

NOT SUBJECT TO
AMENDMENT ACTION

34-04-70 DM.

SMITHS AVIATION DIVISION

Maintenance Manual

E 2 SERIES COMPASSES

THIS MANUAL IS APPROVED BY
THE AIR REGISTRATION BOARD
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Note, several pages missing... Sorry.

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1. E2 SERIES COMPASSES - DESCRIPTION AND OPERATION

A. Description

(1) General

Kelvin Hughes Series E2 compasses are small, lightweight, liquid filled instruments. Originally introduced as stand-by instruments for aircraft equipped with remote - indicating compass systems they have since proved eminently suitable for both large and small aircraft, including gliders, notably where there is limited space for cockpit instruments.

(2) Mechanical

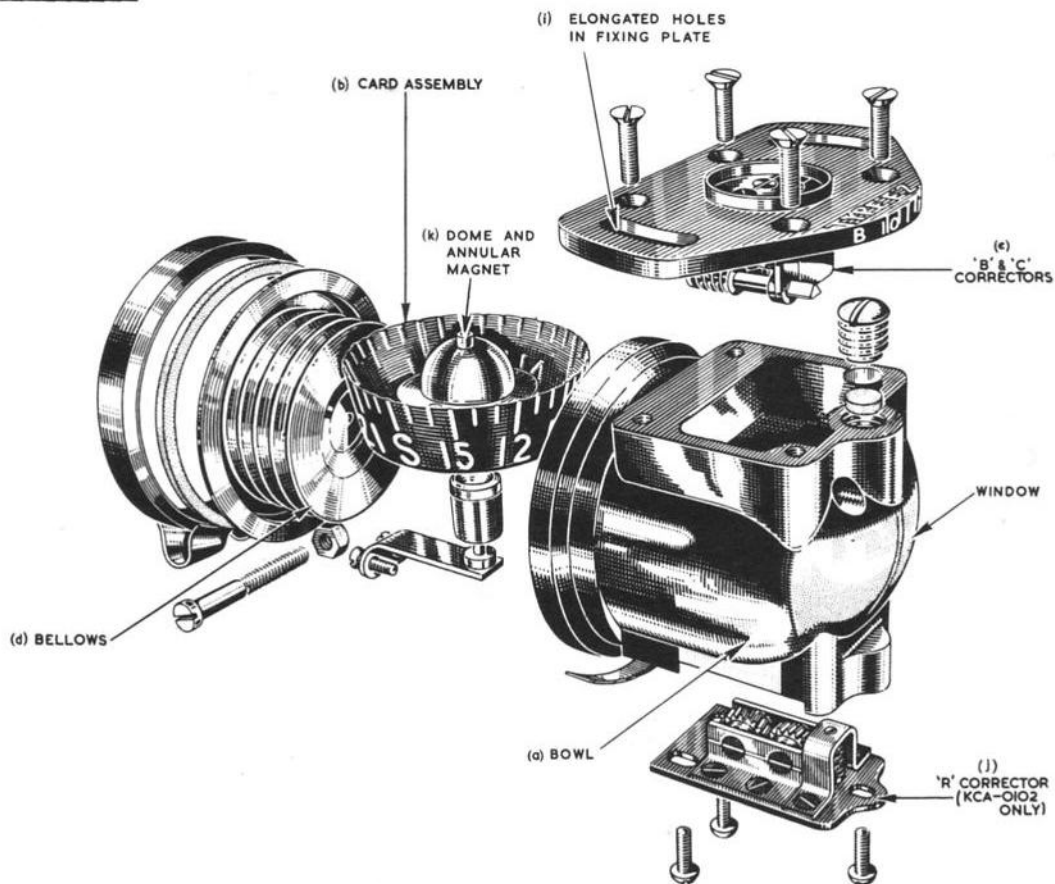


Fig.1. Exploded View showing General Features of E2 Series Compasses

- (a) Compass bowl moulded in transparent plastic material, painted black.
- (b) Black compass card, with white or luminous markings, seen through 'window' in bowl.
- (c) The bowl is filled with silicone fluid as a damping medium.

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- (d) Bellows allow for expansion and contraction of the fluid with changes in temperature.
- (e) 'B' and 'C' co-efficient correctors are attached to the underside of the mounting plate at the top of the bowl.
- (f) These correctors are adjusted by means of a key inserted in appropriately identified apertures in the front of the bowl.
- (g) Any rotation of the corrector spindles can be seen as an angular difference between the indicator lines and the associated index lines, which line up at the magnetic null, or neutral position.
- (h) The front edge of the mounting plate is engraved with a small scale for the correction of co-efficient 'A' when installing the compass.
- (i) Elongated holes in the fixing plate allow the compass to be turned 10° either side of the fore-and-aft datum.

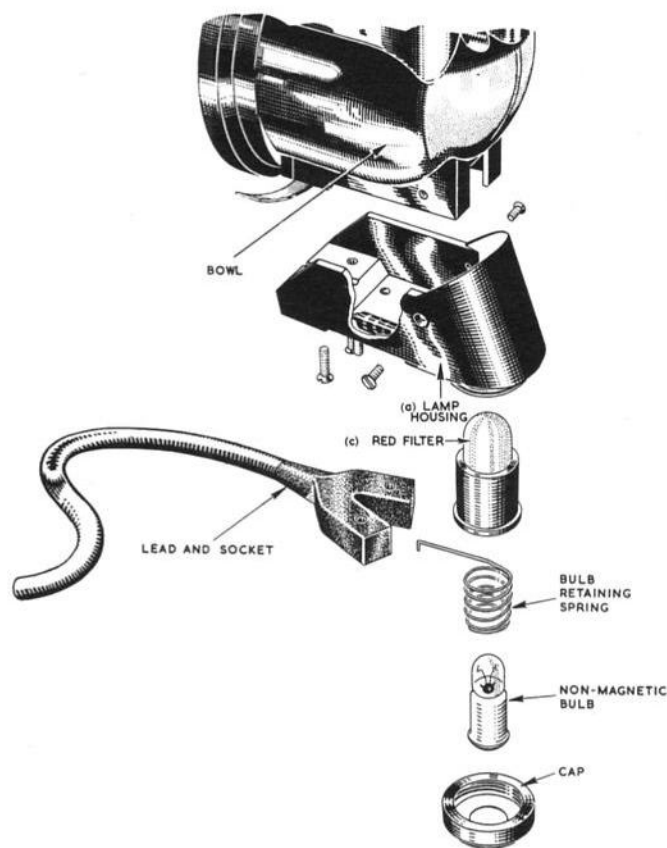


Fig.2. Exploded View showing Lighting Unit on KCA-0104 Type Compasses.