Tyre Repair Puncture Repair and Workshop Operations

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:

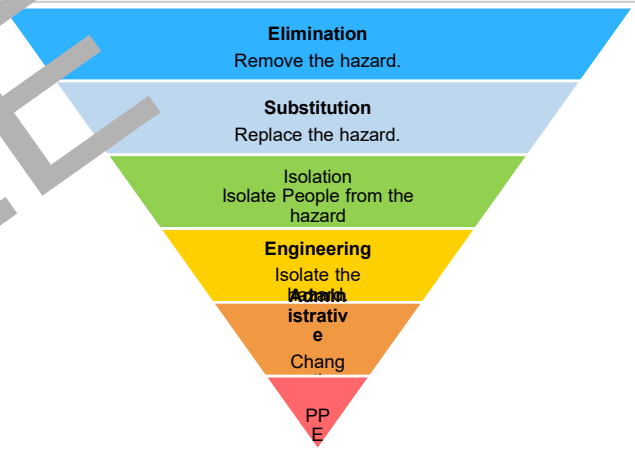
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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. WHS Governance, Roles and Legal Compliance	• Lack of clear WHS responsibilities for tyre and workshop operations under WHS Act 2011 and WHS Regulations • Inadequate understanding of specific duties relating to plant, hazardous manual tasks and noise • Failure to consult with workers on changes to tyre repair processes, layouts or equipment • No formal process to review compliance with AS/NZS and Safe Work Australia codes of practice relevant to workshops and plant • Inadequate WHS policy coverage for high-risk tyre operations (e.g. inflating heavy vehicle tyres, curing presses, bead cutting) • Poor incident reporting and notifiable incident escalation processes • Contractor and labour-hire workers n included in WHS systems and induction	4A	• Establish and maintain a documented WHS anagement system aligned to WHS Act 2011, WHS Regulations and relevant codes of practice plant and nual tasks • Define and document WHS roles, responsibi s d accountabilities for officers, managers, supervisors and tyre technicians, including auth to stop uns work • Implement a formal WHS leg egister capturing plica legislation, Australian Standards and guidance material relevant to ty epair, puncture re and workshop operations, with scheduled review dates • Develop a sultation pr edure e uring toolbox talks, safety committees and pre-change risk reviews occur before i ducing n tyre chan curing presses or buffing machines • Imp nt an i and hazard reporting system that supports anonymous reporting, timely invest at root-c se analysis and corrective actions tracking • Includ con ctors, bile tyre fitters and visiting drivers in site WHS induction, consultation and incident port proce es • C duc period WHS audits and management reviews focusing on tyre-related high-risk activities and closing tified gaps	3H
2. Competency, Licensing and Training for Tyre Operations	• Workers breaking be s, c ting beads, buffing tyres r operating curing presses without ve ied competency • Inadequate training e inflatio and deflation of tyres, including high pressure and split-rim assemblies • Lack of competency in o ting tyre changers, removal machines and mounting equipment to manufacturer requirements • Insufficient instruction on hazards associated with stored energy in tyres, bead seating and rim failures • No formal training in lock-out/tag-out (LOTO) and isolation procedures for tyre and workshop plant • Training not refreshed when equipment, procedures or legislation change	4A	• Develop a competency framework and training matrix for all tyre and workshop roles covering bead breaking, tyre changers, buffing machines, curing presses, inflation systems and disposal processes • Require documented verification of competency (VOC) for use of tyre changers, bead breakers, buffing machines, curing presses and high-pressure inflation equipment • Implement structured induction and task-specific training that includes hazards of stored energy, bead failure and tyre explosion scenarios with case studies • Provide formal training in lock-out/tag-out and isolation procedures for maintenance and fault-finding on tyre plant and workshop equipment • Schedule refresher training at defined intervals and after incidents, plant upgrades or procedural changes • Ensure supervisors are trained in coaching, observation and competency assessment for tyre repair and mounting tasks • Restrict high-risk tyre operations to competent persons only, with documented authorisation lists maintained by management	2M

