around the grinder clean and free of oil and grease.
- Wash hands thoroughly when in contact with coolant oil.
- Follow the manual handling training guidelines at all times.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Ensure interlocks and emergency shutdown devices are checked each term
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained technicians are permitted to change and set up a grinding wheel.

- Abrasive wheel training in accordance with S.I. No. 30/1982 - Safety in Industry (The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.
- PPE Training
- Manual Handling
- MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 308
	Revision Date: Oct 2026
Guillotine (Pedal Operated)	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, carrying and pushing sheet metal for cutting can result in acute or chronic lower back injury and neck and arm injuries.

Sharps
Thin pieces of metal sheets, corners of metal sheets and damaged pieces of metal can cause deep lacerations to the hands, arms, face and other body parts.

Slips, Trips & Falls
Untidy work space, poorhouse keeping can cause individuals to trip or slip resulting in broken limbs, concussion, major and minor cuts and bruises.

Mechanical
Moving parts of machinery can result in crushing or breaking fingers, severing of fingers from shearing action of cutting blades.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Cutting sheet and strip metal into particular shapes and lengths

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Food or drink must not be consumed in workshop.
- Loose clothing is not permitted.
- Long hair must be tied back neatly.
- Personal belongings are not permitted beside or around workspace.
- Maintain clear and clean workspace all times
- Jewellery must not be worn when operating machine.
- Group gathering around machine is not permitted.
- Wear safety glasses at all times.
- Do not touch cutting blade with bare hands
- Measure and mark metal sheets for cutting prior to using the machine.
- Follow the manual handling training guidelines at all times. When required, seek assistance in lifting and holding large cut offs of metal sheets.
- Wear leather work gloves when handling sheet metal stock.
- Always ensure secure footing when operating the machine.
- Ensure that hands and fingers are clear of the cutting area at all times.

- Hands and fingers must remain at the front stop of the machine when cutting.
- On completion of cutting, tidy the machine workspace and floor from all metal sheet cut offs.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use the guillotine
- All students must be supervised when operating the guillotine
- Manual Handling Training

Personal protective equipment required (last resort)

- Safety glasses
- Leather work gloves
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Steelworker Powered Guillotine** **NO LONGER IN USE**	Ref: SWPS 309 Revision Date: Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired or damaged cables can result in electrocution death, first, second or third degree burns.

Mechanical
Contact with machine cutting tool can result shearing of fingers, contact with machine puncher may cause crushing injuries to hands and fingers, contact with notching tool can result in entrapment and loss of fingers.

Sharps
Cutting, notching and punching pieces of metal can result in sharp edges, corners and surfaces on machined and scrap pieces of metal and cause lacerations to the hands, face, eyes.

Slips, trips and falls
Trailing power cable and untidy work area can impede secure footing and result in falls that cause concussion, major or minor cuts and bruises and musculoskeletal injuries.

Chemicals
Filling up the machine oil reserves can cause skin and eye irritation from splashing.

Hydraulics
Contact with hydraulic hot fluid may result in first, second or third degree burns, damage to the skin from injection or cuts and bruises from flying hydraulic lines.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Cutting medium sized cross-sectioned metal bar-stock to length, punching and notching sheet metal.

Controls

- Students are not permitted to use the machine. Lecturers and technicians are only permitted to use this machine.
- Food or drink must not be consumed in workshop.
- Loose clothing is not permitted.
- Long hair must be tied back neatly.
- Personal belongings are not permitted beside or around workspace.
- Maintain clear and clean workspace all times

- Jewellery must not be worn when operating machine.
- Group gathering around machine is not permitted.
- Machine isolator must be locked (tag out / lock out) when machine is not in use.
- Emergency stop button must be pressed stop and power switch must be in off position when machine is not in use.
- Isolator power switch lock and key is under the control of the technician.
- Ensure electrical power cable of on/off foot pedal and machine sre free from defects prior to use. Do not use if damaged. Competent persons must only carry out repairs to damaged power cables.
- Ensure all machine guards (Notching, Puncher, and Guillotine X 2) are in place prior to use.
- Ensure all machine panels are in place prior to use
- When required seek assistance when cutting large sections of material.
- Place foot pedal to the required (Notching, Punching or Guillotine) part of machine in use.
- Wear safety glasses.
- Wear gloves when topping up with hydraulic oil.
- Never touch leaking hydraulic fluid and ensure machine is turned off
- Wear leather work gloves when handling sheet metal stock.
- Ensure that hands and fingers are clear of the cutting area at all times.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School

Information, Instruction & Training

- Only trained technicians are allowed to operate this machine
- Manual Handling Training
- PPE Training
- Chemical Training
- MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Leather work gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability		x	Severity		=	Risk Factor	
÷	**3**			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability ÷	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**
Risk Assessment Review *As and when process changes or yearly*							

Safe Work Practice Sheet	Ref: SWPS 310
	Revision Date: Oct 2026
Hot Wire Strip Heater	Approved by: Breda Brennan

Hazards

Mechanical
Contact with the bending arm crushing of fingers resulting in bruising. Contact with the bending arm can cause entrapment resulting in broken fingers.

Electricity
Incorrectly wired or damaged cables can result in electrocution-death, first, second and or third degree burns.

Temperature
Machine hot wire, over heated material surfaces can cause first, second and or third degree burns.

Manual Handling
Lifting, carrying of the machine can result in lower back acute and chronic injury.

Slips trip and falls
Machine trailing cables, untidy work area can cause trips and result in falling injuries such as concussion, broken limbs, major and minor cuts and bruises.

Fumes
Inhalation of fumes from overheated materials can result in acute of chronic respiratory illness.

Fire
Combustible material in contact with heated wire, resulting first, second and or third degree burns, acute or chronic respiratory illness from inhalation of smoke.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine clamps and holds Perspex and plastic sheeting. A heated wire element softens the material along a narrow straight line. The material can then be bent / folded along that line. On cooling, the material re-hardens thereby retaining its new folded shape.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Food or drink must not be consumed in workshop.

- Loose or nylon clothing is not permitted.
- Long hair must be tied back neatly.
- Personal belongings are not permitted beside or around workspace.
- Maintain clear and clean workspace all times
- Jewellery must not be worn when operating the machine.
- Group gathering around machine is not permitted.
- Ensure materials are not stored on the machine.
- Ensure electric cable and plug are free from defects (do not use if damaged) prior to use. Only competent person/s can carry out repairs to damaged plug and cables. Follow manual handling guidelines when transporting machine.
- Ensure the machine is used in a well-ventilated place.
- Flammable liquids or materials must not be stored on or near the machine.
- Do not place fingers underneath the machine bending arm.
- Never leave the machine unattended when in use.
- Only use materials suitable for heat bending (Perspex and acrylic sheets).
- Mark and measure working material using a china-graph pencil prior to using the machine.
- Prior to switching the machine on, insert the measured working material into the machine and adjust heating wire into the required position.
- Avoid over heating of work materials. Read and follow the manufacturer's heating guidelines on the face plate of the machine. When required temperature is achieved bend the material to the desired angle by using the lever arm on the machine.
- Do not place bare hands, or clothing on or near the heating wire or hot working materials.
- Place the bending arm over the heating wire when work is completed.
- Turn off and unplug the machine when no longer required.
- Wear heat resistant gloves
- Safety glasses must be worn

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use the hot wire bending machine
- PPE training
- Manual Handling training
- MSDS

Personal protective equipment required (last resort)

- Heat resistant gloves
- Safety glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	= Risk Factor	9High Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	= Risk Factor	3 Low RISK

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Lathes (Harrison 300/400/ Colchester Student)	Ref: SWPS 311 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired or damaged cables can result in electrocution-death, first, second and or third degree burns.

Manual Handling
Lifting and carrying chuck heads, pushing and pulling tail stock can result in acute lower back acute injuries.

Mechanical
Loose clothing or long hair can become entangled with rotating shaft or chuck head and result in asphyxiation. Entrapment, fingers in contact with rotating parts, resulting in loss of fingers, broken bones, major and minor injuries.

Hot Surfaces
Contact with machined surfaces or hot cutting tools can cause minor burns to the hands and fingers.

Sharps
Contact with machine cutting tool and generated swarf machined material can result in major or minors lacerations to hands.

Noise
Poorly maintained machinery, incorrect cutting of materials can cause noise resulting in acute temporary hearing loss, discomfort or chronic hearing problems.

Slips trips and fall
Untidy work area, poorly placed floor mats can cause slipping & tripping that results in falling injuries, concussion, broken limbs, major and minor cuts and bruises.

Chemicals
Contact with machine cooling or cutting oil may cause skin acne, slight irritation to the skin.

Flying Debris / Missiles
Ejected cutting material or oil can come into contact with eyes and result in loss of sight or temporary eye discomfort. Ejected chuck key and work piece can cause impact injuries, loss of sight concussion cuts and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Machining cylindrical part, components and artefacts mainly from metallic stock

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision. .
- Inspect the machine electrical cable and plugs for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair.
- Food or drink must not be consumed in workshop.
- Personal belongings are not permitted beside or around workspace.
- Maintain clear and clean workspace all times.
- Group gathering around machine is not permitted (only under the lecturer's instruction).
- Non work materials must not be stored on the machine.
- Ensure machine parts and working materials are firmly stored on the head stock. Do not stand materials or parts top heavy.
- Ensure all machine guards are in place prior to operating the machine.
- Safety glasses must be worn at all times.
- Lecturers and technicians are only permitted to change chuck heads.
- Rotating Chuck head must come to a complete stop prior to loading or changing work pieces or chuck head.
- Chuck guard must be used where practical.
- Ensure work piece is properly secured in machine chuck.
- Remove chuck key immediately after tightening or releasing workpiece.
- Loose clothing such as open jackets, loose jumpers, ties etc must not be worn when operating this machine.
- Long hair must be covered by cap or hair net or tied back neatly.
- Jewellery such as rings, chains and necklaces must not be worn when operating this machine.
- Machine is never to be left unattended when running.
- Use proper manual handling practice when loading or unloading heavy or awkward work pieces or chucks.
- Ensure secure firm footing at all times, do not over reach when operating the machine.
- Take heed of hazard warning notices.
- Only use a brush to brush down machine, do not use air or bare hands.
- All swarf must be brushed down off the top of machine surfaces into the machine sump.
- Empty the sump when required.
- Exercise caution when handling cutting tools or machined materials (swarf etc.).

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure interlocks and emergency shutdown devices are checked each term
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators are allowed to operate the lathe unsupervised.
- All students are given training before being allowed to use the lathe.
- All students must be supervised when operating the lathe.
- Manual Handling Training.
- PPE Training
- Chemical Handling Training
- MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Cap / hair net
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 312
	Date: Oct 2026
Milling Machines	Assessed by: G. Caffrey Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired or damaged electrical cables may cause electrocution-death, first, second and third degree burns.

Chemicals
Contact with cooling and cutting fluid can result in minor eye and skin irritation

Mechanical
Contact with rotating cutting tool can result in entanglement and major or minor injuries, cuts and bruises

Sharps
Contact with machine tools and machined material can result in major and minor lacerations to the hands and fingers.

Ejected materials
Unsecured vice or work materials may be ejected and cause blunt force body injuries. Machined material or disintegrated broken cutting tools can generate flying parts and cause loss of sight, major and minor lacerations and puncture wounds to the body.

Pneumatics
Incorrectly fitted or damaged air lines can result in whipping hose and cause loss of sight, major or minor lacerations and bruising to the body.

Slips, trips and falls
Poor housekeeping, untidy work area, folded mats lead can cause falls from slipping, tripping that result in broken limbs, major and minor cuts and bruises.

Hot surfaces
Used machine tools and machined material can cause minor burns when touched by hands and fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Cutting and shaping metal parts, components and artefacts

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Safety glasses must be worn at all times
- Loose clothing such as open jackets, loose jumpers, ties etc must not be worn when operating this machine
- Long hair must be covered by cap or hair net or tied back neatly.
- Food or drink must not be consumed in workshop.
- Personal belongings are not permitted beside or around workspace.
- Maintain clear and clean workspace all times and ensure mats are flat on the ground.
- Jewellery such as rings, chains and necklaces must not be worn.
- Group gathering around machine is not permitted (only under the lecturer's instruction).
- Inspect the machine power cable for damage or defects, do not use the machine if power cable is damaged or defected in any way. Competent person/s must only carry out electrical repairs.
- Cutting tools and clamping devices must only be replaced or adjusted when machine is not running.
- Do not place hands or body parts near rotating parts of machinery.
- Prior to use, ensure cutting tool is not damaged and is properly secured in machine chuck. Damaged cutting tools must be reported to the lecturer / technician for a replacement one.
- Lecturer and technicians must only repair and replace cutting heads and tools.
- Follow the manual handling training guidelines at all times. Seek assistance when lifting and carrying heavy machine parts and material to be machined.
- Where applicable ensure all machine guards are in place prior to and when operating the machine. Work piece/s must be properly secured in the machine vice.
- Ensure that the vice is properly secured to the machine table.
- Wash hands and body parts when in contact with cutting and coolant fluid.
- Allow hot cutting tool and materials to cool sufficiently (or wear heat resistant gloves) prior to handling.
- Exercise caution when handling sharp cutting tools and cut materials.
- Only use copper or plastic mallet to tap down work piece or to tighten machine vice.
- Machine is never to be left unattended when running.
- Machine must be brushed (using a brush only) down when work is complete and machine has come to a stop.
- Empty the swarf tray as required.
- Store all non-used machine tools (cutting tools etc.) in their storage location.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure interlocks and emergency shutdown devices are checked each term
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators are allowed to operate the milling machine unsupervised
- All students are given training before being allowed to use the milling machine
- All students must be supervised when operating the milling machine
- Manual handling training.
- Chemical training
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Overalls/shop coat
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk.**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Unimolder Plastics Molding Machine** **NO LONGER IN USE**	Ref: SWPS 313 Revision Date: Approved by: Breda Brennan

Hazards

Electricity

Damaged or incorrectly wired electrical cables can result in electrocution death, first, second and or third degree burns.

Mechanical

Sliding guard door, moving injection piston can result in crushing of hand and fingers.

Hot Surfaces

Contact with hot moulds, heaters and hot materials can result in first, second or third degree burns to hands and fingers.

Hydraulics

Contact with hydraulic fluid may cause minor irritation to the skin. Hydraulic injection fluid injuries, piercing the skin on the hands and fingers. Acute or chronic respiratory illness from inhalation of hydraulic fluid aerosol.

Manual Handling

Lifting and pulling of machine guard can result in work related upper limb disorder, carrying of plastic materials and moulds can cause lower back acute or chronic injuries.

Slips trips and falls

Poor housekeeping, leaking oil fluid, spilled plastic beads can cause slipping or tripping that results in falls and concussion, major or minor cuts to the head.

Fumes

Acute or chronic respiratory illness from inhalation of fumes from overheated plastics

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Universal plastics moulding machine for injection, compression and blow moulding operations

Controls

- Lecturers and Technicians are only permitted to operate the machine.
- Food or drink must not be consumed in workshop.
- Personal belongings are not permitted beside or around workspace.
- Maintain clear and clean workspace and floors all times.
- Group gathering around machine is not permitted.

- Materials must not be stored on top of the machine.
- Loose or nylon clothing must not be worn when operating the machine.
- Long hair must be tied back neatly.
- Ensure all electrical cables are in good working order prior to use. Do not use if electrical cables are damaged.
- Ensure floor is free from hydraulic oil prior to use. Do not use machine if leaking hydraulic fluid.
- Avoid over filling of machine hopper when loading plastic pellets. Clean up any spilled plastic pellets immediately.
- Follow the manual handling training guidelines at all times, exercise caution when lifting and placing moulds into and out of the machine
- Wear safety glasses at all times
- Ensure safety guards and machine panels are in place and closed when machine is in operating mode
- Use heat resistant gloves where required
- Take heed of hazard warning notices
- Ensure that there is adequate ventilation when operating the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure safety interlocks on guards and emergency shutdown devices are checked each term

Information, Instruction & Training

- Only trained technicians are allowed to operate this machine
- Manual Handling training
- PPE training
- Chemical Training.
- MSDS

Personal protective equipment required (last resort)

- Heat resistant gloves
- Safety glasses
- Safety boots

Initial Risk Rating (without any control measures)

Probability ÷		x Severity		= Risk Factor	
	3		**3**		**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability ÷	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**
Risk Assessment Review *As and when process changes or yearly*							

Safe Work Practice Sheet	Ref: SWPS 314
	Revision Date: Oct 2026
Portable Electric Angle Grinder	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, damaged or cut cable and plugs can result in electrocution-death, first, second and third degree burns.

Manual Handling
Incorrect lifting, holding or carrying pieces of machinery can result in acute or chronic lower back injuries and work related upper limb disorder.

Mechanical
Contact with rotating cutting blade can result major skin lacerations, severing of fingers. Entanglement of loose clothing, long hair may cause major cuts to body parts.

Flying debris
Shattered cutting disc, grinded material may result in loss of sight, body puncture would, minor cuts and bruises.

Ergonomics
Unfavorable working space, cramped position, can result in lower back injuries.

Fire
Flammable fuel sources may ignite from sparks and result in major burns to the body, asphyxiation form smoke inhalation, and acute respiratory illness.

Slips trips & falls
Trailing cables and untidy work area can result in slipping or tripping that results in falls and concussion, major or minor cuts to the head.

Persons Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Rough grinding of metal items using hand-held power tool

Controls

- Students are not permitted to use this machine.
- Operators that have received formal abrasive wheel training may only operate this machine.
- Competent persons must only carry out mounting of an abrasive wheel.
- Group gatherings are not permitted at or around the machine when in use.
- Food or drink must not be consumed at or near work area.

- The wearing of loose or nylon clothing is not permitted.
- Long hair must be neatly tied back.
- Group gatherings are not permitted when machine in operation.
- Work area must be maintained free from flammable materials, clutter and personal belongings.
- Never carry or move the machine by the power cable.
- The operator must carry out the required pre-operational (cable, plugs etc.) checks on the machine. Do not use the machine if damaged in any way.
- Eye protection to be worn at all times. When required wear a face guard.
- Adequate personal protective equipment (gloves, apron, boots) must be worn.
- Only trained competent persons to mount wheels in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.
- It is the duty of the employee to advise the Senior Technician of any repairs necessary to the machine where they become aware.
- Grinding should be performed in a controlled area (welding cubicle), certain circumstances may require grinding to be performed in an open area.
- Power cables must follow the rotating disc. No person, even the operator, is permitted to approach the dangerous moving parts of the machine while it is in operation.
- Do not touch a rotating grinding disc and allow coming to a stop.
- In exceptional circumstances, when a competent person is present to operate the machine, a maintenance person may observe the operation of the machine provided there is no risk of entanglement or coming in contact with moving parts of the machine.
- The operator should stop the machine if anyone has to move close to the grinding area for any reason, taking account of draw down time unless brakes are fitted. Adequate warning signs should be placed at the grinding area while in operation.
- When the machine is not in use, precautions must be taken to ensure that it is fully immobilised.
- Grinder must be returned to the stores after use & locked away under the lecturer, technician's control.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Grinding/cutting disc to be changed and checked by technician
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained persons are allowed to operate this machine or to replace a grinding wheel
- Abrasive wheel training in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.
- PPE
- Manual Handling

Personal protective equipment required (last resort)

- Safety glasses/goggles, face guard
- Boots
- Apron
- Gloves

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 315
	Revision Date: Oct 2026
Portable Electric Shears	Approved by: Breda Brennan

Hazards

Electricity
Damaged or defected electrical cables or plugs can result in electrocution-death or first, second or third degree burns.

Manual Handling
Incorrect lifting, carrying and holding of shears and metal sheets can result in lower back injuries, work related upper limb disorders.

Mechanical
Contact with moving blade can result in minor cuts to hands and fingers.

Slips trips & falls
Trailing cables and untidy work area can result in slipping or tripping that results in falls and concussion, major or minor cuts to the head.

Sharps
Contact with machine blade, metal sheets can result in lacerations to the hands.

Ergonomics
Unfavorable working space and height can result in lower back discomfort, work related upper limb disorder.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

A powered hand-held shears for cutting sheet metal

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Food or drink must not be consumed at or near work area.
- The wearing of loose or nylon clothing is not permitted.
- Long hair must be neatly tied back.
- Group gatherings are not permitted when the machine is in operation.
- Follow the manual handling training guidelines at all times.
- Maintain workspace free from clutter and personal belongings.
- Measure and mark sheet metal for cutting prior to obtaining the machine. Ensure sheet metal is on a work bench when marking for cutting.

- Students must request the machine from the lecturer or technician when required.
- Do not carry or move the machine by the power cable.
- Ensure the machine and power cable is free from defects prior to use. Do not use the machine if damaged in any way
- Plug in the machine at the sockets above the chosen workbench.
- Ensure adequate workspace is available and maintained when cutting materials
- Ensure the power cable follows the cutting blade when machine in is use
- Do not touch cutting blade or cut sheet metal edges with bare hands
- Machine must be returned to the lecturer or technician when no longer required.
- Tidy workspace from all sheet metal and cut offs when work is complete.
- Safety glasses must be worn.
- Safety gloves must be worn when handling sheet metal material.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use the bending machine
- All students must be supervised when operating the bending machine
- Manual Handling Training
- PPE Training

Personal protective equipment required (last resort)

- Safety glasses
- Safety gloves
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 316
	Revision Date: Oct 2026
Portable Spot Welder	Approved by: Breda Brennan

Hazards

Electrical
Contact with damaged plugs or cables can result in electrocution-death or first, second or third degree burns.

Manual Handling
Incorrect lifting, carrying and holding of welder can result acute or chronic lower back injuries, work related upper limb disorders.

Mechanical
Contact with machine tong tips and linkages can crush hand parts and fingers.

Slips trips & falls
Trailing cables and untidy work area can result in slipping or tripping causing falls and concussion, major or minor cuts to the head.

Ergonomics
Unfavorable working space and bench height can result in acute or chronic lower back discomfort and or work related upper limb disorder.

Fire
Flying sparks can ignite combustible materials resulting in burns, and respiratory illness from inhalation of smoke.

Explosion
Flammable liquids exposed to heat or sparks can ignite and explode

Hot surfaces
Contact with heated metal surfaces can result in first or second and third degree burns to the hands and fingers.

Falling machinery / materials
Loose machine in vice or unsecure work material can result in falling item causing lower leg and feet impact injuries

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Spot welding is a process used to join thin metal sheets or plates. The sheets are placed in contact with one another and are joined by the heat obtained from resistance to electric

current flow. Work-pieces are held together under pressure exerted by two electrodes. Welding current is concentrated into a small "spot". Forcing a large current through the spot will melt the metal and form the weld.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Food or drink must not be consumed at or near work area.
- The wearing of loose or nylon clothing is not permitted.
- Long hair must be neatly tied back.
- Group gatherings are not permitted when the machine is in operation.
- Maintain workspace free from clutter and personal belongings.
- Students must request the machine from the lecturer or technician when required.
- Do not carry or move the machine by the power cable, use the machine handles.
- Ensure the machine and electrical cable are free from damage or defects prior to use. Do not use if damaged in any way.
- Lecturers / technicians must set up machine at the required work bench, use vice if required.
- Plug in the machine at the sockets above the chosen workbench.
- Ensure adequate workspace is available and maintained when welding.
- Ensure the power cable and hands do not come between machine tong tips.
- Use hand held tongs when welding small components.
- Do not touch hot welded surfaces with bare hands.
- Ensure there is adequate ventilation prior to operating the machine.
- Flammable and combustible materials must not be stored at or near welding working area.
- Return the welder back to storage when no longer required.
- Ensure to maintain a firm hold of the machine when in use.
- Ensure work pieces are securely clamped or held

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use the spot welder
- All students must be supervised when operating the spot welder
- Only the designated area in the workshop is to be used for spot welding
- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety glasses/goggles must be worn at all times
- Heat resistant gloves

- Safety boots must be worn

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 317
	Revision Date: Oct 2026
Thermo Forming Centre - Portable	Approved by: Breda Brennan

Hazards

Electrical
Poorly maintained, connected or damaged cables or plugs can result in electrocution-death or first, second or third degree burns.

Manual Handling
Pulling and pushing machine into position can result in acute or chronic lower back injury and or work related upper limb disorder. Incorrect lifting and closing of the machine heating hood can result in muscular skeletal injuries. Damaged wheels can impede the movement of the machine resulting acute lower back injuries.

Pneumatics
Incorrectly fitted or damaged airlines can result in whipping airline, resulting in loss of sight, minor cuts and bruises

Trips and falls
Poor housekeeping or incorrect placement of machine can result in trips and falls that result in broken limbs minor cuts and bruising.

Mechanical
Placing of hands in injection molding piston can result in crushing injuries to fingers and hands. Fingers or hands may get crushed or trapped from closing manually operated heating hood, oven door. Loose clothing long hair may get trapped in oven heating hood

Hot Surfaces
Inserting and removing metal components from the machine oven can result in first or second degree burns.

Chemicals
Overheated plastic materials can generate fumes resulting in respiratory illness.

Fire
Flammable sources in contact with hot surfaces may ignite and cause minor burns to the body.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The thermo forming centre is a machine used to soften plastic and polymer materials so that they can be pressed and moulded into shapes, using basic dies and moulds. Also used for preheating metals for plastic dip coating.

Controls

- Students are permitted to operate the machine, under correct instruction & the lecturer or technician's supervision.
- Food or drink must not be consumed at or near work area.
- The wearing of loose or nylon clothing is not permitted when operating the machine.
- Jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back.
- Group gatherings are not permitted when the machine is in operation.
- Follow the manual handling training guidelines at all times.
- Maintain workspace free from clutter and personal belongings.
- Follow manual handling training when moving the machine and seek assistance if required.
- Ensure wheels on machine are in good working order. Move the machine to the designated work area and lock both caster wheels. Do not transport by pulling on cables and hoses.
- Inspect the electrical cable, plugs and airlines for damage or defects prior to operating the machine.
- Avoid the trailing of electrical cables.
- Ensure the required machine guards are in place prior to operating the machine.
- Use the handle on the oven when required to operate.
- Use both hands to operate the handle of the heating hood.
- Do not touch injection molding piston when in operation,
- Follow the manufacturer's instructions on the machine face plate.
- Do not store flammable sources beside, on or near the machine.
- Ensure there is adequate ventilation when the machine is in use
- Use purpose-made tongs and handles for manipulating moulded components and materials
- Use heat resistant gloves when handling hot materials
- Use safety glasses at all times
- Take heed of hazard warning notices
- Do not use the machine if defective in any way.

Checks & Inspections

- Regular maintenance inspections to be carried out and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use this machine
- Students are only permitted to operate the machine while supervised
- Manual handling training
- PPE training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Heat resistant gloves
- Safety glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 318
	Revision Date: Oct 2026
Vacuum Form Plastic Cutter	Approved by: Breda Brennan

Hazards

Manual Handling
Moving the machine to and from storage location can result in lower back injuries.

Electricity
Incorrectly wired, damaged or poorly maintained cables can result in electrocution-death or first second and third degree burns.

Slips trips and falls
Trailing cable, poor housekeeping can cause slips and trips resulting in falls and broken hands and fingers, minor cuts and bruises. Folded floor mat may result in trips and fall impact head injuries causing concussion and minor bruising.

Mechanical
Loose clothing, long hair in contact with rotating shaft can result in entanglement and cause minor cuts and bruising. Contact with rotating blade can result in deep lacerations to the fingers and hands.

Flying material
Trimming plastic material creates flying waste material and can result in loss of sight or temporary eye discomfort.

Hot surfaces
Trimming plastic materials on the cutting tool can result in generating heat and cause minor burns to the hands and fingers.

Falling machine
Poorly mounted and unsecured machine can fall and cause impact injuries resulting in broken toes and major bruises.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The vacuum form plastic cutter is a portable bench mounted cutting device use to trim moulding flash and excess material from vacuum formed components.

Controls

- Lecturer or technicians must set up the machine.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Follow manual handling training guidelines when lifting and transporting the machine.

- Inspect the electrical cable and plug prior to use, do not use if damaged or defected in any way.
- Electrical repairs must be carried out by a competent person.
- Never pull or drag the machine by the electrical cable.
- Ensure no trailing cables, plug into socket above workbench.
- Maintain work area free from clutter and personal belongings.
- Floor mats must lay firm and flat on the ground.
- Loose clothing is not permitted when operating the machine.
- Long hair must be neatly tied back.
- Ensure machine guard is in place prior to using the machine.
- Never touch the rotating cutting tool.
- Chosen workbench must be free from materials so as to ensure secure mounting of machine.
- Ensure that the machine is paced in from the workbench edge.
- Group gatherings are not permitted around the machine unless under the lecturers supervision.
- Safety glasses/goggles must be worn at all times.
- Use heat resistant gloves when required.

Checks & Inspections

- Regular maintenance inspections to be carried out and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use the cutter
- All students must be supervised when operating the cutter

Personal protective equipment required (last resort)

- Safety glasses/goggles
- Heat resistant gloves
- Manual Handling training
- PPE Training

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**High Risk 9**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**Low Risk 1**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 319
	Revision Date: Oct 2026
Air Compressor & Hoses	Approved by: Breda Brennan

Hazards

Explosions
Over pressuring of compressor, not being maintained can result in explosions and ejected flying metal missiles causing death, lacerations, deep puncture wounds, major and minor cuts and bruises.

Electricity
Loose, damaged or poorly maintained electrical cables, plugs can result in electrocution or first, second or third degree burns.

Slips, Trips & Falls
Leaking water, untidy workspace, poor housekeeping, can cause personnel to slip trip and fall breaking limbs, cuts and bruises and or concussion.

Noise
Poorly marinated compressors, missing guards can increase noise levels and cause acute or chronic permanent or temporary hearing loss and discomfort.

Fire
Overheating of compressors can result in fire when in contact with fuel sources and cause first second or third degree burns.

Whipping air lines
Damaged air lines, partly left open valves, poorly fitted connections can cause uncontrolled whipping lines striking individuals and causing loss of sight minor cuts and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Compressing air to open and close demonstration valves, operate machinery, and particular hand held tools.

Controls

- Students are not permitted to turn on Air Compressor or use airline hoses.
- Only trained lecturers and technicians must operate the compressor.
- Maintain good housekeeping and clutter free surrounding of the compressor at all times.
- Inspect electrical cable and plugs for damage or defects prior to use, do not use if damaged or defected in any way.

- Dry up any leaking water immediately.
- Ensure all machine guards and housing is in place at all times of use of the compressor.
- Ensure all airline valves are closed prior to turning on compressor.
- Switch on the compressor when required. Follow the manufacturer's instructions.
- Ensure all hose attachments and connectors are free from defects (do not use if damaged) prior to use. Leaking or damaged airlines must only be repaired by a competent person.
- All non-machine hose airlines must be stored in storage lab. Lecturer and technicians are only permitted to use hose airlines. Return hose air lines to storage when no longer required.
- Only trained persons may use the compressor.
- All pipes, hoses, and fittings must have a rating of the maximum pressure of the compressor. Compressed air pipelines should be identified (psi) as to maximum working pressure.
- Air supply shutoff valves should be located (as near as possible) at the point-of-operation.
- Air hoses should be kept free of grease and oil to minimise the possibility of deterioration.
- Hoses must not be strung across floors or aisles where they are liable to cause personnel to trip and fall. When possible, air supply hoses should be suspended overhead, or otherwise located to afford efficient access and protection against damage.
- Compressed air must not be used to blow down clothing etc. and disciplinary action will be taken against anybody seen directing a live compressed air hose at any other person, as compressed air can enter the body via the skin causing serious illness/fatality.

Checks & Inspections

- Annual test and inspection of the compressor must be completed by the insurer. A record of the test should be kept by the School.
- Inspect hose and fittings prior to use.

Information, Instruction & Training

- PPE

Personal protective equipment required (last resort)

- Safety boots.
- Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**
Risk Assessment Review							
As and when process changes or yearly							

Safe Work Practice Sheet	Ref: SWPS 320
	Revision Date: Oct 2026
Portable Hand Guillotine	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, carrying, pulling and pushing the machine to and from storage can result in acute or chronic lower back injury and neck and arm injuries.

Sharps
Cutting blades, corners of sheet metal and damaged pieces of metal can cause deep lacerations to the hands, arms, face and other body parts.

Slips, Trips & Falls
Untidy work space, poor housekeeping, personal belongings, supporting base legs of guillotine can cause individuals to trip or slip resulting in broken limbs, concussion, major and minor cuts and bruises.

Mechanical
Operating hand lever of the machine can result in blunt blows to the head and body parts causing concussion minor wounds and bruising, fingers in between shearing action of cutting blades can result in severing of fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Portable machine for cutting thin pieces of sheet metal into various sizes and shapes.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Food or drink must not be consumed in workshop.
- Loose clothing is not permitted.
- Long hair must be tied back neatly.
- Personal belongings are not permitted beside or around workspace.
- Maintain clear and clean workspace all times
- Jewellery must not be worn when operating machine.
- Group gathering around machine is not permitted.
- Wear safety glasses at all times.
- When required, place the machine (workshop or outside) into the required position and on firm level ground. Seek assistance when moving the machine and follow manual handling training guidance.
- Observe the placement of the supporting base of the machine when operating it.
- Measure and mark metal sheets for cutting prior to using the machine.

- Never touch machine cutting blades with bare hands.
- When required, seek assistance in lifting and supporting large cut offs of metal sheets.
- Wear leather work gloves when handling sheet metal stock.
- Place metal sheet into the guillotine where cut is to be achieved.
- Ensure that hands and fingers are clear of the cutting area at all times.
- Ensure that both hands are on the end of the guillotine lever when operating it.
- Ensure secure firm footing at all times.
- Return the lever into the upright position when cutting is complete.
- Ensure spatial surroundings are free from persons and obstructions when operating the machine lever.
- Tidy the machine workspace and floor from all metal sheet cut offs.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use the guillotine
- All students must be supervised when operating the guillotine

Personal protective equipment required (last resort)

- Safety glasses
- Leather work gloves

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**3**	= Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 321
	Revision Date: Oct 2026
Fixed Guillotine	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, carrying and holding heavy loads for cutting can result in acute or chronic lower back injury and neck and arm injuries.

Sharps
Cutting blades, corners of sheet metal and damaged pieces of metal can cause deep lacerations to the hands, arms, face and other body parts.

Slips, Trips & Falls
Untidy work space, poor housekeeping can cause individuals to trip or slip resulting in broken limbs, concussion, major and minor cuts and bruises.

Mechanical
Moving parts of machinery can result in blunt blows to the head and body parts causing concussion minor wounds and bruising, fingers in between shearing action of cutting blades can result in severing of fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Portable machine for cutting thin pieces of sheet metal in various sizes and shapes.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Food or drink must not be consumed in workshop.
- Loose clothing is not permitted.
- Long hair must be tied back neatly.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Jewellery must not be worn when operating machine.
- Group gathering around machine is not permitted.
- Wear safety glasses at all times.
- Measure and mark metal sheets for cutting prior to using the machine.
- When required, seek assistance in lifting and supporting large cut offs of metal sheets.
- Wear leather work gloves when handling sheet metal stock.
- Ensure that hands and fingers are clear of the cutting area at all times. Do not touch cutting blade with bare hands.
- Ensure spatial surroundings are free from persons and obstructions when operating the machine lever.

- Both hands should be used to operate the machine lever.
- Return the lever into the upright position when cutting is complete, tidy the machine workspace and floor from all metal sheet cut offs.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- All students are given training before being allowed to use the guillotine
- All students must be supervised when operating the guillotine
- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety glasses
- Leather work gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**3**	= Risk Factor	**6 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 322
	Revision Date: Oct 2026
Fly Press	Approved by: Breda Brennan

Hazards

Mechanical
Contact with rotating fly wheel can result in blunt blows to the head, eyes and upper body parts resulting in concussion or minor bruising. Crushing of fingers can occur when pressing bearings. Loose clothing, long hair can become entangled with fly wheel and result in neck injuries and minor bruising to body parts.

Chemicals
Hands in contact with machine lubricating oil can result in contact dermatitis and minor skin irritations.

Sips trips and falls
Poor housekeeping, personal belongings, folded matting can generate slip and trip hazards resulting in falls and head injuries, broken arms, minor cuts and bruises.

Falling machine
Unsecured machine can fall and cause impact injury resulting in broken bones in the feet and lower legs, major and minor cuts and bruises.

Manual Handling
Incorrect pulling of the fly wheel can result in acute lower back or upper arm injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to press bearings and bushings

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Food or drink is not permitted at or near the workstation.
- Do not touch lubricated parts of the machine with bare hands, wash hands or skin if in contact with oil.
- Use the machine as instructed and always keep head and body parts clear of the fly wheel.
- Ensure the fly wheel arm is properly configured prior to use.
- Do not place hands and fingers between moving parts, use both hands when turning the fly wheel.
- Maintain work area free from clutter and personal belongings at all times.
- Floor matting must be secure and flat on the ground at all times.

- Ensure that the machine is securely bolted to the work bench.
- Follow the manual handling safety guidelines when operating the fly wheel.
- Do not wear loose clothing.
- Long hair must be neatly tied back or cap worn when operating the machine.

Checks & Inspections

- Regular maintenance inspections to be carried out and records kept by the School
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Operators must be trained in how to use the machine.
- Manual handling training.
- Chemical training.
- MSDS

Personal protective equipment required (last resort)

- Safety glasses/goggles
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 323
	Revision Date: Oct 2026
Transportation & Storage of Metal Stock	Approved by: Breda Brennan

Hazards

Manual handling
Lifting and carrying long pieces of metal can result in acute or chronic lower back injuries and work related upper limb disorder.

Slips trips and falls
Metal materials lying on the ground can cause slipping and tripping that results in falls to the ground or against stored materials resulting in possible concussion, major and minor cuts to the head, broken hand or arm, major and minor cuts and bruises to hands.

Metal Sharps
Lifting and carrying metal sheets and rods etc. can result in loss of sight from metal sharps, major and minor cuts or puncture wounds to the hands, arms and other body parts.

Falling materials
Heavy loads can slip and fall when carrying causing impact injuries to the feet and lower legs resulting in broken bones, major and, minor cuts and bruising.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Flat metal sheeting, long metal rods etc. are taken in from a supplier and stored in the metal storage area for when required.

Controls

- Technicians are only permitted to receive stock from suppliers and place in storage.
- Students are permitted to take stock from the stores as required, under correct instruction and the lecturer or technician's supervision.
- Seek assistance when transporting metal stock into the storage area.
- Heavy metal bars must be stored on bottom shelving & light material rods etc. on top shelving.
- Sheet metal must be stored on its side against the wall in the stores.
- Pre-cut long pieces of metal to the required length prior to moving to storage. Inspect cut material for metal sharps and file smooth if required.
- Ensure the walkway of the stores is maintained free from metals & maintain good housekeeping at all times. Personal belongings must not be stored in with metal materials.
- Ensure manual handling training guidelines are followed at all times.

- Safety glasses must be worn at all times.
- Use leather apron and gloves at all times.
- Safety boots must be worn at all times.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety glasses
- Leather apron
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 324
	Revision Date: Oct 2026
Carif 260, Semi-Automatic Band Saw	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged power cables can result in electrocution-death or first second and third degree burns.

Manual Handling
Lifting and carrying heavy loads for cutting can result in acute or chronic lower back and or musculoskeletal injuries.

Ergonomics
Operating the cutting handle of the machine for extended periods of time can result in work related upper limb disorder.

Noise
Poorly maintained machinery can generate unnecessary noise when cutting various metal materials and cause acute hearing discomfort.

Chemicals
Filling the machine with cutting fluid can cause spilling and splashing and result in minor eye and skin irritation. Handling of lubricated cut metal or saw blade can result skin minor irritation to the hands and fingers.

Slips, trips and falls
Oil on floor may result in slips and cause impact head injuries from falling, minor and major cuts and bruises. Cutting Long pieces of cutting materials, poor housekeeping & incorrect storing of metal can cause trips resulting in impact head injuries from falls.

Sharps
Contact with machine cut metal can cause lacerations to the hands, fingers and other body parts. Contact with saw blade teeth can result in cuts to the hands and fingers.

Mechanical
Contact with rotating saw blade can result in severing of fingers & hands. Loose clothing, long hair can become entangled with machine causing death.

Flying debris
Cutting of various metals can generate flying materials and cause loss of sight or eye irritation. Unsecured work piece can fly and cause blunt force injuries resulting in concussion and bruising. Damaged or poorly fitted saw blade can result in ejected materials causing loss of sight and cuts.

Hydraulics
Damaged hydraulic hoses, ejecting hydraulic fluid can result in piercing of the skin, loss of sight and minor skin irritation.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Long and short pieces of square, cylindrical, flat, metal tubing and rods of varying diameters are loaded into the machine and cut to a required length using a rotating machine saw.

Controls

- Trained operators (lecturers /technicians) must only use the machine.
- Students are not permitted to use the machine.
- Stand back from the machine when cutting is in progress.
- Group gatherings are not permitted with this machine, unless under the lecturers / technicians supervision.
- Materials must not be stored on top of or beside the machine.
- Prior to use, inspect the machine power cables and plug for any damage or defects. Do not use if damaged or defected in any way and remove form use for repair by a competent person.
- Ensure emergency stop button is in good working order.
- Follow manual handling training guidelines at all times, seek assistance where loads are too heavy or awkward to handle and lift.
- Ensure the machine is adequately filled with cutting oil and that it is turned on. Wear gloves and glasses when filling with cutting oil, pour carefully, and avoid spilling and splashing.
- Clean all cutting oil up that comes into contact with the floor as soon as possible.
- Collect all metal cut offs in an empty bucket.
- Remove and replace clothing contaminated with cutting oil. Wash any contaminated skin immediately.
- Wear gloves if handling metals or saw blade in contact with cutting fluid.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure the machine rollers are free rolling.
- Hand file or grind any metal burrs & sharps if required.
- Ensure all machine and blade guards are in place prior to operating the machine.
- Stand clear and allow the machine to stop if the blade breaks when running.
- Never touch the rotating saw blade.
- Hands and body parts must remain clear from the rotating saw blade at all times.
- Loose clothing must not be worn and long hair must be neatly tied back or a cap worn.
- Wear safety glasses at all times when operating the machine.
- Ensure material for cutting is properly clamped and secure.
- Never cut more than one metal tubing or piping at a time.
- Ensure saw blade is correctly tensioned prior to use, replace any damaged saw blades.
- Wear gloves when handling cut materials, piping or removing and replacing saw blade.
- Ensure hydraulic machine hoses are in good order prior to use, do not use if damaged or leaking.
- Switch off the machine when it is no longer required and tidy up work area.
- Unused metal stock must be returned to storage.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Machine operation
- Manual handling training
- PPE training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 325
	Revision Date: Oct 2026
Portable Optimum Bit Grinder	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged or poorly maintained electrical power cables can result in electrocution-death or first second and third degree burns.

Manual Handling
Lifting and carrying the machine into the required location can result in acute or chronic lower back or musculoskeletal injuries.

Ergonomics
Setting the machine up at a height that is too low or high can result in acute or chronic lower back or musculoskeletal injuries.

Falling Machine
Unsecure machine on work bench edge can fall resulting in lower leg and feet impact injuries and bruising.

Slips, trips and falls
Folded mats, trailing cables, poor housekeeping can result in slipping and tripping causing head impact injury and cuts and bruises. Wet floor when transporting machine resulting in splashing from trough causing slips and fall head impact injuries.

Sharps
Contact with drill bits for sharping can result in lacerations to the hands and fingers.

Ejected metal / debris
Operating hand vise can result in hands in contact with metal debris & inadvertently being rubbed into and causing eye damage.

Hot Surfaces
Contact with machined drilled bits can result in minor burns to the hands and fingers.

Mechanical
Loose clothing, long hair can become entangled with the machine causing minor cuts and bruising. Abrasions to hands and fingers from touching rotating stone.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Damaged, blunt machine drill bits are inserted into the machine vise for manually operated reshaping on a rotating sharping stone.

Controls

- Students are not permitted to use this machine.
- Operators that have received formal abrasive wheel training may only operate this machine.
- Competent persons must only carry out mounting of an abrasive wheel.
- Group gatherings are not permitted at or around the machine when in use.
- Materials must not be stored on top of or beside the machine.
- Inspect the machine power cable and plug for defects or damage prior to use. Do not use the machine where cables are damaged or defected in any way, remove from use for repair by a competent person.
- Ensure emergency stop button is in good working order.
- Follow manual handling training guidelines at all times, seek assistance if required.
- Ensure the machine is set up at the required height when in use.
- Ensure the machine is placed in from the work bench edge, level and flat.
- Ensure all floor matting is lying firm and flat along the ground.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Machine electrical cable should be plugged into sockets above workbenches or tables.
- Do not touch the drill bit or cutting tool head, handle by the shank.
- Use water in machine water trough to cool machined hot metals.
- Ensure all machine guards are in place prior to operating the machine.
- Never touch the rotating stone on the machine. Use machine clamping device at all times and ensure piece is securely clamped.
- Do not fill machine water trough prior to moving, do not over fill water trough when in position. Empty water trough when no longer required.
- Never touch hands to eyes during or after grinding, wash hands thoroughly after grinding is complete.
- Loose clothing must not be worn and long hair must be neatly tied back or a cap worn.
- Wear safety glasses at all times when operating the machine.
- Switch off the machine when it is no longer required for use and tidy up work area.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Abrasive wheel training in accordance The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016**.**
- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 326
	Revision Date: Oct 2026
Hurco TM 6	Approved by: Breda Brennan

Hazards

Electricity

Incorrectly wired, loose or damaged power cables can result in electrocution-death or first second and third degree burns.

Manual Handling

Lifting and carrying drums of machine cutting fluid, swarf waste bin, reservoir oil tray, & removing and lifting machine panels and parts for maintenance can result in acute or chronic lower back injuries.

Slips, trips and falls

Folded mats, transformer power cables, poor housekeeping, personal belongings, machine control pedals can result in tripping causing head impact injuries and cuts and bruises. Spilled, leaking, splashed hydraulic or cutting fluid & waste material can result in slipping causing falls & head impact injuries.

Chemicals

Filling the machine with cutting fluid can result in spilling & splashing of fluid & cause minor eye and skin irritation and clothing contamination. Cutting oil in contact with hands and body parts can result in minor skin irritation.

Pneumatics

Incorrectly installed, damaged or inadvertent banging of airline can result in uncontrolled whipping airline causing loss of sight & minor eye injuries.

Sharps

Contact with cutting tool, chuck head, tail stock, machined material, swarf can result in cuts to the hands / fingers

Mechanical

Crush injuries and entrapment from tail stock and chuck head. Crushed fingers from closing machine door & part capture. Pinch points from replacing panels. Entanglement of loose clothing and long hair resulting in neck and head injuries. Entrapment with chuck head and or tail stock when loading or adjusting work piece.

Flying Missile & Debris

Machining material, brushing or blowing of swarf can generate flying debris and result in loss of sight. Unsecure work piece in chuck head can result in flying missile & cause major blunt force head injuries.

Falling objects

Machine cutting tools and miscellaneous materials stored on top of the machine can fall and cause impact injuries to the head and other body parts.

Fire
Machine not maintained can lead to overheating of machine oil, burnt cables etc. and result first second or third degree burns.

Hot Surfaces
Insufficient cutting oil on machined cutting tool/work pieces can result in minor burns to the hands and fingers.

Person Exposed to Risk
☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using Computer Numerical Controlled (CNC) MTurning Centre to machine (cut) metal, polymers to a desired part or component shape

Controls

- Only trained operators can use the machine, students must be supervised by the lecturer or technician when using the machine.
- All machine guards must be in place prior to operating the machine.
- Group gatherings are not permitted with the machine unless under the supervision of the lecturer.
- Ensure that all electrical power cables are free from defects or damage prior to using the machine, do not use if damaged in any way and remove from use for repair by a competent person.
- Loose clothing or jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Never touch a machine rotating or moving part.
- Marked pedestrian walkway must be used at all times by passers-by.
- Follow the manual handling training guidelines when lifting, pulling, pushing or carrying heavy loads.
- Ensure that the machine surrounding floor space is free from oil leaks at all times.
- Cutting fluid or waste material on the floor must be cleaned as soon as noticed.
- Avoid the spilling and splashing of cutting fluid when topping up the machine.
- Remove and replace any clothing contaminated with cutting fluid or oil immediately.
- Wash skin contaminated by cutting fluid or oil immediately.
- Avoid trailing power cables with the machine control pedals and transformer.
- Ensure all floor mats are lying flat on the ground.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Safety glasses must be worn when operating or maintaining the machine.
- Safety gloves must be worn when handling cutting fluid, machined materials or parts in contact with cutting fluid.
- Ensure airlines are securely fitted, free from damage or leaks prior to using the machine. Do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Always brush swarf away from yourself & machine parts & machined materials. Never use air to remove swarf.
- Never handle swarf with bare hands.

- Wear gloves when handling the cutting tool, tail stock, raw materials or machined materials.
- Do not place fingers or hands in-between moving chuck clamp or tail stock.
- Keep fingers and hands clear when closing machine doors and machines parts capture.
- Ensure material in chuck head is securely clamped prior to operating the machine.
- Never store machine parts or miscellaneous items on top of the machine.
- Turn off the machine when it is no longer required.
- Student part programmes from "of line" programme should only be imported into the Hurco master file.
- Checking of interlocks as per recommendations in Hurco safety manual
- CE locks, interlocks or hardware, limit switches or other guarding must never be interfered with.
- Front door can never be open during machining.
- The chuck foot pedal must be operated by the same operator loading and unloading the work piece.
- Machine door must be closed before tail stock foot pedal is operated. The machine operator must only advance the tail stock.
- Side door must only be opened for service proposes; door must be bolted closed during any machining operations, or machine movements.
- Emergency Stop button must be unobstructed and tested each term.
- No person is permitted inside the enclosure without correct equipment lock out procedures in place.
- Always wash your hands when finished using the machine.

Checks & Inspections

- Maintenance to be carried out according to manufactures recommendations (Ch. 4)
- Maintenance log to be maintained by the School
- Ensure safety interlocks are checked each term
- Technicians to monitor compliance with control measures
- Lectures and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Machine operation
- Manual handling training
- PPE training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Gloves

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	= Risk Factor	9 High Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 327
	Revision Date: Oct 2026
Hurco VM 10	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, loose or damaged power cables can result in electrocution-death or first second and third degree burns.

Manual Handling
Lifting and carrying drums of machine cutting fluid, swarf waste bin, reservoir oil tray, machine panels and parts (vise dividing head etc.), for use or maintenance can result in acute or chronic lower back injuries.

Slips, trips and falls
Folded mats, poor housekeeping, personal belongings, air and cooling fluid hose lines can result in tripping causing head impact injuries. Spilled, leaking, splashed hydraulic or cutting fluid & waste material can result in slipping causing falls & head impact injuries.

Chemicals
Filling the machine with cutting fluid can result in spilling and splashing of cutting fluid & cause minor eye and skin irritation and contamination of clothing.

Pneumatics
Incorrectly installed, damaged or inadvertent banging of airline can result in uncontrolled whipping airline causing loss of sight & minor eye injuries.

Sharps
Contact with cutting tool, chuck head, machined material and swarf can result in lacerations to the hands and fingers.

Mechanical
Crush injuries and entrapment with tail stock and chuck head. Crushed fingers from closing machine door & part capture. Pinch points from replacing panels. Entanglement of loose clothing, long hair with rotating cutting tool resulting in neck and head injuries. Pinch points when manually inserting cutting tool resulting in loss of finger.

Flying missile / debris
Unsecure work piece or vise can result in flying missile & cause major blunt force head & body injuries. Machining material, brushing or blowing of swarf can generate flying debris & oil and result in permanent eye damage.

Falling objects
Machine cutting tools and miscellaneous materials stored on top of the machine fall and cause impact injuries to the head and other body parts.

Fire
Machine not maintained leading to overheating of machine oil, burnt cables etc. resulting burns to the body

Hot Surfaces
Insufficient cutting oil on machined cutting tool and work pieces can result in minor burns to the hands and fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using Computer Numerical Controlled (CNC) MTurning Centre to machine (cut) metal, polymers to a desired part or component shape.

Controls

- Only trained operators can use the machine, students must be supervised by the lecturer or technician when using the machine.
- All machine guards must be in place prior to operating the machine.
- Group gatherings are not permitted with the machine unless under the supervision of the lecturer/technician.
- Marked pedestrian walkway must be used at all times by passers-by.
- Ensure that all electrical power cables are free from defects or damage prior to using the machine, do not use if damaged in any way and remove from use for repair by a competent person.
- Lose clothing or jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Never touch a machine rotating or moving part.
- Follow the manual handling training guidelines when lifting, pulling, pushing or carrying heavy loads.
- Ensure that the machine surrounding floor space is free from oil leaks at all times.
- Ensure there is adequate cutting fluid prior to operating the machine.
- Cutting fluid or waste material on the floor must be cleaned as soon as noticed.
- Avoid the spilling and splashing of cutting fluid when topping up the machine.
- Remove and replace any clothing contaminated with cutting fluid or oil immediately.
- Wash skin contaminated by cutting fluid or oil immediately.
- Ensure all floor mats are lying flat on the ground.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Safety glasses must be worn when operating or maintaining the machine.
- Safety gloves must be worn when handling cutting fluid or machined materials or parts in contact with cutting fluid or jot surfaces.

- Ensure airlines are securely fitted, free from damage or leaks prior to using the machine. Do not use if damaged or defected in any way and remove from use for repair by a competent person..
- Always brush swarf away from yourself & machine parts & machined materials.
- Only trained operators can use air and coolant guns on the machine.
- Students must never use air or oil coolant guns.
- Never test air or coolant guns against body parts.
- Do not handle swarf with bare hands.
- Wear gloves when handling the cutting tool, tail stock, raw materials or machined materials.
- Keep fingers and hands clear when closing machine doors.
- Never store machine parts or miscellaneous items on top of the machine.
- Turn off the machine when it is no longer required.
- Student part programmes from "of line" programme should only be imported into the Hurco master file.
- Checking of interlocks as per recommendations in Hurco safety manual.
- CE locks, interlocks or hardware, limit switches or other guarding must never be interfered with.
- Work area must be cordoned off when side doors of machine are open for machining of large components and under the lecturers supervision at all times of the operation.
- Front door can never be open during machining
- Side door must only be opened for service proposes; door must be bolted closed during any machining operations, or machine movements.
- Emergency Stop button must be unobstructed and tested each term.
- No person is permitted inside the enclosure without correct equipment lock out procedures in place.
- Always wash your hands when finished using the machine.

Checks & Inspections

- Maintenance to be carried out according to manufactures recommendations (Ch. 4)
- Maintenance log to be maintained by the School
- Ensure safety interlocks are checked each term
- Technicians to monitor compliance with control measures
- Lectures and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Machine operation
- Manual handling training
- PPE training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 328
	Revision Date: Oct 2026
Edwards Bench Mounted Bending Machine	Approved by: Breda Brennan

Hazards

Falling Machine
The machine is placed on the edge of the workbench and falls causing lower leg and feet impact and crushing injuries.

Manual Handling
Lifting and lowering of the bending lever of the machine for extended periods of time can result in work related upper limb disorder.

Mechanical
Crushing and entrapment of hands and fingers when in between manual descending clamping metal plate. Crushing of fingers when in between hinge limit and bending bolt or compressing springs.

Slips Trips and Falls
Poor housekeeping, personal belongings, metal artefacts lying on the ground can result in slips and trips causing fall impact head and body injuries.

Sharps
Handling flat pieces of metal for bending can contain sharp edges or corners that can result in deep lacerations to the hands and fingers.

Flying Debris
Bending pieces of metal can result in metal breaking and flying thus resulting in loss of sight from metal flying fragments.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Machine is used for bending and folding various flat metal sheets or bars.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the machine is fixed bolted to the work bench.
- If required, tend to other duties for periods of rest from repeatedly operating the bending lever of the machine.
- Follow the manual handling training guidelines at all times.
- Never place hands and fingers in between the manual descending clamping plate.

- Always keep fingers and hands on the outside of the machine when holding metal for bending.
- Do not place fingers tips in between the hinge limit and bending bolt.
- Never touch the springs of the machine when it is in use.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Always use the work bench at the machine to store metal parts for or after bending.
- Where possible file smooth any sharp metal edges or corners on material for bending.
- If required wear leather gloves for handling metal sharps.
- Be aware of other people in the vicinity of the machine and ensure the work area is clear before using equipment.
- Wear eye protection when operating the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 329
	Revision Date: Oct 2026
Mitutoyu Optical Comparator	Approved by: Breda Brennan

Hazards

Falling Machine
The machine is placed at the workbench edge and falls resulting in lower leg and feet impact injuries.

Electricity
Poorly maintained, damaged or defected electrical power cable or plug can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing electrical cables lying on the ground can result in slips and trips causing fall impact head and body injuries.

Manual Handling
Moving the machine to or from storage can result in acute or chronic lower back or musculoskeletal injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Machine is used for bending and folding various flat metal sheets or bars.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the machine is placed in from the work top edge, flat and level.
- Inspect the machine electrical cable and plug for damage or defects prior to use, do not use if damaged or defected in any way. Competent person/s must carry out all electrical repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of the electrical cable by plugging the machine in the socket mounted on the wall behind the machine.
- Follow the manual handling training guide lines if required to move the machine and seek assistance.
- Ensure that all electrical covers are in place and closed prior to operating the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 330
	Revision Date: Oct 2026
Scrolling Apparatus	Approved by: Breda Brennan

Hazards

Falling Apparatus
Mounting the apparatus on the edge of the workbench can fall and result in lower leg and feet impact and injuries.

Manual Handling
Repeated lifting and lowering of the bending lever of the machine can result in work related upper limb disorder.

Mechanical
Crushing of fingers with manual descending clamping roller. Crushing of fingers tips if in between ascending clamp and limit bolt. Shearing or crushing of finger tips if in between lever and bolt pivot points.

Slips Trips and Falls
Poor housekeeping, personal belongings, metal artefacts lying on the ground can result in slips and trips causing fall impact head and body injuries.

Sharps
Handling round or flat pieces of metal for scrolling can contain sharp edges or corners that can result in deep lacerations to the hands and fingers.

Flying Debris
Scrolling pieces of metal can result in metal breaking and flying thus resulting in loss of sight from metal flying fragments.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Machine is used for scrolling flat and round pieces of metal.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision. .
- Ensure that the apparatus is fixed bolted to the work bench prior to operating it.
- Tend to other duties for periods of rest from repeatedly operating the bending lever of the machine.
- Never place hands and fingers in between the manual descending clamping roller clamp & limit bolt.

- Never place finger tips in between lever and bolt pivot points.
- Never rest free hand on the machine when scrolling metal pieces.
- Where possible always use both hands to scroll metal pieces.
- Do not place fingers tips in between the hinge limit and bending bolt.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Always use the work bench at the machine to store metal parts for or after bending.
- Where possible file smooth any sharp metal edges or corners prior to scrolling.
- If required wear leather gloves for handling metal sharps.
- Ensure work area is free from bystanders when operating the machine.
- Wear eye protection when operating the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 331
	Revision Date: Oct 2026
Colchester Universal Workbenches	Approved by: Breda Brennan

Hazards

Manual Handling
Moving the workbench to and from location, adjusting the height of the bench can result in acute or chronic lower back and or musculoskeletal injury.

Slips trips and Falls
Poor housekeeping, personal belongings, rubber mats and metal materials lying on the ground can result in slipping and tripping causing falls and head and body impact injuries cuts and bruises.

Falling Bench
Moving the bench to and from required location can result in the bench toppling over and falling causing feet crushing injuries, lower leg impact injuries.

Mechanical
Adjusting the height of the table can result in crushing of fingers if holding on to the shaft when the table is being lowered to the required height. Crushing of fingers when clamping in materials on the vice.

Ergonomics
Carrying out work on the work bench that is too low or high can result in acute or chronic lower back and or musculoskeletal injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The workbenches are mobile and can be used as supplementary workbenches.

Controls

- Students are permitted to use the benches, under the lecturer or technicians supervision.
- Follow the manual handling training guidelines and seek assistance if required to move the table or use a trolley if required to transport the workbench several metres away.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave metal artefacts lying on the ground.
- Ensure rubber mats are lying flat on the ground.
- Where possible leave the bench in the same location.
- Never hold on to the shaft of the workbench when adjusting the bench height.
- Never place hands or fingers in between the closing jaws of the vice when clamping materials.
- Always seek assistance when adjusting the table height.

- Ensure that the table is adjusted to the required height prior to carrying out work on it.
- Wear safety boots when working oat the bench.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 332
	Revision Date: Oct 2026
Hand Tools in Mechanical Engineering	Approved by: Breda Brennan

Hazards

Sharps
Holding tools by the cutting edge or blade, placing fingers between the cutting blades of snips, damaged tool handles with sharp metal parts can result in lacerations to the hands and fingers. Puncture wounds to body parts pointed sharps (scribes etc.)

Flying Debris
Inappropriate use of the tool can result in the metal tool breaking and causing flying metal parts, hack saw blade breaks, striking metal objects with hammers etc. can result in loss of sight or puncture wounds to the body.

Ergonomics
Holding and using hand tools for extended periods of time can result in work related upper limb disorder.

Falling hand Tools
Tool rolls from the workbench, tools placed at the edge of the work bench edge, over loading of the body with hand tools when transporting resulting in lower leg and feet crush and or puncture injuries from falling tools.

Slips Trips and Falls
Poor housekeeping, personal belongings, hand tools lying of the ground can result in slipping and tripping causing falls and head and body impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The hand tools are manually operated and are used to cut, punch, file, extract, bend, measure etc. and can consist of metal and or wooden handles. The types of tools used can include hammers, files, dividers, callipers, scribes, spot punch, squares, hacksaws, stock dyes, tin men snips and clamps etc.

Controls

- Students are permitted to use the hand tools under correct instruction and the lecture or technicians supervision.
- Inspect the hand tool for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair or replacement.
- Always hold the tool by its handle.
- Never place fingers in between closing parts of a hand tool.

- Never press pointed sharps against any part of the body, always carry out work on a work bench or away from the body.
- Always use the tool as intended by the manufacturer.
- Safety glasses must be worn at all times of hand tool use.
- Avoid the use of hand tools for extended periods of time, tend to other duties for periods of rest.
- Ensure tools are placed in from the work bench edge when not in use.
- Ensure tools cannot roll off the workbench when placed upon it.
- Never over load the body with hand tools when transporting.
- Safety boots must be worn at all times.
- Never throw or drop tools to the ground or workbench.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Hand tools must never be stored or left lying on the ground.

Checks & Inspections

- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- PPE Training

Personal protective equipment required (last resort)

- Safety Boots
- Safety glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 High Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 333
	Revision Date: Oct 2026
Soldering in Mechanical Engineering	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged electrical wiring or plug on the soldering Iron can result in electrocution-death or first, second and or third degree burns.

Hot surfaces / Liquids
Contact with heated soldering iron or liquid metals can result in first second and or third degree burns to the hands and fingers.

Fire
Flammable materials in contact with hot soldering iron can result in fire, minor and or major burns and or respiratory illness from smoke inhalation.

Fumes
Soldering metal parts together can result in the inhalation of fumes and cause acute or chronic respiratory illness.

Chemicals
Applying flux when soldering can result in acute or chronic irritation to the hands and finger, inadvertent ingestion of solder can result in acute or chronic illness.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing cables can cause tripping and result in head and body fall impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Soldering is carried out so as to join two join two pieces of metal together.

Controls

- Students are not permitted to carry out soldering.
- Soldering must be carried out by a lecturer or technician.
- Inspect the electrical power cable & plug of the soldering iron for damage or defects prior to use.
- Do not use the soldering iron if the power cable or plug is damaged or defected in any way and remove from use for repair.
- All electrical repairs must be carried out by a competent person.
- Always hold the soldering iron by the handle.

- Allow heated metals to adequately cool prior to handling.
- Wear heat resistant gloves if required to handle hot materials.
- Flammable materials must not be stored at or near the soldering iron when in use.
- Ensure soldering is performed in the welding shop and that the extract system is turned on.
- Use a brush when applying flux and wear safety gloves.
- Always wash your hands after soldering is complete.
- Food or drink must not be consumed in the work shop.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid trailing cables and use the socket mounted on the wall.

Checks & Inspections

- Regular maintenance carried out on in accordance with the manufacturers recommendations and records maintained by the school
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- PPE Training
- Chemical Training
- MSDS for Flux and Solder.

Personal protective equipment required (last resort)

- Safety Boots
- Safety glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 LOW Risk**

Safe Work Practice Sheet Laser engraving machine	Ref: SWPS 334 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, damaged or defected electrical power cable or plug can result in electrocution-death or first, second and or third degree burns.

Laser Light
Exposure to laser beam can cause severe eye damage or skin burns.

Fire
During operation substrate material is burned away generating significant amounts of heat which can cause fire and hot objects

Fumes
Cutting and marking processes melt and vaporize the part creating potentially toxic or inflammable fumes

Cut/Lacerations
Sharp edges can result in laceration and puncture wounds

Mechanical
Crush injuries and entrapment from closing machine door & part capture. Pinch points from replacing panels. Entanglement of loose clothing and long hair resulting in neck and head injuries. Entrapment when loading or adjusting work piece.

Person Exposed to Risk

✓ Students ✓Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Laser cutting is a process used for cutting/engraving a variety of materials.

Controls

- The consumption of food and drink is not permitted in the work shop.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Long hair should be neatly tied back or wear a well fitted cap.
- Hand jewellery must not be worn.
- Do not look at laser beam with unprotected eyes.
- Protect the forearms and all exposed skin from exposure to laser rays, do not roll up sleeves.
- Follow the manual handling training when lifting heavy loads.

- Keep working area tidy and free from personal belongings.
- Ensure suitable fire extinguishing equipment is readily available and maintained in good condition.
- Ensure all electric cables, plugs and sockets are in good condition prior to use.
- Use fume extract system at all times.
- Allow sufficient cooling time before handling hot materials.
- Exercise caution and use gloves when handling sharp edge.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- Ensure emergency shutdown devices are checked each term
- Electric cables are inspected annually

Information, Instruction & Training

- Students receive instruction before using equipment
- Students are supervised when using the equipment.
- PPE Training

Personal protective equipment required (last resort)

- Suitable eye protection must be worn

Initial Risk Rating (without any control measures)

Probability:	**2**	x	Severity	**2**	=	Risk Factor	**4**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability:	**1**	x	Severity	**1**	=	Risk Factor	**1**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet ***UNIVERSAL ROBOT UR5e*** ***(Fitted with Hand e Gripper)***	Ref: SWPS 335 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Hazardous Motion/Physical Hazards
The robot arm moving at high speed could cause serious injury or even death if it collides with a person

Crushing/Trapping Accidents
Standing in a zone that is overlapping with the robotic arm movement can lead to entrapment or crushing

Cut/Lacerations
Sharp edges can result in laceration and puncture wounds

Mechanical
Crush injuries and entrapment from moving machine. Pinch points from gripper mechanism. Entanglement of loose clothing and long hair resulting in possible neck and head injuries. Entrapment when loading or adjusting work piece.

Electrical Hazzard
Robot is powered by 220V AC and in addition has 24V DC auxiliary connections for communication with external sensors / relays etc.

Person Exposed to Risk

✓ Students ✓Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
The Universal Robots UR5e cobot is a collaborative robotic arm designed for safe interaction with human operators while performing automated tasks. It is engineered to execute precise pick-and-place operations, enhancing productivity and efficiency in manufacturing and assembly environments.
Equipped with safety features such as force sensing and collision detection, the UR5e minimizes risk during operation, allowing close human-robot interaction under controlled conditions.
UR5e complies with ISO 10218-1/2 and ISO/TS 15066 safety standards.
This standard only covers activities using the Hand e parallel gripper.

Controls
- Adequate and comprehensive training to workers handling and overseeing operations of a robotic system is imperative in ensuring their safety.
- No load of greater than 4kg can be lifted at any one time.

- Default Safety Settings must not be adjusted: The UR5's preconfigured torque thresholds are optimized for general collaborative applications and comply with ISO 10218-1/2 and ISO/TS 15066 safety standards.
- Set maximum tool speed to ≤ 250 mm/s during collaborative tasks.
- Force/torque thresholds via the UR5e safety settings to ensure light contact triggers a stop (per ISO/TS 15066 standards).
- Students are permitted to operate the machine under supervision, under correct instruction from the lecturer or technician's supervision.
- Emergency halting mechanism is checked before use.
- Safety barriers/chains are in place before operations.
- Long hair should be neatly tied back or wear a well fitted cap.
- Loose fitting clothing, ties and scarves which can get tangled in the equipment should be removed/neatly tied.
- Hand jewellery must not be worn.
- Keep working area tidy and free from personal belongings.
- Ensure all electric cables, plugs and sockets are in good condition prior to use.

Checks & Inspections

- Lecturers/technicians to monitor compliance with control measures.
- Robot programme to be simulated via handheld table control software to minimise any undesired movement be program is run.
- Lecturers/technicians to monitor the wearing of PPE.
- Ensure emergency shutdown devices are checked before use.
- Electric cables are inspected annually.

Information, Instruction & Training

udents receive instruction before using equipment
udents are supervised when using the equipment.
E Training

Personal protective equipment required (last resort)

- Suitable eye protection must be worn

Initial Risk Rating (without any control measures)

Probability:	**2**	x	Severity	**2**	=	Risk Factor	**4**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability:	**1**	x Severity	**2**	= Risk Factor	**2**

Risk Assessment Review

As and when process changes or yearly

SECTION 4

MECHANICAL ENGINEERING THERMO

Safe Work Practice Sheet	Ref: SWPS 400
	Revision Date: Oct 2026
Air Conditioning Test Unit	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained electrical wiring damaged simulating room bulbs can result in Electrocution-Death. First second and or third degree burns.

Manual Handling
Pulling and pushing the machine in to the test location can result in lower back and musculoskeletal injuries.

Mechanical
Contact with air flow & refrigerator fan can result in loss of fingers, entanglement of hair and clothing minor cuts and bruises.

Hot Surfaces
Contact with hot pipes, compressor head can result in minor burns to the hands and fingers.

Refrigerator Gas
Inhalation of leaking gas can result in minor respiratory or eye irritation.

Slips trips and falls
Slipping as a result of leaking or spilled water, causing falls and head impact injuries, cuts and bruises. Tripping due to trailing power cable, poor housekeeping & personal belongings resulting in falls & head impact injuries, cuts and bruises.

Falling Machine / Items
Damaged wheels on the test equipment can result in falling test machinery & cause lower leg and feet crushing injuries and entrapment. Items stored on top of the machine fall off and cause impact leg and feet injuries.

Glass Sharps
Bulbs in simulating box get damaged from inadvertent knocking resulting in minor cuts to hands and fingers.

Light
Panel door on simulator room is removed or damaged can result in light exposure to the eyes and temporary blindness.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Air conditioning test unit is used to carry out trial performance and efficiency tests on air handling systems for buildings.

Controls

- The lecturer or technician must set up machine prior to use.
- Lecturer and technician are permitted to operate the machine.
- Students are only permitted to operate the machine controls panels under correct instruction and the supervision of the lecturer or technician.
- Follow the manufacturer's machine operating procedures at all times.
- Long hair must be tied back neatly or a well fitted cap worn when operating the machine.
- The wearing of loose clothing or jewellery is not permitted.
- Ensure that the electric power cable and plug is in good working order & free from defects prior to use.
- Do not use the machine if the power cable or plug is damaged in any way.
- Competent persons must carry out all electrical repairs or bulb replacements.
- Follow the manual handling training guidelines at all times when moving the machine & seek assistance if required.
- Ensure that the machine fan guards are in place and free from damage prior to operating the machine.
- Do not touch machine compressor or hot pipes when the machine is running, if required allow sufficient time to cool before handling.
- Ensure the machine is set up in a well-ventilated area, never use the machine if leaking refrigerator gas.
- Avoid the trailing of power cables by plugging in the machine from the back.
- Clean any water or spills up as soon as noticed.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the wheels of the test equipment are free from defects and damage prior to use.
- Do not store test equipment or miscellaneous items on top of the machine.
- Do not handle broken glass with bare hands, use a dust pan and brush to clean up.
- Ensure that the simulator panel door is closed on the machine at all times and free from damage.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment.
- Lab instruction sheets are issued to all students prior to carrying out an exercise.
- Laboratory exercises are supervised by college staff.

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	SEVERITY	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 401
	Revision Date: Oct 2026
Internal Combustion Engine Test Bed	Approved by: Breda Brennan

Hazards

Explosion
Incorrect wiring of the battery can result in explosions and puncture wounds from flying missiles.

