Heavy Vehicle and Truck Tyre Fitting and Inflation

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:

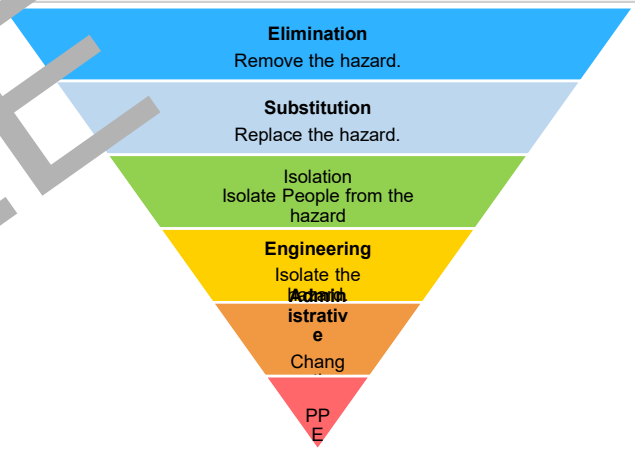
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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, WHS Duty of Care and Legal Compliance	• Lack of clear allocation of WHS responsibilities for tyre fitting and inflation activities under WHS Act 2011 and WHS Regulations • Inadequate understanding by officers of due diligence obligations regarding high-risk heavy vehicle tyre work • Absence of a documented WHS management plan for heavy vehicle and truck tyre operations across depots and field locations • Failure to monitor and review compliance with Australian Standards (e.g. AS/NZS 4825, AS 4457, AS 1210, relevant plant and pressure equipment standards) • Poor integration of contractor and labour hire workers into the PCBU's WHS governance arrangements • Insufficient consultation with workers and Health and Safety Representatives (HSRs) on system changes affecting tyre work	4A	• Establish and document a WHS governance structure that clearly allocates roles, responsibilities and accountabilities for heavy vehicle and truck tyre fitting and inflation across the organisation • Ensure officers are trained in WHS due diligence requirements specific to high-risk tyre and wheel activities, including catastrophic burst and separation risks • Develop and implement a WHS Management Plan for heavy vehicle tyre operations, covering workshops, depots, roadside work and client sites • Implement a legal and standards register identifying all applicable legislation, Codes of Practice and Australian Standards for heavy vehicle and machinery tyre work, with scheduled review dates • Integrate contractor, labour hire and service provider obligations into WHS policies and agreements, specifying responsibilities for plant, equipment, training and supervision • Establish formal worker consultation and HSR involvement in the design, implementation and review of tyre-related procedures and equipment selection • Conduct periodic WHS compliance audits focusing on high-risk tyre fitting, wheel and inflation activities, with corrective actions tracked to closure • Embed tyre safety requirements into corporate WHS policy and strategic risk registers, including explicit recognition of stored energy and explosion hazards	3H
2. Competency, Licensing and Training for Tyre Technicians	• Inadequate competency of tyre fitters to recognise high-risk conditions (e.g. bead damage, cracked rims, incorrect components) • Reliance on informal 'on-the-job' learning without structured training for truck, bus and heavy machinery tyre work • Lack of verification of training and experience for new employees, contractors and labour hire workers • Insufficient instruction regarding safe inflation pressures, multi-piece rims, duals, and large off-the-road (OTR) tyres • Poor understanding of manufacturer instructions, Australian Standards and safe use of safety cages and remote inflation devices	4A	• Develop a competency framework for heavy vehicle, bus and heavy machinery tyre work aligned with recognised industry training (e.g. AUR and equivalent units of competency) • Implement a formal induction program specific to truck and heavy machinery tyre fitting and inflation, including hazard awareness for stored energy and wheel-end failures • Require documented evidence of competency and verification of skills for all tyre technicians prior to unsupervised work, including contractors and labour hire workers • Provide structured training on multi-piece rims, lock rings, bead seating, dual wheel configurations, run-flat or bead-lock systems and large OTR tyres • Ensure all technicians are trained in and assessed on the use of safety cages, remote inflation devices, pressure regulators, and safe stand-off positions • Deliver periodic refresher training (e.g. every 2–3 years or after major incidents/changes) with practical assessment of tyre inflation and deflation procedures • Maintain training records in a central WHS database, with triggers for refresher training and competency re-assessment • Include manufacturer technical bulletins and Australian Standards requirements in training content and toolbox talks	2M

