



Australian Government

MEM27024 Diagnose and rectify mobile plant hydrostatic systems

Release: 1

MEM27024 Diagnose and rectify mobile plant hydrostatic systems

Modification History

Release 1: New unit

Application

This unit of competency defines the skills and knowledge required to assess converter/transmission operation, and repair or replace faulty components.

It applies to hydrostatic systems used in mobile plant applications, including steering, transmissions and other closed circuit systems. It provides additional specialist skills and knowledge in hydrostatics and is designed to complement the MEM units relevant to the particular equipment systems.

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

Band: B

Unit Weight: 4

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations
MEM18055	Dismantle, replace and assemble engineering components
MEM27017	Maintain, fault find and rectify hydraulic systems for mobile plant

Competency Field

Fixed and Mobile Plant

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 1 | Determine job requirements | 1.1 Follow standard operating procedures (SOPs) |
| | | 1.2 Comply with work health and safety (WHS) requirements at all times |
| | | 1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 Identify job requirements from specifications, drawings, job sheets or work instructions |
| 2 | Identify and assess the function and operation of hydrostatic system components | 2.1 Identify motor and pump configurations used on equipment |
| | | 2.2 Identify pump types and control methods |
| | | 2.3 Check pump prime mover and alignment |
| | | 2.4 Identify charge pumps and assess operation against specifications |
| | | 2.5 Identify control valves and functions, including special control features |
| | | 2.6 Identify load sensors, other sensors, control modules, fieldbus circuits and other electrical or electronic components |
| | | 2.7 Locate and check filters, hydraulic lines, heat exchangers and reservoirs |
| | | 2.8 Test system operation and integrity according to manufacturer specifications |
| 3 | Repair/replace faulty components | 3.1 Interpret test results and determine components requiring repairs or replacement |
| | | 3.2 Determine component wear and clearances using appropriate test equipment and manufacturer recommendations |
| | | 3.3 Select replacement components using manufacturer's data |
| | | 3.4 Remove and refit components to hydrostatic system using appropriate tools, equipment and techniques |
| | | 3.5 Test performance of hydrostatic system against specification |

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

3.6 Record all test and rectification activities

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different 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.

Hydrostatic motor and pump configuration includes one (1) or more of the following:

- close coupled (motor and pump back to back units)
- split units (separate motor and pump) single and double
- multiple pump/motor layouts
- series and parallel operation
- fixed and variable displacement pumps

Control valves include one (1) or more of the following:

- hot oil shuttle valves
- cross-line relief valves
- counterbalance valves
- bypass valves
- differential lock valves
- parking brake valves

Hydrostatic special control features include one (1) or more of the following:

- inch control
- creep speed
- brake defeat function
- hydrostatic braking

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>