Manual Handling
Applying and removing weights from the back of the machine, topping the machine up with fuel, can result in lower back and or musculoskeletal injuries

Slips, Trips and Falls
Poor housekeeping, personal belongings, leaking oil or petrol, spilled oil or petrol, leaking water onto the floor can result in tripping, slipping causing falls and major or minor head and body impact injuries.

Temperature
First and or second degree burns to the hands and fingers when in contact with the engine manifold or pipe.

Chemicals
Acute or chronic dermatitis on hands and fingers from topping up the engine with oil or petrol.

Fumes
Topping the machine up with petrol can result in acute or chronic respiratory illness, running the machine can result in exhaust emissions and carbon monoxide poisoning-death,

Fire
Petrol in contact with ignition sources can result in a fire causing death or first, second and or third degree burns.

Falls from Height
Climbing up on the machine to top up the petrol tank can result in a fall and major and minor head and body injuries

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The internal combustion engine test bed is used to carry our performance and efficiency tests.

Controls

- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Students are not permitted to set up the test bed.
- Students are only permitted to operate various functions of the machine as instructed by the lecturer or technician. Students must be supervised at all times during the test engine operation.
- Follow the manual handling training guidelines at all times when handling weights and fuel.
- Always use an approved petrol container for holding fuel and topping up the machine.
- Only use a small petrol container of 5 litres or less.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Inspect the floor space around the machine for oil, water and petrol prior to using the machine.
- Fluid on the floor must be cleaned up immediately, dispose of cleaning aids (paper towels etc) responsibly.
- Do not run the machine if leaking water, oil or petrol, competent persons must carry out repairs to the machine.
- Never touch the engine housing manifold or exhaust when the machine is running, allow for the machine to cool down after use prior to handling.
- Always wear safety gloves when handling petrol or oil for or from the machine.
- Ensure that the in-house extract system is turned on prior to operating the machine.
- Ensure that there is adequate ventilation when topping the machine up with petrol and running the machine.
- Ensure that all rotating parts are guarded
- Equipment may only be operated by technician or lecturer
- Only very small quantities of fuel to be used at any time, fuel must never be stored in the lab.
- Appropriate fire extinguisher to be located nearby when operating the machine.
- Naked flames or Ignition sources must not be used at or near the machine.
- Do not climb up on the machine to gain access to top up the petrol tank. Use and approved step ladder when topping up the petrol tank. See SWPS 007.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Only lecturers and technicians are permitted to set up the equipment
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Instruction is given on the safe use of the equipment
- Lab instruction sheets are issued to all students prior to carrying out an exercise
- Laboratory exercises are supervised by college staff
- Manual handling training
- PPE training
- Chemical handling training
- Petrol and oil MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Heat resistant gloves when appropriate
- Safety gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 402
	Revision Date: Oct 2026
Parker Hydraulics Training Unit	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, not maintained, damaged or defected electrical cable or plug and socket can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Pulling and pushing the machine to and from storage can result in lower back and or musculoskeletal injuries.

Mechanical
Contact with the machine rotating cog wheel can result in entanglement, contact with the moving piston can result in crushing injuries to fingers.

Slips, Trips and Falls
Poor housekeeping, personal belongings, trailing electric cable, leaking hydraulic oil or topping up with oil can cause tripping and slipping resulting in falls and major or minor head impact injuries.

Whipping hydraulic hoses
Damaged, defected or incorrectly set up hydraulic hose can result in an uncontrolled whipping hose causing blunt force blows to upper body parts.

Chemicals
Handling the hydraulic hoses and other machine parts can result in acute or chronic dermatitis of the hands and fingers when in contact with hydraulic oil.

Ejected hydraulic fluid
Damaged hydraulic hose or fitting or piping can result in hydraulic fluid being ejected under pressure causing permanent or temporary loss of sight and or major or minor skin irritation.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using hydraulics training unit to demonstrate and learn the practical application of pressurised oil driven devices to automate certain processes.

Controls

- Students are permitted the use of the machine under correct instruction and the lecturer or technicians supervision.

- Inspect the machine electrical cable, plug or wall socket for damage or defects prior to using the machine.
- Do not use the machine if the cable or plugs are damaged in any way, competent person/s must carry out all electrical repairs.
- Follow the manual handling training guidelines when moving the machine to and from storage.
- Ensure that the machines castor wheels are in good working order when moving the machine.
- Ensure that the cog and piston machine guards are in place prior to operating the machine.
- Maintain good housekeeping and work area free from personal belonging at all times.
- Avoid the trailing of electrical power cables when setting up the machine, use the power sockets mounted above workbenches. Do not walk in behind the machine when it is set up.
- Spilled, splashed or leaking hydraulic oil on the floor must be cleaned up immediately.
- Inspect the hydraulic hoses prior to use. Do no not use if damaged in any way and hand to the technician or lecturer for removal, replacement or repair.
- Where hoses or fittings are leaking oil when running the machine, stop using the machine immediately.
- Use gloves when handling machine parts contaminated with hydraulic oil.
- Contaminated clothing must be removed immediately.
- Safety glasses must be worn at all times
- Take heed of hazard warning notices
- Wash hands thoroughly if one comes into contact with leaked oil or when testing is complete.
- Follow the manufacturer's safety check list on the front panel of the test unit prior to and when operating the test unit.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Students receive training and instruction before using this training unit.
- Students must be supervised when operating this equipment.
- Manual handling training.
- Chemical handling training.
- PPE training.
- Hydraulic oil MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Safety gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 403
	Revision Date: Oct 2026
Pneumatics Training Boards	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained electrical wiring, damaged simulating room bulbs can result in Electrocution-Death. First second and or third degree burns.

Pneumatics
Incorrectly fitted, damaged airlines or connectors can cause whipping airlines resulting in loss of sight and or minor cuts and bruises.

Mechanical
Entanglement of long hair, loose clothing or jewellery with rotating shaft. Crushing of fingers when in contact with the moving piston rod.

Slips Trips and Falls
Poor housekeeping, personal belongings, air hoses lying on the ground can cause tripping and slipping resulting fall head impact injuries and minor cuts and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using pneumatic training boards to demonstrate and learn the practical application of compressed air driven devices to automate certain processes.

Controls

- Students are permitted the use of the training boards under correct instruction and the lecturer or technicians supervision.
- Ensure that the electric power cable and plug of the training board is in good working order & free from defects prior to use.
- Loose clothing must no be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Do not use the training boards if the power cable or plug is damaged in any way.
- Competent persons must carry out all electrical repairs.
- Training exercise diagrams must be adhered to at all times.
- Airlines and connectors must be inspected for damage or defects prior to use.
- Do not use any damaged or defected airline or connector.
- Damaged or defected airline or connectors must be reported to the lecturer or technician for removal and replacement.
- Competent persons must only carry out repairs to training boards and parts.

- The lecturer must inspect the students work prior to turning on the air supply.
- Never touch any of the rotating or moving parts of the training boards.
- Safety glasses must be worn at all times.
- Take heed of hazard warning notices.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Students to be provided with training and instruction before using these training boards

Personal protective equipment required (last resort)

- Safety glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x Severity		= Risk Factor	
	3		**3**		**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x Severity		= Risk Factor	
	1		**3**		**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Electric Reciprocating Water Pump Test Unit (Serial No. TE83/1976)	Ref: SWPS 404 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged test unit electrical wiring can result in electrocution-death or first, second and or third degree burns.

Mechanical
Entanglement of long hair or loose clothing with rotating electric motors and shafts resulting in asphyxiation.

Slips Trips and Falls
Trailing power cable, poor housekeeping, personal belongings, leaking water from the machine can cause slips and trips resulting in falls and major or minor head impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
The test unit is used for carrying out performance tests on a reciprocating water pumping system.

Controls

- Students are permitted to use the machine under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable or plug is damaged in any way.
- Competent person/s must carry out electrical repairs or work.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure all machine guards are in place prior to operating the machine.
- Maintain good housekeeping and work area free from personal belongings all times.
- Avoid the trailing of power cables.
- Check for water leaks on the floor prior to and when operating the machine. Leaking water must be cleaned up immediately.
- Safety Glasses must be worn when operating the machine.

Checks & Inspections

- Regular maintenance in accordance with manufacturer's recommendations and records maintained by the school.
- Water sump is emptied and replaced once per term.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Students are provided with training and instruction in the use of the equipment prior to using it.

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Electric Piston Water Pump Test Unit (Serial No. TE52/1943)	Ref: SWPS 405 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged test unit electrical wiring can result in electrocution-death or first, second and or third degree burns.

Mechanical
Crushing of fingers in between sliding piston plunger. Pinching and loss of fingers with rotating drive belt. Entanglement of long hair or loose clothing with rotating motor shaft or drive wheel resulting in asphyxiation.

Manual Handling
Dragging, pushing or pulling the machine to or from storage can result in acute or chronic lower back and or musculoskeletal injuries

Slips Trips and Falls
Trailing power cable, poor housekeeping, personal belongings, leaking water from the machine can cause slips and trips resulting in falls and major or minor head impact injuries.

Falling machine
Legs or wheel on the machine fail causing the machine to collapse to the ground resulting in lower leg and feet crushing injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
The test unit is used for carrying out performance tests on an electric water piston pumping system.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable or plug is damaged in any way.
- Competent person/s must carry out electrical repairs or work.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure all machine guards are in place when operating the machine.
- Never place fingers in between the moving/sliding piston plunger.
- Follow the manual handling training guide lines when moving the machine to and from storage and seek assistance if required.

- Maintain good housekeeping and work area free from personal belongings all times.
- Avoid the trailing of power cables.
- Check for water leaks on the floor prior to and when operating the machine. Leaking water must be cleaned up immediately.
- Ensure the wheels and legs of the test equipment are in good working order prior to use. Do not use if damaged in any way and remove from use for repair.
- Safety Glasses must be worn when operating the machine.

Checks & Inspections

- Regular maintenance in accordance with manufacturer's recommendations and records maintained by the school.
- Water sump is emptied and replaced once per term.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Students are provided with training and instruction in the use of the equipment prior to using it.

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Electric Oil Gear Pump Test Unit (Serial No. TE74/1971)	Ref: SWPS 406 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged test unit electrical wiring can result in electrocution-death or first, second and or third degree burns.

Mechanical
Entanglement of long hair or loose clothing with rotating motor shaft or drive wheel resulting in asphyxiation.

Slips Trips and Falls
Trailing power cable, poor housekeeping, personal belongings, leaking oil from the machine can cause slips and trips resulting in falls and major or minor head impact injuries.

Splashing Oil
Filling the machine up with oil, not running the machine as intended can result in oil splashes causing major or minor eye and skin irritation or clothing contamination.

Collapsing Machine
Frame of the machine fails resulting in a collapsing machine causing lower leg and feet crush injuries.

Fire
Oil is exposed to an ignition source resulting in a fire causing first second and or third degree burns.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The test unit is used for carrying out performance tests on an electric water piston pumping system.

Controls

- Students are permitted to use the machine under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable or plug is damaged in any way.
- Competent person/s must carry out electrical repairs or work.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.

- Ensure all machine guards are in place when operating the machine.
- Maintain good housekeeping and work area free from personal belongings all times.
- Avoid the trailing of power cables.
- Check for oil leaks on the floor prior to and when operating the machine. Leaking oil must be cleaned up immediately. Wear safety gloves if in contact with oil.
- Safety Glasses must be worn when operating or maintaining the machine
- Clothing contaminated with machine oil must be removed immediately.
- Ensure machine oil guards are in place prior to operating the machine.
- Ensure that the resting frame of the machine is of sound structure and free from defects prior to operating the machine.
- Never expose the oil in the machine to ignition sources (lighters, hot sources etc.).

Checks & Inspections

- Regular maintenance in accordance with manufacturer's recommendations and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Students are provided with training and instruction in the use of the equipment prior to using it.
- MSDS
- Chemical training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 LOW Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Portable Solar Panel	Ref: SWPS 407 Revision Date: Oct 2026 Approved by: Breda Brennan

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The solar panel is used externally to capture heat from the sun to heat water in an enclosed system.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical power cable and plug and external power supply for damage or defects prior to use.
- Do not use the machine if the power cable, plug, external power supply unit is damaged or defected in any way.
- All electrical repairs must be carried out by a competent person.
- Follow the manual handling training guidelines when moving the test unit to and from the lab.
- Seek assistance when required to move and transport the solar panel unit.
- Use the wooden sheet ramps provided to wheel the unit to and from the lab floor and ground level.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Use the rubber mat supplied to cover exposed trailing cables.
- Always walk around the unit steadying legs and never step over them.
- Ensure that the unit angle locking pin is locked when transporting the unit and in final testing location.
- Ensure that the copper cylinder heat jacket is in place prior to using the machine.
- Do not touch pipe work on the back of the unit during and after testing, allow for adequate cooling time if required to handle.
- Where possible, use the test unit at a time of year where the UV index is low.
- Wear adequate sun factor if UV index is high.
- Ensure to remain hydrated if outside for extended periods of times.
- Wear safety boots when moving the unit to and from storage.
- Inspect the wheels of the unit for damage or defects prior to transporting it, do no use the unit if wheels are damaged or defected in any way and remove form use for repair by a competent person.
- Observe for pedestrians and vehicular traffic when transporting the unit externally.
- Give way to pedestrians at all times when pushing the unit to and from the external test location.
- Obey the rules of the road when utilising the road to test location.
- Exercise caution when passing through the road barrier.
- Ensure that the unit is set up on level flat ground and that the wheels are locked into place.

Checks & Inspections

- Regular maintenance carried out on the unit and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Students are provided with training and instruction in the use of the equipment prior to using it.
- Manual Handling Training

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x Severity		= Risk Factor	
	3		**3**		**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x Severity		= Risk Factor	
	1		**3**		**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 408
	Revision Date: Oct 2026
Concentric Tube Heat Exchanger	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged test unit electrical wiring or plug can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing water hoses, leaking water, can result in slipping and tripping causing falls and head and body impact injuries.

Temperature
The pipes on the back of the unit heat up and cause minor burns to the hands and fingers.

Falling Apparatus
The apparatus falls from the work table causing lower leg and feet impact and crushing injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is used to demonstrate the flow of a hot and cold water system.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable, plug, is damaged or defected in any way and remove from use for repair.
- All electrical repairs must be carried out by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the electrical cables and water hoses are connected to the back of the machine.
- Clean up any leaking water immediately when noticed.
- Do not touch pipe work on the back of the unit during and after testing, allow for adequate cooling time if required to handle.
- Ensure that the thermostat is set at and maintained at the required testing temperature.
- Wear safety boots when moving the unit to and from storage.
- Ensure that the apparatus is fixed bolted to the work bench.

Checks & Inspections

- Regular maintenance carried out on in accordance with the manufacturer's recommendations and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Students are provided with training and instruction in the use of the equipment prior to using it.

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Cussons (P6112/223/224) Water Flow Measuring Apparatuses	Ref: SWPS 409
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged apparatus unit electrical wiring or plug can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing water hoses or electrical cables, leaking water can result in slipping and tripping causing falls and head and body impact injuries.

Falling Apparatus
The apparatus falls from the work table causing lower leg and feet impact and crushing injuries. The frame of the apparatus falls to the ground due to a damaged wheel and causes crush injuries to the feet.

Manual Handling
Moving the apparatus to and from location, placing and removing weights to and from the apparatus can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Weights
Free weights fall from the apparatus and result in impact injuries to the feet.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus are used to demonstrate and measure the flow of water and.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable, plug, is damaged or defected in any way and remove from use.
- All electrical repairs must be carried out by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the electrical cables and water hoses are connected to the back of the machine.
- Clean up any leaking water immediately when noticed.
- Wear safety boots.

- Ensure that the measuring apparatus is placed firm, flat and in from the edge of top of the work table.
- Inspect the wheels of the apparatus for damage or defects prior to use. Do not use if damaged in any way.
- Follow the manual handling training guide lines at all times when working with the apparatus.
- Ensure that the apparatus is not over loaded with weights.
- Ensure to place weights at right angles to one another.

Checks & Inspections

- Regular maintenance carried out on in accordance with the manufacturers recommendations and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Students are provided with training and instruction in the use of the equipment prior to using it.
- Manual handling Training

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 410
	Revision Date: Oct 2026
Photovoltaic Energy Stand	Approved by: Breda Brennan

Hazards

Manual Handling
Dragging and pushing the test apparatus to and from lab and external test area, lifting the unit off and up on to the lab floor level can result in acute or chronic lower back and muscular skeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings can result in slipping and tripping causing falls and head and body impact injuries.

Mechanical
The unit rotates on its hinges by the force of the wind or when been transported and strikes an individual causing head and or body impact injuries.

External Environment
Testing the unit in the external environment can result in exposure to the UV light and first second and or third degree burns dehydration and or sun stroke.

Collapsing Apparatus
The castor wheels of the apparatus fail and collapse causing feet crushing injuries.

Traffic
Transporting the test unit outside can result in coming in contact with vehicular and pedestrian traffic and cause bystanders being struck by the unit resulting in body impact injuries or being struck by a vehicle resulting in major bodily injury.

Moving Unit
Setting the unit up in the test location can result in the unit rolling out of control and causing major impact injuries to bystanders.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The photovoltaic apparatus is used to harness sunlight to generate a low electrical current.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.

- Follow the manual handling training guidelines when moving the test unit to and from the lab.
- Seek assistance when required to move and transport the photovoltaic panel unit.
- Use the wooden sheet ramps provided to wheel the unit to and from the lab floor and ground level.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Always walk around the unit steadying legs and never step over them.
- Ensure that the unit hinge is locked (hand tightening bolt) in place when transporting and in testing location.
- Ensure to stay well hydrated if working outside for extended periods of time.
- Where possible, use the test unit at a time of year where the UV index is low.
- Wear adequate sun factor if UV index is high.
- Wear safety boots when moving the unit to and from storage.
- Inspect the wheels of the unit for damage or defects prior to transporting it, do no use the unit if wheels are damaged or defected in any way and remove from use for repair by a competent person.
- Observe for pedestrians and vehicular traffic at all times of transporting the unit.
- Give way to pedestrians at all times when pushing the unit to and from the external test location.
- Obey the rules of the road when utilising the road to test location.
- Exercise caution when transporting the unit under the road barrier.
- Ensure that the unit is set up on level flat ground.

Checks & Inspections

- Regular maintenance carried out on the unit and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Students are provided with training and instruction in the use of the equipment prior to using it.
- Manual Handling Training.

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 411
	Revision Date: Oct 2026
Air Flow Test Unit	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged unit electrical wiring or plug can result in electrocution-death or first, second and or third degree burns.

Mechanical
Severing of finger tips, entanglement of long hair with rotating fan.

Slips Trips and Falls
Poor housekeeping, personal belongings, unit trailing power cable can result in slipping and or tripping and fall head and body impact injuries.

Falling test unit
The brackets holding the test unit in place on the wall fail or are loose and the unit falls causing impact and crush injuries to the upper and lower body.

Flying debris
Operating the air restriction device on the test unit, standing beside the air restriction device can result in dusty debris being blow into the eyes and causing minor eye irritation and discomfort.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The unit is used to carry out test on air flow.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable or plug is damaged or defected in any way and remove from use for repair.
- All electrical repairs must be carried out by a competent person.
- Ensure that the fan metal guard is in place prior to operating the machine.
- Long hair must be neatly tied back or a cap worn when the machine is in use.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical power cables by using the socket mounted on the wall beside the test unit.

- Ensure that the brackets mounted on the wall are tight and secure around the test unit prior to operating it.
- Safety glasses must be worn at all times when operating or observing the air flow test unit.

Checks & Inspections

- Regular maintenance carried out on in accordance with the manufacturer's recommendations and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Students are provided with training and instruction in the use of the equipment prior to using it.

Personal protective equipment required (last resort)

- Safety Boots
- Safety glasses.

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 412
	Revision Date: Oct 2026
Hot Box Oven	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged unit electrical wiring or plug can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, oven trailing power cable can result in slipping and or tripping and fall head and body impact injuries.

Falling Oven
Transporting the oven to and from storage location can result in the oven falling from personal grip or trolley and causing lower leg impact and feet crushing injuries.

Temperature
Handling materials that have been heated in the oven can result in burns to the hands and fingers.

Chemicals
Handling various materials, coal etc, can result in minor skin irritation.

Manual Handling
Lifting or carrying the oven to and from storage, wheeling the trolley to and from storage can result in lower back and or musculoskeletal injuries.

Fire
Flammable materials stored at or near the oven, nylon clothing can catch fire and result in first second and or third degree burns.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The oven is used to heat various materials.

Controls

- Students are not permitted to operate the oven.
- Lectures or technicians are only permitted to operate the oven.
- Inspect the oven electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable or plug is damaged or defected in any way and remove from use for repair.

- All electrical repairs must be carried out by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical power cables by using the socket mounted on the wall beside the test unit.
- Safety glasses must be worn at all times when operating or observing the oven.
- Follow the manual handling training guidelines at all times.
- Ensure to use the trolley that the oven is mounted on for transporting to and from storage.
- Ensure that the oven is placed firm, level and secure on the trolley.
- When required seek assistance when moving the oven.
- Ensure that the thermostat of the oven is set at the required temperature prior to use.
- Wear heat resistant gloves and or use a pair of metal tongs to remove heated materials from the oven.
- Wear safety gloves when handling materials prior to placing in the oven.
- Wear safety glasses at all times.
- Nylon clothing must not be worn when using the oven.
- Flammable materials must not be stored at or near the oven.

Checks & Inspections

- Regular maintenance carried out on in accordance with the manufacturer's recommendations and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Manual handling Training
- Chemical Handling Training
- PPE Training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety glasses
- Heat Resistant Gloves
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Carbolite Furnace	Ref: SWPS 413 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged unit electrical wiring or plug can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, oven trailing power cable can result in slipping and or tripping and fall head and body impact injuries.

Falling Oven
Transporting the oven to and from storage location can result in the oven falling from personal grip or trolley and causing lower leg impact and feet crushing injuries.

Temperature
Handling materials that have been heated in the furnace can result in first second and third degree burns to the hands and fingers.

Chemicals
Handling various materials, coal etc, can result in minor skin irritation.

Smoke
Heating materials, coal etc. can result in the production of smoke and if inhaled can cause acute respiratory illness.

Fire
Flammable materials stored at or near the oven, nylon clothing can catch fire and result in first second and or third degree burns.

Manual Handling
Lifting or carrying the oven to and from storage, wheeling the trolley to and from storage can result in lower back and or musculoskeletal injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The furnace is used to heat various materials (coal, coke etc.) up to 1200 C

Controls

- Students are not permitted to operate the furnace.

- Lectures or technicians are only permitted to operate the furnace.
- Inspect the oven electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable or plug is damaged or defected in any way and remove from use for repair.
- All electrical repairs must be carried out by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical power cables by using the socket mounted on the wall beside the test unit.
- Safety glasses must be worn at all times when operating or observing the furnace.
- Ensure to use the trolley that the oven is mounted on for transporting to and from storage.
- Ensure that the furnace is placed firm, level and secure on the trolley.
- When required seek assistance when moving the oven.
- Ensure that the thermostat of the oven is set at the required temperature prior to use.
- Wear heat resistant gloves and or use a pair of metal tongs of adequate length to remove heated materials from the furnace.
- Wear safety gloves when handling materials prior to placing in the oven.
- Ensure that there is good ventilation and turn on the extract system prior to operating the furnace.
- Nylon clothing must not be worn when operating the furnace.
- Flammable materials must not be stored at or near the furnace.
- Follow the manual handling training guidelines at all times.

Checks & Inspections

- Regular maintenance carried out on in accordance with the manufacturers recommendations and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Manual handling Training
- Chemical Handling Training
- PPE Training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety glasses
- Heat Resistant Gloves
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 414
	Revision Date: Oct 2026
Osborne Reynolds Apparatus	Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, loose or damaged electrical wiring or plug can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing power cable, water on the ground can result in slipping and or tripping and fall head and body impact injuries.

Manual Handling
Lifting or carrying the apparatus, wheeling the apparatus on a trolley to and from storage, placing or removing weights on the apparatus can result in acute lower back and or musculoskeletal injuries.

Falling Apparatus / Weights
The apparatus falls when being wheeled to or from storage, carrying to many weights or incorrectly placed on the apparatus resulting in lower leg or feet impact injuries.

Collapsing Trolley
The wheels of the trolley fail sue to damage or defects resulting in crush injuries to the feet.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus id used to investigate the characteristic of the flow of the liquid in a pipe.

Controls

- Students are permitted use of the apparatus, under correct instruction and the lecture or technicians supervision.
- Inspect the apparatus electrical power cable and plug for damage or defects prior to use.
- Do not use the machine if the power cable or plug is damaged or defected in any way and remove from use for repair.
- All electrical repairs must be carried out by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical power cables by using sockets mounted on the wall.
- Safety glasses must be worn at all times when operating or observing the apparatus.
- Immediately clean up any water lying on the ground
- Follow the manual handling training guidelines at all times.
- Seek assistance if required to lift or move the apparatus.

- Ensure that all four feet of the apparatus are level and flat when mounted on the work top and trolley.
- Ensure that weights are placed at right angles to one another on the apparatus.
- Inspect the wheels of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair.

Checks & Inspections

- Regular maintenance carried out on in accordance with the manufacturers recommendations and records maintained by the school.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturer and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Manual handling Training

Personal protective equipment required (last resort)

- Safety Boots
- Safety glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

SECTION 5

BUILT ENVIRONMENT

Safe Work Practice Sheet	Ref: SWPS 500
	Revision Date: Oct 2026
2000kN Concrete Testing Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained electrical wiring on the apparatus can result in Electrocution-Death. First second and or third degree burns.

Mechanical
Crushing of fingers, hands & feet between ascending ram and machine head plate, crushing of fingers when changing spacer/plates or test material pieces.

Manual Handling
Lower back and musculoskeletal injuries from carrying, lifting and sliding of spacer/plates and test pieces.

Slips, trips and falls
Slipping as a result of water, leaking hydraulic oil or debris on floors causing falls and head impact injuries, cuts and bruises. Tripping due to trailing power cable, test equipment, poor housekeeping & personal belongings resulting in falls & head impact injuries, cuts and bruises.

Sharps
Crushing materials can generate masonry sharps and cause lacerations, puncture wounds to the hands and fingers when handled.

Flying debris
Crushing masonry materials can result in loss of sight from flying particles due to machine guard open.

Falling Objects
Lifting heavy parts of machinery or test material can fall and cause lower leg and feet crushing, impact injuries.

Hydraulics
Skin in contact with hydraulic oil can result in minor skin irritation.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine is used to crush concrete cubes and bricks to the point of failure in order to measure compressive strength, load absorption etc.

Controls

- Only trained operators are permitted to load up and operate the machine.
- Follow the manufacturer's machine operating procedures at all times.
- Students are permitted to start the machine under the supervision of the lecturer or technician.
- Long hair must be tied back neatly or a well fitted cap worn when operating the machine.
- The wearing of loose clothing or jewellery is not permitted.
- Ensure that the electric power cable and plug is in good working order & free from defects prior to use.
- Do not use the machine if the power cable or plug is danged in any way.
- Competent persons must carry out all electrical repairs.
- Do not place hands, fingers or feet between ascending ram and head plate.
- Ensure to remove fingers from between spacer/plate & test materials when loading the machine.
- Do not place and rest heavy items on the ground, use a support bench for resting heavy items on.
- Avoid the trailing of power cables and use the power socket at the back of the machine.
- Clean any water or test material spills up as soon as noticed.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the workstation.
- Do not leave test pieces or machine parts lying on the ground around the machine.
- Crushed debris on the ground or machine must be removed by use of brush and pan or by wearing of heavy duty gloves.
- Lifting to be carried out in accordance with correct manual handling practice and procedure
- Guard plate to be kept closed during and after testing.
- Safety glasses must be worn when operating the machine. Lecturer or technician must ensure that observers are a safe distance away from the machine.
- Ensure to obtain a firm hold/grip of machine parts or test equipment when lifting or carrying. Seek assistance if required. Ensure no hydraulic oil is leaking on to the floor prior to using the machine, use gloves if handling hydraulic oil and dispose of carefully.
- Wash your hands thoroughly when testing is complete.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Practical instruction is given on the safe use of the equipment.
- Laboratory exercises are supervised by college staff.
- Manual handling training.

- PPE training.

Personal protective equipment required (last resort)

- Safety boots
- Safety glasses
- Safety gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Pin Jointed, Shear Force and Bending Moment Apparatus / Deflection of Beams Apparatus / Structural Frames	Ref: SWPS 501 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, pulling & carrying the test equipment onto the required workbench or floor space can result in acute or chronic lower back and or musculoskeletal injuries.

Electricity
Poorly maintained, loose, damaged machine electrical cables and plugs can result in electrocution–death and first, second or third degree burns.

Falling Test Equipment
Machinery positioned on the edge of workbench can fall a cause lower leg and feet impact crush injuries, broken bones and cuts and bruises. Damaged, defective wheels on test equipment frames can fail and fall over when being moved causing impact crush injuries to the lower body. Weights falling from hands due to over loading, loose grip or failed string, equipment causing feet impact injuries.

Slips, trips and falls
Poor housekeeping, personal belongings and leaking water from test apparatus can result in slipping and tripping causing head and body impact injuries, cuts and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Shear Force and Bending Moment apparatus / Deflection of Beams apparatus / Structural Frames apparatus are experimental apparatus used for verifying fundamental laws of physics. Typically they are simple bench-mounted structures or frames on which weights are hung and from which simple measurements are taken in order to verify a particular physical principal or phenomenon.

Controls

- Students are permitted to use the apparatus, under correct instruction and the supervision of the lecturer or technician.
- Follow the manual handling training guidelines at all times when handling test equipment.
- Seek assistance if required when lifting the test equipment onto the work benches.
- Inspect electrical cable and plugs for damage or defects prior to use. Do not use if damaged in any way.
- Competent persons must only carry out repairs on electrical equipment.

- Ensure that the test equipment for use is secure and firmly placed in from the workbench edge.
- Ensure that all trolley wheels are free from defects prior to use, Lock the wheels when test equipment is in required position.
- Maintain a firm and secure hold of test weights when carrying into position.
- Never overload the body with too many weights when carrying or lifting.
- Ensure test apparatus weight strings and parts are free from defects prior to use.
- Never exceed the test apparatus weight limit.
- Follow the manufacturer's machine weight test guidelines at all times.
- Maintain good housekeeping at all times and work space free from personal belongings.
- Mop up and dry any leaking or spilled water on the floor as soon as noticed.
- Laboratory exercises are supervised by college staff

Checks & Inspections

- Weight hangers are inspected annually
- Digital force display unit is compliance tested annually
- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Lab instruction sheets are issued to all students prior to carrying out an exercise
- Practical instruction is given in the safe use of the equipment.
- Manual handling training.

Personal protective equipment required (last resort)

- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 502
	Revision Date: Oct 2026
Heating and Bitumen Handling	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, not maintained or damaged electrical heat bath cable or plugs can result in electrocution-death or first, second or third degree burns.

Manual Handling
Lifting, carrying or pushing the machine into position, filling and emptying with water can result in acute or chronic lower back or musculoskeletal injuries.

Slips, trips and falls
Poor housekeeping, personal belongings, machine trailing power cable, wet floor topping machine up with water or removal of heated bitumen can result in tripping and slipping hazards causing fall impact injuries to the head resulting in concussion ,cuts and bruises.

Hot Liquid
Setting of the machine heating thermostat too high can result in hand and finger scalding when placing or removing bitumen specimen from the machine water bath.

Dirty Water
Water of heat bath infrequently changed, dirt in water can result in possible mould growth and result in minor illness (stomach cramps etc.) if inadvertently ingested by touching with hands.

Chemicals
Handling warm or cold bitumen specimen with bare hands can result in minor skin irritation.

Falling Machine
Uneven, unsecure surface, machine at bench edge can result in a falling machine and lower leg and feet crush injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Prior to carrying out a penetration test, bitumen samples are placed in containers and heated to 25 degrees centigrade in a heated water bath. As the viscosity of the sample is temperature dependent, this is done in order to order to ensure that all measurements are taken under the same conditions.

Controls

- Students are permitted to use the machine, under correct instruction and the supervision of the lecturer or technician
- Inspect electrical cable and plugs on heating bath prior to use.
- Do not use the machine if cables or plug are damaged in any way.
- Competent persons must only carry out electrical repairs.
- Follow the manual handling training guidelines at all times.
- Maintain good housekeeping at all times and work area free from personal belongings.
- Ensure that the machine is plugged into the socket above the bench when in use.
- Dry up any water spills as soon as noticed.
- Allow bitumen test piece to drain into water bath prior to moving to workbench.
- Avoid splashing of water when filling up the machine water bath.
- Ensure that the machine thermostat is set at the correct temperature for heating bitumen specimen.
- Check the machine temperature gauge before handling the bitumen specimen.
- Never move the machine full of water.
- Do not handle the machine until it has cooled down sufficiently.
- Ensure the machine bath lid is covering the water when heating the test specimen and when not in use.
- Inspect the bath water regularly for discoloration, smell and mould growth and change if required.
- Always use clean tap water when topping up the machine bath.
- Ensure that the machine is placed on a level secure surface and in from the bench edge.
- Personnel must use disposable gloves when handling bitumen material and water bath.
- Hands must be washed thoroughly after handling bitumen and the water bath.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School.
- Lecturers and Technicians to monitor compliance with control measures.

Information, Instruction & Training

- Students are given instruction in the safe handling of bitumen
- Laboratory exercises are supervised by college staff
- Lecturers and Technicians to monitor compliance with control measures
- Manual handling training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Disposable gloves are provided
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 503
	Revision Date: Oct 2026
Bitumen Penetrometers (Electrical & Manual)	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, not maintained or damaged penetrometer electrical cable or plugs can result in electrocution-death or first, second or third degree burns.

Manual Handling
Lifting, carrying or pushing the machine into work bench position can result in acute or chronic lower back or musculoskeletal injuries.

Slips trips and falls
Poor housekeeping, personal belongings, machine trailing power cable can cause tripping and fall impact injuries to the head resulting in concussion, cuts and bruises.

Chemicals
Handling warm or cold bitumen specimen with bare hands can result in minor skin irritation.

Mechanical & needle stick
Impact injury of bruising to the hands or fingers from unsecure descending test equipment. Entrapment of hand or fingers with descending needle and machine base plate, result in puncture wounds to the hands or fingers.

Falling Machine
Uneven, unsecure surface, machine at bench edge can result in a falling machine and lower leg and feet crush injuries.

Flying Debris
Penetrating bitumen under load against metal surfaces can result in breaking a needle and cause flying metal debris and permanent eye damage.

Sharps
Severe cuts to hands and fingers by inadvertently brushing against needle of the machine.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus forces a penetrating needle into a bitumen sample in order to measure its viscosity.

Controls

- Students are permitted to use the machine, under correct instruction and the supervision of the lecturer or technician.
- Inspect electrical cable and plugs on the penetrometer prior to use.
- Do not use the machine if cables or plug are damaged in any way.
- Competent persons must only carry out electrical repairs.
- Follow the manual handling training guidelines at all times.
- Maintain good housekeeping at all times and work area free from personal belongings.
- Ensure that the machine is plugged into the socket above the bench when in use.
- Personnel must use disposable gloves when handling bitumen test material.
- Ensure that the machine test equipment is tightened securely when in place for testing.
- Do not rest hands on the machine base plate.
- Ensure that the machine is placed on a level secure surface and in from the bench edge.
- Inspect the needle for defects prior to use. Do not use if damaged.
- Adjust the needle height by with both hands to avoid needle holding arm from sliding freely.
- Never place hands or fingers between descending needle and machine base plate.
- Always keep hands and fingers clear of the needle tip in the machine.
- Needle is kept covered when not being used and removed from penetrometer.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Lab instruction sheets are issued to all students prior to carrying out an exercise
- Practical instruction is provided in the safe operation of the equipment.
- Laboratory exercises are supervised by college staff
- Manual handling training
- Chemical training
- Material Safety Data Sheet

Personal protective equipment required (last resort)

- Safety Glasses
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x Severity		= Risk Factor	
	1		**3**		**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly.

Safe Work Practice Sheet	Ref: SWPS 504
	Revision Date: Oct 2026
50kn California Bearing Ratio Test Apparatus	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, connected, damaged or poorly maintained electrical wiring can result in Electrocution-Death. First second and or third degree burns.

Mechanical
Crushing of fingers, hands between ascending ram test equipment.

Slips, trips and falls
Slipping as a result of wet or dusty floors causing falls and head impact injuries, cuts and bruises. Tripping due to trailing power cable, test equipment, poor housekeeping & personal belongings resulting in falls & head impact injuries, cuts and bruises.

Falling sample mould
Unsecure grip of test mould, falling and resulting in lower leg and feet impact injuries resulting in broken bones, cuts and bruises.

Flying debris
Compacting samples can generate flying particles and cause loss of sight or temporary eye irritation.

Manual Handling
Lifting, carrying and pushing of the sample mould can result in lower back injuries and musculoskeletal injuries.

Falling Machine
Uneven, unsecure surface can result in a falling machine and lower leg and feet crush injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine is used for carrying out compression tests on soil and aggregate samples

Controls

- Students are permitted to use the apparatus, under correct instruction and the supervision of the lecturer or technician.
- Follow the manufacturer's machine operating procedures at all times.
- Long hair must be tied back or a well fitted cap worn when operating the machine.

- The wearing of loose clothing is not permitted.
- Jewellery must not be worn.
- Ensure that the electric power cable and plug is in good working order & free from defects prior to use.
- Do not use the machine if the power cable or plug is damaged in any way.
- Avoid the trailing of power cables..
- Competent persons must carry out all electrical repairs.
- Do not place hands, fingers or feet between ascending ram and base platen.
- Ensure the machine power cable is plugged in to the socket above the test work bench.
- Clean any water or test dust spills up as soon as noticed.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the workstation.
- Do not leave test pieces lying on the ground around the machine.
- Firmly hold on to the sample mould when setting up for testing.
- Safety glasses must be worn when operating the machine or preparing samples.
- Ensure water is added to soil sample prior to mixing.
- Protective gloves to be worn when handling samples.
- Scoops / shovels to be used for preparing samples and for loading the sample to apparatus.
- Lifting to be carried out in accordance with correct manual handling practice and procedure.
- Ensure that the machine is mounted on a secure and even surface.
- Access cover over the ram to be kept closed when machine is in operation
- It is not permitted to move the soil sample while compactor is in operation
- Lifting of soil sample and associated items of the apparatus is to be carried out in accordance with safe manual handling practice.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures
- Practical instruction is provided in the safe operation of the equipment.
- Laboratory instruction sheets are issued to students
- Manual handling training
- PPE training

Information, Instruction & Training

- Instruction is given on the safe use of the equipment
- Laboratory exercises are supervised by college staff
- First Aid is available in the laboratory

Personal protective equipment required (last resort)

- Protective gloves are provided
- Scoops / shovels are provided

- Safety glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 505
	Revision Date: Oct 2026
Cement and Concrete Handling, Mixing and Batching	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained electrical wiring on mobile cement mixer or dust extract system can result in Electrocution-Death. First second and or third degree burns.

Manual Handling
Lifting carrying and holding cement moulds, slump cylinders, sand & cement bags, mixing tray, moving the cement mixer and dust extractor into position can result in lower back and musculoskeletal injuries.

Sharps
Incorrectly stored, mishandled, damaged or broken graduated glass cylinders for measuring water can result in sharps that can cause lacerations to the hands and fingers.

Dust
Decanting cement and sand from bags and mixing in cement mixer can result in the generation of dust, causing acute or chronic respiratory irritation & illness, disease (asthma). Minor irritation to the eyes.

Wet Cement
Contact with wet cement can result in burns to exposed skin parts and or contact dermatitis.

Dry Powders
Handling dry cement powder with bare hands can result in burns to the hands and fingers and contact dermatitis.

Falling objects
Unsecure hold of empty or full moulds and not mounted properly on the work bench can result in falling mould and lower leg and feet crush injuries.

Slips, Trips and Falls
Trailing power cables, poor housekeeping, personal belongings, test pieces can result in tripping causing fall impact head injuries. Wet, sandy, gravel & dusty floors can result in slipping & fall impact head injuries.

Mechanical
Pinching of fingers when assembling and disassembling steel moulds.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Cement, sand and gravel are mixed in order to make concrete samples of varying strengths for test purposes.

Controls

- Students are permitted to carry out this task, under correct instruction and the lecturer or technician supervision.
- Ensure that all electrical cables are in good working order and free from defects prior to use.
- Do not use electrical equipment if damaged in any way.
- Competent person/s must carry out electrical repairs.
- Ensure that graduated glass cylinders are free from defects or damage prior to use, do not use if damaged and dispose of carefully if damaged.
- Use a brush and pan to clean up any broken glass.
- Ensure that the mobile dust extraction is in good working order prior to handling cement and sand.
- Disposable gloves must be worn when handling cement and concrete mixes.
- Mechanical extractor is operational when sample preparation is taking place, so as to remove airborne cement dust
- Scoops & shovels are provided to avoid skin contact.
- Lifting to be carried out in accordance with correct manual handling practice and procedure. Seek assistance if required.
- Ensure to maintain a secure hold of moulds when handling. Ensure that moulds are placed flat and in from the edge of the workbench.
- Ensure that the cement mixer & dust extract power cables are not trailing on the lab walkways.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Do not leave test pieces lying on the ground, store away when no longer required.
- Clean wet, sandy, gravel and dusty floors as soon as possible.
- Use the stainless steel tray for mixing cement.
- Exercise caution when assembling and dissembling steel moulds, do not place fingers between closing parts.

Checks & Inspections

- Manufacturers safety data sheets are posted in public view and student's attention is drawn to them
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Practical instruction is given in the safe handling of cement.
- Laboratory instruction sheets are issued to students in relation to each exercise
- Manual Handling Training

- PPE Training
- Chemical Training
- MSDS

Personal protective equipment required (last resort)

- Disposable gloves are supplied
- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review - As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 506
	Revision Date: Oct 2026
Compacting Factor Test	Approved by: Breda Brennan

Hazards

Wet Cement
Handling wet cement with bare hands, clothing contaminated with wet cement can result in burns to the hands and fingers or other exposed body parts. Splashing in eyes from decanting from one cone to another can result in burns to the eyes.

Manual Handling
Lifting, dragging or pushing the test apparatus in to position, lifting and carrying test samples can result in lower back and or musculoskeletal injuries.

Falling Apparatus & Equipment
Due to leaning against, un level apparatus, dragging into position, unsecure hold of equipment causing lower leg and feet crush injuries.

Mechanical
Crushing of fingers from in-between moving levers on the test apparatus.

Slips Trips and Falls
Poor housekeeping, personal belongings, test pieces and equipment can result trips and fall impact head injuries. Wet, sandy and dusty floor can result in slips and fall head impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is used for compacting wet concrete samples to test for the degree to which the sample reduces in volume or compresses under controlled conditions.

Controls

- Students are permitted to use the test apparatus, under correct instruction and the lecturer or technician's supervision.
- Protective gloves to be worn when handling samples.
- Scoops / shovels to be used for preparing samples and for loading the sample to apparatus.
- Lifting to be carried out in accordance with correct manual handling practice and procedure.
- Clothing contaminated with wet concrete must be removed and changed immediately.
- Ensure that the test apparatus is set up firm and level on the ground.

- Never lean against the apparatus.
- Ensure to maintain a secure hold of the test apparatus and equipment when moving. Seek assistance if required.
- Never place fingers in between moving levers on the test apparatus.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Do not leave test pieces or equipment lying on the ground.
- Wear the appropriate PPE.
- Wet, sandy and dusty floors must be cleaned as soon as possible.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Practical instruction is provided in the safe operation of the equipment.
- Laboratory instruction sheets are issues to students
- Manual Handling Training
- PPE Training
- Chemical Handling Training
- MSDS

Personal protective equipment required (last resort)

- Protective gloves are provided
- Scoops / shovels are provided
- Safety Boots
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 507
	Revision Date: Oct 2026
Drying Ovens	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained electrical wiring on ovens can result in Electrocution-Death. First second and or third degree burns.

Falling Machine
Ovens mounted on the edge of the workbench fall, resulting in crushing of feet & lower leg impact cuts & bruises.

Temperature
Heating test samples to required temperature can result in burns to the hands and fingers when removing from the oven.

Fire
Heating and drying materials not intended for the oven resulting in first, second & or third degree burns. Flammable sources stored beside the oven, nylon clothing, igniting and resulting in first, second and or third degree burns.

Slips, Trips and Falls
Poor housekeeping, personal belongings, test pieces and trailing electrical cables can result in trips causing falls and impact head injuries. Slipping due to spilled soil samples on the ground resulting in impact head injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is an electric oven that is used to dry sand, soil and aggregate samples as part of a process to measure moisture content.

Controls

- Students are permitted to use the equipment, under correct instruction and the supervision of the lecturer or technician.
- Inspect electrical cables prior to using the ovens.
- Do not use the ovens if electrical cables are damaged in any way.
- Competent person/s must carry out electrical repairs.
- Ensure that the ovens are placed securely in from the edge of the workbench.
- Heat resistant gloves are provided and must be worn when handling materials into and out of the oven.
- Only place materials in to the oven as recommended by the machine manufacturer.

- Nylon clothing must not be worn when operating the ovens.
- Flammable materials must never be stored at or near the ovens. Maintain good housekeeping and work area free from personal belongings at all times.
- Test pieces must not be stored on the ground.
- Ensure the electrical power cables of the ovens are plugged into sockets above the workbenches.
- Clean up any spilled soil samples from the floor immediately.
- Remove test samples from the oven one at a time.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and technicians to monitor compliance with control measures

Information, Instruction & Training

- Lab instruction sheets are issued to all students prior to carrying out an exercise
- Practical instruction is given in the safe use of the equipment.

Personal protective equipment required (last resort)

- Heat resistant oven gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Flow Channel / Stability of Floating Objects Apparatus	Ref: SWPS 508 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained electrical wiring on test apparatus can result in Electrocution-Death. First second and or third degree burns.

Manual Handling
Moving the apparatus into test or demonstration position, lifting of test weights can result in acute or chronic lower back and or musculoskeletal injuries.

Slips, Trips and Falls
Trailing power cable, weights on the ground can cause trips and fall impact head injuries. Leaking test apparatus, splashing water can result in slipping and fall head impact injuries.

Falling Weights
Weights not mounted properly on weight hanger, hanger set up incorrectly, unsecure hold of weights can result in falling weights and lower feet impact injuries.

Falling Water Tank
Wheels of the water tank collapse resulting in the water tank falling over causing crushing of feet and impact injuries to the lower legs.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is used for conducting experiments relating to water flow and flow measurement, engineering hydraulics and fluid dynamics.

Controls

- Students are permitted to use the apparatus, under correct instruction and the supervision of the lecturer or technician.
- Inspect the electrical cables prior to using the ovens.
- Do not use the equipment if electrical cables are damaged in any way.
- Competent person/s must carry out electrical repairs.
- Follow the manual handling training guidelines at all times, seek assistance if required.
- Ensure that the test apparatus is free from leaks.
- Avoid the trailing of power cables along the walkways at all times.
- Laboratory floor to be kept dry at all times

- All water spillages are mopped up immediately
- Laboratory exercises are supervised by college staff
- Ensure of a firm hold of weights when lifting and carrying.
- Never carry too many weights at a time, only lift what you can securely hold.
- Mount the weights on to the weight hanger at right angles to each other.
- Ensure that the wheels of the water tank are free from damage and defects prior to using the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Lab instruction sheets are issued to all students prior to carrying out an exercise
- Practical instruction is given in the use of the equipment.

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 509
	Revision Date: Oct 2026
Force Boards / Moment Boards / Centre of Gravity Boards / Spring Testing Kits	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting of test equipment to or from workbenches can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Test Equipment
Loose clothing or long hair can become entangled with test equipment. Loose or failed fittings on test equipment on lab walls, equipment placed on the edge of workbench, unleveled equipment, equipment strings snap, weights not mounted correctly on hangers falling and causing minor impact impact injuries to the lower legs and feet.

Assembling Test Equipment
Fixing and removing test equipment to/from boards can result in pinching of fingers, cuts to hands when clamping pieces together.

Slips Trips and Falls
Poor housekeeping and personal belongings can result in tripping and cause fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Force boards, moment boards etc., are experimental apparatus used for verifying fundamental laws of physics. Typically they are simple bench-mounted structures or frames on which weights are hung and from which simple measurements taken in order to verify a particular physical principal.

Controls

- Students are permitted to use the test equipment under correct instruction and the lecturer or technician's supervision.
- Follow the manual handling training guidelines at all times when handling test apparatus.
- Ensure that all test equipment fittings are tight and securely fitted.
- Ensure that test equipment is mounted in from the edge of the workbench.
- Check that test equipment strings are free from defects.
- Ensure that weights on test apparatus are mounted at right angles to each other.
- Loose clothing must not be worn when operating the test equipment.
- Long hair must be neatly tied back or a well fitted cap worn.

- Do not place hands or fingers in between test apparatus being clamped together.
- Maintain good housekeeping at all times and area free from personal belongings
- Maximum weight of 10N (1 kg) used
- Laboratory exercises are supervised by college staff

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Lab instruction sheets are issued to all students prior to carrying out an exercise
- Practical instruction is given on the safe use of the equipment.
- First Aid is available in the laboratory
- Manual Handling Training.

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 510
	Revision Date: Oct 2026
Land Surveying	Approved by: Breda Brennan

Hazards

Electricity
Contact with overhead electrical power lines when using full length levelling staves resulting in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting, carrying, holding & pushing tripods, levelling staves, GPS, Trundle Wheels, sledge hammers & any other surveying hand held equipment can result in acute or chronic lower back & or musculoskeletal injuries.

Mechanical
Setting up or dismantling of tripods, trundle wheels & test equipment can result in crushing of fingers or hands when in-between moving or closing parts. Crushing and pinching of fingers when setting up instruments on tripods.

Falling Equipment
Tripod etc. equipment not set up correctly, falling causing lower leg & feet minor crush injuries. Carrying too much& unsecure hold of equipment., unleveled ground, windy conditions can result in falling equipment & lower leg and feet crush injuries.

Sharps
Feet of tripod, range rod, nails, wooden stakes and other test equipment can cause puncture wounds to the feet hands and other body parts of person carrying equipment or in path of equipment.

Failed Equipment
Damaged wooden handles on sledge hammers, wooden stake, tripods etc,, fail resulting in been struck by blunt force causing head and body impact injuries., splinters in hands , cuts and bruises.

Traffic
Crossing road ways without looking, listening etc, being stuck by moving motor vehicle, cyclist or pedestrians resulting in death or severe body injuries, major and minor cuts and bruises.

Slips Trips and Falls
Untidy field work area, mucky, gravel etc., wet, frosty & unleveled surface conditions can result in slipping and tripping causing head impact and body injuries.

External Environment
Exposed to UV rays (clear or cloudy), causing, first second and or third degree burns, dehydration or sun stroke, chronic effect of skin cancer or eye cataracts.

Biological
Contact with earth & soil can result in contacting weils disease, causing death, flu like symptoms, liver and kidney damage.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The carrying out of physical surveys of topographical features to ascertain two and three dimensional measurement data using industry standard equipment.

Controls

- Students are permitted to carry out land surveying, under correct instruction and the lecturer's supervision.
- Keep all passageways clear
- Check weight of load before lifting. Correct manual handling procedure and practice to be used at all times.
- Individuals should always seek assistance to carry/transport equipment where it is felt necessary
- Adhere to standard 'Safe Cross Code' when negotiating pathways and roadways on site.
- Travel only on assigned pathways to the specified location. Full length staves must not be used within ten (10) metres of power lines.
- Do not place fingers or hands in-between moving or closing parts of test equipment when setting up or dismantling.
- Students must adhere to training instructions for setting up of equipment.
- Equipment must be carried by handles and straps if on equipment.
- Test equipment must be placed on to resting area and never thrown down.
- Test equipment with sharps points must be carried with sharp point facing towards the ground.
- Maintain spatial awareness of other persons when carrying or setting up equipment.
- Ensure that equipment (wooden handles, tripod legs etc.) are free from damage and defects prior to removing from stores.
- Damaged equipment must be reported to lecturer / technician & taken out of use for repair or disposal.
- Assess the test area ground surface conditions prior to setting up equipment.
- Maintain a clear and clean internal & external workspace at all times.
- Ensure to maintain your hydration if working outside for long periods of time.
- Where possible, always keep your skin covered on a clear or cloudy day.
- Use an adequate sun filter protection for exposed skin if required.
- Do not handle any external surfaces (earth, soil, waste materials etc.) with bare hands, use disposable gloves.
- Maintain good hygiene at all times, wash hands thoroughly when work is complete.

Checks & Inspections

- Lecturers to monitor compliance with control measures

Information, Instruction & Training

- Instruction provided for all equipment prior to first use
- Equipment manuals to be made available
- Manual Handling

Personal protective equipment required (last resort)

- High Visibility Vest to be provided and worn
- Safe Access Equipment to be provided
- Safety Boots
- Gloves

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 511
	Revision Date: Oct 2026
Oedometer	Approved by: Breda Brennan

Hazards

Manual Handling

Lifting, carrying and placing weights onto and off the machine can result in lower back and musculoskeletal injuries.

Mechanical

Crushing of fingers in between load beam and load platen or adjusting screw. Crushing of hand or fingers if between descending pivoted yoke and load beam.

Falling Machine & Weights

Machine head not bolted properly, unsecure hold of weights, cells, lifting too many weights, weights incorrectly mounted on weight hanger, hanger set up incorrectly can result in in falling weights and lower leg and feet impact injuries.

Slips, trips and falls

Slipping as a result of wet or dusty floors causing falls and head impact injuries, cuts and bruises. Tripping due to test equipment, poor housekeeping & personal belongings resulting in falls & head impact injuries, cuts and bruises.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is used for testing the settlement rate of clay and soil samples.

Controls

- Students are permitted to use the machine, under correct instruction and the supervision of the lecturer or technician.
- Lifting, carrying and placing weights to be carried out in accordance with safe manual handling practice and procedure.
- Never place fingers in-between moving load beam and load platen or adjusting screw.
- Never place hands or fingers between descending pivoted yoke and load beam.
- Ensure that the machine head is bolted tight.
- Ensure of a firm hold on weights when lifting and carrying.
- Never carry too many weights at a time.
- Mount the weights on to the weight hanger at right angles to each other.
- Ensure the machine is set up as per manufacturer's instructions
- Test equipment and weights must not be stored on the floor

- Laboratory floor to be kept dry at all times, water spillages and soil samples to be mopped up immediately.
- Laboratory exercises are supervised by college staff
- First Aid is available in the laboratory
- Wash hands thoroughly when test is complete

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Instruction is given on the safe use of the equipment
- Laboratory exercises are supervised by college staff

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 512
	Revision Date: Oct 2026
Permeability Test Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling

Lifting, carrying and holding test cell, sand bag, and water tank can result in acute or chronic lower back and or musculoskeletal injuries.

Glass sharps

Clearing standpipes from air locks or placing on panel can result in broken glass and cuts to hands and fingers.

Falling Test Equipment

Test cells not secure on workbench or frim hold of can fall and result in crush injuries to the feet.

Slips Trips and Falls

Slipping as a result of wet or sand on floors causing falls and head impact injuries, cuts and bruises. Tripping due to poor housekeeping & personal belongings resulting in falls & head impact injuries, cuts and bruises.

Mechanical

Pinching of fingers when tightening up test cells.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

A test carried out to measure the permeability of soil, clay and sand samples by subjecting the samples to a flow of water under controlled conditions.

Controls

- Students are permitted to use the apparatus, under correct instruction and the supervision of the lecturer or technician.
- Lifting to be carried out in accordance with safe manual handling practice and procedure.
- Do not lift water bath fully laden with water, use a small jug to decant water from the bath.
- Exercise caution when handling standpipes, use both hands to hold.
- Replace standpipe if broken or chipped.

- Clean up any broken glass up immediately.
- Ensure to have a firm hold of test cells when handling.
- Ensure test cells are placed securely in test apparatus and not near the work bench edge.
- Maintain good housekeeping and work areas free from Personal belongings at all times.
- Laboratory floor to be kept dry at all times, water spillages and sand to be cleaned up immediately.
- Students are permitted to use the test equipment under, Laboratory exercises are supervised by college staff.
- First Aid is available in the laboratory

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Lab instruction sheets are issued to all students prior to carrying out an exercise
- Practical instruction is provided in the safe operation of the equipment.
- Laboratory exercises are supervised by college staff

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**24 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Plastics & Materials Testing – Flammability NO LONGER IN USE	Ref: SWPS 513
	Revision Date:
	Approved by: Breda Brennan

~~**Hazards**~~

~~**Explosions**~~

~~Leaking propane gas from damaged lab gas line, faulty bench gas valve, faulty damaged Bunsen burner rubber tubing, and bench gas valve left open can result in explosions when in contact with ignition sources and cause death, first, second and or third degree burns to the body.~~

~~**Leaking gas**~~

~~Inhalation of propane gas can result in acute respiratory illness.~~

~~**Fire**~~

~~Flammable materials, at or near the workbench, loose, nylon clothing, long hair, burner hose pipes can catch fire from naked flame of the Bunsen burner and result in first, second and or third degree burns.~~

~~**Hot surfaces**~~

~~Heating various plastics and other materials can result in first, second and or third degree burns to the hands and fingers when handling. Burns to the hands and fingers when handling heated Bunsen burners.~~

~~**Melted plastics**~~

~~Heated various plastics and materials reach their melting point and begin to drip or flow and come into contact with exposed skin or clothing causing severe burns.~~

~~**Sharps**~~

~~Use of hacksaws and snips for cutting up test materials can result in severing of fingers, major or minor laceration's to the hands or fingers. Cutting plastic and materials can result in producing sharp plastic points or edges that can cause laceration's to the hands and fingers~~

~~**Mechanical**~~

~~Crushing of fingers in between moving parts of the snips.~~

~~**Flying Debris**~~

~~Hack sawing or snipping plastics and other materials can generate flying debris resulting in loss of sight or minor eye irritation.~~

~~**Slips trips and Falls**~~

~~Poor housekeeping, personal belongings can result in tripping, plastic materials for testing lying on the floor can result in slipping, causing fall impact head injuries, cuts and bruising.~~

~~**Fumes/Smoke**~~

Heating plastics & materials can generate noxious fumes, when inhaled and cause respiratory illness & irritation.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Identification of combustion characteristics of plastic types.

Controls

- Additional ventilation is provided for flammability test through the opening of windows and doors.
- Students are permitted to carry out testing, under correct instruction and the supervision of lecturers and technicians.
- All lab bench gas valves must be in the closed position prior to turning on at the propane gas mains.
- Listen for possible propane gas leaks as soon as turning on at the mains.
- Turn off the gas at the main supply if there is a smell of gas in the lab.
- Inspect Bunsen burners and hoses for damage or defects prior to using. Do not use if damaged in any way and report to the lecturer or technician for removal and safe disposal of.
- Propane gas must be switched off at the mains supply as soon as no longer required.
- Flammable sources must not be stored at or near the Bunsen burners.
- Loose or nylon clothing must not be worn when operating the Bunsen burners.
- Long hair must be neatly tied back or a well fitted cap worn.
- Bunsen burners must be set up by the lecturer or technician.
- Wear heat resistant gloves when handling hot plastics and other materials?
- Use pliers to hold materials when heating.
- Allow Bunsen burners to cool sufficiently before handling for return to storage.
- Never touch melted or running/flowing test plastics or materials. Always carry out testing on a workbench ensuring catchment of melted materials.
- Never place hands or fingers near a moving hack saw blade when cutting up test materials, use a vice where required.
- Where possible use a snips to cut up test pieces. Always snip materials away from body parts or bystanders.
- Never place fingers or hands in between cutting or moving parts of the snips.
- Never touch metal or plastic sharps with bare hands and fingers, use gloves or pliers to handle.
- Maintain good housekeeping at all times & area work area free from personal belongings.
- Plastics materials must be swept or picked up from the floor immediately.
- Never inhale the smoke or fumes of burning or heated test materials or plastics.
- Always consult the Safety Data Sheets when using Propane gas.

Checks & Inspections

- Lab propane gas line, fixtures and fittings must be checked and records kept by the school.

Information, Instruction & Training

- Instruction is provided in the safe use of equipment.
- Safety Data Sheet

Personal protective equipment required (last resort)

- Safety boots
- Safety Glasses
- Heat Resistant Gloves

Initial Risk Rating (without any control measures)

Probability		x	Severity		=	Risk Factor	
÷	**3**			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability		x	Severity		=	Risk Factor	
÷	**1**			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 514
	Revision Date: Oct 2026
Shear Box Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling

Lifting, carrying, holding and placing weights on and off the machine can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Machine & Weights

Machine not bolted to the ground can result in falling due it leaning against; items of clotting catching on it resulting in lower leg and feet crush injuries. Unsecure hold of weights, cells, lifting too many weights, weights not mounted properly on weight hanger, hanger set up incorrectly can result in in falling weights and lower leg and feet crushing injuries.

Electricity

Incorrectly connected, damaged or poorly maintained electrical wiring can result in Electrocution-Death. First second and or third degree burns.

Slips Trips and Falls

Slipping as a result of wet or sand on floors causing falls and head impact injuries, cuts and bruises. Tripping due to poor housekeeping, trailing power cable & personal belongings resulting in falls & head impact injuries, cuts and bruises.

Mechanical

Crushing of fingers when in contact with moving loading lever and jack screw.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Testing the shear strength of soil and sand samples under controlled conditions

Controls

- Manual handling of weights to be carried out in accordance with proper manual handling practice.
- Ensure that the machine is bolted to the ground.
- Students are permitted to use the apparatus, under correct instruction and the supervision of the lecturer or technician.
- Ensure of a firm grip on weights when lifting and carrying.
- Never carry too many weights at a time, only carry what you can safely hold.
- Mount the weights on to the weight hanger at right angles to each other.

- Ensure the machine is set up as per manufacturer's instructions
- Check that the electrical cable and plugs are free from damage or defects prior to use, do not use if electrical cables are damaged or defecated in any way.
- Competent persons must carry out all electrical repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Laboratory floor to be kept dry at all times, water & sand spillages to be cleaned up immediately.
- Machine power cable must be plugged into socket above the work bench.
- Never place fingers in between ascending or descending loading lever and jack screw.
- Follow the manufacturer's machine standard operating procedures at all times.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Instruction is given on the safe use of the equipment
- Laboratory exercises are supervised by college staff
- First Aid is available in the laboratory

Personal protective equipment required (last resort)

- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**3 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Soil Compactor	Ref: SWPS 515 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained electrical wiring can result in Electrocution-Death. First second and or third degree burns

Mechanical
Crushing of fingers, hands & feet between descending ram and platen. Entanglement of hair & clothing with top wheel assembly and rotating base platen resulting in asphyxiation and bruises. Pinch points with rotating chain & loss of fingers.

Slips, trips and falls
Slipping as a result of wet or dusty floors causing falls and head impact injuries, cuts and bruises. Tripping due to trailing power cable, test equipment, poor housekeeping & personal belongings resulting in falls & head impact injuries, cuts and bruises.

Falling sample mould
Unsecure grip of test mould, falling and resulting in lower leg and feet impact injuries.

Flying debris
Compacting samples can generate flying particles and cause loss of sight or temporary eye irritation.

Manual Handling
Lifting, carrying and pushing of the sample mould can result in acute or chronic lower back injuries and or musculoskeletal injuries.

Dust
Scooping soil samples can generate dust & result in respiratory irritation and illness. Contact with skin can result in minor skin irritation.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is used for compacting wet concrete samples to test for the degree to which the sample reduces in volume or compresses under controlled conditions.

Controls

- Only trained operators are permitted to use the machine.

- Follow the manufacturer's machine operating procedures at all times.
- Students are permitted the use of the machine, under correct instruction and the supervision of the lecturer or technician.
- Long hair must be tied back neatly or a well fitted cap worn when operating the machine.
- The wearing of loose clothing is not permitted.
- Jewellery must not be worn.
- Ensure that the electric power cable and plug is in good working order & free from defects prior to use.
- Do not use the machine if the power cable or plug is damaged in any way.
- Competent persons must carry out electrical repairs.
- Ensure all machine guards are in place prior to setting up the machine.
- Ensure the safety gate lever is closed when setting up the machine & when the machine is not in use.
- Only open the safety gate lever when ready to commence testing.
- Do not place hands, fingers or feet between descending ram and base platen.
- Never touch the rotating chain or moving parts of the machine.
- Ensure the machine power cable is plugged in to the socket above the test work bench.
- Clean any water or test dust spills up as soon as noticed.
- Maintain good housekeeping at all times.
- Personal belongings are not permitted at or near the workstation.
- Do not leave test pieces lying on the ground around the machine.
- Firmly hold on to the sample mould when setting up for testing.
- Safety glasses must be worn when operating the machine or preparing samples.
- Ensure water is added to soil sample prior to crushing.
- Protective gloves to be worn when handling samples
- Scoops / shovels to be used for preparing samples and for loading the sample to apparatus
- Lifting to be carried out in accordance with correct manual handling practice and procedure

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Practical instruction is provided in the safe operation of the equipment.
- Laboratory instruction sheets are issued to students
- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Protective gloves are provided
- Scoops / shovels are provided
- Safety glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		= Risk Factor	
	3			**3**		**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		= Risk Factor	
	1			**3**		**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 516
	Revision Date: Oct 2026
Soil Sample Extruder	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting of soil tubes from the ground for extrusion can result in lower back and or musculoskeletal injuries.

Mechanical
Crushing of fingers if in between descending hydraulic ram and machine housing. Hand impact injuries, minor cuts and bruises from operating the manual hydraulic lever.

Slips, Trips and Falls
Poor housekeeping, personal belongings, leaking hydraulic fluid, spilled soil from test sample can result in tripping and slipping causing falls and head impact injuries, concussion and major and minor cuts and bruises.

Chemicals
Contact with hydraulic oil can result in minor skin irritation to the hands and fingers. Inadvertent ingestion may cause stomach irritation and upset.

Falling machinery and Test Samples
Machine not secure on the ground, unsecure hold of test sample, test sample not secure on workbench and on the edge can fall resulting in lower leg and feet crush and impact injuries.

Biological
Handling of soil samples with bare hands can result in contacting Weils disease through cuts, open wounds or inadvertent ingestion resulting in death or major illness.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Use of a hand operated device for extracting core soil and clay samples, and subsequently extruding them from the device for use in further tests and experiments.

Controls

- Lifting to be carried out in accordance with proper manual handling practice and procedures.
- Good hygiene practice must be followed at all times.

- Hands must be washed thoroughly after handling materials and on completion of the exercise.
- Washing facilities are provided.
- Students are permitted to carry out his task, under correct instruction and the supervision of the lecturer or technician.
- Never place fingers in between the descending or ascending hydraulic ram.
- Ensure the machine is set up clear from obstructions when operating the manual hydraulic lever.
- Maintain good housekeeping at all times and work area free from personal belongings.
- Inspect the machine for leaking hydraulic oil prior to use.
- Clean up any leaking oil or spilled soil test samples immediately.
- Wear gloves when operating the machine and handling soil samples.
- Maintain a firm and secure hold of test sample when handling.
- Ensure the machine is mounted securely and level on the ground.
- Test samples must be placed firmly on the workbench top and in from the edge when using.
- Never place hand to mouth when test sol samples.
- Cuts or open wounds must be covered with a plaster.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Practical instruction is provided in the safe operation of the equipment.
- Laboratory instruction sheets are issued to all students
- Manual Handling Training
- MSDS

Personal protective equipment required (last resort)

- Safety Gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly.

Safe Work Practice Sheet	Ref: SWPS 517
	Revision Date: Oct 2026
Soil Sample Preparation	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, holding or carrying of packaged soil, sand bags, sample containers, scooping soil, sand etc. from holding vessels, pushing or pulling holding vessels, failed wheel on container vessels can result in acute or chronic lower back injury and or musculoskeletal injuries.

Dust
Pouring of dry soil, sand etc. samples into holding trays and sample containers can generate dust causing acute respiratory irritation or illness.

Falling apparatus and moulds
Decanting samples into various apparatus and moulds and resting them on the side of benches can result in falling materials from unsecure hold of and result in lower leg and feet impact and crush injuries.

Biological
Handling of soil, sand or stones can result in contact with Weils disease and other bacterial infections resulting in a major or minor illness.

Slips, Trips and Falls
Poor housekeeping, personal belongings, soil, sand and stone sample on the floor can result in slips, trips and fall impact head and body cuts and bruises.

Sharps
Quarried rock may contain slivers of stone that can cause minor lacerations to the hands and fingers when handling.

Mechanical
Assembling and disassembling apparatus for soil, sand and stone containment can result in pinching or crushing of fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

General preparation of soil samples for further testing in a variety of laboratory tests and experiments.

Controls

- Students are not permitted to conduct the preparation of soil sampling.

- Food or drink must not be consumed in the laboratory.
- Lifting to be carried out in accordance with proper manual handling practice and procedures.
- Ensure that all soil sand etc. container trolley wheels are free from defect or damage when handling.
- Ensure that there is adequate ventilation when pouring dry soil, sand and stone samples.
- Wear a dust mask where there is the generation of dust from dry samples.
- Ensure to wear the appropriate PPE.
- Maintain a secure hold of apparatus and moulds when handling.
- Always rest the apparatus or moulds being used firm and securely on the work benches and in from the edge.
- Cuts or open wounds must be covered with a plaster prior to handling soil, sand and stones.
- Never handle sample soils, sand or stones with bare hands wear safety gloves and use scoops provided for handling.
- Hands must be washed thoroughly after handling materials and on completion of the exercise.
- Washing facilities are provided
- Good hygiene practice must be followed at all times.
- Maintain good housekeeping and area free from personal belongings at all times.
- Clean up any sample spillage from the floor immediately, use a dust pan and tray.
- Never place hands or fingers in-between moving or clamping parts of sample containers.
- Laboratory exercises are supervised by college staff.
- Always wash your hands when work is complete.

Checks & Inspections

- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Practical instruction is provided in the safe operation of the equipment.
- Manual handling training
- Safety Data Sheets

Personal protective equipment required (last resort)

- Safety boots
- Dust Mask
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 518
	Revision Date: Oct 2026
Timber Grading	Approved by: Breda Brennan

Hazards

Sharps
Using a hand held metal scribe for cutting into planks of timber can result in lacerations to the hands and fingers. Scribing with the timber resting on the upper legs can result in lacerations to the upper legs.

Falling Timber
Unsecure hold of planks of timber when carrying, resting on workbench edge for scribing can fall causing lower leg or feet impact injuries.

Timber Splinters
Incorrectly stored, damaged or over used pieces of timber may contain splinters and result in puncture wounds to the hands and fingers.

Timber Plank
Swinging of a timber plank when transporting or when using at the workbench can result in blunt force impact blows to the head and cause concussion and or major or minor cuts and bruising to head and other body parts.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Visual inspection of timber samples to determine general quality based on grain structure, knotting and other such features.

Controls

- Wear safety gloves when handling timber pieces
- Students are permitted to carry out testing on timber under correct instruction and the lecturer or technicians' supervision.
- Never place your free hand or fingers in between scribe and timber or in the direction of where the timber is being scribed.
- Always place the timber for scribing on top of the lab workbench.
- Ensure to maintain a secure hold of planks of timber when transporting.
- Ensure the timber is placed firmly and in from the edge of the workbench edge when scribing.
- If required seek assistance to hold the piece of timber firmly on the workbench when scribing.

- Ensure that the timber for scribing is stored free from objects resting or banging against it.
- Inspect the timber for damage and splinters prior to using it, do not use if damaged in anyway and remove it for repair or replacement.
- Never swing the pieces of timber for testing when carrying to the workbenches.
- Always observe your spatial surroundings when handling test pieces of timber.

Checks & Inspections

- Ensure the timber is free from damage or defects prior to use.

Information, Instruction & Training

- Students are given instruction in the safe use of tools
- Students are supervised when carrying out all practical work

Personal protective equipment required (last resort)

- Safety gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		= Risk Factor	
	2			**2**		**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		= Risk Factor	
	1			**2**		**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 519
	Revision Date: Oct 2026
Tri-axial Compression Test Apparatus	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, incorrectly fitted, damaged electrical cables or plugs, wet hands when operating the machine can result in electrocution-death or first second and third degree burns.

Manual Handling
Moving parts of the machine and test equipment can result in lower back and or musculoskeletal injuries.

