Tyre Changing - Tractor and Off-Road

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:

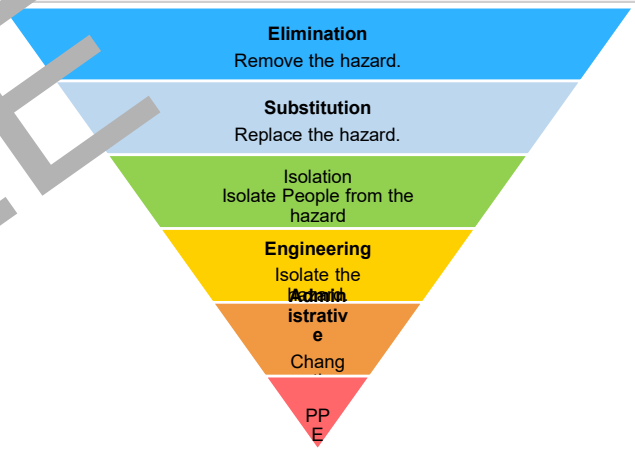
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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 Duties and Contractor Management	• Lack of clear allocation of WHS duties under WHS Act 2011 for persons conducting a business or undertaking (PCBUs), officers, workers and contractors involved in tractor and off-road tyre changing • Inadequate due diligence by officers to ensure safe systems of work, resourcing, and verification for tyre changing activities • No formal process to assess and manage WHS risks when engaging mobile tyre service providers or contractors • Poor coordination of WHS responsibilities where multiple PCBUs share the workplace (farms, depots, workshops, roadside sites) • Outdated or non-existent WHS policies specific to high-risk plant and tyre handling operations • Failure to consult with workers and health and safety representatives (HSRs) about tyre changing risks and controls • Inadequate incident reporting and investigation systems leading to repeat events and systemic issues not being addressed	High	• Establish and document a WHS governance framework that clearly defines legal duties and organisational responsibilities for tractor and off-road tyre changing in line with the WHS Act 2011 and associated Regulations • Ensure officers exercise due diligence by regularly reviewing tyre changing risk registers, resourcing levels (equipment, training, supervision) and verifying implementation of control measures via audits and inspections • Implement a formal contractor management procedure that includes pre-qualification, review of contractor SWMS, insurances, training records and evidence of competence for off-road and tractor tyre work • Develop written agreements or interface documents outlining how multiple PCBUs will consult, cooperate and coordinate activities relating to tyre changing at shared workplaces • Create and maintain WHS policies and procedures specific to plant safety, high-risk maintenance, and tyre/wheel management, with scheduled reviews at least every two years or after significant incidents • Implement a structured consultation process, including toolbox talks, pre-start meetings and HSR forums, specifically addressing tyre-related risks and proposed changes to systems of work • Introduce a standardised incident and near-miss reporting system (including unsafe plant and equipment reports) for all tyre changing activities, with clear investigation and corrective action processes • Periodically commission external WHS audits or technical reviews of tyre changing systems to verify compliance with legislation, standards and industry good practice	Medium
2. Procurement of Plant, Tyres and Equipment	• Purchase of tractors, rims, wheels and off-road tyres that are incompatible or lack appropriate design for the loads, pressures and conditions in which they are used • Procurement of tyre changing equipment (bead breakers, jacks, lifting devices, cages, air lines, torque tools) that does not meet Australian Standards or is unsuitable for large agricultural and off-road tyres • Lack of engineering and safety specification input when purchasing new plant or attachments leading to	High	• Implement a formal procurement policy that requires WHS risk considerations and technical specifications for tractors, rims, wheels, tyres and tyre changing equipment prior to purchase • Require supplier documentation confirming compliance with relevant Australian Standards and manufacturer's specifications for all rims, tyres, jacks, stands, lifting devices and inflation equipment • Engage competent engineers or plant specialists to review tyre load ratings, rim compatibility, ballast requirements and stability for intended terrain and agricultural attachments before finalising procurement • Specify and purchase purpose-designed tyre handling equipment (e.g. tyre manipulators, bead breakers, inflation cages, wheel dollies) sized appropriately for tractor and off-road tyres • Prohibit procurement of unidentified, damaged, or unidentified second-hand rims and tyres unless fully inspected and certified fit-for-purpose by a competent person	Medium

