



Australian Government

MEM27008 Maintain induction, exhaust and emission control systems

Release: 1

MEM27008 Maintain induction, exhaust and emission control systems

Modification History

Release 1. Supersedes but not equivalent to MEM18032B Maintain induction/exhaust systems

Application

This unit of competency defines the skills and knowledge required to assess induction, exhaust and emission control system operation and repair or replace faulty components.

It applies to induction and exhaust systems on mobile and stationary plant and equipment.

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

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.

1	Determine job requirements	<p>1.1 Follow standard operating procedures (SOPs)</p> <p>1.2 Comply with work health and safety (WHS) requirements at all times</p> <p>1.3 Use appropriate personal protective equipment (PPE) in accordance with SOPs</p> <p>1.4 Identify job requirements from specifications, drawings, job sheets or work instructions</p>
2	Assess induction and exhaust system operation	<p>2.1 Apply principles, terminology and applications of supercharging, filtering, inter and after cooling to assess induction and exhaust system operation</p> <p>2.2 Obtain relevant information and interpret prior to any testing</p> <p>2.3 Undertake checks safely and to prescribed testing procedures</p> <p>2.4 Determine and record flows, pressures and temperatures</p> <p>2.5 Isolate faults to component level and determine appropriate corrective action using appropriate test instruments and equipment</p>
3	Assess emission control system operation	<p>3.1 Inspect emission control system components against manufacturer specification</p> <p>3.2 Check fuel evaporative control system and engine crankcase ventilation</p> <p>3.3 Service, adjust or replace components to manufacturer specifications, workplace procedures and WHS and environmental requirements</p>
4	Rectify faulty components	<p>4.1 Determine component wear and clearances using manufacturer recommendations</p>

Elements describe the essential outcomes.

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

- 4.2 Determine if faulty components should be repaired or replaced
- 4.3 Repair faulty components where appropriate
- 4.4 Select replacement components using manufacturers' data
- 4.5 Remove and refit repaired or replacement components to engine
- 4.6 Record all test and rectification activities
- 4.7 Ensure engine is free of air and exhaust leaks after repair work is carried out

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.

- Faults include one (1) or more of the following:**
- excessive air inlet restrictions
 - excessive exhaust back pressures
 - too much or too little boost pressure
 - ineffective inter or after cooling

Unit Mapping Information

Release 1. Supersedes but not equivalent to MEM18032B Maintain induction/exhaust systems

Links

Companion Volume implementation guides are found in VETNet -

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