

Perform Electrical Work On Machines Risk Assessment

Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THIS PROJECT

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:

CLIENT OR PRINCIPAL CONTRACTOR DETAILS

Client:	SCOPE OF WORKS
Project Name:	
Project Address:	
Project Manager:	
Contact Phone:	
Date Risk Assessment supplied to Project Manager:	

RISK MATRIX									
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	Substitution Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	Engineering Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	Administrative Change	
								PPE	

Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.
3H	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
1L	Proceed, following standard operating procedures. Monitor and keep records.

Consequence Scale:

Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
Catastrophic	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
Major	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
Moderate	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
Minor	First-aid only, no lost time	negligible delay	Isolated non-conformance
Insignificant	No injury	no schedule impact	Deviation caught and corrected on site

Notes on Hierarchy of Controls:

Remember to apply controls in the preferred order shown by the coloured pyramid:

1. **Eliminate**
2. Substitute
3. Isolate
4. Engineering
5. Administrative
6. PPE

Always document **why** a lower-order control is accepted if elimination or substitution is not reasonably practicable.

aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. Preparation	electric shock, arc flash	3H	<ul style="list-style-type: none"> - Conduct a full risk assessment prior to commencing work - Confirm isolation of electrical supply to equipment - Ensure all tools and equipment are tested and tagged - Obtain necessary permits for electrical work - Verify competency of personnel to perform electrical tasks - Provide training on emergency procedures and first aid - Prepare site with appropriate barriers and signs - Check ambient conditions (e.g. wet surfaces) before work starts - Use lock-out/tag-out procedures on all relevant machines - Isolate and discharge all capacitive circuits 	2M
2. Site Inspection	tripping hazards, inadequate lighting	2M	<ul style="list-style-type: none"> - Conduct a walkthrough to identify any obvious hazards - Ensure adequate illumination levels in work area - Remove unnecessary items and debris from the workspace - Ensure all pathways are clear and free of obstacles - Place hazard warning signs where needed - Equip workers with portable lighting if necessary - Secure cables and cords to prevent tripping - Inspect ladders and scaffolding for stability and safety - Verify access and egress points are unobstructed - Document inspection findings and act on them 	1L
3. Equipment Inspection	equipment malfunction, damaged insulation	3H	<ul style="list-style-type: none"> - Perform a detailed visual inspection of all equipment - Verify integrity of insulation on cables and wires - Check for damaged or worn-out parts before operation - Calibrate tools and testing equipment to ensure accuracy - Use equipment manuals as a reference for verification - Label any faulty equipment and prevent its use - Ensure electrical testers are functioning correctly - Conduct insulation resistance tests on equipment 	2M

