



**Australian Government**

# **MARB051 Apply elements of magnetic compass adjusting**

**Release: 1**

# MARB051 Apply elements of magnetic compass adjusting

## Modification History

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 apply elements of magnetic compass adjusting.

This unit includes preparing for work, inspecting compass, analysing records, determining deviations, adjusting a magnetic compass and completing documentation.

This unit applies to people working in the maritime industry in the capacity of:

- Compass Adjuster for vessels less than and equal to 45 metres in length.

Work is performed under limited supervision and applies to those responsible for adjusting a magnetic compass in the work environment and who are responsible for their own work.

## Licensing/Regulatory Information

This unit is one of the requirements to obtain certification as a Compass Adjuster as defined in Marine Order 27.

To undertake this unit of competency a person must hold at least a:

- certificate of competency that permits a person to command a vessel less than 24 metres (Masters < 24 m Near Coastal (NC)) or an equivalent certificate as a Master recognised by Australian Maritime Safety Authority (AMSA), or
- a current compass adjuster licence issued by a state or territory or AMSA for those vessels.

## Pre-requisite Unit

MARB052 Apply knowledge of the principles of magnetic compass adjusting

## Competency Field

B - Equipment Checking and Maintenance

## Unit Sector

Maritime

## Elements and Performance Criteria

### ELEMENTS

### 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 Job requirements are identified from specifications and information provided by the ship's Master or nominated representative
- 1.2 Ship is embarked safely in accordance with International Convention for the Safety of Life at Sea (SOLAS) and Marine Order requirements
- 1.3 Appropriate personal protective equipment (PPE) is selected in accordance with ship work health and safety (WHS)/occupational health and safety (OHS) requirements
- 1.4 Ship is confirmed as being in its 'normal seagoing condition' in accordance with standard operating procedures
- 1.5 Movable magnetic materials in the locality of the compass are removed or secured in accordance with workplace procedures
- 1.6 Magnetic equipment is secured in its 'normal seagoing position' before beginning adjustments in accordance with workplace procedures

#### 2 Inspect compass

- 2.1 Physical inspection of the compass and binnacle is conducted to determine suitability of compass and binnacle to carry out an adjustment satisfactorily in accordance with manufacturer's specifications and workplace procedures
- 2.2 Appropriate tools, equipment and techniques are used to inspect compass in accordance with job requirements
- 2.3 Inventory of any correctors already fitted is recorded in ships Safety Management System (SMS) records and/or compass deviation book in accordance with workplace procedures

#### 3 Analyse records

- 3.1 Ship's compass deviation book and/or records are examined to determine if any changes have been made to

- correctors since the last compass adjustment in accordance with workplace procedures
- 3.2** Ship's compass deviation book and/or records are examined to determine recent performance of the compass in accordance with workplace procedures
- 4 Determine deviations and adjust magnetic compass**
- 4.1** Compass deviation errors are determined using procedures outlined in the tentative method of adjustment and the analysis method of adjustment
- 4.2** Compass is adjusted using procedures outlined in the tentative method of adjustment and the analysis method of adjustment
- 4.3** Final swing is performed, and residual deviations are recorded in accordance with tentative method of adjustment and the analysis method of adjustment
- 5 Complete documentation**
- 5.1** A table or curve of deviation from observations taken on principle cardinal and intercardinal headings is produced and the position of correctors and residual coefficients is recorded in accordance with workplace procedures
- 5.2** Outcome of the compass adjustment is confirmed with the Master in accordance with job requirements
- 5.3** Ship is disembarked safely in accordance with SOLAS and Marine Order requirements

## 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 may be found in the MAR Training Package Companion Volume Implementation Guide.

## Unit Mapping Information

This is a new unit. No equivalent unit.

## **Links**

Companion Volume Implementation Guides are found in VETNet -

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