



Australian Government

AURKTA011 Diagnose and repair mobile plant hydraulic systems

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to diagnose and repair faults in the hydraulic systems of mobile plant. It involves preparing for the task, selecting the correct diagnostic procedure, carrying out the diagnosis and the repair, performing post-repair testing, and completing workplace processes and documentation.

It applies to those working in the automotive service and repair industry. The mobile plant hydraulic systems include those in agricultural machinery or mobile plant machinery.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Competency Field

Mechanical - Mobile Plant

Unit Sector

Technical

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Prepare to diagnose and repair mobile plant hydraulic system	1.1 Job requirements are determined from workplace instructions 1.2 Mobile plant hydraulic system diagnostic information is sourced and interpreted 1.3 Diagnostic options are analysed and those most appropriate to the circumstances are selected

Elements Elements describe the essential outcomes.	Performance Criteria Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
	1.4 Hazards associated with the work are identified and risks are managed 1.5 Diagnostic tools and equipment are selected and checked for serviceability
2. Diagnose hydraulic system	2.1 <i>Diagnostic tests</i> are carried out according to manufacturer specifications, workplace procedures, and <i>safety and environmental requirements</i> 2.2 Faults are identified from diagnostic test results and causes of faults are determined 2.3 Diagnosis findings, including recommendations for necessary repairs or adjustments, are reported according to workplace procedures
3. Repair hydraulic system	3.1 Repair information is sourced and interpreted 3.2 Repair options are analysed and those most appropriate to the circumstances are selected 3.3 Repair tools, equipment and materials are selected and checked 3.4 <i>Repairs</i> and component replacements and adjustments are carried out according to manufacturer specifications, workplace procedures, and safety and environmental requirements, and without causing damage to components or systems 3.5 Post-repair testing is carried out according to workplace procedures to confirm fault rectification, and any further problems detected as having been introduced during the repair process are rectified
4. Complete work processes	4.1 Final inspection is made to ensure work is to workplace expectations and vehicle or machinery is presented ready for use 4.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 4.3 Tools and equipment are checked and stored according to workplace procedures 4.4 Workplace documentation is processed according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance and are not explicit in the performance criteria.

Skills	Description
Learning skills to:	locate appropriate sources of information efficiently.
Reading skills to:	- interpret information from manufacturer and workshop literature when seeking hydraulic system specifications and procedures - interpret hydraulic symbols and circuits.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting diagnostic findings, making repair recommendations, and recording parts and material used.
Oral communication skills to:	- clarify instructions - report diagnostic findings and make repair recommendations.
Numeracy skills to:	- measure hydraulic system components and use basic mathematical operations, including addition, subtraction, multiplication and division to calculate: - distances, tolerances and deviations from manufacturer specifications - hydraulic system pressures, forces, distances and temperature - read precision measuring equipment, such as micrometers, vernier calipers, and flow, temperature and pressure gauges.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	use hydraulic pressure gauges and flow meters.

Range of Conditions

This section specifies work environments and conditions that may affect performance.

Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Mobile plant hydraulic system</i> must include:	- reservoirs - accumulators - pumps - valves - actuators - motors - filters - hoses, pipes, fittings and couplings.
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Diagnostic tests must include:	• using pressure gauges and flow meters to determine system pressure settings, pump output and individual system component internal leakage.
Safety and environmental requirements must include:	• work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for: • using raising, lowering and supporting equipment • isolating and stabilising machines • working with stored hydraulic pressure • working with escaping high pressure oil • working with hot fluid hazards • environmental requirements, including procedures for trapping, storing and disposing of hydraulic fluid released from hydraulic systems.
Repairs must include:	• using pressure gauges and flow meters to set system pressure settings and adjust hydraulic valves.

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>