



Australian Government

MEM27028 Diagnose and rectify manual transmissions

Release: 1

MEM27028 Diagnose and rectify manual transmissions

Modification History

Release 1. Supersedes and is equivalent to MEM18042C Diagnose and rectify manual transmissions

Application

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

Testing and assessment of performance would typically require operation of the plant or equipment. A licence may be required and users should check with the relevant authorities.

Where hydraulic clutch assembly is used then unit MEM18020 Maintain hydraulic system components should also be selected.

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
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

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.

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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 | Assess clutch/transmission operation | 2.1 | Apply principles of clutch and release mechanism types, power flows, gear types and ratios, torque multiplication, synchronising and shifting to assess operation of clutch/transmission assembly |
| | | 2.2 | Obtain and interpret relevant information prior to any testing |
| | | 2.3 | Undertake preliminary checks safely to prescribed procedures |
| | | 2.4 | Isolate faults to component level and determine appropriate corrective action |
| | | 2.5 | Use test equipment in accordance with SOPs |
| | | 2.6 | Assess component parts for reuse or replacement |
| 3 | Repair/replace faulty components | 3.1 | Determine component wear and clearances using appropriate test equipment and manufacturer recommendations |
| | | 3.2 | Select replacement components using manufacturers' data |
| | | 3.3 | Remove and refit components to clutch/transmission assembly using appropriate tools, equipment and techniques |
| | | 3.4 | Make adjustments using appropriate tooling/equipment and manufacturers' data |
| | | 3.5 | Verify clutch/transmission assembly is free of excessive noise and operates to specification after work is carried |

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

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3.6 Record all test and rectification activities according to 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.

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.

Manual transmissions include one (1) or more of the following:

- single/multi-plate type
- clutch assemblies
- counter shaft transmissions
- power take-offs
- transfer cases

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18042C Diagnose and rectify manual transmissions

Links

Companion Volume implementation guides are found in VETNet -

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