



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **PMBPROD326B Inspect tyres**

**Revision Number: 1**

## **PMBPROD326B Inspect tyres**

### **Modification History**

Not applicable.

### **Unit Descriptor**

#### **Unit descriptor**

This competency covers the testing and inspection of tyres and the solving 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 in tyre inspection and testing to ensure quality, in both performance and safety, of finished tyres. It also requires using a range of well developed skills requiring some discretion and judgement to recognise and resolve a range of problems.

The operator will:

- inspect tyres visually, manually and by use of inspection equipment
- check settings and adjustments of equipment
- monitor equipment operation and correct variations
- identify non-conforming products and take appropriate action (eg ensuring discarded products are repaired where possible and/or scraped tyres are disposed of in accordance with workplace instructions)
- solve inspection and equipment 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

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
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

<b>ELEMENT</b> ELEMENT	<b>PERFORMANCE CRITERIA</b> 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 and processes to be used for tyre inspection and testing. 1.2 Identify different tyre types, identification codings and quality standards required. 1.3 Implement measures to control identified hazards in line with procedures and duty of care. 1.4 Identify repair, scrap tyre and housekeeping needs
2. Start up testing process to procedures.	2.1 Conduct visual inspection of tyres to spot obvious defects. 2.2 Manually locate bumps or dips. 2.3 Check inspection equipment settings and make adjustments as required. 2.4 Complete other pre-start checks in accordance with procedures.
3. Operate tyre testing machines to procedures.	3.1 Operate machine to rotate and test tyres, following standard operating procedures and State OHS requirements. 3.2 Monitor product quality in accordance with procedures. 3.3 Clean, adjust and lubricate equipment as required. 3.4 Shut down equipment to procedures, in normal or emergency situations. 3.5 Complete relevant documentation.
4. Respond to faults.	4.1 Identify possible routine and non-routine faults in the tyre. 4.2 Determine tyres needing action. 4.3 Determine possible fault causes. 4.4 Report faults outside area of responsibility to designated person. 4.5 Maintain appropriate records and log books to meet procedures/work instructions.
5. Stamp, label and sort tyres.	5.1 Stamp identification number on each tyre. 5.2 Label tyres with weekly code. 5.3 Sort passed tyres by coding.

<b>ELEMENT</b> ELEMENT	<b>PERFORMANCE CRITERIA</b> Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.
	5.4 Sort tyres for repair or scrap.

## Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Application of knowledge of the materials, equipment and testing process sufficient to recognise material and equipment conditions which may lead to out of specification production.

Knowledge and ability to implement organization procedures, the quality requirements at each production 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 the tyre inspection/testing processes. 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 testing equipment, including:

- different tyre types and their construction and material content
- quality requirements for the different types of tyres
- function and operating principles of tyre testing equipment, machine components and ancillary equipment
- correct selection and use of equipment and inspection/testing procedures
- waste management and importance of repairing non-conforming products.

Competence also includes the ability to:

- plan own work, including predicting consequences and identifying improvements
- maintain 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 inspection/testing process
- identify what faults the operator is able to recognise manually and when assistance by equipment is required.

### Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets and machine control panels such as those displaying SPC information..

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 inspection criteria in relation to the end product
- make adjustments to inspections/testing process and equipment as required
- identify and take appropriate action on problems and potential problems.

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

- tyre inspection and testing standards are met consistently
- all safety procedures are always followed.

## **Assessment method and context**

Assessment will occur on an industrial tyre inspection/testing equipment and will be undertaken in a work-like environment.

Competence in this unit may be assessed:

- by observation over a range of tyre inspection/testing 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 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**

This competency applies to the inspection and testing of tyres within the rubber industry. It includes the operation of all relevant additional equipment where that equipment is integral to the inspection/testing 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:

- tyre testing machines such as x-ray, uniformity, bulge test, and tyre balance test machines
- hand tools used in the inspection/testing process
- material loading equipment used for loading of tyres
- relevant personal protective equipment.

### **Hazards**

Typical hazards include:

- manual handling hazards
- equipment operations
- dust/ vapours.

### **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 routine faults include:

- bulges in sidewalls
- deformation
- damaged carcass
- offset
- snaking
- cuts.

Typical inspection/testing problems may include:

- equipment malfunction
- incorrect set-up of testing machine to tyre type
- detecting hidden damage.

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:

- colour
- product weight



- product integrity and general conformance to specification/sample.
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## **Unit Sector(s)**

Not applicable.