



**Australian Government**

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

# **RIISAM210A Remove and fit wheel assemblies**

**Release: 1**

## **RIISAM210A Remove and fit wheel assemblies**

### **Modification History**

Not applicable.

### **Unit Descriptor**

This unit covers the removal and fitting of wheel assemblies in resources and infrastructure industries. It includes planning and preparing for work; assessing the risk in wheel assembly removal; removing wheel assemblies; inspecting wheel assemblies and fasteners; and fitting wheel assemblies.

### **Application of the Unit**

This unit is applicable to all light and heavy wheeled vehicles and is appropriate for those working in operational, service and maintenance roles, at worksites within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining

### **Licensing/Regulatory Information**

Refer to Unit Descriptor.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

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| Elements describe the essential outcomes of a unit of competency. | Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide. |
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## Elements and Performance Criteria

| ELEMENT                                  | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| 1. Plan for work                         | <p>1.1. Access, interpret and apply <b>compliance documentation</b> relevant to the removal and fitting of wheel assemblies</p> <p>1.2. Obtain, interpret and clarify work requirement and safety information and procedures, in accordance with legislation and site procedures, before proceeding</p> <p>1.3. Identify site risks and hazards, including equipment to be used</p> <p>1.4. Set up maintenance schedules based on tyre usage, wear or condition in accordance with legislation, manufacturer and/or site procedures</p> <p>1.5. Access and apply safety information and procedures throughout the operations</p> |
| 2. Prepare for work                      | <p>2.1. Identify <b>wheel and/or rim</b> type, and mounting system</p> <p>2.2. Prepare, clean and inspect <b>wheel assemblies</b> in accordance with <b>legislation</b>, manufacturer and/or site procedures</p> <p>2.3. Select and check <b>tools</b> are fit for purpose in accordance with manufacturer and/or site procedures</p>                                                                                                                                                                                                                                                                                            |
| 3. Assess risk in wheel assembly removal | <p>3.1. Identify and control any <b>hazardous conditions of the work environment</b> before proceeding</p> <p>3.2. Identify and control any <b>hazardous conditions of the assembly</b> before proceeding</p> <p>3.3. Identify wheel by construction and mounting type</p> <p>3.4. Access and interpret correct information from appropriate manufacturer specifications and site procedures</p> <p>3.5. Identify when tyre(s) require deflation before removal from equipment</p>                                                                                                                                               |
| 4. Remove wheel assembly                 | <p>4.1. Plan sequence of work, noting points where safety checks are required</p> <p>4.2. Identify and apply <b>methods</b> for raising and supporting equipment in accordance with</p>                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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|                                           | <p>site procedures</p> <p>4.3. Identify and apply methods for removing the wheel in accordance with site procedures</p> <p>4.4. Identify and apply site procedure for transport and storage of wheel</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5. Inspect wheel assemblies and fasteners | <p>5.1. Access and apply site procedure for inspection of wheel assemblies and <b>fasteners</b></p> <p>5.2. Clean and visually inspect wheel assembly for damage, wear, corrosion foreign material, cracks, and compatibility of components</p> <p>5.3. Clean and visually inspect mounting surfaces and fasteners for damage, wear, corrosion, foreign material and cracks</p> <p>5.4. Check specifications and compare to conditions found</p> <p>5.5. Report and action findings in accordance with site procedures</p> <p>5.6. Discard unusable fasteners in accordance with manufacturers or site procedures</p>                                                                                                                                |
| 6. Fit wheel assembly                     | <p>6.1. Access and interpret information from appropriate manufacturer specifications and site procedures</p> <p>6.2. Identify and apply methods in accordance with site procedures for fitting the wheel</p> <p>6.3. Ensure that tightening sequence, torque settings and inflation pressure are in accordance with manufacturer's specifications and site procedures</p> <p>6.4. Check wheel assembly for correct fitment including alignment</p> <p>6.5. Identify and apply methods for lowering equipment in accordance with site procedures</p> <p>6.6. Re-torque as required in accordance with site procedures and manufacturer's specifications</p> <p>6.7. Record <b>data</b> and all work performed in accordance with site procedures</p> |

## Required Skills and Knowledge

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

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to remove and fit wheel assemblies:

- apply legislative, organisation and site requirements and procedures
- apply risk assessment procedures
- apply enterprise procedures
- observe safety precautions
- access, interpret and apply technical information
- apply lift and support procedures for vehicles and/or machines
- apply wheel changing requirements and procedures including: removing and fitting wheel or rim
- apply tyre or tube deflating and inflating procedures
- apply tyre and wheel assembly handle procedures
- apply wheel assembly fastener tightening, torque and re-torque procedures

### Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to remove and fit wheel assemblies:

- potential hazards and their identification
- safety precautions to be observed throughout the removal and fitting process
- rubber tyred equipment safety requirements
- types and classifications of wheels and rims
- soft ground support procedures and systems
- personal safety requirements
- process used in undoing wheel or rim fasteners
- process used in torque measurement when tightening wheel or rim fasteners
- process used to inflate and deflate tyres
- distinguish the difference between a rim and a wheel
- jacking and support procedures
- manual handling techniques
- identifying components for compatibility