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	• Unsupervised new or young workers performing high-risk tyre tasks			
3. Plant and Equipment Management (Tyre Changers, Buffers, Curing Presses)	• Failure of tyre changers, bead breakers, buffing machines and curing presses due to inadequate inspection and maintenance • Missing or bypassed guards and interlocks on moving parts of tyre machinery • Uncontrolled start-up or movement of plant during cleaning, maintenance or jam clearance • Use of non-compliant or homemade adaptors, bead cutting tools or inflation devices • Inadequate design or guarding of curing presses leading to crush, burn or entrapment hazards • No system for managing plant defects or isolating unsafe equipment • Inadequate ventilation and extraction on buffing machines causing dust inhalation and fire risk	4A	• Implement a plant lifecycle management procedure requiring risk assessment, commissioning checks and acceptance testing for all tyre and workshop equipment • Ensure all tyre changers, bead breakers, buffing machines and curing presses are fitted with compliant guarding, emergency stop devices and interlocks aligned with WHS plant requirements and manufacturer instructions • Establish a planned preventive maintenance and inspection schedule managed through a computerised maintenance management system or equivalent • Introduce a formal defect reporting, tagging and lock-out system for any equipment identified as unsafe or out of specification • Prohibit unauthorised modification of tyre equipment and require engineering approval and re-assessment of risks for any changes • Install local exhaust ventilation or dust extraction on buffing machines and areas where rubber dust or fumes are generated, with regular performance checks • Maintain and test emergency stops, pressure relief devices and safety controls on curing presses and inflation systems at defined intervals	2M
4. Tyre Inflation, Deflation and Stored Energy Control	• Tyre burst or explosion during inflation due to over-pressurisation of damaged beads and casings • Improper deflation prior to bead breaking, cutting beads or removing from rims, leading to uncontrolled release of stored energy • Use of non-calibrated pressure gauges or faulty regulators • Inflation conducted without safety cages or adequate exclusion zones on high-risk tyres (e.g. truck, bus, industrial) • No standard procedure for safe inflation, deflation and pressure checks • Workers positioned in line with the sidewall or bead during inflation	4A	[redacted]	2M

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	• Inadequate controls for split-rim assemblies or multi-piece rims		[redacted]	
5. Manual Handling, Ergonomics and Tyre Movement	• Musculoskeletal disorders from manually lifting, rolling or stacking heavy tyres and rims • Poor workshop layout requiring excessive carrying of tyres between changers, buffers, curing presses and storage • Absence of mechanical aids for moving large tyres, wheels or cured products • Inadequate systems for team lifting or job rotation in high-volume tyre repair operations • Poor design of workbenches, tyre stands and buffing stations causing awkward postures • High-frequency tyre mounting and demounting tasks without ergonomic task design	3H	[redacted]	2M
6. Hazardous Substances, Fumes and Dust from Tyre Work	• Exposure to rubber dust [redacted] buffing operations • Inhalation of fum[redacted] from curing presses, adhesive[redacted] solv[redacted] vulcanising agents • Skin contact with tyre repair chem[redacted]als, bead lubricants and clean[redacted]ts • Inadequate chemical storage, labelling and Safety Data Sheet (SDS) management • No system for assessing and controlling exposure to hazardous substances under WHS Regulations • Incompatible storage of flammable liquids near heat sources or ignition risks	3H	[redacted]	2M
7. Workshop Layout, Traffic Management and Storage of Tyres	• Vehicle and pedestrian interaction in workshop areas where tyres are received, repaired and dispatched	3H		2M

