Electrical and Diagnostics			
Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

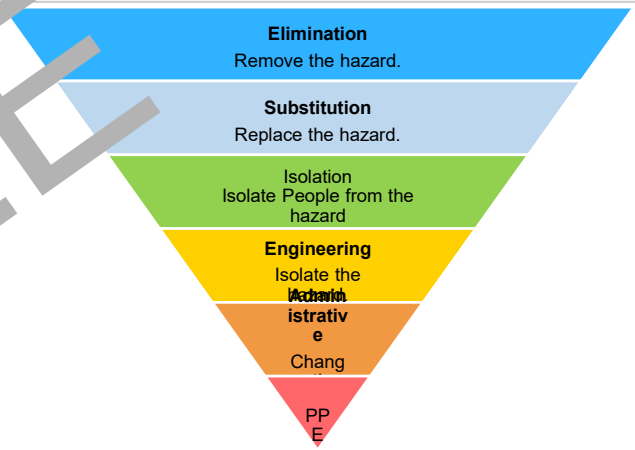
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

CLIENT OR PRINCIPAL CONTRACTOR DETAILS	SCOPE OF WORKS
Client:	
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
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE		
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Rev before work
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACU	2M MO RATE	Ensure control measures in place.
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 H	1L LOW	Monitor and keep records.

HIERARCHY OF CONTROLS



Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. E inate the hazar redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or hi er-level authorisati is required.
3H	Review and approve additional c rols b ask arts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in ace and effe ive. 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. WHS Governance, Policies and Legal Compliance	• Absence of a documented WHS management system referencing WHS Act 2011 and WHS Regulations for electrical and diagnostic work • Inadequate integration of electrical safety, plant and hazardous chemicals requirements into workshop policies • Lack of procedures covering high-risk activities such as airbag system work, ignition diagnostics and dynamometer operation • Poor consultation with workers and health and safety representatives on changes to diagnostic procedures and equipment • No formal process to review incidents, near misses or regulatory changes related to electrical and diagnostic work	4A	• Develop and implement a documented WHS Management System that specifically addresses electrical and diagnostic activities in line with WHS Act 2011, WHS Regulations and relevant Codes of Practice • Establish workshop-specific policies for electrical safety, plant and equipment, hazardous chemicals, and high-risk automotive diagnostic tasks, endorsed by senior management • Create, authorise and maintain a controlled set of WHS procedures for vehicle diagnostics, ignition system work, airbag removal, dynamometer operation and use of diagnostic software and equipment • Implement a formal WHS consultation process with workers and HSRs for introducing new diagnostic technology, equipment or work methods • Schedule periodic legal and standards compliance reviews (e.g. AS/NZS 3000, AS/NZS 3012, AS/NZS 4836, relevant automotive standards) with actions tracked to completion • Establish incident and near-miss reporting, investigation and corrective action system that targets underlying system failures in electrical and diagnostic work	3H
2. Electrical Safety Management and Isolation Systems	• Inadequate lock-out/tag-out system for isolating vehicle electrical systems, batteries and mains-powered diagnostic equipment • Uncontrolled exposure to live circuits during ignition system diagnostics and repair • Unsafe practices when testing and adjusting alternator settings, including working on energised systems • Lack of standardised procedures for de-energising vehicles prior to diagnostics or software connection • No system for managing risks from jump-starting, booster packs or auxiliary power sources • Inadequate labelling and segregation of high-voltage or hybrid systems (where applicable)	4A	• Implement a lock-out/tag-out (LOTO) procedure for automotive electrical systems, including battery isolation, fuses and main feeds, and ensure it is mandatory prior to diagnostic or repair work • Develop documented safe work procedures for ignition system diagnostics, alternator testing and charging system work that specify de-energisation, test equipment ratings and verification of isolation • Introduce a standard pre-diagnostic electrical isolation checklist for all vehicles, integrated into job cards or workshop management software • Standardise the use and storage of jump-start packs and auxiliary power units, including current-limited devices and manufacturer-approved connection points • Clearly identify and label higher-risk electrical systems (e.g. high-output alternators, modified performance systems, hybrid/EV where relevant) and apply additional isolation controls • Conduct periodic audits of electrical isolation practices, including observation and documentation reviews, with non-conformances actioned and trended	2M
3. Airbag and Supplementary Restraint Systems (SRS) Management	• Incorrect or absent procedures for airbag removal and refit leading to unintentional deployment	4A	• Develop detailed workshop procedures for airbag removal, handling and refit that align with OEM information and WHS and dangerous goods requirements for pyrotechnic devices	2M