Slips, Trips and Falls
Trailing power cables, poor housekeeping, personal belongings, spilled and leaking water and oil can cause tripping and slipping resulting fall impact head and body injuries.

Mechanical
Pinching of fingers when assembling bolts to platen.

Falling machinery and equipment
Machinery not placed securely on workbench, unsecure hold of test equipment resulting in falling and causing lower leg and feet crushing and impact injuries.

Biological
Handling of soil samples with bare hands can result in contacting Weils disease through cuts, open wounds or inadvertent ingestion resulting in death or major illness.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This device is used for carrying out compression tests on clay samples

Controls

- Students are permitted use of the machine, under correct instruction and the lecturer or technicians supervision.
- Food or drink is not permitted.
- Ensure that the electric power cable and plug is in good working order & free from defects prior to use.
- Do not use the machine if the power cable or plug is damaged in any way.
- Competent persons must carry out all electrical repairs.
- Ensure both hands are dry when operating the machine.

- Lifting to be carried out in accordance with safe manual handling practice and procedure.
- Maintain good workplace housekeeping and area free from personal belongings at all times. Laboratory floor to be kept dry at all times, water and oil spillages to be mopped up immediately.
- Ensure that all machine water hoses are free from damage or defects and running to the sink and drain.
- Ensure that the machine is free from oil leaks prior to and when operating the machine.
- Do not place fingers in-between bolt and platen when assembling.
- All test machinery must be placed level and in from the edge of the work bench.
- Maintain a secure hold of test equipment when handling.
- Wear gloves when handling soil samples.
- Cuts and open wounds on hands and fingers must be dressed with a plaster prior to operating the apparatus.
- Good hygiene practice must be followed at all times.
- Always wash your hands when work is complete.
- Follow the manufacturer's machine operating procedures at all times
- Laboratory exercises are supervised by college staff
- First Aid is available in the laboratory

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Instruction is given on the safe use of the equipment
- Laboratory exercises are supervised by college staff
- First Aid is available in the laboratory
- Manual Handling Training
- MSDS

Personal protective equipment required (last resort)

- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		= Risk Factor	
	1			**3**		**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 520
	Revision Date: Oct 2026
Portable Weighing Scales	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, damaged electrical cable and plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Moving the weighing scales on or to the work bench, decanting test samples on to and off the weighing scales can result in acute or chronic lower back and or musculoskeletal injuries.

Slips, Trips and Falls
Poor housekeeping, personal belongings, trailing cables, spilled soil, sand and rock samples can result in tripping and slipping causing falls and head impact concussion, major and minor cuts and bruises.

Biological
Handling of test soil, sand and rock samples with bare hands can result in contacting Weils disease and other bacterial infections causing a major illness.

Falling Equipment
Weighing scales not mounted level and on the edge of the work bench, unsecure hold of the scales when transporting can fall causing lower leg and feet crush and impact injuries.

Dust
Weighing various samples can result in dust being generated and cause acute upper respiratory irritation.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This device's are used for the approximate weighing (Grams to over 20 Kilos) of soil, sand and rock samples being used for various test machines and apparatus.

Controls

- Students are permitted to use the equipment, under correct instruction and the supervision of the lecturer or technician.
- Ensure that the electric power cable and plug is in good working order & free from defects prior to use.
- Do not use machine if the power cable or plug are damaged in any way.

- Competent persons must carry out all electrical repairs.
- Ensure that the machine is plugged into the power socket above the lab workbench selected.
- Follow the manual handling training guidelines at all times when handling loads.
- Maintain good housekeeping and area free from personal belonging at all times.
- Spilled soil, sand and rock test samples must be cleaned up from the floor immediately.
- Use gloves and scoops when weighing soil, sand and rock samples.
- Weighing scales must be mounted flat and in from the edge of the work benches being used.
- Maintain a secure hold of the weighing scales when transporting.
- Ensure the room is well ventilated when weighing samples.
- Always wash your hands when work is complete.
- Open cuts or wounds must be dressed with a plaster prior to commencement of work.
- Wear a dust mask when weighing and transferring soil, sand and stone samples.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- MSDS

Personal protective equipment required (last resort)

- Safety Gloves
- Safety Boots
- Dust Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)						
Probability :	**1**	x	Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review - ***As and when process changes or yearly***

Safe Work Practice Sheet	Ref: SWPS 521
	Revision Date: Oct 2026
Buckling Apparatus	Approved by: Breda Brennan

Hazards

Manual Handling
Moving the machine in to the required position requires pushing, pulling or lifting the apparatus and can cause acute or chronic lower back and or musculoskeletal injuries.

Falling Machine
Attempting to lift and carry the apparatus on your own, apparatus resting at the edge of the work bench, being carried to another test workbench can fall causing major and minor lower leg and feet crush and impact injuries.

Falling Weights
Moving the apparatus laden with weights to a different workbench location, incorrect placement of weights on apparatus, failed or damaged weight string can result in falling weights resulting in minor lower leg and or feet impact injuries.

Mechanical
Changing of apparatus strut holding blocks, holding or touching the apparatus adjusting coiled spring when operating and levelling the apparatus can result in pinching of skin on hands and fingers.

Slips Trips and Falls
Poor housekeeping, personal belongings can result in slipping and tripping causing fall head and body impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is used to measure the failure points in various metal struts under load.

Controls

- The lecturer or technician must only use the apparatus, students must only observe for data collection.
- Follow the manual handling training guidelines at all times.
- Where possible carry out the test on the bench that the apparatus is resting on and incrementally move the machine into the required set up position.
- Never attempt to carry or lift the apparatus on your own.
- Seek assistance if required to move the apparatus from one workbench to another.
- Maintain a secure hold of the apparatus when moving to another workbench.
- Place the apparatus securely on the workbench and in from the edge when setting up or storing away.

- Ensure that the string for supporting wieghts is in good working order and free from defects prior to use.
- Place the weights onto the apparatus at right angles to each other.
- Never transport the apparatus laden with weights.
- Do not touch or hold the apparatus coiled spring when adjusting or using the apparatus.
- Keep fingers clear of strut holding clamps devices when changing and tightening.
- Maintain good housekeeping and work area free from personal belongings at all times.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 522
	Revision Date: Oct 2026
Bearing Capacity of Shallow Foundations	Approved by: Breda Brennan

Hazards

Manual Handling
Pushing or pulling the soil test box into position, filling or emptying the soil test box can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Crushing of fingers if in between the ascending manually operated load screw and load cell.

Slips Trips and Falls
Poor housekeeping, personal belongings, sand, soil etc. on the floor can result in slipping and tripping causing fall head and body impact injuries.

Biological
Handling of test soil, sand samples with bare hands can result in contacting Weils disease and other bacterial infections causing a major illness.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is used to test model footing failure in a soil test box.

Controls

- The lecturer or technician must only set up the apparatus.
- Students are permitted to carry out his task, under correct instruction and the supervision of the lecturer or technician.
- Follow the manual handling training guidelines at all times.
- Seek assistance if required when moving the soil test box.
- Use a scoop to empty or fill the soil test box.
- Never place hands and fingers in between the ascending manually operated load screw.
- Maintain good housekeeping at all times and work area free from personal belongings at all times.
- Any spilled soil, sand etc. must be swept up from the floor immediately.
- Wear gloves when handling soil.
- Food or drink is not permitted.
- Open cuts or wounds must be dressed with a plaster prior to commencement of work.
- Follow good hygiene practice at all times.
- Wash hands when work is complete.

Checks & Inspections

- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 522
	Revision Date: Oct 2026
Bearing Capacity of Deep Foundations	Approved by: Breda Brennan

Hazards

Manual Handling
Pushing or pulling the soil test tank into position, emptying the soil test tank, lifting sand bags etc. to fill the test tank can cause acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Crushing of fingers if in between hinged parts of the bottle jack. Pinching of fingers when assembling the bottle jack to the apparatus.

Slips Trips and Falls
Poor housekeeping, personal belongings, sand, soil, leaking hydraulic oil on the floor can result in slipping and tripping causing fall head and body impact injuries.

Biological
Handling of test soil, sand samples with bare hands can result in contacting Weils disease and other bacterial infections causing a major illness.

Falling Apparatus
Failed wheels on the apparatus can result in a collapsing and falling apparatus causing lower leg and feet crush and impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This apparatus is used to model pile foundation to failure in a soil test tank.

Controls

- The lecturer or technician must only set up the apparatus.
- Students are permitted to carry out this task, under correct instruction and the supervision of the lecturer or technician.
- Follow the manual handling training guidelines at all times.
- Seek assistance if required when moving the soil test tank.
- Use a scoop to empty or fill the soil test tank.
- Never hold the bottle jack by the hinge parts when operating it.
- Keep your fingers clear of the bolt and nut when assembling onto the apparatus.
- Maintain good housekeeping and work area free from personal belongings at all times.

- Any spilled soil, sand or leaking hydraulic oil must be swept and cleaned up immediately.
- Wear gloves if in contact with handling soil.
- Food or drink is not permitted.
- Open cuts or wounds must be dressed with a plaster prior to commencement of work.
- Follow good hygiene practice at all times.
- Wash hands when work is complete.
- Ensure that the wheels of the apparatus are in good working order prior to use.

Checks & Inspections

- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**3 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 524
	Revision Date: Oct 2026
Flexure Bending Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained machine electrical wiring or plugs can result in Electrocution-Death. First second and or third degree burns

Manual Handling
Lifting of concrete or timber test beams to & from the machine, removing or replacing machine rollers or parts can cause acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Crushing or entrapment of fingers or hands, loose clothing or long hair in between the descending platen and test material or ascending machine ram.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing power cable, test beams and fragments & machine parts lying on the floor, leaking hydraulic oil can result in tripping and slipping causing fall head and body impact injuries.

Falling test pieces
Unsecure hold of test piece when loading into the machine, test piece breaks and falls when being removed after testing resulting in lower leg and feet impact and crush injuries.

Sharps
Testing concrete and timber materials under load can cause material sharps to break off and result in minor cuts or puncture wounds to the hands and fingers when handling damaged beams or fragments.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to test the failure point of concrete timber beams.

Controls

- Students are permitted to use the machine, under correct instruction and the supervision of the lecturer or technician.
- Ensure that the machine electrical cables and plug are free from damage or defect prior to use.
- Do not use the machinery if cable or plugs damaged in anyway.
- Competent person/s must carry out all electrical repairs.

- Avoid the trailing of power cables on walkways.
- Follow the manual handling training procedures at all times and seek assistance if required.
- Lecturer or the technician must set up the machine for use.
- Loose clothing or jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never place your hands and fingers in between the ascending or descending ram, platen and materials.
- Maintain good housekeeping at all times and work area free from personal belongings.
- Never store or place test beams and machine parts on the floor space around the machine.
- Check for hydraulic leaks prior to using the machine. Fix any leaks before using the machine.
- Clean up any hydraulic fluid from the floor immediately.
- Wear safety gloves if required to handle hydraulic fluid.
- Use a dust pan and brush to sweep up any test beam fragments from the ground or the machine.
- Use builder's gloves when handling beams before or after testing.
- Maintain a secure hold of the test material when loading into the machine.
- Exercise caution when removing and carrying tested materials from the machine. Place onto a wooden pallet for removal from the work shop.
- Ensure that the machine loading sensor is in good working order when using the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots
- Safety gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review -

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 525
	Revision Date: Oct 2026
Dry Brick Formation Building	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, holding and carrying bricks to and from storage for dry brick building on the floor can cause acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, stepping over building bricks formations on the ground, brick dust and debris, building brick formations in front of escape exits or on a walkway to an exit can result in tripping and slipping causing fall head and body impact injuries.

Falling Bricks
Unsecure hold of and carrying too many bricks to and from storage resulting in lower leg and feet impact and crush injuries.

Sharps
Handling bricks to and from storage can result in minor cuts to the hands and fingers from sharp brick cut edges and rough brick parts.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Demonstrating the various brick formations that can be applied when brick building

Controls

- Follow the manual handling training procedures at all times when brick building.
- Students are permitted to carry out this task, under correct instruction and the lecturer or technicians supervision.
- Never over load the body with too many bricks when lifting or carrying. Always carry what you can securely hold.
- Maintain good housekeeping at all times and work area free from personal belongings.
- Bricks must be returned to storage as soon as demonstration is complete.
- All brick dust and debris must be swept from the floor as soon as possible.
- Always walk around the dry brick formation and never step over it.
- Do not build brick formations in front of or near an escape exit or walk way to an exit.
- Wear builders gloves when handling bricks to and from storage

Checks & Inspections

- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots
- Safety gloves

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 526
	Revision Date: Oct 2026
Dust Extractor Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, damaged or poorly maintained machine electrical wiring or plugs can result in Electrocution-Death. First second and or third degree burns

Manual Handling
Lifting, pulling and pushing the machine to and from storage can cause acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, stepping over trailing power cables, machine placed in front of an escape exit or blocking a walkway to an exit can result in tripping and slipping causing fall head and body impact injuries.

Falling Machine
The machine legs and or wheel of the machine fail resulting in a collapsing and falling machine causing lower leg and feet impact and crush injuries. .

Cement Dust
Removing the dust box from the machine can result in inhalation of cement dust causing acute or chronic respiratory illness, contact with cement dust on the skin can result in contact dermatitis, burns to the skin or eyes.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for extracting cement dust from the air when making up cement batches.

Controls

- Students are permitted to use the machine, under correct instruction and the supervision of the lecturer or technician.
- Ensure that the machine electrical cable and plug is free from damage or defects prior to use.
- Do not use the machine if the electrical cable or plugs are damaged in any way,
- Competent person/s must carry out all electrical repairs.
- Follow the manual handling training guidelines at all times when moving the machine

- Maintain good housekeeping and work area free from personal belongings at all times.
- Always plug the extractor in from the back of the machine to power socket on the wall.
- Never position the machine in front of an escape exit or block a walkway to an escape exit.
- Inspect the wheels and legs of the machine for damage or defects prior to moving.
- Do not move the machine if the wheels or legs/frame are damaged in any way. Competent person/s must carry out repairs.
- Wear safety gloves, glasses and a dust mask when emptying the machine dust box.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- Chemical handling training
- PPE training.

Personal protective equipment required (last resort)

- Safety Boots
- Safety gloves
- Dust Mask
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 527
	Revision Date: Oct 2026
Rifle Boxes & Sieves	Approved by: Breda Brennan

Hazards

Manual Handling
Pulling, pushing, lifting and carrying the rifle boxes and sieves unloaded or loaded with gravel for grading can result in acute or chronic lower back and or musculoskeletal injuries.

Dust
Pouring dry gravel into the rifle box for separation or from the rifle box to a sieve or from one sieve to another for grading can result in the inhalation of dust causing acute or chronic respiratory illness or disease.

Flying debris
Pouring dry gravel from the rifle box or sieves can result in air borne flying debris causing acute minor irritation to the eyes.

Sips Trips and Falls
Poor housekeeping, personal belongings, stepping over grading equipment lying on the ground, spilled gravel can result in slipping and tripping causing head and body fall impact injuries, cuts and bruises.

Blocked fire exit
Setting the rifle box up in front of the fire exit or blocking walkway to an exit can result in an unsafe passage from the building in the event of an emergency.

Falling rifle box of sieves
Unsecure hold of rifle box and sieves when moving from storage, failed handles on rifle box when grading dry grave, sieves falling from workbench or weighing scales can result in crush and impact lower leg and feet injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The rifle box and sieves are used to assist in determining dry gravel particle size distribution.

Controls

- Students are permitted to use the equipment, under correct instruction and the supervision of the lecturer or technician.
- Follow the manual handling training guidelines at all times.

- Wear a dust mask when handling dry gravel for decanting to and from rifle box or sieves.
- Wear safety glasses when performing gravel for grading.
- Maintain good housekeeping and workspace free from personal belongings at all times.
- Never step over equipment lying on the ground, always walk around it.
- Spilled gravel must be swept up immediately.
- Rifle boxes and sieves must be returned to storage when they are no longer required.
- Do not impede any escape exits or walkways when setting up the rifle box for use.
- Maintain a secure hold to equipment when handling.
- Always place sieves or rifle boxes in from the edge of a work bench.
- Ensure that sieves are placed flat and securely on weighing scales.
- Inspect that the handles of the rifle box are free from damage or defects prior to use, do not use if damaged in any way and report to the lecturer or technician for removal and repair.

Checks & Inspections

- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- PPE training.

Personal protective equipment required (last resort)

- Safety Boots
- Dust Mask
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**3**			**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 528
	Revision Date: Oct 2026
Sieve Shaking Machines	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly fitted, poorly maintained, damaged machine electrical cables or plugs can result in electrocution–death or first, second and or third degree burns.

Manual Handling
Lifting and carrying the sieves loaded with gravel for grading to the machine, pulling and pushing the machine in and out from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Dust
Shaking the sieves on the machine for gravel grading can result in the generation and inhalation of dust causing acute or chronic respiratory illness or disease.

Flying debris
Shaking the sieves mechanically for grading can result in air borne flying debris causing acute minor irritation to the eyes.

Sips Trips and Falls
Poor housekeeping, personal belongings, trailing power cables on the ground, spilled gravel can result in slipping and tripping causing head and body fall impact injuries, cuts and bruises.

Falling sieves and parts of machinery
Unsecure hold of sieves when moving to and from machines, sieves not placed properly in machines, unsecure hold of machine clamp for holding sieve in place can result in impact lower leg and feet injuries.

Mechanical
Inadvertent pinching of fingers when clamping sieves into place with descending tightening and clamp resulting in cuts and bruises.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used to shake dry gravel so as to determine the particle size distribution in the sieves.

Controls

- Students are permitted to use the machines, under correct instruction and the supervision of the lecturer or technician.
- Ensure that the machine electrical cable an plug are free from damage or defect prior to use, do not use if damaged or defected in any way.
- Competent person/s must carry out electrical repairs.
- Follow the manual handling training guidelines at all times.
- Seek assistance if required when moving machinery.
- Ensure that there is adequate ventilation. Wear a dust mask.
- Wear safety glasses at all times.
- Ensure that the lid of the sieve is place on the top sieve before and during the use of the machine.
- Maintain good housekeeping and workspace free from personal belongings at all times.
- Avoid the trailing of power cables and use the sockets mounted onto the wall behind the machines.
- Spilled gravel must be swept up immediately.
- Maintain a secure hold of sieves and clamps when handling.
- Ensure that the sieves are securely placed and clamped in the machine before operating it.
- Maintain hands and fingers free from descending tightening screws and clamps.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling

Personal protective equipment required (last resort)

- Safety Boots
- Dust Mask
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 529
	Revision Date: Oct 2026
Compactor for Gravel	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and dragging the compactor to and from storage, lifting the mechanical compactor ram head or sample container can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Crushing of feet, hands and fingers with descending ram and machine platen. Severing of fingers with descending ram and sample container. Pinching of fingers on loading catch when positioning the descending ram.

Sips Trips and Falls
Poor housekeeping, personal belongings, sample containers lying on the ground, spilled gravel and dust can result in slipping and tripping causing head and body fall impact injuries, cuts and bruises.

Falling machinery and containers
Unsecure hold of the machine when moving and dragging to and from storage, unsecure hold of sample container can result in impact lower leg and feet injuries.

Dust
Compacting gravel in sample containers can result in the generation and inhalation of dust causing acute or chronic respiratory illness or disease.

Flying debris
Compacting gravel in sample containers can result in air borne flying debris causing acute minor irritation to the eyes or loss of sight.

Impeded Exit
Compactor device is positioned blocking an escape exit or walkway impeding safe exit from the building.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The apparatus is a mechanically operated device to compact gravel in sample containers.

Controls

- Students are permitted to operate this device under correct instruction and the lecturer or technicians supervision.
- Group gatherings are permitted with the device under the lecturer or technicians supervision.
- Loose clothing or jewellery must not be worn when operating the device.
- Long hair must be neatly tied back or a well fitted cap worn.
- Lecturer must determine safe distance stance position for student observers.
- Follow the manual handling training guidelines at all times.
- Seek assistance if required when moving machinery.
- Never place feet, hands or fingers in between the descending ram and platen. Follow the same rule when setting the device up.
- Ensure that the machine safety release bolt is in position when setting the machine up. Inspect the safety bolt for wear and tear and replace if necessary.
- Never lace fingers in between the loading catch of the device.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never place or store gravel sample containers on the ground around the device.
- Clean up any spilled gravel or dust from the floor as soon as possible.
- Maintain a secure hold of the machine when moving to and from storage, seek assistance if required.
- Maintain a secure hold of gravel sample containers when loading and unloading the device.
- Ensure the room is well ventilated when carrying out the compacting procedure.
- Stand in an upright position when operating the compactor device.
- Never position the device in front of an escape exit or impede a walkway.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- PPE Training

Personal protective equipment required (last resort)

- Safety Boots
- Dust Mask
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		= Risk Factor	
	1			**3**		**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 530
	Revision Date: Oct 2026
Slump Test	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, dragging and carrying the metal mixing tray, slump cone to and from storage, scooping wet cement into slump cone, compacting wet cement mix can result in acute or chronic lower back and or musculoskeletal injuries.

Sips Trips and Falls
Poor housekeeping, personal belongings, wet floors, slump cones lying on the ground, spilled wet cement on the ground, stepping on and off the mixing tray can result in slipping and tripping causing head and body fall impact injuries, cuts and bruises.

Chemicals
Handling wet cement when filling slump cones can result in severe burns to the hands, fingers and other exposed skin parts. Filling slump cones with wet cement can contaminate clothing and footwear resulting in severe burns to the skin.

Impeded Exit
Mixing tray is positioned blocking an escape exit or walkway and impeding safe exit from the building.

Waste Material
Disposal of wet cement when test is carried out can result generating large slaps of cement when pooled into one pile.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The slump test is carried out to test the workability of concrete.

Controls

- Students are permitted to use the slump cone, under correct instruction and the lecturer or technicians supervision.
- Group gatherings are permitted with the device under the lecturer or technicians supervision.
- Loose clothing or jewellery must not be worn when using the device.
- Long hair must be neatly tied back or a well fitted cap worn.
- Lecturer must determine safe distance stance position for student observers.
- Follow the manual handling training guidelines at all times.

- Maintain good housekeeping and work area free from personal belongings at all times.
- Use the stainless steel mixing tray when carrying out slump test
- Never place or store slump cones on the ground or around the mixing tray.
- Maintain secure footing when stepping on and off the mixing tray.
- Clean up any spilled wet cement or water from the floor immediately.
- Maintain a secure hold of the mixing tray when moving to and from storage, seek assistance if required.
- Wear safety gloves, glasses and protective footwear when handling wet cement.
- Remove any clothing or footwear contaminated with wet cement immediately.
- Wash any skin contaminated with wet cement immediately.
- Never position the mixing tray in front of an escape exit or impede a walkway.
- When test is completed the wet cement must be scooped into small loads into plastics bags for safe removal and disposal.
- Test equipment must be returned to storage when test is competed.
- Always wash and dry your hands when testing is complete.

Checks & Inspections

- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- PPE Training
- Chemical Handling training
- MSDS Cement

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	= Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	= Risk Factor	3 Low Risk

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 531
	Revision Date: Oct 2026
Cube, Cylinder and Beam Moulds	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, dragging and carrying the metal moulds to and from storage, dismantling and clamping the moulds scooping wet cement into the moulds, compacting the wet cement mix in the moulds, washing the moulds after use, using the metal tray for resting the moulds on, placing moulds onto the workbench can result in acute or chronic lower back and or musculoskeletal injuries.

Sips Trips and Falls
Poor housekeeping, personal belongings, wet floors, moulds lying on the ground, spilled wet cement on the ground, stepping on and off the mixing tray can result in slipping and tripping causing head and body fall impact injuries, cuts and bruises.

Chemicals
Handling wet cement when filling moulds can result in severe burns to the hands, fingers and other exposed skin parts. Filling moulds with wet cement can contaminate clothing and footwear resulting in severe burns to the skin.

Impeded Exit
Mixing tray or moulds are positioned blocking an escape exit or walkway and impeding safe exit from the building.

Mechanical
Crushing or pinching of fingers when assembling the moulds.

Falling Moulds
Unsecure hold of the mould when dismantling and assembling, mould placed on the edge of the workbench incorrect method of handling the mould can result in falling moulds and lower leg and feet crush and impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The moulds are used to form cement into various shapes and sizes.

Controls

- Students are permitted to use the moulds, under correct instruction and the lecturer or technicians supervision.

- Group gatherings are permitted with the moulds under the lecturer or technicians supervision.
- Loose clothing or jewellery must not be worn when using the moulds.
- Long hair must be neatly tied back or a well fitted cap worn.
- Follow the manual handling training guidelines at all times.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Use the stainless steel mixing tray when required with moulding.
- Never place or store moulds on the ground or around the mixing tray.
- Maintain secure footing when stepping on and off the mixing tray.
- Clean up any spilled wet cement or water from the floor immediately.
- Maintain a secure hold of the mixing tray when moving to and from storage, seek assistance if required.
- Wear safety gloves, glasses and protective footwear when handling wet cement.
- Remove any clothing contaminated with wet cement immediately.
- Wash any skin contaminated with wet cement immediately.
- Never position the mixing tray or moulds in front of an escape exit or impede a walkway.
- Maintain fingers clear from mould clamping devices and hinges when assembling.
- Instruction must be provided for students in how to assemble, disassemble and handle moulds.
- Moulds must be placed in from the edge of workbench.
- Assembling and disassembling of small moulds should be carried out on a work bench.
- Moulds must be returned to storage when no longer required.
- Always wash and dry your hands when testing is complete.

Checks & Inspections

- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- PPE Training
- Chemical Handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	2	x	Severity	3	= Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x Severity		= Risk Factor	
	1		**3**		**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 532
	Revision Date: Oct 2026
Vibrating Table	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, dragging, pulling or pushing the machine to and from storage, loading the moulds on and off the machine can result in acute or chronic lower back and or musculoskeletal injuries.

Electricity
Incorrectly fitted, poorly maintained, damaged machine electrical cable or plugs can result in electrocution–death or first, second and or third degree burns.

Sips Trips and Falls
Poor housekeeping, personal belongings, wet floors, moulds lying on the ground, spilled wet cement on the ground, trailing power cable can result in slipping and tripping causing head and body fall impact injuries, cuts and bruises.

Chemicals
Handling wet cement on the frame of the moulds or from the ground can result in severe burns to the hands, fingers and other exposed skin parts.

Impeded Exit
Vibrating machine or mould set up in such a way that it blocks an escape exit or walkway thus impeding safe exit from the building.

Mechanical
Pinching of fingers when tightening the moulds.

Falling Moulds
Unsecure hold of the mould when loading and unloading the machine, can result in falling moulds and lower leg and feet crush and impact injuries.

Vibration
Holding on to the machine when it is in operation may result in in hand arm vibration syndrome also resulting in white finger.

Noise
Running the machine to de-aerate moulds generates noise and may cause acute temporary hearing discomfort, long term use may result in loss of hearing.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to vibrate and de-aerate wet loaded concrete moulds.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.
- Group gatherings are permitted with the machine under the lecturer or technicians supervision.
- Loose clothing or jewellery must not be worn when using the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Follow the manual handling training guidelines when using the machine and loading with moulds.
- Inspect the machine electrical power cable and plug prior to use.
- Do not use the machine if cable or plug is damaged in any way, report to lecturer or technician for removal from use.
- Competent person/s must carry out electrical repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never place or store moulds on the ground or around the mixing tray.
- Clean up any spilled wet cement or water from the floor immediately.
- Ensure that there are no trailing power cables along the ground when setting up the machine. Use the power sockets above the workbench.
- Maintain a secure hold of the mixing tray when moving to and from storage, seek assistance if required.
- Wear safety gloves, glasses and protective footwear when handling wet cement.
- Remove any clothing contaminated with wet cement immediately.
- Wash any skin contaminated with wet cement immediately.
- Never position the machine in front of an escape exit or impede a walkway.
- Maintain fingers clear from machine clamping devices when loading the moulds.
- Instruction must be provided for students in how to load and operate the machine.
- Maintain a secure hold of the mould when loading the machine. Seek assistance when loading and unloading the machine with moulds.
- Never hold on to or touch the machine when it is in operation.
- Wear hearing protection when operating the machine or in the vicinity of the machine. Where possible tend other duties away from the machine.
- Always use the machine as per manufacturer's instructions.
- Always wash and dry your hands when moulding is complete.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- PPE Training
- Chemical Handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves
- Safety Glasses
- Hearing protection

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 533
	Revision Date: Oct 2026
Cement Mixer	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, dragging, pulling or pushing the machine to and from storage, loading the machine with buckets of sand, gravel, cement and water, unloading the machine onto the cement stainless steel tray can result in acute or chronic lower back and or musculoskeletal injuries.

Electricity
Incorrectly fitted, poorly maintained, damaged machine electrical cable or plugs can result in electrocution–death or first, second and or third degree burns.

Sips Trips and Falls
Poor housekeeping, personal belongings, wet floors, spilled wet cement or spilled dry parts on the ground, trailing power cable can result in slipping and tripping causing head and body fall impact injuries, cuts and bruises.

Chemicals
Handling wet cement on the frame of the moulds or from the ground can result in severe burns to the hands, fingers and other exposed skin parts.

Flying Debris
Loading the machine with gravel, sand, cement can cause flying debris resulting in major or minor eye damage.

Impeded Exit
The mixer is set up in such a way that it blocks an escape exit or walkway thus impeding safe exit from the building.

Mechanical
Crushing of hands and fingers when in between the rotating mixing drum and frame, entanglement of loose clothing or long hair with rotating shaft or inner drum baffles.

Falling Moulds
Unsecure hold of the mould when loading and unloading the machine, can result in falling moulds and lower leg and feet crush and impact injuries.

Vibration
Holding on to the machine when it is in operation may result in in hand arm vibration syndrome also resulting in white finger.

Toppling Machine
Wheels or axle of the machine fail and cause the machine to topple resulting in lower leg and feet crush injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to mix a wet cement mix for various moulding.

Controls

- Students are permitted to use the mixer, under correct instruction and the lecturer or technicians supervision.
- Group gatherings are permitted with the machine under the lecturer or technicians supervision.
- Loose clothing or jewellery must not be worn when using the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Follow the manual handling training guidelines when removing and returning the mixer to and from storage, loading and unloading the mixer.
- Inspect the machine electrical power cable and plug prior to use.
- Do not use the machine if electrical cable or plug is damaged in any way, report to lecturer or technician for removal from use.
- Competent person/s must carry out electrical repairs.
- Ensure that all machine guards are in place prior to using the machine.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any spilled wet cement, water or dry parts from the floor immediately.
- Ensure that there are no trailing power cables along the ground when setting up the machine. Use the power sockets above the workbench.
- Wear safety gloves, glasses and protective footwear when handling wet cement.
- Remove any clothing contaminated with wet cement immediately.
- Wash any skin contaminated with wet cement immediately.
- Safety glasses must be worn when operating the machine.
- Loose clothing must not be worn when operating the mixer.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never place hands in between the rotating mixing drum and the frame of the machine.
- Never position the mixer in front of an escape exit or impede a walkway.
- Never place hands, arms or other body parts into the mixing drum.
- Instruction must be provided for students in how to operate the machine.
- Never hold on to or touch the machine when it is in operation.
- Always use the machine as per manufacturer's instructions.
- Always wash and dry your hands when mixing is complete.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School

- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- PPE Training
- Chemical Handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Curing Tank	Ref: SWPS 534 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Loading and unloading the machine with cement beams, cubes or cylinders, emptying the tank of water for cleaning can result in acute or chronic lower back and or musculoskeletal injuries.

Electricity
Incorrectly fitted, poorly maintained, damaged machine electrical cable or plugs can result in electrocution–death or first, second and or third degree burns.

Sips Trips and Falls
Poor housekeeping, personal belongings, wet floors, trailing power cable, beams, cubes or cylinders lying on the ground can result in slipping and tripping causing drowning, head and body fall impact injuries, cuts and bruises.

Chemicals
Handling wet cement moulds to and from the curing tank can result in severe burns to the hands, fingers and other exposed skin parts.

Falling Moulds
Unsecure hold of the mould when loading and unloading into the curing tank can result in falling moulds and lower leg and feet crush and impact injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The curing tank is used to prevent concrete beams, cubes and cylinders from drying out too quickly.

Controls

- Loan working is not permitted with this machine under any circumstances.
- Students are permitted to use the curing tank, under correct instruction and the lecturer or technicians supervision.
- Group gatherings are permitted with the machine under the lecturer or technicians supervision.
- Loose clothing or jewellery must not be worn when using the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Follow the manual handling training guidelines when loading and unloading the curing tank.

- Always seek assistance when loading or unloading the beams to and from the tank.
- Maintain a secure hold of all moulds when loading or unloading the tank.
- Do not over load buckets with water when emptying the tank.
- Inspect the machine's electrical power cable and plug prior to use.
- Do not use the machine if electrical cable or plug is damaged in any way, report to lecturer or technician for removal from use.
- Competent person/s must carry out electrical repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that there are no trailing power cables along the ground when using the machine. Use the power sockets above the workbench.
- Cement beams, cubes or cylinders must not be left lying on the ground around the tank. Always store on a workbench and in from the edge.
- Wear safety gloves, glasses and protective footwear when handling wet moulds.
- Remove any clothing contaminated with wet cement immediately.
- Wash any skin contaminated with wet cement immediately.
- Loose clothing must not be worn when loading or unloading the tank.
- Long hair must be neatly tied back or a well fitted cap worn.
- Instruction must be provided for students in how to operate the machine.
- Always use the machine as per manufacturer's instructions.
- Always wash and dry your hands when curing is complete.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures

Information, Instruction & Training

- Manual Handling
- PPE Training
- Chemical Handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review – As and when process changes or yearly

SECTION 6

CARPENTRY JOINERY WORKSHOPS/LABS

Safe Work Practice Sheet	Ref: SWPS 600
	Revision Date: Oct 2026
Woodworking General Requirements	Approved by: Breda Brennan

Hazards

Electricity
Contact with electricity can result in electric shock, death or minor injuries. First, second or third degree burns. Secondary injuries resulting in musculoskeletal injuries, cuts and bruises, broken limbs and or broken fingers.

Mechanical
Contact with moving parts can cause entanglement, entrapment, struck by, pinch points and result in death, severing of limbs, severe cut and bruises.

Noise
Can result in acute (temporary hearing loss, discomfort) and/or chronic permanent hearing loss and discomfort.

Fire
Fire can be caused by dust and build-up of dust resulting in death, first, second and/or third degree burns.

Chemicals
Dust and liquid chemicals can cause upper respiratory damage that may affect an individual acutely (wheezing) or chronically (Cancer of the lungs or nasal passage, asthma). Chemicals may also result in in skin irritation (contact dermatitis).

Pneumatics
Flying projected missiles may cause loss of sight, major and minor cuts and bruises.

Manual Handling
Lifting of heavy loads can cause acute or chronic musculoskeletal injury and damage to the lower back.

Slips Trip & Falls
Can result in broken limbs, cuts, bruises and lower back pain and discomfort.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☑Visitors

Work Description
Various tasks performed

Controls
- On induction students must be informed by the lecturer of the work shop hazards.
- Do not use machinery if electrical cables are damaged or defected in any way.

- Horse play must not be allowed in the Work shop.
- Food or drink is not permitted in the work shop.
- Long hair must be tied back neatly.
- Loose clothing is not permitted.
- Relevant PPE must be worn (See PPE Requirements)
- Ensure there is sufficient dust extraction (no build-up of dust within extract hose or ducting)
- Machine area must be clearly marked out.
- Area around machines must be maintained in a non-slip condition.
- Floor must remain free from off cuts and waste (All waste wood must be placed into the bin).
- Timber must be stacked neatly and safely.
- Walk ways must be kept clear.
- Machine operator must not be distracted.
- Main power supply to be switched off when all machines are not in use.
- Authorised and trained personnel may use machines.
- Never leave machine whilst in motion.
- Push sticks must be provided and used when required.
- No queues to form while waiting for a machine to come free.
- Ensure tool in machines is secure in chuck of cutter block.
- All defective machinery, equipment must be reported to the lecturer / technician.
- Students must not use defective or damaged machinery, equipment.
- Students must not attempt to carry out repairs on machinery or equipment.
- Repairs to defective, damaged machinery or equipment must only be carried out by a competent person.
- Ensure material is clamped whenever possible and firmly controlled.
- Place waste material in designated container.
- Sweep down machine beds after use and only when moving parts stop.
- Consult MSDS/SDS of chemicals when in use.
- Machine must not be left unattended when running.
- Turn off the machine when no longer required.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's instructions and inspections in accordance with Work Equipment Regulations 2007. Records kept by the School
- Ensure Safety Devices, guarding on Machines are in place
- Lecturer and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

Any person approaching or moving around machinery, while in operation, may be in danger of suffering serious injury through entanglement or by coming in contact with the moving parts of the machine. Workshop machinery can be regarded as presenting a high risk if the prescribed control measures as outlined are not adhered to.

Students may operate machinery under the supervision of the lecturer and technician.

- Manual Handling
- PPE Training
- Chemical Training
- MSDS

Personal protective equipment required (last resort)

Safety boots, hearing protection, glasses / goggles and hand protection, dust mask when required.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 601
	Revision Date: Oct 2026
Manually Operated Mortising Machine	Approved by: Breda Brennan

Hazards

Electricity
Contact with poorly maintained, loose, damaged electrical cables can result in electric shock, death or minor injuries. First, second or third degree burns. Secondary injuries resulting in musculoskeletal injuries, cuts and bruises, broken limbs and or broken fingers.

Mechanical
Contact with moving parts can cause entanglement, entrapment, struck by, pinch points and, severing of fingers, severe cut and bruises.

Noise
Noise cab result in acute (temporary hearing loss, discomfort) and/or chronic permanent hearing loss and discomfort.

Fire
Fire can be caused by dust and build-up of dust in contact with an ignition source resulting in death, first, second and/or third degree burns.

Wood Dust
Inhalation of wood dust and can cause upper respiratory damage that may affect an individual acutely (wheezing) or chronically (Cancer of the lungs or nasal passage, asthma). Skin irritation (contact dermatitis).

Manual Handling
Lifting of heavy wooden loads can cause musculoskeletal injury and damage to the lower back.

Slips Trip & Falls
Untidy workspace and trailing of electrical leads can result in broken limbs, cuts, bruises and lower back pain and discomfort.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machines cuts mortises into timber of various sizes.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.

- On induction students must be informed by the lecturer of the work shop hazards.
- Do not use machinery if electrical cables are damaged or defected in any way.
- Food or drink is not permitted in the work shop.
- Long hair must be tied back neatly.
- Loose clothing is not permitted.
- Machine cutting tool must be checked for defects by operator prior to use. Do not use any damaged cutting tool. Request the lecturer / technician to replace damaged cutting tool.
- Chisel and bit must be correctly mounted and secured in the machine.
- Work piece must be securely clamped against fence.
- Chisel and bit must be correctly mounted and secured in machine.
- Never place hands or arms between moving parts of the machine.
- Protruding end/s of work piece must be supported when required.
- Plunge lever must be returned to the vertical position when not required.
- Remove materials only when cutter stops.
- Provide adequate support under work piece.
- Work space around machine must be maintained free from clutter and rubbish and personal belongings.
- Ignition sources must not be used at or near the machine.
- Dust or chipping must not be allowed to accumulate around the machine (clean regularly).
- Machine must not be left unattended when running.
- Turn off the machine when no longer required.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices / Guarding in place.
- Lecturer and technicians must monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained operators are permitted to operate this machinery. Students must be trained by the lecturers.
- Manual Handling
- PPE Training
- Chemical Training
- MSDS

Personal protective equipment required (last resort)

Safety boots, hearing protection, eye protection, dust mask when required

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 602
	Revision Date: Oct 2026
Wood Working Panel Saw	Approved by: Breda Brennan

Hazards

Electricity

Contact with damaged, poorly maintained or fitted electrical cables can result in electric shock, death or minor injuries. First, second or third degree burns. Secondary injuries resulting in musculoskeletal injuries, cuts and bruises, broken limbs and or broken fingers.

Mechanical

Contact with rotating saw blades can cause entanglement, entrapment, struck by, pinch points and result in death, severing of limbs, fingers, severe lacerations, minor cuts and bruise.

Noise

Machine and cutting timber generate noise, long term use can result in acute (temporary hearing loss, discomfort) and/or chronic permanent hearing loss and discomfort.

Fire

Build-up of dust in contact with an ignition source can result in a fire first, second and/or third degree burns.

Wood dust

Respiratory tract illness affecting an individual acutely (wheezing) or chronically (Cancer of the lungs or nasal passage, asthma). Chemicals may also result in in skin irritation (contact dermatitis).

Manual Handling

Lifting of heavy wooden loads can cause musculoskeletal injury and damage to the lower back and neck injuries.

Slips Trip & Falls

Untidy workspace and trailing of electrical leads can result in broken limbs, cuts, bruises and lower back pain and discomfort.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine cuts various flat boards and underscores to prevent chipping. There are two saw blades on the machine; the underscore saw blade cuts into the wood on the bottom prior to the main saw blade.

Controls

- On induction students must be informed by the lecturer of the work shop hazards.
- Do not use machinery if electrical cables are damaged or defected in any way. Competent person/s must carry out electrical repairs.
- Food or drink is not permitted in the work shop.
- Long hair must be tied back neatly.
- Loose clothing is not permitted.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Never pass hands over saw blades.
- Never machine short pieces of timber.
- Use push stick as required and as instructed by lecturer / technician.
- Use crown guard for all work. (Crown guard to cover the entire cutter head).
- Keep work space around machine tidy and free from clutter at all times.
- Follow the manual handling training guidelines at all times. Seek assistance when lifting heavy pieces of wood.
- Ignition sources are not permitted at or near the machine.
- Pass work piece under crown guard, crown guard should be at maximum clearance of 10mm.
- Cross cut fence must be returned to shortest length when not in use.
- Ensure sufficient extra space when operating machine.
- Off cut pieces of cut timber waste must be disposed of into designated bins.
- Machine to be cleaned down by the technician / Class assistant at the end of every day or as required.
- Machine must never be left unattended when running.
- Machine must be switched off when not in use.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices / Guarding in place.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained Operators are permitted to operate this machinery. Students are allowed to use this machine under the supervision of Lecturer / technician.
- Manual Handling
- PPE Training
- Chemical Training
- MSDS

Personal protective equipment required (last resort)

Safety boots, hearing protection, eye protection, dust mask when required.

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	= Risk Factor	9 High Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 603
	Revision Date: Oct 2026
Band Resaw	Approved by: Breda Brennan

Hazards

Electricity
Contact with damaged, poorly installed electrical cables can result in electric shock, death or minor injuries. First, second or third degree burns. Secondary injuries resulting in musculoskeletal injuries, cuts and bruises, broken limbs and or broken fingers.

Pneumatics
Damaged or loose airlines can result in whipping action and cause loss of sight in one or both eyes, and minor cuts and bruises.

Mechanical
Contact with rotating blade or feeder can cause entanglement, entrapment, struck by, pinch points and result in death, severing of limbs, fingers, severe lacerations, minor cuts and bruise.

Noise
Long term use of machining pieces of timber can result in acute (temporary hearing loss, discomfort) and/or chronic permanent hearing loss and discomfort.

Fire
Fire can be caused by dust in contact with an ignition source resulting in death, first, second and/or third degree burns.

Wood dust
Inhalation of wood dust can cause respiratory illness wheezing or Cancer of the lungs or nasal passage, asthma. Handling wood dust can result in minor skin irritation.

Manual Handling
Lifting of heavy wooden loads can cause musculoskeletal injury and damage to the lower back.

Slips Trip & Falls
Untidy workspace and trailing of electrical leads can result in broken limbs, cuts, bruises and lower back pain and discomfort.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
This machine cuts timber to various shapes

Controls

- On induction students must be informed by the lecturer of the work shop hazards.
- Do not use machinery if electrical cables are damaged or defected in any way. Competent person/s must carry out electrical repairs.
- Food or drink is not permitted in the work shop.
- Long hair must be tied back neatly.
- Loose clothing is not permitted.
- Students are not permitted to use this machine.
- Ensure blade is in good condition.
- Blade tension must be manually set.
- Ensure emergency cord stop button is operational.
- Provide out feed support when operating machine by lowering out feed table from machine (key to lock on out feed table is held by the technician). Out feed table must be returned to folded position and locked when machine is not in use.
- Blade guard must not interfere with the power feed.
- Follow the manual handling training guide lines at all times.
- Fence must be tightened to correct material size.
- Ensure adequate dust extraction.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables.
- Machine must be turned off when not in use and never left unattended when running.
- Machine to be cleaned down at the end of the day or when required.

Checks & Inspections

- Regular inspections and maintenance to be carried out. Records kept by the School and in accordance with Work Equipment Regulations 2007.
- Ensure Safety Devices and guarding is checked.
- Lecturer and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained operators (Technician) are permitted to operate this machine.
- Manual handling
- PPE Training
- Chemical Training
- MSDS

Personal protective equipment required (last resort)

Safety boots, hearing protection, Eye Protection, Respiratory Protection

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 604
	Revision Date: Oct 2026
Centauro 600, FBR 400 Wood Working Bandsaws	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, loose or damaged electrical cables can result in electrocution-death or first, second and or third degree burns.

Mechanical Hazards
Contact with rotating saw blade could result in loss of hands or fingers. Entanglement of loose clothing, long hair with rotating fly wheel and moving parts resulting in cuts and bruises. Crushing of fingers with moving parts.

Dust
Inhalation of wood dust can cause acute respiratory illness (wheezing, coughing tec.) and or chronic disease (cancer) and illness. Build-up of dust can result in a fire or explosion when in contact with ignition source causing first, second and or third degree burns or impact injuries.

Noise
Incorrectly fitted or maintained saw blade can result in noisy machinery and acute temporary ringing in the ears or chronic hearing loss from long term exposure.

Slips Trip & Falls
Untidy workspace, personal belongings, and trailing electrical cables can result in tripping causing fall impact injuries and broken limbs, cuts, bruises. Wood dust on the floor can result in slipping causing fall impact injuries.

Falling Material
Pieces of timber being cut can fall & cause impact injuries to the lower legs and feet.

Manual Handling
Lifting holding and carrying pieces of timber can result in lower back and musculoskeletal injuries.

Sharps
Touching or brushing hands against stopped saw blade can result in lacerations to the hands and fingers.

Ejected Debris
Saw blade breaks, ejecting metal debris causing loss of sight.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine cuts timber to various shapes

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Group gathering is not permitted around the machine unless under the lecturers supervision.
- Ensure that all electrical cable and plugs are free from damage and defects prior to using the machine. Do not use the machine if electrical cables damaged in any way.
- Competent person/s must carry out electrical repairs.
- Loose clothing must not be worn when operating the machine.
- Long hair must neatly tied back or a well fitted cap worn.
- Ensure the workshop dust extraction unit is running when operating the machine & ensure the machine extraction port is open.
- Do not allow dust to build up on the machinery or the workshop, clean as required.
- Check tracking and tensioning of blade.
- Use ear and eye protection at all times when operating the machine.
- Set roller guides and thrust bearing as close as possible.
- Thrust bearing and guides to be set correctly below the table.
- All moving parts to be fully enclosed.
- Enclose blade with guard except for operating position.
- Keep hands clear of the blade at all times.
- Remove waste timber from around saw blade with push stick.Guards or micro switches must not be tampered with.
- Never leave the machine running unattended & ensure all moving parts are stopped before leaving machine.
- Maintain good housekeeping at all times and work space free from personal belongings.
- Securely hold cutting material when operating the machine.
- Follow the manual handling training guidelines at all times.
- Follow the manufacturer's machine operating instructions all times.

Checks & Inspections

- Regular Inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators are permitted to operate this machine trained by Technician's.
- Material Safety Data Sheets.
- Manual Handling Training
- Chemical Handling Training.

- MSDS for wood being machined

Personal protective equipment required (last resort)

Safety boots, hearing protection, Eye Protection, Respiratory Protection and overalls.

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	= Risk Factor	9 High Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 605
	Revision Date: Oct 2026
Wadkin Bursgreen Planer Machine	Approved by: Breda Brennan

Hazards

Electricity

Incorrectly installed, loose, damaged cables can result in electrocution or first, second and or third degree burns.

Manual Handling

Lifting, carrying & holding wooden planks for planer machine, moving benches for greater free space can result in lower back injury.

Mechanical

Crushing of fingers when adjusting suvamatic guard. Machine panels open, resulting in severing of fingers with pinch point on machine belt drive. Entanglement of long hair loose clothing in spinning blade resulting in asphyxiation, cuts and bruises. Pinch point with belt drive, guard panel not in place, severing of fingers.

Dust

Inhalation of wood dust can cause acute respiratory illness (wheezing, coughing tec.) & or chronic disease (cancer) & illness. Build-up of dust can result in a fire or explosion when in contact with ignition source causing first, second & or third degree burns or impact injuries.

Noise

Operating the machine for extended periods of time can result in acute temporary ringing (Tinnitus) in the ears or chronic hearing loss from long term exposure.

Slips Trip & Falls

Untidy workspace, personal belongings, and trailing electrical cables can result in tripping causing fall impact injuries and broken limbs, cuts, bruises. Wood dust on the floor can result in slipping causing fall impact injuries.

Falling Material

Pieces of timber being cut can fall & cause impact injuries to the lower legs and feet.

Sharps

Touching or brushing hands against rotating or stopped planer blade can result in lacerations to the hands and fingers.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine planes & straightens timber to the desired thicknesses

Controls

- Students are not permitted to use this machine.
- Ensure that all electrical cable and plugs are free from damage and defects prior to using the machine. Do not use the machine if electrical cables damaged in any way.
- Competent person/s must carry out electrical repairs.
- Follow the manual handling training guidelines when machining timber.
- Seek assistance if required to move benches or carry, lift etc. heavy pieces of timber.
- Do not place hands or fingers between moving parts,
- Where applicable use the piece of timber for machining to adjust the Suvamatic guard.
- Ensure all machine guards and panels are in place and closed prior to operating the machine.
- The wearing of loose clothing is not permitted when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure the workshop dust extraction unit is on when operating the machine.
- Ensure the machine extraction port is open.
- Do not allow dust to build up on the machinery or the workshop, clean as required.
- Ignition sources are not permitted at or near the machine.
- Wear the appropriate PPE when operating the machine.
- Avoid the trailing of power cables.
- Maintain good housekeeping at all times and work area free from personal belongings.
- Ensure to hold pieces of timber for machining securely when handling.
- Never pass hands over cutters.
- Never machine short pieces of timber
- Use push stick at all times.
- Use bridge guard for all work. (Bridge guard to cover the entire cutter head).
- Pass work piece under guard when facing, maximum clearance 10mm.
- Pass work piece past the end of guard when edging.
- Set end of bridge guard against fence when surfacing.
- Set end of bridge guard close to work piece when edging, maximum clearance 10mm.
- Front and rear tables must be properly positioned and aligned.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators (Technician's) are permitted to operate this machine
- MSDS for wood being machined

Personal protective equipment required (last resort)

Safety boots, hearing protection, Eye Protection, Respiratory Protection and overalls.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 606
	Revision Date: Oct 2026
Wood Working Lathe	Approved by: Breda Brennan

Hazards

Electricity

Poorly maintained, damaged electrical cable and plugs can result in electrocution-death or first, second and or third degree burns.

Manual handling

Lifting pieces of timber for machining, adjusting the tail stock and chuck tool rests can result in lower back and or musculoskeletal injuries.

Mechanical

Entanglement of loose clothing, jewellery, long hair with rotating timber, mounting plates, head stock, maintaining or adjusting machine chain belt resulting in asphyxiation. Severing of fingers when adjusting chain belt speed. Pinching, crushing of fingers on tool rest when operating cutting tools or adjusting the tail stock, tool rest.

Dust

Generation of dust from various timbers causing acute respiratory illness (wheezing, coughing) or chronic respiratory illness disease and or death.

Flying material

Cutting various rotating timber can result in flying chippings of wood and cause loss of sight.

Falling Machine Parts

Handling the tool rest, chuck, tail stock and other removable machine parts, holding more than one part can fall and cause lower leg and feet impact and crush injuries.

Slips Trip and Falls

Trailing electrical cables, poor housekeeping, personal belongings, build-up of dust and waste material on the ground can cause tripping and slipping resulting in head impact injuries, cuts and bruises.

Sharps

Touching or brushing against the tail stock centre or cutting tools can cause lacerations to the hands & fingers.

Fire

Build-up of dust, waste materials can catch fire when in contact with ignition source causing burns to the body.

Vibration

Machining timber for long periods of time can result in hand arm vibration syndrome causing musculoskeletal injuries.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine turns timber to be shaped by various lathe chisels

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the machine electrical power cable and plug are in good working order prior to use.
- Do not use the machine if the electrical power cable or plug is damaged in any way.
- Any electrical repairs must be carried out by a competent person (Electrician).
- Follow the manual handling training guidelines at all times when adjusting the tail stock, chuck, tool rests, lifting pieces of timber and any other machine parts.
- Loose clothing or jewellery must not be worn when operating or maintaining the lathe.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure the machine interlock device and guards are in place when running the machine.
- Never interfere with the machine guards or interlocks.
- Training must be provided before individuals are allowed to operate the lathe.
- When adjusting the tail stock or tool rests, do not place your hands or fingers in between the closing gap.
- Wear a face shield if flying chippings are being produced.
- Maintain a secure hold of machine parts when removing and replacing.
- Never carry or hold more than one machine part at a time.
- Maintain good housekeeping and workspace free from personal belongings at all times.
- Dust and all wood waste material must not be allowed to accumulate at or around the machine floor space.
- Avoid the trailing of power cables by plugging the machine into a wall socket at the back of the machine.
- Keep hands and fingers clear of tail stock centre, never brush against.
- Do not touch cutting tool bevelled head with bare hands. Always use the handle to hold the tool.
- Do not machine pieces of timber for long periods of time.
- Ignition sources are not permitted at or near the machine.
- Lathe must be set at correct speed for work piece diameter.
- Material must be securely held.
- Always rotate stock manually to check clearance before starting machine.
- Tool rest must be positioned correctly.
- Use correct tool for job in hand.
- Use eye protection, dust masks and hand protection.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked.
- Technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- trained operators are permitted to operate this machine under the lecturer and Technician's supervision
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Hand Protection.
- Safety glasses.
- Face Shield.
- Respiratory Protection (Dust mask)
- Overalls.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 607
	Revision Date: Oct 2026
Portable Wood Working Routers Trend (PRT), Festool (Basis Plus), Trend (Router Rack)	Approved by: Breda Brennan

Hazards

Electricity
Poorly maintained, damaged electrical cable or plugs can result in electrocution-death or first, second and or third degree burns.

Mechanical
Entanglement of loose clothing, jewellery, long hair with rotating cutting tool or motor shaft resulting in asphyxiation. Contact with rotating cutting tool when machining timber resulting in lacerations to the hands and fingers.

Sharps
Removing, replacing cutting tool or touching in situ resulting in lacerations to the hands and fingers.

Ejected Materials
Work pieces not inserted the correct way, too abruptly, cutting tools incorrectly fitted, resulting in ejected material causing puncture wounds and impact blunt force blows to the body.

Falling Machinery / Materials
Machine not securely fixed to the work top, falling and causing lower leg and feet, crush and impact injuries. Unsecure hold of timber materials for machining, falling causing lower leg and feet impact injuries.

Dust
Machining timber generates dust, and may cause acute respiratory illness (coughing, wheezing), chronic disease or illness lung or nasal cancer.

Fire
The build of dust and wood waste can catch fire when in contact with ignition sources causing first, second and third degree burns to the body.

Slips, Trips and Falls
Poor housekeeping, personal belongings, trailing power cables, dust build up, waste materials can result in tripping and slipping causing fall impact head and body impact injuries, cuts and bruises.

Noise / Vibration
The rotating motors of the machine and machining timber generates noise and using for extended periods of time may cause acute hearing discomfort, chronic effects may result in hearing impairment. Hand machining pieces of timber for long periods of time can result in hand arm vibration syndrome.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Cutting/routing of timber pieces

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the machine electrical power cable and plug are in good working order prior to use.
- Do not use the machine if the electrical power cable or plug is damaged in any way.
- Any electrical repairs must be carried out by a competent person (Electrician).
- Loose clothing or jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the machine rotating cutting tool.
- Never handle or touch a cutting tool by its cutting edge.
- Always insert timber for machining in the correct direction and never abruptly.
- Competent persons must only remove and replace cutting tools on the machine.
- Ensure that the machine is bolted fixed to the worktable prior to use.
- Maintain a secure hold of timber pieces when holding for machining.
- Ensure that the router extract vacuum system is turned on before operating the machine.
- Wear a dust mask when routing materials.
- Dust and wood waste must not be allowed to build up, regular machine cleaning must be maintained.
- Ignition sources are not permitted at or near the machine.
- Maintain good housekeeping at all times and work area free from personal belongings.
- Machinery must be plugged into sockets mounted on the wall behind the machine.
- Ear defenders must be worn when operating the machines.
- Do not machine pieces of timber for extended periods of times, tend to other duties for periods of rest.
- Use standard cutters only.
- Fences and guards must be in position.
- Cutter must be correctly secured in chuck.
- 'No volt release' switch must be operational.
- Use additional temporary fences/jigs where appropriate.
- Depending on the work being performed use the spring Guards to guide work piece.
- A push stick must be used at all times.
- The machine must be set at the correct speed for the cutter being used.
- The machine must be secured in a safe location. [casters locked].
- Use eye and ear protection when using machine.
- Never modify any machine cutting tool.

Checks & Inspections

- Regular Inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding is checked.
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators are permitted to operate this machine
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Eye Protection,
- Respiratory Protection
- Overalls.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 608
	Revision Date: Oct 2026
Single Ended Tenoner Machine Concept 4	Approved by: Breda Brennan

Hazards

Electricity
Contact with poorly maintained, damaged or loose electrical machine cables and plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Removing, replacing the cutting heads for use or maintenance, adjusting the machine timber clamp, machining pieces of timber can result in lower back and or musculoskeletal injuries.

Sharps
Inspecting, removing and replacing and setting the cutter block and saw blade can result in lacerations to the hands and fingers and other body parts.

Mechanical
Pinching of fingers and hands when closing the material clamp, severing of limbs with rotating saw blade or rotating cutting block. Entrapment of hand or arm with rotating cutting block, automatic descending cutting guard hood. Entanglement of loose clothing, long hair or jewellery.

Noise
Using the machine for long periods of times can cause acute temporary hearing discomfort and or chronic permanent hearing loss

Fire
Machining pieces of timber generates wood shavings and dust around, in or on the machine, ignition sources may ignite waste materials and cause a fire resulting in first, second and or third degree burns.

Dust
Machining timber generates dust, inhalation of wood dust may cause acute or chronic respiratory illness,

Pneumatics
Leaking, damaged airline may result in whipping airline and result in loss of sight and or minor cuts and bruises.

Slips trips and falls
Poor housekeeping, personal belongings, trailing power cables, pieces of timber & dust shavings lying on the floor can cause tripping and slipping resulting falling impact head injuries.

Falling materials
Removing saw blades and cutters, or pieces or timber from the machine can result in falling materials causing lower leg and feet crush and impact injuries, major cuts and bruising.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine cuts tenons and scribes shoulders on various timber items i.e. Door and Window stiles

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Group gatherings are not permitted at the machine unless under the lecturer of technicians supervision.
- The wearing of loose clothing or jewellery is not permitted when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn when operating the machine.
- Ensure that the machine electrical cable and plugs are free from damage and defects prior to operating the machine.
- Do not use the machine if electrical cables and plug are damaged in any way.
- Competent persons must only carry out electrical repairs.
- Follow the manual handling training guide lines at all times.
- Wear gloves when inspecting, removing, replacing and setting the cutter block and saw blade.
- Ensure all cutter blocks are secured correctly.
- Ensure cutter blocks are set at correct size.
- Ensure saw blade is set correctly at required length.
- Check that all automatic guards are functioning properly before starting the machine.
- Never interfere with or modify the machine guards or micro switches.
- Never place hands or fingers in between automatic descending cutting guards.
- Ensure that fingers and hands are clear of closing metal clamp when clamping materials for machining.
- Wear ear defenders at all times when the machine is running.
- Do not use ignition sources (lighters, open flames etc.) at or near the machine.
- Turn on the dust extract system when the machine is running.
- Wear a dust mask when operating the machine.
- Inspect the pneumatic external airlines for damage or defects prior to using the machine, do not use the machine if airline is damaged in any way. Competent person/s must carry out airline repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of power cables and use the sockets on the wall at the back of the machine.
- Dust and wood shavings must not be allowed to build up around the surrounding machine floor space.
- Pieces of timber must not be stored or left lying on floor walkway around the machine.

- Maintain a secure hold of any items being lifted to or from the machine.
- Ensure all isolating switches and emergency stop buttons are functioning correctly.
- Isolate machine for all maintenance and setting.
- Always operate the machine as per manufacturers operating procedures.
- Turn off the machine when it is no longer required.

Checks & Inspections

- Regular Inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding is checked.
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators are permitted to operate this machine
- Manual handling training
- PPE training

Personal protective equipment required (last resort)

Safety boots, Hearing Protection, Eye Protection, Respiratory Protection and overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 609
	Revision Date: Oct 2026
Woodworking Machine Fourcutters Quattromat 23P	Approved by: Breda Brennan

Hazards

Electricity
Contact with poorly maintained, damaged or loose electrical machine cables and plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Removing, replacing the cutting heads for use or maintenance, adjusting the machine timber clamp, machining pieces of timber can result in lower back and or musculoskeletal injuries.

Sharps
Inspecting, removing and replacing and setting the cutter block and saw blade can result in lacerations to the hands and fingers and other body parts.

Mechanical
Entrapment of hands and fingers with machine guide roll can result in crushed hands or fingers, Entanglement of loose clothing, long hair or jewellery with machine parts can result in asphyxiation, Pinching of fingers when adjusting the guide roll.

Noise
Using the machine for extended periods of time can cause acute temporary hearing discomfort and or chronic permanent hearing loss

Fire
Machining pieces of timber generates wood shavings and dust around, in or on the machine, ignition sources may ignite waste materials and cause a fire resulting in first, second and or third degree burns.

Dust
Machining timber generates dust, inhalation of wood dust may cause acute or chronic respiratory illness,

Pneumatics
Leaking, damaged airline may result in whipping airline and result in loss of sight and or minor cuts and bruises.

Slips trips and falls
Poor housekeeping, personal belongings, trailing power cables, pieces of timber & dust shavings lying on the floor can cause tripping and slipping resulting falling impact head injuries.

Falling materials

Removing saw blades and cutters, or pieces or timber from the machine can result in falling materials causing lower leg and feet crush and impact injuries, major cuts and bruising.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine is used to fine surface and mold, if required, the four sides of timber in one pass

Controls

Carry out pre operational checks

- Students are not permitted to operate the machine.
- Group gatherings are not permitted at the machine unless under the lecturer of technicians supervision.
- The wearing of loose clothing or jewellery is not permitted when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn when operating the machine.
- Ensure that the machine electrical cable and plugs are free from damage and defects prior to operating the machine.
- Do not use the machine if electrical cables and plug are damaged in any way.
- Competent persons must only carry out electrical repairs.
- Follow the manual handling training guide lines at all times.
- Wear gloves when inspecting, removing, replacing and setting the cutter block and saw blade.
- Ensure all cutter blocks are secured correctly.
- Ensure cutter blocks are set at correct size.
- Ensure saw blade is set correctly at required length.
- Check that all automatic guards are functioning properly before starting the machine.
- Never interfere with or modify the machine guards or micro switches.
- Maintain fingers clear from machine guide roll handle when adjusting
- Wear ear defenders at all times when the machine is running.
- Do not use ignition sources (lighters, open flames etc.) at or near the machine.
- Turn on the dust extract system when the machine is running.
- Wear a dust mask when operating the machine.
- Inspect the pneumatic external airlines for damage or defects prior to using the machine, do not use the machine if airline is damaged in any way. Competent person/s must carry out airline repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of power cables and use the sockets on the wall at the back of the machine.
- Dust and wood shavings must not be allowed to build up around the surrounding machine floor space.
- Pieces of timber must not be stored or left lying on floor walkway around the machine.
- Maintain a secure hold of any items being lifted to or from the machine.

- Ensure all isolating switches and emergency stop buttons are functioning correctly.
- Isolate machine for all maintenance and setting.
- Always operate the machine as per manufacturers operating procedures.
- Turn off the machine when it is no longer required.
- Cutter blocks must be correctly tightened on shafts.
- Feed rollers must not be obstructed.
- Heads must be set to correct sizes.
- All safety doors of machine to be closed before activating switches.
- Adjustment tools and cutters to be stored in designated press.
- Never place your hands past the feed pressure guide roller.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding is checked.
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators (Technicians) are permitted to operate this machine.

Personal protective equipment required (last resort)

Safety boots, Hearing Protection, Eye Protection, Respiratory Protection and overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Risk Assessment	Ref: SWPS 610
	Revision Date: Oct 2026
CB Wood Working Sander	Approved by: Breda Brennan

Hazards

Electricity
Contact with poorly maintained, damaged or loose electrical machine cables and plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting, holding and carrying pieces of timber for sanding can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Entanglement of loose clothing, long hair or jewellery with rotating height adjustment wheel resulting in asphyxiation, cuts and bruises. Entrapment of hands and arms, crushing of hands and arms with feed roller. Abrasion burns to the hands and fingers with rotating sander. Severing of fingers with nipping point on rotating sander or machine drive belt.

Noise
Using the machine for long periods of times can cause acute temporary hearing discomfort and or chronic permanent hearing loss

Fire
Machining pieces of timber generates wood dust around, in or on the machine, ignition sources may ignite waste materials and cause a fire resulting in first, second and or third degree burns.

Dust
Sanding timber generates dust, inhalation of wood dust may cause acute or chronic respiratory illness,

Pneumatics
Leaking, damaged airline may result in whipping airline and result in loss of sight and or minor cuts and bruises.

Slips trips and falls
Poor housekeeping, personal belongings, trailing power cables, pieces of timber & dust lying on the floor can cause tripping and slipping resulting falling impact head injuries.

Falling materials
Removing, lifting, holding pieces or timber from the machine, can result in falling materials causing lower leg and feet crush and impact injuries, major cuts and bruising.

Ejected Material
Incorrect feeding of material for machining can result in ejected materials causing blunt force injuries to the machinist or bystanders.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to smoothen wooden surfaces by abrasion of a sand paper belt,

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Group gatherings are not permitted at the machine unless under the lecturer of technicians supervision.
- The wearing of loose clothing or jewellery is not permitted when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn when operating the machine.
- Ensure that the machine electrical cable and plugs are free from damage and defects prior to operating the machine.
- Do not use the machine if electrical cables and plug are damaged in any way.
- Competent persons must only carry out electrical repairs.
- Follow the manual handling training guide lines at all times.
- Wear gloves when inspecting, removing, replacing and setting the cutter block and saw blade.
- Check that all guards and interlocks are functioning properly before starting the machine.
- Never interfere with or modify the machine guards or interlocks.
- Wear ear defenders at all times when the machine is running.
- Do not use ignition sources (lighters, open flames etc.) at or near the machine.
- Turn on the dust extract system when the machine is running.
- Wear a dust mask when operating the machine.
- Inspect the pneumatic external airlines for damage or defects prior to using the machine, do not use the machine if airline is damaged in any way. Competent person/s must carry out airline repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of power cables and use the sockets on the wall at the back of the machine.
- Dust and wood shavings must not be allowed to build up around the surrounding machine floor space.
- Pieces of timber must not be stored or left lying on floor walkway around the machine.
- Maintain a secure hold of any items being lifted to or from the machine.
- Ensure all isolating switches and emergency stop buttons are functioning correctly.
- Isolate machine for all maintenance and setting.
- Always operate the machine as per manufacturers operating procedures.
- Turn off the machine when it is no longer required.
- Do not try to retract material once process commences.
- Keep hands clear of the machine rotating table.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding is checked.
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators or persons with correct instruction of how to use of the machine are permitted to operate the machine.

Personal protective equipment required (last resort)

Safety boots, Hearing Protection, Eye Protection, Respiratory Protection and overalls.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 611
	Revision Date: Oct 2026
Spindle Mini Max T45F (Curved Cutting)	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, loose or damaged machine electrical cables can result in electrocution or first, second and or third degree burns.

Manual Handling
Lifting, carrying & holding wooden planks for machining can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Entanglement of long hair or loose clothing with rotating cutting tool causing asphyxiation.

Sharps
Touching or brushing hands against rotating or stopped cutting tool, removing and replacing cutting tool can result in lacerations to the hands and fingers.

Noise
Operating the machine for extended periods of time can result in acute temporary ringing (Tinnitus) in the ears or chronic hearing loss from long term exposure.

Dust
Cutting of various woods can result in the Inhalation of wood dusts and cause acute respiratory illness (wheezing, coughing) & or chronic disease (cancer) & asthma.

Slips Trip & Falls
Untidy workspace, personal belongings, and trailing electrical cables, wood dust or wooden parts can result in tripping causing fall impact injuries and broken limbs, cuts, bruises.

Ejected Material / Falling material
Timber inserted incorrectly can result in an ejected piece of timber resulting in blunt force striking injuries to bystanders or machinist. Pieces of timber being machined or manually handled can fall causing minor impact injuries to the lower legs and feet.

Vibration
Manually operating the machine for extended periods of time can result in hand arm vibration (white finger) syndrome.

Fire
Dust in contact with ignition source may result in fires and first, second and or third degree burns.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to shape curved pieces of timber.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine electrical cable and plugs prior to operating the machine.
- Do not use the machine if the electrical cable or plug is damaged in any way.
- Competent person/s must only carry out electrical repairs.
- Follow the manual handling training guidelines at all times when machining pieces of timber.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch or place hand or fingers near the machine rotating cutting tool. Always wait for the cutting to come to a complete stop before adjusting, maintaining or removing cutting tool or timber.
- Never leave the machine running unattended.
- Always wear hearing protection when operating the machine.
- Ensure the extract system is turned on prior to operating the machine. Ensure extract system is properly connected to the machine (wear a dust mask where required).
- Maintain good housekeeping and area free from personal belongings at all times.
- Wood dust or wooden parts must not be allowed to build up around, on or inside the machine.
- Maintain a secure hold of timber for machining at all times during handling.
- All timber being machined must be fed from the right hand side to the left hand side of the cutter tool.
- Avoid operating the machine for long periods of time, tend to other duties for periods of rest.
- Always use the machine and tools as intended by the manufacturer.
- Adjust the guards with the front and side flanges prior to operating the machine.
- Ensure the work piece is securely held prior to cutting.
- Maintain thumbs tucked into the side of the hands and not spread out over the work piece.
- Where possible in cutting curves, use a curved or straight template fixed to the work piece and guide pins fixed to the adjustable guard and let guard pin run on the template.
- Never start the machine under load by placing the work piece against the cutter block.
- Never queue up to use the machine or stand close by the machinist.
- Set the guard as close as possible to the material being machined.
- Never use a blunt cutter block.
- Always use the correct tool for the job in hand.
- Inspect tools and equipment for damage prior to use. Do not use if damaged in any way and report to the lecturer of technician for safe removal and replacement.
- Always isolate the machine from mains electricity prior to carrying out maintenance.
- Ensure that the emergency stop button is good working order.
- Ignition sources are not permitted at or near the machine.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Lecturers and technicians to monitor compliance with control measures
- Lecturer and technicians to monitor the condition of cutting block, templates and jigs. .
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained operators are permitted to operate this machine and those with correct instruction and under supervision.
- MSDS for wood being machined.
- Manual handling training
- PPE training
- Chemical handling training

Personal protective equipment required (last resort)

- Safety boots
- Hearing protection,
- Eye Protection
- Respiratory Protection
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 612
	Revision Date: Oct 2026
CNC Machine	Approved by: Breda Brennan

Hazards

Electricity
Contact with poorly installed, maintained or damaged cables can result in electrocution-death or first, second and or third degree burns. Secondary injuries resulting in cuts and bruises.

Chemicals
The generation of dust from rotating cutters on timber can cause acute (wheezing) or chronic respiratory (asthma) if inhaled.

Pneumatics
Whipping airline may result from loose airline or build-up of pressure and cause irreversible damage to the eyes, cuts and bruises to the face and hands.

