



**Australian Government**

# **MARL046 Carry out engineering calculations**

**Release: 2**

# MARL046 Carry out engineering calculations

## Modification History

**Release 2.** This is the second release of this unit of competency in the MAR Maritime Training Package.

- Minor statement changes in unit Application
- Minor re-ordering changes in Performance Evidence
- Minor statement changes in Knowledge Evidence
- Minor statement changes in Assessment Conditions.

**Release 1.** This is the first release of this unit of competency in the MAR Maritime Training Package.

## Application

This unit involves the skills and knowledge required to carry out calculations related to fuel consumption, fuel storage and engine performance that conform to accepted engineering tolerances.

It includes calculating fuel consumption and storage and completing calculations related to engine performance.

This unit applies to people working in the maritime industry in the capacity of Marine Engine Driver Grade 1 Near Coastal.

## Licensing/Regulatory Information

Legislative and regulatory requirements are applicable to this unit.

This unit is one of the requirements to obtain Australian Maritime Safety Authority (AMSA) certification as a Marine Engine Driver Grade 1 Near Coastal, as specified in Marine Order 505.

Seafarers seeking certification should check with AMSA.

## Pre-requisite Unit

Not applicable.

## Competency Field

L - Marine Engineering

## Unit Sector

Not applicable.

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Calculate fuel consumption and storage**

#### **2 Complete calculations related to engine performance**

### PERFORMANCE CRITERIA

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

- |            |                                                                                                                 |
|------------|-----------------------------------------------------------------------------------------------------------------|
| <b>1.1</b> | Information required for calculations related to fuel consumption and storage is obtained from relevant sources |
| <b>1.2</b> | Calculations are completed to accepted working tolerances                                                       |
| <b>1.3</b> | Results of calculations are verified                                                                            |
| <b>1.4</b> | Results of calculations are applied to managing fuel, as required                                               |
| <b>2.1</b> | Information required for calculations related to engine performance is obtained from relevant sources           |
| <b>2.2</b> | Calculations are completed to accepted working tolerances                                                       |
| <b>2.3</b> | Results of calculations are verified                                                                            |
| <b>2.4</b> | Results of calculations are applied to managing engine performance, as required                                 |

## 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.

## Unit Mapping Information

This unit replaces and is equivalent to MARL001 Carry out engineering calculations.

## Links

Companion Volume Implementation Guides are found in VETNet -

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