



Marine compasses

Clocks and weather instruments

GENERAL INSTRUCTION C20-00138 BRACKET MOUNT 125MM CARD MARINE COMPASS

CAUTION:

All Magnetic Compasses are vulnerable to magnetic interference, which will produce errors, called deviation. It is the Owner/Operator and/or Helmsman's responsibility to make sure the compass is properly installed and compensated. Compensation is the act of correcting for deviation. Magnets (speakers, microphones etc.), ferrous metals (steel, iron, etc.) and current carrying devices are common causes of deviation. Magnetic compasses point to Magnetic North. There is a difference between Magnetic North and True North, and that difference is called variation. Variation differs depending on your geographical location and can be determined by referring to a local chart.

INSTALLATION

Positioning

IMO Resolution A382(X) Magnetic Compasses Carriage and Performance Standards includes a section on the positioning of the magnetic compass. It is also strongly recommended that ISO 694 - Positioning of Magnetic Compasses in Ships - is complied with. If, due to the special construction of the vessel, it is necessary to deviate from these, then the Flag State Authority should be consulted, as incorrect positioning can affect the expected performance of the magnetic compass.

Installation

You must install your compass at a sufficient distance from the influence of any magnetic field: main engine, windscreen wiper motor, fire extinguisher, other compasses, speakers, etc. Any magnetic disturbance may affect the compass.

The bracket can be fastened to the deck. The compass lubber line must pass through the imaginary mid-ship line of the vessel.

2. DEVIATION

Deviation is a positive or negative error in degrees on the compass heading due to magnetic influences.

If this deviation exists, it will be necessary to draw a deviation curve.

This curve must be controlled and checked every year or whenever the compass suffers the influence of newly installed equipment on board.



Marine compasses

Clocks and weather instruments

3. COMPASS ADJUSTMENT

A qualified compass adjuster must carry out the compass adjustment.

The C20-00138 comes with Quadrantal correctors but doesn't come with built in compensators and compensation must be done with external magnets for B and C errors.

4. MAINTENANCE

Compass Bowl

The compass bowl should be regularly inspected to ensure that there are no leaks or bubbles. In addition, the upper and lower glass should be maintained in a clean condition, and the compass gimbaling checked.

A few times per year, and more regularly on vessels with high vibration levels or following heavy weather, an operational test should be carried out on the magnetic compass to ensure that no friction has developed on the pivot and jewel. This operational test should be carried out as follows:-

Whilst the vessel is alongside, bring a magnetic object towards the compass so that the heading is deviated by 2 degrees. Hold the deviated compass card in this position for 10 seconds, and then release by removing the magnetic object.

When the compass card settles it should be within 15 seconds of arc of the original heading.

If the compass card does not return within this limit then there is a high level of friction between the pivot and jewel.

A competent authority should overhaul the compass.