

Chapter 1 ALTIMETER, MK. 26

Introduction

1. The Mk.26 altimeter (Ref. No. 6A/8978) is a capsule-operated, direct reading, three-pointer instrument with a range of -2000 to 60 000ft. It is calibrated to the I.C.A.O. standard atmosphere.

DESCRIPTION

2. The altimeter mechanism is housed in a 2½ in. dia. case which has a static connector at the rear. Twin capsules are mounted in a rear frame and each is connected to a common rocking shaft by a link. A sector on the front end of the rocking shaft engages the pinion of a primary gear assembly; this is part of a gear train which transmits the capsule movement to the pointers. To eliminate backlash from the mechanism, a hair-spring is attached to the primary gear.

3. The handstaff assembly consists of three concentric handstuffs. A pinion on the rear of the rear end of each handstaff engages an associated gear of the gear train, and the three pointers are located on the front end of the handstaff.

4. The baroscale mechanism consists of a baroscale disc located immediately behind the dial, and graduated from 950 to 1050 millibars. A baroscale setting knob at the front of the instrument is connected to the baroscale disc by an adjusting shaft and the gear train. A part of the baroscale disc is visible through a window in the dial.

5. The front of the instrument is sealed by a glass, a gasket and a non-metallic washer; these are retained by a bezel secured to the front flange of the case.

