



**Australian Government**

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

# **AURT316171A Service and rectify faults in lift assisted suspension systems**

**Release: 1**

## AURT316171A Service and rectify faults in lift assisted suspension systems

### Modification History

Not Applicable

### Unit Descriptor

|                        |                                                                                                                                                                            |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Unit descriptor</b> | This unit covers the competence required to carry out specific servicing procedures and to locate and rectify faults in various types of lift assisted suspension systems. |
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### Application of the Unit

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Application of the unit</b> | <p>The unit includes identification and confirmation of work requirement, preparation for work, inspection and servicing of systems, rectification of system faults, final testing of the system and completion of work finalisation processes including clean-up and documentation.</p> <p>Work involves servicing various types of lift assisted suspension systems and rectifying faults identified during the servicing procedures.</p> <p>The unit applies to all types of lift assisted suspension systems fitted to light vehicles which may include 4WD and light commercial vehicles.</p> <p>Work requires individuals to demonstrate judgment and problem-solving skills in managing work activities and contributing to a productive team environment.</p> <p>Work is carried out in accordance with award.</p> |
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### Licensing/Regulatory Information

Not Applicable

### Pre-Requisites

|                           |  |  |
|---------------------------|--|--|
| <b>Prerequisite units</b> |  |  |
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| <b>Prerequisite units</b> |  |  |
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## Employability Skills Information

|                             |                                          |
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| <b>Employability skills</b> | This unit contains employability skills. |
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## 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Prepare for work                                   | <ul style="list-style-type: none"><li>1.1. Work instructions are used to determine job requirements including method, process and equipment</li><li>1.2. Job specifications are read and interpreted</li><li>1.3. OH&amp;S requirements, including personal safety needs, are observed throughout the work activity</li><li>1.4. Equipment and tooling are identified and checked for safe and effective operation</li><li>1.5. Procedures are determined to minimise task time</li></ul>                                                                                                                                                                                                                                                                                          |
| 2. Service lift assisted suspension systems           | <ul style="list-style-type: none"><li>2.1. Service information is accessed and interpreted prior to commencing servicing procedures</li><li>2.2. Current status and previous fault history of lift assisted suspension system is determined in conjunction with customer</li><li>2.3. Current status of lift assisted suspension system is confirmed through a road test program</li><li>2.4. Lift assisted suspension system is serviced in accordance with manufacturer/component supplier specifications and enterprise procedures</li><li>2.5. Fluids and lubricants are used in accordance with OH&amp;S and manufacturer/component supplier specifications</li><li>2.6. Used fluids and lubricants are disposed of according to enterprise and OH&amp;S procedures</li></ul> |
| 3. Rectify lift assisted suspension system faults     | <ul style="list-style-type: none"><li>3.1. Road test results are interpreted to verify system fault diagnosis</li><li>3.2. The customer is notified of fault(s) which are discussed to obtain agreement to carry out work</li><li>3.3. Faulty components are removed and replaced with approved replacement parts in accordance with workplace procedures and customer requirements</li><li>3.4. Faulty components are disposed of in accordance with workplace procedures and warranty requirements</li><li>3.5. System adjustments are completed relevant to components replaced</li></ul>                                                                                                                                                                                       |
| 4. Test and confirm system faults have been rectified | <ul style="list-style-type: none"><li>4.1. Test procedures are carried out to confirm rectification of system faults</li><li>4.2. Outcomes of rectification work are explained to the satisfaction of the customer to enable invoicing/ documentation to be completed</li><li>4.3. Documentation is completed in accordance with workplace/ customer requirements</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                        |

| ELEMENT                                      | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. Clean up work area and maintain equipment | 5.1. Material that can be reused is collected and stored<br>5.2. Waste and scrap is removed following workplace procedure<br>5.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures<br>5.4. Unserviceable equipment is tagged and faults identified in accordance with workplace requirements<br>5.5. Operator maintenance is completed in accordance with manufacturer/component supplier specifications and workplace procedures<br>5.6. Tooling and equipment is maintained in accordance with workplace procedures |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- collecting information from a variety of sources to ensure the major component can be serviced to achieve the manufacturer/component supplier intent
- discussing job card requirements and vehicle symptoms with the customer
- following up fault diagnosis outcomes, which may also require ongoing consultation with the customer to confirm a course of repair action
- servicing and fault rectification procedures need to be followed in a set order as specified in workshop manuals and other technical publications to achieve a serviceable outcome within efficient timeframes
- the servicing of components requires cooperative working arrangements with colleagues and supervision relating to sharing of specialist equipment, sharing of technical knowledge and the procurement of spare parts
- establishing 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
- using mathematical ideas and techniques to correctly calculate time, assess tolerances, apply measurements, calculate material requirements and establish quality checks
- using workplace technology related to the servicing and rectification of faults in lift assisted suspension systems, including the use of specialist tools, measuring equipment, computerised technology and communication devices and the reporting/recording of results