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	• No refreshers or verification of competency following incidents, near misses or equipment changes			
3. Tyre and Wheel Selection, Procurement and Specification	• Procurement of tyres and rims that are incompatible with existing fleet, load ratings or operating conditions • Use of non-genuine, damaged, counterfeit or unverified components (e.g. rims, lock rings, wheel studs and nuts) • Inappropriate tyre selection for heavy vehicles, buses or heavy machinery used in harsh or off-road conditions • Lack of documented engineering review for new wheel systems, particularly multi-piece rims and high-pressure OTR tyres • Insufficient consideration of inflation pressure requirements and tyre size when designing or modifying vehicles and machinery • No system to verify that procurement specifications are aligned with legal load limits, speed ratings and manufacturer guidance	3H	• Develop a standard specification for heavy vehicle tyres and machinery tyres, rims and associated hardware based on manufacturer requirements and relevant Australian Standards • Require engineering review and sign-off for introduction of new wheel systems, multi-piece rims or changes to tyre sizes and pressure ratings • Restrict purchasing to approved suppliers with quality assurance systems and documented traceability of tyres, rims and critical wheel components • Include mandatory checks in procurement processes to confirm load rating, speed rating, ply/strength, rim compatibility and operating environment suitability • Implement a component verification process to identify and reject counterfeit, damaged or unapproved tyres and rims at receipt and before fitting • Standardise wheel and tyre combinations across the fleet as far as reasonably practicable to reduce complexity and mismatch hazards • Document procurement controls in a Fleet and Plant Standards Procedure, with roles and responsibilities defined for engineering, procurement and maintenance • Review and update specifications when operating conditions, routes or equipment usage patterns change materially	2M
4. Workshop Layout, Traffic Management and Depot Infrastructure	• Poor separation of heavy vehicles, forklifts and pedestrians in tyre bays and workshops • Insufficient space, lighting and poor condition in tyre change areas leading to crush, trip and manual handling risks • Inadequate anchoring and positioning of safety cages, jacks, stands and lifting equipment • Lack of designated safe zones during tyre inflation and deflation activities • Inadequate provision of fixed air supply points, regulators and isolation valves in tyre bays • Uncontrolled vehicle movements within depots and bus yards during tyre change operations	3H	[redacted]	2M

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			[redacted]	
5. Mobile and Roadside Tyre Service Operations	• Uncontrolled roadside work on trucks, buses or heavy machinery near live traffic • Inadequate systems to assess whether it is safe to conduct tyre work on-site versus towing or relocating • Limited access to safety equipment and isolation controls in remote or field locations • Fatigue and time pressure for mobile tyre technicians responding to breakdowns • Poor communications with traffic controllers, clients or authorities during emergency call-outs • Inconsistent applicati[redacted] assessments and pe[redacted]nts for work on mine sites, remote[redacted]oads or construction areas	4A	[redacted]	2M
6. Plant, Tools and Safety Equipment for Tyre Fitting and Inflation	• Use of unsuitable, ungu[redacted] poorly maintained tyre changers, bead breakers, jacks and rattle guns • Absence or inadequate capacity of tyre inflation cages, blast guards, remote inflation lines and pressure limiting devices • Failure of lifting devices or stands leading to vehicle or wheel collapse during tyre changes • Use of damaged extension bars, sockets or incorrect torque tools on wheel nuts and studs	4A	[redacted]	2M