## 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.

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| <b>Overview of assessment</b>                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b> | <p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for removing and fitting of wheel assemblies</li> <li>• implementation of requirements, procedures and techniques for the safe, effective and efficient completion of the removing and fitting of wheel assemblies</li> <li>• working with others to undertake and complete the removal and fitting of wheel assemblies that meets all of the required outcomes</li> <li>• consistent timely completion of removing and fitting of wheel assemblies that safely, effectively and efficiently meets the required outcomes</li> </ul> |
| <b>Context of and specific resources for assessment</b>                                             | <ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</li> <li>• The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</li> <li>• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity.</li> <li>• Aboriginal people and other people from a non</li> </ul>                                                                                     |

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|                                            | <p>English speaking background may have second language issues.</p> <ul style="list-style-type: none"> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate learning and/or assessment support when required.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Method of assessment</b>                | <p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes</li> <li>• consistently achieving the required outcomes</li> </ul> </li> <li>• first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• working with others to undertake and complete the removal and fitting of wheel assemblies</li> </ul> </li> </ul> |
| <b>Guidance information for assessment</b> | <p>Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## 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. Bold italicised wording, if used in the performance criteria, is detailed below. 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) may also be included.

|                                                                     |                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Relevant compliance documentation</b><br>may include:            | <ul style="list-style-type: none"> <li>• legislative, organisation and site requirements and procedures</li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• code of practice</li> <li>• Employment and workplace relations legislation</li> <li>• Equal Employment Opportunity and Disability Discrimination legislation</li> </ul> |
| <b>Information</b> may include:                                     | <ul style="list-style-type: none"> <li>• tagging out and immobilisation of equipment</li> <li>• jacking points</li> <li>• for specifications for torque settings and tightening sequences</li> <li>• inflation pressure</li> </ul>                                                                                                                                                 |
| <b>Wheels and Rim</b> may include:                                  | <ul style="list-style-type: none"> <li>• rim or hub mounted split rim</li> <li>• safety lock rim</li> <li>• split rim, forklift or cranes</li> <li>• rim or hub mounted multi piece rim</li> <li>• one piece wheel/rim</li> </ul>                                                                                                                                                  |
| <b>Wheel assemblies</b>                                             | <ul style="list-style-type: none"> <li>• tyre and rim</li> <li>• tyre and wheel mounted to a wheel</li> </ul>                                                                                                                                                                                                                                                                      |
| <b>Tools</b> may include:                                           | <ul style="list-style-type: none"> <li>• lifting equipment</li> <li>• hand tools, power tools</li> <li>• jacks and support stands</li> <li>• personal protective equipment (PPE)</li> </ul>                                                                                                                                                                                        |
| <b>Hazardous conditions of the working environment</b> may include: | <ul style="list-style-type: none"> <li>• changing ground conditions</li> <li>• dust</li> <li>• noise</li> <li>• weather</li> <li>• traffic interaction</li> <li>• personnel interaction</li> </ul>                                                                                                                                                                                 |
| <b>Hazardous conditions of the assembly</b> may include:            | <ul style="list-style-type: none"> <li>• tyre defects</li> <li>• distortion</li> <li>• structural damage</li> </ul>                                                                                                                                                                                                                                                                |

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|                                                                          | <ul style="list-style-type: none"> <li>• cuts and damage</li> <li>• potential internal fire/explosion</li> <li>• potential external fire/tyre burst</li> <li>• under inflated tyre</li> <li>• wheel and rim component defects</li> <li>• cracks</li> <li>• distortion</li> <li>• wear</li> <li>• corrosion</li> <li>• dislodged components</li> <li>• leakage</li> <li>• mechanical damage</li> <li>• valve gear</li> <li>• blocked valve</li> <li>• expired scheduled testing date</li> </ul> |
| <b>Methods</b> should apply to the following conditions and may include: | <ul style="list-style-type: none"> <li>• indoors or outdoors</li> <li>• level or uneven ground conditions</li> <li>• hard or soft ground conditions</li> <li>• workshop or mining area</li> <li>• surface or underground</li> <li>• wet or dry</li> <li>• night or day</li> <li>• standard or non standard heavy rims</li> </ul>                                                                                                                                                               |
| <b>Methods</b> include:                                                  | <ul style="list-style-type: none"> <li>• risk assessment procedures</li> <li>• personal safety aspects</li> <li>• raising and supporting vehicle safely</li> <li>• deflating and inflating tyres or tubes</li> <li>• removing and fitting wheel or rim</li> <li>• handling tyre and wheel assembly using the relevant equipment</li> <li>• tightening, torque and re-torque the assembly fasteners</li> </ul>                                                                                  |
| <b>Fasteners</b> may include:                                            | <ul style="list-style-type: none"> <li>• wedges</li> <li>• nuts</li> <li>• bolts</li> <li>• washers</li> <li>• studs</li> <li>• cleats</li> <li>• wedge bands</li> <li>• spacer bands</li> <li>• reducers</li> </ul>                                                                                                                                                                                                                                                                           |

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| <b>Data</b> may include: | <ul style="list-style-type: none"><li>• site maintenance records</li><li>• re-torque tags</li></ul> |
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## Unit Sector(s)

Service and Maintenance

## Competency field

Refer to Unit Sector(s).

## Co-requisite units

Not applicable.