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

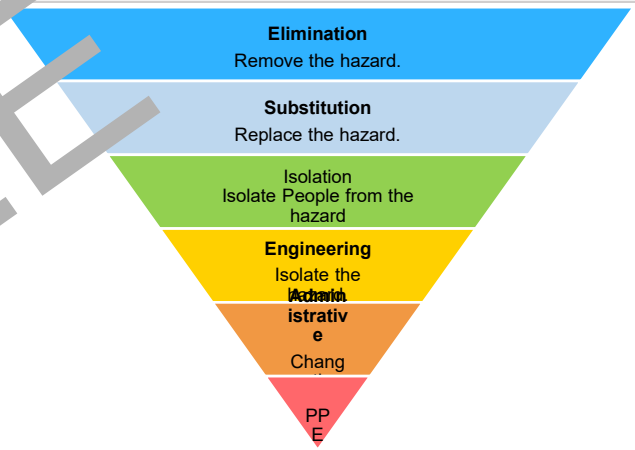
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

CLIENT OR PRINCIPAL CONTRACTOR DETAILS	
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
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. Governance, Legal Compliance & WHS Responsibilities	• Lack of clear WHS governance for vehicle testing activities under WHS Act 2011 and WHS Regulations • Unclear PCBU, officer and worker responsibilities for high-risk vehicle testing operations • Inadequate integration of WHS duties into contracts with clients, test facilities and subcontractors • Failure to identify and apply relevant Australian Standards (e.g. crash testing, vehicle restraint systems, emissions testing, roadworthiness, electrical safety) • Inadequate change management for new test methods, new vehicle technologies or modifications to test tracks and laboratories • Poor consultation mechanisms with workers, HSRs, unions and contractors regarding test program risks • Limited due diligence by officers in verifying the effectiveness of vehicle testing WHS systems • Insufficient budgeting and resourcing for safe design, engineering controls and specialist supervision	4A	• Establish a documented WHS governance framework for vehicle and bus testing aligned with WHS Act 2011, including clear PCBU, officer, worker and contractor responsibilities • Develop and maintain a legal and standards register covering applicable WHS legislation, road transport legislation, Australian Design Rules, ANCAP protocols, emissions standards and relevant Australian Standards • Integrate WHS requirements and performance criteria into all contracts, service agreements and procurement documents for crash, emissions and road testing services • Implement a formal WHS due diligence program for officers, including scheduled reviews of critical controls for crash testing, high-speed testing and emissions laboratories • Establish a documented management of change procedure for new test types, track layouts, vehicle technologies (e.g. EV, ADAS, roll stability systems) and modifications to plant or facilities • Maintain a WHS consultation and HSR engagement plan specific to vehicle testing operations, including toolbox talks prior to new or novel test programs • Conduct periodic external WHS and technical audits of the vehicle testing management system and rectify findings through a documented action plan • Ensure senior leadership review WHS performance indicators for testing programs (e.g. near misses during emergency steering tests, containment failures in bus crash tests) at least quarterly	3H
2. Test Program Planning & Risk Management	• Inadequate upfront risk assessment for complex test programs (high-speed testing, high-speed stability tests, roll stability checks, stress testing suspensions) • Failure to consider cumulative risks when multiple tests are conducted concurrently at the same facility • Poor definition of test envelopes (speed, mass, load conditions, weather tolerances) leading to unanticipated vehicle behaviour • Insufficient scenario planning for emergency steering tests and loss-of-control events	4A	• Establish a documented test program planning procedure requiring a formal WHS risk assessment for each new or significantly changed vehicle testing program • Use a standardised risk assessment template that explicitly addresses crash testing, emissions testing, high-speed road testing, remote testing locations and simultaneous operations • Define and record test envelopes (speed range, vehicle configuration, load condition, track condition, weather, visibility, wind limits) with clear go/no-go criteria authorised by a competent engineer • Implement a formal approval process for high-risk tests, including sign-off by engineering, WHS and operations management prior to scheduling • Require pre-test scenario planning and documented contingency plans for loss-of-control events, emergency steering manoeuvres and stability failures • Mandate cross-functional pre-test planning meetings including drivers, test engineers, WHS, mechanics and track controllers for complex or non-routine tests	2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Inadequate classification of high-risk tests (e.g. destructive crash tests, high-speed lane change, rollover propensity, emissions testing in confined spaces) • Failure to consult operators, engineers and maintainers in test design, leading to impractical or unsafe set-ups • Inadequate planning for interaction between test vehicles, support vehicles, pedestrians and plant on test tracks and access roads		• Utilise simulation, desktop modelling or scaled trials where reasonably practicable to validate high-risk test concepts before full-scale execution • Plan for separation in time and space of high-spe[illegible]ests, bus crash tests and emissions work to prevent interaction and congestion on test tracks and in l[illegible]oratories	