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			<ul style="list-style-type: none"> - Implement routine maintenance checks - Ensure safety switches and circuit breakers are operational 	
4. Planning	miscommunication, incorrect procedures	3H	<ul style="list-style-type: none"> - Conduct a pre-job meeting with all team members to discuss the task, hazards, and control measures. - Ensure all team members understand their roles and responsibilities. - Verify that all necessary tools and equipment are available and in good condition. - Obtain necessary permits and approvals before starting work. - Establish a clear communication system, including a designated safety officer. - Perform a risk assessment for the planned work. - Develop a detailed work plan and schedule. - Ensure that all team members are trained and competent to perform the task. - Implement a strict safety protocol, including the use of personal protective equipment (PPE). - Establish a clear area of work and restrict access to unauthorized personnel. - Perform a final check of all safety measures before starting work. 	2M
5. Tool Selection	using faulty tools, inappropriate tool use	3H	<ul style="list-style-type: none"> - Inspect all tools and equipment before use to ensure they are in good condition. - Use only tools and equipment that are rated for the task. - Avoid using tools or equipment that are damaged or worn. - Follow the manufacturer's instructions for the use of all tools and equipment. - Use proper tool handling techniques to avoid injury. - Store tools and equipment properly when not in use. - Report any damaged or faulty tools to the supervisor immediately. - Do not use tools or equipment if you are unsure of how to use them safely. - Keep work area clean and free of clutter to prevent tripping hazards. - Use appropriate tool storage methods to prevent damage and ensure easy access. - Regularly maintain and sharpen tools to ensure they are in good condition. 	2M
6. Isolation & Lock-out	unintentional re-energisation, access to live circuits	4A	<ul style="list-style-type: none"> - Verify that all energy sources are isolated and locked out. - Use proper lock-out/tag-out (LOTO) procedures. - Ensure that all team members are aware of the LOTO status. - Do not attempt to work on live circuits. - Use appropriate PPE when working near live circuits. - Establish a clear area of work and restrict access to unauthorized personnel. - Perform a final check of all safety measures before starting work. - Follow the manufacturer's instructions for the use of all tools and equipment. - Use proper tool handling techniques to avoid injury. - Store tools and equipment properly when not in use. - Report any damaged or faulty tools to the supervisor immediately. - Do not use tools or equipment if you are unsure of how to use them safely. - Keep work area clean and free of clutter to prevent tripping hazards. - Use appropriate tool storage methods to prevent damage and ensure easy access. - Regularly maintain and sharpen tools to ensure they are in good condition. 	2M

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7. Conducting the Task	contact with live parts, tool slip	3H		2M
8. Testing & Commissioning	incorrect test procedures, incorrect activation	3H		2M
9. Debrief & Inspection	incomplete task documentation, unnoticed hazards	2M		1L

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10. Clean Up & Restoration	residual waste, hazardous material exposure	2M		1L
11. Sign-off & Documentation	inaccurate reporting, failure to record data	2M		1L
12. Monitoring & Feedback	omit oversight, lack of procedure updates	2M		1L

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13. Maintenance Program	equipment degradation, wear and tear	3H		2M
14. Review of Procedures	ineffective procedures, outdated processes	2M		1L
15. Emergency Preparedness	slow emergency response, inadequate resources	3H		2M

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SAMPLE

EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

LEGISLATIVE REFERENCES

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES IF ANY STATE THAT ARE NOT APPLICABLE

Queensland & Australian Capital Territory

Work Health and Safety Act 2011

Work Health and Safety Regulations 2011

Legislation QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws>

Codes of Practice QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>

Legislation ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations>

Codes of Practice ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice>

Victoria

Occupational Health and Safety Act 2004

Occupational Health and Safety Regulations 2017

Legislation VIC: <https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations>

Codes of Practice VIC: <https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice>

New South Wales

Work Health and Safety Act 2011

Work Health and Safety Regulations 2017

Legislation NSW: <https://www.safework.nsw.gov.au/legal-obligations/legislation>

Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-codes-of-practice>

Western Australia

Work Health and Safety Act 2020

Work Health and Safety Regulations 2022

Legislation Western Australia: <https://www.commerce.wa.gov.au/worksafe/legislation>

Codes of Practice WA: <https://www.commerce.wa.gov.au/worksafe/codes-practice>

Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011

Work Health and Safety (National Uniform Legislation) Regulations 2011

Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>

Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/codes-of-practice>

Safe Work Australia Links

Law and Regulation (All States): <https://www.safeworkaustralia.gov.au/law-and-regulation>

Model Codes of Practice: <https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice>

Model Codes of Practice

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work

South Australia

Work Health and Safety Act 2012 (SA)

Work Health and Safety Regulations 2012 (SA)

Legislation for SA: <https://www.safework.sa.gov.au/resources/legislation>

Codes of Practice for SA: <https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs>

Tasmania

Work Health and Safety Act 2012

Work Health and Safety (Transitional and Consequential Provisions) Act 2012

Work Health and Safety Regulations 2012

Work Health and Safety (Transitional) Regulations 2012

Legislation for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations>

Codes of Practice for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice>

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.