



Australian Government

AURTTJ2002 Remove and refit wheel hubs and associated brake components

Release 1

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Modification History

Release	Comment
Release 1	<p>Replaces AURT217865A Remove and refit wheel hubs and associated brake components</p> <p>Unit code updated to meet policy requirements</p> <p>Reference to OHS legislation replaced with new WHS legislation</p> <p>Licensing statement added to unit descriptor</p>

Unit Descriptor

Unit descriptor	<p>This unit covers the competence to remove and refit wheel hubs and associated brake components necessary during the rectification of faults in steering and suspension systems.</p> <p>Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.</p>
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Application of the Unit

Application of the unit	<p>The unit applies to all types of wheel hubs and brake systems fitted to light vehicles, including 4WD vehicles and light commercial vehicles.</p> <p>Work involves removing and refitting various brake system components necessary to carry out required rectification procedures for steering and suspension systems.</p> <p>Work requires individuals to demonstrate discretion, judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	This unit contains employability skills.
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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. 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
<p>1. Prepare for work</p>	<p>1.1. Nature and scope of work requirements are identified and confirmed</p> <p>1.2. Information required for the work is accessed from manufacturer/component supplier specifications and interpreted</p> <p>1.3. WHS policies and procedures are observed throughout the work processes</p> <p>1.4. Components, tooling and equipment required for the work are identified, selected and prepared in accordance with site procedures</p> <p>1.5. Wheel hub and brake components to be removed and refitted are identified and prepared in accordance with manufacturer/component supplier and site procedures</p>
<p>2. Remove wheel hubs and associated brake components</p>	<p>2.1. System components are removed using hand tooling and specialist equipment without causing damage and are stored in an appropriate location</p> <p>2.2. Identified component faults are reported to the customer and discussed for further instructions</p>
<p>3. Refit and adjust wheel hubs and associated brake components</p>	<p>3.1. Removed components are examined for serviceability prior to commencing the refitting procedures</p> <p>3.2. Serviceable components are refitted according to manufacturer/component supplier specifications and instructions</p> <p>3.3. Fluids and lubricants required during the refitting procedures are used in accordance with WHS and manufacturer/component supplier specifications</p> <p>3.4. Refitted components are adjusted according to manufacturer/component supplier specifications</p>
<p>4. Prepare wheel hub and brake components for use</p>	<p>4.1. Work schedule documentation is completed</p> <p>4.2. Final inspection is made to ensure work is to workplace expectations</p> <p>4.3. Job card is processed in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- apply research and interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures
- apply analytical skills required for identification and analysis of technical information
- apply plain English literacy and communication skills in relation to dealing with customers and team members
- apply questioning and active listening skills for example when obtaining information from customers
- apply oral communication skills sufficient to convey information and concepts to customers
- apply planning and organising skills to own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance
- interact effectively with other persons both on a one-to-one basis and in groups, including understanding and responding to the needs of a customer and working effectively as a member of a team to achieve a shared goal
- establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage
- use mathematical ideas and techniques to correctly calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks
- use workplace technology related to removal and refitting of wheel hubs and associated brake components, including the use of measuring equipment, specialist tooling, computerised technology, and communication devices and the reporting/documenting of results

Required knowledge

A working knowledge of:

- WHS regulations/requirements, equipment, material and personal safety requirements
- dangers of working with raised vehicles
- principles of hydraulic brake system operation
- brake bleeding methods
- methods of using and applying lubricants and sealants
- methods of fitting gaskets and circlips
- types of wheel bearings and their adjustment methods

REQUIRED SKILLS AND KNOWLEDGE

- dismantling, assembling and adjusting procedures
- types and layout of service/repair manuals (hard copy and electronic)
- accessing/recording information from a computer

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>It is essential that competence is fully observed and there is ability to transfer competence to changing circumstances and to respond to unusual situations in the critical aspects of:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • conducting removal, replacement and tightening sequence and tensioning of wheel hub and brake components in accordance with workplace and manufacturer/component supplier requirements • completing work within workplace timeframes • wheel hub and brake components are presented to customer in compliance with workplace requirements
Context of, and specific resources for assessment	<p>Application of competence is to be assessed in the workplace or simulated worksite</p> <p>Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment is to comply with regulatory requirements, including, Australian Standards</p> <p>The following resources should be made available:</p> <ul style="list-style-type: none"> • workplace location or simulated workplace • material relevant to removal, fitting and adjustment of wheel hub and brake components • equipment, hand and power tooling appropriate to removal, fitting and adjustment of wheel hub and brake components • activities covering mandatory task requirements • specifications and work instructions

EVIDENCE GUIDE	
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the automotive industry's RS&R Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge</p> <p>Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies</p> <p>Assessment must confirm a reasonable inference that competence is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>It is preferable that assessment reflects a process rather than an event and occurs over a period of time to cover varying quality circumstances. Evidence of performance may be provided by customers, team leaders/members or other persons subject to agreed authentication arrangements</p> <p>Competence in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role</p>
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>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.</p>	
System components	<p>System components may include:</p> <ul style="list-style-type: none"> • brake drums • brake shoes

RANGE STATEMENT	
	<ul style="list-style-type: none"> • disc brake calipers • wheel cylinders • disc pads • disc rotors • wheel hubs • wheel bearings • ABS rotors and sensors
WHS	WHS requirements are to be in accordance with legislation/regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices
Safe operating procedures	Safe operating procedures are to include, but are not limited to operational risk assessment and treatments associated with vehicular movement, toxic substances, electrical safety, machinery movement and operation, manual and mechanical lifting and shifting, working in proximity to others and site visitors
Emergency procedures	Emergency procedures related to this unit are to include, but are not limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation
Environmental requirements	Environmental requirements are to include, but are not limited to waste management, noise, dust and clean-up management
Quality requirements	Quality requirements are to include, but are not limited to regulations, including Australian Standards, internal company quality policy and standards and enterprise operations and procedures

RANGE STATEMENT	
Statutory/regulatory authorities	Statutory/regulatory authorities may include Federal, State/Territory and local authorities administering acts, regulations and codes of practice
Tooling and equipment	<p>Tooling and equipment may include:</p> <ul style="list-style-type: none"> • hand and power tooling • lifting equipment and support stands • dial indicators • torque wrenches • brake spring removing tool • brake bleeding equipment • wheel bearing removing tools • wheel bearing grease • brake fluid
Communications	Communications are to include, but are not limited to verbal and visual instructions, and fault reporting and may include site specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers
Information/documents	<p>Sources of information/documents may include:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches • safe work procedures related to the removal, fitting and adjustment of wheel hub and brake components • regulatory/legislative requirements pertaining to the automotive industry, including Australian Design Rules • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Australian Standards

Unit Sector(s)

Unit sector	Mechanical Miscellaneous
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Co-requisite units

Not applicable.

Competency field

Competency field	Technical - Wheels and Tyres
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