3. Facility Design, Layout & Test Track Management	• Test tracks or crash pads not designed or rated for planned speeds, masses or impact angles • Inadequate run-off areas, barriers or containment systems for high-speed and emergency steering tests • Poor delineation between test zones, spectator/observation areas, pedestri[illegible] walkways and vehicle access routes • Insufficient fixed protection against vehicle intrusion into co[illegible]oms, emissions labs or wo[illegible]shops • Inadequate drain[illegible]e and surfa[illegible] maintenance caus[illegible]rod[illegible]frict[illegible] aquaplaning or uneven road surfaces • Lack of engineered rollover prote[illegible]on zones for roll stability and [illegible]esting suspension systems • Inadequate separation between combustion engine emissions testing and electric/hybrid vehicle charging or battery storage areas	[illegible]	• Enga[illegible]mpeten[illegible]ngineers to design and certify test tracks, crash test areas and run-off zones suitable[illegible]or [illegible]ximum[illegible]anned speeds, vehicle masses and manoeuvres • Install [illegible]d ma[illegible]tain engineered barriers, guard rails, energy-absorbing crash attenuators and c[illegible]ainm[illegible]nt fenc[illegible]g around critical test and observation areas • Deve[illegible]nd implement a test facility layout plan with clearly marked test lanes, no-go areas, pedestrian [illegible]lkways and emergency egress paths • P[illegible]vide vehicle-resistant protection (bollards, barriers, earth berms) around control rooms, emissions labs, power supplies and occupied buildings adjacent to test areas • Implement a formal track inspection and maintenance regime, including friction measurement, surface defect inspection and documented rectification timeframes • Designate and signpost specific zones for high-risk activities (e.g. rollover propensity checks, emergency lane changes) with restricted access controls • Ensure adequate ventilation and separation in facilities where emissions testing is undertaken, with isolation from EV charging and battery storage zones • Review facility layout after any incident, near miss or major change to test protocols and implement engineered improvements where reasonably practicable	2M
4. Vehicle Procurement, Suitability & Configuration Control	• Use of vehicles that are not fit for intended testing duty cycles, speeds or loads • Uncontrolled modifications to vehicles used in crash, emissions or stability testing • Lack of verification that vehicles meet baseline safety standards (e.g. ANCAP	4A	[redacted]	2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	rating, ADR compliance) before being used as test platforms • Incorrect or inconsistent configuration of vehicles between test runs (tyre type, inflation, suspension settings, ballast, roll stability system parameters) • Inadequate identification of prototype or non-standard vehicles with unknown performance characteristics • Poor control of disabling or bypassing OEM safety systems during certain tests (e.g. ESC off, airbag deactivation) without risk reassessment		[redacted]	
5. Driver, Operator & Engineer Competency Management	• Inadequate training or licensing of test drivers for high-speed manoeuvres, emergency steering tests and bus crash set-ups • Engineers or technicians performing vehicle testing tasks without competen[redacted] in handling dynamics, emissions systems or crash instrumentation • Lack of competence i[redacted]ging EVs, hybrids and advanc[redacted] driver assistance systems during tes[redacted] • Failure to verify th[redacted]river, contractor or visiting engineer competencies • No structured competen[redacted]ssment for high-risk tests such as roll stability system checks and high-speed safety checks • Inadequate understanding of test procedures and emergency protocols by drivers and operators	4A	[redacted]	2M
6. Fatigue, Fitness for Work & Scheduling Controls	• Test drivers and engineers conducting high-speed or complex tests while fatigued or not fit for work • Extended shifts or compressed test schedules leading to cognitive overload and error	4A	[redacted]	2M

