



Australian Government

MEM18020 Maintain hydraulic system components

Release: 2

MEM18020 Maintain hydraulic system components

Modification History

Release 2. Quantum of hours of workplace practice removed. Supersedes and is equivalent to MEM18020 Maintain hydraulic system components (Release 1).

Release 1. Supersedes and is equivalent to MEM18020B Maintain hydraulic system components.

Application

This unit of competency defines the skills and knowledge required to check hydraulic system components, identify, and repair or replace faulty components.

Hydraulic system components are identified and inspected and assessed using fluid power principles to predetermined specifications interpreted from data sheets and circuits diagrams.

Where straightforward removals/replacement of components from a hydraulic system is required unit MEM18055 Dismantle, replace and assemble engineering components and unit MEM18071 Connect and disconnect fluid conveying system components, should be selected as appropriate.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
MEM12024	Perform computations
MEM13015	Work safely and effectively in manufacturing and engineering
MEM14006	Plan work activities
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations

MEM18003	Use tools for precision work
MEM18006	Perform precision fitting of engineering components
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
2	Check hydraulic system components	2.1	Identify the characteristics and operational function of each system component
		2.2	Inspect and test the operational function of each component
		2.3	Assess correct operation of each component against specifications
3	Identify and repair or replace faulty hydraulic system components	3.1	Localise faulty system components and confirm malfunction by inspection and testing using fluid power principles, procedures and safety requirements
		3.2	Dismantle faulty system components and repair to manufacturers'/site specifications

Elements describe the essential outcomes.

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

- 3.3 Select replacement parts from appropriate sources
- 3.4 Reassemble system components and test for correct operation and assessment against specifications
- 3.5 Confirm correct operation of the hydraulic system according to SOPs
- 3.6 Adopt appropriate follow-up procedures
- 3.7 Complete service reports

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.

Hydraulic system components include one (1) or more of the following:

- static and dynamic seals
- linear and semi-rotary actuators
- fixed and variable displacement pumps
- pressure, directional and flow control valves
- hydraulic motors
- reservoirs
- contamination control components (filtration)
- fluid conductors/fittings
- other associated equipment

Unit Mapping Information

Release 2. Supersedes and is equivalent to MEM18020 Maintain hydraulic system components (Release 1).

Release 1. Supersedes and is equivalent to MEM18020B Maintain hydraulic system components.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MEM18020 Maintain hydraulic system components

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications, charts, lists, drawings and other applicable reference documents to maintain hydraulic system components
- inspecting and testing hydraulic system components to predetermined specifications using fluid power principles
- checking component parts visually and dimensionally for compliance to specification and, where appropriate, marking faulty parts for repair, replacement or adjustment
- dismantling and repairing faulty system components, including selecting replacement parts from manufacturers'/suppliers' catalogues, to site or manufacturers' specifications
- assembling and testing hydraulic components for correct operation and compliance to specifications
- checking the operation of the hydraulic system for compliance to specifications
- completing service reports in accordance with SOPs.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- Full range of hydraulic system components characteristics/ operational function of each component
- procedures and equipment for inspecting and testing hydraulic system components
- specifications of each hydraulic system component
- faulty system components and causes of faulty components
- individual components within the hydraulic system
- procedure for repairing hydraulic system components
- procedures for checking hydraulic system operation

- follow-up procedures with respect to repaired/replaced hydraulic system components
- reporting/recording procedures.

Assessment Conditions

- Assessors must:
 - have vocational competency in maintaining hydraulic system components at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Assessment must occur in a functioning workplace. Where assessment in the workplace would be unsafe, impractical or threatens the environment, assessment must occur in a sufficiently rigorous simulated environment that reflects the circumstances that would be experienced in a functioning workplace. Assessment must cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

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