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	• Inadequate training on working with airbag systems and SRS control modules • Failure to follow manufacturer de-energisation and wait-time requirements before handling SRS components • Poor tracking and storage of removed airbag modules and pyrotechnic devices • No system to verify that vehicles with disabled or removed airbags are not released to customers without documentation and warnings		• Mandate that only trained and deemed competent personnel may perform work on SRS systems, with competency verified and recorded • Include SRS de-energisation steps and required w[illegible]imes in standard job checklists and diagnostic workflows, referencing specific vehicle manuals • Provide designated storage areas and co[illegible]ners for re[illegible]ved airbag modules, with inventory and disposal processes that comply with dangero[illegible]goods[illegible]d waste regulations • Implement a verification and sign-off process c[illegible]rming that SR[illegible] systems are functional, or clearly documented as inoperative, b[illegible]ore vehicle releas • Undertake periodic audits of S[illegible] work orders and [illegible]s to confirm adherence to procedures and traceability of remo[illegible]placed[illegible]its	
4. Dynamometer (Chassis and Engine) Safety Management	• Absence of a formal risk assessment and operating procedure for chassis and engine dynamometer testing • Inadequate guarding, barriers or exclusion zones around moving parts and rotating components • Uncontrolled vehicle movement or detachment from the chassis dynamometer under load • Noise, exhaust em[illegible]sions and heat build-up not adequ[illegible]ely managed during dynamometer ope[illegible]on • Insufficient controls for electrical an[illegible] data connections between vehicle [illegible]d dynamometer systems • Inadequate emergency stop systems and response procedures for dynamometer faults or test failures	[illegible]	[redacted]	2M
5. Diagnostic Software, Data Security and Configuration Control	• Use of unlicensed or unverified diagnostic software leading to incorrect diagnostic codes or unsafe configurations • Software updates or coding changes that unintentionally disable safety systems such as airbags, ABS or stability control	3H	[redacted]	2M

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	• Poor management of access rights to diagnostic systems, allowing unqualified staff to change critical parameters • Lack of documented procedures for reading diagnostic codes, clearing faults and verifying repairs • Cybersecurity vulnerabilities in connected diagnostic equipment that could compromise system integrity		[redacted]	
6. Competency, Licensing and Training for Electrical and Diagnostics	• Workers performing electrical and diagnostic work without appropriate trade qualification or competency verification • Insufficient training in ignition system diagnostics, diesel engine diagnostics and alternator testing methods • Lack of ongoing training in new vehicle technologies, complex electronic systems and diagnostic platforms • No formal induction to workshop-specific risks such as dynamometer testing, SRS handling an use of diagnostic softwa • Supervision syste s that do not adequately monito pprentices and new starters during hig k di stic ks	4A	[redacted]	2M
7. Workshop Layout, Plant, and Infrastructure for Diagnostics	• Poor workshop layout causing hicle movement conflicts arou agnostic bays and dynamometers • Inadequate segregation of high-risk diagnostic areas (e.g. dynamometer cell, SRS workbench) from general workshop activities • Insufficient electrical supply design, leading to overloading circuits used for diagnostic equipment and test rigs • Trip and crush hazards from poorly routed diagnostic leads, exhaust hoses and test equipment	3H	[redacted]	2M