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	increased tyre loading, instability and premature failure • Inadequate provision for guarding, restraining devices, or inflation cages in original equipment specifications • Sourcing cheap or second-hand rims and tyres without verifiable history, identification markings or compatibility information • Failure to specify safe inflation systems (e.g. remote inflators, pressure regulators, whip-checks) at time of purchase		• Ensure all new plant and equipment arrives with instruction manuals, safety information, and maintenance schedules that address tyre inspection and replacement requirements • Include remote inflation systems, calibrated pressure gauges, pressure-limiting devices and whip-checked hoses as mandatory items in procurement of compressed air systems used for tyre inflation • Incorporate whole-of-life cost and safety considerations (including training, inspections, spare parts, and replacements) into procurement decisions rather than selecting purely on upfront price	
3. Design and Layout of Workshop and Field Tyre Changing Areas	• Inadequate workshop layout leading to interaction between moving vehicles, forklifts and workers performing tyre changes • Insufficient space, lighting or ground conditions for safe handling of large tractor and off-road tyres in the workshop or in field locations • Poorly designed storage systems for rims and tyres resulting in collapse, falling objects or manual handling injuries • Lack of designated exclusion zones around tyre inflation areas, particularly when inflating large off-road tyres with risk of explosion or sidewall failure • Unsafe or uneven surfaces at field repair sites leading to instability of jacks, stands and vehicles • Inadequate drainage and housekeeping causing slips, trips and falls around tyre changing equipment	High	• Design workshop layouts so that tyre changing areas are physically separated from vehicle traffic routes, with marked walkways, barriers and adequate clearances for plant and equipment • Implement minimum space, lighting and floor load-rating requirements for tyre handling areas, ensuring smooth, level, non-slip and well-maintained surfaces for placement of jacks, stands and handling equipment • Install engineered racking or stillages purpose-built for large rims and tyres, with load ratings clearly displayed and procedures for safe stacking, retrieval and securing • Establish designated tyre inflation bays with permanent exclusion zone markings, signage and, where practicable, physical barriers or cages; restrict access during inflation of large tyres • Develop criteria and procedures for selecting suitable field work locations, including ground stability checks, chocking requirements and use of portable platforms or mats to stabilise jacks and stands • Provide fixed and portable lighting adequate for detailed inspection of rims, beads and tread in both workshop and field operations • Implement housekeeping standards and inspection routines to ensure floors and work areas remain free from oil, mud, tools, loose components and debris • Ensure emergency egress routes, fire equipment and first aid facilities remain unobstructed by stored tyres, rims or tyre changing plant	Medium
4. Maintenance, Inspection and Asset Management of Plant and Tyres	• Lack of systematic inspection and maintenance of tractors, rims, tyres, jacks, stands and lifting devices leading to undetected defects and failures • Use of tyre changing tools and equipment that are damaged,	High	[redacted]	Medium

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	uncalibrated, not tagged, or past service intervals • No central register or tracking of tyres, rims and associated components, resulting in mix-ups, incorrect assemblies or re-use of condemned equipment • Failure to follow manufacturer's recommendations for torque settings, tyre pressures and load ratings • Insufficient processes for identifying and quarantining damaged or non-conforming rims, tyres and components • Inadequate maintenance of compressed air systems (including valves, hoses, couplings and regulators) increasing the risk of hose whip or over-pressurisation		[redacted]	
5. Risk Management, Procedures and Documentation	• Absence of a documented risk management process specific to tracto and off-road tyre changing activities • Reliance on inform or verbal instructions rather an formal procedures, increa g varia practices • No documented Safe System of W k (SSOW), Safe Operating Proced es (SOPs) or SWMS for high tyre changing activities • Risk assessments not updated when plant, tasks, locations or equipment change • Procedures that do not align with current Australian Standards, manufacturer instructions or industry best practice • Complex or overly generic documentation that workers find difficult to understand or apply in the field	High	[redacted]	Medium