Slips trips and falls
Poor housekeeping, personal belongings, wooden materials, dust lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical hazards
Contact with rotating cutters can lead to death, severed arm/s, hands, and fingers or sever cuts. Ejection of work piece cutter or material can cause loss of sight, puncture wound to the body. Trapping and crushing can be caused by the moving tables or machining heads and result in death or serious bodily injury. Unexpected machine movement may result in death, major or minor injuries if in contact with the machine.

Noise
Acute damage to hearing may occur, temporary discomfort, ringing, tinnitus in ears or chronic damage, loss of hearing.

Fire
Fire may occur from the build-up of dust and cause first, second or third degree burns.

Manual Handling
Lifting heavy parts arts of machinery or pieces of work material cause acute or chronic lower back or muscular skeletal injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Cutting/routing of large timber pieces.

Controls

- Food or drink is not permitted beside or on machine.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- The machine can operate in two zones. It is possible to load one zone while the other zone is operational. **Students are only permitted to operate one zone**.
- Inspect the electrical cables of the machine for damage or defects prior to use prior to use. Do not use machinery if electrical cables are damaged or defected in any way.
- Competent person/s must carry out electrical repairs.
- Loose clothing is not permitted when using machine.
- Long hair must be tied back.
- Ensure only trained operators use the machine.
- Ensure all guards are in place prior to commencing work.
- Ensure dust is extracted by local exhaust ventilation.
- Ensure interlocks and automatic shutdown sensors are operational before use.
- Care should be taken to keep the area around the pressure mat clear.
- Staff and students are prohibited from walking around the back of the machine while it is operating.
- Work pieces must not be retrieved while the machine is in motion.
- In order to retrieve a piece the programme must be stopped not just the machine.
- Use correct manual handling techniques when manoeuvring large timber pieces into the machine, seek assistance if required.
- Dust should be cleaned away from the machine on a regular basis. If using compressed air see Safe Work Practice Sheet Compressed air.
- Emergency stop buttons must be unobstructed and tested each term.
- A lock-out tag-out system must be enforced when maintenance is being performed on the machine or when the access to moving parts is required.
- Machine must not be left unattended when running.
- Turn off the machine when no longer required.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and in accordance with the Work Equipment Regulations 2007.Records kept by the School
- Ensure interlocks and automatic shutdown sensors are checked each term
- Lecture and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- Observe spatial surrounding when operating as it is possible to be hit/cut at the corner of the pressure mat.
- Ensure pressure mats are free from obstruction prior to use.

Information, Instruction & Training

- Only trained operators are permitted to operate this machine.
- Students can use this machine but only under the supervision of the Lecturer / Technician supervision.
- Manual Handling
- PPE Training
- Chemical Training
- MSDS

Personal protective equipment required (last resort)

Safety boots, hearing protection, Eye Protection, dust mask when required.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 613
	Revision Date: Oct 2026
Wadkin Bursgreen Thicknessing Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, loose, damaged cables can result in electrocution or first, second and or third degree burns.

Manual Handling
Lifting, carrying & holding wooden planks, lifting machine blade lid, moving benches for greater free space can result in lower back and or musculoskeletal injuries.

Mechanical
Crushing of fingers when closing blade lid. Machine panels open, resulting in severing of fingers with pinch point on machine belt drive. Entanglement of long hair loose clothing with spinning blade or grinding stone resulting in asphyxiation, cuts and bruises. Entrapment of fingers with in feed of the machine and ascending table. Pinch point, machine guard panels not in place, loss of fingers.

Flying debris
Disintegrated grindstone when sharping thicknessing blade can result in flying debris, loss of sight, skin puncture wounds, minor cuts and bruises.

Dust
Inhalation of various wood dusts can cause acute respiratory illness (wheezing, coughing) & or chronic disease (cancer) & illness. Build-up of dust can result in a fire or explosion when in contact with ignition source causing first, second & or third degree burns or impact injuries.

Noise
Operating the machine for extended periods of time can result in acute temporary ringing (Tinnitus) in the ears or chronic hearing loss from long term exposure.

Slips Trip & Falls
Untidy workspace, personal belongings, and trailing electrical cables can result in tripping causing fall impact injuries and broken limbs, cuts, bruises. Wood dust on the floor can result in slipping causing fall impact injuries.

Falling Material
Pieces of timber being cut can fall & cause impact injuries to the lower legs and feet.

Sharps
Touching or brushing hands against rotating or stopped planer blade can result in lacerations to the hands and fingers.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine planes pieces of timber to the desired thicknesses.

Controls

- Students are not permitted to use this machine.
- Ensure that all electrical cable and plugs are free from damage and defects prior to using the machine. Do not use the machine if electrical cables damaged in any way.
- Competent person/s must carry out electrical repairs.
- Follow the manual handling training guidelines when machining timber.
- Use both hands when lifting lid of the machine.
- Seek assistance if required to move benches or carry, lift etc. heavy pieces of timber.
- Do not place hands or fingers between moving parts.
- Ensure all machine guards, panels and lid are in place and closed prior to operating the machine.
- The wearing of loose clothing is not permitted when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure the workshop dust extraction unit is on when operating the machine.
- Ensure the machine extraction port is open.
- Do not allow dust to build up on the machinery or the workshop, clean as required.
- Wear the appropriate PPE when operating the machine.
- Ensure that the machine grind stone is free from damage or defects prior to use. Do not use if damaged in any way
- Avoid the trailing of power cables.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure to hold pieces of timber for machining securely when handling.
- Never pass hands over rotating cutters or touch static cutter.
- Never machine short pieces of timber
- Never place fingers into the in feed of the table, use push stick at all times.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained operators are permitted to operate this machine.
- Abrasive wheel training in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.
- MSDS for wood being machined.
- Chemical Handling training

- PPE training

Personal protective equipment required (last resort)

Safety boots, hearing protection, Eye Protection, Respiratory Protection and overalls.

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	= Risk Factor	9 High Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 614
	Revision Date: Oct 2026
Carpentry Joinery Hand Held Tools	Approved by: Breda Brennan

Hazards

Sharps
Incorrect handling and misuse of saws, chisels, & marking cutting tools can result in lacerations to hands and fingers

Damaged Tools
Poor storage, misuse, wear and tear of tools can result in damage to the handles resulting in minor cuts and blisters to hands and fingers. Repairing or replacing damaged cutting tools, saw blades etc. can result in lacerations the hands and fingers.

Adjustment of Hand Tools
Adjustment of various hand tools can result in minor cuts to the hands and fingers.

Falling Hand Tools
Incorrect hold of, tool lying at the workbench edge, tool not placed securely in the holding trolley, carrying too many at a time can result in a falling hand tool causing lower leg and feet puncture wounds, cuts and bruises.

Slips Trips and Falls
Poor Housekeeping, personal belongings, hand tools lying on the ground can result in slips, trips and fall impact head injuries.

Ergonomics
Using tools for extended periods of time can result in work related upper limb disorder.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Hand held tools are used to carry out precision carpentry and joinery. Tools in use can include chisels, marking & mortise gauges, Tenon saws & saws, spoke shaves, planers, mallets, screw drivers, hammers etc.

Controls

- Students are permitted to use hand tools, under correct instruction and the lecturer of technician's supervision.
- Al persons must be trained in the safe use of hand tools.
- Always lift or carry a hand tool by its handle.
- All hand tools must be used in accordance with the manufacturers intended use and design.

- Hand tools must be stored on mobile racks or shelving when not in use.
- Tools must be inspected for damage or defects prior to use.
- Damaged or defected tools must be handed to the lecturer or technician for removal from use.
- Students are not permitted to carry out repair to damaged tools. All repairs must be carried out by a competent person.
- Maintain hands and fingers free from metal sharps when adjusting or using a hand tool.
- Never carry too many hand tools from the storage trolleys or shelving.
- Hand tools resting on workbenches must be mounted in from the edge of the workbench.
- Ensure that all tools when no longer required are returned securely to their storage holding space.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Hand held tools must not be left lying on the ground at any stage of their use.
- Avoid working in the same position for extended periods of times, tend to other duties where possible or take a small break from the work in hand.

Checks & Inspections

- Inspect tools for damage or defects prior to use

Information, Instruction & Training

- How to use hand held tools

Personal protective equipment required (last resort)

- Wear safety glasses, boots and gloves when cleaning in operation

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 615
	Revision Date: Oct 2026
Spindle Moulder (Robland Straight Cutting)	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, loose or damaged machine electrical cables or plugs can result in electrocution or first, second and or third degree burns.

Manual Handling
Lifting, carrying & holding wooden planks for machining can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Entanglement of long hair or loose clothing with rotating cutting tool or power feed rotating feed rollers causing asphyxiation. Entrapment with power feed rollers resulting on crushing of fingers or hands cuts. Crushing of fingers when adjusting the power feed.

Sharps
Touching or brushing hands against rotating or stopped cutting tool, removing or replacing cutting tool can result in lacerations to the hands and fingers.

Noise
Operating the machine for extended periods of time can result in acute temporary ringing (Tinnitus) in the ears or chronic hearing loss from long term exposure.

Dust
Cutting of various woods can result in the Inhalation of wood dusts and cause acute respiratory illness (wheezing, coughing) & or chronic disease (cancer) & asthma.

Slips Trip & Falls
Untidy workspace, personal belongings, and trailing electrical cables, wood dust or wooden parts can result in tripping causing fall impact injuries and broken limbs, cuts, bruises.

Ejected Material / Falling material
Timber inserted incorrectly to the cutting tool can result in an ejected piece of timber resulting in blunt force striking injuries to bystanders. Pieces of timber being machined or manually handled can fall causing minor impact injuries to the lower legs and feet.

Vibration
Manually operating the machine for extended periods of time can result in hand arm vibration (white finger) syndrome.

Fire
Dust in contact with ignition source may result in fires and first, second and or third degree burns.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to shape straight pieces of timber.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine electrical cable and plugs prior to operating the machine.
- Do not use the machine if the electrical cable or plug is damaged in any way.
- Competent person/s must only carry out electrical repairs.
- Follow the manual handling training guidelines at all times when machining pieces of timber.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch or place hand or fingers near the machine rotating cutting tool. Always wait for the cutting to come to a complete stop before adjusting, maintaining or removing cutting tool or machined timber.
- Never place hands or fingers under the power feed.
- Do not place hands and fingers in between power feed and fence when adjusting.
- Ensure the power feed is locked into position when operating the machine.
- Never leave the machine running unattended.
- Always wear hearing protection when operating the machine.
- Ensure the extract system is turned on prior to operating the machine. Ensure extract system is properly connected to the machine (wear a dust mask where required).
- Maintain good housekeeping and area free from personal belongings at all times.
- Wood dust or wooden parts must not be allowed to build up around, on or inside the machine.
- Maintain a secure hold of timber for machining at all times during handling.
- All timber being machined must be fed from the right hand side to the left hand side of the cutter tool.
- Avoid operating the machine for long periods of time, tend to other duties for periods of rest.
- Always use the machine and tools as intended by the manufacturer.
- Adjust the guards with the front and side flanges prior to operating the machine.
- Ensure the work piece is securely held prior to cutting.
- Maintain thumbs tucked into the side of the hands and not spread out over the work piece.
- Where possible when cutting curves, use a curved or straight template fixed to the work piece and guide pins fixed to the adjustable guard and let guard pin run on the template.
- Never start the machine under load by placing the work piece against the cutter block.
- Never queue up to use the machine or stand close by the machinist.
- Set the guard as close as possible to the material being machined.
- Never use a blunt cutter block.
- Always use the correct tool for the job in hand.
- Inspect tools and equipment for damage prior to use. Do not use if damaged in any way and report to the lecturer of technician for safe removal and replacement.

- Always isolate the machine from mains electricity prior to carrying out maintenance.
- Ignition sources are not permitted at or near the machine.
- Ensure that the emergency stop button is in good working order.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Lecturers and technicians to monitor compliance with control measures
- Lecturer and technicians to monitor the condition of cutting block, templates and jigs. .
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained operators are permitted to operate this machine and persons under supervision.
- MSDS for wood being machined.
- Manual handling training
- PPE training
- Chemical handling training

Personal protective equipment required (last resort)

- Safety boots
- Hearing protection,
- Eye Protection
- Respiratory Protection
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 616
	Revision Date: Oct 2026
Wilson Spindle Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, loose or damaged machine electrical cables or plugs can result in electrocution or first, second and or third degree burns.

Manual Handling
Lifting, carrying & holding wooden planks for machining, operating the dove tail gig, removing and replacing cutting tools, jigs cutter shafts and fences can result in lower back and or musculoskeletal injuries.

Mechanical
Entanglement of long hair or loose clothing with rotating cutting tool or power feed rotating feed rollers causing asphyxiation. Entrapment with power feed rollers resulting on crushing of fingers or hands cuts. Crushing of fingers when adjusting the power feed or when using various jigs.

Sharps
Touching or brushing hands against rotating or unguarded stopped cutting tool, removing or replacing cutting tool can result in lacerations to the hands and fingers.

Noise
Operating the machine for extended periods of time can result in acute temporary ringing (Tinnitus) in the ears or chronic hearing loss from long term exposure.

Dust
Cutting of various woods can result in the Inhalation of wood dusts and cause acute respiratory illness (wheezing, coughing) & or chronic disease (cancer) & asthma.

Slips Trip & Falls
Untidy workspace, personal belongings, and trailing electrical cables, wood dust or wooden parts can result in tripping causing fall impact injuries and broken limbs, cuts, bruises.

Ejected Material / Falling material
Timber inserted incorrectly to the cutting tool can result in an ejected piece of timber resulting in blunt force striking injuries to bystanders. Pieces of timber being machined or manually handled can fall causing minor impact injuries to the lower legs and feet.

Vibration
Manually operating the machine for long periods of time can result in hand arm vibration (white finger) syndrome.

Fire
Dust in contact with ignition source may result in fires and first, second and or third degree burns.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to shape straight or curved pieces of timber.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer of technician's supervision.
- Inspect the machine electrical cable and plugs prior to operating the machine.
- Do not use the machine if the electrical cable or plug is damaged in any way.
- Competent person/s must only carry out electrical repairs.
- Follow the manual handling training guidelines at all times when machining pieces of timber or removing or changing the machine jigs, cutting tools, fences cutter shafts etc.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch or place hand or fingers near the machine rotating cutting tool. Always wait for the cutting to come to a complete stop before adjusting, maintaining or removing cutting tool or machined timber.
- Ensure dove tail jig is placed over cutter tool when not in use.
- Exercise caution when operating the machine cutter tool.
- Never place hands or fingers under the power feed.
- Never place hands or fingers between jig clamping devices.
- Do not place hands and fingers in between power feed and fence when adjusting.
- Ensure the power feed is locked into position when operating the machine.
- Never leave the machine running unattended.
- Always wear hearing protection when operating the machine.
- Ensure the extract system is turned on prior to operating the machine. Ensure extract system is properly connected to the machine (wear a dust mask where required).
- Maintain good housekeeping and area free from personal belongings at all times.
- Wood dust or wooden parts must not be allowed to build up around, on or inside the machine.
- Maintain a secure hold of timber for machining at all times during handling.
- All timber being machined must be fed from the right hand side to the left hand side of the cutter tool.
- Avoid operating the machine for long periods of time, tend to other duties for periods of rest.
- Always use the machine and tools as intended by the manufacturer.
- Adjust the guards with the front and side flanges prior to operating the machine.
- Ensure the work piece is securely held prior to cutting.
- Maintain thumbs tucked into the side of the hands and not spread out over the work piece.
- Where possible in cutting curves, use a curved or straight template fixed to the work piece and guide pins fixed to the adjustable guard and let guard pin run on the template.
- Never start the machine under load by placing the work piece against the cutter block.
- Never queue up to use the machine or stand close by the machinist.
- Set the guard as close as possible to the material being machined.

- Never use a blunt cutter block.
- Always use the correct tool for the job in hand.
- Inspect tools and equipment for damage prior to use. Do not use if damaged in any way and report to the lecturer of technician for safe removal and replacement.
- Always isolate the machine from mains electricity prior to carrying out maintenance.
- Ignition sources are not permitted at or near the machine.
- Ensure that the emergency stop button is in good working order.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Lecturers and technicians to monitor compliance with control measures
- Lecturer and technicians to monitor the condition of cutting block, templates and jigs. .
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained operators are permitted to operate this machine and persons under supervision.
- MSDS for wood being machined.
- Manual handling training
- PPE training
- Chemical handling training

Personal protective equipment required (last resort)

- Safety boots
- Hearing protection,
- Eye Protection
- Respiratory Protection
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability:	1	x	Severity	3	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 617
	Revision Date: Oct 2026
Tormek 200 Grinder	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, loose or damaged machine electrical cable can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting, carrying or holding the machine when moving to location can result in lower back and or musculoskeletal injuries.

Mechanical
Entanglement of long hair or loose clothing with rotating sharpening stone resulting in asphyxiation, minor cuts and bruises. Entrapment of fingers with rotating grindstone and tool rest resulting in abrasions to the hands and fingers.

Sharps
Touching or brushing hands or fingers against hand tool edge can result in lacerations to the hands or fingers.

Slips Trip & Falls
Untidy workspace, personal belongings, trailing machine electrical cable, water on the floor can result in tripping or slipping causing fall impact head and body injuries and broken limbs, cuts, bruises.

Falling machine / tools
Machine mounted at the edge of the table, not level on the table, unsecure hold of when carrying, carrying handle fails can result in a falling machine causing lower leg and feet crushing and impact injuries. Unsecure hold of tool for sharpening, tool on edge of table can fall resulting in puncture wound to the legs or feet, minor cuts.

Vibration
Manually operating the machine for long periods of time can result in hand arm vibration (white finger) syndrome.

Ejected Material
Damaged grindstone may result in ejected parts from the stone when sharpening tools causing loss of sight and or minor cuts and bruising.

Chemicals
Using abrasive paste or WD40 when grinding may result in contact dramatis to the hands and fingers or acute respiratory illness from the inhalation of aerosols or fumes.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The grinder is used to sharpen hand edge tools.

Controls

- Operators that have received formal abrasive wheel training may only operate this machine.
- Students are not permitted to operate this machine.
- Competent persons must only carry out mounting of an abrasive wheel.
- Group gatherings are not permitted at or around the machine when in use.
- Ensure the cutting tool for sharpening is set up at correct cutting angle prior to operating the grinder.
- Inspect the grindstone for any damage or defects prior to use. Do not use the machine if the grindstone is damaged in any way. Request the lecturer or technician to remove it from use.
- Lecturer/s or technicians must only carry out dressing of the grindstone.
- Inspect the machine electrical cable and plugs prior to operating the machine.
- Do not use the machine if the electrical cable or plug is damaged in any way.
- Competent person/s must only carry out electrical repairs.
- Follow the manual handling training guidelines at all times when moving the machine.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never place hands or fingers in between the rotating grindstone and tool rest.
- Never leave the machine running unattended.
- Never touch the rotating grindstone with hands and fingers.
- Never touch edge of hand tools with bare hands or fingers before or after sharpening.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Always connect the machine power cable into a wall socket behind the machine.
- Always fill the machine water reservoir to the level indicated on the reservoir.
- Clean up any spilled water from the floor immediately.
- Never operate the machine for long periods of time, tend to other duties for periods of rest.
- Ensure the machine is mounted level on the table and in from the edge.
- When transporting the machine maintain a secure hold of it by using the carrying handle.
- Inspect the carrying handle prior to transporting.
- Maintain a secure hold of hand tool when sharpening.
- Do not place hand tools on the edge of tables or work benches.
- Always use the machine and tools as intended by the manufacturer.
- Isolate the machine from the mains electricity prior to carrying out maintenance.
- Safety glasses must be worn at all times when operating the grindstone.
- Ensure there is good ventilation when using aerosols of abrasive paste.
- Apply aerosol oil or abrasive past sparingly.
- Ensure that the emergency stop button is in good working order.
- Thoroughly wash your hands when grinding is completed.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations & records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Abrasive wheel training in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 -2016.
- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety boots
- Eye Protection

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 618
	Revision Date: Oct 2026
Viceroy Sharpedge TDS 12/16	Approved by: Breda Brennan

Hazards

Electricity

Incorrectly installed, loose or damaged machine electrical cable can result in electrocution-death or first, second and or third degree burns.

Mechanical

Entanglement of long hair or loose clothing with rotating sharpening stone resulting in asphyxiation, minor cuts and bruises.

Sharps

Touching or brushing hands or fingers against hand tool edge can result in lacerations to the hands or fingers.

Slips Trip & Falls

Untidy workspace, personal belongings, trailing machine electrical cable, oil on the floor can result in tripping or slipping causing fall impact head and body injuries and broken limbs, cuts, bruises.

Falling tools

Unsecure hold of tool for sharpening, tool resting on the edge of machine or table can fall resulting in puncture wound to the legs or feet, minor cuts.

Vibration

Manually operating the machine for long periods of time can result in hand arm vibration (white finger) syndrome.

Ejected Material

Damaged grindstone may result in ejected parts from the stone when sharpening tools causing loss of sight and or minor cuts and bruising.

Chemicals

Handling oil for topping the machine up with, touching the grindstone or grinded tools can result in contact dermatitis to the hands and fingers.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The grinder is used to sharpen hand edge tools.

Controls

- Operators that have received formal abrasive wheel training may only operate this machine.
- Competent persons must only carry out mounting of an abrasive wheel.
- Group gatherings are not permitted at or around the machine when in use.
- Ensure that the machine panels and guards are in place prior to operating the machine.
- Ensure the cutting tool for sharpening is set up at correct cutting angle prior to operating the grinder.
- Inspect the grindstone for any damage or defects prior to use. Do not use the machine if the grindstone is damaged in any way. Request the lecturer or technician to remove it from use.
- Trained persons must only carry out dressing of or grindstone wheel replacement.
- Inspect the machine electrical cable and plugs for damage or defects prior to operating the machine.
- Do not use the machine if the electrical cable or plug is damaged or defected in any way.
- Competent person/s must only carry out electrical repairs.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never leave the machine running unattended.
- Never touch the rotating grindstone with hands and fingers.
- Never touch edge of hand tools with bare hands or fingers before or after sharpening.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Always connect the machine power cable into a wall socket behind the machine.
- Always fill the machine water reservoir to the level indicated on the reservoir.
- Clean up any spilled or splashed oil from the floor immediately.
- Do not operate the machine for extended periods of time, tend to other duties for periods of rest.
- Maintain a secure hold of hand tool when sharpening.
- Do not place hand tools on machine, the edge of tables or work benches.
- Always use the machine and tools as intended by the manufacturer.
- Isolate the machine from the mains electricity prior to carrying out maintenance.
- Safety glasses must be worn at all times when operating the grindstone.
- Wear safety gloves when topping the machine up with oil or handling the grindstone.
- Ensure that the emergency stop button is in good working order.
- Thoroughly wash your hands when grinding is completed.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations & records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Abrasive wheel training in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety boots
- Eye Protection
- Safety Glove

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 619
	Revision Date: Oct 2026
Centauro CBO Mortising Machines	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly installed, loose or damaged machine electrical cable can result in electrocution-death or first, second and or third degree burns.

Mechanical
Entrapment of hand with descending cutting tool, pneumatic clamp resulting in crushing, broken bones, cuts and bruises. Pinching of fingers when adjusting the cross and top slide of the machine resulting in cut to the fingers.

Pneumatics
Damaged, defected, poorly fitted or loose air hose feed or machine airline can result in a whipping airline causing loss of sight, minor cuts and bruises. Dust projectile from cleaning down the machine resulting in loss of sight or eye irritation.

Sharps
Touching or brushing hands or fingers against hand tool edge can result in lacerations to the hands or fingers.

Slips Trip & Falls
Untidy workspace, personal belongings, trailing machine electrical cable or air lines, work pieces lying on the floor, waste wood chipping on the floor can result in tripping or slipping causing fall impact head and body injuries and broken limbs, cuts, bruises.

Noise
Operating the machine for extended periods of time can result in acute temporary hearing discomfort.

Falling material
Unsecure hold of work piece for machining or machined can fall resulting in in lower leg or feet impact or crush injuries.

Vibration
Manually operating the machine for extended periods of time can result in hand arm vibration (white finger) syndrome.

Manual handling
Loading and unloading the machine with material for machining can result in acute or chronic lower back or musculoskeletal injuries.

Fire
Waste material build up around the machine in contact with ignition sources can catch fire causing first, second and or third degree burns

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used to cut mortises into pieces of timber.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer of technician's supervision.
- Inspect the machine electrical cable and plugs prior to operating the machine.
- Do not use the machine if the electrical cable or plug is damaged in any way.
- Competent person/s must only carry out electrical repairs.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never leave the machine running unattended.
- Do not place hands or fingers in between the descending cutting tool.
- Do not place hands and fingers between the pneumatic clamping devices when loading with timber.
- Keep hand and fingers clear from the top and cross slide when adjusting the machine.
- Ensure that all airlines and hoses are in good working order and connected properly prior to operating the machine.
- Do not use the machine if airlines are leaking, report to the lecturer or technician for repair.
- Air hose and gun for blowing debris down from the machine must be stored away in the stores. Operators of the machine must request it from the technician or lecturer.
- Air gun must be fitted on to a coiled airline.
- Do not use air line for cleaning down the machine where bystanders are nearby.
- Only use the airline and air gun as intended by manufacturer and never place at or near the skin.
- Return the airline and air gun to the technician for safe storage when no longer required.
- Do not touch the cutting tool of the machine with bare hands or fingers.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Connect the machine power cable into a wall socket behind the machine.
- Ensure that the pneumatic air feed is connected from the back of the machine to the wall.
- Never leave work pieces machined or for machining lying on the ground beside the machine.
- Wear ear defenders when operating the machine.
- Avoid operating the machine for extended periods of time and tend to other duties for periods of rest.
- Maintain a secure hold of work material when loading or unloading the machine.
- Follow the manual handling training guidelines at all times and seek assistance if required.
- Do not allow waste material to build up around the machine.
- Ignition sources are not permitted at or near the machine.
- Always use the machine as intended by the manufacturer.

- Isolate the machine from the mains electricity prior to carrying out maintenance.
- Never interfere with the machine interlocks or micro switches.
- Safety glasses must be worn at all times when operating the machine.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations & records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained operators are permitted to operate this machine.
- PPE training
- Manual handling training

Personal protective equipment required (last resort)

- Safety boots
- Eye Protection
- Ear protection

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 620
	Revision Date: Oct 2026
Pillar Drilling Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death and or first second and third degree burns.

Mechanical
Loose clothing, long hair can result in entanglement with rotating drill causing cuts and bruises to the head and arms. Contact with rotating drill piece can result in cuts to the hands and fingers. Entrapment of hand and arm with descending cutting tool and base table, vice or work piece. Crushing of fingers when adjusting the table height of the machine.

Slips, trips and falls
Poor housekeeping, personal belongings, waste material, trailing power cables on the ground can cause trips and slips resulting in fall impact head injuries.

Flying Debris / Objects
Waste drilled pieces of wooden material, disintegrated cutting tool can create flying debris and result in loss of sight. Unsecured work piece or clamp/vice can result in flying object and cause impact injuries to the head and body parts.

Sharps
Contact with rotating drill piece can result in lacerations to the hands and fingers.

Fire
Ignition sources in contact waste drilled material can result in a fire causing first, second and third degree burns to the skin or respiratory illness from inhalation of smoke.

Manual Handling
Adjusting the machine table height to the required working position, carrying heavy loads for drilling can result in lower back and or musculoskeletal injuries.

Falling Machine
Drilling machine not securely fixed to the work bench, topples over and falls causing lower leg and feet crushing injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used cutting holes into wood of varying sizes and shapes.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine power cable and plug prior to use. Do not use if damaged in any way and report to the lecturer or technician for removal from use.
- Electrical repairs must be carried out be a competent person.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Hands or arms must never come between the descending drill piece and material for cutting.
- Follow manual handling training guidelines at all times.
- Always use both hands to support and adjust the table height.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the machine is plugged into the wall socket above the workbench.
- Ensure all machine guards are in place prior to use.
- Safety glasses must be worn at all times when operating the machine.
- Inspect the cutting tool prior to use, do not use if damaged, hand back damaged cutting tool and request a new one from the lecturer / technician.
- Ensure to hold the work material firmly or clamp the work piece securely when operating the machine.
- Lecturer and technicians are only permitted to carry out repairs on cutting tools.
- Never blow or use air to remove drilled waste wood, Use a brush to clean or remove unwanted drilled wooden material.
- Ensure the machine working table is adjusted to the required working height prior to use.
- Ignition sources (naked flames, lighters, hot materials etc.) are not permitted at or near the machine.
- Ensure that the machine is fixed bolted to the workbench.
- Never leave the machine running unattended.
- Always wait for the machine to come to a complete stop before adjusting or removing drilled material or parts.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Lecturers and technicians to monitor compliance with control measures
- Lecturer and technicians to monitor the condition of cutting tools.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 621
	Revision Date: Oct 2026
Viceroy Pedestal Grinding Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death and or first second and third degree burns.

Mechanical
Loose clothing, long hair can result in entanglement with rotating grinding stones/shaft and result in asphyxiation. Contact with rotating grinding stones can result in loss of fingers or abrasions to the hands and fingers.

Flying Debris / Objects
Ejection of damaged rotating stone or cutting tool or parts can result in loss of sight and or facial and bodily puncture wounds.

Sharps
Contact with the edge of the cutting tool or grinding stone can result in lacerations or abrasions to the hands and fingers.

Fire
Build-up of wood dust or shavings etc., flammable materials in contact with sparks from grinding can result in first, second and third degree burns to the skin or respiratory illness from inhalation of smoke.

Slips, trips and falls
Poor housekeeping, personal belongings, waste material, water and trailing power cables lying on the ground can cause trips and slips resulting in fall impact head injuries.

Vibration
Grinding cutting tools for extended periods of time can result in hand arm vibration causing white finger and damage to the nerves of the fingers.

Noise
Machine grinding metal edge tools generates noise and may result in temporary acute hearing discomfort or chronic permanent hearing loss.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for sharpening various edge tools.

Controls

- Operators that have received formal abrasive wheel training may only operate this machine.
- Competent persons must only carry out mounting of an abrasive wheel.
- Group gatherings are not permitted at or around the machine when in use.
- Inspect the machine power cable and plug prior to use. Do not use if damaged in any way and report to the lecturer or technician for removal from use.
- Electrical repairs must be carried out be a competent person.
- Loose or nylon clothing must not be worn when operating the machine.
- Jewellery must not be worn when operating the machine.
- Ensure all machine guards are in place prior to operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Never touch the rotating grinding stones with hands or fingers.
- Ensure to use the machine tool rests when grinding tools and that they are set at the correct angle.
- Inspect the grinding stone for damage or defects prior to use. Do not use if defected or damaged in any way and remove from use.
- All repairs or replacement of grinding stones must only be carried out by a competent person/s.
- Securely hold the tool for sharpening when grinding on the machine.
- Never touch the tool cutting edge with hands or fingers.
- Always hold or carry the tool for or after grinding by its handle.
- Wood dust or shavings must not be allowed to accumulate on the machine or around the floor of the machine.
- Flammable liquids or materials must never be stored at or near the machine
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the machine is plugged into the wall socket at the back of the machine.
- Ensure that cooling water for the cutting tool is held in a leak free container and supported firmly on the table, water lying on the ground must be cleaned immediately
- Do not operate the grinder for extended periods of time, tend to other duties where possible.
- Hearing protection must be worn when operating the grinding machine.
- Safety glasses must be worn at all times when operating the machine.
- Never leave the machine running unattended.
- Always wait for the machine to come to a complete stop before adjusting or removing drilled material or parts.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.
- Abrasive wheel training in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Hearing protection

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 622
	Revision Date: Oct 2026
Graule Grinding Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death and or first second and third degree burns.

Mechanical
Loose clothing, long hair can result in entanglement with rotating grinding disc and result in asphyxiation. Contact with rotating grinding disc can result in loss of fingers or abrasions to the hands and fingers. Crushing of hands with sliding top slide and motor height adjustment.

Flying Debris / Objects
Ejection of damaged rotating disc or cutting tool or parts can result in loss of sight and or facial and bodily puncture wounds.

Sharps
Contact with the edge of the cutting tool for grinding or rotating cutting disc can result in lacerations to the hands and fingers.

Fire
Build-up of wood dust or shavings etc. around the machine, flammable materials in contact with sparks from grinding can result in first, second and third degree burns to the skin or respiratory illness from inhalation of smoke.

Slips, trips and falls
Poor housekeeping, personal belongings, waste material, and trailing power cables lying on the ground can cause trips and slips resulting in fall impact head injuries.

Noise
Machine grinding metal edge tools generates noise and may result in temporary acute hearing discomfort or chronic permanent hearing loss.

Falling Machine
Machine topples on the work bench and falls off causing crush and impact injuries to the lower legs and feet.

Dust
Disc grinding cutting tools can generate dust causing acute or chronic respiratory illness if inhaled.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for sharpening various edge tools.

Controls

- Operators that have received formal abrasive wheel training may only operate this machine.
- Competent persons must only carry out mounting of an abrasive wheel.
- Group gatherings are not permitted at or around the machine when in use.
- Inspect the machine power cable and plug prior to use. Do not use if damaged in any way and report to the lecturer or technician for removal from use.
- Electrical repairs must be carried out be a competent person.
- Loose or nylon clothing must not be worn when operating the machine.
- Jewellery must not be worn when operating the machine.
- Ensure all machine guards are in place prior to operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Never touch the rotating grinding disc with hands or fingers.
- Ensure to use the machine tool rests when grinding tools and that they are set at the correct angle.
- Inspect the grinding disc or cutting tool being sharpening for damage or defects prior to use. Do not use if defected or damaged in any way and remove from use.
- All repairs or replacement of grinding disc must only be carried out by a competent person/s..
- Never place hands or fingers in between the sliding top slide of the machine or when adjusting the height of the motor.
- Never touch the cutting tool (for grinding) edge with hands or fingers.
- Always hold or carry the cutting tool by the opposite end of the cutting part
- Wood dust or shavings must not be allowed to accumulate on the machine or around the floor of the machine.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the machine is plugged into the wall socket at the back of the machine.
- Hearing protection must be worn when operating the grinding machine.
- Safety glasses must be worn at all times when operating the machine.
- Never leave the machine running unattended.
- Always wait for the machine to come to a complete stop before adjusting or removing drilled material or parts.
- Ensure the cutting disc is rotating in the correct direction.
- Ensure the machine is fixed bolted to the workbench.
- Ensure there is adequate ventilation when operating the machine, wear a dust mask if required.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.
- Abrasive wheel training in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Hearing protection
- Dust Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 623
	Revision Date: Oct 2026
Grifo Grinding Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death and or first second and third degree burns.

Mechanical
Loose clothing, long hair can result in entanglement with rotating grinding disc or stone and result in asphyxiation. Contact with rotating grinding disc can result in loss of fingers or abrasions to the hands and fingers.

Dust
Sharpening planer and cutting blades on the grinder generates metal dust and can result in respiratory illness if inhaled.

Flying Debris / Ejected Missiles
Grinding metal cutting tools will result in the generation flying metal parts and can cause loss of sight. Ejection of damaged shattered rotating grind stone or cutting tool can result in loss of sight and or facial and bodily puncture wounds.

Fire
The build-up of wood dust, shavings, storage of fuel sources come into contact with an ignition source or sparks can result in a fire death or first, second and or third degree burns.

Slips Trips and falls
Poor housekeeping, personal belongings, trailing power cable, wood dust or metal filing on the ground can result in tripping and slipping causing fall impact head and body injuries.

Sharps
Loading and unloading the machine with planer blades and cutter tools for grinding can result in deep lacerations to the hands and fingers or the severing of finger tips.

Hot Surfaces
Grinding pieces of metal generates heat and can result in minor burns to the hands and fingers when handled.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for sharpening planer blades and cutting blocks

Controls

- Operators that have received formal abrasive wheel training may only operate this machine.
- Wear safety glasses and a safety mask when operating the machine.
- Abrasive wheel training must be provided for operators of the machine.
- Competent persons must only carry out mounting of an abrasive wheel.
- Group gatherings are not permitted at or around the machine when in use.
- Inspect the machine power cable and plug prior to use. Do not use if damaged in any way and report to the lecturer or technician for removal from use.
- Electrical repairs must be carried out be a competent person.
- Loose or nylon clothing must not be worn when operating the machine.
- Jewellery must not be worn when operating the machine.
- Ensure all machine guards are in place prior to operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Never touch the rotating grinding disc or stone with hands or fingers.
- Ensure to use the machine tool rests when grinding planer blades and cutters and that they are set at the correct angle.
- Use the handles on the machine to slide or advance sharpening blades or cutters towards grinders.
- Inspect the grinding disc or grind stone for damage or defects prior to use. Do not use if defected or damaged in any way and remove from use.
- All repairs or replacement of grinding stone or disc must be carried out by a competent person/s.
- Naked flames or ignition sources must not be used at or near the machine.
- Fuel sources must never be stored at or near the machine.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Wood dust, shavings or metal filings must be cleaned from around and on top of the machine regularly or before use of the machine commences.
- Ensure that the machine is plugged into the socket on the wall at the back of the machine.
- Never touch a planer or cutter tool blade before or after sharpening with bare hands.
- Use gloves when handling the planer and cutting tools.
- Allow grinded pieces of metal to cool down sufficiently before handling or wear heat resistant gloves.
- Never leave the machine running unattended.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.

- Abrasive wheel training in accordance with The Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016.

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Dust Mask
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 624
	Revision Date: Oct 2026
LG – 150 Disc and Belt Sander	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death and or first second and third degree burns.

Manual Handling
Pulling, pushing or dragging the machine to and from storage can result in acute or chronic lower back and or musculoskeletal injury.

Mechanical
Entanglement of long hair or loose clothing when in contact with rotating disc, bobis shaft or sand belt resulting in asphyxiation. Entrapment of fingers or hands with disc wheel or sander belt resulting in abrasions to the hands or fingers.

Slips Trips and Falls
Poor housekeeping, personal belongings, dust on the floor trailing power cable, floor access panels, wooden parts can result in slipping and tripping causing fall impact head and body injuries.

Dust
Sanding pieces of wood will generate dust and may cause acute or chronic respiratory illness.

Flying Missiles
Unsecure hold of piece of timber for sanding fly's from operator hands and strikes nearby person causing blunt force injuries to the head or body parts.

Fire
Wood dust from the timber comes into contact with an ignition source and catches fire, resulting in first, second and or third degree burns.

Falling Machine
The wheels of the stand fail causing the machine to fall resulting in feet crushing injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for sanding small pieces of wood.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the electrical power cable and plug for damage or defects prior to use. Do not use the machine if the power cable or plug is damaged in any way and remove from use for repair.
- Competent person/s must carry out all electrical repairs.
- Follow the manual handling training guidelines when moving the machine to and from storage.
- Ensure that the wheels of the machine are in good working rolling order when moving the machine.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn when operating the machine.
- All machine guards and fencing are in place and adjusted correctly prior to operating the machine.
- Ensure that the machine is rotating in the correct direction prior to operating the machine.
- Never touch the rotating sand belt or disc sander with bare hands or fingers.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave or store wooden parts on the ground around the machine.
- Avoid the trailing of electrical power cables when setting up the machine.
- Wear a safety dust mask when operating the machine.
- Ensure that the sander is connected to the in-house extract system when in use.
- Maintain a secure hold of timber piece being sanded at all times.
- Naked flames or ignition sources must never be used at tor near the machine.
- Ensure that the sander belt is correctly tracked when using the machine.
- Never overreach across the sand belt to turn on or off the machine.
- Never leave the machine running unattended.
- Always allow for the machine to come to a natural stop and never assist in stopping the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.
- Manual Handling
- Chemical handling training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Dust Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 625
	Revision Date: Oct 2026
Stromab Up Cut Saw	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables or plugs can result in electrocution-death and or first second and third degree burns.

Manual Handling
vehicing, carrying or holding pieces of timber for or after machining can result in acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing electrical cables on the ground, saw dust and timber off cuts lying on the ground can cause tripping and slipping resulting in falls and head and body impact injuries.

Mechanical
Entanglement of long hair or loose clothing with rotating shaft of saw blade resulting in death or loss of limbs. Severing of limbs with rotating saw blade when cutting pieces of timber. Impact injury to the hands, arms or abdomen from the ejection of the sliding handle and saw mechanism.

Noise / Vibration
Running the machine and cutting pieces of timber generates noise and can result in acute temporary hearing discomfort. Using the machine for extended periods of time can result in hand arm vibration and cause temporary hand arm discomfort.

Dust
Machining pieces of timber will generate dust and cause acute and or chronic respiratory discomfort and or illness.

Sharps
Removing and replacing the cutting blade of the machine or touching the teeth of the blade when on the machine.

Fire
Wood dust in contact with an ignition source can ignite and result in a fire and first, second and or third degree burns to the body.

Collapsing roller table
Legs of the roller table collapse and result in feet crush injury.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for cutting pieces or planks of timber.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the electrical power cable and plug for damage or defects prior to use. Do not use the machine if the power cable or plug is damaged in any way and remove from use for repair.
- Competent person/s must carry out all electrical repairs.
- Follow the manual handling training guidelines when handling pieces of timber for and after machining and seek assistance if required.
- Use the machine roller tables when machining pieces of timber.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Saw dust and timber off cuts must be swept and cleaned up from the ground as soon as possible.
- The machine electrical power cable must be plugged into the socket mounted on the wall socket behind the machine.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure all machine guards are in place prior to operating the machine.
- Ensure that the machine is correctly set up prior to operating the machine.
- Ensure the saw blade is rotating in the correct direction prior to operating the machine.
- Ensure the emergency stop buttons and devices are working properly prior to operating the machine.
- Group gatherings are not permitted around this machine when it is in use.
- Maintain a secure hold of the machine saw sliding handle when operating the machine.
- Wear safety ear protection when operating the machine.
- Avoid using the machine for extended periods of time, tend to other duties for periods of rest.
- Switch on the workshop extract system prior to operating the machine and wear a dust mask if required.
- Wear gloves when removing or replacing the saw blade of the machine.
- Never touch the teeth of the saw blade with bare hands or fingers.
- Ignition sources or naked flames are not permitted at or near the machine.
- Wood dust must be cleaned from the machine when work is complete.
- Inspect the legs of roller tables for damage or defects prior to operating the machine. Do not use if defected or damaged in any way and remove from use for repair.
- Never overreach across the saw blade of the machine.
- Never leave the machine running unattended.
- Always use the brake handle on the machine to assist in stopping the rotating saw blade.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.

- Ensure Safety Devices and guarding are checked prior to using the machine.
- Lecturers and technicians to monitor compliance with control measures
- Lecturer and technicians to monitor the condition of cutting tools.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- PPE training.
- Manual Handling
- Chemical handling training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Dust Mask
- Hearing protection

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 626
	Revision Date: Oct 2026
Ingersoll Rand Compressor	Approved by: Breda Brennan

Hazards

Electricity
Damaged, loose, poorly connected electrical cable and plugs of the machine can result in elocution– death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, leaking water from the compressor when emptying or coolant, dust build up materials stored around the machine can cause slipping and tripping resulting fall head and body impact injuries.

Hot Surfaces
Contact with the coolant reservoir, filter or coolant pipe work during or after the machine was running can result in first or second degree burns to the hands or fingers

Fire
Dust build up on the machine can catch fire resulting in inhalation of smoke and respiratory illness, death, or first second and or third degree burns.

Nosie
Working beside the machine when it is running may result in acute temporary hearing discomfort or ringing in the ears.

Chemicals
Contact with leaking coolant fluid or when topping up can result in minor irritation to the hands and fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The compressor is used to supply air to various workshop machines and tools that are wholly or partially pneumatically operated.

Controls

- Students are not permitted to turn on the compressor.
- The lecturer or technician must turn on the machine when it is required.
- Inspect the machine electrical cable and plugs for damage or defects prior to use.
- Do not use the machine if the electrical cable or plugs are damaged or defected in any way and remove from use for repair.

- Competent person/s must carry out all electrical repairs.
- Maintain good housekeeping and machine area free from personal belongings at all times.
- Clean up any water spills or leaks on the ground immediately after emptying the machine.
- Regularly clean up any wood dust from the floor space or on top of the machine.
- Never store materials on, around or against the machine.
- Ensure that the compressor hood is fully closed prior to operating the machine.
- Allow the compressor coolant system to adequately cool prior to handling or maintaining.
- Wear ear protection if required to work beside the compressor.
- Never touch coolant fluid with bare hands.
- Use safety gloves if required to handle coolant fluid and safely dispose of.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Chemical Handling training.
- PPE training.
- MSDS

Personal protective equipment required (last resort)

- Safety Gloves
- Hearing Protection
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 627
	Revision Date: Oct 2026
Pneumatic Nailer & Stapler Hand tools	Approved by: Breda Brennan

Hazards

Pneumatics
Loos air hose fitting or damaged hose can result in a whipping air line and cause loss of sight, lacerations and bruising to body parts.

Flying Debris
Exhaust air from the hand tool can result in blowing flying debris into the air and cause acute or chronic respiratory illness or permanent or temporary loss of sight.

Ergonomics
Holding the hand tool for extended periods of time can result in work related upper limb disorder causing or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing pneumatic hose or hand tool lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Falling Tool
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Nosie
Operating the hand tools can result in the generation of noise and cause acute temporary or chronic hearing discomfort.

Vibration / Kickback
Operating the nailing or stapling gun will generate vibration and periods of prolonged use can result in hand arm vibration minor injuries, kick back can result from nailing or stapling pieces of timber together and cause sprain injuries to the upper limbs.

Impalement
The operator or bystander comes in between the staple or nail and object for joining together and becomes impaled resulting in major bone or hand and body injuries.

Ejected Missiles
Nailing or stapling pieces of timber together can result in ejected missiles and cause death or puncture wounds to body parts.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The hand tools are used for nailing or stapling pieces of timber together through the use of pneumatics.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technicians supervision.
- Check the air line hose and fittings of the hand tool for damage or defects prior to using.
- Do not use the hand tool if hose or fittings are defected or damaged in any way and remove from use for repair by a competent person.
- Ensure that the tool is disconnected from the sir supply prior to loading with nails or staples.
- Never leave a connected tool to the air supply unattended.
- Wear safety glasses when operating the hand tool.
- Wear a safety mask if required.
- Do not use the hand tool for extended periods of time and tend to other duties for periods of rest or split the work load with another work colleague if possible.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of hose lines where possible.
- Never leave a hand tool lying on the ground, use a nearby work bench to rest it on.
- Maintain a secure hold of the hand tool when operating it.
- Always place the hand tool in from the edge of a work bench when not in use.
- Wear ear safety protection when operating the hand tools.
- Always stand behind the tool when operating it.
- Never press the tool against any part of the body.
- Never support the back of any piece of timber being joined together with any body part.
- By standers are not permitted when the tool is in operation
- Ensure that the tool always used as intended by the manufacturer.
- Trained operators must only use the tool.
- Ensure that the safety guard device is in place prior to using the tool.
- Return the tool to storage when it is no longer required.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.
- Safe use of operating the tool.

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Dust Mask

- Hearing protection

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 628
	Revision Date: Oct 2026
Corded and Cordless Hand Held Skill Saws	Approved by: Breda Brennan

Hazards

Electricity
Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing electrical cable, saw dust and hand tool lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical
Entanglement of long hair or loose clothing with rotating blade can result in death or major and minor cuts and bruises. Severing of limbs when in contact with rotating saw blade.

Ergonomics
Operating the tool in crunched awkward positions and for extended periods of time can result in acute or chronic lower back and or musculoskeletal injuries**.**

Vibration / Kickback
Sawing various materials can result in vibration and cause hand arm vibration injuries (white finger). Sawing various materials can result in kickback and sprains to the wrist and elbow or major cut to the body.

Flying Debris
Sawing various materials can generate small flying wooden chips and result in loss of sight.

Noise
Sawing various wooden materials can result in the generation of noise and cause acute temporary hearing discomfort**.**

Sharps
Saw blades can contain sharps and result in minor lacerations to the hands and fingers when handled during removal and replacement.

Falling Machine
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Dust
Sawing various wooden materials will result in the generation of dust and cause acute or chronic respiratory illness.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The hand tools are used for drillings holes or screws into or cleaning down various materials.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Where possible always use a battery operated or 110v saw. If required to use a 240v drill ensure that it is plugged in to a socket with a Residual Control Device (RCD).
- 240v power tools are not permitted to be used for external work.
- Inspect the machine saw blade for damage or defects prior to use, do no use is damaged or defected in any way. A competent person must remove and replace the saw blade.
- Inspect the electrical cable, plugs and saw for damage or defects prior to use.
- Do not use if cable or saw is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of. A competent person must carry out repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Always cut away from machine electrical power cable.
- Clean up saw dust from the ground as soon as possible.
- Never leave a hand tool lying on the ground, rest it on in from the edge of a nearby workbench.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch a rotating saw blade.
- Never assist in stopping or slowing down a rotating saw blade.
- Ensure the machine safety guard is in place and operational prior to using the machine.
- Ensure that the riving knife is in place prior to operating the machine.
- Do not use the hand tool for extended periods of time and tend to other duties for periods of rest or split the work load with another work colleague if possible.
- Always work away from the body when cutting wooden material.
- Never place free hand in the direction or line of the cutting blade.
- Maintain a firm and secure hold of the hand tool when sawing wooden materials.
- Wear safety glasses when sawing materials.
- Wear safety hearing protection when required.
- Always use the saw as intended by the manufacturer.
- Never hold or handle a saw blade by its cutting teeth, wear gloves if required removing or replacing the blade.
- Never leave a saw unattended and return to storage when no longer required.
- Wear a safety mask when sawing wooden materials.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Lecturers and technicians to monitor compliance with control measures
- Lecturer and technicians to monitor the condition of cutting tools.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- PPE training
- Safe use of operating the tool

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves
- Hearing protection
- Dust Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 629
	Revision Date: Oct 2026
Corded and Cordless Hand Held Jig Saws	Approved by: Breda Brennan

Hazards

Electricity
Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing electrical cable, saw dust and hand tool lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical
Severing of fingers when in contact with line of reciprocating blade or when hands or fingers underneath the material for cutting.

Ergonomics
Operating the tool in crunched awkward positions and for extended periods of time can result in acute or chronic lower back and upper body musculoskeletal injuries**.**

Vibration / Kickback
Sawing various materials can result in vibration and cause hand and vibration injuries (white finger). Sawing various materials can result in kickback and sprains to the wrist and elbow or major cut to the body.

Flying Debris
Sawing various materials can generate small flying wooden pieces and result in loss of sight.

Noise
Sawing various wooden materials can result in the generation of noise and cause acute temporary hearing discomfort**.**

Sharps
Saw blades can contain sharps and result in minor lacerations to the hands and fingers when handled during removal and replacement.

Falling Machine
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Dust
Sawing various wooden materials will result in the generation of dust and cause acute or chronic respiratory illness.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The hand held jig saw is used for precision cutting, intricate curves and patterns in thin sheets of wood..

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the saw is plugged in to a socket with a Residual Control Device (RCD).
- Inspect the machine saw blade for damage or defects prior to use, do no use is damaged or defected in any way. A competent person must remove and replace the saw blade.
- 240v power tools are not permitted to be used for external work.
- Inspect the electrical cable, plugs and saw for damage or defects prior to use.
- Do not use if cable or saw is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of. A competent person must carry out electrical repairs.
- Always cut away from machine electrical power cable.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Clean up saw dust from the ground as soon as possible.
- Never leave a hand tool lying on the ground, rest it on in from the edge of a nearby workbench.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch a reciprocating saw blade.
- Always work away from the body when cutting material.
- Never place hands or fingers under materials being cut.
- Ensure that free hand is never in line with the direction of the cutting blade.
- Always make cutting turns slowly and use a narrow blade for curved work.
- Always wait for the reciprocating blade to stop before removing the tool from the materials being cut.
- Ensure the cutting blade in in good working order prior to use.
- Never assist in stopping or slowing down a reciprocating saw blade.
- Ensure the machine safety guard is in place and operational prior to using the machine.
- Do not use the hand tool for extended periods of time, tend to other duties for periods of rest or split the work load with another work colleague where possible.
- Maintain a firm and secure hold of the hand tool when sawing wooden materials.
- Wear safety glasses when sawing materials.
- Wear safety hearing protection when required.
- Always use the saw as intended by the manufacturer.
- Never hold or handle a saw blade by its cutting teeth, wear gloves if required to remove or replace the blade.
- Never leave a saw unattended and return to storage when no longer required.
- Wear a safety mask when sawing wooden materials.

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturer's recommendations and in compliance with Work Equipment Regulations 2007. Records kept by the School.
- Ensure Safety Devices and guarding are checked prior to using the machine.
- Lecturers and technicians to monitor compliance with control measures
- Lecturer and technicians to monitor the condition of cutting tools.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- PPE training
- Safe use of operating the tool

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves
- Hearing protection
- Dust Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 630
	Revision Date: Oct 2026
Hand Held Belt Sanders	Approved by: Breda Brennan

Hazards

Electricity
Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs, sanding over the power cable can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing electrical cable, saw dust and hand tool lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical
Entanglement of loose clothing, long hair with rotating sand belt can result in major abrasions to body parts. Severe abrasions to the hands and fingers when in contact with the rotating sand belt.

Ergonomics / Manual Handling
Operating the tool in crunched awkward positions for extended periods of time can result in acute or chronic lower back and or upper body musculoskeletal injuries**.** Lifting the machine to and from storage and when operating it can result in acute or chronic lower back and musculoskeletal injuries

Vibration / Acceleration
Sanding materials for extended periods of time can result in hand vibration injuries (white finger). Sanding materials can result in an accelerated hand tool pulling an individual forward, resulting in in acute lower back injuries.

Falling Machine
Unsecure hold of machine, placed on the workbench edge can result in a falling machine, lower leg and feet impact injuries.

Noise
Sanding various wooden materials will generate noise and cause acute temporary hearing discomfort**.**

Falling Machine
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Dust Chemicals
Sanding various wooden materials will generate dust & cause acute or chronic respiratory illness or irritation to the eyes.

Fire
Ignition sources in contact with dust, metal parts in wood can spark & result in a fire causing first second and or third degree burns.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The belt sanders are used to smoothen rough pieces of wood.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the sander is plugged in to a socket with a Residual Control Device (RCD).
- 240v power tools are not permitted to be used for external work.
- Where possible ensure to clamp material for sanding.
- Use both hands to operate the sander.
- Inspect the electrical cable, plugs and sander for damage or defects prior to use.
- Do not use if cable or sander is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of. A competent person must carry out electrical repairs.
- Always work away from machine electrical power cable.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Clean up saw dust from the ground as soon as possible.
- Never leave a hand tool lying on the ground, rest it on in from the edge of a nearby workbench.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the rotating sander of the machine and allow to come to a complete stop.
- Always work away from the body when sanding materials.
- Maintain hands and fingers clear from material being machined.
- Ensure the sand belt in in good working order prior to use.
- Never assist in stopping or slowing down the rotating sander.
- Avoid using the hand tool for extended periods of time, tend to other duties for periods of rest or split the work load with another work colleague where possible.
- Follow the manual handling training guidelines at all times when using the machine.
- Maintain a firm and secure hold of the hand tool when sanding materials.
- Turn on the sander prior to placing on the material for machining.
- Always place the sander in from the workbench edge when not in use.
- Wear safety glasses when sanding materials.
- Wear safety hearing protection when required.
- Always use the sander as intended by the manufacturer.
- Never leave a sander unattended and return to storage when no longer required.
- Wear a safety mask when sanding wooden materials.
- Turn on the extract system when using the sander, use a sander machine dust bag where possible.
- Avoid the build of dust and clean the sander and surrounding area regularly.
- Ignition sources are not permitted at or near the material being sanded.

- Remove all metal materials from material being sanded where possible.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Safe use of operating the tool
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Hearing protection
- Dust Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 631
	Revision Date: Oct 2026
Hand Held Orbital Sanders	Approved by: Breda Brennan

Hazards

Electricity
Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs, sanding over the power cable can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing electrical cable, saw dust and hand tool lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Ergonomics / Manual Handling
Operating the tool in crunched awkward positions and for extended periods of time can result in lower back and upper body musculoskeletal injuries**.** Lifting the machine to and from storage and when operating it can result in acute or chronic lower back and musculoskeletal injuries

Vibration
Sanding materials for extended periods of time can result in hand and vibration injuries (white finger).

Falling Machine
Unsecure hold of machine, placed on the workbench can result in a falling machine, lower leg and feet impact injuries

Noise
Sanding various wooden materials will generate noise and cause acute temporary hearing discomfort**.**

Falling Machine
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Dust Chemicals
Sanding various wooden materials will generate dust & cause acute or chronic respiratory illness or irritation to the eyes.

Fire
Ignition sources in contact with dust, metal parts in wood can spark & result in a fire causing first second and or third degree burns.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The orbital sanders are used for fine smoothing pieces of wood.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the sander is plugged in to a socket with a Residual Control Device (RCD).
- 240v power tools are not permitted to be used for external work.
- Ensure that the machine is switched off prior to connecting to the electricity supply.
- Inspect the electrical cable, plugs and sander for damage or defects prior to use.
- Do not use if cable or sander is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of. A competent person must carry out repairs.
- Always sand away from the machine electrical power cable.
- Where possible ensure to clamp material for sanding.
- Use both hands to operate the sander.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Clean up saw dust from the ground as soon as possible.
- Never leave a hand tool lying on the ground, rest it on in from the edge of a nearby workbench.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Always work away from the body or electrical cables when sanding materials.
- Maintain hands and fingers clear from material being machined.
- Avoid using the hand tool for long periods of time, tend to other duties for periods of rest or split the work load with another work colleague where possible.
- Follow the manual handling training guidelines at all times when using the machine.
- Maintain a firm and secure hold of the hand tool when sanding materials.
- Turn on the sander prior to placing on the material for machining.
- Always place the sander in from the workbench edge when not in use.
- Wear safety glasses when sawing materials.
- Wear safety hearing protection when required.
- Always use the sander as intended by the manufacturer.
- Never leave a sander unattended and return to storage when no longer required.
- Wear a safety mask when sanding wooden materials.
- Turn on the extract system when using the sander, use a sander machine dust bag where possible.
- Avoid the build of dust and clean the sander and surrounding area regularly.
- Ignition sources are not permitted at or near the material being sanded.
- Remove all metal materials from material being sanded where possible.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Safe use of operating the tool
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Hearing protection
- Dust Mask

Initial Risk Rating (without any control measures)

Probability :		x Severity		= Risk Factor	
	3		**3**		**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x Severity		= Risk Factor	
	1		**3**		**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 632
	Revision Date: Oct 2026
Portable Chop Saws	Approved by: Breda Brennan

Hazards

Electricity
Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs, sanding over the power cable can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing electrical cable, saw dust and hand tool lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical
Entanglement of loose clothing, long hair with rotating cutting tool resulting in severing of fingers. Kick back of machine handle when in contact with a nail or knot causing impact head and arm injuries

Ergonomics / Manual Handling
Operating the saw in crunched awkward positions and for extended periods of time, lifting the machine to and from storage and can result in acute or chronic lower back and musculoskeletal injuries.

Vibration / Acceleration
Sanding materials for extended periods of time can result in hand and vibration injuries (white finger). Sanding materials can result in an accelerated hand tool pulling an individual forward, resulting in in lower back injuries.

Falling Machine
Machine not placed on the workbench level can result in a falling machine, lower leg and feet impact injuries

Noise
Sanding various wooden materials will generate noise and cause acute temporary hearing discomfort**.**

Falling Machine
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Fire, Dust Chemicals
Ignition sources, metal parts in wood (sparking) can ignite wood dust & result in a fire & first second and or third degree burns. Sawing wood generates wood dust & can cause acute or chronic respiratory illness or irritation to the eyes

Sharps
Removing and replacing the cutting tool can result in lacerations to the hands and fingers.

Ejected materials
Cutting pieces of timber can result in flying materials that cause blunt force injury to the operator or bystanders.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for planing pieces of timber to a required thickness and flat surface.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the saw is plugged in to a socket with a Residual Control Device (RCD).
- 240v power tools are not permitted to be used for external work.
- Inspect the electrical cable, plugs and saw for damage or defects prior to use.
- Do not use if cable or sander is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of. A competent person must carry out repairs.
- Always work away from machine electrical power cable.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Never leave a hand tool lying on the ground, rest it on and in from the edge of a nearby workbench.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the rotating saw blade and allow to come to a natural complete stop.
- Never place free hand in line with the cutting blade.
- Never assist in stopping or slowing down the rotating saw blade.
- Avoid using the hand tool for extended periods of time, tend to other duties for periods of rest or split the work load with another work colleague where possible.
- Follow the manual handling training guidelines at all times when using the machine.
- Maintain a firm and secure hold of the handle of the machine when sawing materials.
- Where possible remove any metal materials from wood being machined.
- Always place the saw firm, flat and in from the workbench edge.
- Wear safety glasses when sawing materials.
- Wear safety hearing protection.
- Always use the saw as intended by the manufacturer.
- Never leave a saw unattended and return to storage when no longer required.
- Wear a safety mask when sawing wooden materials.
- Turn on the extract system when using the machine.
- Avoid the build of wood dust and clean the saw and surrounding area regularly.
- Ignition sources are not permitted at or near the material being sanded.
- Wear gloves when required to remove and replace the saw blade.

- Competent person/s must only remove and replace saw blades.
- Ensure that bystanders are a safe distance from the machine when in use.
- Group gatherings are not permitted around the machine.
- Maintain a secure hold of the timber being machined.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Safe use of operating the tool
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Hearing protection
- Dust Mask
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 633
	Revision Date: Oct 2026
Hand Held Planers	Approved by: Breda Brennan

Hazards

Electricity
Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs, planning over the power cable can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing electrical cable, saw dust and hand tool lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical
Entanglement of loose clothing, long hair with rotating cutting tool resulting in severing of fingers. Kick back when in contact with a nail causing hand and arm injuries

Ergonomics / Manual Handling
Operating the planer in crunched awkward positions and for extended periods of time, lifting the machine to and from storage and can result in acute or chronic lower back and musculoskeletal injuries.

Vibration / Acceleration
Planning materials for extended periods of time can result in hand and vibration injuries (white finger). Machining materials can result in an accelerated hand tool pulling an individual forward, resulting in in lower back injuries.

Falling Machine
Machine not placed on the workbench level can result in a falling machine, lower leg and feet impact injuries.

Noise
Operating the machine will generate noise and may cause acute temporary hearing discomfort**.**

Falling Machine
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Fire, Dust Chemicals
Ignition sources, metal parts in wood (sparking) can ignite wood shavings & result in a fire & first second and or third degree burns. Planing wood can generate wood dust & can cause acute or chronic respiratory illness or irritation to the eyes

Sharps
Removing and replacing the cutting tool can result in lacerations to the hands and fingers.

Ejected materials

Cutting pieces of timber can result in flying materials that cause blunt force injury to the operator or bystanders.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for planing pieces of timber to a required thickness.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure that the planer is plugged in to a socket with a Residual Control Device (RCD).
- 240v power tools are not permitted to be used for external work.
- Inspect the edge of the cutting tool for damage or defects prior to use. Do not use if damaged or defected in any way and remove from use for repair and replacement by a competent person.
- Inspect the electrical cable, plugs and planer for damage or defects prior to use.
- Do not use if cable or planer is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of. A competent person must carry out repairs.
- Always work away from the machine electrical power cable.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Never leave a hand tool lying on the ground, rest it on and in from the edge of a nearby workbench.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the rotating cutting tool.
- Before handling the cutting tool allow to come to a natural complete stop.
- Never place free hand in line with the cutting tool.
- Never assist in stopping or slowing down the rotating cutting tool.
- Avoid using the hand tool for extended periods of time, tend to other duties for periods of rest or split the work load with another work colleague where possible.
- Follow the manual handling training guidelines at all times when using the machine.
- Maintain a firm and secure hold of the handle of the machine when cutting materials.
- Where possible ensure that material being cut is clamped securely.
- Do not rest the machine cutting tool on the timber being machined prior to starting the machine, place the front of the machine on the edge of the timber.
- Use both hands to operate the machine.
- Where possible remove any metal materials from wood being machined.
- Always place the planer firm, flat and in from the workbench edge.
- Wear safety glasses when planing materials.
- Wear safety hearing protection.

- Always use the planer as intended by the manufacturer.
- Never leave a planer unattended and return to storage when no longer required.
- Wear a safety mask when cutting wooden materials.
- Turn on the extract system when using the machine.
- Avoid the build of wood shaving and clean the machine and surrounding area regularly.
- Ignition sources are not permitted at or near the material being cut.
- Ensure that bystanders are a safe distance from the machine when in use.
- Where possible remove all metal parts from materials being machined.
- Group gatherings are not permitted around the machine.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Safe use of operating the tool
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Hearing protection
- Dust Mask
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Hand Operated Clamps	Ref: SWPS 634 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and carrying clamps to and from storage, over loading the body with several clamps can result in acute or chronic lower back and or musculoskeletal injuries

Falling Clamp
Unsecure hold of clamp when moving to and from storage, clamp not secure on worktable or storage, carrying to many clamps at a time can fall and result in lower leg and or feet impact injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, clamps and wooden pieces lying on the ground can result in slipping and tripping and cause head and body impact fall injuries.

Sharps and failed clamp
Clamps can contain metal sharps from impact damage and result in major and minor lacerations to the hands and fingers.

Clamping Materials
Closing the clamp to hold materials to a work bench or together can result in entrapment and pinching and crushing of fingers or hands and result in broken bones cuts and bruises.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The clamps are used for clamping pieces of timber of varying sizes together or to a workbench.

Controls

- Students are permitted use of the clamps, under the lecturer or technicians supervision.
- Students must request the clamp from the lecturer or technician.
- Ensure to use the correct clamp for the job in hand, never use more clamps than is necessary.
- Always use the clamp as instructed and intended by the manufacture.
- Follow the manual handling training guidelines at all times when transporting clams.
- Ensure to maintain a secure and firm hold of the clamp when transporting.
- Never carry more clamps than you can maintain a secure hold of.
- Clamps not in use must be stored away neatly in the stores.
- Always place the clamp in from the work bench edge.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never place clamps or wooden work pieces on the ground, use a nearby work bench.

- Inspect the clamp for damage or defects prior to use, do not use if damaged or defected in an way and remove from use for repair or safe disposal of.
- Return to storage when no longer required.
- Never place hands or fingers in between the jaws of the clamp when clamping.

Checks & Inspections

- Inspect the tool prior to use
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 635
	Revision Date: Oct 2026
Woodworking Benches	Approved by: Breda Brennan

Hazards

Manual Handling
Pulling and dragging the work bench into the required work position can result in acute or chronic lower back and or muscular skeletal injuries.

Ergonomics
Working in the same position and stance for extended periods of time can cause fatigue and or musculoskeletal injuries.

Falling Vice / Material / Tools
Unsecure vice on the work bench can fall, material in vice falls, tools and drawing boards fall from the bench top and result in impact injuries to the lower legs and feet.

Mechanical
Impact injuries to the hands and fingers when using the quick release to close the vice.

Slips Trips and Falls
Poor housekeeping, personal belongings, materials, waste materials or tools lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The benches are used to carry out various activities from drawings, planning, cutting timber etc.

Controls

- Students are permitted to use the work benches under the supervision of the lecturer or technician.
- Follow the manual handling training guidelines when moving the workbench and seek assistance if required.
- Avoid working in the same position for extended periods of times, tend to other duties for periods of rest, and where possible split the work load with fellow colleagues.
- Ensure that the vice is fixed bolted to the bench and secure prior to operating it.
- Ensure that material placed in the vice is securely clamped prior to working on it.
- Drawing boards and tools must be placed in from the work bench edge when being utilised.
- Maintain hands and fingers free from the inside jaws of the vice at all times of clamping materials or closing the vice.
- Slowly close the vice when using the quick release lever.

- Maintain good housekeeping and work area free from personal belongings at all times.
- Tools and materials in use must be stored on the work bench or nearby workbench at all times of use.
- Waste material must be cleaned up as soon as possible.
- Safety boots must be worn.

Checks & Inspections

- Regular maintenance and inspection to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Manual handling training

Personal protective equipment required (last resort)

- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 636
	Revision Date: Oct 2026
Transportation of Materials	Approved by: Breda Brennan

Hazards

Manual Handling
Pushing and pulling the trolley to & from storage & work shop, lifting timber and materials from racking, loading and unloading the trolley with materials can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Timber / Materials
Lifting timber from racking, not placed securely on the trolley can result in falling timber or materials and cause impact inquires to the upper torso and lower legs and feet.

Traffic
Transporting the timber and materials from the stores to the workshop and vice versa can result in been struck by a moving vehicle, or striking bystanders resulting in major or minor impact injuries.

Mechanical
Crushing of feet if under neat on in line with the wheels of the trolleys.

Moving Trolley
Crushing injuries from unassisted moving trolley on a slope or hill etc.

Failed trolley axles
A failed trolley axle can result in crushing of feet with a collapsing trolley.

Timber Splinters
Manually handling pieces of timber for transportation can result in puncture wounds to the hands, fingers and other body parts.

Dust / Debris
Lifting loads from the racking can result in major or minor eye irritation from dust and debris that has settled on the load for transportation.

Slips Trips and Falls
Poor housekeeping, personal belongings, materials lying on the ground, wet floor of stores can cause slipping and tripping resulting in fall head and body impact injuries. Snow and ice can result in slipping causing fall impact injuries.

Weather
Exposer to UV Rays can result in acute burns to the skin, cold wet weather can result in acute minor hypothermia.

Person Exposed to Risk

☑Students ☑ Employees ☑Public ☑ Contractors ☑ Visitors

Work Description

Employees are required to transport student projects, timber planks, sheets of materials etc. to and from the timber stores and carpentry joinery work shop.

Controls

- Students are not permitted to carry out this task.
- Technician or class assistant may only carry out this task.
- Follow the manual handling training guidelines at all times.
- Where required seek assistance when lifting, carrying and loading the trolley.
- Ensure to place and load and materials securely on the trolley when transporting.
- Follow the rules of the road when transporting the materials on campus road way.
- Maintain feet clear of the path of the trolley at all times.
- Ensure that the trolley is parked on level flat ground. Use a choc bloc where required.
- Inspect the wheels and axles of the trolley prior to use. Do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Wear heavy duty safety gloves when handling timber.
- Wear safety glasses when transporting the loads.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Minimise skin exposure to UV light by reducing outside exposure time.
- Do not transport loads where the road is covered with snow and or ice.
- Ensure to wear adequate clothing when outside during cold or wet weather.
- Observe the weather conditions prior to transporting loads.

Checks & Inspections

- Regular maintenance and inspection to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Manual handling training
- PPE Training

Personal protective equipment required (last resort)

- Safety Boots
- Heavy Duty Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 637
	Revision Date: Oct 2026
Disposal of Class Projects	Approved by: Breda Brennan

Hazards

Manual Handling

Lifting, carrying and breaking up projects, carrying broken up projects for disposal can result in acute or chronic lower back and or musculoskeletal injuries

- See SWPS CJ 005 Centauro 600 & FBR 400 Woodworking Bandsaws
- See SWPS CJ 016 Carpentry Joinery Hand Tools
- See SWPS 017 Corded and Cordless Hand Held Drills
- See SWPS CJ 038 Woodworking Benches
- See SWPS CJ 039 Transportation of Loads
- See SWPS CJ 041 Timber Stores

Person Exposed to Risk

☑Students ☑ Employees ☐Public ☐Contractors ☐Visitors

Work Description

Employees are required to dispose of class projects when they have exceeded their retention period, projects are dismantled and broken through various means.

Controls

- Students are not permitted to carry out this task.
- Technicians and class assistant may carry out this task.
- Follow the manual handling training guidelines at all times and seek assistance if required.
- See SWPS CJ 005 Centauro 600 & FBR 400 Woodworking Bandsaws
- See SWPS CJ 016 Carpentry Joinery Hand Tools
- See SWPS 017 Corded and Cordless Hand Held Drills
- See SWPS CJ 038 Woodworking Benches
- See SWPS CJ 039 Transportation of Loads
- See SWPS CJ 041 Timber Stores

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- See relevant SWPS

Personal protective equipment required (last resort)

- See Relevant SWPS

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 638
	Revision Date: Oct 2026
Timber Stores	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and carrying timber to and from the stores, lifting timber and materials to and from racking, can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Timber / Materials / Failed Racking
Lifting timber to and from racking, not placed securely on the racking can result in falling timber or materials and cause impact injuries to the head, racking is not secure resulting in head and upper torso crushing.

