Operating Instructions

For the

Prismatic Compass

Types

954-2399 &
954-2399REV

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Ref: OI/954-2399
1.0 Description

The prismatic compass has been designed to give accurate magnetic headings.

The compass card is graduated in ½ degree increments and is viewed through a magnifying prism.

The compass body is constructed mainly from Brass and incorporates a bellows expansion system to allow for volumetric changes in the damping fluid contained within the capsule.

Extreme care should be taken when handling the instrument to prevent damage to the card assembly system.

![View of Compass Unit](Fig.1)
2.0 Operation

The compass is used with a tripod to ensure that the compass card remains steady and in focus when readings are being taken. The tripod should be totally ‘Non-Magnetic’ and should have a male fitting that will interface with the female socket at the base of the compass.

SIRS manufacture a tripod that is suitable for this purpose, Description: Non-Magnetic Carbon-Fibre Telescopic Tripod type 954-2399-TRIPOD

The process of operation is as follows….

1. Mount the compass onto the Tripod (fig 5)
2. Level the compass
3. Raise the ‘Sighting Vane’ to the vertical position
4. View through the ‘Prism’ and align the ‘Sighting Vane’ and ‘Prism Bracket’ slot with the object to be viewed. The sight vane will cut the divisions of the compass card. The point at which the compass card is cut represents the magnetic heading. (see fig.4)
5. A calibration chart (fig.6) will be provided with the compass to indicate the errors of the compass and the corrections to be made for each 15 degree heading (the compass should be re-calibrated annually)
6. To take a second bearing from the same location, the compass can be rotated on the tripod by loosening the Tripod Clamp screw and rotating the body about the mounting spigot.
7. The compass should be replaced into its stowage box after use.

The view through the ‘Prism Bracket’ will be as shown in figs.3 & 4
View through Prism
*Fig. 3*

Magnified View through Prism
*Fig. 4*
3.0 Calibration

The compass should be re-calibrated every 12 months or earlier if the unit is suspected of any damage.

The compass will be checked for faults before being calibrated against a magnetic standard that is traceable to national standards.

A deviation chart will be produced and attached to the stowage case of the compass. This chart will indicate the corrections that should be applied for each 15 degree heading.
3.1 Reverse Reading Compasses

The compass is also manufactured as a version with a ‘reverse reading card’ (954-2399-REV). This is identical to the compass described within this document but provides magnetic readings that are 180° opposite to the true heading. A typical use for this compass would be to take a magnetic reading, while standing in front of the aircraft. The magnetic reading on the compass would be the same as that observed inside the cockpit of the aircraft.

4.0 Product Support

The compass can be Serviced, Repaired and Calibrated by SIRS Navigation Ltd.