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6. Competency, Training and Supervision	• Workers and contractors performing tractor and off-road tyre changing without adequate training, competency assessment or experience • No formal verification of competency (VOC) for high-risk tasks such as large tyre inflation, bead seating and rim assembly • Inadequate supervision of new or young workers, especially during high-risk tyre operations and field repairs • Lack of refresher training leading to skill fade and non-compliance with procedures over time • Training that is limited to theory and does not adequately cover practical risk recognition, emergency response or safe decision-making in remote areas • Inconsistent induction processes resulting in varying understanding of tyre-related hazards, company policies and reporting requirements	High	[redacted]	Medium
7. Plant Isolation, Energy Control and Stability Management	• Inadequate isolation of tractors and off-road plant during tyre changes leading to unintentional movement or activation • Failure to control stored energy such as suspended loads, hydraulic pressure, compressed air, and tyre pressure during maintenance • Insufficient chocking, jacking and support systems for heavy vehicles and machinery, increasing risk of collapse or roll-away • Lack of standardised procedures for lock-out/tag-out (LOTO) when working on tyres, wheels and associated components • Reliance on single jacks without use of stands or secondary supports in system design and procedures	High	[redacted]	Medium

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	• No formal verification or sign-off step to confirm plant stability before workers commence tyre work		[redacted]	
8. Manual Handling, Ergonomics and Use of Mechanical Aids	• Systemic reliance on manual lifting, pushing and rolling of heavy tractor and off-road tyres leading to musculoskeletal disorders • Insufficient availability or inappropriate selection of mechanical aids such as tyre handlers, dollies or lifting attachments • Poor ergonomic design of workstations, tool storage and tyre racks increasing bending, twisting and over-reach • Lack of formal assessment of manual handling risks for tyre changing activit in workshops and field locations • Time pressure and productivity target that discourage the use hanical aids or team lifting • Inadequate traini and supe in correct use of mec dling equipment	High	[redacted]	Medium
9. Remote, After-Hours and Field Tyre Changing Management	• Tyre changing conduct ote or off-road locations without adequate communication, supervision or emergency support • Lack of formal journey management and lone worker systems for after-hours or remote tyre repairs • Inadequate assessment of environmental conditions (weather, terrain, traffic, wildlife) at field sites • Insufficient equipment and resources carried in service vehicles to complete tyre tasks safely in the field	High	[redacted]	Medium

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	• Fatigue associated with extended shifts, night work and emergency call-outs for tyre failures • Poor location information and access arrangements for emergency services responding to incidents at remote tyre sites		[redacted]	
10. Emergency Preparedness, First Aid and Incident Response	• Lack of planning for emergencies arising from tyre explosions, vehicle collapse, crush injuries or air hose failures • Inadequate first aid resources and trained personnel for typical tyre-related injuries (crush, lacerations, eye injuries, fractures) • No clear procedures for raising the alarm and coordinating [redacted] in workshops or remote tyre sites • Insufficient practice of emergency drills, leading to confusion during real incidents • Failure to preserve incident scene or collect accurate information for investigation and prevention • Psychological impact on workers exposed to serious tyre-related traumatic events not being recognised or managed	High	[redacted]	Medium
11. Personal Protective Equipment (PPE) and Workplace Environment	• Over-reliance on PPE instead of higher order controls in tyre changing systems • Inconsistent PPE standards between sites, shifts and contractors leading to gaps in protection	Medium	[redacted]	Low

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	• Incorrect selection, fitting, maintenance or replacement of PPE such as safety footwear, eye and hearing protection, gloves and high-visibility clothing • Inadequate protection from environmental conditions (heat, cold, UV, rain) during field tyre work, leading to heat stress or reduced concentration • Lack of enforcement of PPE requirements by supervisors and managers		[redacted]	
12. Monitoring, Review and Continuous Improvement	• Failure to monitor performance of tyre changing systems, leading to undetected non-compliance and drift from safe practice • Lack of meaningful performance indicators specific to tyre-related risks and incidents • Infrequent or superficial inspections and audits of tyre changing activities, equipment and documentation • Inadequate review of incident, near miss and inspection data to identify systemic issues and trends • Poor communication of lessons learned, resulting in repeated tyre-related incidents across different sites or teams	Medium	[redacted]	Low

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			[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