**REQUIRED SKILLS AND KNOWLEDGE****Required knowledge**

A working knowledge of:

- OH&S and environmental regulations/requirements, equipment, material and personal safety requirements
- principles of operation relating to various types of hydraulic and pneumatic lift assisted suspension systems
- construction and operation of major components
- system testing procedures
- servicing procedures
- road-testing techniques
- fault diagnostic methods and procedures
- methods of accessing and interpreting manufacturer/ component supplier specification charts
- enterprise procedures for reporting system faults and material defects
- safe methods of using lubricants and sealants
- methods and techniques for using specific precision measuring tools
- methods of using and interpreting results from specific test equipment
- enterprise and customer documentation
- work organisation and planning processes
- enterprise quality processes

## Evidence Guide

| <b>EVIDENCE GUIDE</b>                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Overview of assessment</b>                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>                                                                                                                    | <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"> <li>• observing safety procedures and requirements</li> <li>• communicating effectively with others involved or affected by the work</li> <li>• selection methods and techniques appropriate to the circumstances</li> <li>• completing preparatory activity in a systematic manner</li> <li>• completing fault diagnosis and analysis</li> <li>• completing servicing and fault rectification procedures to workplace and manufacturer/component supplier requirements</li> <li>• completing work within workplace timeframes</li> <li>• presentation of equipment to customer in compliance with workplace requirements</li> <li>• correctly completing job documentation</li> </ul> |
| <b>Context of, and specific resources for assessment</b>                                                                                                                                                               | <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 specified Australian Standards</p> <p>The following resources should be made available:</p> <ul style="list-style-type: none"> <li>• workplace location or simulated workplace</li> <li>• materials relevant to servicing and rectification of faults in lift assisted suspension systems</li> <li>• equipment, hand and power tools appropriate to servicing and rectification of faults in lift assisted suspension systems</li> <li>• activities covering mandatory task requirements</li> <li>• specifications and work instructions</li> </ul>                                                                             |
| <b>Method of assessment</b>                                                                                                                                                                                            | Assessment must satisfy the endorsed assessment guidelines of the automotive industry's RS&R Training Package                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

**EVIDENCE GUIDE**

Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge

Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies

Assessment may be applied under project related conditions and require evidence of process

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

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

Competence in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

**EVIDENCE GUIDE****Guidance information for assessment****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. 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.

**Lift assisted suspension systems**

Types of lift assisted suspension systems may include hydraulic and pneumatic

**Road test programs**

Types of road test programs may include off-road terrain, highway, city and proving ground facilities

**Test procedures**

Types of test procedures to confirm fault rectification may include shock absorber testing

**OH&S**

OH&S 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 tools and equipment, workplace environment and safety, handling of materials, 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

| <b>RANGE STATEMENT</b>                  |                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         | lifting and shifting, working in proximity to others and site visitors                                                                                                                                                                                                                                                                                                                 |
| <b>Emergency procedures</b>             | Emergency procedures related to this unit are to include, but may not limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation                                                                                                                                                                              |
| <b>Environmental requirements</b>       | Environmental requirements are to include, but are not limited to waste management, noise, dust and clean-up management                                                                                                                                                                                                                                                                |
| <b>Quality requirements</b>             | Quality requirements are to include, but are not limited to regulations including Australian Standards, internal enterprise quality policy and standards and enterprise operations and procedures                                                                                                                                                                                      |
| <b>Statutory/regulatory authorities</b> | Statutory/regulatory authorities may include Federal, State/Territory and local authorities administering acts, regulations and codes of practice                                                                                                                                                                                                                                      |
| <b>Tooling and equipment</b>            | Tooling and equipment may include hand tooling, meters, gauges, load testing devices, computerised diagnostic equipment and shock absorber testers                                                                                                                                                                                                                                     |
| <b>Materials</b>                        | Materials may include spare parts, lubricants, fluids and cleaning materials                                                                                                                                                                                                                                                                                                           |
| <b>Communications</b>                   | 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                                                                                                                                            |
| <b>Information/documents</b>            | <p>Sources of information/documents may include:</p> <ul style="list-style-type: none"> <li>• verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets and diagrams or sketches</li> <li>• safe work procedures related to the servicing and rectification of faults in lift assisted</li> </ul> |

**RANGE STATEMENT**

|  |                                                                                                                                                                                                                                                                                                                                                                                                                         |
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|  | <p>suspension systems</p> <ul style="list-style-type: none"><li>• regulatory/legislative requirements pertaining to automotive industry including Australian Design Rules</li><li>• engineer's design specifications and instructions</li><li>• organisation work specifications and requirements</li><li>• instructions issued by authorised enterprise or external personnel</li><li>• Australian Standards</li></ul> |
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**Unit Sector(s)**

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|--------------------|-----------|
| <b>Unit sector</b> | Technical |
|--------------------|-----------|

**Co-requisite units**

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| <b>Co-requisite units</b> |  |  |
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**Competency field**

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|-------------------------|--|
| <b>Competency field</b> |  |
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