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
	• Inadequate controls for alcohol and other drugs in a vehicle testing context • Poor management of circadian factors for early morning or night testing on public roads or private tracks • Insufficient planning for rest breaks during long road testing or repetitive emissions testing cycles • Cultural pressure to complete test programs despite signs of fatigue or reduced concentration		[redacted]	
7. Test Procedure Development, Documentation & Control	• Lack of standardised procedures for bus crash tests, emissions testing, roll stability checks and high-speed road testing • Use of outdated, informal or verbally communicated instructions for complex testing • Failure to capture lessons learned and incident findings in revised procedures • Procedures not considering worst-case scenarios or deviations (e.g. vehicle malfunction mid-test, instrumentation failure, weather changes) • Inadequate document control leading to multiple versions of procedures in circulation • Procedures that are overly complex or impractical, encouraging workarounds and rule-breaking	4A	[redacted]	2M
8. Plant, Equipment & Instrumentation Management	• Failure or malfunction of crash test rigs, restraints, towing systems or impact barriers	4A	[redacted]	2M

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
	• Inaccurate or unreliable emissions testing equipment leading to unsafe exposures or invalid results • Poor maintenance and calibration of speed measurement, data loggers and stability measurement systems • Inadequate guarding or interlocks on dynamic test rigs, suspension stress rigs and rolling roads • Uncontrolled use of temporary fixtures, ballast and instrumentation mounts that can become projectiles in a crash or high-speed event • Electrical hazards from test equipment, including EV and hybrid testing interfaces		[redacted]	
9. Traffic Management, Road Testing & External Interface	• Interaction between test vehicles and other road users during on-road testing • Inadequate journey management for long-distance road testing, including remote area travel • Poor communication and coordination with public road authorities when testing near or on public roads • Unclear delineation of responsibility when using third-party test tracks or proving grounds • Lack of systems for monitoring location and status of vehicles engaged in road testing • Exposure to unpredictable external hazards (roadworks, livestock, pedestrians, aggressive drivers) during real-world testing	4A	[redacted]	2M
10. Environmental & Occupational Exposure Management (Emissions & Noise)	• Inhalation of exhaust gases and particulates during emissions testing and prolonged idling • Accumulation of combustion products in enclosed or partially enclosed test bays and labs	3H	[redacted]	2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Noise exposure from high-speed testing, crash tests and suspension stress rigs exceeding exposure standards • Secondary exposure to test by-products such as brake dust, tyre wear particles and fuel vapours • Inadequate monitoring of air quality and noise levels in emissions test cells and trackside observation areas		[redacted]	
11. Emergency Preparedness, Incident Response & Recovery	• Delayed or ineffective response to crashes, rollovers or loss-of-control events during testing • Lack of preparedness for vehicle fires, including EV and hybrid battery fires during crash or road testing • Inadequate communication systems f remote test locations or long road tests • Absence of rehears protocols for rescue from damag d buses, test rigs or inverted vehicles • Poor integration of external emerge y services into site and test-specific emergency plans • Failure to manage scene preservation for incident investigation and legal requirements		[redacted]	2M
12. Contractor, Visitor & Third-Party Management	• Contractors conducting high-risk tests without alignment to site WHS systems • Visitors and clients entering hazardous areas during crash tests or high-speed demonstrations • Third-party laboratories or calibration providers not managing WHS risks to the required standard	3H	[redacted]	2M

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
	• Inadequate supervision of short-term or specialist contractors configuring emissions rigs or stability systems • Confusion over responsibilities where multiple PCBUs share the test site or test program		[redacted]	
13. Information, Communication & Control of Testing Activities	• Breakdown in communication between drivers, track controllers, engineers and observers during tests • Lack of clear authority to start, pause or abort tests, especially high-speed or crash events • Inadequate briefing and debriefing processes before and after critical tests • Reliance on informal or personal communication channels that are not monitored or recorded • Insufficient real-tim[redacted]onitoring of conditions (weathe[redacted]rack surface, visibility) leading t[redacted]nsafe go/[redacted] decisions	3H	[redacted]	2M
14. Data Management, Reporting, Auditing & Continual Improvement	• Failure to capture and a[redacted] safety-critical data from tests, incidents and near misses • Under-reporting of hazardous events due to cultural or system barriers • No systematic auditing of controls for high-risk tests such as bus crash, roll stability and emergency steering • Loss or inaccessibility of test and safety records required for legal defence, trend analysis and improvement	3H	[redacted]	2M

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
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	• Inadequate feedback loop from investigators and engineers to management and frontline workers		[redacted]	

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