Traffic
Transporting the timber and materials to and from the stores can result in been struck by a moving vehicle, or striking bystanders resulting in major or minor impact injuries.

Mechanical
Crushing of feet if under neat on in line with the wheels of the trolleys.

Moving Trolley
Crushing injuries from unassisted moving trolley on a slope or hill etc.

Failed trolley axles
A failed trolley axle can result in crushing of feet with a collapsing trolley.

Timber Splinters
Manually handling pieces of timber to and from storage can result in puncture wounds to the hands, fingers and other body parts.

Dust / Debris
Lifting and loading materials to and from the racking can result in major or minor eye irritation from dust and debris that has settled on the load for transportation.

Slips Trips and Falls
Poor housekeeping, personal belongings, materials lying on the ground, wet floor of stores can cause slipping & tripping resulting in fall head & body impact injuries. Snow & ice can result in slipping causing fall impact injuries.

Weather
UV exposure can result in acute burns to the skin, cold wet weather can result in minor hypothermia.

Fire
Timber exposed to ignition sources can combust resulting in death or first second and or third degree burns.

Person Exposed to Risk

☑Students ☑ Employees ☑Public ☑ Contractors ☑ Visitors

Work Description

Employees are required to load and unload the racking of the stores with student projects, timber planks, sheets of materials etc.

Controls

- Students are not permitted to carry out this task.
- Technician or class assistant can carry out this task.
- Follow the manual handling training guidelines at all times.
- Where required seek assistance when lifting, carrying, loading and unloading the racking.
- Ensure to place and load timber and materials securely on the racking.
- Heavy materials must be placed on the bottom of the racking.
- Inspect the racking from damage or defects prior to use, do not use if damage or defected in any way.
- Follow the rules of the road when loading or unloading the materials in the stores.
- Maintain feet clear of the path of the trolley at all times.
- Ensure that the trolley is parked on level flat ground. Use a choc bloc where required.
- Inspect the wheels and axles of the trolley prior to use. Do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Wear heavy duty safety gloves when handling timber.
- Wear safety glasses when transporting the loads.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Items must not be stored on the walkway of the stores.
- Minimise skin exposure to UV light by reducing outside exposure time.
- Do not transport loads to the store when the road is covered with snow and or ice.
- Ensure to wear adequate clothing when working during cold or wet weather.
- Observe the weather conditions prior to loading the stores.
- Ignition sources are not permitted at or near the stores.
- The stores must be locked at all times when not in use. Access to the stores must be limited by issuing of key to approved users.
- The store must be exclusively used as a timber store.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- Regular inspection to conducted on the racking and records maintained by the Institute.
- Manual handling training
- PPE Training

Personal protective equipment required (last resort)

- Safety Boots
- Heavy Duty Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 639
	Revision Date: Oct 2026
Dusting Down of Exhibit Pieces	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, pulling and pushing of exhibit pieces can result in musculoskeletal injuries, lower back, hand, arm and finger strain. Pushing and pulling hoover/buffer can result in lower back injuries, musculoskeletal injuries.

Chemicals
Wood dust may cause eye and skin irritation. Damage to the lungs by acute wheezing or chronic asthma.

Electricity
Loose, damaged or poorly fitted electrical cables can result in electric shock-death or minor injuries. First, second or third degree burns. Secondary injuries resulting in musculoskeletal injuries, cuts and bruises, broken limbs and or broken fingers.

Fire
Fire can be caused by build-up of dust in contact with ignition source resulting in death, first, second and/or third degree burns.

Sharps
Contact with wooden sharps can result in severe to minor cuts to hands and fingers.

Slips Trips and Falls
Poor Housekeeping, trailing cables can cause slips trips and falls resulting in broken limbs, musculoskeletal injuries, broken fingers, cuts and bruises.

Person Exposed to Risk

☑Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Class assistant is required to take down and manually handle various display exhibits in the workshop and clean by dusting down and hovering.

Controls

- Cleaning must be carried out when students, contractors, visitors or other staff are not present.
- Turn off electricity at main supply and turn off Isolation switch for machines beside exhibit pieces.
- Lift exhibit piece down from the wall and place on a workbench table or standing on the ground.
- Brush down the dust from the exhibit piece or hoover from it.

- Spiral stair case exhibit piece must be brushed from top to bottom, do not stand on exhibit piece.
- Hoover any dust from the floor.
- When required wear PPE.
- Follow the manual handling training guidelines when required.
- Hoover the dust from the floor.
- Empty the contents of the hoover into a black bag and skip if required.
- Replace hoover back to storage when not in use.
- Avoid trailing cables where possible.
- Maintain work space free from clutter.

Checks & Inspections

- Check that the cable, plug of hoover is free from visual damage.
- Check that the floor around work area is free from, trailing cables, clutter and rubbish.

Information, Instruction & Training

- Manual handling training.
- Chemical handling training.
- PPE training.

Personal protective equipment required (last resort)

Dust Mask, glasses, safety boots and gloves.

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	= Risk Factor	9 High Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	2	= Risk Factor	3 Low Risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 640
	Revision Date: Oct 2026
Workshop Extraction Pipe Cleaning	Approved by: Breda Brennan

Hazards

Slips Trips and Falls
Trailing electrical cables, untidy work area can result in broken limbs from falls, major and minor cuts and bruises.

Manual Handling
Pushing and pulling hoover/buffer, tables etc or range rod can result in lower back, neck injuries, musculoskeletal injuries.

Wood dust
Contact with wood dust may cause eye and skin irritation. Damage to the lungs by acute wheezing or chronic asthma.

Falls from heights
Standing on a ladder, chair or table etc. to gain a height advantage for cleaning can result in a fall and cause head and body injuries.

Electricity
Damaged hoover cable can result in electric shock, death or minor injuries. First, second or third degree burns.

Fire
Build-up of wood dust can lead to a fire when in contact with ignition source resulting in death, first, second and/or third degree burns, acute and chronic respiratory illness.

Person Exposed to Risk

☑Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
Class assistant is required to dust down the extraction pipe system using a range rod with a connected duster.

Controls
- Cleaning must be carried out when students, contractors, visitors or other staff are not present.
- Inspect the cable on the hoover prior to use. Do not use if damaged.
- Move the classroom furniture (use the pallet truck for moving workbenches) prior to cleaning.
- Put on the required PPE.
- The use of a ladder is not permitted for this cleaning task.
- Do not stand on chair/s, workbenches or machinery when carrying out cleaning task.
- Ensure secure footing (both feet on the ground) at all times when cleaning in progress.
- Use the extended range rod to clean the dust down from the air extraction piping.

- Do not over reach when cleaning in progress.
- When cleaning is completed hoover dust from the tops of the machines and floor.
- Empty the contents of the hoover into a black bag and skip if required.
- Return the hoover to storage when cleaning of extraction pipe is completed.

Checks & Inspections

- Check that the cable, plug of hoover is free from visual damage.
- Check that the floor around work area is free from, trailing cables, clutter and rubbish.

Information, Instruction & Training

- Manual handling training.
- Chemical handling training.
- PPE training.
- MSDS.

Personal protective equipment required (last resort)

Dust Mask, glasses, safety boots and gloves.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 641
	Revision Date: Oct 2026
Cleaning of Workshop Machinery	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting pushing and or pulling hoover/buffer and rubbish can result in lower back injuries, musculoskeletal injuries.

Wood dust
Wood dust may cause eye and skin irritation. Inhalation of dust may result in acute or chronic wheezing.

Electricity
Incorrectly installed, loose or damaged cables can result in electrocution-death or minor injuries. First, second or third degree burns.

Fire
Ignition sources can result in wood dust catching fire and causing first, second and/or third degree burns.

Mechanical
Contact with rotating saw blade or cutting tool can result in loss of limb, major and minor cuts to the hands and fingers.

Sharps
Contact with non-moving saw blades, machine cutting tools can result in severe, minor lacerations to hands and fingers.

Slips Trips and Falls
Poor Housekeeping, trailing hoover cables can cause slips trips and falls resulting in broken limbs, musculoskeletal injuries, broken fingers, cuts and bruises.

Machine doors
Opened machine overhead doors can result in head impacting injuries causing cuts and bruises.

Person Exposed to Risk

☑Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
Class assistant is required to clean workshop machinery from dust and shavings build up.

Controls
- Cleaning must be carried out when students, contractors, visitors or other staff are not present.
- Turn off the machine electricity supply at the mains supply.

- Turn off Isolation switch at the machine being cleaned.
- Do not transport electrical cleaning equipment by its power cable.
- Follow the manual handling training guidelines at all times. Seek assistance where loads are too heavy or cumbersome to lift or carry.
- Wear glasses and gloves and approved dust mask when cleaning is in progress.
- Ensure the room is well ventilated and extract system is working and turned on.
- Do not allow wood dust to build up, clean the machine regularly or when required.
- Do not touch the cutting saw blades or tools of any machinery with bare hands.
- Where possible use the lance of the vacuum cleaner to extract waste wood material.
- Where possible avoid trailing power cables.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Exercise caution when cleaning machinery with doors. Close doors when cleaning is complete.

Checks & Inspections

- Check that the cable, plug of hoover is free from visual damage.
- Check that the floor around work area is free from, trailing cables, clutter and rubbish.

Information, Instruction & Training

- Manual handling training.
- Chemical handling training.
- PPE training.
- MSDS

Personal protective equipment required (last resort)

Dust Mask, glasses, safety boots and gloves.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 642
	Date: Oct 2026
Waste and Dust Extraction Silo	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, removing or emptying the dust bags from the extract system can result in acute or chronic lower back and or muscular skeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, dusty extractor floor, wet dust, ice and snow can cause slips and falls resulting in impact head and body injuries from falls.

Weather
Emptying the extraction system in snow, frosty or cold conditions can result in acute hypothermia. Windy conditions can result in air borne dust and acute respiratory illness. Rain can result in dust becoming wet and slippery.

Fire / Explosion
Naked flames, hot surfaces or ignitions sources can result in saw dust etc. catching fire and or exploding causing death or first, second and or third degree burns, puncture wounds to the face and or body parts, the inhalation of dust and or smoke resulting in asphyxiation.

Chemical Dust
Removing and replacing dust bags from the extract system, not switching off the extract machine prior to emptying can result in the inhalation of chemical dust and acute or chronic respiratory illness and or disease.

Flying Debris
Emptying and removing dust bags can result in coming into contact with flying dusty debris resulting in acute or chronic respiratory illness and or permanent or temporary eye damage.

Mechanical
Removing and replacing the steel bands that hold the plastic bags in place can result in pinched or crushed fingers if in between steel band when closing secure.

Person Exposed to Risk

☑ Students ☑ Employees ☑Public ☑Contractors ☑Visitors

Work Description

The machine Extracts Dust and Small cuttings of less than 50mm square. The extraction comprises of a metal fabricated waste storage silo, ducting and a powered electric fan that also recycles air back into the carpentry workshop. The silo is located externally to the rear of the carpentry and joinery

workshop. The dust extractor removes dust and waste from wood working machines through manually controlled dampened collecting points and a system of metal ducting to the locked and secured silo containing Six collection bags. These bags must be manually removed and the waste disposed of via a skip located in a secured compound 100m (approximately) from the silo or via external collection.

Controls

- Cleaning must be carried out when students, contractors, visitors or other staff are not present.
- The workshop attendant removes and replaces the dust bags **one time per day or as required** as part of his duties to clean the carpentry and joinery shop.
- Ensure that the Section Head, Technician or other responsible person is advised when the extraction silo is about to be cleaned and sign the duties book prior to cleaning.
- Isolate the machine from the mains electricity before maintenance by ensuring the suction fan is switched off as follows: press the key control button and remove the key from the extraction control panel (This control panel is located to the side of the tool store door within the Carpentry and Joinery workshop).
- The only key to the lock is kept by the attendant on his/her person to prevent accidental **powering on** of the extractor.
- Dust bags must be emptied before they exceed 2/3 (two thirds) of fill capacity. Seek assistance if bags have exceeded 2/3 capacity.
- Always follow the manufacturer's standard operating procedures as detailed in the extraction manual.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure to wear appropriate clothing as determined by the weather conditions.
- Observe the condition of the outside ground surface (due to weather conditions) prior to commencing work.
- Avoid working externally for extended periods of time in adverse weather conditions.
- Where possible, avoid emptying the dust bags in windy or wet conditions.
- Fire Extinguisher must be at hand when extraction of waste is carried out. Ensure to have a multipurpose fire extinguisher.
- Smoking, naked flames, ignition sources or hot surfaces are not prohibited within 30 meters of the extract system.
- Full safety PPE must be worn for this operation (see below).
- Before unlocking silo doors: check that the silo is fully switched off, wait five minutes for falling dust to settle.
- Ensure that the machine motor has come to rest before opening the unit.
- All bystanders must be asked to move to a safe distance from the silo prior to commencing work.
- Never place hands or fingers in between the steel band and plastic bags when clamping a new bag.
- Ensure plastic bags are free from damage or defects prior to use, do not use if damaged or defected in any way.
- Un-lock silo doors and secure keys and padlock
- Undo the clamps holding waste Bags
- Remove the waste bags to the outside of the silo, tie off the tops, and place on a transport trolley-cart for removal to the waste disposal skip.
- Never enter the silo or manoeuvre oneself into the hopper section of the bag feeder unit

- Never leave a silo without a dust collection bag connected.
- The silo doors must remain closed and locked at all times, unless when cleaning/emptying is in progress.
- Maintain hands and fingers clear when closing doors and hinges of the silo.

Occupational Health

Dust Monitoring for this activity is required. Personal Exposure levels must be established.
Health Surveillance and Monitoring must be an integral part of the Safety Management program.
If in doubt seek advice from Head of Department, Head of Section, Technician or Lecturer. Normal safety precautions should be adhered to at all times.

Checks and Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Ensure all doors and guards are in place and checked at regular intervals
- Ensure all bags are in good condition
- Ensure all safety and personal protection is in good order, notices are readable and displayed in correct locations
- Technicians to monitor compliance with control measures
- Keep machine in good condition with regular checks
- Never carry out maintenance without full PPE.
- Ensure that the Section Head, Technician or other responsible person is advised when maintenance or inspection operations are to be carried out.

Information, Instruction and Training

- Manual handling training
- Chemical handling training
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Battery powered air assisted sealed full face mask conforms to EN 2941:1999 – TH2
- Protection gloves
- Fully certified Boots
- Full protective electrostatic-proof overalls with elasticised cuffs and elasticised leg endings

Initial Risk Rating (without control measures)

Probab
:

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after present controls introduced)							
Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Medium**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 643
	Revision Date: Oct 2026
Door Hanging	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, pulling and pushing of doors and associated materials can result in musculoskeletal injuries, lower back, hand, arm and finger strain.

Falling Door / Materials / Tools
Lifting doors in and on/off to door frames can result in falling timber or materials and tools and can cause impact inquires to the upper torso and lower legs and feet.

Ergonomics / Manual Handling
Operating the planer in crunched awkward positions and for extended periods of time, lifting the machine to and from storage and can result in acute or chronic lower back and musculoskeletal injuries.

Vibration / Acceleration
Planning materials for extended periods of time can result in hand and vibration injuries (white finger). Machining materials can result in an accelerated hand tool pulling an individual forward, resulting in in lower back injuries.

Timber Splinters
Manually handling pieces of timber can result in puncture wounds to the hands, fingers and other body parts.

Chemicals
Wood dust may cause eye and skin irritation. Damage to the lungs by acute wheezing or chronic asthma.

Electricity
Loose, damaged or poorly fitted electrical cables can result in electric shock - death or minor injuries.
First, second or third degree burns. Secondary injuries resulting in musculoskeletal injuries, cuts and bruises, broken limbs and or broken fingers.

Fire
Fire can be caused by build - up of dust in contact with ignition source resulting in death, first, second and/or third degree burns.

Sharps
Contact with wooden sharps can result in severe to minor cuts to hands and fingers.

Slips Trips and Falls
Poor Housekeeping, trailing cables can cause slips trips and falls resulting in broken limbs, musculoskeletal injuries, broken fingers, cuts and bruises.

Person Exposed to Risk

☐ ✓Students ☐✓Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Students are required to fit and hang a set of double doors onto fixed frames. Hand tools and power tools are used for the mounting of the doors onto a timber door frame.

Controls

- On induction students must be informed by the lecturer of the work shop hazards.
- Students are permitted use of the equipment, under correct instruction and the lecturer or technicians supervision.
- Ensure that the planer is plugged in to a socket with a Residual Control Device (RCD).
- Inspect the edge of the cutting tool for damage or defects prior to use. Do not use if damaged or defected in any way and remove from use for repair and replacement by a competent person.
- Wear safety glasses when planing materials.
- Use both hands to operate the machine.
- Where possible remove any metal materials from wood being machined.
- Always place the planer firm, flat and in from the workbench edge.
- Wear safety glasses when planing materials.
- Always use the planer as intended by the manufacturer.
- Never leave a planer unattended and return to storage when no longer required.
- Avoid the build of wood shaving and clean the machine and surrounding area regularly.
- Where possible always use a battery operated or 110v drill. If required to use a 240v drill ensure that it is plugged in to a socket with a Residual Control Device (RCD).
- 240v power tools are not permitted to be used for external work.
- Inspect the electrical cable, plugs and drill for damage or defects prior to use.
- Do not use if cable or drill is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Never leave a hand tool lying on the ground, use a nearby work bench to rest it on.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.

- Never touch a rotating cutting tool.
- Never assist in stopping or slowing down a rotating tool or chuck head.
- Do not use the hand tool for extended periods of time and tend to other duties for periods of rest or split the work load with another work colleague if possible.
- Maintain a firm and secure hold of the hand tool when drilling materials.
- Always place the hand tool in from the edge of a work bench when not in use.
- Wear safety glasses when drilling materials.
- Wear safety hearing protection when required.
- Always use the drill as intended by the manufacturer.
- Never hold or handle a drill bit by its cutting tool head, wear gloves if required.
- Never leave a drill unattended and return to storage when no longer required.
- Always hold the tool with both hands when drilling materials.
- Ensure material is clamped whenever possible and firmly controlled.
- Floor must remain free from off cuts and waste (All waste wood must be placed into the bin).

Checks & Inspections

- Regular maintenance to be carried out according to tool manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.
- Safe use of operating the tools.

Personal protective equipment required (last resort)

- Safety Boots
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**1**	= Risk Factor	**1 Low Risk**

Risk Assessment Review

As and when process changes or yearly

SECTION 7

ELECTRICAL TRADES WORKSHOPS / LABS

Safe Work Practice Sheet	Ref: SWPS 700
	Revision Date: Oct 2026
Wiring / Building and Testing of Electrical Panels	Approved by: Breda Brennan

Hazards

Electricity
Slips, Trips and Falls
Manual handling
Explosions
Cutting and snipping
Mechanical
Temperature

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The wiring / building of panels for various voltages and testing.

Controls

- Students must be informed at induction about the importance of not energising panels on their own.
- The 3 phase 400v and Single Phase supply can be energised by a student under correct instruction and the direct supervision of the Lecturer.
- The key for 3 Phase 400v and Single Phase supply is to be kept under the lecturers control at all times.
- Only one 3 Phase 400v supply lead may be in use at any given time.
- Students may use Single Phase supply leads under correct instruction and the supervision of the lecturer.
- 3 Phase 400v and Single Phase supply leads must be requested from the lecturer.
- 3 Plase 400v and Single Phase supply leads must be returned to the lecturer when no longer required.
- It is against Part 3 Electricity of the Safety, Health and Welfare at Work (General Application) Regulations 2007 -2016 for non-certified persons to work on live panels or equipment.
- It is advised that Safety glasses must be worn when working on panels.
- Screw top bottles are the only food/drink item allowed in the workshop. They must not be stored in the vicinity of the apprentices panel. All other items must be consumed/disposed of before entering the workshop floor.
- Do not operate with loose clothing, long exposed hair or jewellery.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Students <u>are not permitted</u> to rotate the workstations. The Electrical Technician/ Technical Assistants should be notified if the workstation is not in the correct position.

- Follow the manual handling training guidelines at all times.
- All damaged Power Leads, Sockets or equipment must be brought to the attention of the Lecturer, replacements may be obtained from the Technician.
- Students should not attempt to repair any electrical items or cables.
- All conduit, Din rail etc. must be held in a suitable Vice when being cut or threaded.
- Individuals to exercise vigilance when using hand held tools for cutting and snipping.
- Do not touch drill bits or drilled material after drilling (allow to cool down).

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- All voltage power outlets to be checked and recorded each term.
- Ensure emergency shutdown devices are checked and recorded each term
- RCDs tested and recorded each term
- Power supply leads must be inspected prior to use. Leads are also to be tested and recorded each term.
- Electrical circuits tested every 3 years by Estates Department.

Instruction & Training

- Trained First Aider/CPR (available when live working is carried out)
- Manual Handling training
- PPE

Further Information:
Part 3 Electricity of the Safety, Health and Welfare at Work (General Application) Regulations 2007 to 2016 www.hsa.ie
Electro-Technical Council of Ireland (ETCI) www.etci.ie/docs/ET215(2008).pdf.
National Standards Authority of Ireland (NSAI)

Personal protective equipment required (last resort)

- Employees and Students must wear safety boots or shoes while in the workshop.
- Employees must wear safety glasses when using power tools.
- It is advised that Safety glasses be worn when working on panels.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safer Work Practice Sheet	Ref: SWPS 701
	Revision Date: Oct 2026
Rotation of Electrical Workstations	Approved by: Breda Brennan

Hazards

Mechanical
Manual Handling
Slips trips and falls
Ergonomics

Person Exposed to Risk

☐ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
The Action of rotating Workstation Boards

HAZARD 1 Manual Handling

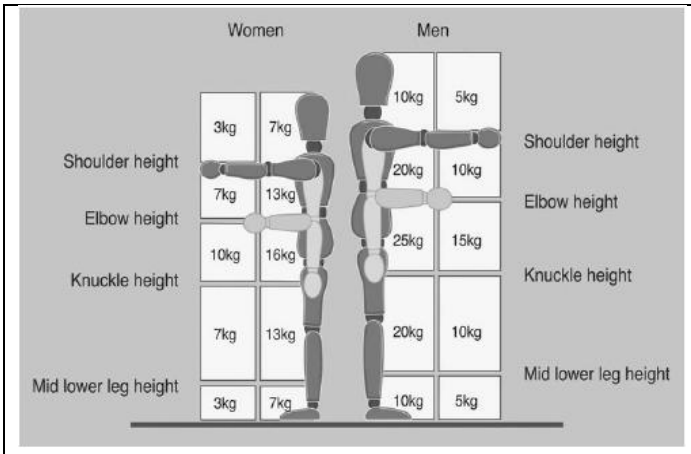
The workstations require rotation. The weights involved exceed the guidelines weights (see diagram below) set out by the Health and Safety Authority.

HAZARD 2 Ergonomics

A risk of physical injury when taking into account the following existing conditions:

- Weights Involved
- Force applied to rotate the board forward (when boards may drop back) and stopping the boards
- Twisting or turning of the body while carrying out this operation
- Twisting, stooping, reaching forward

The work boards – are:
• heavy
• bulky
• difficult to grasp
• unstable / unpredictable with rotation



Guideline weights issued by the Health and Safety Authority.

Controls

- Good housekeeping must be maintained and encouraged.
- At induction, students must be informed that they must not turn the work boards or work stations and that the lecturer or technician should be informed if required to turn the work board or station.
- The technician and/or assistant at the end of each class or phase of works will rotate the workstations. There are a maximum of 16 workstations, all or some workstation may require daily rotating. Boards will only be turned when students are no longer in the workshop. Access to the workshop will be limited during board turning operations.
- The task of rotating the Electrical Work Boards must be carried out by both the technician and/or assistant.
- The retractable hazard barriers must be maintained in place while turning the work boards in case of caretaker/cleaner/contractor etc entry
- Follow the manual handling training guidelines at all times.
- Care to be taken when attaching drill shaft to motor.
- Battery drill to be used in a controlled, low speed as shown during hand over from supplier.
- When work boards are rotated/flipped they must be bolted back into their designed fixed position and verified. (Rotation – 1 fixed point. Flip – 2 fixed points)
- Locking bolts on workstations to be checked and recorded for spring, sliding and locking functionality each term.

Recommendations

1. Mesh Guarding to be installed at exposed ends of all rotating workstations.
2. Bolt levers on rotating workstations, work boards need to be replaced by more suitable ergonomic levers (presently, firm grip cannot be obtained).

Further controls agreed

- Manual handling training

Checks & Inspections

- Rotatory boards will be checked and recorded each term

Personal protective equipment required (last resort)

- Employees and Students must wear safety boots or shoes while in the workshop.
- Students must wear safety glasses when directed while working on workstations.

Initial Risk Rating (with existing control measures)

Probability :	**2**	x Severity	**3**	= Risk Factor	**6 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after further controls outlined introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

Risk reduction with regard to this activity must be an integral part of the Safety Management Program.

Safe Work Practice Sheet **Electrical Test Beds** **(No longer in use in this area / used in Electronic Eng Lab & covered as part of SWPS 108-FH2 Test Bed)**	Ref: SWPS 702 Revision Date: Approved by: Breda Brennan

Hazards

Electricity
Slips, Trips and Falls
Explosions

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Students are required to complete a number of experiments. All results are entered into the report by the student as the information is being obtained.

Controls

- Students are permitted to carry out this task, under correct instruction and the lecturer or technicians supervision.
- No food or drinks to be consumed or stored near work stations.
- Safety glasses must be worn when working on test beds.
- The Test Beds operate at High Voltages from 230v to 400v; under no circumstances is the student permitted to use these supplies without the consent of the Lecturer and the presence of the technician.
- The supplies are controlled by means of a Key switch and may only be issued to students while under the supervision of the Lecturer.
- When the experiment using any of these supplies is completed, the Key must be returned to the Lecturer without delay.
- The safety Keys must be at all times maintained in a locked Key safe under the control of the Technician/Lecturer.
- On completing the electrical circuit wiring, students must have the wiring checked by the Lecturer before any connection is made to the supply system.
- Any damaged equipment must be returned to the Technician for repair or disposal. Students are not permitted to repair any equipment.
- Maintain good housekeeping and work area free from [personal belongings at all times.

Checks & Inspections

- Students are supervised by lecturing staff and technical staff during this procedure

- Lecturers and Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- All power outlets to be checked monthly for tripping operations
- Ensure emergency shutdown devices are checked each term
- All RCDs back to the electrical main supply panel tested once per term (conducted and recorded by the Technician)
- Electrical circuits tested every 3 years

Information, Instruction & Training

- Students are regularly informed of the dangers and are not permitted to use power supplies without the direct supervision of the lecturer or technician.
- Trained First Aider/CPR (available when live working is carried out)

Further Information:

Part 3 Electricity of the Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016 www.hsa.ie
Electro-Technical Council of Ireland (ETCI) www.etci.ie/docs/ET215(2008).pdf.
National Standards Authority of Ireland (NSAI)

Personal protective equipment required (last resort)

- Employees and Students must wear safety footwear while in the workshop.
- Students must wear safety glasses when working on panels or using power tools.

Initial Risk Rating (without any control measures)

Probability		x	Severity		=	Risk Factor	
÷	**3**			**3**			**9 High Risk**

-	**KEY**	-
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability		x	Severity		=	Risk Factor	
÷	**1**			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 703
	Revision date: Oct 2026
Final Testing of Student Exercise	Approved by: Breda Brennan

Hazards

Electricity
Explosion
Manual Handling
Slips, Trips and Falls
Poor housekeeping
Tipping trolley

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Students are required to test single and three phase motors by wiring them to their own previously wired panels. Motors must be brought over to their workstations.

Controls

- Students are permitted to carry out this task, under correct instruction and supervision of the lecturer.
- Screw top bottles are the only food/drink item allowed in the workshop. They must not be stored in the vicinity of the apprentice's panel. All other items must be consumed/disposed of before entering the workshop floor.
- Safety glasses must be worn when working testing motors and control panels.
- Staff to follow the manual handling training guidelines at all times.
- Panels operate at High Voltages from 230v to 400v; under no circumstances is the student permitted to use these supplies without the consent of the Lecturer .
- The supplies are controlled by means of a Key switch and may only be issued to students while under the supervision of the Lecturer.
- On completion of final testing the Key must be returned to the Lecturer without delay.
- The power supply keys must be at all times maintained under the control of the Technicians. Lecturers can obtain the keys from the Technician's when required.
- Any damaged equipment is to be returned to the Technician for repair or disposal. Students are not permitted to repair any equipment.
- Single and three phase motors should be bolted to trolleys on wheels.
- Defective motor wiring must be reported to the lecturer or technician.
- Technician must carry out repairs on defective wiring or motors.
- Trolleys must be placed within close proximity of workstation to minimise trailing cables along the floor.

- On successful completion of the exercise the student must disconnect the wiring between motor trolley and the workstation and return the trolley to the storage area or to another student awaiting trolley.
- Trolleys and wheels must be maintained in good working order and be fit for purpose. Technicians / Lectures to inspect for damage or defects prior to use.
- Maintain good housekeeping and work area free from personal belongings at all times.

Checks & Inspections

- Full visual inspection of motor and wiring on trolleys must be carried out by Lecturer / Technician prior to use.
- Students are supervised by lecturing staff and technical staff during this procedure
- Lecturers and Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- All voltage power outlets to be checked and recorded each term
- Ensure emergency shutdown devices are checked and recorded each term
- RCDs tested and recorded once per term
- Power supply leads must be inspected and results recorded prior to use.
- Electrical circuits tested every 3 years by Estates Department.

Information, Instruction & Training

- Students are regularly informed of the dangers and are not permitted to use power supplies without the direct supervision of the lecturer or technician.
- Trained First Aider/CPR (available when live working is carried out)
- Manual Handling training

Further Information:

Part 3 Electricity of the Safety, Health and Welfare at Work (General Application) Regulations 2007 - 2016 www.hsa.ie
Electro-Technical Council of Ireland (ETCI) www.etci.ie/docs/ET215(2008).pdf.
National Standards Authority of Ireland (NSAI)

Personal protective equipment required (last resort)

- Employees and Students must wear safety boots or shoes while in the workshop.
- Students advised to wear safety glasses when working on panels or motors.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)						
Probability :	**1**	x	Severity	**3**	= Risk Factor	**3 Low Risk**
Risk Assessment Review						
As and when the process requires changes or yearly						

Safe Work Practice Sheet Demonstration of Various Alarm Systems	Ref: SWPS 704 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Manual Handling
Slips, Trips and Falls
Chemicals – smoke detector test aerosol
Noise – Alarm sirens

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Teaching students the functionality of different alarm systems and using an aerosol smoke detector tester.

Controls

- Screw top bottles are the only food/drink item allowed in the workshop. They must not be stored in the vicinity of the apprentice's panel. All other items must be consumed/disposed of before entering the workshop floor.
- Inspect the electrical cable and plugs for damage or defects prior to use.
- Safety glasses to be worn when using the smoke detector aerosol.
- Alarm systems must be installed / wired on demonstration boards by technician.
- Technician to carry out inspection of demonstration alarms each term.
- Power Supply lead for alarms must be obtained through lecturer or technician.
- Alarm demonstration area must be kept tidy and free from clutter at all times.
- Students are not permitted to carry out any electrical work or wiring of alarm panels.
- Students must not open alarm panels.
- Students are only permitted to operate the function keys on all alarm panels.
- Students are permitted to use smoke detector spray tester, this must be obtained from the technician.
- Return the smoke detector aerosol to the technician when not in use.

Checks & Inspections

- Demonstration board must be visually inspected prior to use.
- Power supply leads must be inspected prior to use.
- Students are supervised by lecturing staff and technical staff during this procedure.
- Lecturers and Technicians to monitor compliance with control measures.

- Lecturers and technicians to monitor the wearing of PPE.
- All voltage power outlets to be checked and recorded each term.
- Ensure emergency shutdown devices are checked and recorded each term.
- RCDs tested and recorded once per term.
- Power supply leads must be inspected and results recorded prior to use.
- Electrical circuits tested every 3 years by Estates Department.

Information, Instruction & Training

- Students informed of the dangers and hazards of electricity
- Trained First Aider/CPR (available when live working is carried out)
- Manual handling
- Safety Data Sheet

Personal protective equipment required (last resort)

- Employees and Students must wear safety boots or shoes while in the workshop.
- Students must wear safety glasses when using smoke detector aerosol spray.

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 705
	Revision Date: Oct 2026
Preparation of Student Work Materials	Approved by: Breda Brennan

Hazards

Manual Handling
Ergonomics
Slips Trips and Falls
Sharps
Tipping trolleys
Falling boxes
Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Technicians / Assistants are required to gather and prepare work materials (switches, connectors etc.) for students in plastic trays, boxes etc. and place them into trolleys for distribution to students.

Controls

- Maintain good housekeeping and work area free from personal belongings at all times.
- Technician or assistants may only carry out this duty.
- Floor must be kept clean and free from obstruction and rubbish.
- Follow manual handling training guidelines.
- Inspect the trolley and tray for damage or defects prior to use, do not use trolleys or tray s if damaged or defected.
- Trays to be placed by Technicians/Technical Assistants at each students work station prior to examinations.

Checks & Inspections

- Trolleys and wheels must be inspected prior to use.
- Trays must be inspected prior to use.

Information, Instruction & Training

- Manual handling

Personal protective equipment required (last resort)

- Safety footwear

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS706
	Revision Date: Oct 2026
Portable Wheeled White Boards	Approved by: Breda Brennan

Hazards

Ergonomics / Manual Handling
Slips Trips and Falls
Chemicals – vapours white board markers
Tipping white board
Moving trolley

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Lecturers use tall white boards mounted on purpose built steel frame trolleys for mathematical, circuitry etc. and theory demonstrations.

Controls

- Students are not permitted to move the white boards on trolleys.
- Lecturer, technician or assistants are permitted to move the white boards.
- Mounted white boards must only be used on purpose built trolleys.
- Inspect the white board and trolley for damage or defects prior to use.
- Do not use a damaged or defected trolley or white board and remove form use for repair
- Unlock wheels before moving trolley and use both hands when pushing or pulling into place or back to storage.
- Lock wheels of trolley when in use or in storage.
- Do not lean against white boards or frame.
- Follow the manual handling guidelines.
- Only use nontoxic white board markers.
- Permanent markers must not be used.

Checks & Inspections

- Wheels and trolleys to be inspected prior to use
- White board must inspected prior to use for integrity of security and mounting on steel frame of trolley

Information, Instruction & Training

- Manual Handling training

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 707
	Revision Date: Oct 2026
Trolley with Three motors	Approved by: Breda Brennan

Hazards

Manual Handling
Slips Trips or Falls
Tipping trolley

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Technician and class assistant are required to position single phase and three phase motors permanently mounted on a trolley to the student's workstation/s.

Controls

- Do not operate with loose clothing, long exposed hair or jewellery.
- Students are permitted to use the trolley, under correct instruction and the supervision of the lecturer.
- Trolley must be maintained in good working order and fit for purpose.
- Do not use trolley if there is damage to the wheels, motors or electrical wiring.
- Repairs to the trolley must be carried out by technician/technical assistant.
- Any damaged equipment is to be returned to the Technician for repair or disposal.
- Single and three phase motors should be bolted to trolley base on wheels.
- Trolley must be placed within close proximity of workstation to minimise trailing cables on the floor.
- Students must exercise caution if adjustment of trolley at their workstation is required.
- When the student finishes with the trolley after their exercise has been tested, they should return the trolley to its storage area or pass it on to the next student waiting for it.
- Workshop floor space must be maintained free from clutter and rubbish.

Checks & Inspections

- Trolley must be inspected prior to use (wheels electrical wiring and motors).
- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Follow manual handling training guidelines

Personal protective equipment required (last resort)

- Employees must wear safety footwear while in the workshop.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when the process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 708
	Revision Date: Oct 2026
Use of Hand Held Tools	Approved by: Breda Brennan

Hazards

Electricity
Sharps
Damaged Tools
Falling Hand Tools
Slips Trips and Falls
Ergonomics
Flying Debris
Mechanical
Inadvertent Stabbing -Using your body as resting support for a component, PCB or material etc. resulting in self stabbing.
Manual Handling

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Hand held tools are required to enable operators to build and or repair or modify electrical wiring etc.

Controls

- Students are permitted to use hand held tools, under correct instruction and the lecturer or technicians supervision.
- Ensure that equipment or machinery being repaired is disconnected and isolated from the mains supply prior to conducting electrical work, repairs etc.
- Inspect the tool for damage or defects prior to use, do not use if damaged or defective in any way and hand back to lecturer or technician for removal from use.
- It is advised that safety glasses be worn.
- Always lift or carry a hand tool by its handle.
- All hand tools must be used in accordance with the manufacturers intended use and design.
- Students are not permitted to carry out repairs to damaged tools. Defective or damaged tools must be reported to the Technician for repairs and new tools arranged.
- Ensure that tools required are resting in from the workbench edge.
- Falling hand tools must be picked up from the ground immediately.
- Maintain good housekeeping and work area free form personal belongings.
- Ensure that the floors are swept clean from material cut offs as soon as possible.
- Avoid the use of hand tools for extended periods of times by tending to other duties where possible or periodically take small breaks.

- Always cut and snip materials away from the body and never in the direction of bystanders or other workbenches.
- Best practice is to use workbenches where necessary.
- Follow the manual handling training guidelines at all times.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE
- Manual Handling Training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Soldering – (Manual Soldering Iron)** **No longer in use**	Ref: SWPS 709 Revision Date: Approved by: Breda Brennan

Hazards

Electricity
Poorly fitted, maintained, damaged or defected electrical cables can result in electrocution- death, first second and or third degree burns.

Hot surfaces
Contact with heated soldering iron or melted metals can result in first second and or third degree burns to the hands and fingers.

Fire
Combustible liquids (alcohol etc.) igniting when in contact with hot soldering iron resulting in fire and minor burns and respiratory illness from smoke inhalation.

Chemicals
Handling alcohol, flux etc. can result in acute or chronic skin disease and illness and minor skin irritation. Inadvertent ingestion of lead from contaminated hands resulting in central nervous system illness and disease.

Fumes
Inhalation of fumes from soldering can result in acute or chronic respiratory illness or disease.

Falling object
Soldering equipment placed at work bench edges can fall and cause minor burns, cuts and bruises to the legs.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Soldering is the process of joining two metals by the use of a solder alloy and heated electrical soldering iron. Solder for electronics is pre-manufactured and can be made up of tin and lead of varying mixing ratios, lead free solder can also be obtained. Solder can melt at temperatures from 183 C (361 F) to 261 C (420 F) and change to a flowing hot liquid. The heated flowing liquid solder binds to Printed Circuit Boards and components where heat is also applied via the soldering iron.

Controls

- Food or drinks is not permitted in the electrical lab.
- Students are not permitted to use the equipment.
- Inspect the soldering iron cable and plugs for damage or defects prior to use.
- Do not use the iron if cable or plug is damaged or defected in any way and remove form use for repair or replacement.
- Competent persons must only carry out electrical repairs.
- Ensure the Iron is switched off prior to use.
- Ensure the extraction on the soldering unit is working effectively prior to use.
- Flammable solvents are not permitted in the vicinity of hot surfaces or materials.
- All flammable solvents are stored in small quantities in the technical support office/store. If solvent is required ask the lecturer, technician for the solvent.
- Where solvents (flux, alcohol) are being used, use a small plastic pipette for dispensing.
- Soldering irons must be kept clear of combustible materials.
- Soldering irons must be switched off when not in use and returned to storage.
- Ensure the soldering equipment in use is securely placed in from the work bench edge.
- All soldering must be performed on the work bench edge.
- Where possible use substitute non lead solder.
- Never put hands or fingers to your mouth when soldering.
- Always wash your hands thoroughly when finished soldering.

Checks & Inspections

- Regular inspections and maintenance to be carried out on all soldering irons and records kept by the School
- Lecturers and Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- Ensure filter on iron is working (replace filter if necessary)

Information, Instruction & Training

- Chemical Handling Training
- MSDS

Personal protective equipment required (last resort)

Safety glasses must be worn when soldering.

Initial Risk Rating (without any control measures)

Probability		x	Severity		=	Risk Factor	
÷	**3**			**3**			**3 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability ÷		x Severity		= Risk Factor	
	1		**3**		**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 710
	Revision Date: Oct 2026
Cleaning of the Electrical Workshop	Approved by: Breda Brennan

Hazards

Electricity
Manual Handling
Chemicals
Slips Trips and Falls

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☑Contractors ☑ Visitors

Work Description

Students, Lecturers, Technicians and Assistants are required to tidy up their own work area on completion of works.

Controls

- Maintain good housekeeping at all times to minimise debris on floors and work surfaces.
- Safety glasses, boots and gloves must be worn.
- Safety signage and/or access control and/or retractable hazard barriers must be used when cleaning in progress.
- Inspect electrical cleaning equipment and cables for damage or defects prior to use.
- Do not use the equipment if damaged or defected in any way and remove from use for repair or replacement.
- Technicans/Competent persons must carry out all electrical repairs on machinery and cleaning equipment.
- Never transport cleaning equipment by pulling on the electrical cables.
- If present, chemicals must be stored away in a designated area.
- Chemicals must remain in original containers with original Identification label description.
- Do not store any personal belongings with chemicals.
- Liquid waste (liquid vac hoover, bucket etc.) must be disposed of to external drains.
- Follow manual handling training guidelines at all times.
- When cleaning machinery is in use, trailing electrical cables must be draped over shoulder of the operator.
- Machinery must be returned to storage when no longer required.

Checks & Inspections

- Cables and Plugs on electrical machines must be checked before use.

Information, Instruction & Training

- Manual Handling training.
- Chemical handling training.
- PPE
- Safety Data Sheet

Personal protective equipment required (last resort)

- Glasses
- Boots
- Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 711
	Revision Date: Oct 2026
Disposal of Waste in Bins	Approved by: Breda Brennan

Hazards

Manual handling
Dust
Sharps.
Falling Bins
Slips, trips and falls

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Technician/Technical Assistant is required to empty bin or bins from the electrical work shop into wheelie bins in the waste compound.

Controls

- Safety glasses, boots and gloves must be worn when carrying out waste bin duties.
- Over filling of bins must be prevented, bins must be emptied at the end of every day or when required.
- Follow manual handling training guidelines when emptying bins.
- Do not physically handle waste in bins.
- Waste bins must be emptied prior to class lecture commences or after completion of class lecture.
- Bring one bin at a time to the skip or use a trolley to transport more than one bin.
- Plastic bins must be fit for purpose and free from defects (sharp plastic edges, cracks, holes etc.)
- Safety glasses to be worn while emptying bin to prevent dust blow back entering the eyes.
- Two person lift procedures as per Manual Handling training to be adopted when required and as per good manual handling practices.

Checks & Inspections

- Ensure bins are in good order e.g. bin is free from sharp pieces of plastic or cracked plastic.

Information, Instruction & Training

- Manual handling training.

- PPE

Personal protective equipment required (last resort)

- Safety glasses
- Gloves
- Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Storage, Handling & Use of Cable Drums	Ref: SWPS 712 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling Injuries
Poor Storage
Unauthorised entry
Awkward loads and size
Delivery to workshop
Adverse Weather Condition
Use of Trolleys / Manual Handling Aids
Cut injuries

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Technician/Technical Assistants /Delivery person required to unload deliveries of cable/cable drums and move to storage facilities.
Technician/ Technical Assistants required to dispense and transport off cuts of cable to location required by class facilitator e.g. electrical trades workshop.

Controls

Storage & Delivery

1. The smallest possible drum of cable to be ordered and delivered from supplier. Cables on drums/reels to be ordered were possible.
2. Inspect drums before they are unloaded to ensure they are free from defects or cracks. Damaged coil(s) to be assessed at the time of delivery and determined whether to be returned or not by Technicians/Technical Assistants.
3. As per best practice, Manual Handling Aids/ trolleys to be used to transport cable drums to storage areas.
4. Larger cable drums can be rolled to the storage area. Roll the drums to the storage area using a minimum two people, one to push and one to guide.
5. Team lifts (if required) to be carried out when transporting cable drums onto storage shelves.
6. Heavier drums to be stored on lower level of shelving unit or at ground level.

Handling & Dispensing of Cable

1. Only authorised persons will be permitted at access the storage area to cut and dispense cabling.
2. Class facilitators to give adequate notification of cables required to allow adequate time for cables to be cut and delivered to class.
3. Cut resistant gloves to be used while cutting cables.
4. Ensure the correct cutting tools are utilised for the cutting of each cable.
5. Roll on/off system to be utilised for the handling and dispensing of cables in the work shop.

Transport of Cabling to Classroom / other locations

1. Team lifts to be carried our (if required) for the transport of cable onto trolley.
2. Manual handling aids / trolleys to be utilised for the transport of cables to class / location. Two persons to assist in the maneuvering of trolleys up ramps or over undulating areas. Rough terrain truck to be utilised also for the movement of cables.
3. Where possible do not transport cables externally during times of adverse weather conditions.

Checks & Inspections

Visually inspect drums prior to accepting delivery to ensure they are free from cracks or any defects.
Ensure the SWL of the shelving units are not exceeded at any times.
Ensure the maximum weight of the cable reel is marked cleared on each reel.
Visually inspect manual handling aids / trolleys before use.

Information, Instruction & Training

Manual handling training

Personal protective equipment required (last resort)

Safety footwear.

Gloves to protect hands and give additional grip during manual handling operations.

Cut resistant gloves when cutting cables.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**2**	=	Risk Factor	**6**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Cable Stripping Machine**	Ref: SWPS 713 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazard

Manual Handling
Slips, Trips and Falls
Sharps
Ergonomics
Mechanical

Person Exposed to Risk

☐ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Use of Electric Cable Stripping Machine

Controls

- Regular safety checks must be carried out. Records of this to be documented and must be stored in electrical workshop safety files.
- Ensure bystanders are a safe distance from the machine when in use. Safety signage/barriers must be used.
- Maintain good housekeeping and clean work area.
- Loose clothing/gloves must not be worn when feeding into the machine.
- Safety glasses must be worn.
- Safety gloves with the correct level of protection must be worn when handling stripped cable.
- Never touch the moving blade and allow it to come to a natural and complete stop.
- Always use the machine as intended by the manufacturer.
- Always follow the manual handling training guidelines when moving the machine.
- Always follow manual handling training guidelines when emptying/moving cable bins.
- Cable Stripper must be stored safely when not in use.

Checks & Inspections

- Visual inspection that all safety guards are in place and secure.
- Visual inspection that main electrical supply cable and plug/socket is secure and not damaged.
- Electrical mains supply cable must not create a potential trip hazard.
- Visual check that the machine is fixed in a secure position.
- Machine must be at a safe working height.
- Work area around the machine should be kept clean and tidy.
- Safety signage/barriers should be in place near the machine.
- Stop, start and emergency stop must be tested for correct operation.
- Safety glasses must be worn by the operator.

- Safety gloves with the correct level of protection must be worn by the operator when handling stripped cable.
- PAT Testing to be carried out in accordance with the policy.

Information, Instruction & Training

Manual Handling
PPE
Safety Records
Refer to manufacturer's instructions.

Personal protective equipment required (last resort)

Safety Glasses
Safety Gloves that have the correct level of protection for handling stripped cable.
Safety Boots
Safety Signage/Barriers

Initial Risk Rating (without any control measures)

Probability :	**2**	**x Severity**	**2/3**	**= Risk Factor**	**4/6 Medium - High**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**2**	x Severity	**2**	= Risk Factor	4 Medium Risk

Risk Assessment Review
As and when process changes or yearly

Safe Work Practice Sheet **Chop Saw**	Ref: SWPS 714 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Manual Handling
Slips, Trips and Falls
Sharps
Ergonomics
Mechanical
Flying Debris
Noise
Hot Surfaces

Person Exposed to Risk

☐ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Use of battery Chop Saw for preparing workshop materials.

Controls

- Regular safety checks must be carried out. Records of this to be documented and must be stored in electrical workshop safety files.
- Ensure work area is secured against passers-by etc. Safety signage/barriers to be used.
- Maintain good housekeeping and clean work area.
- Always place the saw firm, flat and in from the workbench edge.
- Loose clothing must not be worn when operating the machine.
- Never touch the rotating saw blade and allow to come to a natural complete stop.
- Never place free hand in line with the cutting blade.
- Never assist in stopping or slowing down the rotating saw blade.
- Maintain a firm and secure hold of the handle of the machine when sawing materials.
- Avoid the build of wood dust and clean the saw and surrounding area regularly.
- Follow the manual handling training guidelines at all times when moving the machine. Lift saw by the handle and in the locked position.
- Safety glasses must be worn.
- Hearing protection must be worn.
- Safety gloves and dust mask to be provided to the operator.
- Always use the saw as intended by the manufacturer.
- Remove battery if leaving unattended and return to storage when no longer required.
- Competent person/s to remove/replace saw blades. Refer to manufacturer's instructions.

Checks & Inspections

- Visual inspection that all safety guards are in place and secure.
- Machine must be at a safe working height.
- Visual check that the machine is fixed in a secure position.
- Work area around the machine should be clean and tidy.
- Ensure work area is secured against passers-by etc. Safety signage/barriers to be used.
- Stop/start must be tested for correct operation.
- Safety glasses must be worn by the operator.
- Hearing Protection must be worn by the operator
- Safety gloves must be provided for operator.

Information, Instruction & Training

Manual Handling
PPE
Safety Records
Refer to manufacturer's instructions.

Personal protective equipment required (last resort)

Safety Glasses
Safety Boots
Hearing Protection
Safety Gloves
Safety Signage/Barriers

Initial Risk Rating (without any control measures)

Probability :	**2**	**x**	**Severity**	**2/3**	**=**	**Risk Factor**	**4/6 Medium - High**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	4 Medium Risk

Risk Assessment Review
As and when process changes or yearly

Safe Work Practice Sheet **400 Watt Bench Grinder**	Ref: SWPS 715 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Manual Handling
Slips, Trips and Falls
Vibration
Hot Surfaces
Flying Debris
Fire
Ergonomics
Mechanical
Noise

Person Exposed to Risk

☐ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Hand held grinding and shaping of metallic components

Controls

- Regular safety checks must be carried out. Records of this to be documented and must be stored in electrical workshop safety files.
- Read operating manual. Only workshop staff are allowed operate machine.
- Ensure work area is secured against passers-by etc.
- Maintain good housekeeping and clean work area.
- Ensure grinder is securely fixed to workbench.
- Loose clothing must not be worn when operating the machine.
- Never touch the rotating stone and allow to come to a natural complete stop.
- Wheel guard/visor to be in position when grinding is being carried out.
- Never assist in stopping or slowing down the rotating grinder blade.
- Never leave the machine unattended when running
- Follow the manual handling training guidelines at all times when moving the machine.
- Safety glasses must be worn.
- Hearing protection must be worn.
- Always use the saw as intended by the manufacturer.
- Competent person/s must only carry out mounting of an abrasive. Refer to manufacturer's instructions.
- Flammable materials must never be stored at or near the machine.

Checks & Inspections

- Visual inspection that all safety guards are in place and secure.
- Visual check that the machine is fixed in a secure position.
- Inspect the wheel for defects or damage prior to use. Do not use if damaged in any way and remove from use.
- Inspect the machines electrical cables and plug for defects or damage prior to use. Do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Machine must be at a safe working height.
- Work area around the machine should be clean and tidy.
- Ensure work area is secured against passers-by etc.
- Stop/start must be tested for correct operation.
- Safety glasses must be worn by the operator.
- Hearing Protection must be worn by the operator

Information, Instruction & Training

Manual Handling
PPE
Safety Records
Refer to manufacturer's instructions.

Personal protective equipment required (last resort)

Safety Glasses
Safety Boots
Hearing Protection

Initial Risk Rating (without any control measures)

Probability :	**2**	**x Severity**	**2/3**	**= Risk Factor**	**4/6 Medium - High**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**2**	x Severity	**2**	= Risk Factor	4 Medium Risk

Risk Assessment Review
As and when process changes or yearly

SECTION 8

MOTORING ENGINEERING LABS / WORKSHOPS

Safe Work Practice Sheet	Ref: SWPS 800
	Revision Date: Oct 2026
Alternator Test Bench	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting or carrying the test unit or battery onto the workbench can result in lower back and or musculoskeletal injuries

Electricity
Incorrectly connected, poorly maintained or damaged electrical cable or plugs can cause electrocution-death or first second and or third degree burns to the hands and body parts.

Falling Equipment
Vibration causes the test unit to move and fall off the bench, battery not placed securely on the test equipment, test equipment placed at the edge of the work bench, carrying test equipment on your own can result in the equipment falling causing impact and crush injuries to the lower legs and feet .

Fire / Explosion
Battery is incorrectly connected and explodes or generates sparks that come into contact with fuel sources resulting in a fire and first, second and or third degree burns.

Mechanical
Contact with rotating motor and alternator drive belt can result in severing of fingers.

Bright Lights
Operating the test unit can result in temporary blindness, headache, and sore eyes from looking into bright lights on the test unit.

Chemicals
Manually handling a damaged or leaking battery can result in burns to the skin on the hands, fingers and other exposed skin parts from battery acid.

Slips Trips and Falls
Poor housekeeping, personal belongings, leaking battery acid, trailing electrical cable can result in slips or trips causing falls and impact injuries to the head and other body parts.

Noise
Operating the test equipment for long periods of time can result in acute hearing discomfort.

Person Exposed to Risk
☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
Carrying out demonstrations on Alternator Test Bench (running and stationary).

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Workshop working procedures / instructions must be followed at all times.
- The lecturer or technician must set up the test apparatus prior to use.
- Follow the manual handling training guidelines at all times when moving the machine or battery.
- Where possible leave the test unit on the same workbench.
- Seek assistance if required to move the test unit to a different workbench location.
- Inspect the electrical cable and plug of the motor and battery on the test unit prior to using.
- Do not use the test unit if electrical cable or plugs are damaged in any way and remove from use for repair.
- Electrical repairs must be carried out by a competent person.
- Ensure the battery is mounted securely onto the test apparatus.
- Ensure that the test apparatus is placed in from the edge of the workbench at all times.
- Fuel sources (petrol, diesel etc) or flammable materials must never be stored at or near the test apparatus.
- Ensure that the motor and alternator machine guards are in place prior to operating the test unit.
- Never look directly into the lights mounted on the test unit when it is running.
- Lights on the test unit must only be switched on for fault finding exercises.
- Inspect the battery for damage or leaks prior to moving to the test unit. Do not use if damaged in any way and seek a replacement battery if required.
- Maintain good housekeeping and work area free personal belongings at all times.
- Read the standard operating procedures and users manual thoroughly and be completely familiar with all machine controls.
- Ensure that the machine is rotating in the correct direction.
- Eye protection and protective clothing must be worn.
- Guard all moving parts such as pulleys, belts and gears and ensure all guards are in place and checked for security
- Ensue that the drive belt is tensioned correctly
- Ensure that the battery is connected correctly when setting up.
- Take care when connecting electrical cables to battery, connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Never move away from machine without first switching it off and waiting for it to come to rest.
- Wear hearing protection if using the test equipment for extended periods of time.
- If in doubt seek advice from the lecturer or technician,
- Safety precautions must be adhered to at all times.
- Wash hands after coming in contact with battery acid

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals.
- Ensure all safety notices are readable and displayed in correct locations.
- Technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Students are permitted the use of the test equipment under the lecturer or technicians supervision.

Personal protective equipment required (last resort)

- Safety boots.
- Eye protection.
- Barrier creams/gloves.
- Hearing protection.
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 801
	Revision Date: Oct 2026
Brake Systems	Approved by: Breda Brennan

Hazards

Collapsing Vehicle
Car is raised off the ground with a jack and fails or collapses, causing death by crushing or major crush injuries, cuts and bruises. Loosening the nuts on the wheels when raised can result in a collapsing vehicle and feet and hand crush injuries. .

Manual Handling
Removing and replacing the wheel/s on the car, carrying or lifting vehicle jacks or wheel supporting axles when repairing the braking system can result in lower back and or musculoskeletal injuries.

Mechanical
Contact with rotating engine belt when replacing or topping up brake fluid can result in a severing of finger.

Dust
Inhalation of brake dust can result in acute respiratory illness or chronic illness, mesothelioma.

Slips Trips and Falls
Poor housekeeping, personal belongings, leaking or spilled brake fluid on the ground, tools and vehicle parts lying on the ground can result in slipping and tripping causing fall impact head and body part injuries.

Sharps
Handling badly worn brake pads can result in coming into contact with metal sharps resulting in lacerations to the hands and fingers.

Chemicals
Contact with brake fluid when replacing or topping up, removing brake pads, contaminated clothing can result in irritation to the hands and fingers and other body parts. Inhalation or ingestion can result in death.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
Carrying out demonstrations and repairs on Braking Systems.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Where possible always use the drive on ramps for tending to demonstrations and brake repairs on vehicles.
- If required, supplement a jack with axle stands.
- Never venture under a car that is only supported by a jack.
- Wheel nuts must be loosened prior to jacking the car up and tightened when the car wheels are on firm level ground.
- Follow the manual handling training guidelines when removing and replacing wheels from a vehicle.
- Ensure that the engine is switched off prior to jacking up the vehicle.
- Never leave the keys in the ignition when working on the vehicle, safely store them in your pocket.
- Always use hand protection and barrier creams as supplied.
- Stored energy in the form of springs and high pressures can result in severe injury, use specified tools and procedures to release energy and depressurise systems.
- Brake dust may contain asbestos and therefore should never be inhaled.
- Never blow down brake dust with compressed air. (see safe work practice sheet on compressed air)
- Never dry brush, brake dust down from the wheels or braking systems of vehicles.
- Use a water spray bottle with low water spraying pressure to wet down brake dust and dry off with a cleaning cloth.
- Dispose of brake dust cleaning cloth into a safe impermeable labelled container for safe disposal.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Spilled or leaking brake fluid must be cleaned from the ground immediately.
- Never leave tools or vehicle parts lying on the ground when working on the vehicle.
- Exercise caution when removing worn brake discs as they may contain sharp edges, use gloves if required and never brush hands and fingers against the brake pad.
- Never inhale brake fluid spray.
- Hydraulic brake fluids must be changed at specified intervals.
- Hydraulic brake fluid is poisonous, seek immediate medical attention if fluid is swallowed or gets into the eyes.
- Never renew brake pads on one side of vehicle only.
- Do not use petroleum-based solvents to clean brake parts.
- Do not allow brake fluid oil or grease to contact brake pads or disc.
- Carry out necessary checks and adjustments as outlined in workshop manuals or data books such as brake shoe adjustment, handbrake adjustment, load apportioning valve, wheel bearings etc.
- Check all hydraulic pipes and hoses for any signs of deterioration.
- Check all tyres for correct speed ratings, pattern, size, pressures, thread depth, and any signs of faults or deterioration.

- After carrying out work on braking systems always check to make sure that the brake pedal feel and clearance is OK and also handbrake, before initial road testing or driving the vehicle.
- Dispose or discard worn parts or brake fluid in accordance with present legislation.
- Always wash hands thoroughly when work is complete.

Checks & Inspections

- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on Braking Systems. New staff/students will be trained by technician and lecturing staff as required.
- MSDS
- Manual handling training
- Chemical handling training
- PPE training

Personal protective equipment required (last resort)

- Safety boots
- Eye protection
- Barrier creams/gloves
- Dust extraction system
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 802
	Revision Date: Oct 2026
Diesel Engine Fuel Systems	Approved by: Breda Brennan

Hazards

Chemicals
Working on the engines can result in coming into contact with diesel or engine oil, leaking battery acid and result in irritation (pain, redness, itching etc.) to the skin. Inhalation of diesel vapours or fumes can result in acute respiratory irritation (coughing, wheezing) or chronic illness (asthma).

Mechanical
Entanglement of long hair or loose clothing with rotating shaft of the fan belt resulting in asphyxiation and cuts and bruises. Nip point and loss of fingers when in contact with rotating fan belt. Crushing of fingers when closing the bonnet of the car.

Hot Surfaces
Engine running for a period of time will result in heat being generated in the engine, coolant system or exhaust etc. and result in minor burns to the hands, fingers or arms if in contact with.

Hot Liquids
Leaking coolant system, damaged coolant hose can result in scalding to the hands, fingers and arms resulting in first, second and or third degree burns

Slips Trips and Falls
Poor housekeeping, personal belongings, tools and engine parts lying on the ground, raised ramp parts, leaking diesel and oil can result in tripping and slipping causing fall head impact and bodily injuries.

Sharps
Contact with parts of the engine can result in minor cuts to the hands or fingers.

Fumes
Running the diesel engine can result in the inhalation of carbon monoxide from the exhaust pipe & cause death or acute respiratory illness.

Ejected Fluid
Leaking fuel lines can result in ejected fuel under pressure and penetrate the skin resulting in death or acute illness.

Fire
Diesel atomised in the air can rapidly ignite when in contact with an ignition source resulting in burns to the body.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Carrying out demonstrations and repairs on diesel engine fuel systems (running and stationary)

Controls

- Always follow the proper instructions as given and observe the correct procedure as laid down in the work shop manuals.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision. .
- Food or drinks are not permitted in the work shop.
- Ensure that there is adequate ventilation prior to working on the engines and that the extract system is switched on.
- Apply barrier cream to the hands or wear gloves when working on the engines.
- Never touch a leaking battery with bare skin. Remove and replace with a new one, dispose of damaged one carefully and responsibly.
- Immediately remove any items of clothing that become contaminated with diesel, oil or battery acid.
- Wash hands or contaminated skin parts immediately when in contact with diesel, oil or battery acid.
- Never work on the engine where there is evidence of vapours or fumes.
- Loose clothing must not be worn when working on the engine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Maintain hands and fingers free from the bonnet and frame of the car when closing the bonnet.
- Never touch the rotating fan belt with hands or fingers.
- Never place hand and fingers between the moving parts of the fan belt.
- Exercise caution if handling hot engine parts or the coolant system.
- Never rest hands or arms against the running engine.
- Wear heat resistant gloves if required to handle hot engine or coolant system or allow to cool down sufficiently.
- Ensure that the coolant system and hoses are free from leaks and securely fitted prior to commencing work on the engine.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave tools or engine parts lying on the ground, always use workbenches.
- Observe and be aware of where the ramp is slightly raised off the ground.
- Immediately clean and safely dispose of any leaking diesel or oil from the ground.
- Exercise caution when handling parts of the engine as they main contain unforeseen hidden sharps.

- Ensure that the car exhaust pipe is connected onto the in-house exhaust extract system prior to starting the engine. Never work on the engine indoors if the exhaust extract system is not working.
- Naked flames or ignition sources are not permitted at or near the engine.
- Exercise caution when working under the bonnet of the car, open the bonnet as far as possible.
- If using compressed air see Safe Work Practice Sheet Compressed air.
- Use proper PPC and PPE as supplied.
- Have a fire extinguisher on standby.
- Fuel system should be properly depressurized in accordance with manufacturer's specifications prior to disconnecting any fuel pipes or lines.
- Diesel injection pumps supply fuel at very high pressure. Take care when working on the fuel injectors and fuel pipes.
- Warning: Never expose the hands, face or any other part of the body to injector spray; the fuel can penetrate the skin with potentially fatal results.
- Diesel fuel is a highly flammable substance when atomised and should be treat with great care
- Ensure correct fire extinguishers are available.
- Correct tools supplied to carry out work in a safe and efficient manner.
- On completion of system testing, check for any signs of leaks and repair as necessary..
- Thoroughly wash your hands when work is complete on the engines.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals
- Ensure all safety notices are readable and displayed in correct locations
- Ensure correct fire extinguishers are available
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on engines. New staff/students will be trained by technician and lecturing staff as required.
- MSDS
- PPE training
- Chemical handling training

Personal protective equipment required (last resort)

- Safety boots
- Eye protection
- Barrier creams/gloves
- Hearing protection
- Overalls

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Block & Auto Edu Diesel Engines (Audi A5 & Golf)	Ref: SWPS 803 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Pulling and pushing the engines to and from storage, topping the diesel tank up with fuel, removing and replacing the engine battery, can result in acute or chronic lower back and or musculoskeletal injuries

Hot Surfaces / Liquid
Contact with the engine exhaust, radiator and hoses can result in minor or major burns to the hands and fingers.

Fumes
Running the test engine can result in the Inhalation of exhaust fumes and cause death or acute or chronic respiratory illness.

Liquid Chemicals
Topping the diesel tank up with diesel, topping up with anti-freeze or coolant fluid, topping up the battery with water, leaking battery acid can result in loss of sight from splashing, contamination of clothing with battery acid can cause burns to the skin, hands and fingers, contact dermatitis.

Mechanical
Rotating radiator fan, fan belt or cooling fan can result in entanglement and cause asphyxiation. Contact with rotating fan belt can result in severing of fingers with fan belt pinch point.

Slips Trips and Falls
Poor housekeeping, personal belongings, spilled or splashed liquid chemicals on the ground can result in slipping and tripping causing fall impact head and body injuries.

Fire
Diesel liquid, spray or mist can result in fire when in contact with a naked flame or ignition source, causing death or burns to the body.

Collapsing Test Equipment
Damaged legs or wheels on the test apparatus can result in the apparatus collapsing causing lower leg and feet impact and crushing injuries.

Explosion
Battery is incorrectly connected and explodes or generates sparks that come into contact with fuel sources resulting in a fire and first, second and or third degree burns.

Noise

Running the engines for long periods of time can result in acute temporary hearing discomfort or chronic loss of hearing.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Carrying out demonstrations and repairs on diesel engines (running and stationary)

NOTE:
All engines should be fitted with proper guards where possible.
Battery Location and storage should be in a position so as to prevent accidental short circuits.
Fuel Location and storage to be in a position to prevent any risk of uncontrolled combustion.
Always follow proper instructions and observe the correct working procedures as laid down in relevant workshop manuals.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Follow the manual handling training guidelines at all times. Seek assistance if required when moving test engines to and from storage.
- Toping up with diesel must be done with the use of a Gerri can of no more than 10 litre capacity.
- Ensure only trained personnel use the engines, students are permitted use of the engines under the lecturer or technicians supervision.
- Never touch the exhaust or radiator or engine parts when the test engine is running and allow for sufficient time to cool before handling.
- Ensure that all guards are in place prior to commencing work.
- Do not use the machine if any guards are missing.
- Ensure that the exhaust of the test engine/s is connected to the workshop extract system prior to use.
- Turn on the extract system prior to starting up the test engine/s.
- Wear safety glasses and gloves when topping the machine up with diesel, antifreeze, water coolant or the battery with water.
- Avoid the splashing of chemicals when pouring from holding containers. Where possible use a funnel.
- Use an attachable flexible spout when pouring diesel into the diesel tank.
- Inspect the battery for damage and leaks prior to use, do not use if damaged in any way (remove for safe disposal) and use a replacement.
- Clothing contaminated by diesel, antifreeze, water coolant or battery acid must be removed & replaced immediately.

- Loose clothing or jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the moving or rotating parts of the engine.
- Never place hands and fingers in-between moving or rotating parts of the engine.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Immediately clean-up & safely dispose of any spilled or splashed liquid chemicals from the ground.
- Never disconnect a fuel line when the machine is running.
- Avoid working on engine if the fuel storage and supply and return lines are not fully secured.
- If repairs are being carried out on the fuel system make sure system is depressurized in accordance with manufacturer's instructions.
- Diesel injection pumps supply fuel at very high pressure. Take care when working on the fuel injectors and fuel pipes.
- Warning: Never expose the hands, face or any other part of the body to injector spray, the fuel can penetrate the skin with potentially fatal results.
- Diesel fuel is a highly flammable substance when atomised and should be treated with great care.
- Ensure that the correct fire extinguishers are available & close to hand when operating the engines.
- Naked flames or ignition sources must never be used at or near the test engines/s.
- Diesel must not be stored in the workshop, use the external designated storage area.
- Never remove pressurized radiator cap from cooling system while the system is pressurized.
- Inspect the legs and wheels of the apparatus for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair.
- Students must request the battery from the lecturer of technician.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Always make sure battery is disconnected while carrying out repairs on engine.
- Never leave the key in the ignition switch when working on the vehicle engine.
- Always use correct fitting spanners, discard broken or worn tools.
- Always make sure engine is switched of before moving away from it.
- Wear ear protection when operating the machine.
- Always wash your hands when work with the test engines is complete.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals.

- Ensure all safety notices are readable and displayed in correct locations
- Ensure correct fire extinguishers are available.
- Lecturers and technicians must monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on engines. New staff/students will be trained by technician and lecturing staff as required.
- MSDS
- Manual Handling Training.
- Chemical Handling Training.
- PPE Training.

Personal protective equipment required (last resort)

- Safety boots,
- Safety Glasses,
- Barrier creams/ safety gloves,
- Hearing protection,
- Overalls,

Initial Risk Rating (without any control measures)

Probability :		x Severity		= Risk Factor	
	3		**3**		**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x Severity		= Risk Factor	
	1		**3**		**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 804
	Revision Date: Oct 2026
Four Post Lifts	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired or damaged electrical wires can result in electrocution-death, first, second or third degree burns.

Hydraulics
Topping the machine up with hydraulic fluid can result in splashing of fluid into the eyes or on exposed skin parts or contamination of clothing resulting in acute or chronic eye or skin irritation.

Pneumatics
Loose or damaged air lines can result in uncontrolled whipping airline resulting in permanent loss of sight.

Slips, Trips and Falls
Poor housekeeping, personal belongings, car parts or tools lying on the ground, leaking or spilled hydraulic fluid can result in slipping or tripping causing fall impact head and body injuries.

Manual Handling
Lifting and holding engines or car components, removing or replacing car wheels, gear box or axles can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Loss of fingers or breaking of bones if in between moving hydraulic scissors jack. Crushing and entrapment of hands, arms or fingers with descending hydraulic scissor jack, feet with car being driven onto the ramp. Crushing and entrapment with cable and pulley of the lift.

Fumes
Driving vehicles on and off the ramps, running the engine on the ramp can result in the inhalation of carbon monoxide and cause death or acute or chronic respiratory illness and or disease.

Falls from Heights
Standing on the lift when it is moving or working on a raised car can result in falling and death

Hot Surfaces
Touching the exhaust of a running vehicle can result in major burns to the hands and fingers.

Falling Tools, Car Parts or Vehicle

Tools / car parts on the ramp edge can fall causing blunt force blows to the head or body parts. Car not mounted correctly onto the ramp can roll back and fall resulting crushing injuries.

Traffic
Driving the vehicle indoors, on and off the ramp can result in striking a bystander causing serious injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Carrying out demonstrations on Vehicle brakes, overhauling, steering and suspension system while on the lift (running and stationary).

Note: The normal safety precautions as listed when working under or around a vehicle must be adhered to for this exercise.

Controls

- Students are permitted to operate the lift, under correct instruction and the lecturer or technician's supervision.
- Never exceed the manufacturer's weight lifting capacity as stated on the lift or jack.
- Ensure that all safety sensors, micro switches and rails are in place prior to operating the machine.
- Inspect the electrical cables of the lift for any damage, defects or loose wiring prior to operating the lift.
- Never use the lift where electrical cables are damaged, loose of defected in anyway.
- All electrical repairs must be carried out by a competent person.
- Ensure to slowly pour hydraulic fluid when topping up the machine.
- Immediately remove any clothing contaminated with hydraulic fluid.
- Ensure that all air lines are securely fitted and connected to the lift.
- Leaking air lines must be repaired immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Car parts or work tools must never be stored or left lying on the ground beside the lift, always use a nearby work bench.
- Spilled or leaking hydraulic fluid must be cleaned from the ground immediately.
- Wear safety gloves and glasses when handling hydraulic oil.
- Follow the manual handling training guide lines at all times and seek assistance if required to lift or handle heavy or awkward loads. Never place hands or fingers in between the moving or descending hydraulic scissor jack.
- Never place feet on the lift when vehicles are being driven on to it.

