Australian Government

MEM18053 Modify fluid power control systems

Release: 2

MEM18053 Modify fluid power control systems

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM18053 Modify fluid power control systems (Release 1).

Release 1. Supersedes and is equivalent to MEM18053B Modify fluid power control systems.

Application

This unit of competency defines the skills and knowledge required to check and test software programs, control system inputs and outputs, repair faulty system inputs and outputs, and prepare a service report.

It covers the skills required to alter the control parameters of fluid power control systems by system modification, this includes the ability to assess system performance based on sound working knowledge of established principles, methods and procedures.

System specifications are interpreted and understood from data sheets, circuit diagrams and flow diagrams.

Where equipment condition monitoring and recording only is required to be performed then unit MEM18010 Perform equipment condition monitoring and recording should also be selected.

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
MEM12024	Perform computations
MEM12025	Use graphical techniques and perform simple statistical computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities

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MEM16006	Organise and communicate information
MEM16010	Write reports
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations
MEM18003	Use tools for precision work
MEM18006	Perform precision fitting of engineering components
MEM18018	Maintain pneumatic system components
MEM18019	Maintain pneumatic systems
MEM18020	Maintain hydraulic system components
MEM18021	Maintain hydraulic systems
MEM18022	Maintain fluid power controls
MEM18023	Modify fluid power system operation
MEM18055	Dismantle, replace and assemble engineering components

Competency Field

Maintenance and diagnostics

Elements and Performance Criteria

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

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Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
2	**Check/test control software program**	2.1	Check program steps against manufacturers' and site specifications using schematics, circuit and ladder diagrams and determine and record deviations
3	**Correct or modify control system software/program**	3.1	Correct and align program deviations to specification requirements
		3.2	Undertake modifications to program to specification requirements
		3.3	Back up and record modified program
4	**Check/test control system inputs/outputs**	4.1	Check and assess input/output signals against operational specifications using appropriate tools, equipment and techniques
		4.2	Identify and repair and record/report faulty signals to appropriate personnel
5	**Repair faulty control system input/output**	5.1	Repair and/or replace faulty signal source
		5.2	Test repaired/replaced signal source for correct operation in system and commission in compliance to operational specifications
6	**Prepare service report**	6.1	Prepare and complete a service report and include recommendations for improvement and repeat downtime avoidance analysis in accordance with SOPs

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.

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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.

Control system includes one (1) or more of the following:	• programmable controllers (PCs) • distributed control system (DCS) • relay logic (electric-hydraulic-pneumatic)
Modifications to program includes one (1) or more of the following:	• software timers • gates • associated equipment • flow • ladder and logic diagrams
Fault-finding of system hardware input/outputs include one (1) or more of the following:	• input/output circuitry • cards • external sensors • limits • mnemonic coding and associated equipment

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM18053 Modify fluid power control systems (Release 1).

Release 1. Supersedes and is equivalent to MEM18053B Modify fluid power control systems.

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2

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