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	• Congested work areas around tyre changers, buffing machines and curing presses increasing trip, crush and struck-by risks • Unsafe stacking of tyres leading to collapse, roll-away or restricted access to exits and emergency equipment • Inadequate segregation of forklift or delivery vehicle routes from tyre repair work zones • Poor lighting around bead breaking and inspection areas impacting quality and safety • Insufficient planning of emergency access routes around storage racks and curing equipment		[redacted]	
8. Electrical, Pneumatic and Energy Isolation Systems	• Uncontrolled release of pneumatic energy from compressors, lines and tyre inflation systems • Electrical shock or electrocution from poorly maintained workshop equipment and portable tools • Lack of formal lock-out/tag-out procedures for tyre changers, machines and curing [redacted] during maintenance or jam clearing • Inadequate inspection and testing of extension leads, portable [redacted] and fixed electrical installations • Use of damaged air hoses or fittings on tyre removal machines and mounting operations • Unauthorised persons conducting electrical or pneumatic repairs	3H	[redacted]	2M
9. Contractor, Visitor and Mobile Tyre Service Management	• External contractors performing tyre repairs, puncture repairs or equipment maintenance without alignment to site WHS systems	3H	[redacted]	2M

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	• Mobile tyre service operations conducted roadside or off-site without adequate risk assessment and controls • Visiting drivers and customers entering workshop or tyre storage areas without supervision • Lack of clear interface arrangements between host employer and contractors regarding plant, equipment and emergency procedures • Inadequate verification of contractor competency and insurances for high-risk tyre work		[redacted]	
10. Fatigue, Work Scheduling and Psychosocial Risks	• Extended shifts and high workload during peak tyre repair periods leading to fatigue-related errors • Time pressure to complete tyre puncture repairs, bead breaking and mounting tasks quickly, resulting in shortcuts • Inadequate staffing levels causing solo work on high-risk tyre operations such as curing presses and truck [redacted]ion • Poor management of psychosocial hazards including stress, conflict and bullying within workshop teams • Night or on-call mobile tyre work without adequate rest opportunities or support	3H	[redacted]	2M
11. Emergency Preparedness, First Aid and Incident Response	• Delayed or ineffective response to tyre explosion, crush injury or amputation events in the workshop • Lack of specific emergency procedures for tyre-related incidents such as curing press entrapment or high-pressure release • Inadequate first aid coverage and equipment for burns, lacerations, eye injuries and crush injuries	3H	[redacted]	2M

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	• Workers unaware of emergency shutdown procedures for tyre changers, buffing machines and curing presses • Poor coordination with emergency services due to outdated site plans or inaccurate hazard information		[redacted]	
12. Environmental and Waste Management for Tyres and By-products	• Uncontrolled accumulation of scrap tyres creating fire risk and pest harbourage • Improper disposal of tyres, rubber dust, curing residues and chemical wastes • Tyre storage or disposal areas not designed to manage run-off or firewater contamination • Burning or cutting of tyres using inappropriate methods generating toxic fumes • Lack of traceability for tyre disposal leading to illegal dumping or non-compliance with environmental regulations	3H	[redacted]	1L
13. Personal Protective Equipment and Safety Equipment Management	• Reliance on PPE as the primary control for high-risk tyre activities rather than higher-order controls • Inconsistent use of eye, face, hand and foot protection during bead breaking, bead cutting and buffing operations • PPE not fit-for-purpose for specific tyre tasks (e.g. inadequate impact protection or heat resistance) • Lack of systems for issuing, maintaining and replacing PPE and safety equipment • No verification that workers understand correct PPE use, limitations and storage	2M	[redacted]	1L
14. Continuous Improvement,	• Outdated tyre repair procedures, checklists and maintenance schedules	2M		1L

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Monitoring and Documentation Control	not reflecting current equipment or legislation • Lack of trend analysis for tyre-related incidents, near misses and non-conformances • Poor record keeping for training, maintenance, inspections and risk assessments • No structured process for workers to provide feedback on the practicality and effectiveness of controls • Failure to learn from external incidents, alerts or industry guidance relating to tyre explosions and plant failures		[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