- Always remain behind the yellow line around the lift when a vehicle is been driven on or off.
- Always remain behind the yellow line when the lift is in use.
- Never lean against or hold on to any part of the lift when it is use.
- Ensure that the exhaust of the vehicle is connected to the in-house fume extract system as soon as possible.
- Ensure that there is good workshop ventilation prior to commencing work on the lift.
- Never stand on the lift when it is ascending or descending.
- Never stand on the lift to work on a vehicle.
- Always allow for the exhaust of a vehicle to cool sufficiently prior to handling.
- Never leave tools or car parts on the edge of the lift, always use a nearby bench to place them on.
- Exercise caution when working underneath a raised lift.
- Follow the rules of the road when driving the vehicle in the garage and on and off the lift.
- Sound the vehicle horn before reversing off the ramp.
- Always drive the vehicle up on lift until it clears rear wheel stops.
- Only use turntables when vehicle is on lift if vehicle is properly secured.
- When lift is fully raised before starting work underneath it, ensure safety locks provided are in place.
- When using wheels free lifting system or lift jacks always place at recommended lifting points and support with axle stands where necessary.
- Always check head clearance between vehicle roof and workshop ceiling before raising lift.
- Take care when working underneath a vehicle on the lift, ensure that you have a working clearance that will prevent you accidentally bumping into protruding parts.
- Never touch parts such as exhaust systems without first ascertaining if these parts are cold.
- Before lowering lift, make sure that there are no obstructions which may cause damage or be damaged.
- Always keep doors closed when lift is being raised or lowered.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals
- Ensure all interlocks, safety sensors and automatic shutdown sensors are checked each term
- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on lifts. New staff/students will be trained by technician and lecturing staff as required.
- PPE training
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots,
- Eye protection,
- Barrier creams/gloves,
- Overalls.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 805
	Revision Date: Oct 2026
Petrol Engine Fuel Systems	Approved by: Breda Brennan

Hazards

Chemicals
Working on the engines can result in coming into contact with diesel or engine oil, leaking battery acid and result in irritation (pain, redness, itching etc.) to the skin. Inhalation of diesel vapours or fumes can result in acute respiratory irritation (coughing, wheezing) or chronic illness (asthma).

Mechanical
Entanglement of long hair or loose clothing with rotating shaft of the fan belt resulting in asphyxiation and cuts and bruises. Nip point and loss of fingers when in contact with rotating fan belt. Crushing of fingers when closing the bonnet of the car.

Hot Surfaces
Engine running for a period of time will result in heat being generated in the engine, coolant system or exhaust etc. and result in minor burns to the hands, fingers or arms if in contact with.

Hot Liquids
Leaking coolant system, damaged coolant hose can result in scalding to the hands, fingers and arms resulting in first, second and or third degree burns

Slips Trips and Falls
Poor housekeeping, personal belongings, tools and engine parts lying on the ground, raised ramp parts, leaking diesel and oil can result in tripping and slipping causing fall head impact and bodily injuries.

Sharps
Contact with parts of the engine can result in minor cuts to the hands or fingers.

Fumes
Running the diesel engine can result in the inhalation of carbon monoxide from the exhaust pipe & cause death or acute respiratory illness.

Ejected Fluid
Leaking fuel lines can result in ejected fuel and penetrate the skin resulting in death or acute illness.

Fire
Diesel atomised in the air can rapidly ignite when in contact with an ignition source resulting in burns to the body.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Carrying out demonstrations and repairs on petrol engine fuel systems (running and stationary)

NOTE:

All engines should be fitted with proper guards where possible.
Battery Location and storage should be in a position so as to prevent accidental short circuits.
Fuel Location and storage to be in a position to prevent any risk of uncontrolled combustion.
Always follow proper instructions as given and observe the correct working procedures as laid down in workshop manuals.

Controls

- Always follow the proper instructions as given and observe the correct procedure as laid down in the work shop manuals.
- Students are permitted to operate the engines, under correct instruction and the lecturer or technician's supervision.
- Food or drinks are not permitted in the work shop.
- Ensure that there is adequate ventilation prior to working on the engines and that the extract system is switched on.
- Apply barrier cream to the hands or wear gloves when working on the engines.
- Never touch a leaking battery with bare skin. Remove and replace with a new one, dispose of damaged one carefully and responsibly.
- Immediately remove any items of clothing that become contaminated with petrol, oil or battery acid.
- Wash hands or contaminated skin parts immediately when in contact with petrol, oil or battery acid.
- Never work on the engine where there is evidence of vapours or fumes.
- Loose clothing must not be worn when working on the engine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Maintain hands and fingers free from the bonnet and frame of the car when closing the bonnet.
- Never touch the rotating fan belt with hands or fingers.
- Never place hand and fingers between the moving parts of the fan belt.
- Exercise caution if handling hot engine parts or the coolant system.
- Never rest hands or arms against the running engine.
- Wear heat resistant gloves if required to handle hot engine or coolant system or allow to cool down sufficiently.
- Ensure that the coolant system and hoses are free from leaks and securely fitted prior to commencing work on the engine.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave tools or engine parts lying on the ground, always use workbenches.
- Observe and be aware of where the ramp is slightly raised off the ground.
- Immediately clean and safely dispose of any leaking petrol or oil from the ground.

- Exercise caution when handling parts of the engine as they main contain unforeseen hidden sharps.
- Ensure that the car exhaust pipe is connected onto the in-house exhaust extract system prior to starting the engine. Never work on the engine indoors if the exhaust extract system is not working.
- Naked flames or ignition sources are not permitted at or near the engine.
- Exercise caution when working under the bonnet of the car, open the bonnet as far as possible.
- Ensure all guards are in place prior to commencing work
- If using compressed air see Safe Work Practice Sheet Compressed air.
- Use proper PPC and PPE as supplied.
- Have a fire extinguisher on standby.
- Fuel system should be properly depressurized in accordance with manufacturer's specifications prior to disconnecting any fuel pipes or lines.
- Fuel injection systems can supply fuel at high pressures. Take care when working on the fuel injectors and fuel pipes.
- Warning: Never expose the hands, face or any other part of the body to injector spray; the fuel can penetrate the skin with potentially fatal results.
- Correct tools supplied to carry out work in a safe and efficient manner.
- On completion of system testing, check for any signs of leaks and repair as necessary.
- Make sure all plug leads are fully secure before cranking engine.
- Petrol fuel is a highly flammable substance and should be treat with great care
- Check with Lecturer in charge before leaving this exercise so that you may be signed off.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals.
- Ensure all safety notices are readable and displayed in correct locations
- Ensure correct fire extinguishers are available.
- Lecturers and technicians must monitor compliance with control measures
  Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on engines. New staff/students will be trained by technician and lecturing staff as required.
- MSDS
- PPE training
- Chemical handling training

Personal protective equipment required (last resort)

- Safety boots,
- Eye protection,
- Barrier creams/gloves,

- hearing protection,
- overalls,
- Fire extinguishers.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Block & Auto Edu Petrol & Diesel Engines (Audi, Ford)	Ref: SWPS 806 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Pulling and pushing the engines to and from storage, topping the petrol tank up with fuel, removing and replacing the engine battery can result in acute or chronic lower back and or musculoskeletal injuries

Hot Surfaces / Liquid
Contact with the engine exhaust, radiator and hoses, hot water, steam, engine block can result in minor or major burns to the hands and fingers.

Fumes
Inhalation of exhaust fumes can cause death or acute and or chronic respiratory illness.

Chemicals
Topping up with petrol, anti-freeze, coolant fluid, battery water, leaking battery acid, hydraulics fluid can result in loss of sight from splashing, contamination of clothing and burns to the skin, hands and fingers.

Mechanical
Entanglement of long hair loose clothing or jewellery with rotating radiator fan, fan belt or cooling fan, wheel drive shafts can result in asphyxiation. Contact with rotating fan belt can result in severing of fingers. Crushing of fingers when in contact with closing breaking pads.

Slips Trips and Falls
Poor housekeeping, personal belongings, spilled, splashed or leaking liquid chemicals (Petrol, Coolant oil, Antifreeze, Battery Acid, and Brake Fluid) extract exhaust hose system can result in slipping & tripping causing fall impact head & body injuries.

Fire
Topping the petrol tank up, disconnecting the fuel line causing Petrol spray or mist, Petrol stored in the workshop can result in fire when in contact with a naked flame or ignition source, causing death or burns to the body.

Collapsing Test Equipment
Damaged legs or wheels on the test AG apparatus can result in the apparatus collapsing causing lower leg and feet impact and crushing injuries.

Explosion
Battery is incorrectly connected and explodes or generates sparks that come into contact with fuel sources resulting in a fire and first, second and or third degree burns.

Ejected fluid
Ejected hydraulic fluid (Opel Vectra) can penetrate the skin and result in death, skin irritation, dermatitis.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The AG Bloc petrol engines are used to test automatic Opel Vectra and Ford Mondeo transmission systems and general engine management systems. The Audi 2.0L AG Bloc is used to fault find through diagnostics.

NOTE:
Battery Location and storage should be in a position so as to prevent accidental short circuits.
Fuel Location and storage to be in a position to prevent any risk of uncontrolled combustion.
Always follow proper instructions and observe the correct working procedures as laid down in relevant workshop manuals.

Controls

- Students are permitted to operate the equipment, under correct instruction and the lecturer or technician's supervision.
- Follow the manual handling training guidelines at all times. Seek assistance if required when moving test engines to and from storage.
- Toping up with petrol must be done with the use of a 10 litre Gerri can.
- Ensure only trained personnel use the engines, students are permitted to use the engines under the lecturer or technicians supervision.
- Never touch the exhaust or radiator or engine parts when the test engine is running and allow for sufficient time to cool before handling.
- Do not touch hot water or steam from the radiator or hoses.
- Ensure that all guards are in place prior to commencing work.
- Do not use the machine if any guards are missing.
- Ensure that the exhaust of the test engine/s is connected to the workshop extract system prior to use.
- Turn on the extract system prior to starting up the test engine/s.
- Wear safety glasses and gloves when topping the machine up with petrol, antifreeze, water coolant or the battery with water.
- Avoid the splashing of chemicals when pouring from holding containers. Where possible use a funnel.
- Use an attachable flexible spout when pouring petrol into the petrol tank.
- Inspect the battery for damage and leaks prior to use, do not use if damaged in any way (remove for safe disposal) and use a replacement.

- Clothing contaminated by petrol, antifreeze, water coolant or battery acid must be removed & replaced immediately.
- Loose clothing or jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the moving or rotating parts of the engine.
- Never place hands and fingers in-between moving (brake pads) or rotating parts (fan belt, radiator fan) of the engine.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Immediately clean-up & safely dispose of any spilled, splashed or leaking liquid chemicals (Petrol, Coolant oil, Antifreeze, Battery Acid, and Brake Fluid) from the ground.
- Avoid trailing the exhaust extract hose along the ground where possible. Always walk around a trailing hose and never step over it.
- Never disconnect a fuel line when the machine is running.
- Do not work on the engine if the fuel storage and supply and return lines are not fully secured.
- If repairs are being carried out on the fuel system make sure system is depressurized in accordance with manufacturer's instructions.
- Warning: Never expose the hands, face or any other part of the body to injector spray, the fuel can penetrate the skin with potentially fatal results.
- Petrol fuel is a highly flammable substance when atomised and should be treated with great care.
- Ensure that the correct fire extinguishers are available and close to hand when operating the engines.
- Naked flames or ignition sources must never be used at or near the test engines/s.
- Petrol must not be stored in the workshop, use the external designated storage area.
- Never remove the radiator cap from cooling system while the system is pressurized.
- Inspect the legs and wheels of the apparatus for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Always make sure battery is disconnected while carrying out repairs on engine.
- Never touch leaking or ejected hydraulic oil and switch off the engine prior to repairing.
- Ensure that the hydraulic hoses are free from defects, damage and leaks prior to using the machine.
- Never leave the key in the ignition switch when working on the vehicle engine.
- Always make sure engine is switched of before moving away from it.
- Always wash your hands when work with the test engines is complete.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals.
- Ensure all safety notices are readable and displayed in correct locations
- Ensure correct fire extinguishers are available.
- Lecturers and technicians must monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on engines. New staff/students will be trained by technician and lecturing staff as required.
- MSDS
- Manual Handling Training.
- Chemical Handling Training.
- PPE Training.

Personal protective equipment required (last resort)

- Safety boots,
- Safety Glasses,
- Barrier creams/ safety gloves,
- Hearing protection,
- Overalls,

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Roller Brake Testing (NCT Lane)	Ref: SWPS 807 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, poorly maintained or damaged electrical cable or plugs of the test equipment can cause electrocution-death or first second and or third degree burns to the hands and body parts

Fumes
Driving vehicles on and off the test equipment, running the engine on the test equipment will generate exhaust fumes and can result in acute or chronic respiratory illness or disease.

Hot Surfaces
Contact with test vehicle exhaust pipe when connecting extract system or engine parts when probing temperature of the engine oil can result in minor burns to the hands and fingers.

Slips, Trips and Falls
Poor housekeeping, personal belongings, trailing extract hose or diagnostic cables, leaking brake, coolant, oil etc. fluid, raised NCT test equipment and cover lids above ground level can result in slipping and tripping causing fall impact head and body injuries.

Manual Handling
Lifting and closing the NCT test roller lid and vehicle bonnet can result in acute or chronic lower back or musculoskeletal injuries.

Mechanical
Entanglement of clothing or long hair with rotating car wheels, NCT rollers, engine fan belt can result in asphyxiation. Entrapment of feet and lower legs with NCT Rollers or rotating wheels on rollers and hands with engine fan belt.

Moving Traffic
Driving the vehicle indoors, on and off the NCT ramp can result in striking a bystander causing serious injuries.

Laser Beams
Using the head beam aligner can result in the loss of sight or temporary eye injury by directly looking into or by pointing it at an individual's eyes.

Falling test equipment
Moving the test equipment (head beam alignment or computers etc.) can fall resulting in lower leg and feet impact and crush injuries.

Chemicals
Checking the temperature of the oil or cleaning up leaking fluids can result in minor skin irritation.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
Carrying out demonstrations on Roller brake testing, steering, shock absorbers and lights alignment.

Note: The normal safety precautions as listed when working under or around a vehicle must be adhered to for this exercise.
Always follow proper instructions and observe the correct working procedures as laid down in relevant workshop manuals.

- Students are not permitted the use of this test equipment.
- Lecturers or technicians must only operate the equipment.
- Inspect the electrical power cable and plug of the test equipment for damage or defects prior to use. Do not use if damaged in any way and remove from use for repair.
- Competent person/s must carry out all electrical repairs.
- Ensure that there is good ventilation prior to starting up the test vehicle engine.
- Ensure that the test vehicle exhaust is connected to the in house exhaust extract system as soon as possible.
- Do not touch any part of the exhaust pipe with bare hands when connecting to the extract system.
- Avoid touching any part of the engine with bare hands when checking.
- Wear heat resistant gloves or allow hot parts to cool sufficiently before handling.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any fluid leaks or liquid spills immediately from the ground and dispose of carefully.
- Where possible avoid the trailing of the extract hose and diagnostic cables.
- Observe and be aware of where the NCT fixed test equipment (Steering Rubber Mat, Shock Pads, and Lift etc.) is raised above ground level.
- Where possible always work outside the Yellow Border Line painted around the NCT test area.
- Bystanders and other personnel must remain outside the Yellow Border Line of the NCT at all times
- Follow the manual handling training guidelines at all times and seek assistance if required.
- Loose clothing or jewellery must not be worn when NCT testing.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch any moving part with hands, fingers, feet or tools when NCT testing
- Never stand on the test equipment when idle or running.

- Ensure that the stainless steel cover plates enclose the rollers when they are not in use.
- Follow the rules of the road when driving indoors.
- Beep the horn of the vehicle when moving on or off the NCT test ramp.
- Never drive the vehicle at speed.
- Never look directly into the light of the head lamp beam aligner.
- Never point or direct the light of the head lamp beam aligner in to the eyes of a bystander.
- Only switch on the head beam aligner light when the vehicle is in place.
- Turn off the light of the head beam aligner when it is no longer required.
- Ensure that the head beam aligner is on the rails when wheeling in and out of storage.
- Maintain the rails free from obstructions at all times.
- Ensure that the computers and test equipment is secure on the trolleys when in use.
- Use gloves when handling leaks and oil spills or checking the temperature of the oil.
- Read the standard operating procedures and users manual thoroughly
- Only trained authorised personnel may operate this test equipment
- Check Tyres for correct pressure and serviceability
- Check manufacturer's instruction for correct driving on and of the rollers (exit the test stand only when the rollers are running)
- Wait for ready message
- Don't leave car when rollers are rotating
- Don't allow personnel to stand close to revolving wheels or rollers, all moving or rotating parts are potentially dangerous
- Once test has started proceed in forward direction otherwise machine damage may result (shock tester)
- Exhaust emissions testing should be done in well ventilated workshop.
- Don't run vehicle engine in enclosed area. (Potential carbon monoxide poisoning)
- Never start up vehicle engine using rollers
- Never park a vehicle on rollers
- Before starting headlight testing make sure height adjuster is set at zero.

The test stand should be secured and/or covered when not in use.
If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals.
- Ensure all interlocks and automatic shutdown sensors are checked each term
- Ensure all safety notices are readable and displayed in correct locations
- Lecturer and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Chemical Handling training
- PPE training

- Manual Handling training.

Personal protective equipment required (last resort)

- Safety boots,
- Eye protection,
- Barrier creams/gloves,
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	3	x	Severity	3	=	Risk Factor	9 High Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	=	Risk Factor	3 Low risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Steering/Suspension Systems	Ref: SWPS 808 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Fumes
Inhalation of exhaust fumes can result in death or acute or chronic respiratory illness, disease, coughing and wheezing.

Manual Handling
Removing and replacing car wheels, suspension systems or using the suspension compressor jig can result in lower back and or muscular skeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, suspension parts and tools lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Loaded Springs
Compressing and decompressing suspension sprigs can result in major head and body impact injuries resulting in death or major cuts and bruises.

Pneumatics
Using the spring compressor jig can result in a whipping airline causing loss of sight.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Carrying out demonstrations on steering/suspension systems.

Controls

- Students are permitted to operate the equipment, under correct instruction and the lecturer or technician's supervision. .
- Ensure that the car exhaust is connected to the extract system as soon as possible.
- Turn on the workshop extract system prior to operating on the vehicle.
- Follow the manual handling training guidelines at all times.
- Refer to the MOT 005 SWPS for Four Post Lift when carrying out this activity.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never store workshop tools or suspension parts on the ground, always use a nearby workbench.
- Wear safety glasses when carrying out this task.
- Always follow proper instructions and observe the correct working procedures as laid down in relevant workshop manuals.

- Always use hand protection and barrier creams as supplied.
- Always use proper spring compressors or use the spring compressor jig to aid removal of springs.
- Ensure airlines are free from defect or damage prior to use.
- Ensure airlines on compressor jig are correctly fitted if in use.
- Damaged steering components should never be repaired; they should be replaced with new ones.
- If a vehicle is involved in accidental damage all steering components should be inspected and checked. This will include dismantling steering rack (box) and checking it for damage.
- Carry out necessary checks and adjustments as outlined in workshop manuals or data books such as wheel alignment front and rear, caster camber and swivel axis inclination angles, wheel bearings etc.
- Check all hydraulic dampers for any signs of leaks or deterioration.
- Check power steering for correct operation and also check for leaks.
- Make sure engine is not running before gauges are connected or disconnected.
- Check all tyres for correct speed ratings, pattern, size, pressures, thread depth, and any signs of faults or deterioration. Always adhere to tyre mixing and compatibility requirements.
- After carrying out work on Steering and Suspension systems always check to make sure that the steering wheel is free to move the correct number of turns.
- Check brake pedal feel and clearance is OK before test driving the vehicle.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on steering and suspension systems. New staff/students will be trained by technician and lecturing staff as required.
- Manual Handling training
- PPE training

Personal protective equipment required (last resort)

- Safety boots
- Safety Glasses
- Overalls

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 809
	Revision Date: Oct 2026
Transmission Systems	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and carrying the transmission system and differential unit to and from storage, dismantling the gear box can result in lower back and or musculoskeletal injuries.

Falling equipment
Unsecure hold of test transmission unit when moving to and from storage, transmission unit not secured in the vice or placed at the workbench edge, assembling and disassembling the unit can fall and result in feet crushing injuries.

Mechanical
Crushing of finger tips when hand rotating the transmission cog wheels. Entanglement of long hair or loose clothing with rotating cog wheel.

Slips Trips and Falls
Poor housekeeping, personal belongings, transmission parts or tools lying on the ground can result in slipping and tripping causing fall impact injuries to the head and body parts.

Chemicals
Immersing parts for degreasing with detergent, removing degreased parts for washing, brush cleaning parts, topping up or emptying the degreaser can result in splashing of detergent causing temporary or permanent loss of sight, burns to the hands and fingers or other body parts by contamination of clothing.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Carrying out demonstrations on stationary front and rear Transmission systems.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Always follow proper instructions as given and use workshop manuals for the correct working procedures as laid down.
- Only dismantle transmission system when proper instruction is given.
- Follow the manual handling training guidelines at all times.
- Seek assistance if required to move transmission systems to and from storage.
- Maintain a secure hold of transmission units when moving to and from storage.

- Ensure that units are fitted securely into vice when in use.
- Always place the transmission unit in from the work bench edge.
- Never place fingers in between the rotating cog wheels of the unit.
- Loose clothing must not be worn when carrying out this task.
- Long hair must be neatly tied back or a well fitted cap worn.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave tools or transmission parts lying on the ground, always use the work bench for storage.
- See SWPS MEC 006 for degreasing parts.
- Lecturer to get students to sign in on exercise and instruct them as to the necessary PPC and PPE required to completing the exercise in a safe logical and efficient manner. Also a copy of a safe practice worksheet for that exercise should be made available.
- Make sure that transmission is properly secured or located on workbench or attached to engine.
- Use proper hand protection, barrier cream and gloves as supplied.
- Use selected tools such as soft hammers and drifts as supplied.
- The use of hydraulic press and selected pullers should be used for fitting and removing gears and bearings wherever possible. See safe work sheet for hydraulic press.
- If in doubt check with the Lecturer in charge.
- Always tidy up when work is complete and leave transmission ready for next demonstration.
- Dispose or discard worn parts or transmission fluid in accordance with present legislation.
- Check with Lecturer in charge before leaving this exercise so that you may be signed off.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on transmission systems
- New staff/students will be trained by technician and lecturing staff as required.
- Manual handling training.
- PPE training.
- Chemical handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Eye protection.
- Barrier creams/gloves.

- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 810
	Revision Date: Oct 2026
Compressed Air	Approved by: Breda Brennan

Hazards

Explosions
Over pressuring of compressor, not being maintained can result in explosions and ejected flying metal missiles causing death, lacerations, deep puncture wounds, major and minor cuts and bruises.

Electricity
Loose or damaged electrical cables, plugs can result in electrocution or first, second or third degree burns.

Slips, Trips & Falls
Leaking water, untidy workspace, poor housekeeping, can cause personnel to slip trip and fall breaking limbs, incur cuts and bruises and or concussion.

Noise
Poorly marinated compressors, missing guards can increase noise levels and cause acute or chronic permanent or temporary hearing loss and discomfort.

Fire
Overheating of compressors can result in fire when in contact with fuel sources and cause first second or third degree burns.

Whipping air lines
Damaged air lines, partly left open valves, poorly fitted connections can cause uncontrolled whipping lines striking individuals and causing loss of sight minor cuts and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using compressing air to open and close demonstration valves, operate machinery, and particular hand held tools.

Controls

- Students are not permitted to turn on Air Compressor or use airline hoses.
- Maintain clean, clutter free surrounding of the compressor at all times.
- Ensure all machine guards and housing are in place at all times of operation.
- Ensure all airline valves are closed prior to turning on compressor.
- Switch on the compressor when required. Follow the manufacturer's instructions.
- Ensure all hose attachments and connectors are free from defects (do not use if damaged) prior to use. Leaking airlines must only be repaired by a competent person.
- All non-machine hose airlines must be stored in storage lab. Lecturer and technicians are only permitted to use hose airlines. Return hose air lines to storage when no longer required.
- Only trained persons may use the compressor.
- All pipes, hoses, and fittings must have a rating of the maximum pressure of the compressor. Compressed air pipelines should be identified (psi) as to maximum working pressure.
- Air supply shutoff valves should be located (as near as possible) at the point-of-operation.
- Air hoses should be kept free of grease and oil to reduce the possibility of deterioration.
- Hoses should not be strung across floors or aisles where they are liable to cause personnel to trip and fall. When possible, air supply hoses should be suspended overhead, or otherwise located to afford efficient access and protection against damage.
- Inspect and check the rim flanges, tyre bead and tube prior to assembly for defects, rust and tyre lever damage. Check any liners in the tyre that may be covering casing splits/damage or patches.
- Stand to one side and do not position your head or shoulders over the tyre during inflation.
- Inflate the tyre when it is contained within a restraining device, positioned behind a barrier, or bolted to the vehicle with the wheel nuts fully tightened.
- Compressed air must not be used to blow down clothing etc. and disciplinary action will be taken against anybody seen directing a live compressed air hose at any other person, as compressed air can enter the body via the skin causing serious illness/fatality.

Checks & Inspections

- Annual test and inspection of the compressor must be completed by the insurer. A record of the test should be kept by the School.
- Inspect hose and fittings prior to use.

Information, Instruction & Training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Hearing protection

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Strands Bench and Pillar Drilling Machine	Ref: SWPS 811 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death or first second and third degree burns.

Mechanical
Loose clothing, long hair can result in entanglement with rotating drill causing cuts and bruises to the head and arms. Contact with rotating drill piece can result in cuts to the hands and fingers. Entrapment of hand and arm with descending cutting tool and base table, vice or work piece. Crushing of fingers when adjusting the table height of the machine.

Slips, trips and falls
Poor housekeeping, personal belongings, waste material, trailing power cables on the ground can cause trips and slips resulting in fall impact head injuries.

Flying Debris / Objects
Waste drilled pieces of wooden or metal material, disintegrated cutting tool can create flying debris and result in loss of sight. Unsecured work piece or clamp/vice can result in flying object and cause impact injuries to the head and body parts.

Sharps
Contact with rotating drill piece can result in lacerations to the hands and fingers.

Fire
Flammable materials in contact waste drilled material can result in a fire causing first, second and third degree burns to the skin or respiratory illness from inhalation of smoke.

Manual Handling
Adjusting the machine table height to the required working position, clamping tool or carrying heavy loads for drilling can result in lower back and or musculoskeletal injuries.

Falling Machine
Drilling machine not securely fixed to the work bench, topples over and falls causing lower leg and feet crushing injuries.

Noise
Drilling pieces of metal can result the generation of noise causing temporary hearing discomfort or chronic hearing loss from long term use.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used cutting holes into metal, wood or other materials of varying sizes and shapes.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine power cable and plug prior to use. Do not use if damaged in any way and report to the lecturer or technician for removal from use.
- Electrical repairs must be carried out be a competent person.
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Hands or arms must never come between the descending drill piece and material for cutting.
- Follow manual handling training guidelines at all times.
- Ensure the correct speed is selected when drilling materials.
- Always use both hands to support and adjust the table height.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the machine is plugged into the wall socket above the workbench.
- Ensure all machine guards are in place prior to use.
- Safety glasses must be worn at all times when operating the machine.
- Inspect the cutting tool prior to use, do not use if damaged, hand back damaged cutting tool and request a new one from the lecturer / technician.
- Ensure to hold the work material firmly or clamp the work piece securely when operating the machine.
- Lecturer and technicians are only permitted to carry out repairs on cutting tools.
- Never blow or use air to remove swarf, Use a brush to clean or remove unwanted drilled material. Brush away from the body.
- Flammable materials must not be stored at or near the machine.
- Ensure the machine working table is adjusted to the required working height prior to use.
- Ensure that the machine is fixed bolted to the workbench.
- Never leave the machine running unattended.
- Always wait for the machine to come to a complete stop before adjusting or removing drilled material or parts.
- Ensure the cutting tool is adequately tightened before using.
- Wear hearing protection if using the machine for long periods of time.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Hearing protection

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Bloc Hydraulic & Electric Power Steering Simulator	Ref: SWPS 812 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Carrying the battery to and from storage for use on the simulator, pulling, dragging and pushing the simulator to and from storage can result acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Severing of fingers when in contact with the steering column when it is turning.

Slips Trips and Falls
Poor housekeeping, personal belongings, leaking hydraulic fluid lying on the ground can result in slipping and tripping causing fall impact head injuries.

Explosions
Incorrect setting up of the battery can result in explosions and cause puncture wounds to the body and or loss of sight.

Chemicals
Leaking or damaged battery can result in acid burns to the hands and exposed body parts.

Falling Battery
Battery not securely mounted and fastened on to the test unit, unsecure hold of the battery when carrying to and from storage

Fire
Flammable sources in contact with ignition source (battery) can result in a fire and cause first, second and or third degree burns to the body.

Collapsing test Unit
Damage to the wheels or frame of the test unit can result in a collapsing machine and cause crushing injuries to the feet.

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death or first second and third degree burns

Ejected Hydraulics
Leaking hydraulic fluid under pressure can result in loss of sight or piercing of the skin and death or irritation to the skin.

Person Exposed to Risk
Students Employees Public Contractors Visitors

Work Description

These simulators are used to demonstrate how electric & Hydraulic power steering functions.

Controls

- Students are permitted to use the simulator under the under correct instruction and the lecturer or technician's supervision.
- Follow the manual handling training guidelines at all times when operating the machine.
- Seek assistance if required when moving the machine.
- Never place fingers or hands on the steering column when it is in use.
- Maintain good housekeeping and work area from personal belongings at all times.
- Immediately clean up any leaking hydraulic fluid from the ground.
- Technicians or lecturers must connect the battery to the test unit.
- Ensure to follow the battery wire colour coding when connecting to the unit.
- Inspect the battery for damage or leaks prior to use.
- Do not use battery if damaged or defected in any way and remove from use for safe disposal.
- Wear safety glasses and exercise caution when topping the battery cells up with water.
- Ensure to maintain a secure hold of the battery when carrying to and from storage.
- Ensure that the battery is securely mounted and fastened onto the machine when setting up.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Flammable sources must not be stored at or near the test unit.
- Ensure that the wheels and frame of the test unit are free from damage or defects prior to use.
- Inspect the machine for leaking hydraulic fluid prior to use.
- Ensure that the hydraulic hoses are free from damage or defects prior to using the machine. Do not use if damaged or defected in any way and remove from use for repair.
- Competent person/s must only carry out hydraulic repairs.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training
- Chemical Training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves
- Overalls

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**3**			**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 813
	Date: Oct 2026
SWPS 813 Maha, Space & Redmount Scissors Lifts	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired or damaged electrical wires can result in electrocution-death or first, second and or third degree burns.

Pneumatics
Loose or damaged air lines can result in uncontrolled whipping airline resulting in permanent loss of sight.

Slips, Trips and Falls
Poor housekeeping, personal belongings, car parts or tools, lying on the ground, raised NCT platform can result in slipping or tripping causing fall impact head and body injuries.

Manual Handling
Lifting or dragging the extension support plates, removing or replacing car wheels can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Loss of fingers or breaking of bones if in between moving pneumatic scissors jack or wheels free scissors jack. Crushing and entrapment of hands, arms or fingers with descending pneumatic jacks or feet with car being driven onto or off the ramp.

Fumes
Driving vehicles on and off the ramps, running the engine on the ramp can result in the inhalation of carbon monoxide and cause death or acute or chronic respiratory illness and or disease.

Falls from Heights
Standing on the lift when it is moving or working on a raised car can result in falling & cause death. Unsecure footing under the vehicle can result in falling into the pit or walking close to the pit edge when working on a vehicle and cause fall head impact injuries.

Hot Surfaces
Touching the exhaust of a running engine can result in burns to the hands and fingers.

Falling Tools, Car Parts or Vehicle
Tools / car parts on the ramp edge can fall causing blunt force blows to the head or body parts. Car not mounted correctly on the ramp can roll back and fall resulting in impact and crushing injuries.

Traffic
Driving the vehicle indoors, on and off the ramp can result in striking a bystander causing blunt force injuries.

Ejected Hydraulics
Leaking hydraulic fluid under pressure can result in loss of sight or piercing of the skin and death or irritation to the skin**.**

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Carrying out demonstrations on Vehicle brakes, overhauling, steering and suspension system while on the lift (running and stationary).

Note: The normal safety precautions as listed when working under or around a vehicle must be adhered to for this exercise.

Controls

- Students are permitted to use the lift, under correct instruction and the lecturer or technician's supervision.
- Ensure the vehicle in use is securely driven and mounted onto the lift prior to operating the lift.
- Never exceed the manufacturer's weight lifting capacity as stated on the lift.
- Ensure that all safety sensors, micro switches and rails are in place prior to operating the machine.
- Inspect the electrical cables of the lift for any damage, defects or loose wiring prior to operating the lift.
- Never use the lift where electrical cables are damaged, loose of defected in anyway.
- All electrical repairs must be carried out by a competent person.
- Ensure that all air lines are securely fitted and connected to the lift.
- Leaking air lines must be repaired immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Car parts or work tools must never be stored or left lying on the ground beside the lift, always use a nearby work bench.
- Observe the raised ground (NCT Test Equipment) when working with the lift.
- Follow the manual handling training guide lines at all times and seek assistance if required to lift or handle heavy or awkward loads.
- Never place hands or fingers in between the moving or descending pneumatic scissors and wheel jack.
- Never place feet on the lift when vehicles are being driven on to it.
- Always remain behind the yellow line around the lift when it is being loaded or unloaded with a vehicle.
- Always remain behind the yellow line when the lift is in use.
- Never lean against or hold on to vehicle on the lift when it is use.

- Ensure that the exhaust of the vehicle is connected to the in-house fume extract system as soon as possible.
- Ensure that there is good workshop ventilation prior to commencing work on the lift.
- Never stand on the lift when it is ascending or descending.
- Never stand on the lift to work on a vehicle.
- Always allow for the exhaust of a vehicle to cool sufficiently prior to handling.
- Never leave tools or car parts on the edge of the ramp, always use a nearby bench to place them.
- Exercise caution when working underneath a raised lift.
- Follow the rules of the road when driving the vehicle in the garage and on and off the lift.
- Sound the vehicle horn before reversing off the ramp.
- Always drive the vehicle up on lift until it clears rear wheel stops.
- Only use turntables when vehicle is on lift and when vehicle is properly secured.
- When lift is fully raised before starting work underneath it, ensure safety locks provided are in place.
- When using wheels free lifting system or lift jacks always place at recommended lifting points and support with axle stands where necessary.
- Always check head clearance between vehicle roof and workshop ceiling before raising lift.
- Take care when working underneath a vehicle on the lift, ensure that you have a working clearance that will prevent you accidentally bumping into protruding parts.
- Never touch parts such as exhaust systems without first ascertaining if these parts are cold.
- Before lowering lift, ensure that there are no Persons or obstructions underneath the vehicle.
- Always keep doors of the vehicle closed when lift is being raised or lowered.
- Inspect the machine for leaking hydraulic fluid prior to use.
- Ensure that the hydraulic hoses are free from damage or defects prior to using the machine. Do not use if damaged or defected in any way and remove from use for repair.
- Never touch hydraulic fluid with bare skin.
- Always wear gloves when in contact with or handling hydraulic fluid.
- Competent person/s must only carry out hydraulic repairs.
- Wash hands thoroughly when work is complete

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular inspections and maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals
- Ensure all interlocks, safety sensors and automatic shutdown sensors are checked each term
- Ensure all safety notices are readable and displayed in correct locations

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on lifts. New staff/students will be trained by technician and lecturing staff as required.
- PPE training
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots,
- Eye protection,
- Barrier creams/gloves,
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 814
	Revision Date: Oct 2026
Engine Block & Cylinder Heads	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and carrying the engine, cylinder head unit to and from storage, dismantling the engine can result in lower back and or musculoskeletal injuries.

Falling equipment
Unsecure hold of engine part or cylinder head when moving to and from storage, unit not secured in the vice or placed at the workbench edge, assembling and disassembling the unit can fall and result in feet crushing injuries.

Mechanical
Crushing of finger tips when rotating parts by hand. Entanglement of long hair or loose clothing with moving engine parts.

Slips Trips and Falls
Poor housekeeping, personal belongings, engine parts or tools lying on the ground can result in slipping and tripping causing fall impact injuries to the head and body parts.

Chemicals
Immersing parts for degreasing with detergent, removing degreased parts for washing, brush cleaning parts, topping up or emptying the degreaser can result in splashing of detergent causing temporary or permanent loss of sight, burns to the hands and fingers or other body parts by contamination of clothing.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The test engines blocks and cylinder heads are used for practical demonstration purposes.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technician's supervision.
- Always follow proper instructions as given and use workshop manuals for the correct working procedures as laid down.
- Only dismantle engine blocks or cylinder heads when proper instruction is given.
- Follow the manual handling training guidelines at all times.
- Seek assistance if required when moving engines or parts to and from storage.
- Maintain a secure hold of engine and parts when moving to and from storage.

- Ensure that units are fitted securely into vice when in use.
- Always place the engine unit and parts in from the work bench edge.
- Never place fingers in between the rotating parts of the unit.
- Loose clothing must not be worn when carrying out this task.
- Long hair must be neatly tied back or a well fitted cap worn.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave tools or transmission parts lying on the ground, always use the work bench for storage.
- See SWPS MEC 006 for degreasing parts.
- Lecturer to get students to sign in on exercise and instruct them as to the necessary PPC and PPE required to completing the exercise in a safe logical and efficient manner. Also a copy of a safe practice worksheet for that exercise should be made available.
- Use proper hand protection, barrier cream and gloves as supplied.
- Use selected tools such as soft hammers and drifts as supplied.
- If in doubt check with the Lecturer in charge.
- Always tidy up when work is complete and leave transmission ready for next demonstration.
- Dispose or discard worn parts or transmission fluid in accordance with present legislation.
- Check with Lecturer in charge before leaving this exercise so that you may be signed off.

Checks & Inspections

- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots,
- Eye protection,
- Barrier creams/gloves,
- Overalls.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 815
	Revision Date: Oct 2026
Wheel force 1900,Hunter &Geolux Wheel Alignment	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged wiring, poorly maintained wiring or plugs on the Rav machine can result in electrocution-death or first second and or third degree burns.

Manual Handling
Attaching and disconnecting the alignment clamps to and from the vehicle wheels, setting up and dismantling the turn and sliding alignment tables, pulling and dragging the wheel force trolley to and from storage can result in lower back and or musculoskeletal injuries. Moving the wheel on the turn table.

Slips Trips and Falls
Poor housekeeping, personal belongings, in correct procedure, test equipment lying on the ground can result in tripping and slipping causing fall impact head and body injuries.

Fumes
Driving the test vehicle on and off the lift can result in the inhalation of carbon monoxide resulting in death or acute or chronic respiratory illness.

Laser Beams
Using the head beam aligner can result in the loss of sight or temporary eye injury by directly looking into or by pointing it at an individual's eyes

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The test equipment is used to test the front and rear wheel alignment of vehicles.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Inspect the electric cable and plugs on the test unit prior to use.
- Do not use the test unit if cable or plug damaged or defected in any way & remove from use for repair.
- Competent persons must carry out electrical repairs.
- Follow the manual handling training guidelines at all times when setting up and dismantling the test unit.

- Never use the wheel aligner head to move the vehicle\wheel on the alignment tables\ turn tables.
- Always use both hands to grip the tyre while turning the wheel.
- Never look directly into the light of the head lamp beam aligner
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave test equipment lying on the ground when in use, use a near by workbench.
- Ensure that the test vehicle is connected to the in-house exhaust extract system as soon as possible.
- Ensure that there is adequate ventilation at all times.
- See the Four Post Lift SWPS MOT 005 when carrying out this operation.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the school.
- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots,
- Eye protection,
- Barrier creams/gloves,
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	=	Risk Factor	3 Low risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet 60 Tonne Press	Ref: SWPS 816 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the pressing blocks into position, lifting, carrying or holding metal materials for pressing can result in lower back and or musculoskeletal injuries.

Mechanical
Entanglement of long hair or loose clothing with ratchet and pulley system resulting in minor neck injuries and bruising. Crushing of finger tips when caught in between the rotating cogs of the ratchet system. Crushing, entrapment or pinching of hands or fingers with the descending ram head and material or base block.

Ejected Hydraulics
Leaking hydraulic fluid under pressure can result in loss of sight or piercing of the skin and death or irritation to the skin.

Chemicals
Topping the hydraulic reservoir up with hydraulic fluid, cleaning up hydraulic leaks or spills, contaminated clothing can result in contaminating the hands and fingers with fluid and cause acute or chronic dermatitis.

Slips Trips and Falls
Poor housekeeping, personal belongings, hydraulic fluid or metal components lying on the ground can cause slipping or tripping that results in falls and major or minor head and body impact injuries.

Flying Missiles
Metal materials being pressed under pressure can shatter or break resulting in a flying metal missiles and cause loss of sight and or puncture wounds to the body.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for removing bearings from metal parts or shaping metal materials.

Controls

- Students are permitted to use the press, under correct instruction and the lecturer or technician's supervision.

- Follow the manual handling training guidelines at all time when operating the machine.
- Seek assistance if required when handling awkward loads for pressing.
- Loose clothing must never be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch or place hands or fingers in between the pulley and ratchet cog wheels when rotating.
- Use both hands when operating the pulley handle.
- Never place hands or fingers in between the descending ram head of the machine.
- Inspect the machine for leaking hydraulic fluid prior to use.
- Ensure that the hydraulic hoses are free from damage or defects prior to using the machine. Do not use if damaged or defected in any way and remove from use for repair.
- Never touch hydraulic fluid with bare skin.
- Always wear gloves when in contact with hydraulic fluid.
- Carefully pour hydraulic fluid when topping up the machine reservoir.
- Remove clothing contaminated with hydraulic fluid immediately.
- Always wash your hands thoroughly after handling hydraulic fluid.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never store metal components on the ground around the machine, always use a nearby workbench.
- Immediately clean up any leaking hydraulic fluid from the ground or machine and carefully dispose of.
- Always wear safety glasses when operating the press.
- Ensure that the metal components being pressed are securely mounted on to the base of the machine.
- Group gatherings or individual onlookers must remain at a safe distance when the machine is in operation. Safe distance to be determined by lecturer or technician.
- Always operate the machine standing in front of the hydraulic controls.
- Seek assistance if required to hold materials in place.
- Never leave the machine unattended when it is use.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Safety Glasses.
- Overalls.
- Safety gloves.

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 817
	Revision Date: Oct 2026
Christensen 10 Tonne Press	Approved by: Breda Brennan

Hazards

Manual Handling
Moving the block bed into the correct height, lifting, carrying or holding metal materials for pressing can result in lower back and or musculoskeletal injuries.

Mechanical
Entrapment of long hair or loose clothing with ram head resulting in minor neck injuries and bruising. Crushing, entrapment or pinching of hands or fingers with the descending ram head and material or base block.

Ejected Hydraulics
Leaking hydraulic fluid under pressure can result in loss of sight or piercing of the skin and death or irritation to the skin.

Chemicals
Topping the hydraulic reservoir up with hydraulic fluid, cleaning up hydraulic leaks or spills, contaminated clothing can result in contaminating the hands and fingers with fluid and cause acute or chronic dermatitis.

Slips Trips and Falls
Poor housekeeping, personal belongings, hydraulic fluid or metal components lying on the ground can cause slipping or tripping that results in falls and major or minor head and body impact injuries.

Flying Missiles
Metal materials being pressed under pressure can shatter or break resulting in a flying metal missile and cause loss of sight and or puncture wounds to the body.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for removing bearings from metal parts or shaping metal materials.

Controls

- Students are permitted to use the press, under correct instruction and the lecturer or technician's supervision.
- Follow the manual handling training guideline at all times when operating the machine.
- Seek assistance if required when handling awkward loads for pressing.

- Always seek assistance when setting the block bed up at the correct height and ensure that the roller pins are secured into holding position.
- Loose clothing must never be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never place hands or fingers in between the descending ram head of the machine.
- Inspect the machine for leaking hydraulic fluid prior to use.
- Ensure that the hydraulic hoses are free from damage or defects prior to using the machine. Do not use if damaged or defected in any way and remove from use for repair.
- Never touch hydraulic fluid with bare skin.
- Always wear gloves when in contact with hydraulic fluid.
- Carefully pour hydraulic fluid when topping up the machine reservoir.
- Remove clothing contaminated with hydraulic fluid immediately.
- Always wash your hands thoroughly after handling hydraulic fluid.
- Competent person/s must only carry out hydraulic repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never store metal components on the ground around the machine, always use a nearby workbench.
- Immediately clean up any leaking hydraulic fluid from the ground or machine and carefully dispose of.
- Always wear safety glasses when operating the press.
- Ensure that the metal components being pressed are securely mounted on to the base of the machine.
- Group gatherings or individual onlookers must remain at a safe distance when the machine is in operation. Safe distance to be determined by lecturer or technician.
- Always operate the machine standing in front of the hydraulic controls.
- Seek assistance if required to hold materials in place.
- Never leave the machine unattended when it is use.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Chemical handling training
- Manual handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Safety Glasses.
- Overalls.
- Safety gloves.

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 818
	Revision Date: Oct 2026
Seat, Starlet and Clio Demonstration Engines	Approved by: Breda Brennan

Hazards

Manual Handling
Pulling and pushing the engines to and from storage, topping the fuel tanks up with fuel, removing and replacing the engine battery can result in acute or chronic lower back and or musculoskeletal injuries

Hot Surfaces / Liquid
Contact with the engine exhaust, radiator and hoses, hot water, steam, engine block can result in first second or third degree burns to the hands and fingers.

Fumes
Running a test engine can result in inhalation of carbon monoxide and cause death or acute and or chronic respiratory illness.

Chemicals
Topping up the fuel tanks, leaking battery acid, can result in loss of sight from splashing or petrol or battery acid or contamination of clothing and burns to the skin, hands and fingers.

Mechanical
Entanglement of long hair loose clothing or jewellery with rotating radiator fan, fan belt or cooling fan can result in asphyxiation. Contact with rotating fan belt or drive belt can result in the severing of fingers.

Slips Trips and Falls
Poor housekeeping, personal belongings, spilled, splashed or leaking liquid chemicals (petrol, diesel, coolant oil, battery Acid) extract exhaust hose system can result in slipping & tripping causing fall impact head & body injuries.

Fire
Topping the fuel tank up, disconnecting the fuel line can result in aerosol fuel spray, fuel stored in the workshop can result in fire when in contact with a naked flame or ignition source, causing death or burns to the body.

Collapsing Test Equipment
Damaged legs or wheels on the frames of the engines can result in the apparatus collapsing causing lower leg and feet impact and crushing injuries.

Explosion
Battery is incorrectly connected and explodes or generates sparks that come into contact with fuel sources resulting in a fire and first, second and or third degree burns or puncture wounds to the body.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The engines are mounted onto steel transportable frames and are working petrol (Starlet, Clio) and diesel (Peugeot) engines used to carry out various demonstrations.

Controls

- Students are permitted to use the press, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Follow the manual handling training guidelines at all times. Seek assistance if required when moving test engines to and from storage.
- Toping up with fuel must be done with the use of a 10 litre Gerri can.
- Never touch the exhaust, radiator or engine parts when the test engine is running and allow for sufficient time to cool before handling.
- Never remove the radiator cap when the engine is running.
- Never touch hot water or steam from the radiator or hoses.
- Ensure that all guards are in place prior to commencing work.
- Do not use the machine if any guards are missing.
- Ensure that the exhaust of the test engine/s is connected to the workshop extract system prior to use.
- Turn on the extract system prior to starting up the test engine/s.
- Wear safety glasses and gloves when topping the fuel tank up with fuel or battery with water.
- Avoid the splashing of chemicals when pouring from holding containers. Where possible use a funnel.
- Use an attachable flexible spout when pouring fuel into the fuel tank.
- Inspect the battery for damage and leaks prior to use, do not use if damaged in any way (remove for safe disposal) and use a replacement.
- Clothing contaminated by fuel, oil or battery acid must be removed & replaced immediately.
- Loose clothing or jewellery must not be worn when operating the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the moving or rotating parts of the engine.
- Never place hands and fingers in-between moving or rotating parts (fan belt, radiator fan) of the engine.
- Maintain good housekeeping and work area free from personal belongings at all times.

- Immediately clean-up & safely dispose of any spilled, splashed or leaking liquid chemicals (Petrol, diesel coolant oil, Battery Acid) from the ground.
- Avoid trailing the exhaust extract hose along the ground where possible. Always walk around a trailing hose and never step over it.
- Never disconnect a fuel line when the engine is running.
- Avoid working on engine if the fuel storage and supply and return lines are not fully secured.
- If repairs are being carried out on the fuel system make sure system is depressurized in accordance with manufacturer's instructions.
- Never expose the hands, face or any other part of the body to injector spray, the fuel can penetrate the skin with potentially fatal results.
- Petrol fuel is a highly flammable substance when atomised and should be treated with great care.
- Ensure that the correct fire extinguishers are available and close to hand when operating the engines.
- Naked flames or ignition sources must never be used at or near the test engines/s.
- Fuel for the engines must not be stored in the workshop, use the external designated storage area.
- Never remove pressurized radiator cap from cooling system while the system is pressurized.
- Inspect the legs and wheels of the apparatus of the engines for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair.
- Follow the letter and colour coding on the battery when connecting to the engine.
- Never leave the key in the ignition switch when working on the vehicle engine.
- Ensure the engine is switched off before moving away from it.
- Always wash your hands when work with the test engines is complete.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all guards are in place and checked at regular intervals.
- Ensure all safety notices are readable and displayed in correct locations
- Ensure correct fire extinguishers are available.
- Lecturers and technicians must monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on engines. New staff/students will be trained by technician and lecturing staff as required.
- MSDS
- Manual Handling Training.
- Chemical Handling Training.
- PPE Training.

Personal protective equipment required (last resort)

- Safety boots,

- Safety Glasses,
- Barrier creams/ safety gloves,
- Hearing protection,
- Overalls,

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 819
	Revision Date: Oct 2026
Diesel Injector Tester and Aspirator	Approved by: Breda Brennan

Hazards

Chemicals
Topping up the machine with diesel, maintaining or operating the machine can result hands and fingers in contact with diesel causing irritation to the hands and fingers or other body parts with contaminated clothing.

Ejected Diesel
Operating the machine will result in ejected diesel under pressure and could cause death if it penetrates the skin, loss of sight, respiratory illness if inhaled

Fumes
Inhalation of diesel fumes can result irritation to the respiratory system coughing and wheezing.

Fire
Ignition or heat sources in contact with diesel liquid or spray, diesel stored beside the machine can result in a fire and cause first, second and or third degree burns to the body.

Falling Machine
Machine not bolted to the table can fall causing lower leg and feet impact injuries.

Mechanical
Operating the hand pressure pump of the machine can result in minor crushing of fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for checking various diesel fuel injected spray patterns under pressure.

Controls

- Students are permitted to use the machine, under correct instruction and the lecturer or technicians supervision.
- Wear gloves when topping up the machine with diesel or operating or maintaining the machine.
- Use a rubber bulb syringe for safe removal of diesel from sump/trauf.
- Clothing contaminated with diesel must be removed and replaced immediately.
- Wear safety glasses when operating or maintaining the machine.

- Ejected diesel spray must never be touched.
- Ensure the machine Perspex guard is in pace at all times when operating the machine.
- Ensure the diesel ejector is securely clamped prior to operating the machine.
- Ensure that all pipe work is securely connected prior to operating the machine.
- Follow the manufacturer's standard operating procedures at all times when operating the machine.
- Ensure that there is adequate ventilation when operating the machine.
- Turn on the garage extract system prior to operating the machine.
- Ignition or heat sources must never be used at or near the machine.
- Ensure that fire extinguishers are close to hand when operating the machine.
- Diesel must be stored in the designated outside storage area.
- Ensure that the machine is fixed bolted to the workbench table at all times of use.
- Always use the pressure pump of machine by its handle.
- Never place fingers in between the pressure pump handle base and machine.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Chemical handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Safety Glasses.
- Overalls.
- Safety gloves.

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)						
Probability :	**1**	x	Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Ford, Peugeot and Kia Test Engines (Non Live)	Ref: SWPS 820 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the engines to and from storage can result acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Crushing of fingers in between timing belt and or gear wheels when being rotated by hand. Entanglement of long hair or loose clothing with manual rotation of gear wheels resulting in minor bruising.

Slips Trips and Falls
Poor housekeeping, personal belongings, tools or engine parts lying in the ground can result in slipping and tripping causing fall head and body impact injuries.

Falling Engine
The wheels or the frame of the unit holding the engine in place fail or collapse resulting lower leg and feet crushing injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The engines are no longer operational by fuel or battery. They are permanently mounted on to steel frames for the purpose of demonstrating the removal of and fitting a timing belt, valve tuning and checking for piston engine ware and tare etc.

Controls

- Students are permitted to use the machine under the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times when moving the test engines.
- Never place fingers in between the timing belt and gear wheels or other moving parts when they are being rotated by hand.
- Loose clothing or jewellery must not be worn when carrying out this exercise.
- Long hair must be neatly tied back or a well fitted cap worn.
- Maintain good housekeeping and work area free from personal belongings at all times.

- Always use a nearby work bench to store tools or engine parts in use.
- Ensure that the wheels of the trolley are in good working order prior to using the unit.
- Ensure that the frame of the trolley is free from damage or defects prior to use.
- Do not use the trolley if the wheels or frames structure is damaged or defected in any way and remove from use for repair by a competent person.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Chemical handling training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Safety Glasses.
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **1966 Ford Anglia Engine** **NO LONGER IN USE**	Ref: SWPS 821 Revision Date: Approved by: Breda Brennan

Hazards

Electricity

Poorly connected, loose or damaged electrical cables or plugs can result in electrocution death or first, second and or third degree burns.

Mechanical

Entanglement of loose clothing, jewellery or long hair with rotating engine parts can result in asphyxiation. Pinching and crushing of fingers with rotating gear cogs. Impact injuries with ascending piston heads. Severing of fingers when in contact with rotating fan belt. Loss of fingers when in contact with the rotating chain.

Manual Handling

Moving the machine to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls

Poor housekeeping, personal belongings or trailing power cables can result in slipping and tripping causing fall impact head and body injuries.

Falling Machine

Machine is not bolted securely to the unit holding it in place, wheels fail on the trolley unit and engine falls over resulting in lower leg and feet crushing injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The Machine is used to demonstrate the layout of a working engine and gear box through the means of electricity.

Controls

- Students are not permitted to use this machine.
- Students are permitted to observe the mechanical workings of the machine under the supervision of the lecturer or technician.
- Ensure that all machine guards are in place prior to operating the machine.
- Inspect the machine electrical cable and plug for damage or defects prior to use.
- Do not use the machine if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Loose clothing or long hair must not be worn when operating this machine.

- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the rotating cog wheels of the machine with hands or fingers.
- Never place hands or fingers in between piston or valve movement.
- Never touch the fan belt when it is rotating.
- Follow the manual handling training guidelines when moving the machine to and from storage.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of power cables where possible, cover any trailing power cables with rubber mats.
- Ensure that the wheels of the trolley are in good working order prior to moving the machine.
- Ensure that the engine is secure and fixed bolted trolley.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.

Initial Risk Rating (without any control measures)

Probability ÷		x Severity		= Risk Factor	
	3		**3**		**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability ÷		x Severity		= Risk Factor	
	1		**3**		**3 Low risk**

~~Risk Assessment Review~~

~~As and when process changes or yearly~~

Safe Work Practice Sheet ABS Display Boards	Ref: SWPS 822 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Mechanical
Entanglement of long hair with rotating wheel speed gear on the display unit, loss of tip of fingers with rotating wheel speed gear.

Explosions
Incorrect setting up of the battery can result in explosions and cause puncture wounds to the face and other body parts.

Chemicals
Leaking or damaged battery, topping up with water can result in contact with battery acid that causes severe burns to the skin. Contact with leaking brake fluid or when topping up with brake fluid can result in irritation to the skin.

Manual Handling
Lifting and carrying the battery to and from the machine, moving the display boards to and from storage can result in acute lower back and or musculoskeletal injuries.

Ejected Brake Fluid
Damaged or leaking brake fluid pipe work or loose brake pipe connections can result in ejected brake fluid under pressure and cause loss of sight and or irritation to the skin.

Falling Display Board or Battery
The wheels or legs of the display board unit fail due to damage or defects causing the machine to fall over and result in lower leg and feet impact injuries. Unsecure hold of or damaged battery handle can result in a falling battery and crush injuries to the feet.

Slips Trips and Falls
Poor housekeeping and personal belongings can result in slipping and tripping causing fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The display boards are used for the purpose of training in diagnostic trouble shooting on brake systems.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Ensure that all machine guards are in place prior to operating the machine.
- Inspect the machine electrical cable and plug for damage or defects prior to use.
- Do not use the machine if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Loose clothing or long hair must not be worn when operating this machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the rotating wheel speed gears of the machine with fingers.
- Ensure that sensors are in place when checking wheel speed gears.
- Inspect the battery for damage or defects prior to use, do not use if damaged or defected in any way and remove form use for safe disposal.
- Remove any clothing contaminated with battery acid or brake fluid immediately.
- Wear gloves when topping up a battery with water or the unit with brake fluid.
- Follow the manual handling training guidelines when moving the machine or battery to and from storage.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving from storage.
- Inspect all brake pipe work and fittings for damage or leaks prior to using the machine.
- Wear safety gloves if required to handle leaking brake fluid or topping up with brake fluid.
- Do not use the machine if brake fluid pipe work is damaged or leaking in any way and remove from use for repair by a competent person.
- Wear safety glasses when operating or observing the operation of the machine.
- Inspect the wheel and legs of the machine for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Bloc Ford Mondeo Engine Simulator Board	Ref: SWPS 823 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the display unit or battery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Entanglement of loose clothing or long hair with rotating wheels on the display board can result in asphyxiation or major bruising of the neck.

Falling battery
Unsecure hold of battery when placing on to the unit, battery not mounted flat and secure on the display unit can result in a falling battery and crush injuries to the feet.

Falling Display Unit
The wheels or the legs of the display unit fail due to damage or defects resulting in the display unit falling over and causing lower leg and feet impact injuries.

Chemicals
A leaking or damaged battery can result in major acid burns to the hands and fingers or other body parts from contaminated clothing.

Slips Trips and Falls
Poor housekeeping, personal belongings or battery acid lying on the ground can result in slipping and tripping causing falls and head and body impact injuries.

Explosions
Incorrect setting up of the battery can result in an explosion causing loss of sight or puncture wounds to the face and body parts.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The display board is used for the purpose of putting in practical engine faults for students to find through the use of diagnostics.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Follow the manual handling training guide lines at all times when moving the display board or battery.
- Ensure that all machine guards are in place prior to operating the machine.
- Loose clothing or jewellery must not be worn when using the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving from storage.
- Inspect the wheels and legs of the display unit for damage and defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Inspect the battery for damage or leaks prior to use, do not use if damaged or leaking in any way and remove from use for safe disposal of.
- Wear safety gloves and glasses if required to handle a damaged or leaking battery.
- Remove any clotting contaminated by battery acid immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up and battery acid spills or leaks immediately and safely dispose of waste materials.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Bloc Window Winders Simulator Board	Ref: SWPS 824 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the display unit or battery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Entanglement of loose clothing or long hair with rotating wheels on the rotating winders of windows unit resulting in minor neck injury. Nip point with the moving cog system and teeth of the front windows resulting in cuts to the tips of fingers.

Falling battery
Unsecure hold of battery when placing on to the unit, battery not mounted flat and secure on the display unit can result in a falling battery and impact injuries to the feet.

Falling Display Unit
The wheels or the legs of the display unit fail due to damage or defects resulting in the display unit falling over and causing lower leg and feet impact injuries.

Chemicals
A leaking or damaged battery can result in major acid burns to the hands and fingers or other body parts from contaminated clothing.

Slips Trips and Falls
Poor housekeeping, personal belongings or battery acid lying on the ground can result in slipping and tripping causing falls and head and body impact injuries.

Explosions
Incorrect setting up of the battery can result in an explosion causing loss of sight or puncture wounds to the face and other body parts.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The display board is used for the purpose of demonstrating the function of the electric window winders in cars and finding faults through diagnostics.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Follow the manual handling training guide lines at all times when moving the display board or battery.
- Ensure that the machine guard mesh on all four windows is in place prior to operating the machine.
- Loose clothing or jewellery must not be worn when using the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving to and from storage.
- Inspect the wheels and legs of the display unit for damage and defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Inspect the battery for damage or leaks prior to use, do not use if damaged or leaking in any way and remove from use for safe disposal of.
- Wear safety gloves and glasses if required to handle a damaged or leaking battery.
- Remove any clotting contaminated by battery acid immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up and battery acid spills or leaks immediately and safely dispose of waste materials.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Bloc Central Locking Simulator Board	Ref: SWPS 825 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the display unit or battery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Falling battery
Unsecure hold of battery when placing on to the unit, battery not mounted flat and secure on the display unit can result in a falling battery and crush injuries to the feet.

Falling Display Unit
The wheels or the legs of the display unit fail due to damage or defects resulting in the display unit falling over and causing lower leg and feet impact injuries.

Chemicals
A leaking or damaged battery can result in acid burns to the hands and fingers or other body parts from contaminated clothing.

Slips Trips and Falls
Poor housekeeping, personal belongings or battery acid lying on the ground can result in slipping and tripping causing falls and head and body impact injuries.

Explosions
Incorrect setting up of the battery can result in an explosion causing loss of sight or puncture wounds to the face and body parts.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The display board is used for the purpose of demonstrating the function of the central door locks in cars and finding faults through diagnostics.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).

- When disconnecting the battery, disconnect the black cable first.
- Follow the manual handling training guide lines at all times when moving the display board or battery.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving to and from storage.
- Inspect the wheels and legs of the display unit for damage and defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Inspect the battery for damage or leaks prior to use, do not use if damaged or leaking in any way and remove from use for safe disposal of.
- Wear safety gloves and glasses if required to handle a damaged or leaking battery.
- Remove any clotting contaminated by battery acid immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any battery acid spills or leaks immediately and safely dispose of waste materials.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	2	=	Risk Factor	2 Low risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Bloc Air Bag System	Ref: SWPS 826 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the display unit or battery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Falling battery
Unsecure hold of battery when placing on to the unit, battery not mounted flat and secure on the display unit can result in a falling battery and crush injuries to the feet.

Falling Display Unit
The wheels or the legs of the display unit fail due to damage or defects resulting in the display unit falling over and causing lower leg and feet impact injuries.

Chemicals
A leaking or damaged battery can result in major acid burns to the hands and fingers or other body parts from contaminated clothing.

Slips Trips and Falls
Poor housekeeping, personal belongings or leaking battery acid lying on the ground can result in slipping and tripping causing falls and head and body impact injuries.

Explosions
Incorrect setting up of the battery can result in an explosion causing loss of sight or puncture wounds to the face and body parts.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for fault finding on a car air bag system through diagnostics on a 12 Volt system.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).

- When disconnecting the battery, disconnect the black cable first.
- Follow the manual handling training guide lines at all times when moving the display unit or battery.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving to and from storage.
- Inspect the wheels and legs of the display unit for damage and defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Inspect the battery for damage or leaks prior to use, do not use if damaged or leaking in any way and remove from use for safe disposal of.
- Wear safety gloves and glasses if required to handle a damaged or leaking battery.
- Remove any clotting contaminated by battery acid immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any battery acid spills or leaks immediately and safely dispose of waste materials.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability :	**1**	x	Severity	**2**	= Risk Factor	**2 Low risk**	
Risk Assessment Review *As and when process changes or yearly*							

Safe Work Practice Sheet AG Bloc Air Conditioning Mobile Unit	Ref: SWPS 827 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poor connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Moving the display unit or battery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Contact with the water coolant rotating fan or motor drive belt can result in severing of finger tips. Entanglement of loose clothing or long hair with rotating coolant fan or air con motor.

Falling battery
Unsecure hold of battery when placing on to the unit, battery not mounted flat and secure on the display unit can result in a falling battery and crush injuries to the feet.

Falling Display Unit
The wheels or the legs of the display unit fail due to damage or defects resulting in the display unit falling over and causing lower leg and feet impact injuries.

Chemicals
A leaking or damaged battery can result in major acid burns to the hands and fingers or other body parts from contaminated clothing. Leaking refrigerant gas from the unit hoses can result in acute minor irritation to the respiratory system if inhaled.

Temperature
Touching escaping gas from hoses etc. can result in frostbite to the hands and fingers.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing power cables or leaking battery acid lying on the ground can result in slipping and tripping causing falls and head and body impact injuries.

Explosions
Incorrect setting up of the battery can result in an explosion causing loss of sight or puncture wounds to the face and body parts.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for fault finding and refilling the air conditioning system.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Inspect the machine electrical cable and plug for damage or defects prior to use.
- Do not use the machine if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Follow the manual handling training guide lines at all times when moving the display unit or battery.
- Ensure all machine guards are in place prior to operating the machine.
- Loose clothing must not be worn when operating the unit.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving to and from storage.
- Inspect the wheels and legs of the display unit for damage and defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Inspect the battery for damage or leaks prior to use, do not use if damaged or leaking in any way and remove from use for safe disposal of.
- Wear safety gloves and glasses if required to handle a damaged or leaking battery.
- Remove any clotting contaminated by battery acid immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any battery acid spills or leaks immediately and safely dispose of waste materials.
- Avoid the trailing of electrical power cables when setting up the unit for use.
- Ensure that there is good ventilation when operating the unit.
- Never touch escaping refrigerant gas with bare skin.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training

- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Blue Point Mobile Engine & Gear Box Mounted Stands** **NO LONGER IN USE**	Ref: SWPS 828 Revision Date: Approved by: Breda Brennan

Hazards

Manual Handling

Moving the stands to and from storage, removing or replacing engine and gear boxes can result in acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls

Poor housekeeping or personal belongings can result in slips and trips causing fall impact head and body injuries.

Falling Stand

Damage to the caster wheels or legs of the unit can result in the stand and engine falling over and causing feet crushing injuries.

Rotating Unit

Manually rotating the unit can result in bystanders being struck by the moving unit and causing minor bruising.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The stands are used for holding in place non live engines and gearboxes so that students can visually see the various parts of an engine or gear box.

Controls

- Students are permitted to use the stands, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines when moving the stands to and from storage.
- Seek assistance if required when removing or replacing engines or gear boxes on the stands.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Inspect the wheels and frame of the stand for damage or defects prior to moving from storage.
- Do not use the unit if the wheels or frame is damaged in any way and remove from use for repair by a competent person.
- Never lay directly underneath the test unit when it is in use.

- Ensure that bystanders are clear from moving arc of the unit when it is being rotated into position.
- Never touch the unit when it is being rotated.
- Never stand on the frame of the unit when stationary or being transported.
- Safety boots must be worn.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- PPE Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.

Initial Risk Rating (without any control measures)

Probability ÷	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability ÷	**1**	x Severity	**2**	= Risk Factor	**2 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Bloc Ignition Turret Trainers	Ref: SWPS 829 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the training units or battery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical
Contact with the machine rotating drive shaft for the distributor or drive motor can result in entanglement of loose clothing or long hair causing minor injuries.

Falling battery or Ignition unit
Unsecure hold of battery or ignition unit when moving or placing on work bench, battery or training unit not mounted flat, secure, and at the work bench edge can result in a falling battery or training unit and impact injuries to the lower legs and feet.

Chemicals
A leaking or damaged battery can result in major acid burns to the hands and fingers or other body parts from contaminated clothing.

Slips Trips and Falls
Poor housekeeping, personal belongings or leaking battery acid lying on the ground can result in slipping and tripping causing fall and head and body impact injuries.

Explosions
Incorrect setting up of the battery can result in an explosion causing loss of sight or puncture wounds to the face and body parts.

Fire
Flammable materials or liquids within close proximity of the training unit can combust resulting in first second and third degree burns.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used to demonstrate how the ignition system of a vehicle operates and is powered through a on a 12 Volt battery system.

Controls

- Students are permitted to use the equipment, under correct instruction & the lecturer/technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Follow the manual handling training guide lines at all times when moving the training unit or battery.
- Use a trolley for moving the training units or battery to and from storage.
- Ensure all machine guards are in place prior to operating the machine.
- Loose clothing must not be worn when operating the unit.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure that the distributor cap and all guards are in place prior to operating the machine.
- Ensure that the battery and training unit are mounted flat and secure on the workbench.
- Place the battery and training unit in from the workbench edge.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery or training unit when moving to and from storage.
- Inspect the battery for damage or leaks prior to use, do not use if damaged or leaking in any way and remove from use for safe disposal of.
- Wear safety gloves and glasses if required to handle a damaged or leaking battery.
- Remove any clotting contaminated by battery acid immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any battery acid spills or leaks immediately and safely dispose of waste materials.
- Inspect the wheels and legs of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Never leave a training unit unattended when in use.
- Flammable materials, liquids must not be stored at or near the training units.
- Never touch the electrical spark generated through spark plug.
- Never touch the electrical cable contact points with hands or fingers.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x Severity	**2**	= Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**2**	= Risk Factor	**2 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Draper Engine Bloc Stand	Ref: SWPS 828 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the stands to and from storage, removing or replacing engine and gear boxes, adjusting the engine into desired working position can result in acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping or personal belongings can result in slips and trips causing fall impact head and body injuries.

Falling Stand
Damage to the caster wheels or legs of the unit can result in the stand and engine falling over and causing feet crushing injuries.

Rotating Unit
Manually rotating the unit can result in bystanders being struck by the moving unit and causing minor impact bruising.

Inadvertent movement of engine
The engine not locked into position can move suddenly and cause serious impact head and body injuries resulting in death and or concussion, cut and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The stand is used for holding in place non live engines and gearboxes so that students can visually see the various parts of an engine or gear box.

Controls

- Students are permitted to use the engine stand, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines when moving the stands to and from storage.
- Seek assistance when removing or replacing engines or gear boxes on the stands.
- Seek assistance when adjusting the engine into the working position.
- Use the metal lever when rotating the engine into desired position.
- Maintain good housekeeping and work area free from personal belongings at all times.

- Inspect the wheels and frame of the stand for damage or defects prior to moving from storage.
- Do not use the unit if the wheels or frame is damaged in any way and remove from use for repair by a competent person.
- Never lay directly underneath the test unit when in use.
- Ensure that bystanders are clear from moving arc of the unit when it is being rotated into position.
- Never touch the unit when it is being rotated.
- Never stand on the frame of the unit when stationary or being transported.
- Safety boots must be worn.
- Ensure to tighten the safety locking bolt on the rotating shaft when the engine is in desired position.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- PPE Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Block automotive Engine Stand	Ref: SWPS 831 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Moving the stands to and from storage, removing or replacing engine and gear boxes, adjusting the engine into desired working position can result in acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping or personal belongings can result in slips and trips causing fall impact head and body injuries.

Falling Stand
Damage to the caster wheels or legs of the unit can result in the stand and engine falling over and causing feet crushing injuries.

Rotating Unit
Manually rotating the unit can result in bystanders being struck by the moving unit and causing minor impact bruising.

Mechanical
Inadvertent crushing of fingers tips or pinching of skin on hand when adjusting the locking pin or tightening the brake on the unit can result in minor cuts and bruises.

Engine movement
The engine not locked into position can move unaided and cause serious impact head and body injuries resulting in death and or concussion, cut and bruises.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The stand is used for holding in place non live engines and gearboxes so that students can visually see the various parts of an engine or gear box.

Controls

- Students are permitted to use the engine stand, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines when moving the stands to and from storage.

- Seek assistance when removing or replacing engines or gear boxes on the stands.
- Seek assistance when adjusting the engine into working position.
- Ensure to loosen and tighten the safety bolt as required.
- Use a metal lever when rotating the engine into desired position.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Inspect the wheels and frame of the stand for damage or defects prior to moving from storage.
- Do not use the unit if the wheels or frame is damaged in any way and remove from use for repair by a competent person.
- Never lay directly underneath the test unit when in use.
- Ensure that bystanders are clear from moving arc of the unit when it is being rotated into position.
- Never touch the unit when it is being rotated.
- Never stand on the frame of the unit when stationary or being transported.
- Safety boots must be worn.
- Exercise caution when adjusting and tightening the locking pin and brake of the stand.
- Ensure that the engine is locked into position and that the locking pin and brake are working properly.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- PPE Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability :	**1**	x	Severity	**3**	= Risk Factor	**3 Low risk**	
Risk Assessment Review *As and when process changes or yearly*							

Safe Work Practice Sheet	Ref: SWPS 832
	Revision Date: Oct 2026
Epco Manual Hydraulic Hoist	Approved by: Breda Brennan

Hazards

Manual Handling
Pulling and dragging the hoist to and from storage or moving when loaded with an engine etc., moving the extension jib into position can result in acuter or chronic lower back and or musculoskeletal injuries.

Falling Extension Jib
The extension jib slips and falls when been adjusted or when bearing a load and causes crushing or death, feet crush injuries, lower leg impact injuries.