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	• Inadequate lighting and ventilation in diagnostic areas, increasing the risk of error and exposure to fumes			
8. Equipment Procurement, Maintenance and Inspection Systems	• Use of outdated, damaged or non-calibrated diagnostic tools, multimeters and oscilloscopes • Inadequate maintenance regime for dynamometers, alternator test rigs and engine test stands • Failure of safety interlocks or guards on diagnostic and test equipment due to lack of inspection • No test and tag program for portable electrical equipment used in diagnostics • Poorly managed repair and replacement of defective diagnostic leads, probes and adapters	3H	[redacted]	2M
9. Safe Systems for Vehicle Diagnostics and Test Procedures	• Lack of standardised procedures for performing vehicle diagnostics and reading diagnostic codes • Uncontrolled crank[illegible]g or engine running during dia[illegible]ostics, creating risks of entanglem[illegible]t, noise[illegible]s • Inconsistent approaches to diesel engine diagnostics that may involve exposure to high-pressure fuel s[illegible]tems or hot components • No formal risk assessment for non-standard diagnostic tasks, performance tuning or fault replication on the road • Failure to manage risks when replacing directional indicators, vehicle heating system components or other safety-related parts under diagnostic conditions	3H	[redacted]	2M
10. Hazardous Energy, Heat and Emission Exposure Management	• Exposure to exhaust gases during engine and dynamometer testing due to inadequate extraction	3H	[redacted]	2M

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	• Burns from hot engine, exhaust and heating system components during diagnostics and repair • Unmanaged battery charging, discharging and jump-starting leading to explosion, acid exposure or fire • Prolonged exposure to noise from test engines and dynamometers exceeding exposure standards • Accumulation of flammable vapours or combustible materials near hot surfaces and ignition sources		[redacted]	
11. Contractor, Visitor and Customer Vehicle Management	• Contractors undertaking electrical or diagnostic work without induction into workshop-specific WHS procedures • Visitors or customers entering diagnostic or dynamometer areas without awareness of hazards • Insufficient controls over customer-supplied or modified vehicles that may have unknown electrical or safety system alterations • Lack of clear communication to customers about limitations or risks when safety systems (e.g. airbags, indicators, heating/defogging) are inoperative • Inadequate verification of contractor qualifications and insurances for specialist diagnostic services	H	[redacted]	2M
12. Emergency Preparedness, Incident Response and First Aid	• No specific emergency response procedures for electrical shock, SRS misfire or dynamometer failure • Inadequate first aid equipment and training relevant to burns, electrical injuries and crush injuries • Staff uncertainty about emergency shutdown of dynamometers, test	3H	[redacted]	1L

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	engines and mains-powered diagnostic equipment • Incomplete investigation of electrical and diagnostic-related incidents, leading to repeated systemic failures • Lack of coordination with emergency services regarding workshop-specific hazards such as airbags and test cells		[redacted]	
13. Fatigue, Workload and Human Factors in Diagnostics	• Complex diagnostic tasks undertaken when workers are fatigued, increasing risk of error and unsafe decision-making • Production and time pressures leading to bypassing of isolation, verification or test procedures • Cognitive overload when using multiple diagnostic systems, software platforms and reference materials simultaneously • Inadequate break scheduling during prolonged investigations or repetitive testing sessions • Poor reporting culture where workers feel unable to raise concerns about rushed or unsafe diagnostic practices	3H	[redacted]	2M
14. Documentation, Records and Continuous Improvement	• Incomplete or inaccurate records of diagnostic procedures, software changes and test outcomes • Loss of historical diagnostic data that could inform future risk assessments or maintenance planning • No formal process to review and improve diagnostic and electrical safety procedures following incidents or new technology introduction • Poor integration of WHS documentation with workshop management and job control systems • Difficulty demonstrating compliance with WHS and regulatory requirements during audits or inspections	2M	[redacted]	1L

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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 FOR 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

New South Wales
Work Health and Safety Act 2011
Work Health and Safety Regulations 2025
Legislation NSW: https://www.safework.nsw.gov.au/legal-obligations/legislation
Codes of Practice NSW: https://www.safework.nsw.gov.au/resource-library/list-of-codes-of-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/forms-and-resources/codes-of-practice

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.

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

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

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