



Australian Government

PMBPROD336A Inspect heavy off-the-road tyres

Release 1

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Modification History

Release 1 - New unit of competency

Unit Descriptor

This unit of competency covers the skills and knowledge needed to inspect tyres defined by AS 4457.2-2008 Earth-moving machinery - Off-the-road wheels, rims and tyres - Maintenance and repair - Tyres (or its authorised replacement) or similar tyres.

Application of the Unit

This competency is typically performed by advanced operators applying knowledge of materials, knowledge and basic understanding of the tyre design, and product purpose and processes to the inspection of tyres for defects that would preclude them being repaired or making some preliminary judgements as to the extent and nature of any required repairs. It also requires the use of some discretion and judgment to recognise and resolve a range of problems.

This unit should be interpreted in line with AS 4457.2-2008 Earth-moving machinery - Off-the-road wheels, rims and tyres - Maintenance and repair - Tyres.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

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|---|------------------------|-----|---|
| 1 | Prepare for inspection | 1.1 | Complete initial documentation for tyre |
| | | 1.2 | Raise all relevant paperwork as required |
| | | 1.3 | Clean tyre ready for inspection |
| | | 1.4 | Position tyre securely for inspection |
| 2 | Inspect tyre | 2.1 | Identify injuries to tyre both internally and externally |
| | | 2.2 | Investigate injuries for extent and nature |
| | | 2.3 | Identify injuries/tyres which are irreparable |
| | | 2.4 | Determine injuries which should be repaired |
| | | 2.5 | Mark areas requiring repair |
| | | 2.6 | Categorise injuries to standard |
| | | 2.7 | Determine overall reparability of the tyre |
| 3 | Finalise inspection | 3.1 | Complete any required internal paperwork |
| | | 3.2 | Prepare customer quotation as required |
| | | 3.3 | Communicate with customer in accordance with procedures |
| | | 3.4 | Make arrangements for tyre to be repaired, scrapped or returned as required |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- use of inspection tools
- communicating effectively
- analytical skills
- working safely in accordance with operational requirements and safe systems of work
- ability to read and interpret typical product specifications, job sheets and material labels as provided to operators
- writing to the level of completing workplace forms and production reports

Required knowledge

Required knowledge includes:

- organisation's procedures
- heavy off-the-road (HOTR) tyre construction
- radial and bias ply construction
- methods of identifying lug/position identification
- AS 4457.2-2008 Earth-moving machinery - Off-the-road wheels, rims and tyres - Maintenance and repair - Tyres
- hazards and hazard controls associated with HOTR tyre inspection
- indicators of tyre injuries
- injuries which do not need repairing, injuries which are repairable and injuries which either individually or in the sum should not be repaired
- reporting procedures

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria required skills and knowledge range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Critical aspects for assessment and evidence are:

- tyre injury is identified and appropriate action determined
- consistent application of inspection and testing standards
- safety procedures are always followed.

Context of and specific resources for assessment

Assessment will occur on an HOTR tyre repair facility. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility, such as an office or lunchroom. No other special resources are required.

Method of assessment

Competence in this unit may be assessed:

- by observation over a range of tyre inspection procedures undertaken in the workplace
- in a situation allowing for the generation of evidence of the ability to respond to problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that appropriate practical/simulation assessment will be combined with targeted questioning to assess the required knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment.

Guidance information for assessment

Assessment processes and techniques must be appropriate to the language, competency and safety requirements of the site and consistent with workplace systems or procedures.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Initial documentation

Completing initial documentation will include ensuring that:

- the serial number is correct
- the correct tyre is inspected

Injuries to tyres

Injuries to tyres may include, but are not limited to:

- cuts, abrasion, splits, cracks and crazing
- separations within the structure
- deformities both surface and internal
- penetrations into and through the casing/carcass

Injuries

Injuries may include, but are not limited to:

- injuries which do not need repair and should be returned to the customer to be used as is
- injuries which should be repaired
- injuries which are beyond repair and so the tyre should be scrapped

Standards

Standards may include, but are not limited to:

- AS 4457.2-2008 Earth-moving machinery - Off-the-road wheels, rims and tyres - Maintenance and repair – Tyres
- Rubber Manufacturer's Association of America (RMA)
- Supplier standards, such as technical data sheets and manuals
- internal organisational standards

Procedures

Procedures may be written, verbal, computer-based or in some other form. They may include, but are not limited to:

- all work instructions
- standard operating procedures
- formulas/recipes
- batch sheets
- temporary instructions
- any similar instructions provided for the smooth running of the plant
- good operating practice as may be defined by

industry codes of practice

Procedures would be expected to comply with any relevant government regulations.

Paperwork

Paperwork may be paper or electronic-based.

Appropriate action

Appropriate action includes, but is not limited to:

- determining problems needing action
- accessing and applying relevant technical and plant data
- applying appropriate problem solving techniques to determine possible fault causes, within manufacturer guidelines and safety procedures
- rectifying problem using appropriate solution within area of responsibility
- following through items initiated until final resolution has occurred
- reporting problems outside area of responsibility/ability to designated person

Health, safety and environment (HSE)

All operations to which this unit applies are subject to stringent HSE requirements, which may be imposed through state or federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between Performance Criteria and HSE requirements, the HSE requirements take precedence.

Unit Sector(s)

Not applicable.

Custom Content Section

Not applicable.