Failed Jib, hook or sling
The jib, sling, rope or hook fails and breaks, overloading thus causing the load been lifted to fall causing death or crush injuries to the lower leg and feet. Object being removed is not properly secured and falls causing crush injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, leaking or spilled hydraulic fluid on the ground, stepping over the support legs of the hoist can result in slips and trips causing falls and head and body impact injuries.

Mechanical
Crushing and entrapment of finger tips with descending ram, base of the hydraulic lever, severing of finger tips with descending jib hinge. Severing of finger tips if touching the steering linkage.

Chemicals
Leaking hydraulic fluid or topping up with hydraulic fluid can result in irritation to the hands and eyes and exposed body parts.

Swinging Load
The object hoisted and been transported swings freely and strikes a bystander or hoist operator with a blunt force, causing head or body impact injuries.

Fall from Height
Persons are transported on the hoist by standing on it and fall causing head and body impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The hoist is used for removing and replacing engines and heavy loads in vehicles.

Controls

- Students are permitted to use the hoist, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines when using the hoist.
- Seek assistance when removing or replacing engines or gear boxes with the hoist.
- Ensure that the jib and connecting arm of the hoist are horizontal to the ground when adjusting to the required length.
- Ensure that all the locating safety pins are in place prior to operating the hoist.
- Inspect the hoist, jib, sling and hook for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Ensure that the object being hoisted for removal or replacement is properly secured by the sling or rope prior to hoisting.
- Never work underneath the hoist loaded or unloaded.
- Never exceed the manufacturer's recommended weight bearing capacity of the hoist.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Immediately clean up any hydraulic leaks or spills from topping up the machine, safely dispose of waste.
- Never step over the support legs of the machine, always walk around it.
- Never place fingers in between descending ram of the hoist.
- Never hold onto the descending ram of the hoist.
- Do not place fingers tips in between a moving hydraulic lever.
- Never touch or hold the jib hinge of the machine.
- Never hold or touch the steering linkage of the machine.
- Wear safety gloves and glasses if required to clean up leaking hydraulic fluid or top up with hydraulic fluid.
- Immediately remove and replace any clothing contaminated with hydraulic oil.
- Ensure all by standers are standing clear from the hoist when it is in use.
- Inspect slings or ropes for damage or defects prior to use, do not use if damaged or defected in any way and remove form use.
- Always use the shortest possible sling or rope to support lifting an object.
- Always transport the loaded or unloaded hoist raised as close to the ground as possible.
- Never stand on any part of the hoist.
- Transporting personal on the hoist is strictly prohibited.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- PPE Training
- Chemical Handling Training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Sealey Manual Hydraulic Trolley and Stand	Ref: SWPS 833 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Pulling and dragging the stand to and from storage or moving when loaded with a gear box can result in acute or chronic lower back and or musculoskeletal injuries.

Toppling Machine
The machine topples over when loaded with a gear box due to a damaged wheel, trolley leg or with items lying on the floor causing lower leg and feet crushing injuries.

Falling Gearbox
The gear box resting on the trolley is not secure, the support arms of the trolley are damaged resulting in a falling gear box and lower leg and feet impact and crush injuries.

Mechanical
Crushing of finger tips when in contact with hydraulic foot pedal hinge.

Slips Trips and Falls
Poor housekeeping, personal belongings, machine parts, tools and leaking hydraulic lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Chemicals
Leaking hydraulic fluid or topping up with hydraulic fluid can result in irritation to the hands and eyes and exposed body parts.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The manual hydraulic stand is used for supporting a gear box removal or replacement in a vehicle.

Controls

- Students are permitted to use the stand, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines when using the mobile hydraulic lift.
- Seek assistance when removing or replacing gear box from a vehicle and when transporting a gearbox on the trolley.

- Inspect the trolley and wheels for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Ensure that the gear box is mounted securely on the holding base of the trolley.
- Ensure that the gear box being removed or replaced is resting securely on the trolley stand.
- Never touch or operate the hydraulic foot pedal with hands or fingers.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave machine parts or tools lying on the ground and use a nearby work bench to rest them on.
- Immediately clean up any leaking hydraulic fluid lying on the ground and safely dispose of.
- Wear safety gloves and glasses if required to handle leaking or hydraulic fluid.
- Immediately remove and replace any clothing contaminated with hydraulic fluid.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- PPE Training
- Chemical Handling Training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**
Risk Assessment Review *As and when process changes or yearly*							

Safe Work Practice Sheet Bosch FSA 740 Diagnostic Testing	Ref: SWPS 834 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Pulling and dragging the stand to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Falling Machine
The machine falls over due to damaged or defected wheels, moving the machine when wheels are locked, debris lying on the ground catches the wheel resulting in lower leg and feet impact injuries

Slips Trips and Falls
Poor housekeeping, personal belongings, machine parts, trailing cables, tools, oil and water lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used for running diagnostics on live engines and exhausts.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technicians supervision.
- Read the relevant SWPS for the live engine selected for testing.
- Inspect the machine electrical cable and plug for damage or defects prior to use.
- Do not use the machine if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Follow the manual handling training guidelines at all times.
- Inspect the wheel of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Ensure that the wheels are unlocked prior to moving.
- Maintain good housekeeping and work area free from personal belongings at all times.

- Never leave machine parts or tools lying on the ground.
- Immediately clean up water or oil lying on the ground.
- Avoid the trailing of electrical cables.
- Where applicable use a rubber mat to cover any trailing cables.
- Ensure that the rubber mat is lying flat and level on the ground

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Mobile Sun DGA Diagnostic Testing	Ref: SWPS 835 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Pulling and dragging the stand to and from storage can result in acute or chronic lower back and or musculoskeletal injuries. Holding the smoke detector box for extended periods of times can result in work related upper limb disorder.

Falling Machine
The machine falls over due to damaged or defected wheels, moving the machine when wheels are locked, debris lying on the ground catches the wheel resulting in lower leg and feet impact injuries

Slips Trips and Falls
Poor housekeeping, personal belongings, machine parts, trailing cables, tools, oil and water lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used to diagnostically test petrol or diesel emissions.

Controls

- Students are permitted to use the equipment, under correction instruction and the lecturer or technicians supervision.
- Read the relevant SWPS for the live engine selected for testing.
- Inspect the machine electrical cable and plug for damage or defects prior to use.
- Do not use the machine if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Follow the manual handling training guidelines at all times.
- Do not hold the smoke detector for extended periods of time, where possible split the work load with fellow colleagues or tend to other duties for a period of rest.

- Inspect the wheels of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Ensure that the wheels are unlocked prior to moving.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave machine parts or tools lying on the ground.
- Immediately clean up water or oil lying on the ground.
- Avoid the trailing of electrical cables.
- Where applicable use a rubber mat to cover any trailing cables.
- Ensure that the rubber mat is lying flat and level on the ground

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Mobile Verus, Pico and HDS Diagnostics Testing	Ref: SWPS 836 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Pulling and dragging the stand to and from storage can result in acute or chronic lower back and or musculoskeletal injuries. Lifting test equipment off the trolley stands can result in acute lower back and or musculoskeletal injuries.

Falling Machine
The machine falls over due to damaged or defected wheels, moving the machine when wheels are locked, debris lying on the ground catches the wheel resulting in lower leg and feet impact injuries

Slips Trips and Falls
Poor housekeeping, personal belongings, machine parts, trailing cables, tools, oil and water lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Sharps
Mishandling of probing tools can result in needle stick injuries causing deep puncture wounds to the hands and fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used to diagnostically test engines and car parts.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technicians supervision.
- Read the relevant SWPS for the live engine selected for testing.
- Inspect the machine electrical cable and plug for damage or defects prior to use.
- Do not use the machine if the cable or plugs are damaged in any way and remove from use for repair by a competent person.

- Follow the manual handling training guidelines at all times.
- Inspect the wheel of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Ensure that the wheels are unlocked prior to moving.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave machine parts or tools lying on the ground.
- Immediately clean up water or oil lying on the ground.
- Avoid the trailing of electrical cables.
- When applicable use a rubber mat to cover any trailing cables.
- Ensure that the rubber mat is lying flat and level on the ground.
- Exercise caution when handling diagnostic probing pins and use a recommended by the manufacture.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)							
Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**
Risk Assessment Review *As and when process changes or yearly*							

Safe Work Practice Sheet Cryton Armature Testing Growler	Ref: SWPS 837 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting and carrying the machine to and from storage can result in lower back and or musculoskeletal injury.

Falling Machine
The machine falls when been carried, the machine falls from the workbench it is placed on and causes lower leg and feet impact injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, machine parts, trailing cables, tools, oil and water lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The mobile machines are used to check for electrical faults in the starter armature of a vehicle.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technicians supervision.
- Inspect the machine electrical cable and plug for damage or defects prior to use.
- Do not use the machine if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Follow the manual handling training guidelines at all times.
- Maintain a secure hold of the machine when transporting it to and from storage.
- Ensure to place the machine in from the work bench edge.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never leave machine parts or tools lying on the ground.
- Immediately clean up water or oil lying on the ground.
- Avoid the trailing of electrical cables, where possible plug the machine into a socket mounted above the workbench or on the table.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Draper And Cryton Battery Chargers	Ref: SWPS 838 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting and carrying the batteries or chargers to and from the charging work top can result in lower back and or musculoskeletal injury.

Falling Battery
The battery falls when been transported, the battery falls from the work top it is placed on and causes lower leg and feet impact injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing cables, battery acid or water lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Explosion
Incorrectly wired battery being charged can result in an explosion and cause puncture wounds to the face and body from flying debris or burns to the face form and skin form battery acid.

Fire
Flammable materials or liquids in contact with sparks from a battery when incorrectly set up can combust and cause a fire and result in death and major burns.

Chemicals
Lifting and carrying damaged batteries, topping up batteries with distilled water or battery acid can result in minor to major burns to the hands, face and other body parts contaminated with acid.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machines are used to charge 12 and 24 Volt batteries.

Controls

- Students are not permitted to use the battery chargers.

- Inspect the chargers electrical cable and plug for damage or defects prior to use.
- Do not use the chargers if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Follow the manual handling training guidelines at all times.
- Maintain a secure hold of the battery and use the handle on it when transporting it to and from charging.
- Ensure to place the battery in from the work top edge.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Immediately clean up water or battery acid lying on the ground and dispose of waste carefully.
- Avoid the trailing of electrical cables, plug the machine into a socket mounted above the work top.
- Battery charging must be carried out by the lecturer or technician.
- Battery charging must be carried out in the battery room W103 in the motor workshop. The key of the room W103 must remain under the lecturer or technicians control at all times.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Never touch or cross the negative and the positive metal parts together.
- Flammable materials or liquids must never be stored in Battery room W103.
- Wear safety gloves and glasses at all times when handling battery for charging or topping up.
- Inspect the battery and surrounding area for leaks or damage prior to handling.
- Remove and replace any clothing contaminated by battery acid immediately.
- Immediately wash any skin contaminated by battery acid with cold water.
- Always switch off the charger when it is no longer required.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- MSDS
- Chemical Handling training
- PPE Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.

- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Mobile Bosch BAT 490&SP Smart Charging Unit	Ref: SWPS 839 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting and carrying the battery or wheeling to and from storage can result in lower back and or musculoskeletal injury.

Falling Charger
The battery charger falls when been transported or falls from the trolley and causes lower leg and feet impact injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing cables, battery acid or water lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Explosion
Incorrectly wired battery being charged can explode and cause puncture wounds to the face and body from flying debris or burns to the face form and skin from battery acid.

Fire
Flammable materials or liquids in contact with sparks from a battery when incorrectly set up can combust and cause a fire and result in death and major burns.

Chemicals
Lifting and carrying damaged batteries, topping up batteries with distilled water or battery acid can result in minor to major burns to the hands, face and other body parts contaminated with acid.

Toppling Trolley
The wheels of the trolley are damaged and fail resulting in the trolley falling over causing lower leg feet impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The mobile battery charger is used to maintain proper voltage in the battery of a vehicle being worked on.

Controls

- Students are permitted use of the battery charger, under correct instruction and the lecturer or technicians supervision.
- Inspect the charger electrical cable and plug for damage or defects prior to use.
- Do not use the charger if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Follow the manual handling training guidelines at all times.
- Maintain a secure hold of the charging unit if required to lift or carry. Where possible leave the charging unit on the trolley provided for it.
- Ensure to place the charger inside the brackets on the trolley.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Immediately clean up water or battery acid lying on the ground and dispose of waste carefully.
- Avoid the trailing of electrical cables by plugging the machine into a socket mounted above the work top.
- Use the rubber mats to cover any trailing cables and ensure the rubber mat is lying level and flat on the ground.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Never touch or cross the negative and the positive metal parts together.
- Flammable materials or liquids must never be stored at or near the vehicle being worked on.
- Wear safety gloves and glasses at all times when handling a battery for charging or topping up.
- Inspect the battery and surrounding area for leaks or damage prior to handling.
- Remove and replace any clothing contaminated by battery acid immediately.
- Immediately wash any skin contaminated by battery acid with cold water.
- Always switch off the charger when it is no longer in use.
- Inspect the wheels of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person..

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- MSDS

- Chemical Handling training
- PPE Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Portable Battery Boost Starter	Ref: SWPS 840 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs of the battery unit can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Lifting and carrying the booster starter unit to and from storage can result in acute or chronic lower back and or musculoskeletal injury.

Falling Booster unit
The booster starter falls when been transported, from the work bench when being charged, falls from the vehicle and causes lower leg and feet impact injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, battery acid or water lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Explosion
Incorrectly wired booster starter can result in an explosion and cause puncture wounds to the face and body from flying debris or burns to the face and exposed skin parts from battery acid.

Fire
Flammable materials or liquids in contact with sparks from a booster unit when incorrectly set up can combust and cause a fire resulting in death or major burns.

Mechanical
Nipping of finger tips, crushing of fingers when in in between the jaws of the heavy duty clamps.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The battery unit is used to provide power for starting up vehicles.

Controls

- Students are permitted to use the booster starter, under correct instruction and the lecturer or technicians supervision.
- Inspect the booster starter electrical cable and plug for damage or defects prior to use.
- Do not use the booster starter if the cable or plugs are damaged in any way and remove from use for repair by a competent person.
- Follow the manual handling training guidelines at all times.
- Maintain a secure hold of the booster starter when transporting to and from required location.
- Ensure the booster starter is placed in from the work bench edge when charging.
- Ensure the booster starter is placed flat and secure when being used on a vehicle.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Immediately clean up water or battery acid lying on the ground and dispose of waste carefully.
- Avoid the trailing of electrical cables by charging the booster starter on a work top with socket mounted on a wall above it.
- Never touch or cross the negative and the positive metal parts of the booster together.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Switch on the battery booster.
- Switch off the battery booster when complete.
- Remove the black cable of the battery booster from the battery first and then proceed with removing the red cable from the battery.
- Flammable materials or liquids must never be stored at or near the vehicle being worked on.
- Inspect the battery and surrounding area for leaks or damage prior to handling.
- Never place fingers or hands in between the jaws of the heavy duty clamps when attaching to or removing from a battery unit.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- MSDS
- Chemical Handling training
- PPE Training

Personal protective equipment required (last resort)

- Safety boots.

- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 841
	Revision Date: Oct 2026
Electric Power Steering Unit	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting the steering unit to and from storage can result in lower back and or musculoskeletal injuries.

Falling Unit
The unit falls when being transported, falls from the workbench edge and results in lower leg and feet impact injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, oil or water on the floor can result in slipping and tripping causing fall head and body impact injuries.

Mechanical
Nipping of finger tips with gearing of steering unit.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The steering unit is used for the purpose of demonstrating how an electrical power assisted steering system operates.

Controls

- Students are permitted to use the steering unit, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times.
- Maintain a secure hold of the unit when transporting from storage, use a trolley for transporting if required.
- Ensure to place the unit in from the workbench edge when setting up for demonstration.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any oil or water lying on the floor immediately and dispose of carefully.
- Do not touch or place finger tips in or on the gearing unit when it is being rotated.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training

Personal protective equipment required (last resort)

- Safety boots
- Overalls

Initial Risk Rating (without any control measures)

Probability :	2	x	Severity	2	= Risk Factor	4 Medium Risk

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	2	= Risk Factor	2 Low risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Portable Trolley Jacks	Ref: SWPS 842 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Lifting or carrying the trolley jacks, dragging pulling or pushing the trolley jacks to and from storage, failed and damaged trolley jack wheels can result in acute or chronic lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, topping up trolley jack with hydraulic oil, leaking trolley jack hydraulic oil or water on the floor, stepping over the jack can result in slipping and tripping causing fall head and body impact injuries.

Hydraulic Oil
Pouring and toping up a trolley jack with hydraulic fluid, cleaning up a trolley jack hydraulic fluid leak can result in contamination of clothing, hands and fingers resulting in skin irritation. Irritation to the eyes from splashing when pouring.

Mechanical
Pinching or crushing of fingers, feet with chassis and frame of trolley if in between moving parts when operating it.

Collapsing Car
The trolley fails and the car being jacked up collapses resulting in death, the ground is not level of uneven and results in the car falling over resulting in death.

Transporting Individuals
Individuals stand on the trolley to be transported from one area to another can result in an individual falling and incurring head and body impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The trolley jacks are used to lift cars and suspend them in the air in order to remove the wheels of a vehicle.

Controls

- Students are permitted to use the trolley jacks, under correct instruction and the lecturer or technicians supervision.

- Inspect the trolley jack and wheels for damage, defects or leaks prior to use, do not use if damaged or defected in any way and remove from use for repair and replacement.
- Follow the manual handling training guidelines at all times.
- Where possible always wheel the trolley jack to and from storage.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any oil or water lying on the floor immediately and dispose of carefully.
- Always walk around the jack when it is use and store away from walk ways when not in use.
- Wear safety gloves and glasses if required to clean up hydraulic fluid leaks or top up with hydraulic fluid.
- Always wash hands if in contact with hydraulic fluid.
- Immediately remove and replace any clothing contaminated by hydraulic fluid.
- Always carefully pour hydraulic fluid when topping up trolley jack.
- Never place hands, fingers or feet in between the moving parts of the trolley when operating it.
- Ensure bystanders are clear of trolley when pumping the hydraulic lever.
- Never rely solely on a trolley jack to support a jacked car, always use the car jack stands for added support see SWPS MOT 044 for Car Jack Stands.
- Ensure that the ground is even, level and solid prior to jacking up a car.
- The transporting of individuals on the trolley jacks is strictly prohibited.
- The trolley jack must be used in accordance with the manufacturer's specifications.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- Chemical Handling training
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Car Jack Stands	Ref: SWPS 843 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Lifting or carrying the jack stands to and from storage can result in lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, oil or water on the floor, stepping over the jack stand can result in slipping and tripping causing fall head and body impact injuries.

Mechanical
Pinching or impact injuries to fingers with collapsing jack extension shaft and saddle.

Collapsing Car
The car jack fails and the car being supported collapses resulting in death, the ground is not level of uneven where the jack stand is placed and results in the car falling, the locating pin of the jack fails and the car collapses resulting in death. Crushing of fingers and hands if in between jack saddle and car part being supported

Falling Jack Stand
The jack stand being lifted and carried falls from the persons grip and results in lower leg and feet impact injuries. The jack extension falls form the jack and result in lower leg and feet impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The stands are used to support raised vehicles from the ground.

Controls

- Students are permitted to use the jack stands, under correct instruction and the lecturer or technicians supervision.
- Inspect the jack stands and locating pin for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair and replacement.
- Follow the manual handling training guidelines at all times.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up any oil or water lying on the floor immediately and dispose of carefully.
- Always walk around the jack when it is use and store away from walk ways when not in use.

- Always wash hands if in contact with oil.
- Never hold the jack at the bottom of the jack extension when adjusting the jack height.
- Ensure that the ground is even, level and solid prior to using a jack for support.
- The jack stands must be used in accordance with the manufacturer's specifications.
- Never place hands or fingers in between jack saddle and part of vehicle being supported.
- Ensure to maintain a secure and firm grip of the stand when carrying to required location.
- Where possible use a trolley to transport jack stands.
- Ensure the jack locating pin is inserted in the jack extension prior to moving.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- Chemical Handling training
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Sun Battery Load Tester NO LONGER IN USE	Ref: SWPS 844 Date: Approved by: Breda Brennan

Hazards

Manual Handling

Lifting and carrying the load tester to and from storage, removing or replacing a failed vehicle battery can result in acute or chronic lower back and or musculoskeletal injury.

Falling load tester unit

The tester unit falls when been lifted or carried, falls from the work bench edge or vehicle battery being tested and causes lower leg and feet impact injuries.

Slips Trips and Falls

Poor housekeeping, personal belongings, battery acid, oil or water lying on the ground, trailing tester cables can result in slipping and tripping causing fall head and body impact injuries.

Explosion

Incorrectly wired load tester to battery can result in an explosion and cause puncture wounds to the face and body from flying debris or burns to the face form and skin form battery acid.

Fire

Flammable materials or liquids in contact with sparks from incorrectly set up load tester wiring and battery can combust causing a fire resulting in death or major burns.

Crocodile clips

Nipping of finger tips, crushing of fingers and parts of hands when in between the jaws of the heavy duty crocodile clips.

Chemicals

Leaking or damaged battery can result in coming into contact with battery acid and burns to the skin.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The load tester is used to establish the working condition of a vehicle battery.

Controls

- Students are permitted to use the load tester, under correct instruction and the lecturer or technicians supervision.
- Follow the manual handling training guidelines at all times.
- Maintain a secure hold of the handle of the load tester when transporting to and from storage.
- Never carry or drag the load tester by the electrical cables.
- Where applicable use the handle on the battery unit if carrying or lifting.
- Ensure the load tester is placed in from the work bench edge when in use.
- Ensure the load tester is placed flat and secure when being used on a vehicle.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Immediately clean up any oil, water or battery acid lying on the ground and dispose of waste carefully.
- Avoid the trailing of electrical cables where possible by carrying out work on a work bench
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Never touch or cross the negative and the positive metal parts together.
- Flammable materials or liquids must never be stored at or near the battery being load tested.
- Inspect the battery and surrounding area for leaks or damage prior to handling. Carefully remove any damaged or leaking batter for safe disposal.
- Never place fingers or hands in between the jaws of the crocodile clips when attaching to or removing from a battery unit.
- Wear safety gloves and glasses if handling leaking or damaged battery.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- Chemical handling training
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability ÷	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability ÷	**1**	x Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet CAN BUS Diagnostic Board NO LONGER IN USE	~~Ref: SWPS 845~~ ~~Revision Date:~~ ~~Approved by: Breda Brennan~~

~~Hazards~~

~~Manual Handling~~

~~Lifting and wheeling the diagnostic trolley bench to and from storage, removing or replacing the battery on the trolley bench can result in acute or chronic lower back and or musculoskeletal injury.~~

~~Falling test board or battery~~

~~The test board falls from the bench trolley, the battery falls when being transported and results in lower leg and feet impact injuries.~~

~~Slips Trips and Falls~~

~~Poor housekeeping, personal belongings, battery acid, oil or water lying on the ground, trailing tester cables can result in slipping and tripping causing fall head and body impact injuries.~~

~~Explosion~~

~~Incorrectly wired battery can result in an explosion and cause puncture wounds to the face and body from flying debris or burns to the face and exposed skin from battery acid.~~

~~Fire~~

~~Flammable materials or liquids in contact with sparks from incorrectly wired battery can combust causing a fire and resulting in death or major burns.~~

~~Crocodile clips~~

~~Nipping of finger tips, crushing of fingers and parts of hands when in between the jaws of the crocodile clips.~~

~~Chemicals~~

~~Leaking or damaged battery can result in coming into contact with battery acid and burns to the skin.~~

~~Person Exposed to Risk~~

~~☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors~~

~~Work Description~~

~~The CAN BUS board is used for the purpose of diagnosing microcontroller and device communication faults.~~

Controls

- Students are permitted to use the CAN BUS board, under correct instruction and the lecturer or technicians supervision.
- Inspect the wheels of the trolley for damage or defects prior to use.
- Follow the manual handling training guidelines at all times.
- Ensure to use the telescopic handles on the trolley bench when moving to and from storage.
- Always use the handle on the battery unit when carrying or lifting.
- Ensure the CAN BUS work board is securely fixed to the trolley bench
- Maintain good housekeeping and work area free from personal belongings at all times.
- Immediately clean up any oil, water or battery acid lying on the ground and dispose of waste carefully.
- Avoid the trailing of electrical cables where possible by placing the battery under the trolley bench.
- Ensure to connect the positive to the positive (red cable) first and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Never touch or cross the negative and the positive metal parts together.
- Flammable materials or liquids must never be stored at or near the battery being load tested.
- Inspect the battery and surrounding area for leaks or damage prior to handling. Carefully remove any damaged or leaking batter for safe disposal.
- Ensure that the battery is placed firm and secure on the underneath of the trolley bench.
- Never place fingers or hands in between the jaws of the crocodile clips when attaching to or removing from a battery unit.
- Wear safety gloves and glasses if handling leaking or damaged battery.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- Chemical handling training
- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability ÷	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability ÷	**1**	x Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Grease Gun	Ref: SWPS 846 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Slips Trips and Falls
Poor housekeeping, personal belongings, spilled grease, oil or water on the floor can result in slipping and tripping causing fall impact head and body injuries.

Mechanical
Crushing of fingers when operating the pumping handle of the grease gun.

Ergonomics
Operating the tool in crunched awkward positions and for extended periods of time can result in acute or chronic lower back and upper body musculoskeletal injuries**.**

Chemicals
Removing and replacing the grease cartridge, wiping down greased components, operating the grease gun, clearing up spilled grease from the ground can result in minor irritation to the eyes, skin on the hands or skin from exposed clothing.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The grease gun is used to lubricate various moving components.

Controls

- Students are permitted to use the grease guns, under correct instruction and the lecturer or technicians supervision.
- Inspect the grease gun for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair or replacement.
- Always use the grease gun as untended by the manufacturer.
- Follow the manufacturer's grease cartridge loading and unloading instructions at all times.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Never place fingers in between the pumping handle and hinge when operating the gun.
- Do no operate the gun in awkward crunched positions for extended periods of time, tend to other duties for periods of rest or split the work load with other colleague.
- Wear safety gloves and glasses at all times when operating the greasing gun, wiping down greased components or cleaning up grease spills.
- Immediately remove and replace any clothing contaminated with grease.
- Safely dispose of any waste grease cartridge or greased material waste.

- Never grease a moving or rotating part of an engine or machine.
- Always wash hands immediately after carrying out greasing operation.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.
- MSDS
- Chemical Handling

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves
-

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Air Gun and Air Pressure Gauges** **To be read in conjunction with SWPS 810 Compressed Air**	Ref: SWPS 847 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing air hoses can result in slipping and tripping causing fall impact head and body injuries.

Flying Debris
Exceeding the recommended PSI or BAR inflation limit of the tyre can result in flying debris (exploding tyre) and loss of sight and or puncture wounds to the face and body parts, temporary hearing loss and discomfort.

Whipping Air Lines
Poorly fitted, connected, damaged or defected air hoses can result in a whipping air line and loss of sight and or bruising to body parts.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The air gun is used to inflate the tyres on wheels of vehicles of cars and trolleys.

Controls

- Students are permitted to use this equipment, under correct instruction and the lecturer or technicians supervision.
- Air gun and gauge must be requested from the lecturer of technician and returned when no longer required.
- Inspect the air gun, pressure gauge and hoses for damage or defects prior to use, do not use is damaged or defected in any way and remove from use for repair by a competent person.
- Follow the manufacturer's standard operating procedures at all times.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of air hoses where possible.
- Always read the tyre inflating limit prior to inflating and never over inflate. Follow the pressure gauge on the air gun.
- See SWPS MOT 011 Compressed Air.
- Never point the air gun or hose at other people.
- Wear glasses at all stages of the use of the equipment.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training.
- MSDS
- Chemical Handling

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 848
	Revision Date: Oct 2026
Degreasing Bath	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly connected, poorly maintained or damaged electrical cable or plugs of the degreasing machine can cause electrocution-death or first second and or third degree burns to the hands and body parts.

Manual Handling
Topping up or emptying the degreaser of detergent requires lifting or carrying, lifting engine or gear parts in and out of the degreasing basin can result in acute or chronic lower back and or musculoskeletal injuries.

Chemical
Immersing parts for degreasing with detergent, removing degreased parts for washing, brush cleaning parts, topping up or emptying the degreaser can result in splashing of detergent causing temporary or permanent loss of sight, burns to the hands and fingers or other body parts by contamination of clothing.

Slips, Trips and Falls
Poor housekeeping, personal belongings, parts for cleaning lying on the ground, trailing power cable, spilled detergent lying on the ground can result in slipping and tripping causing fall impact head injuries and cuts and bruises.

Fumes
Topping up the machine with detergent, removing cleaned parts, brushing parts down with detergent can result in the inhalation of detergent fumes causing acute or chronic respiratory illness.

Fire
Detergent or engine components for degreasing can catch fire when in contact with an ignition source and result in first, second and or third degree burns.

Falling Engine Parts
Lifting or removing engine parts to or from the degreaser can slip and fall causing lower leg and feet crush injuries.

Mechanical
Hands or fingers are inadvertently crushed when closing the lid of the degreaser.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

- The machine is used for degreasing engine and gear box parts of grease, oil, wax, dirt etc.

Controls

- All degreasing operations must be carried out in the degreasing bath in the Motor Shop
- Students are not permitted to carry out this task.
- The Lecturer or technician must only carry out this task.
- Inspect the electrical cable and plug of the degreasing machine prior to use.
- Do not use the test unit if electrical cable or plugs are damaged in any way and remove from use for repair.
- Electrical repairs must be carried out by a competent person.
- Follow the manual handling training guide lines at all times when operating the degreaser.
- Always seek assistance when emptying the degreasing barrel or heavy engine parts.
- Safety glasses must be worn at all stages of the use and maintenance of the degreaser.
- Protective clothing i.e. overalls non-absorbent gloves must be worn (See PPE Required).
- Contaminated clothing must be removed immediately when in contact with degreaser.
- Ensure that the machine is plugged into the socket on the wall at the back of the machine.
- Spilled detergent must be cleaned up immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Parts for cleaning must never be stored on the ground around the machine, use the surrounding work benches.
- Ensure that there is adequate ventilation when operating the degreaser and that the area ventilation system is switched on.
- When possible close the lid of the machine for degreasing or draining parts from detergent.
- Never place hands or fingers between the lid and frame of the degreaser when closing the lid.
- Do not inhale fumes. Wear a mask.
- Do not use in the vicinity of welding operations.
- Do not use in the presence of naked flame or other source of ignition.
- Eating, drinking, smoking & using mobile phones are prohibited from all workshop and laboratory areas.
- Allow parts that are cleaned by detergent to drip dry in the detergent bath before removing.
- Rinse/wash component by immersing, washing or spraying with water.
- Wash both hands thoroughly when finished.

- Adhere to instruction in manufacturers Material Safety Data Sheets.
- All waste solvents must be disposed of according to Material Data Sheets.
- Appropriate fire extinguisher to be close at hand.
- Observe great care when using this process.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturer and technicians to monitor compliance with control measures.
- Operator to check extraction is operational before starting process.

Information, Instruction & Training

- MSDS
- Manual Handling training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety glasses
- Industrial safety gloves (Black Gauntlet Gloves CE 0321, extended length 450mm)
- Protective apron/overalls
- Safety shoes/boots
- Safety Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Mobile Sun & Moratech Air Conditioning Units	Ref: SWPS 849 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Manual Handling
Moving the machine to and from storage, lifting and carrying gas cylinders for topping up with refrigerant can result in acute lower back and or musculoskeletal injuries.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing cables and hoses can result in slipping and tripping causing fall impact head and body injuries.

Toppling Unit
The wheels of the mobile unit are damaged and fail resulting in the trolley falling over causing lower leg feet impact injuries.

Hoses
Loose, damaged or poorly fitted hoses can result in acute or chronic respiratory illness from the inhalation of refrigerant gas R134a, uncontrolled whipping action that causes loss of sight and or cuts and bruising.

Temperature
Connecting and topping up the unit with R134a can result in frostbite to the hands and fingers from refrigerant gas rapidly escaping.

Fire
Rapid release of R134a into the air can result in a fire when in contact with and ignition source causing first, second and or third degree burns.

Explosion
Gas cylinders exposed to heat or a naked flame, dropping cylinders to the ground can result in an explosion causing death or major puncture wounds to the face and body parts.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machinery is used to remove and refill Refrigerant R134A from car air conditioning systems.

Controls

- Students are not permitted to use this machinery.
- Trained persons (lecturer or technician) may only carry out this task.
- See the PPE required for when operating the mobile unit.
- Operators of the Air Con unit must be trained in how to use it.
- Follow Snap-on's air con unit standard operating procedures at all times
- Inspect the electrical cables of the unit for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Follow the manual handling training guide lines at all times.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables and hoses where possible.
- Insect the wheels of the mobile unit for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Inspect the hoses on the mobile unit for damage or defects prior to use, do not use if damaged or defected in any in any way and remove from use for repair or replacement by a competent person.
- Never inhale or touch escaping R134a gas.
- Ensure that the work area is well ventilated and that the extract system is switched on when operating the mobile unit.
- Ignition sources and naked flames are not permitted at or near the unit when it is in operation.
- Cylinders must be stored away from heat sources and naked flames.
- Never throw or drop a cylinder to the ground.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- MSDS R134a
- Chemical Handling training
- PPE Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses
- Safety Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Hand Tools in Motor Engineering	Ref: SWPS 850 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Sharps
Incorrect handling and misuse of saws, screwdrivers, snips etc. can result in lacerations, puncture wounds or abrasions to hands and fingers.

Damaged Tools
Poor storage, misuse, wear and tear of tools can result in damaged tools resulting in minor cuts and blisters to hands and fingers. Repairing or replacing damaged cutting tools, saw blades etc. can result in lacerations the hands and fingers.

Falling Hand Tools
Incorrect hold of tool, tool lying at the workbench edge, carrying too many at a time can result in a falling hand tool causing lower leg and feet puncture wounds, cuts and bruises.

Slips Trips and Falls
Poor Housekeeping, personal belongings, falling hand tools lying, waste cut offs from wiring and components etc. on the ground can result in slips, trips and fall impact head injuries.

Ergonomics
Use of tools for extended periods of time can result in work related upper limb disorder.

Flying Debris
Use of various hand tools can result in flying debris from cutting wires, hammering pieces of metal, bending pieces of metal etc. resulting in the loss of sight or puncture wounds to body parts. Using a knife or blade with a side load to pry away material can result in loss of sight.

Mechanical
Fingers or hands in between closing jaws of snips, pliers, wire strippers etc. can result in pinching of fingers or severing of finger tips.

Sharps
Using your body as resting support for a component or part etc. resulting in self stabbing with screw driver etc. Cutting towards the body with knives can result in lacerations to the hands and fingers.

Manual Handling
Lifting or carrying several tools (large spanners etc.) to and from storage, pulling and pushing on materials and components with hand tools can result in over loading of the body and cause acute or chronic musculoskeletal injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Various manually operated hand tools are required to assist in carrying out particular motor shop tasks. The hand tools can range from spanners, chain whips, vice grips, wire strippers, plyers, torque wrenches, screw drivers, snips, hammers, hacksaws etc.

Controls

- Students are permitted to use the hand held tools, under correct instruction and the lecturer / technicians supervision.
- Students must request the tools from the lecturer or technician.
- Inspect the hand tool for damage or defects prior to use, do not use if damaged or defected in any way and hand back to lecturer or technician for removal from use.
- Wear safety glasses when using hand held tools.
- Always lift or carry a hand tool by its handle.
- All hand tools must be used in accordance with the manufacturers intended use and design.
- Always use the correct tool for the job in hand.
- Students are not permitted to carry out repair to damaged tools. All repairs, replacement blades or cutting tools must be carried out by a lecturer or technician.
- Ensure that tools required are resting in from the workbench edge.
- Falling hand tools must be picked up from the ground immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the floors are swept clean from material cut offs as soon as possible.
- Avoid using hand tools for extended periods of times by tending to other duties where possible or periodically take small breaks.
- Always cut and snip materials away from the body and never in the direction of bystanders or other workbenches.
- Never use a knife or blade to pry open materials.
- Never use blunt blades for cutting. Maintain free hand out of the line of cutting area.
- Never place hands or fingers in between the closing jaws of pliers or snips and ensure to keep hands and fingers at a safe distance when in use.
- Never use your body as a supporting aid for work being carried out, always use the work bench as a means of support.
- Follow the manual handling training guidelines at all times.
- Use a trolley for the transportation of several hand tools or hand to individuals on request.
- Never subject a hand tool to unnecessary force or hammering.

- Never use a pipe or extension to gain leverage on a hand tool.
- Do not substitute one tool for another, for example, a pliers for a wrench.
- Discard any screw drivers with cracked or damaged handles.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual Handling Training
- PPE Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 851
	Revision Date: Oct 2026
AG Bloc Headlights Board	Approved by: Breda Brennan

Hazards

Manual Handling
Moving the training units or battery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Falling battery
Unsecure hold of the battery when carrying, moving or placing on to the test stand, handles of the battery fail, resulting in a falling battery or training unit and impact injuries to the lower legs and feet.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing battery cables can result in slipping and tripping casing falls and body impact injuries.

Explosion
Incorrectly wired battery can result in an explosion and cause puncture wounds to the face and body from flying debris or burns to the face form and skin form battery acid.

Impeded Walkway / Exit
Setting up the unit in front of an exit or walkway can prevent safe passage of exit for individuals resulting in minor to major injuries.

Fire
Incorrect wiring of the battery can result in flammable source catching fire from sparks resulting in first second and or third degree burns.

Chemicals
Leaking or damaged battery can result in coming into contact with battery acid resulting in major chemical burns to the hands and contaminated body parts.

Collapsing Trolley
The wheels or legs of the trolley are damaged and results in the trolley collapsing and falling over causing lower body and feet impact injuries.

Bright Lights
Looking directly into the headlights of the unit can result in temporary blindness, visual discomfort.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is an automotive electrical training unit with various automotive electrical functions.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Lecturers or technicians must set up the unit.
- Follow the manual handling training guide lines at all times when moving the training unit or battery.
- Ensure to maintain a secure hold of the battery when transporting to and from the storage.
- Inspect the battery and handle for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for safe disposal of.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of battery cables and use the battery stands mounted on the test unit.
- Ensure that the battery is wired correctly, live to the live and neutral to the neutral.
- Flammable sources must never be stored at or near the test unit when in use.
- Inspect the wheels and frame of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Never look directly into the beam of the head lights when they are turned on.
- Always operate the unit where students or bystanders can look at the lights from the side on.
- Never leave the lights turned on for any longer than they are required.
- Lock the wheels of the trolley when it is in the required demonstrating or storage area.
- Follow the manufacturer's standard operating procedures at all times.
- Wear safety gloves and glasses if required to handle a damaged or defected battery.
- Ensure the test board does not block exits or walkways when in use.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet AG Bloc Ignition Systems Rig	Ref: SWPS 852 Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electrical
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Mechanical
Severing of finger tips with rotating drive belt or linkage of wiper motor, entanglement of ling hair or loose clothing with rotating motor.

Manual Handling
Pulling or pushing the training unit to and from storage, lifting or carrying the battery or turrets can result in acute or chronic lower back and or musculoskeletal injuries.

Falling battery / Turrets
Unsecure hold of the battery when carrying, moving or placing on to the test stand, handles of the battery fail, resulting in a falling battery or training unit and impact injuries to the lower legs and feet.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing cables can result in slipping and tripping casing falls and body impact injuries.

Explosion
Incorrectly wired battery can result in an explosion and cause puncture wounds to the face and body from flying debris or burns to the face form and skin form battery acid.

Impeded Walkway / Exit
Setting up the unit in front of an exit or walkway can prevent safe passage of exit for individuals resulting in minor to major injuries.

Fire
Incorrect wiring of the battery can result in flammable source catching fire from sparks resulting in first second and or third degree burns.

Chemicals
Leaking or damaged battery can result in coming into contact with battery acid resulting in major chemical burns to the hands and contaminated body parts.

Collapsing Trolley
The wheels or legs of the trolley are damaged and results in the trolley collapsing and falling over causing lower body and feet impact injuries.

Bright Lights
Looking directly into the headlights of the unit can result in temporary blindness, visual discomfort.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The test board is used to carry out various functions and fault findings exercises, for example, on headlights.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Inspect the electrical cables or plugs of the unit for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Ensure all machine guards are in place prior to operating the machine.
- Lecturers or technicians must set up the unit.
- Follow the manual handling training guide lines at all times.
- Ensure to maintain a secure hold of the battery or turrets when transporting to and from the storage. Use a trolley if required.
- Inspect the battery and handle for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for safe disposal of.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of cables, use sockets mounted on the walls or work benches when plugging in the unit, use the battery stands mounted on the test unit.
- Ensure that the battery is wired correctly, live to the live and neutral to the neutral.
- Flammable sources must never be stored at or near the test unit when in use.
- Inspect the wheels and frame of the trolley for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Always operate the unit where students or bystanders can look at the lights from the side on.
- Never leave the lights turned on for any longer than they are required.
- Lock the wheels of the trolley when it is in the required demonstrating or storage area.
- Follow the manufacturer's standard operating procedures at all times.

- Wear safety gloves and glasses if required to handle a damaged or defected battery.
- Never look directly into headlights of the unit or set up in the direction of onlookers.
- Ensure the test board does not block exits or walkways when in use.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 853
	Revision Date: Oct 2026
Mobile Air Compressor	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged compressor power cables or plug can result in electrocution-death and or first second and third degree burns.

Manual Handling
Pushing, pulling and wheeling the compressor into required work area can result in lower back injuries.

Hot surfaces
Parts of the machine may become heated from compressing air and can cause burns to the hands if in contact with hot surface.

Slips, trips and falls
Poor housekeeping, personal belongings, machine power cable and air lines can cause slips and trips resulting in impact head injuries from falls.

Explosions
Badly maintained or damaged machine can result in flying missiles from explosions and cause loss of sight, puncture wounds to various body parts.

Fire
Flammable fuel sources may ignite when in contact with machine hot parts and cause burns to the skin or respiratory illness from inhalation of smoke.

Whipping air lines
Poorly fitted or damaged airline hoses etc. may result in uncontrolled whipping action that results in loss of sight, and minor bruising.

Falling Machine
Machine falls as a result of damaged wheels and results in crushing of feet.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for pressure testing of class projects.

Controls

- Group gatherings are not permitted with this machine unless under the lecturers supervision.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine, power cables and plug for any defects prior to use.
- If required, seek assistance to manoeuvre machine into the required work shop. Follow manual handling training guidelines at all times.
- Ensure wheels on the compressor are in good working order prior to use.
- Do not touch hot parts of the machine during and after use.
- Use the machine handle when transporting the machine to and from storage.
- Maintain machine work area free from clutter and personal items.
- Maintain good housekeeping at all times.
- The wearing of loose or nylon clothing is prohibited.
- Long hair must be neatly tied back or a cap worn.
- Personal belongings and materials must not be stored on top of or beside the machine.
- Ensure cut out switch is good working order.
- Wear safety glasses at all times when operating the machine.
- Flammable materials must not be stored at or near the machine.
- Never drag the machine by the airline hoses.
- Ensure all quall plex and airlines are free from damage or defects and securely fitted prior to use.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 854
	Revision Date: Oct 2026
Cylinder Leakage Tester	Approved by: Breda Brennan

Hazards

Slips Trips and Falls

Poor housekeeping, personal belongings, trailing air hoses lying on the ground can result in slipping and tripping causing falls, impact head and body injuries.

Whipping air lines

Damaged air lines, partly open valve, poorly fitted connections can cause uncontrolled whipping lines striking individuals and causing loss of sight and or minor cuts and bruises.

Person Exposed to Risk

- ☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This tool is used for checking cylinder leakage in engine cylinders.

Controls

- Students are permitted to use this equipment, under correct instruction and the lecturer and technicians supervision.
- Cylinder leakage tester must be requested from the lecturer or technician and returned after use.
- Inspect tester and hoses for damage prior to use, do not use if damaged or defective in any way and remove from use and repair by competent person.
- Follow the manufacturer standard operating procedures at all times.
- See SWPS 810 Compressed Air.
- Wear safety glasses at all times when using this equipment.

Checks & Inspections

Constant vigilance and awareness

- Regular maintenance to be carried out according to manufactures recommendations and records kept by school.
- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- PPE training
- MSDS

Personal protective equipment required (last resort)

- Safety boots
- Safety glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Strut and Spring compressing station	Ref: SWPS 855
	Revision Date: Oct 2026
	Approved by: Thomas Dooley

Hazards

Manual Handling

Moving station or suspension unit into position can result in lower back and or musculoskeletal injuries.

Mechanical

Crushing and entrapment or pinching of hands or fingers between station adapters and coil spring or suspension strut can result in loss of fingers or serious hand injuries.

Ejected Hydraulics

Leaking hydraulic fluid under pressure can result in loss of sight or piercing of skin and death or irritation to skin.

Chemicals

Topping the hydraulic reservoir up with hydraulic fluid, cleaning up leaks or spills, can result in contaminating the hands and fingers with fluid and cause acute or chronic dermatitis

Slips Trips and Falls

Poor housekeeping, personal belongings, hydraulic fluid, adapters, or suspension components lying on ground can cause slipping or tripping resulting in falls and major or minor head or body impact injuries.

Flying Missiles

Coil springs or suspension struts being compressed can break/shatter resulting in flying metal missiles resulting in loss of sight and or puncture wounds to the head and body.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This machine is used to compress coil springs while replacing suspension struts or coil springs.

Controls

- Students are not permitted to use this machine, only for demonstration use by lecturers or technician.

- Follow manual handling training guidelines at all times when operating this machine.
- Never touch or place hands or fingers on coil spring or suspension strut while being compressed.
- Ensure that the correct adapter is being used for the particular spring being compressed, and that the strut/spring in the correct position.
- Never stand directly over coil spring or suspension strut while it is being compressed.
- Inspect machine for any hydraulic fluid leaks prior to use.
- Always wear gloves when topping up or filling with Hydraulic fluid.
- Immediately clean up any leaking hydraulic fluid from ground or machine and carefully dispose of.
- Do not use if any parts of machine or adapters are damaged or defective in any way, and remove from use.
- Never store components on ground around machine, always use nearby bench.
- Always wear gloves and safety glasses when operating this machine.
- Groups gathering or individual on lookers must remain at a safe distance and wear safety glasses when the machine is in operation. Safe distance to be determined by lecturer or technician.
- Never leave machine unattended when it is in use.

Checks & Inspections

Constant vigilance and awareness

- Regular maintenance to be carried out on this tool as specified by the manufacturer.
- Lecturers and technician to monitor compliance with control measures.
- Lecturers and technician to monitor the wearing of PPE.

Information, Instruction & Training

- Manual Handling Training
- Chemical handling training
- PPE training
- MSDS

Personal protective equipment required (last resort)

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability:	**1**	x	Severity	**3**	=	Risk Factor	**3**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet **Bosch/Yuasa battery testers**	Ref: SWPS 856 Revision Date: Oct 2026 Approved by: Thomas Dooley

Hazards

Manual Handling.
Lifting and handling batteries can result in lower back and or musculoskeletal injury.

Slips trips and falls

Poor housekeeping, person belongings, battery acid or batteries lying on floor can result in slips and trips resulting in fall impact injuries to head and body.

Explosion

Incorrectly wired battery being charged can explode and cause puncture wounds to face and body from flying debris or burns to the face from battery acid.

Fire

Flammable materials or liquids in contact with sparks from battery connections when incorrectly set up can combust and cause a fire resulting in major burns or death.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
This equipment is used to test the serviceability of batteries.

Controls

- Students are permitted to use the battery testers under correct instruction and the lecturer or technicians supervision.
- Follow manual handling training guidelines at all times.
- Maintain good housekeeping and keep work area free from personal belongings and batteries.
- Make sure no sparks are allowed to be generating as this may result in the battery exploding resulting in serious injury/damage.
- Flammable materials or liquids must never be stored near a vehicle that is been worked on.
- Wear gloves and safety glasses at all times when handling batteries.

Checks & Inspections

Constant vigilance and awareness

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the institute.
- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Manual handling training.
- PPE training.
- MSDS

Personal protective equipment required (last resort)

- Wear gloves and safety glasses at all times when handling batteries.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 HIGH**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 LOW**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Exhaust Fume Extractor System	Ref: SWPS 857 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity

Incorrectly wired or damaged electrical wires can result in electrocution, resulting in possible burns or death.

Slips, trips and falls

Poor housekeeping i.e. Extractor hoses lying on the ground could result in tripping causing fall impact injuries to the head or body.

Manual handling

Lifting, dragging or attaching Extractor hoses to exhaust pipes could result in acute or chronic lower back and musculoskeletal injuries.

Fumes

Running the engine while attaching extractor hoses can result in the inhalation of carbon monoxide and cause acute/chronic respiratory illness, disease or death.

Hot Surfaces

Touching the exhaust while engine is on or has been running can result in burns to the hands and fingers.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

This system is used to remove dangerous exhaust fumes from petrol and diesel engine inside the workshop/garage

Controls

- Students are permitted to use this equipment, under correct instruction and the lecturer or technicians supervision.
- Inspect the electrical cables and switches on system prior to use.
- A competent person must carry out any electrical repairs.
- Follow manual handling training guidelines at all times when using this equipment.
- Maintain good housekeeping. Keep work area clear from personal belongings.

- Ensure that extractor hoses are recoiled onto reel or place on brackets after use.
- Wear Gloves when attaching extractor hose to exhaust.
- Wear safety glasses when using this equipment.
- Follow manufactures instruction at all time when using this equipment.
- Ensure that extractor hose is connected before engine is started or as soon as possible when vehicle is stationary.

Checks & Inspections

- Regular maintenance to be carried out on equipment as specified by the manufacturer.
- Lecturers and technicians to monitor compliance and control measures.
- Lectures and technicians to monitor wearing of PPE.

Information, Instruction & Training

- PPE training
- Manual training
- MSDS

Personal protective equipment required (last resort)

- Safety boots
- Safety Glasses
- Glove
- Overalls

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Launch petrol injector tester/cleaner	Ref: SWPS 858 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Chemical
Topping up /filling the machine with test fluid, maintaining or operating the machine can result in hands/fingers coming in contact with test fluid causing irritation to hands/fingers or other body parts with contaminated clothing.

Ejected test fluid
Operating the machine will result in injecting test fluid under pressure and could cause death if it penetrates your skin, loss of sight and respiratory illness if inhaled.

Fumes
Inhalation of test fluid fumes can result in irritation to respiratory system coughing and wheezing.

Fire
Ignition or heat sources in contact with test fluid or spray, test fluid stored beside the machine can result in fire and serious burns to the body.

Falling machine

Machine not bolted to the bench can fall causing lower leg and feet impact injuries.

Mechanical

Mounting injectors on machine could result in minor crush injuries.

Electricity

Incorrectly wired or damaged electrical cables can result in electrocution- death or burns.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
The machine is used for cleaning and checking various petrol injector spray pattern under pressure.

Controls

- Students are permitted to use the machine, under correct instruction and lecturer or technicians supervision.

- Wear gloves when topping up/filling machine with test fluid or when operating and maintaining the machine.
- Always drain unused test fluid into proper labelled container after used
- Wear safety glasses when operating or maintaining machine.
- Clothing contaminated with test fluid must be removed and replaced immediately.
- Ensure injectors are mounted properly prior to operating the machine.
- Follow the manufacturer's instructions at all times when operating the machine.
- Ensure that there is adequate ventilation when operating the machine.
- Turn on Fume extractor system in garage prior to operating the machine.
- Ignition or heat sources must not be used near the machine.
- Ensure that fire extinguishers are close at hand when operating machine.
- Ensure machine is properly mounted on bench.
- Inspect electrical cables/wires for damage or loose connections prior to use.
- Never place fingers under injector rail when mounting on machine.

Checks & Inspections

Constant vigilance and awareness

- Regular maintenance to be carried out on the machine as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor wearing of PPE.

Information, Instruction & Training

- PPE training.
- Chemical Handling Training.
- MSDS training.
- Manual handling training.

Personal protective equipment required (last resort)

- Safety boots.
- Safety Glasses.
- Overalls.
- Safety Gloves.

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability:	**1**	x Severity	**3**	= Risk Factor	**3**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Auto Etu Mercedes Can Bus Board	Ref: SWPS 859 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling

Moving the display unit or battery to and from storage can result in acute or chronic lower back and or musculoskeletal injuries.

Mechanical

Entanglement of loose clothing or long hair with rotating wheels on the rotating winders of windows unit resulting in minor neck injury. Nip point with the moving cog system and teeth of the front windows resulting in cuts to the tips of fingers.

Falling battery

Unsecure hold of battery when placing on to the unit, battery not mounted flat and secure on the display unit can result in a falling battery and impact injuries to the feet.

Falling Display Unit

The wheels or the legs of the display unit fail due to damage or defects resulting in the display unit falling over and causing lower leg and feet impact injuries.

Chemicals

A leaking or damaged battery can result in major acid burns to the hands and fingers or other body parts from contaminated clothing.

Slips Trips and Falls

Poor housekeeping, personal belongings or battery acid lying on the ground can result in slipping and tripping causing falls and head and body impact injuries.

Explosions

Incorrect setting up of the battery can result in an explosion causing loss of sight or puncture wounds to the face and other body parts.

Person Exposed to Risk

✓ Students ✓Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The display board is used for the purpose of demonstrating the function of the Can Bus System in cars and finding faults through diagnostics.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Follow the manual handling training guide lines at all times when moving the display board or battery.
- Ensure that the machine guard mesh on all four windows is in place prior to operating the machine.
- Loose clothing or jewellery must not be worn when using the machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving to and from storage.
- Inspect the wheels and legs of the display unit for damage and defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Inspect the battery for damage or leaks prior to use, do not use if damaged or leaking in any way and remove from use for safe disposal of.
- Wear safety gloves and glasses if required to handle a damaged or leaking battery.
- Remove any clotting contaminated by battery acid immediately.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Clean up and battery acid spills or leaks immediately and safely dispose of waste materials.

Checks & Inspections

- Regular maintenance to be carried out on the equipment as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures

Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training

Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves

Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Block Automotive Brake Rig Trainer	Ref: SWPS 860 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Mechanical
Entanglement of long hair with rotating wheel speed gear on the display unit, loss of tip of fingers with rotating wheel speed gear.

Explosions
Incorrect setting up of the battery can result in explosions and cause puncture wounds to the face and other body parts.

Chemicals
Leaking or damaged battery, topping up with water can result in contact with battery acid that causes severe burns to the skin. Contact with leaking brake fluid or when topping up with brake fluid can result in irritation to the skin.

Manual Handling
Lifting and carrying the battery to and from the machine, moving the display boards to and from storage can result in acute lower back and or musculoskeletal injuries.

Ejected Brake Fluid
Damaged or leaking brake fluid pipe work or loose brake pipe connections can result in ejected brake fluid under pressure and cause loss of sight and or irritation to the skin.

Falling Display Board or Battery
The wheels or legs of the display board unit fail due to damage or defects causing the machine to fall over and result in lower leg and feet impact injuries. Unsecure hold of or damaged battery handle can result in a falling battery and crush injuries to the feet.

Slips Trips and Falls
Poor housekeeping and personal belongings can result in slipping and tripping causing fall impact head and body injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
The Brake Trainer is used for the purpose of training in diagnostic trouble shooting on brake systems.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first.
- Loose clothing or long hair must not be worn when operating this machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Ensure that sensors are in place when checking wheel speed gears.
- Inspect the battery for damage or defects prior to use, do not use if damaged or defected in any way and remove form use for safe disposal.
- Remove any clothing contaminated with battery acid or brake fluid immediately.
- Wear gloves when topping up a battery with water or the unit with brake fluid.
- Follow the manual handling training guidelines when moving the machine or battery to and from storage.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving from storage.
- Inspect all brake pipe work and fittings for damage or leaks prior to using the machine.
- Wear safety gloves if required to handle leaking brake fluid or topping up with brake fluid.
- Do not use the machine if brake fluid pipe work is damaged or leaking in any way and remove from use for repair by a competent person.
- Wear safety glasses when operating or observing the operation of the machine.
- Inspect the wheel and legs of the machine for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all times.

Checks & Inspections

Constant vigilance and awareness

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Ensure to connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- When disconnecting the battery, disconnect the black cable first
- Loose clothing or long hair must not be worn when operating this machine.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch the rotating wheel speed gears of the machine with fingers.
- Ensure that sensors are in place when checking wheel speed gears.

- Inspect the battery for damage or defects prior to use, do not use if damaged or defected in any way and remove form use for safe disposal.
- Remove any clothing contaminated with battery acid or brake fluid immediately.
- Wear gloves when topping up a battery with water or the unit with brake fluid.
- Follow the manual handling training guidelines when moving the machine or battery to and from storage.
- Ensure that the battery is mounted flat and secure on to the battery platform of the display unit.
- Ensure that the handle of the battery is free from damage or defects prior to carrying it.
- Maintain a secure hold of the battery when moving from storage.
- Inspect all brake pipe work and fittings for damage or leaks prior to using the machine.
- Wear safety gloves if required to handle leaking brake fluid or topping up with brake fluid.
- Do not use the machine if brake fluid pipe work is damaged or leaking in any way and remove from use for repair by a competent person.
- Wear safety glasses when operating or observing the operation of the machine.
- Inspect the wheel and legs of the machine for damage or defects prior to use, do not use if damaged or defected in any way and remove from use for repair by a competent person.
- Maintain good housekeeping and work area free from personal belongings at all

Information, Instruction & Training

- MSDS
- Manual Handling Training
- PPE Training
- Chemical Handling Training

Personal protective equipment required (last resort)

- Safety boots.
- Overalls.
- Safety Gloves
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**2**	=	Risk Factor	**6**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability:	**2**	x Severity	**1**	= Risk Factor	**2**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Delphi Diesel Injector Tester	Ref: SWPS 861 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Chemical
Topping up /filling the machine with test fluid, maintaining or operating the machine can result in hands/fingers coming in contact with test fluid causing irritation to hands/fingers or other body parts with contaminated clothing.

Ejected test fluid
Operating the machine will result in injecting test fluid under pressure and could cause death if it penetrates your skin, loss of sight and respiratory illness if inhaled.

Fumes
Inhalation of test fluid fumes can result in irritation to respiratory system coughing and wheezing.

Fire
Ignition or heat sources in contact with test fluid or spray, test fluid stored beside the machine can result in fire and serious burns to the body.

Falling machine
Machine not bolted to the bench can fall causing lower leg and feet impact injuries.

Mechanical
Mounting injectors on machine could result in minor crush injuries.

Electricity
Incorrectly wired or damaged electrical cables can result in electrocution- death or burns.

Person Exposed to Risk

☑ Students ☑Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description
The machine is used for cleaning and checking various Diesel injector spray pattern under pressure.

Controls

- Students are permitted to use the machine, under correct instruction and lecturer or technicians supervision.
- Wear gloves when topping up/filling machine with test fluid or when operating and maintaining the machine.
- Always drain unused test fluid into proper labelled container after used
- Wear safety glasses when operating or maintaining machine.
- Clothing contaminated with test fluid must be removed and replaced immediately.
- Ensure injectors are mounted properly prior to operating the machine.
- Follow the manufacturer's instructions at all times when operating the machine.
- Ensure that there is adequate ventilation when operating the machine.

- Turn on Fume extractor system in garage prior to operating the machine.
- Ignition or heat sources must not be used near the machine.
- Ensure that fire extinguishers are close at hand when operating machine.
- Ensure machine is properly mounted on bench.
- Inspect electrical cables/wires for damage or loose connections prior to use.
- Never place fingers under injector rail when mounting on machine.

Checks & Inspections

Constant vigilance and awareness

- to monitor wearing of PPE.
- Regular maintenance to be carried out on the machine as specified by the manufacturer and records maintained by the Institute.
- Lecturers and technicians to monitor compliance with control measures.

Information, Instruction & Training

- PPE training.
- Chemical Handling Training.
- MSDS training.
- Manual handling training.

Personal protective equipment required (last resort)

- Safety boots.
- Safety Glasses.
- Overalls.
- Safety Gloves.

Initial Risk Rating (without any control measures)

Probability:	**3**	x	Severity	**3**	=	Risk Factor	**9**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability:	**1**	x	Severity	**3**	=	Risk Factor	**3**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Nissan Leaf Electric Vehicle	Ref: SWPS 862 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazard

Electricity
Poorly connected, loose or damaged electrical cables or plugs can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, trailing cables, tools, oil and water lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Fire / Explosion
Battery is incorrectly connected and explodes or generates sparks that come into contact with fuel sources resulting in a fire and first, second and or third degree burns.

Person Exposed to Risk

✓ Students ✓Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Students are required to diagnose all electronic and mechanical systems on the Vehicle. Also diagnose The high and low voltage systems

Controls

- Students are only permitted to work on the vehicle when the Lecturer or Technician is present,
- Students are trained to how isolate the battery from the Electric Motor.
- PPE must be worn at all times while working on the car .
- Use proper PPC and PPE as supplied
- Only Insolated tools Should be used while working on car .
- Correct tools supplied to carry out work in a safe and efficient manner.
- Lock out protocol must be adhered too before working on the high voltage system.
- Ensure that Food or drinks are not permitted in the work shop.
- Wearing of jewelry is not permitted while working on the High Voltage System
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure correct fire extinguishers are available. (Black Label CO2)
- Take care when connecting electrical cables to battery, connect the positive to the positive first (red cable) and negative to negative (black cable) second (make sure no sparks are allowed to be generated as this may result in battery exploding causing serious damage).
- If in doubt seek advice from the lecturer or technician
- Naked flames or ignition sources are not permitted at or near the car

Checks & Inspections

- Ensure all safety notices are readable and displayed in correct locations
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- Ensure Correct Fire Extinguisher is available

Information, Instruction & Training

- Only trained staff and students allowed carrying out procedures on high voltage systems
- New staff/students will be trained by technician and lecturing staff as required.
- Lecturers and Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Personal protective equipment required (last resort)

- Safety boots
- Eye protection
- Insulated Tools

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3**

Risk Assessment Review

As and when process changes or yearly

SECTION 9

PLUMBING LABS / WORKSHOPS

Safe Work Practice Sheet	Ref: SWPS 900
	Revision Date: Oct 2026
Plumbing Engineering Arc Welding	Approved by: Breda Brennan

Hazards

Electricity
Contact with objects that are live with electricity, incorrectly fitted or damaged electrical cable or plug of welding equipment, wet floors can result in electrocution-death, first, second and or third degree burns.

Manual Handling
Lifting, carrying, pushing and pulling heavy metal loads, welding equipment can result in lower back injury.

Fire
Nylon clothing and other flammable materials may catch fire when in contact with electrical ignition source or sparks and heated materials, resulting in first second and third degree burns.

Slips trips and falls
Poor housekeeping, personal belongings, trailing cables can cause tripping and falls that result in broken limbs and blunt force injuries to the head.

Radiation
Welding generates UV light and infra-red, exposed eyes can result in arc eye and temporary eye discomfort, long term exposure can lead to cataracts. Exposed skin can get burnt and long term exposure can result in skin cancer.

Fumes
Fumes from welding can result in respiratory illness, irritation to the lungs, loss of consciousness and or minor eye irritation.

Hot Surfaces
Metal materials welded together will retain heat and can cause burns to the hands and fingers when handled.

Sharps
Handling pieces of cut metal can result in cuts to the hands and fingers.

Flying material
Chipping slag from metal after welding resulting in flying materials causing permanent loss of sight or temporary eye discomfort.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using a power supply to create and arc to weld two metals at one point.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Use an approved face screen and filter glass. Recommend shade 11 or higher for ARC welding.
- Protect the body by wearing suitable clothing buttoned to the neck and with arms covered.
- Protect the hands by wearing suitable gloves or gauntlets.
- Screen arc welding so that persons who work in the vicinity are protected from "flashes".
- Avoid exposure of yourself and others to the heat and light of welding arc. N.B. Radiation includes invisible ultra-violet and infrared rays.
- Keep working area tidy and free from flammable material.
- The wearing of loose and nylon clothing is not permitted. Ensure clothing is dry and clean. Ensure suitable fire extinguishing equipment is readily available and maintained in good condition.
- Beware of the danger from hot metal when arc welding. Use heat resistant gloves or tongs when handling hot materials.
- Follow the manual handling guidelines at all times.
- Stand on a dry wooden floor or duckboard and/or wear rubber-soled boots.
- Welding area must be properly ventilated.
- Place material in a safe position where it cannot fall, burn or cause injury.
- Ensure that all leads are laid out in such a manner to prevent trips and falls.
- Never coil a welding cable around any body part.
- Maintain good housekeeping at all times and work area free from clutter and personal belongings.
- Ensure extract system is switched on, place hood directly over material for welding and ensure damper hood is fully open.
- Wear suitable gloves when handling metal sharps. Do not touch live wires or objects that may carry or conduct electricity.
- Ensure that there is adequate earthing.
- Ensure electrical cables and plugs are in good condition and free from damage, do not use if damaged. Competent persons must only carry out electrical repairs.
- Stand on a dry surface and/or wear suitable rubber-soled footwear.
- Switch off the mains-power supply when work is complete.
- Make sure the screen used to protect eyes has the approved "filter glass". **Recommend shade 11 or higher for ARC welding.**
- Ensure screen is of a size and shape to shield the face, throat, wrist and head
- Outer clothing should be dry, free from oil, grease or flammable substances.
- Protect the forearms from exposure to arc rays, do not roll up sleeves. N.B. cuffs on overalls, turn-ups on trousers, exposed long hair and low cut shoes are likely lodging places for sparks or globules of hot metal and slag.

- Protect the front of the body from throat to knees with suitable leather cape and apron. If only an apron is worn this must provide full protection.
- Wear suitable leather gloves to protect the wrists and hands. Recommend heavy duty leather gauntlets.
- Wear suitable protective footwear.
- Wear safety glasses when chipping weld slag.
- Before operating tools and machinery, read understand and follow the manufacturer's operating instructions and obey the instructions listed on the machine decals.
- Always make sure machine is fully switched off before walking away.
- Use proper PPE.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all safety notices are readable and displayed in correct locations
- Technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students allowed carrying out Welding procedures
- New staff/students will be trained by technician and lecturing staff as required**.**
- Manual Handling Training
- PPE Training
- Chemical Training
- Welding Rod MSDS

Personal protective equipment required (last resort)

- Safety boots
- Eye protection / Face shield
- Barrier creams/gloves
- Overalls

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	1	x	Severity	3	=	Risk Factor	3 Low risk

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Plumbing Engineering Mig and Tig welding	Ref: SWPS 901 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Contact with objects that are live with electricity, incorrectly fitted or damaged electrical cable or plug, wet floors can result in electrocution-death, first, second and or third degree burns.

Manual Handling
Lifting, carrying, pushing and pulling heavy metal loads and welding equipment can result in lower back and or musculoskeletal injury.

Fire
Nylon clothing and flammable materials can catch fire when in contact with electrical ignition source, heated metal, sparks and cause first second and or third degree burns to the body.

Slips trips and falls
Poor housekeeping, personal belongings, trailing cables can lead to tripping, slipping and falls that result in broken limbs and blunt force injuries to the head.

Radiation
Welding generates UV light, infra-red, eyes exposed can result in arc eye & temporary discomfort, long term exposure can lead to cataracts. Exposed skin can get burnt and long term exposure can result in skin cancer.

Fumes
Inhalation of welding fumes can result in respiratory illness and lung irritation, loss of consciousness. Irritation to the eyes.

Hot Surfaces
Burns to the hands and fingers when handling metal parts during and after welding.

Sharps
Handling pieces of cut metal can result in cuts to the hands and fingers.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Carrying out demonstrations and Welding Operations with various Techniques to join two pieces of metal together or fill in holes by heating and melting metal.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Use an approved face screen and filter glass. Recommend shade **11 for MIG and 9** or **Higher for TIG**.
- Protect the body by wearing suitable clothing buttoned to the neck and with arms covered.
- Protect the hands by wearing suitable gloves or gauntlets.
- Use the screen arc welding cubicle curtain so that persons who work in the vicinity are protected from "flashes".
- Avoid exposure of yourself and others to the heat and light of welding arc. N.B. Radiation includes invisible ultra-violet and infrared rays.
- Keep working area tidy and free from flammable material.
- The wearing of loose and nylon clothing is not permitted. Ensure clothing is dry and clean
- Ensure suitable fire extinguishing equipment is readily available and maintained in good condition.
- Welding area must be properly ventilated.
- Beware of the danger from hot metal when welding. Use heat resistant gloves or tongs when handling hot materials.
- Follow the manual handling training guide lines at all times.
- Stand on dry wooden floor or duck board and/.or wear rubber-soled boots.
- Place material in a safe position where it cannot fall, burn or cause injury.
- Ensure that all leads are laid out in such a manner to prevent trips and falls.
- Never coil a welding cable around any body part.
- Maintain good housekeeping & work area free from clutter and personal belongings at all times.
- Ensure extract system is switched on, place hood directly over material for welding and ensure damper hood is fully open.
- Wear suitable gloves when handling metal sharps.
- Do not touch live wires or objects that may carry or conduct electricity.
- Ensure that there is adequate earthing.
- Ensure electrical cables and plugs are in good working condition & free from damage, do not use if damaged in any way. Competent person/s must carry out electrical repairs.
- Stand on a dry surface and/or wear suitable rubber-soled footwear.
- For TIG: Do not touch the electrode while H.F. set is switched on.
- Switch off the mains-power supply when adjusting / changing electrodes and/or when finishing work.
- Ensure screen is of a size and shape to shield the face, throat, wrist and head.
- Outer clothing should be free from oil, grease or flammable substances.

- Protect the forearms from exposure to arc rays, do not roll up sleeves. N.B. cuffs on overalls, turn-ups on trousers, exposed long hair and low cut shoes are likely lodging places for sparks or globules of hot metal and slag.
- Protect the front of the body from throat to knees with suitable leather cape and apron. If only an apron is worn this must provide full protection.
- Wear suitable leather gloves to protect the wrists & hands. Recommend light leather gauntlets for TIG.
- Wear suitable protective footwear.
- Before operating tools and machinery, read understand and follow the manufacturer's operating instructions and obey the instructions listed on the machine decals.
- Always make sure machine is fully switched off before walking away.
- Filler rods on TIG should be folded at their top end to prevent eye injury, and also to aid identification of hot end so as to prevent burns.
- Use proper PPE.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturers recommendations and records kept by the School
- Ensure all safety notices are readable and displayed in correct locations.
- Technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Only trained staff and students are allowed to carry out welding procedures
- New staff/students must be trained by technician and lecturing staff as required.
- Manual handling training
- PPE training
- Chemical training
- Welding Rod MSDS

Personal protective equipment required (last resort)

- Safety boots
- Eye protection / face mask
- Barrier creams/gloves
- Overalls

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet FMB Phoenix, Manually Operated Band Saw	Ref: SWPS 902 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death and or first second and third degree burns.

Manual Handling
Lifting and carrying heavy metal loads for cutting can result in lower back injuries.

Ergonomics
Operating the cutting handle of the machine for long periods of time may result in musculoskeletal injuries.

Noise
Poorly maintained machinery can generate unnecessary noise when cutting various metal materials and cause acute hearing discomfort.

Chemicals
Filling the machine with cutting fluid can result in spilling and splashing and cause minor eye and skin irritation and contaminated clothing.

Slips, trips and falls
Oil on floor can result in slips and cause impact head injuries from falling, minor and major cuts and bruises. Cutting Long pieces of cutting materials, poor housekeeping can cause trips resulting in impact head injuries from falls.

Sharps
Cutting metal materials can generate sharps, removing and replacing the saw blade can cause lacerations to the hands, fingers and other body parts.

Mechanical
Contact with rotating saw blade can result in severing of fingers & hands. Loose clothing, long hair can become entangled with machine causing death.

Flying debris
Cutting of various metals can generate flying materials and cause loss of sight or eye irritation. Unsecured work piece can fly and cause blunt force injuries resulting in concussion and bruising. Damage or poorly fitted saw blade can result in ejected materials causing loss of sight and cuts.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Long and short pieces of square and cylindrical metal tubing and rods of varying diameters are loaded into the machine and cut to a required length using a rotating machine saw.