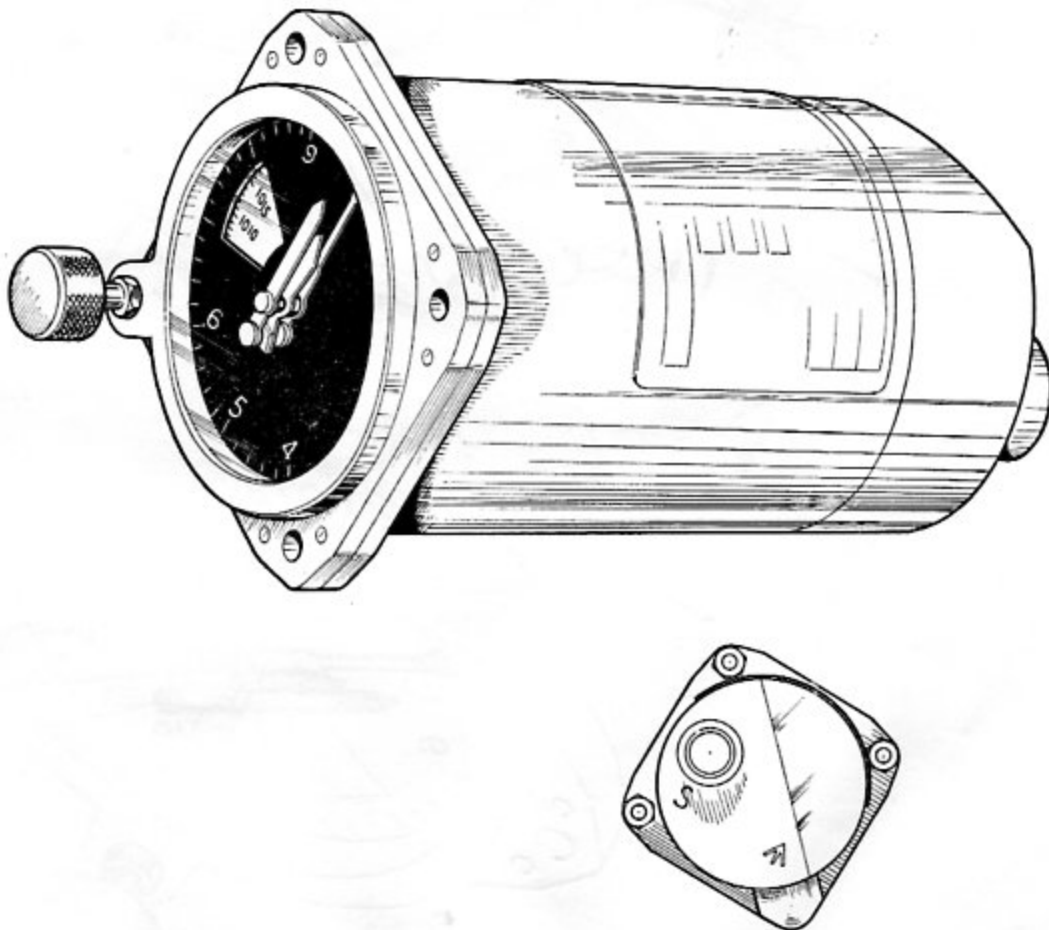


Fig. 1. General view of Mk. 26 altimeter

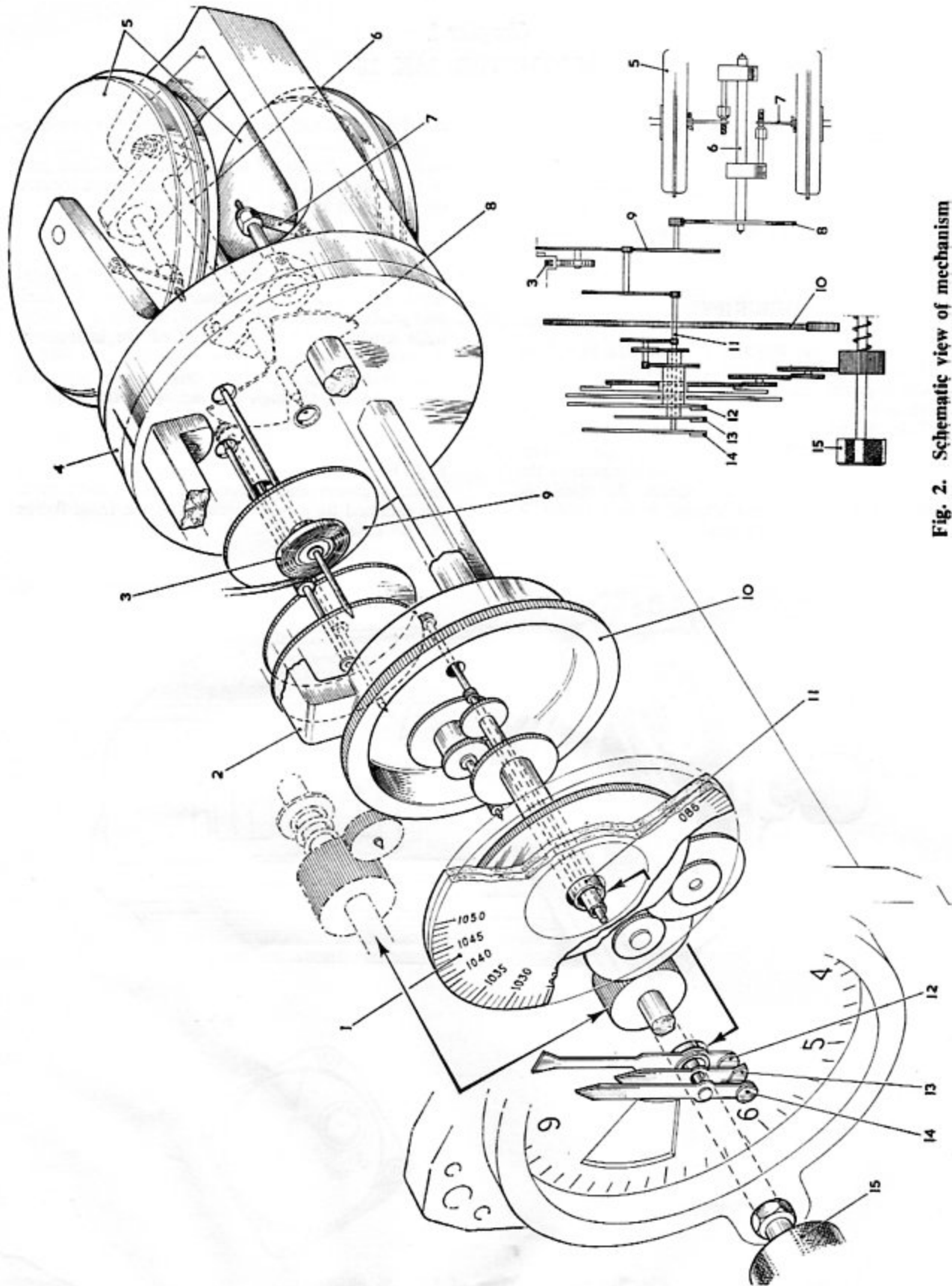


Fig. 2. Schematic view of mechanism

KEY TO FIG. 2

- | | |
|------------------|---------------------------|
| 1 BAROSCALE DISC | 9 PRIMARY GEAR AND PINION |
| 2 FRONT FRAME | 10 MOUNTING RING |
| 3 HAIRSPRING | 11 HANDSTAFF ASSEMBLY |
| 4 REAR FRAME | 12 10000 FT. POINTER |
| 5 CAPSULES | 13 1000 FT. POINTER |
| 6 ROCKING SHAFT | 14 100 FT. POINTER |
| 7 LINK | 15 BAROSCALE SETTING KNOB |
| 8 SECTOR | |

OPERATION

6. The interior of the case is open to ambient pressure by the static connector at the rear of the case. A change in pressure causes the capsules to expand or contract, the capsule movement being transferred to the rocking shaft via the links.

7. The rocking shaft converts the linear movement of the capsules into rotary movement, and this is transmitted to the pointers via the sector and the gear train.

8. To adjust the baroscale setting, the setting knob at the front of the instrument is rotated until the required millibar value appears in the centre of the dial window.

SERVICING

General

9. If serviceability of the instrument is suspect, it is to be tested as detailed in Chap. 2.

Zero adjustment

10. To vary the relationship between the pointer and the baroscale, proceed as follows:—

(1) Slacken the locknut between the baroscale adjusting knob and the case.

(2) Remove the knob and locknut from the shaft.

(3) Set the millibar scale to atmospheric pressure.

(4) Press the shaft to disengage the gear connecting the pointer and the millibar scale. Adjust the pointers to zero feet, then release the shaft ensuring that the gears re-engage.

(5) Refit the locknut and baroscale setting knob, then tighten the locknut.

(6) Apply the standard serviceability test as detailed in Chap. 2.

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