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	• Lack of standardisation in tools and equipment between depots and mobile service vehicles • Inadequate inspection, testing and tagging of critical equipment used in high-pressure tyre work		[redacted]	
7. Tyre Condition Monitoring, Inspection and Maintenance Systems	• Absence of a structured inspection regime for heavy vehicle, bus and heavy machinery tyres • Failure to identify critical damage such as sidewall cuts, bead damage, impact breaks, rim cracks or mismatched components • Inadequate documentation of tyre repairs, rotations and replacements, leading to continued use of unsafe assemblies • Reactive maintenance culture where tyres are only addressed at point of failure or defect notic • No systematic re ew of wheel-off incidents, rapid de tions o punctures for under uses • Insufficient integration of telematic or tyre pressure monitoring data int maintenance planning	4A	[redacted]	2M
8. Procedures for High-Risk Tyre Tasks (Multi-Piece, OTR, High Pressure)	• Lack of specific procedures for high-risk tasks involving multi-piece rims, bead locks and large OTR tyres • Improvised work methods for seized or damaged assemblies on heavy trucks, buses and earthmoving plant • Incorrect deflation, disassembly or reassembly leading to violent separation of components	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
	• Inadequate control of stored energy during inflation and deflation of high-volume tyres • Failure to isolate and secure heavy machinery and trailers during wheel changes • Inconsistent application of safe systems of work between workshops and field locations		[redacted]	
9. Contractor and Third-Party Tyre Service Management	• Use of tyre contractors whose WHS systems do not meet the organisation's standards • Unclear allocation of responsibilities between PCBU and contractor for plant, training and supervision • Contractor technicians performing high-risk tyre work on-site without appropriate equipment or procedures • Lack of monitoring of contractor safe performance and compliance with site rules • Inadequate induct of contractor staff into site-specific ri s for heavy vehicles and mobile plant • Price-driven selection of service providers leading to systemic under resourcing of safety contr ls	3H	[redacted]	2M
10. Fatigue, Workload and Supervision of Tyre Operations	• Extended shifts, night work and irregular hours for mobile tyre technicians servicing freight, bus and machinery fleets • High physical demands and repetitive tasks leading to fatigue and reduced situational awareness • Insufficient supervision of junior or new tyre fitters undertaking high-risk tasks • Productivity and time pressures that encourage short-cuts on inspection, jacking and inflation controls	3H	[redacted]	2M

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	• Inadequate resourcing during peak seasonal demand (e.g. harvest, construction peaks) resulting in rushed jobs • No formal process to identify and manage persons at higher risk due to fatigue or reduced fitness for work		[redacted]	
11. Emergency Preparedness, Incident Response and First Aid	• Lack of clear procedures for responding to tyre explosions, wheel separations or catastrophic failures • Inadequate first aid capacity and equipment for crush injuries, amputations or blast trauma in workshops and remote sites • Slow or uncoordinated response to roadside incidents involving tyre technicians and mobile service vehicles • Failure to preserve incident scenes f investigation and regulatory notificatio where required • No formal process f debriefing, learning capture an system improvement follo g serious t related incidents • Workers uncertain about when an how to contact emergency service om remote or rural locations	3H	[redacted]	2M
12. Information, Communication and Documentation Management	• Procedures, technical bulletins and safety alerts not readily accessible to tyre fitters and mobile technicians • Outdated or conflicting instructions between depot, workshop and roadside work practices • Poor communication of changes to tyre specifications, pressure settings or wheel component types across the fleet • Lack of documentation of inspections, torque checks and post-maintenance verification for wheel assemblies	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
	• Inadequate handover between shifts, depots or contractors on outstanding tyre defects or temporary repairs • Language, literacy or cultural barriers affecting understanding of tyre safety instructions		[redacted]	
13. Driver, Operator and Fleet Interface with Tyre Safety	• Drivers and plant operators not recognising early warning signs of tyre or wheel issues (vibration, pulling, noise, odour) • Failure of drivers to report suspected defects or damage from road hazards, kerb strikes or off-road use • No clear responsibility for pre-trip tyre and wheel checks on trucks, buses and heavy machinery • Overloading, incorrect pressure adjustment or inappropriate operating speeds contributing to tyre failure • Fleet scheduling practices that do not allow time for corrective tyre maintenance • Poor feedback loop between operations, maintenance and tyre providers on recurring tyre issues	3H	[redacted]	2M
14. Health, Ergonomics and Manual Handling in Tyre Work	• High manual handling loads associated with large truck, bus and heavy machinery tyres and rims • Repetitive tasks and awkward postures causing musculoskeletal disorders over time • Exposure to noise, vibration and fumes in tyre workshops and depots • Insufficient consideration of individual health limitations for workers performing physically demanding tyre tasks	3H	[redacted]	2M

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	• Lack of job rotation or task variation leading to cumulative strain • Inadequate reporting and management of early symptoms of musculoskeletal injury		[redacted]	
15. Continuous Improvement, Audit and Safety Culture for Tyre Operations	• Static WHS systems that do not adapt to new risks, technologies or incident learnings in tyre operations • Under-reporting of near misses, minor incidents and unsafe conditions related to tyre and wheel work • Lack of targeted audits on high-risk tyre activities, equipment and contractor performance • Management focus on production or fleet availability at the expense of tyre safety • Poor reinforcement of safe behaviours leading to normalisation [redacted]t-cuts and unsafe practices • Insufficient worke[redacted]engagement [redacted] identifying improve[redacted]yre processes and equipment	3H	[redacted]	1L

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