



Australian Government

Department of Education, Employment and Workplace Relations

PMBPROD324B Inspect tyres for retreading

Revision Number: 1

PMBPROD324B Inspect tyres for retreading

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers the inspection of used tyres to determine their suitability for retreading and the resolving of routine and non-routine problems.

Application of the Unit

Application of this unit

This competency is typically performed by advanced operators applying knowledge of materials, product purpose and processes to the inspection of second hand tyres for defects that would preclude use as a retread. It also requires using a range of well developed skills requiring some discretion and judgment to recognise and resolve a range of problems.

The operator will:

- check settings and adjustments of inspection equipment
- inspect tyres by eye and/ or electronically
- repair minor holes and cracks in the casing
- solve inspection equipment and process problems, seeking guidance where necessary or appropriate.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

The required outcomes described in this unit contain applicable Employability Skills. The Employability Skills Summary of the qualification(s) in which this unit is packaged will assist in identifying Employability Skill requirements.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.
1. Plan own work requirements.	1.1 Identify the most appropriate equipment to be used for inspection and upstream and downstream operations from production plan or request. 1.2 Identify tyres to be inspected and check equipment to be used. 1.3 Implement measures to control identified hazards in line with procedures and duty of care.
2. Conduct tyre inspection.	2.1 Identify quality specifications and standard operating procedures for rejecting tyres for retreading 2.2 Check casings for conformity with specification requirements. 2.3 Tag tyres suitable for retreading following workplace procedures 2.4 Discard non-conforming tyres in accordance with workplace procedures. 2.5 Repair minor holes in casings of retreadables, as required. 2.6 Clean, adjust and lubricate equipment as required.
4. Anticipate and solve problems.	4.1 Recognise a problem or a potential problem. 4.2 Determine problems needing priority action. 4.3 Refer problems outside area of responsibility to appropriate person, with possible causes. 4.4 Seek information and assistance as required, to solve problems. 4.5 Solve problems within area of responsibility. 4.6 Follow through items initiated until final resolution has occurred.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Application of knowledge of tyre construction and technology, inspection methods and equipment sufficient to recognise tyre conditions which may lead to out of specification retreads. For example, weather checking can be difficult when a tire is under-inflated. The inspector will need to stress the sidewalls by hand or with an inspection spreader. Knowledge and ability to implement organization procedures, quality requirements at each inspection stage, and relevant regulatory requirements, within appropriate time constraints and work standards.

Application of the knowledge of managing risks using the hierarchy of controls applied to tyre inspection methods. Application of approved hazard control and safety procedures and the use of PPE in relation to handling materials, equipment operation and cleanup.

Knowledge and skills in tyre inspection and retreading process sufficient for consistent identification of good quality tyres for retreading:

- characteristics of finished and second hand tyres in relation to the impact of the retread process on product quality and safety
- importance of tyre size, speed rating and aspect ratio markings of tyres on inspection decisions
- function and operating principles of inspection equipment
- impact of significantly faulty tyres falsely passing inspection
- correct selection and use of equipment, materials, processes and procedures.

Competence also includes the ability to:

- plan own work, including predicting consequences and identifying improvements
- maintain inspection output and product quality using appropriate instruments, controls, test information and readings
- identify and describe own role and role of others involved directly in the retreading process.
- identify factors which may affect product quality or production output and appropriate remedies
- identify when assistance is required to solve problems.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets and material labels as provided to operators.

Writing is required to the level of completing workplace forms and production reports.

Basic numeracy is required, eg to determine how many 2 kg, 3 kg and 5 kg bags are needed to make up a requirement for 50 kg.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

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

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- identify critical tyre properties and tyre inspection criteria in relation to the retreading process and the end product
- make adjustments to the inspection process as required
- identify and take appropriate action on inspection problems and potential problems.

Consistent performance should be demonstrated. For example, look to see that:

- inspection is done thoroughly and consistently
- all safety procedures are always followed.

Assessment method and context

Assessment will occur using industrial tyre inspection methods and equipment and will be undertaken in a work-like environment.

Competence in this unit may be assessed:

- by using an appropriate tyre inspection method and/ or machine
- 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 practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. 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.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

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. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

The competency applies to the initial inspection of tyres for retreading. It covers the operation of inspection equipment and all relevant additional equipment where that equipment is integral to the tyre inspection process.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Tools and equipment

This competency includes use of equipment and tools such as:

- inspection equipment (such as NDI scanning equipment, nail hole detector, high pressure tester, x-ray or ultrasound)
- manual handling aids such as handcarts and overhead tracks
- hand held lights
- basic hand tools required for inspecting holes in the tyre casing
- relevant personal protective equipment.

Hazards

Typical hazards include:

- dust
- manual handling hazards
- noise.

Problems

'Anticipate and solve problems' means resolve a wide range of routine and non-routine problems, using product and process knowledge to develop solutions to problems which do not have a known solution/s recorded in the procedures.

Typical process and product problems may include:

- equipment malfunction
- detecting hidden damage
- blow-outs
- punctures
- broken chords
- cord body fabric damage
- wear patterns.

Appropriate action for problems outside area of responsibility may be reporting to an appropriate person.

Appropriate action for solving problems within area of responsibility includes asking questions and seeking assistance from appropriate persons/sources.

Variables

Key variables to be monitored include:

- tire size
- speed ratings
- aspect ration markings
- pressure
- discolouration.
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Unit Sector(s)

Not applicable.