



**Australian Government**

# **MARB016 Contribute to routine engine maintenance on a vessel**

**Release: 1**

# MARB016 Contribute to routine engine maintenance on a vessel

## Modification History

Release 1. New unit of competency.

## Application

This unit involves the skills and knowledge required to contribute to servicing engines and engine components on a vessel.

This unit applies to an Integrated Rating or Able Seafarer-Engine, who assists under the direction of the officer in charge of the engineering watch, in performing a range of engine maintenance activities on a range of vessels.

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

## Pre-requisite Unit

Not applicable.

## Competency Field

B – Equipment Checking and Maintenance

## Unit Sector

Not applicable.

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### 1 Plan engine maintenance tasks

### PERFORMANCE CRITERIA

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

- 1.1 Planned maintenance system is accessed to establish engine maintenance requirements for vessel
- 1.2 Maintenance tasks are proposed and prioritised in conjunction with others involved in or affected by the maintenance work
- 1.3 Resource requirements are identified and accessed to ensure

- efficient completion of tasks
- 1.4 Maintenance tasks are recorded in the maintenance schedule according to organisational procedures
- 2 Prepare for engine service**
- 2.1 Nature and scope of work requirements are confirmed according to organisational procedures
- 2.2 Service procedures, workshop manuals and manufacturer specifications are accessed and interpreted
- 2.3 Tools, equipment and materials required for servicing are identified and prepared
- 2.4 Engine and components are visually inspected for external signs of defects according to maintenance documentation
- 2.5 Electrical components are identified and electrical equipment is used safely
- 2.6 Engine is started, ran up to operating temperature and checked for leaks, abnormal noises and pressures
- 2.7 Test results are compared with manufacturer/component supplier specifications to determine compliance or non-compliance
- 2.8 Results are documented with supporting information and recommendations are made about serviceability and repair
- 3 Service engines and engine components**
- 3.1 Work health and safety (WHS)/occupational health and safety (OHS) requirements are identified and observed
- 3.2 Service operations are performed according to organisational procedures manufacturer/component supplier specifications
- 3.3 Fluid level checks and replenishments are carried out according to manufacturer/component supplier specifications
- 3.4 Appropriate lubricants are applied to engine
- 3.5 Equipment/components requiring replacement are changed according to manufacturer/component supplier specifications
- 3.6 Adjustments are made according to manufacturer/component supplier specifications
- 4 Complete work**
- 4.1 Engine is inspected to ensure protective guards, cowlings and safety features are in place

- 4.2 Engine is cleaned according to organisational procedures
- 4.3 Materials to be reused are collected and stored according to manufacturer specifications and organisational procedures
- 4.4 Tools and equipment are cleaned, maintained and stored according to manufacturer specifications and organisational procedures
- 4.5 Waste and scrap are removed according to legislative requirements and organisational procedures
- 4.6 Unserviceable equipment is tagged and faults are identified and reported according to organisational procedures

## Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the Companion Volume Implementation Guide.

- Maintenance tasks include one or more of the following:
- economiser cleaning
  - engine room rounds (daily/weekly/monthly maintenance checks)
  - greasing and oiling of machinery
  - inspection and maintenance of:
    - hatches, watertight doors ports and deadlights
    - hoists and lifting equipment
  - routine inspection of hand and power tools, measuring instruments and machinery tools
  - safe disposal of waste materials
  - scavenge space cleaning
  - soot blowing
  - surface preparation and painting

## Unit Mapping Information

This unit replaces and is equivalent to MARB3002A Perform routine engine maintenance on a vessel.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>