Controls

- Group gatherings are not permitted with this machine unless under the lecturers supervision.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Materials must not be stored on top of or beside the machine
- Inspect machine power cables and plug for any defects prior to use.
- Follow manual handling training guidelines at all times, seek assistance where loads are too heavy or awkward to handle.
- Where possible avoid operating the machine cutting handle for long periods at a time, share the cutting work load or tend to other duties for a rest period.
- Ensure the machine is adequately filled with cutting oil and that it is turned on. Ensure to wear gloves and glasses when filling with cutting oil, pour carefully to avoid spilling and splashing.
- Clean all cutting oil up that comes into contact with the floor.
- Remove and replace clothing contaminated with cutting oil.
- Maintain work area free from clutter and personal items.
- Maintain good housekeeping at all times.
- Ensure machine support table is properly secured, level and rollers free rolling.
- Wear gloves when handling cut materials, piping and or replacing removing saw blade.
- Where required hand file or grind any metal burrs & sharps.
- Ensure all machine and blade guards are in place prior to operating the machine. Ensure hand start switch is working properly. Never tamper with machine hand switch & use as intended.
- Stand clear and allow the machine to stop if the blade breaks when running.
- Hands and body parts must remain clear from the cutting blade at all times.
- Loose clothing must not be worn and long hair must be neatly tied back or a cap worn.
- Wear safety glasses at all times when operating the machine.
- Ensure material for cutting is properly clamped and secure.
- Ensure saw blade is correctly tensioned prior to use, replace any damaged blade.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 903
	Revision Date: Oct 2026
Grit, Belt and Grinder	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged grinder power cables can result in electrocution-death and or first second and third degree burns.

Manual Handling
Pushing and dragging the grinder into required work shop can result in lower back injuries.

Hot surfaces
Grinding of various metals can generate heat quickly and cause first or second degree burns to the hands and fingers.

Noise
Grinding of various metal materials generates noise and may cause acute hearing discomfort.

Slips, trips and falls
Grinding metal generates small metal filings and could cause slips and head impact injuries, major and minor cuts and bruising. Poor housekeeping and personal belongings can cause trips resulting in impact head injuries from falls.

Sharps
Grinding metal materials can generate sharps and cause lacerations to the hands, fingers and other body parts.

Mechanical
Contact with rotating sand belt can result in severing of fingers. Loose clothing, long hair can become entangled with sand belt causing serious upper limb injuries. Loss of fingers when turning on the machine due to free hand on sand belt.

Flying debris
Grinding of metals can generate flying metal material and cause loss of sight or eye irritation. Unsecured work piece can fly and cause blunt force injuries resulting in concussion and bruising. Damaged or poorly fitted sand belt can result in ejected materials causing loss of sight and cuts.

Fire
Grinded metal sparks may ignite flammable fuel sources and cause burns to the skin or respiratory illness from inhalation of smoke.

Person Exposed to Risk
☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for grinding metal artefacts to a particular size or smooth surface, repairing of cutting tool bits and taking sharp edges off metal materials etc.

Controls

- Group gathering are not permitted with this machine unless under the lecturers supervision.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine power cables and plug for any defects prior to use.
- When required seek assistance to manoeuvre machine into the required work shop. Follow manual handling training guidelines at all times. Where possible maintain machine in a fixed designated position
- Maintain good housekeeping and machine work area free from clutter and personal items at all times.
- Wear heat resistant gloves when grinding down metal materials and maintain clear from rotating grinder.
- When required ensure machine guards are in place prior to operating the machine. Hands and body parts must remain clear from the sanding belt at all times.
- **When switching on or off the machine, the operator's free hand must be by their side and not touching the grinder**.
- Never place hands, fingers, or body parts on or near the rotating sand belt.
- The wearing of nylon clothing is prohibited.
- Wear leather apron or appropriate clothing when operating machine.
- Wear ear defenders if using the machine.
- Ensure the machine vacuum bag is in place when operating the machine. Sweep any metal filings from the ground when the work is complete.
- Personal belongings and materials must not be stored on top of or beside the machine
- Loose clothing must not be worn and long hair must be neatly tied back or a cap worn.
- Wear tight fitting safety goggles at all times when operating the machine and handling grinded materials.
- Wear suitable breathing/dust mask when operating machine.
- Always use the front rest of the machine when grinding materials.
- Ensure a secure grip of the material object for grinding at all times.
- Ensure sanding belt is correctly tensioned and in good condition before use.
- Ensure the wheels of the machine are correctly aligned.
- Flammable materials must not be stored at or near the machine.
- Switch off the machine when it is no longer required for use and follow the safety procedure for switching on the machine.
- Wash hands when work is complete

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety goggles
- Dust/breathing mask
- Safety boots
- Gloves
- Ear protection

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 904
	Revision Date: Oct 2026
Mobile Air Compressor	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged compressor power cables or plug can result in electrocution-death and or first second and third degree burns.

Manual Handling
Pushing, pulling and wheeling the compressor into required work area can result in lower back injuries.

Hot surfaces
Parts of the machine may become heated from compressing air and can cause burns to the hands if in contact with hot surface.

Slips, trips and falls
Poor housekeeping, personal belongings, machine power cable and air lines can cause slips and trips resulting in impact head injuries from falls.

Explosions
Badly maintained or damaged machine can result in flying missiles from explosions and cause loss of sight, puncture wounds to various body parts.

Fire
Flammable fuel sources may ignite when in contact with machine hot parts and cause burns to the skin or respiratory illness from inhalation of smoke.

Whipping air lines
Poorly fitted or damaged airline hoses etc. may result in uncontrolled whipping action that results in loss of sight, and minor bruising.

Falling Machine
Machine falls as a result of damaged wheels and results in crushing of feet.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for pressure testing of class projects.

Controls

- Group gatherings are not permitted with this machine unless under the lecturers supervision.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine, power cables and plug for any defects prior to use.
- If required, seek assistance to manoeuvre machine into the required work shop. Follow manual handling training guidelines at all times.
- Ensure wheels on the compressor are in good working order prior to use.
- Do not touch hot parts of the machine during and after use.
- Use the machine handle when transporting the machine to and from storage.
- Maintain machine work area free from clutter and personal items.
- Maintain good housekeeping at all times.
- The wearing of loose or nylon clothing is prohibited.
- Long hair must be neatly tied back or a cap worn.
- Personal belongings and materials must not be stored on top of or beside the machine.
- Ensure cut out switch is good working order.
- Wear safety glasses at all times when operating the machine.
- Flammable materials must not be stored at or near the machine.
- Never drag the machine by the airline hoses.
- Ensure all quall plex and airlines are free from damage or defects and securely fitted prior to use.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 905
	Revision Date: Oct 2026
Bench and Pillar Drilling Machines	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged machine power cables can result in electrocution-death and or first second and third degree burns.

Mechanical
Loose clothing, long hair can result in entanglement with rotating drill causing cuts and bruises to the head and arms. Loose clothing, long hair can become trapped when adjusting cog of machine. Contact with rotating drill piece can result in cuts to the hands and fingers. Entrapment of hand and arm with ascending cutting tool and base table or vice.

Hot surfaces
Drilling metal materials with a cutting tool generates heat and can result minor burns to the hands if in contact with hot surface.

Slips, trips and falls
Poor housekeeping and personal belongings can cause trips resulting in impact head injuries from falls. Trailing power cables can result in tripping and cause impact injuries to the body.

Flying Debris / Objects
Waste drilled pieces of metal, swarf, disintegrated cutting tool can create flying debris and result in loss of sight in both eyes. Unsecured work piece or clamp/vice can result in flying object and cause impact injuries to the head and body parts.

Sharps
Contact with waste swarf and rotating swarf can result in deep lacerations to the hands and fingers. Contact with sharp pieces of drilled material on metal can result in minor cuts to hand and fingers.

Fire
Flammable fuel sources may ignite when in contact with hot metal waste from machining resulting in burns to the skin or respiratory illness from inhalation of smoke.

Ergonomics
Poorly selected working height on machine table can result in lower back, neck and work related upper limb disorder.

Manual Handling
Pushing and pulling metal clamps into required work position, carrying heavy loads for drilling can result in lower back or musculoskeletal injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for cutting holes into metal of varying sizes and shapes.

Controls

- Group gatherings are not permitted with this machine unless under the lecturers supervision.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine power cable and plug prior to use. Do not use if damaged in any way.
- All electrical repairs must be carried out be a competent person.
- Loose or nylon clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Hands or arms must never come between a descending drill piece and material for cutting.
- If required, seek assistance to manoeuvre machine into the required work shop. Follow manual handling training guidelines at all times.
- Do not touch hot materials or drill bits with bare hands. Use heat resistant glove if required.
- Maintain machine work area free from clutter and personal items.
- Maintain good housekeeping at all times.
- Personal belongings and materials must not be stored on top of or beside the machine.
- Ensure all machine guards are in place prior to use.
- Safety glasses must be worn at all times when operating the machine.
- Inspect the cutting tool prior to use, do not use if damaged, hand back damaged cutting tool and request a new one from the lecturer / technician.
- Lecturer and technicians are only permitted to carry out repairs on cutting tools.
- Do not touch waste swarf material or rotating swarf with bare hands.
- Do not touch metal sharps after drilling, hand file smooth where possible.
- Use a brush to clean or remove unwanted drilled materials. Never use air.
- Wear safety glasses at all times when operating the machine.
- Flammable materials must not be stored at or near the machine.
- Ensure the machine working table is adjusted to the required working height prior to use.
- Ensure the work price and clamps are secured at all times of use. Use only a wooden or copper mallet to tap down work pieces or clamp handles.
- Exercise caution when adjusting machine height etc. Avoid impacting hand against other machine parts.
- Never leave the machine running unattended.
- Always wait for the machine to come to a complete stop before adjusting or removing drilled material.
- Switch off the machine when it is no longer required for use.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Heat resistant gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 906
	Revision Date: Oct 2026
Gas Welding	Approved by: Breda Brennan

Hazards

Explosion
Incorrect gas pressure, leaking gas pipe lines etc. can result in an explosion and result in death, major and minor blunt blows to the head and other body parts. Heating metals can result in small metal explosion and cause burns to the skin.

Fumes
Inhalation of smut when igniting acetylene can result in respiratory discomfort and illness. Inhalation of melted metal fume can result in respiratory discomfort and illness.

Hot surfaces
Welding metals pieces together generates heat and can result in first or second degree burns to the hands when touched.

Fire
Fuel sources can ignite quickly when in contact with an ignition source and cause first, second and third degree burns to the body. Loose, nylon clothing and Long hair can catch fire quickly from sparks and result in burns to the head & body parts.

Chemicals
Inhalation of oxygen can result in lung damage and respiratory irritation, Inhalation of acetylene can result in asphyxiation or respiratory irritations. Both gases can cause irritation to the eyes.

Slips, trips and falls
Poor housekeeping, trailing cables, wet floors can generate tripping and slipping that results in falls head impact injuries resulting in concussion and or minor cuts and bruises.

Sharps
Handling cut and welded metal material sharps can result in deep cuts to the hands and fingers.

Ergonomics
Welding pieces of metal that are too high or low on the workbench can result in lower back & musculoskeletal injuries.

Bright Light
Burns to the back of the eyes can occur from looking into gas burning flame and cause eye damage and discomfort.

Manual Handling
Pushing and pulling metals into work position, carrying heavy loads for welding can result in lower back injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using oxygen and acetylene for welding.

Controls

- Use adjustable height jig for the bench vice when required.
- Wear proper welding visor with approved filter glass.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- The wearing of jewellery is not permitted.
- Ensure the gas pressure is set correctly.
- Ensure gases and regulator valves are turned off when no longer required.
- Purge used lines into extract hood.
- Ensure extract fan is switched on when gas welding.
- Ensure damper on the extract hood is fully open. Close damper on hoods not in use.
- Ensure the ignition of the acetylene is conducted directly under the extract hood in use.
- Do not touch hot pieces of metal with bare hands, wear heat resistant gloves or use metal tongs.
- Keep the working area tidy and free from flammable materials and liquids.
- Ensure work clothing is free from grease and chemicals.
- Welding and cutting must be performed in areas free from fire risk.
- Ensure suitable fire extinguishing equipment is readily available and maintained in good condition.
- Loose and nylon clothing is not permitted to be worn.
- Long hair must be neatly tied back or a cap worn.
- Welding area must be properly ventilated.
- Do not place turned on gases at or near the mouth, nose or eyes.
- Maintain good housekeeping & work area free from personal belongings at all times.
- Ensure floors are dry.
- Ensure were possible no trailing gas torch hoses.
- Tidy all gas torch hoses up when no longer required.
- Wear gloves or use tongs when handling metal sharps. Where possible hand file smooth.
- Protect the front of the body with suitable leather cape/apron.
- Wear suitable leather gloves to protect the wrists and hands.
- Wear suitable protective footwear.
- Beware of the danger from hot metal when gas welding and cutting. N.B. cuffs on overalls, turn-ups on trousers, exposed long hair and low cut shoes are likely lodging places for sparks or globules of hot metal and slag.
- Spark lighters are recommended.

Checks & Inspections

- All pipework, fittings & machines checked annually.
- Flashback arrestors are replaced as soon as a replacement is indicated.
- Ventilation system to be checked annually.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment
- Chemical training
- Workshop and laboratory exercises are supervised by college staff
- MSDS
- Manual handling

Personal protective equipment required (last resort)

- Welding Gloves to be worn
- Suitable eye protection must be worn
- Apron/overalls to be worn
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 907
	Revision Date: Oct 2026
Ridgid Mobile Threading Machine	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly fitted, damaged machine electrical cable or plugs can result in electrocution, first, second and or third degree burns.

Mechanical
Operators clothing or hair can become entangled with rotating chuck head resulting in asphyxiation, cuts and bruises. Entrapped crushing of fingers with tool head can result in broken bones and minor bruising.

Sharps
Contact with tool head can result in minor cuts to hand and fingers. Contact with sump swarf or rotating swarf can result in lacerations to the hands and fingers.

Manual Handling
Moving the machine into the required position can result in lower back, neck & or musculoskeletal injuries.

Chemicals
Contact with splashing oil can result in minor eye, skin irritation and contaminated clothing. Handling of cut material or cutting tools in contact with cutting oil can result in skin irritation to the hand and fingers.

Slips, trip & falls
Trailing electrical & foot pedal cable, poor housekeeping personal belongings can result in tripping causing falls and head impact injuries, cuts and bruising. Splashing oil can result in slipping and falling causing concussion & broken limbs.

Sharps
Handling rotating swarf, cutting and reaming tool heads and cleaning of sump swarf, can result in lacerations to the hands and fingers.

Flying machine parts and debris
Unsecured chuck head or material for cutting could fly and cause blunt force injuries. Ejected cut material can come into contact with eyes and result in loss of sight.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is moved to a required location and used to ream, thread and cut metal piping of various sizes.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Ensure cable and plugs & foot pedal of machine are free from defects prior to use. Do not use if damaged in any way. Competent person/s must only carry out electrical repairs.
- The wearing of loose clothing is not permitted.
- Long hair must be tied back neatly or a cap worn.
- Over reaching across of the machine must be avoided at all times.
- Never touch or adjust a rotating chuck head, always wait for it to come to a complete stop.
- Never rest or place fingers or hands between machine moving parts.
- Always use the handles of reaming, cutting and threading tool when operating the machine.
- Do not touch tool heads with bare hands.
- Do not touch sump swarf with bare hands, use a brush and gloves when cleaning.
- Allow all rotating swarf to fall off into the sump.
- Exercise caution when handling machined metals, when required use a hand file to smoothen off metal sharps.
- Seek assistance if required to move the machine over a long distance, always follow manual handling training guidelines. When manoeuvring the machine use the permanently fitted lever arms. Ensure wheels of the machine are in good working order.
- If required wear gloves when handling tools and materials contaminated with cutting oil. Remove and replace clothing if contaminated with cutting oil.
- Wear glasses at all times when operating the machine.
- Pour cutting oil into the sump carefully so as to avoid any splashing. Clean any oil splashes from the ground as soon as possible.
- Avoid running electrical cables and foot start pedal along the work area walk way. Operate the foot start pedal from under the machine.
- Ensure chuck head and metal material for machining is securely tightened.
- Machine must not be left unattended when running, switch off, unplug and tidy away when no longer required.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures.
  Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment.
- Manual handling.
- Chemical training.

- PPE training
- MSDS must be available.

Personal protective equipment required (last resort)

- Gloves to be worn as required
- Suitable eye protection must be worn
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 908
	Revision Date: Oct 2026
FMB Jupiter, Automatic Assist Band Saw	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged power cables can result in electrocution-death and or first second and third degree burns.

Manual Handling
Lifting and carrying heavy loads for cutting can result in lower back and neck injuries.

Noise
Poorly maintained machinery can generate unnecessary noise when cutting various metal materials and cause acute hearing discomfort.

Chemicals
Filling the machine with cutting fluid can cause spilling and splashing and result in minor eye and skin irritation. Handling of lubricated cut metal or saw blade can result minor skin irritation to the hands and fingers.

Slips, trips and falls
Oil on floor may result in slips and cause impact head injuries from falling, minor and major cuts and bruises. Cutting Long pieces of material, poor housekeeping & incorrect storing of metal can cause trips resulting in impact head injuries from falls. Folded mats on the ground can result in tripping

Sharps
Contact with machine cut metal can contain sharps and cause lacerations to the hands, fingers and other body parts. Contact with saw blade teeth can result in cuts to the hands and fingers.

Mechanical
Contact with rotating saw blade can result in severing of fingers & hands. Loose clothing, long hair can become entangled with machine causing death.

Ejected Material
Cutting more than one cylindrical metal tube/pipe at a time can result in blunt force injuries from unsecure material resulting in concussion and bruising. Damaged or poorly fitted saw blade can result in ejected materials causing loss of sight and cuts.

Hydraulics
Damaged or leaking hydraulic hoses can result in piercing of the skin, loss of sight and minor skin irritation.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Long and short pieces of square and cylindrical metal tubing and rods of varying diameters are loaded into the machine and cut to a required length using a rotating machine saw.

Controls

- Only trained operators (lecturers/ technicians) can operate this machine,
- Students are not permitted to operate the machine.
- Group gatherings are not permitted around the machine.
- Stand back from the machine when cutting programme is selected and running.
- Materials must not be stored on top of or beside the machine.
- Inspect machine power cables and plug for any defects prior to use.
- Ensure emergency stop button is in good working order.
- Follow manual handling training guidelines at all times, seek assistance where loads are too heavy or awkward to handle and lift.
- Ensure the machine is adequately filled with cutting oil and that it is turned on. Wear gloves and glasses when filling with cutting oil, pour carefully, and avoid spilling and splashing.
- Clean all cutting oil up that comes into contact with the floor as soon as possible.
- Collect all metal cut offs in an empty bucket.
- Ensure floor mats are lying flat along the ground.
- Remove and replace clothing contaminated with cutting oil. Wash contaminated skin immediately.
- Wear gloves if handling metals or saw blade in contact with cutting fluid.
- Maintain machine work area free from clutter and personal items. Maintain good housekeeping at all times.
- Metal must be stored on racking.
- Ensure machine rollers are free rolling.
- Where required hand file or grind any metal burrs & sharps.
- Ensure all machine and blade guards are in place prior to operating the machine.
- Stand clear and allow the machine to stop if the blade breaks when running.
- Never touch the rotating saw blade.
- Hands and body parts must remain clear from the rotating saw blade at all times.
- Saw blade must be at a stop when removing cut materials and metal stock
- Loose clothing must not be worn when operating the machine.
- Long hair must be neatly tied back or a cap worn.
- Wear safety glasses at all times when operating the machine.
- Ensure material for cutting is properly clamped and secure.
- Ensure saw blade is correctly tensioned prior to use, replace any damaged saw blades.

- Wear gloves when handling cut materials, piping or removing and replacing saw blade.
- Ensure hydraulic machine hoses are in good working order prior to use, do not use if damaged or leaking. Clean up any leaking hydraulics oil as soon as possible.
- Switch off the machine when it is no longer required for use and tidy up work area.
- Return unused metal stock to storage.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Machine operation
- Manual handling training
- PPE training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Gloves

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

~~**Safe Work Practice Sheet**~~ ~~**Rem Push, Pressure Test Buckets**~~ Not Applicable - No longer in use	~~Ref: SWPS 910~~ ~~Revision Date:~~ ~~Approved by: Breda Brennan~~

Hazards

Mechanical
Crushing of fingers in the lever locking pin of the handle resulting in broken and crushed finger.

Sharps
Handling metal piping for testing can result in lacerations to the hands and fingers.

Manual Handling
Incorrect lifting, carrying of buckets when full can result in lower back or musculoskeletal injury.

Slips, trip & falls
Leaking or over filled water bucket test bucket, damaged pressure hose can cause slipping and result in impact injuries to the head and body. Poor housekeeping, trailing hose cable can cause tripping and result in head impact injuries.

Ejected fluid, debris
Eyes and skin could get sprayed by low pressure ejected water from hose or project piece resulting in temporary minor eye irritation.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The equipment is used to pressure test students exercises & projects for soundness / leaks.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Do not place hands or finger in between moving parts of the test equipment.
- Use the test equipment as instructed.
- If required file of all metal sharps from piping.
- Wear gloves if required.
- Follow manual handling training when carrying test equipment to test wet area.
- Carry one test bucket at a time.

- Use carrying handle on the bucket when carrying and ensure handle locking pin is in locked position.
- Ensure pressure hose is placed into empty test bucket when transporting.
- Do not fill buckets prior to carrying to test wet area.
- Inspect bucket and hose for visual damage prior to use.
- Ensure the test bucket is sitting flat and secure on the ground test area.
- Fill buckets with water at the test wet area. Use clean tap water.
- Wear glasses when using test equipment.
- Never pressures test the hose against the skin or body parts.
- Ensure good housekeeping is maintained at all times.
- Return test buckets back to storage when no longer required.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment.
- Manual Handling training.
- PPE training.

Personal protective equipment required (last resort)

- Suitable glasses
- Gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 911
	Revision Date: Oct 2026
Ridgid, Manual Hydraulic Pipe Bender	Approved by: Breda Brennan

Hazards

Mechanical
Crushing of fingers and hands in contact with bending frame, hinge, and hydraulic cylinder head.

Falling machine
Incorrectly assembled machine, unleveled ground, damaged machine legs can result in a falling machine and broken lower limb bones, cuts and bruises.

Sharps
Handling sharp metal piping for bending can result in lacerations to the hands and fingers.

Manual Handling
Incorrect lifting, carrying, and dragging of the machine can result in lower back or musculoskeletal injury.

Slips, trip & falls
Poor housekeeping, machine legs, personal belongings can result in tripping & cause fall injuries to the head and hands or arms. Leaking hydraulic fluid can result in slipping and cause impact injuries to the head, arms and body parts.

Chemicals
Contact with leaking hydraulic fluid oil can cause hand and finger skin irritation.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The equipment is used to bend steel piping at various curved angles.

Controls

- Students are permitted to operate the equipment, under correct instruction and the lecturer or technician's supervision.
- Do not place hand or fingers in between any moving parts of the machine.
- Use the hydraulic arm lever as instructed.
- Ensure the machine is set up on firm level ground and as per manufacturer's guidelines.
- Inspect machine for damaged legs etc. prior to use, do not use if damaged.
- Hand file any pipe metal sharps prior to bending and handling, wear gloves if required.
- Follow manual handling training guidelines when moving and setting up the machine.
- Maintain the work area free from clutter and personal belongings at all times.

- Observe and be aware of the placement of the machine legs prior to and when using the machine.
- Ensure the machine is not leaking hydraulic oil prior to use. Clean up any leaking hydraulic oil from the floor as soon as noticed. Wear gloves to clean leaking oil and dispose of to a bin.
- Tidy the work area when work is complete.
- Safety glasses must be worn at all time when operating the machine.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment.
- Machine should be checked as instructed per manufacturer recommendations.
- Manual Handling training.
- PPE training.
- Chemical training

Personal protective equipment required (last resort)

- Suitable glasses
- Gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 912
	Revision Date: Oct 2026
Ridgid, Portable Tripod	Approved by: Breda Brennan

Hazards

Mechanical
Crushing of fingers in chain clamp resulting in broken bones cuts and bruises. Impact injury on hands when tightening vise.

Tipping machine
Incorrectly assembled machine, unleveled ground, damaged machine legs can result in toppling machine and broken lower limb bones, cuts and bruises.

Sharps
Handling sharp metal piping for bending can result in lacerations to the hands and fingers.

Manual Handling
Incorrect lifting, carrying, and dragging of the machine can result in lower back or musculoskeletal injury.

Slips, trip & falls
Poor housekeeping, machine legs, personal belongings can result in tripping & cause fall injuries to the head and hands or arms.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The equipment is a pipe chain vise that holds metal tubing in place when threading etc.

Controls

- Students are permitted to use the equipment, under correct instruction and the lecturer or technician's supervision.
- Do not place hands or fingers in between chain clamp when tightening.
- Exercise caution when tightening vise, avoid impacting hand on metal parts.
- Ensure the machine is set up on firm level ground and as per manufacturer's guidelines.
- Inspect machine for damaged legs etc. prior to use, do not use if damaged.
- Hand file any pipe metal sharps prior to bending and handling, wear gloves if required.
- Follow manual handling training guidelines when moving and setting up the machine.
- Observe and be aware of the placement of the machine legs prior to and when using the machine.
- Tidy the work area when work is complete.
- Maintain good housekeeping and work area free from personal belongings at all times.

- Safety glasses must be worn at all time when operating the machine.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment.
- Machine should be checked as instructed per manufacturer recommendations.
- Manual Handling training.
- PPE training.

Personal protective equipment required (last resort)

- Suitable glasses
- Gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 913
	Revision Date: Oct 2026
Record, Portable Free Standing Bender	Approved by: Breda Brennan

Hazards

Mechanical
Crushing of fingers in clamp resulting in broken bones, cuts and bruises. Impact injury to the head when operating the lever. Entrapment of fingers when operating bending lever.

Tipping or collapsing machine
Incorrectly assembled machine, unleveled ground, damaged machine legs can result in toppling or collapsing machine causing broken lower limb bones, cuts and bruises.

Sharps
Handling metal piping for bending can result in lacerations to the hands and fingers.

Manual Handling
Incorrect lifting, carrying, and dragging of the machine can result in lower back or musculoskeletal injury.

Slips, trip & falls
Poor housekeeping, machine legs, personal belongings can result in tripping & cause fall injuries to the head and hands or arms.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The equipment is used to bend steel piping to various angles.

Controls

- Students are permitted to operate the equipment, under correct instruction and the lecturer or technician's supervision.
- Avoid impacting head or body parts when operating bending lever.
- Inspect machine for damaged legs etc. prior to use, do not use if damaged.
- Ensure the machine is set up on firm level ground and as per manufacturer's guidelines. Ensure there is adequate working space.
- Ensure chain pin is properly inserted when setting the machine up.
- Do not place fingers in between moving parts of the bender.
- Hand file any pipe metal sharps prior to bending and handling, wear gloves if required.
- Follow manual handling training guidelines when moving and setting up the machine.
- Maintain work area free from clutter and personal belongings at all times.
- Observe and be aware of the placement of the machine legs prior to and when using the machine.

- Tidy the work area when work is complete.
- Safety glasses must be worn at all time when operating the machine.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment.
- Machine should be checked as instructed per manufacturer recommendations.
- Manual Handling training.
- PPE training.

Personal protective equipment required (last resort)

- Suitable glasses
- Gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 914
	Revision Date: Oct 2026
Manually Operated Plumbing Hand Tools	Approved by: Breda Brennan

Hazards

Mechanical
Moving parts of hand held tools can result in impact crushing injuries and broken crushed fingers, cuts and bruises.

Failed equipment
Tool handle, head etc. breaks when operating it and results in impact injury to the hands, cuts and bruising

Falling objects
Falling hand tools causing Impact injuries to the legs and feet.

Sharps
Carrying tools to the workbench etc. can result in cuts to the hands and fingers when in contact with cutting heads etc. Contact with sharps on metal piping can result in lacerations to the hand and fingers.

Manual Handling
Incorrect lifting, carrying of hand tools and tool heads can result in lower back injuries and or musculoskeletal injury.

Slips, trip & falls
Poor housekeeping, not storing tools in designated storage area can result in slips & trips causing head impact injuries, cuts and bruises.

Ergonomic
Not carrying the tool by the handles, incorrect use if tool, not trained how to use the equipment, unfavorable working area can result in work related upper limb disorder

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Hand held tools are used to bend, thread, ream, file, cut and hammer etc. metal piping.

Controls

- Students are permitted use of the hand held tools, under correct instruction and the lecturer or technician's supervision.
- Inspect tools for defects or damage prior to use, do not use if damaged, damaged tools must be handed to the lecturer or technician.

- Trained persons must only carry out tool repairs.
- Never place fingers or hands in between moving tool parts.
- Always use the tool by the handle when operating it.
- Ensure a secure grip of tools at all times when holding.
- Ensure to follow manual handling guideline when using hand held tools.
- Use tool handle to transport, never carry by cutting head.
- Ensure there is adequate working space and height when operating tools.
- Ensure tool handles are clean and dry prior to use.
- Do not touch cutting tool heads with bare hands or fingers.
- Do not touch sharps with bare hands, use gloves when required.
- Do not over load the body when carrying tools to the work bench etc.
- Never swing the tools when transporting.
- Ensure to maintain a clutter free work area at all times.
- Return all tools to storage when no longer required.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment.
- Tools should be inspected prior to use
- Manual Handling training.
- PPE training.

Personal protective equipment required (last resort)

- Suitable glasses
- Gloves as required
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**2**	=	Risk Factor	**4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 915
	Revision Date: Oct 2026
Testing of Heating / Hot Water Systems	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged power cables or plugs, water lying on the ground in contact with a live wire can result in electrocution-death and or first second and third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings, electrical cables lying on the ground, pipes and tools lying on the ground, water lying on the ground from a leaking system, trailing gas hose line can result in slipping and tripping and cause fall impact head injuries and or broken bones.

Sharps
Handling cut pipes for constructing the heating system can result in minor lacerations to the hands and fingers.

Hot Surfaces
Touching the boiler after applying heat from the hand held burner can result in minor burns to the hands and fingers.

Manual Handling
Lifting, carrying pulling or pushing the gas cylinder to and from the cubicle can result in acute or chronic lower back and or musculoskeletal injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The test system is used so that students can construct an operational central heating system.

Controls

- Students are permitted to carry out this task, under the correct instruction and the supervision of the lecturer or technician.
- Inspect the electrical cable and plug prior to using the test equipment.
- Do not use the test equipment if the electrical cable or plug is damaged or defected in any way and remove from use for repair. Report to the lecturer or technician.
- Competent persons must only carry out electrical repairs.
- Maintain good housekeeping and area free from personal belongings at all times.

- Avoid the trailing of power cables at all times. Use the sockets mounted on to the wall in the test cubicle being used.
- Tools, metal pipes and parts must never be left lying on the ground when building the heating system, always use a work bench to store equipment in use.
- Water lying on the ground in the cubicle must be cleaned up immediately.
- Use the water vacuum hoover if required to clean up water.
- Students must ensure that a leaking system if fixed a soon as possible.
- Inspect the piping for metal sharps prior to handling, hand file any metal sharps smooth.
- Never touch the boiler unit after applying heat to it.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Safety glasses as required
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Portable MIG Welder Coogar Gas Cylinder Replacement	Ref: SWPS 916 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Manual Handling
Lifting, dragging, pulling or rolling the empty or full cylinder off or on the welder, pulling or pushing the MIG welder to and from the delivery door of the workshop can result in acute or chronic lower back or musculoskeletal injuries.

Falling Cylinder
Manually moving empty / full cylinder to and from the delivery truck or storage, wheeling the cylinder on the trolley unchained, rolling the empty or full cylinder on or off the welder can result in a falling cylinder causing lower leg and feet crushing injuries.

Slips Trips and Falls
Trailing gas hoses from the welder, poor housekeeping, and personal belongings can result in slipping and tripping causing head and fall impact injuries, cuts and bruises.

Collapsing Welder
Wheels of the welder fail causing the machine to collapse resulting in feet crushing injuries.

Chemicals
Accidental release of COOGAR gas when removing or replacing the regulator and hose on full or empty cylinders can result in dizziness or loss of sight.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Removing and replacing the COOGAR gas cylinder from the portable MIG welder.

Controls

- Students are not permitted to carry out this task.
- Lecturers or technicians are only permitted to carry out gas cylinder replacement.
- Always seek assistance when carrying out this task.
- Follow the manual handling training guide lines at all times when performing this task.
- Use the trolley on wheels to transport the full or empty gas cylinders to & from storage & delivery truck.
- Ensure that the empty or full gas cylinder is securely chained on to the trolley for transporting.
- Ensure empty cylinder is placed standing firmly and flat on the ground when removed from the welder and placed on the trolley for removal ASAP.

- Always use the handle on the MIG Welder when moving to and from storage.
- Move the MIG welder as near to the delivery doors as possible when changing the cylinder.
- Ensure that your feet are positioned clear of the bottom of the cylinder and ramp of the welder when removing and replacing empty or full cylinders.
- Always slowly roll off the empty cylinder from the welder.
- Always slowly roll the full cylinder on to the welder.
- Position the front of the welder against the wall when removing or replacing the cylinder.
- Use a chock bloc for the wheels of the welder when removing and replacing the cylinder.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Ensure that the gas cylinder valve is turned off prior to removing the empty cylinder.
- Remove the gas hoses and regulator on the empty cylinder prior to removing the cylinder from the welder. Place gas hoses and regulator on a work bench nearby.
- Always use the ramp on the welder to remove and replace the empty and full cylinders.
- Always use the chain on the welder to securely hold the cylinder.
- Ensure that the wheels of the welder are in good working order and free from damage or defects prior to use.
- Always ensure that the valve on the empty or full cylinder is closed prior to removing or fitting the regulator and hose. A competent person must always carry out this operation.
- Wear safety glasses when removing and replacing the regulator and hose.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Safety Boots
- Safety Glasses

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	= Risk Factor	**9High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**3**			**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Wiring / Building and Testing of Heating Control Panels	Ref: SWPS 917 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Contact with incorrectly wired, damaged or exposed cables can result in electric shock, death or minor injuries. First, second or third degree burns. Secondary injuries resulting in musculoskeletal injuries, cuts and bruises, broken limbs and or broken fingers.

Slips, Trips and Falls
Poor housekeeping, personal belongings can result slips or tips causing falls and broken limbs, musculoskeletal injuries, broken fingers, cuts and bruises.

Manual handling
Rotating of work boards can result in broken limbs and or musculoskeletal injuries.

Explosions
Incorrect wiring of work panels can result in flying debris, loss of sight to one or both eyes, minor burns cuts and bruises.

Cutting and snipping
Cutting of excess wiring etc. can result tin flying debris, possible loss of sight or minor eye injuries. Serious or minor cuts to hands.

Mechanical
Flying objects (broken drill bits, flying material) loss of sight or minor eye damage, cuts and bruises. Entanglement of long hair or loose clothing minor cuts or bruises. Entanglement with rotating drill can result in minor cuts and bruising.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The wiring / building of heating control panels.

Controls

- Students must be informed at induction about the importance of not energising panels on their own.
- Lecturers must be present when panels are being energised.
- Students can only energise panels under correct instruction and the supervision and instruction of their lecturer.

- The Single phase supply can be energised by a student under correct instruction and the direct supervision of the Lecturer.
- All heating control panels shall have key operated switches fitted.
- The key for the panel single phase supply is to be kept under the lecturers control at all times.
- Students may use single phase supply leads under correct instruction and the supervision of the lecturer.
- Single phase supply leads must be requested from the lecturer.
- Single phase supply leads must be returned to the lecturer when no longer required.
- All panels to be fitted and limited in current by a 3amp fuse.
- All wiring terminals must be correctly formed using appropriately sized and crimp fitted ferrules.
- Safety glasses must be worn when working on panels.
- Each student is required to have a full Tool Kit and a proper Toolbox.
- Tool Belts may be worn in workshop.
- Food or drinks must not be consumed or stored near work boards.
- Loose clothing must not be worn, for example, hoodies with string.
- Long hair must be tied back.
- The wearing of jewellery is not permitted.
- Maintain fingers clear of cutting tools.
- Always cut away from the body or bystanders.
- Maintain good housekeeping and work area free from personal belongings at all times.
- While carrying out a training exercise, tools must not be placed inside the panel. All tools, measuring equipment and instruments should be placed in the Toolbox.
- Follow the manual handling training guidelines at all times.
- All damaged Power Leads, Sockets or equipment must be brought to the attention of the Lecturer, replacements may be obtained from the Technician or Class Assistant.
- Students should not attempt to repair any electrical items or cables.
- All conduit, Din rail etc. must be held in a suitable Vice when being cut or threaded.
- Individuals to exercise vigilance when using hand held tools for cutting and snipping.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE
- All voltage power outlets to be checked monthly for tripping operations
- Ensure emergency shutdown devices are checked each term
- RCDs tested once per term
- Electrical circuits tested every 3 years

Instruction & Training

- Trained First Aider/CPR (available when live working is carried out)
- Technician to use personal alarm (man down monitor) when carrying out maintenance work as part of a safe system of work during “lone working”.
- Manual Handling training
- PPE training.

Further Information:

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x Severity	**3**	= Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**3**	= Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 918
	Revision Date: Oct 2026
Preparation of Student Work Materials	Approved by: Breda Brennan

Hazards

Manual Handling
Lifting and carrying trays with work materials can result in acute or chronic musculoskeletal injuries, lower back injuries.

Ergonomics
Pushing and pulling of trolleys can result in acute or chronic lower back injuries.

Slips Trips and Falls
Poor housekeeping can result falls & broken limbs, musculoskeletal injuries, broken fingers, cuts & bruises.

Sharps
Damaged steel trolley and broken plastic trays can cause major to minor cuts to hands.

Tipping trolleys
Damaged trolley wheels, overloaded trolley can result in falling trolley and lower leg injuries.

Falling boxes
Carrying of heavy loads or too many items can result in dropping of boxes and cause lower limb impact injuries.

Person Exposed to Risk

☑ Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Technicians / Class Aides are required to gather and prepare work materials for students in trays, boxes etc. and place them into trolleys for work stations distribution.

Controls

- Maintain good housekeeping and work area free from personal belongings at all times.
- Technician or class aid may only carry out this duty.
- Floor must be kept clean and free from obstruction and rubbish.
- Trolleys and trays must only be used by Technician or Class Aid
- Follow manual handling training guidelines.
- Inspect the trolley and tray for damage or defects prior to use, do not use trolleys or trays if damaged or defected.
- Trays must not be over filled or over loaded.

- Loaded trays must be placed on trolleys for dispensing to workstations.
- Trays must be dispensed prior to commencement of student block.
- Technician / Class Aide must collect trays from students when empty.
- Empty trays must be placed back onto trolleys and returned to storage area.
- Empty trolleys and trays must be neatly stored away when not in use.
- Do not over fill boxes with components.
- Never carry more than one box at a time.

Checks & Inspections

- Trolleys and wheels must be inspected prior to use.
- Trays must be inspected prior to use.

Information, Instruction & Training

- Manual handling

Personal protective equipment required (last resort)

- Safety boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	2			**2**			**4 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 919
	Revision Date: Oct 2026
Hand Held Tools for Electrical Works	Approved by: Breda Brennan

Hazards

Electricity
Carrying out repair work on devices connected to the mains can result in electrocution-death or first second and or third degree burns.

Sharps
Incorrect handling and misuse of saws, screwdrivers, snips etc. can result in lacerations, puncture wounds or abrasions to hands and fingers.

Damaged Tools
Poor storage, misuse, wear and tear of tools can result in damage to the handles resulting in minor cuts and blisters to hands and fingers. Repairing or replacing damaged cutting tools, saw blades etc. can result in lacerations the hands and fingers.

Falling Hand Tools
Incorrect hold of, tool lying at the workbench edge, carrying too many at a time can result in a falling hand tool causing lower leg and feet puncture wounds, cuts and bruises.

Slips Trips and Falls
Poor Housekeeping, personal belongings, falling hand tools lying, waste cut offs from wiring and components etc. on the ground can result in slips and trips and fall impact head injuries.

Ergonomics
Use of tools for extended periods of time can result in work related upper limb disorder.

Flying Debris
Use of various hand tools can result in flying debris from PCBs, wires, connector pins etc. resulting in the loss of sight.

Mechanical
Fingers or hands in between closing jaws or blades of hand tools can result in pinching of fingers or severing of finger tips.

Inadvertent Stabbing
Using your body as resting support for a component, PCB or material etc. resulting in self stabbing.

Manual Handling
Lifting or carrying equipment for repair or modification can result in acute lower back injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Hand held tools are required to enable operators to build and or repair or modify electrical wiring etc. The hand held tools can comprise of wire strippers, files, rasps, phase testers, screwdrivers, snips, plyers, hack saws, and hand held drills etc.

Controls

- Students are permitted to use hand held tools, under correct instruction and the lecturer or technicians supervision.
- Students must request the tools from the lecturer or technician.
- Ensure that equipment or machinery being repaired is disconnected and isolated from the mains supply prior to conducting electrical work, repairs etc.
- Inspect the tool for damage or defects prior to use, do not use if damaged or defected in any way and hand back to lecturer or technician for removal from use.
- Wear safety glasses when using hand held tools.
- Always lift or carry a hand tool by its handle.
- All hand tools must be used in accordance with the manufacturers intended use and design.
- Students are not permitted to carry out repairs to damaged tools. All repairs, replacement blades or cutting tools must be carried out by a lecturer or technician.
- Ensure that tools required are resting in from the workbench edge.
- Falling hand tools must be picked up from the ground immediately.
- Maintain good housekeeping and work area free form personal belongings at all times.
- Ensure that the floors are swept clean from material cut offs as soon as possible.
- Avoid the use of hand tools for extended periods of times by tending to other duties where possible or periodically take small breaks.
- Always cut and snip materials away from the body and never in the direction of bystanders or other workbenches.
- Never place hands or fingers in between the closing jaws of plyers or snips etc. and ensure to keep hands and fingers at a safe distance of jaws when in use.
- Never use your body as a supporting aid for work being carried out, always use a work bench as a means of support.
- Follow the manual handling training guidelines at all times.

Checks & Inspections

- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Manual Handling Training

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	3			**3**			**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :		x	Severity		=	Risk Factor	
	1			**2**			**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Gas Soldering	Ref: SWPS 920
	Revision Date: Oct 2026
	Approved by: Breda Brennan

Hazards

Explosion
Incorrect gas pressure, leaking gas pipe lines etc. can result in an explosion and result in death, major and minor blunt blows to the head and other body parts. Heating metals can result in small metal explosion and cause burns to the skin.

Fumes
Inhalation of smut when igniting gases can result in respiratory discomfort and illness. Inhalation of melted metal fume can result in respiratory discomfort and illness.

Hot surfaces
Soldering metal pieces together generates heat and can result in first or second degree burns to the hands when touched. Touching pipework after applying heat from the hand held burner can result in minor burns to the hands and fingers.

Fire
Fuel sources can ignite quickly when in contact with an ignition source and cause first, second and third degree burns to the body. Loose, nylon clothing and Long hair can catch fire quickly from sparks and result in burns to the head & body parts.
Using gas torches to apply heat can result in fire when in contact with fuel sources, leaking gas hose lines can catch fire, and result in first, second and or third degree burns to the body. Gas cylinders exposed to heat source can cause an explosion resulting in death or permanent loss of sight.

Chemicals
Inhalation of gases can result in lung damage and respiratory irritation, Inhalation of gases can result in asphyxiation or respiratory irritations. Gases can cause irritation to the eyes.

Slips, trips and falls
Poor housekeeping, trailing cables, wet floors can generate tripping and slipping that results in falls head impact injuries resulting in concussion and or minor cuts and bruises.

Sharps
Handling cut and welded metal material sharps can result in deep cuts to the hands and fingers.

Ergonomics
Soldering pieces of metal that are too high or low on the workbench can result in lower back & musculoskeletal injuries.

Bright Light
Burns to the back of the eyes can occur from looking into gas burning flame and cause eye damage and discomfort.

Manual Handling
Lifting, carrying pulling or pushing the gas cylinder to and from the work areas can result in acute or chronic lower back and or musculoskeletal injuries.

Person Exposed to Risk
☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The hard or soft gas soldering of pipework in the plumbing workshops or laboratory.

Controls

- Wear safety glasses when soldering.
- Ensure the gas pressure is set correctly.
- Ensure gases and regulator valves are turned off when no longer required.
- Do not touch hot pieces of metal with bare hands, wear heat resistant gloves or use metal tongs as necessary.
- Keep the working area tidy and free from flammable materials and liquids.
- Ensure work clothing is free from grease and chemicals.
- Loose and nylon clothing is not permitted to be worn.
- Long hair must be neatly tied back or a cap worn.
- Soldering area must be properly ventilated.
- Do not place turned on gases at or near the mouth, nose or eyes.
- Maintain good housekeeping & work area free from personal belongings at all times.
- Ensure were possible no trailing gas torch hoses.
- Tidy all gas torch hoses up when no longer required.
- Wear gloves or use tongs when handling metal sharps. Where possible hand file smooth.
- Wear suitable protective footwear.
- Spark lighters are recommended.
- Students are permitted to carry out this task, under the correct instruction and the supervision of the lecturer or technician.
- Tools, metal pipes and parts must never be left lying unattended on the ground when building pipework.
- Fuel sources (paper, wood etc.) must not be stored in, at or near the work area.
- Suitable fire extinguishers must be near to hand when carrying out this operation, and maintained in good serviceable condition.
- Use the cylinder trolley for transporting any large gas cylinders.
- Never apply a heat source or naked flame directly on to the gas cylinder.
- Inspect any gas hose line prior to use.
- Do not use gas hose line if damaged or leaking gas and remove and replace with a new one.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures

- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training
- Chemical training
- MSDS

Personal protective equipment required (last resort)

- Safety glasses
- Gloves as required
- Safety boots

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 921
	Revision Date: Oct 2026
Tungsten Grinder	Approved by: Breda Brennan

Hazards

Electricity
Incorrectly wired, damaged grinder power cables can result in electrocution-death and or first second and third degree burns.

Manual Handling
None – fixed position.

Hot surfaces
Grinding of various metals can generate heat quickly and cause first or second degree burns to the hands and fingers. Highly unlikely as the machinery is enclosed and has internal liquid coolant.

Noise
While a very quiet machine, grinding of various metal materials generates noise and may cause acute hearing discomfort.

Slips, trips and falls
Grinding metal generates small metal filings and could cause slips and head impact injuries, major and minor cuts and bruising. Poor housekeeping and personal belongings can cause trips resulting in impact head injuries from falls.

Sharps
Grinding metal materials can generate sharps and cause lacerations to the hands, fingers and other body parts.

Mechanical
Enclosed machinery which is inaccessible.

Flying debris
Grinding of metals can generate flying metal material and cause loss of sight or eye irritation. Unsecured work piece can fly and cause blunt force injuries resulting in concussion and bruising. Damaged or poorly fitted sand belt can result in ejected materials causing loss of sight and cuts. Flying debris highly unlikely as the machinery is enclosed with debris collection vessel.

Fire
Grinded metal sparks may ignite flammable fuel sources and cause burns to the skin or respiratory illness from inhalation of smoke. Highly unlikely as the machinery is enclosed and has internal liquid coolant.

Person Exposed to Risk
☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is used for grinding tungsten TIG welding tips.

Controls

- Group gathering are not permitted with this machine unless under the lecturers supervision.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Inspect the machine power cables and plug for any defects prior to use.
- When required seek assistance to manoeuvre machine into the required work shop. Follow manual handling training guidelines at all times. Where possible maintain machine in a fixed designated position
- Maintain good housekeeping and machine work area free from clutter and personal items at all times.
- When required ensure machine guards are in place prior to operating the machine.
- Never place hands, fingers, or body parts on or near moving machinery parts.
- The wearing of nylon clothing is prohibited.
- Ensure the machine collection vessel is in place when operating the machine.
- Personal belongings and materials must not be stored on top of or beside the machine
- Loose clothing must not be worn and long hair must be neatly tied back or a cap worn.
- Ensure tungsten tip is secured and tightened into shaft collet at all times.
- Flammable materials must not be stored at or near the machine.
- Switch off the machine when it is no longer required for use and follow the safety procedure for switching on the machine.
- Wash hands when work is complete

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Manual handling training
- PPE training

Personal protective equipment required (last resort)

- Safety boots

Initial Risk Rating (without any control measures)

Probability :		x	Severity		=	Risk Factor	
	1			**1**			**1 Low Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x Severity	**1**	= Risk Factor	**1 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet	Ref: SWPS 922
	Revision Date: Oct 2026
Corded and Cordless Power Tools	Approved by: Breda Brennan

Hazards

Electricity
Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs can result in electrocution-death or first, second and or third degree burns.

Slips Trips and Falls
Poor housekeeping, personal belongings or a trailing electrical cable, and power tools lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical
Entanglement of long hair or loose clothing with rotating parts can result in death or major and minor cuts and bruises. Severing of limbs when in contact with rotating parts.

Ergonomics
Operating the tool in crunched awkward positions and for extended periods of time can result in acute or chronic lower back and or musculoskeletal injuries**.**

Vibration / Kickback
Working on various materials can result in vibration and cause hand arm vibration injuries (white finger). Working on various materials can result in kickback and sprains to the wrist and elbow or major cut to the body.

Flying Debris
Working on various materials can generate small flying debris and result in loss of sight.

Noise
Working on various materials can result in the generation of noise and cause acute temporary hearing discomfort**.**

Sharps
Cutting tolls can contain sharps and result in minor lacerations to the hands and fingers when handled during removal and replacement.

Falling Machine
Unsecure hold of hand tool when operating it, hand tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Dust
Cutting of various materials will result in the generation of debris and dust which can cause acute or chronic respiratory illness.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The portable corded and cordless power tools are used for drilling, cutting, cleaning various materials, and also compressing mechanical plumbing pipe fittings.

Controls

- Students own tools brought to class for use are the sole responsibility of the student and must be in good working order.
- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Where possible always use a battery operated or 110v power tools. If required to use a 240v power tool ensure that it is plugged in to a socket with a Residual Control Device (RCD).
- 240v power tools are not permitted to be used for external work.
- Inspect the machine cutting tools for damage or defects prior to use, do no use is damaged or defected in any way. A competent person must remove and replace the cutting tool.
- Inspect the electrical cable, plugs and power tool for damage or defects prior to use.
- Do not use if cable or saw is defected or damaged in any way and remove from use for repair by a competent person or safe disposal of. A competent person must carry out repairs.
- Maintain good housekeeping and work area free from personal belongings at all times.
- Avoid the trailing of electrical cables where possible.
- Always cut away from machine electrical power cable.
- Clean up debris and dust from the ground as soon as possible.
- Never leave a power tool lying on the ground, rest it on in from the edge of a nearby workbench.
- Loose clothing must not be worn when operating the power tool.
- Long hair must be neatly tied back or a well fitted cap worn.
- Never touch a rotating cutting tool.
- Never assist in stopping or slowing down a rotating cutting tool.
- Ensure the machine safety guard is in place and operational prior to using the machine.
- Do not use the power tool for extended periods of time and tend to other duties for periods of rest or split the work load with another work colleague if possible.
- Always work away from the body when cutting material.
- Never place free hand in the direction or line of the cutting tool.
- Maintain a firm and secure hold of the power tool when in operation.
- Wear safety glasses when cutting materials.
- Wear safety hearing protection when required.
- Always use the power tool as intended by the manufacturer.
- Never hold or handle a cutting tool by its cutting edge, wear gloves if required removing or replacing the cutting tools.
- Never leave a power tool unattended and return to storage when no longer required.
- Wear a dust mask if and when required.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- PPE training
- Safe use of operating the power tools

Personal protective equipment required (last resort)

- Safety Glasses
- Safety Boots
- Safety Gloves
- Hearing protection
- Dust Mask

Initial Risk Rating (without any control measures)

Probability :	**3**	x	Severity	**3**	=	Risk Factor	**9 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**3**	=	Risk Factor	**3 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Plumbing Laboratory	Ref: SWPS 923 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Explosion
Incorrect gas and or oil pressure, leaking gas and or oil pipelines etc. can result in an explosion and result in death, major and minor blunt blows to the head and other body parts.

Fumes
Inhalation of smut when igniting gas, oil, or wood burning appliances can result in respiratory discomfort and illness. Inhalation of products of combustion and smoke match and pellets can result in respiratory discomfort and illness.

Hot surfaces
Hot appliances and piping can result in first or second degree burns to the hands when touched.

Fire
Fuel sources can ignite quickly when in contact with an ignition source and cause first, second and third degree burns to the body. Loose, nylon clothing and long hair can catch fire quickly from flames and sparks and result in burns to the head & body parts.

Chemicals
Inhalation of gases and products of combustion can result in lung damage and respiratory irritation; inhalation of gases and productions of combustion can result in asphyxiation or respiratory irritations.
Touching of some fuel and combustion products may cause skin irritation.

Slips, trips and falls
Poor housekeeping, trailing cables, wet floors can generate tripping and slipping that results in falls head impact injuries resulting in concussion and or minor cuts and bruises.

Sharps
Handling material and equipment with sharps can result in deep cuts to the hands and fingers.

Ergonomics
Working on equipment that are too high or low can result in lower back & musculoskeletal injuries.

Bright Light
Burns to the back of the eyes can occur from looking into gas, oil, or wood burning appliances burning flames for extended periods can cause eye damage and discomfort.

Manual Handling
Pushing and pulling appliances and equipment into work position, carrying heavy loads can result in lower back injuries.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Using the plumbing laboratory for gas, oil, renewable equipment heating and plumbing appliances and equipment.

Controls

- Wear proper PPE such as gloves when in contact with fuels.
- Ensure that all extraction systems are operational before ignition of appliances.
- Ensure correct dampers are open before operation of any appliance. Close dampers not in use.
- Ensure that gas proven system is operational to check for gas leaks prior to operation of an appliance.
- Background and personal gas monitoring detection systems available and operational.
- Students are permitted to operate the appliances, under correct instruction and the lecturer or technician's supervision.
- Ensure the gas and oil pressures are set correctly.
- Ensure gases and regulator valves are turned off when no longer required.
- Purging to be carried out into open and operational extraction hoods.
- Do not touch hot appliances or pipework with bare hands, wear heat resistant gloves.
- Keep the working area tidy and free from flammable materials and liquids.
- Ensure work clothing is free from grease and chemicals.
- Ensure suitable fire extinguishing equipment is readily available and maintained in good condition.
- Loose and nylon clothing is not permitted to be worn.
- Long hair must be neatly tied back or a cap worn.
- Do not place turned on gases at or near the mouth, nose or eyes.
- Maintain good housekeeping & work area free from personal belongings at all times.
- Ensure floors are dry.
- Wear gloves or use tongs when sharp material and equipment.
- Wear suitable protective footwear.

Checks & Inspections

- All appliances, fittings, and equipment to be checked annually.
- Extraction systems to be checked every term.
- Ventilation system to be checked annually.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment
- Chemical training
- Workshop and laboratory exercises are supervised by college staff
- MSDS (material safety data sheets) for each appliance activity to be readily available.
- Manual handling

Personal protective equipment required (last resort)

- Gas monitoring detector
- Safety glasses
- Protective gloves
- Safety Boots

Initial Risk Rating (without any control measures)

Probability :	**2**	x	Severity	**3**	=	Risk Factor	**6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability :	**1**	x	Severity	**2**	=	Risk Factor	**2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Bevelling Machine	Ref: SWPS 924 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity

Poorly or incorrectly connected, fitted, damaged or defected electrical cables and plugs can result in electrocution-death or first, second and or third-degree burns.

Slips Trips and Falls

Poor housekeeping, personal belongings or a trailing electrical cable, and tools or materials lying on the ground can result in slipping and tripping causing fall impact head and body injuries.

Mechanical

Operators clothing or hair can become entangled with rotating chuck head resulting in asphyxiation, cuts and bruises. Entrapped crushing of fingers with tool head can result in broken bones and minor bruising.

Vibration / Kickback

Working on various materials can result in vibration and cause hand arm vibration injuries (white finger). Working on various materials can result in kickback and sprains to the wrist and elbow or major cut to the body.

Flying machine parts and debris

Unsecured chuck head or material for cutting could fly and cause blunt force injuries. Ejected cut material can come into contact with eyes and result in loss of sight.

Noise

Working on various materials can result in the generation of noise and cause acute temporary hearing discomfort**.**

Sharps

Contact with tool head can result in minor cuts to hand and fingers when handled during removal and replacement.

Falling Machine

Machine is required to be mounted on a secure base to prevent falling. Unsecure hold of tool when operating it, tool placed on the edge of a work bench can result in a falling tool and cause lower leg and feet impact injuries.

Dust

Cutting of various materials will result in the generation of debris and dust which can cause acute or chronic respiratory illness.

Ergonomics

Working on equipment that are too high or low can result in lower back & musculoskeletal injuries.

Manual Handling

Moving the machine into the required position can result in lower back, neck & or musculoskeletal injuries. Maintain a stable posture during operation.

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

The machine is a portal bevelling machine that is used to bevel or chamfer the end of pipes in preparation for welding within the plumbing training workshops. It is a mounted power tool that clamps piping within a pipe vice and has a hand-held rotating cutting head.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Keep the working area tidy and maintain a clean working environment.
- Ensure cable and plug of machine are free from defects prior to use. Do not use if damaged in any way. Competent person/s must only carry out electrical repairs.
- Check if the equipment is intact before use of machine.
- Machine to be mounted on secure base such as bespoke tripod to prevent falling.
- The wearing of loose clothing is not permitted.
- Long hair must be tied back neatly or a cap worn.
- Over reaching across of the machine must be avoided at all times.
- Never touch or adjust a rotating chuck head, always wait for it to come to a complete stop.
- Never rest or place fingers or hands between machine moving parts.
- Always use the handles tool when operating the machine.
- Do not touch tool heads with bare hands.
- Do not touch sump swarf with bare hands, use a brush and gloves when cleaning.
- Allow all rotating swarf to fall off into the sump.
- Exercise caution when handling machined metals, when required use a hand file to smoothen off metal sharps.
- Seek assistance if required to move the machine over a long distance, always follow manual handling training guidelines.
- Ensure work clothing is free from grease and chemicals.
- Ensure floors are dry.
- Wear gloves or use tongs when sharp material and equipment.
- Wear suitable protective footwear.
- Wear glasses at all times when operating the machine.
- Avoid running electrical cables along the work area walk way.
- Ensure chuck head and metal material for machining is securely tightened.
- Machine must not be left unattended when running, switch off, unplug and tidy away when no longer required.

Checks & Inspections

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Lecturers and technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment

- Workshop and laboratory exercises are supervised by college staff
- MSDS (material safety data sheets) for each appliance activity to be readily available.
- Manual handling
- PPE training

Personal protective equipment required (last resort)

- Gloves to be worn as required
- Suitable eye protection must be worn
- Safety Boots

Initial Risk Rating (without any control measures)

Probability : **2** x Severity **2** = Risk Factor **4 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability : **1** x Severity **2** = Risk Factor **2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Electric Pallet Stackers & Mini-Lifters	Ref: SWPS 925 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Inappropriate electric pallet stacker & mini-lifters operations, poor maintenance / checking can cause:

- Nips, traps, crushing injuries - pedestrian crush injury, operator crush injury.
- Impact injury from falling objects.
- Unstable load.
- Striking by a load falling from the electric pallet stacker & mini-lifters.
- Fall from a height.
- Fire.

Slips, trips and falls
Poor housekeeping, trailing cables, wet floors can generate tripping and slipping that results in falls head impact injuries resulting in concussion and or minor cuts and bruises.

Sharps
Handling material and equipment with sharps can result in deep cuts to the hands and fingers.

Ergonomics
Working on equipment that are too high or low can result in lower back & musculoskeletal injuries.

Manual Handling
Pushing and pulling appliances and equipment into work position, carrying heavy loads can result in lower back injuries.

Person Exposed to Risk
☑Students ☑ Employees ☐ Public ☑ Contractors ☐ Visitors

Work Description
Use of electric pallet stacker & mini-lifters for the loading, unloading and movement of material.

Controls
Electric pallet stackers & mini-lifters must be safe for use and fit for the purpose for which it is intended. Under health and safety legislation, the law requires that workplaces are maintained in a condition that is safe and without risk to safety and health. The electric pallet stacker & mini-lifters must be kept safe and fit for purpose and the user must be able to access the equipment safely.
Employers must make sure that users are familiar with the equipment they are using and that they have been given appropriate instruction, information and training to carry out required prechecks and to use the equipment in the correct and safe manner, as per the manufacturer's instructions.

Safe Operation
Only members of DkIT staff who have been trained and certified are permitted to use the electric pallet stacker & mini-lifters.

Wear appropriate personal protective clothing as provided - protective footwear and high visibility clothing are recommended as a minimum when working around electric pallet stacker & mini-lifters.

Always:

- Carry out a pre-shift check of the equipment
- Report defects immediately to supervisor
- Make sure work path is free of obstructions
- Wear operator restraints, where fitted
- Look all around before moving off
- Look in the direction of travel
- Travel at a speed suitable for the location and the load carried
- Travel with the fork/sling/platform lowered, but clear of the ground
- Watch out for pedestrians
- Avoid sudden stops and violent braking
- Take care when using on wet, icy, slippery or loose surfaces
- Slow down at corners, doorways, and at danger spots
- Place equipment in a safe location and switch off when task is completed
- Report any accidents or near misses to a supervisor

Never:

- Operate an electric pallet stacker & mini-lifters unless you are trained, competent and authorised to do so
- Use equipment you know is not working properly
- Stand on or near the controls to reach the load at the same time
- Start or stop suddenly
- Make abrupt or quick turns
- Travel on uneven ground
- Run over unprotected cables or flexible pipes
- Try to carry out repairs – leave this to a qualified maintenance engineer
- Operate the equipment when under the influence of alcohol or drugs [prescribed or illegal]
- Use mobile phones or other hand-held devices while operating the equipment
- Use uncertified attachments
- Use an attachment unless a competent person, an authorised dealer, or
- manufacturer has derated the equipment [reduced actual capacity]

Carrying Loads

Always:

- Assess the load before lifting. Check weight, size, load centre and security
- Make sure that pallets / sling / forks are in good condition
- Observe floor / fork loading limits
- Check safe working load (SWL) of racking before placing loads onto it
- Make sure load does not obstruct view. If it does, use in reverse, looking in
- direction of travel
- Make sure there is adequate clearance for the equipment and load, including overhead
- Make sure the load does not exceed capacity of equipment
- Make sure the load is stable and can be safely lifted
- Carry the load as close to ground as possible

- Use controls smoothly
- Position forks / sling / platform properly and as widely as possible
- Make sure the fork arms are fully inserted when travelling with a load
- Make sure the equipment is stationary before raising the load
- Use suitable attachments for lifting unusual or wide loads
- Lower loads at a safe speed
- Make sure you are properly trained, certified and authorised to operate the
- equipment with any attachments.

Never:
- Lift loads greater than the capacity of the equipment.
- Move a load that appears unsuitable or unstable (including on a damaged
- pallet)
- Lift load with attachments, unless trained, certified and authorised to do so
- Travel with a bulky load that blocks your view
- Travel with a raised load, unless the equipment is designed specifically for this
- Leave the vehicle with the load raised.

Operating on Slopes

Always:
- Travel slowly when going down slopes
- Ensure the forks / platform face uphill when travelling up or down slopes with a load
- Ensure the forks / platform face downhill when travelling up or down slopes without a load
- Adjust the tilt (where fitted) to suit the gradient and raise the forks / platform to clear the ground
- Never:
- Turn the equipment around on or travel across a ramp or a slope
- Leave the equipment on a slope, except in an emergency. In case of emergency
- always chock/lock the wheels.

When you have finished working

Always:
- Park the equipment in a safe place, on level ground; never on a slope
- Leave the equipment with the mast tilted forwards and the forks fully lowered, with
- the tips on the floor
- Apply the parking brake, if fitted, and switch off the equipment and remove keys
- Return keys or other activating devices to their place of safe-keeping
- Report any malfunctions or defects immediately to a supervisor
- Loose and nylon clothing is not permitted to be worn.
- Long hair must be neatly tied back or a cap worn.
- Maintain good housekeeping & work area free from personal belongings at all times.
- Ensure floors are dry.
- Wear gloves or use tongs when sharp material and equipment.
- Wear suitable protective footwear.

Checks & Inspections
- All equipment to be checked annually.

Information, Instruction & Training
- Instruction is given on the safe use of the equipment

- Manual handling

Personal protective equipment required (last resort)

- Safety footwear
- Safety glasses
- Protective gloves

Initial Risk Rating (without any control measures)

Probability : **2** x Severity **3** = Risk Factor **6 High Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability : **1** x Severity **2** = Risk Factor **2 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Augmented Reality (virtual) Welder	Ref: SWPS 926 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity
Contact with objects that are live with electricity, incorrectly fitted or damaged electrical cable or plug, wet floors can result in electrocution-death, first, second and or third degree burns.

Slips, trips and falls
Poor housekeeping, trailing cables, wet floors can generate tripping and slipping that results in falls head impact injuries resulting in concussion and or minor cuts and bruises.

Sharps
Handling material and equipment with sharps can result in deep cuts to the hands and fingers.

Ergonomics
Working on equipment that are too high or low can result in lower back & musculoskeletal injuries.

Manual Handling
Pushing and pulling appliances and equipment into work position, carrying heavy loads can result in lower back injuries.

Person Exposed to Risk
☑Students ☑ Employees ☑ Public ☐ Contractors ☑Visitors

Work Description
Carrying out demonstrations on a variety of augmented reality (virtual) welding operations.

Controls

- Students are permitted to operate the machine, under correct instruction and the lecturer or technician's supervision.
- Follow the manual handling training guide lines at all times.
- Do not touch live wires or objects that may carry or conduct electricity.
- Ensure that there is adequate earthing.
- Ensure electrical cables and plugs are in good working condition & free from damage,
- Do not use if damaged in any way. Competent person/s must carry out electrical repairs.
- Before operating tools and machinery, read understand and follow the manufacturer's operating instructions and obey the instructions listed on the machine decals.
- Always make sure machine is fully switched off before walking away.
- Maintain good housekeeping & work area free from personal belongings at all times.
- Ensure floors are dry.

If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times.

Checks & Inspections

- All appliances, fittings, and equipment to be checked annually.

- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School
- Ensure all safety notices are readable and displayed in correct locations.
- Technicians to monitor compliance with control measures.

Information, Instruction & Training

- Instruction is given on the safe use of the equipment
- Manual handling

Personal protective equipment required (last resort)

-

Initial Risk Rating (without any control measures)

Probability : **2** x Severity **2** = Risk Factor **4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability : **1** x Severity **1** = Risk Factor **1 Low Risk**

Risk Assessment Review

As and when process changes or yearly

Safe Work Practice Sheet Mobile Fume Extractor	Ref: SWPS 927 Revision Date: Oct 2026 Approved by: Breda Brennan

Hazards

Electricity

Contact with objects that are live with electricity, incorrectly fitted or damaged electrical cable or plug, wet floors can result in electrocution-death, first, second and or third-degree burns.

Manual Handling

Lifting, carrying, pushing and pulling heavy metal loads and welding equipment can result in lower back and or musculoskeletal injury.

Fumes

Inhalation of welding fumes can result in respiratory illness and lung irritation, loss of consciousness. Irritation to the eyes.

Hot surfaces

Hot appliances and piping can result in first or second degree burns to the hands when touched.

Fire

Nylon clothing and flammable materials can catch fire when in contact with electrical ignition source, heated metal, sparks and cause first second and or third degree burns to the body.

Chemicals

Inhalation of gases and products of combustion can result in lung damage and respiratory irritation; inhalation of gases and productions of combustion can result in asphyxiation or respiratory irritations. Touching of some fuel and combustion products may cause skin irritation.

Slips, trips and falls

Poor housekeeping, trailing cables, wet floors can generate tripping and slipping that results in falls head impact injuries resulting in concussion and or minor cuts and bruises.

Sharps

Handling material and equipment with sharps can result in deep cuts to the hands and fingers.

Ergonomics

Working on equipment that are too high or low can result in lower back & musculoskeletal injuries.

Radiation

Welding generates UV light, infra-red, eyes exposed can result in arc eye & temporary discomfort, long term exposure can lead to cataracts. Exposed skin can get burnt and long term exposure can result in skin cancer

Person Exposed to Risk

☑Students ☑ Employees ☐ Public ☐ Contractors ☐ Visitors

Work Description

Mobile extractor to be used in locations were welding & soldering activities are being performed and where no fixed localised extractor is available.

Controls

- Students are permitted to operate the machine, under correct instruction and the
- lecturer or technician's supervision.
- Use an approved face screen and filter glass. Recommend shade 11 for MIG and 9 or Higher for TIG.
- Protect the body by wearing suitable clothing buttoned to the neck and with arms covered.
- Protect the hands by wearing suitable gloves or gauntlets.
- Use the screen arc welding cubicle curtain so that persons who work in the vicinity are protected from "flashes".
- Avoid exposure of yourself and others to the heat and light of welding arc. N.B. Radiation includes invisible ultra-violet and infrared rays.
- Keep working area tidy and free from flammable material.
- The wearing of loose and nylon clothing is not permitted. Ensure clothing is dry and clean.
- Ensure suitable fire extinguishing equipment is readily available and maintained in good condition.
- Welding area must be properly ventilated.
- Beware of the danger from hot metal when welding. Use heat resistant gloves or tongs when handling hot materials.
- Follow the manual handling training guide lines at all times.
- Place material in a safe position where it cannot fall, burn or cause injury.
- Ensure that all leads are laid out in such a manner to prevent trips and falls.
- Never coil a welding cable around any body part.
- Maintain good housekeeping & work area free from clutter and personal belongings at all times.
- Ensure extract system is switched on, place hood directly over material for welding and ensure damper hood is fully open.
- Wear suitable gloves when handling metal sharps.
- Do not touch live wires or objects that may carry or conduct electricity.
- Ensure that there is adequate earthing.
- Ensure electrical cables and plugs are in good working condition & free from damage, do not use if damaged in any way. Competent person/s must carry out electrical repairs.
- Stand on a dry surface and/or wear suitable rubber-soled footwear.
- For TIG: Do not touch the electrode while H.F. set is switched on.
- Switch off the mains-power supply when adjusting / changing electrodes and/or when finishing work.
- Ensure screen is of a size and shape to shield the face, throat, wrist and head.
- Outer clothing should be free from oil, grease or flammable substances.
- Protect the forearms from exposure to arc rays, do not roll up sleeves. N.B. cuffs on overalls, turn-ups on trousers, exposed long hair and low-cut shoes are likely lodging places for sparks or globules of hot metal and slag.
- Protect the front of the body from throat to knees with suitable leather cape and apron / fire resistant clothing / overalls.
- If only an apron is worn this must provide full protection.
- Wear suitable leather gloves to protect the wrists & hands. Recommend light leather
- gauntlets for TIG.
- Wear suitable protective footwear.

- Before operating tools and machinery, read understand and follow the manufacturer's operating instructions and obey the instructions listed on the machine decals.
- Always make sure machine is fully switched off before walking away.
- Filler rods on TIG should be folded at their top end to prevent eye injury, and also to aid identification of hot end so as to prevent burns.
- Use proper PPE.
- If in doubt seek advice from Lecturer or Technician. Normal safety precautions should be adhered to at all times.

Checks & Inspections

- All appliances, fittings, and equipment to be checked annually.
- Extraction systems to be checked every term.
- Regular maintenance to be carried out according to manufacturer's recommendations and records kept by the School.
- Ensure all safety notices are readable and displayed in correct locations.
- Technicians to monitor compliance with control measures.
- Lecturers and technicians to monitor the wearing of PPE

Information, Instruction & Training

- Only trained staff and students are allowed to carry out welding procedures
- New staff/students must be trained by technician and lecturing staff as required.
- Manual handling training
- PPE training
- Chemical training
- Welding Rod material safety data sheet (MSDS)

Personal protective equipment required (last resort)

- Eye protection / face mask
- Protective gloves
- Fire resistant overalls / clothing / welding aprons
- Safety Boots

Initial Risk Rating (without any control measures)

Probability : **2** x Severity **2** = Risk Factor **4 Medium Risk**

KEY		
PROBABILITY	**SEVERITY**	**RISK FACTOR**
Probable 3	Critical 3	1-3 Low Risk
Possible 2	Serious 2	4 Medium Risk
Unlikely 1	Minor 1	6-9 High Risk
Risk Factor = Probability x Severity		

Risk Reduction Rating (after controls introduced)

Probability : **1** x Severity **1** = Risk Factor **1 Low Risk**

Risk Assessment Review

As and when process changes or yearly