



Australian Government

MEM27025 Maintain, diagnose and rectify fluid power controls in mobile equipment

Release: 1

MEM27025 Maintain, diagnose and rectify fluid power controls in mobile equipment

Modification History

Release 1: New unit

Application

This unit of competency defines the skills and knowledge required to install and repair and/or rectify fluid power controls used in mobile equipment applications.

It applies to hydraulic fluid power systems control circuits and may also apply to mobile equipment using pneumatic systems. Where pneumatic controls are also to be maintained, relevant pneumatic units should also be selected.

It covers fault finding of fluid power systems control circuits, maintaining and repairing or replacing system control components, and checking and adjusting the operation of fluid power system controls. System circuit/components are identified, traced, inspected and operational function is assessed and verified using fluid power principles to predetermined specifications interpreted from data sheets and circuit diagrams.

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

Band: B

Unit Weight: 6

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
MEM27006	Diagnose and rectify batteries, low voltage sensors and circuits

MEM27017 Prepare composite or other substrate surfaces

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/inspect or install fluid power systems and controls | 2.1 Interpret and apply fluid power control principles and system/circuit diagrams |
| | | 2.2 Identify control modules, fieldbus wiring, sensors and control module locations for fluid power systems |
| | | 2.3 Conduct initial inspection of fluid power system/circuit components for compliance with specifications |
| | | 2.4 Undertake sequential installation according to manufacturer specifications and SOPs |
| 3 | Check and adjust fluid power system control sequence and operation | 3.1 Check controls and system operation against operational specifications using appropriate test equipment and application principles/techniques |
| | | 3.2 Perform adjustments to sequence system to meet/align to operational requirements and specifications |
| | | 3.3 Report modifications/alterations and according to SOPs |
| | | 3.4 Check controls and system operation and commission to specifications |

Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
4 Fault find fluid power systems control circuit	4.1 Interpret and apply system/circuit diagrams and data sheets
	4.2 Identify and inspect system/circuit components
	4.3 Trace system/circuit and diagnose action of components to identify and localise faults
	4.4 Test system/circuit parts using appropriate test equipment and application principles
	4.5 Assess system/circuit parts against operational specifications
	4.6 Localise fault condition at the component level
	4.7 Evaluate faulty condition, analyse root cause and plan corrective action
5 Maintain and repair or rectify system control components	5.1 Apply correct maintenance procedures
	5.2 Select and apply repair procedures using appropriate tools, equipment and techniques
	5.3 Test faulty items, repair or replace using sequential installation procedures according to manufacturer recommendations
	5.4 Select replacement items from appropriate sources
	5.5 Reassemble system control components according to specifications
6 Check and adjust sequence of fluid power system controls	6.1 Identify circuit sensors and controllers using circuit diagrams and fluid power system control principles
	6.2 Make necessary adjustments to sequence system control circuit to meet operational specification
	6.3 Check and verify correct operation of system control circuit against operational specification
	6.4 Commission fluid power system controls to specifications
	6.5 Adopt appropriate follow-up procedures
	6.6 Complete service/maintenance report

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.

- Fluid power system controls include one (1) or more of the following:**
- fieldbus system control unit
 - integrated or separate measurement/testing/data logging equipment
 - electronic proportioning and bus systems
 - proportional and servo controlled valving and the associated electronic amplifiers and drivers
 - joystick
 - controller variable and/or digital inputs and outputs
 - sensors
 - digital/analog transducers and proximity switches
 - transducers
 - timers
 - counters
 - ancillary equipment

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>