



Australian Government

MARB003 Service marine internal combustion engines, and propulsion and auxiliary systems

Release: 1

MARB003 Service marine internal combustion engines, and propulsion and auxiliary systems

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to perform basic servicing of marine internal combustion engines, and propulsion and auxiliary systems.

This unit applies to engine workers in the maritime industry on vessels with a propulsion power up to 750 kW in near coastal waters.

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

B – Equipment Checking and Maintenance

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

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

1 Prepare for work

- 1.1 Planned maintenance program is accessed to determine servicing requirements
- 1.2 Inspections are conducted and additional non-routine servicing requirements are determined
- 1.3 Manufacturer specifications for equipment are obtained
- 1.4 Tasks are planned and sequenced in conjunction with others

- involved in or affected by servicing work
- 1.5 Equipment is safely isolated according to regulations and work health and safety (WHS)/occupational health and safety (OHS) requirements
 - 1.6 Tools and equipment are selected and checked for serviceability
 - 1.7 Work area is prepared
 - 2 Carry out routine service**
 - 2.1 Equipment is inspected throughout servicing and inspection results are compared with manufacturer specifications
 - 2.2 Servicing tasks are carried out to specification
 - 2.3 Mechanical equipment and system components are checked with appropriate instruments
 - 2.4 Unserviceable equipment is tagged according to workplace procedures and appropriate personnel are notified
 - 3 Repair and replace faulty components**
 - 3.1 Faulty items or components are removed using appropriate tools and equipment according to workplace procedures
 - 3.2 Replaceable items are selected or serviceable items are fitted according to manufacturer specifications
 - 3.3 Adjustments are made to equipment or components to ensure compliance with specifications
 - 3.4 Operational check is carried out on system to ensure compliance with manufacturer specifications
 - 4 Clean up and complete documentation**
 - 4.1 Work area is cleared and cleaned
 - 4.2 Materials are disposed of or recycled according to legislative and workplace requirements
 - 4.3 Tools and equipment are cleaned, checked and stored according to workplace procedures
 - 4.4 Maintenance report is completed according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

Range of Conditions

Specifies 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.

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

Equipment includes one or more of the following:

- auxiliary equipment and associated spaces
- cooling systems
- firefighting equipment
- fuel systems
- gearbox
- lubricating systems
- marine two- and four-stroke:
 - diesel engines
 - petrol engines
- propeller and immediate shafting alignment
- pumping systems
- refrigeration systems
- sterndrive and water jet drive units
- steering systems

Tools and equipment include one or more of the following:

- hand and power tools
- specialised tools
- test equipment

Servicing tasks include one or more of the following:

- cleaning:
 - coolers
 - filters
- greasing
- oiling
- replacing:
 - anodes
 - shaft seals and gland packing
 - belt drives
 - pumps
- topping up oils

Materials include one or more of the following:

- cleaning products
- rags
- refrigerant gas
- spent oil
- used components

Unit Mapping Information

This is a new unit. This unit is equivalent to MARB2002A Service marine internal combustion engines and propulsion and auxiliary systems.

Links

MAR Maritime Training Package Companion Volume Implementation Guide at: - http://companion_volumes.vetnet.education.gov.au/Pages/TrainingPackage.aspx?pid=22