Chapter 2 INSTRUMENT INSTALLATION

(Completely revised)

Note...
A detailed list of contents appears at the beginning of each group

GENERAL INFORMATION

INTRODUCTION

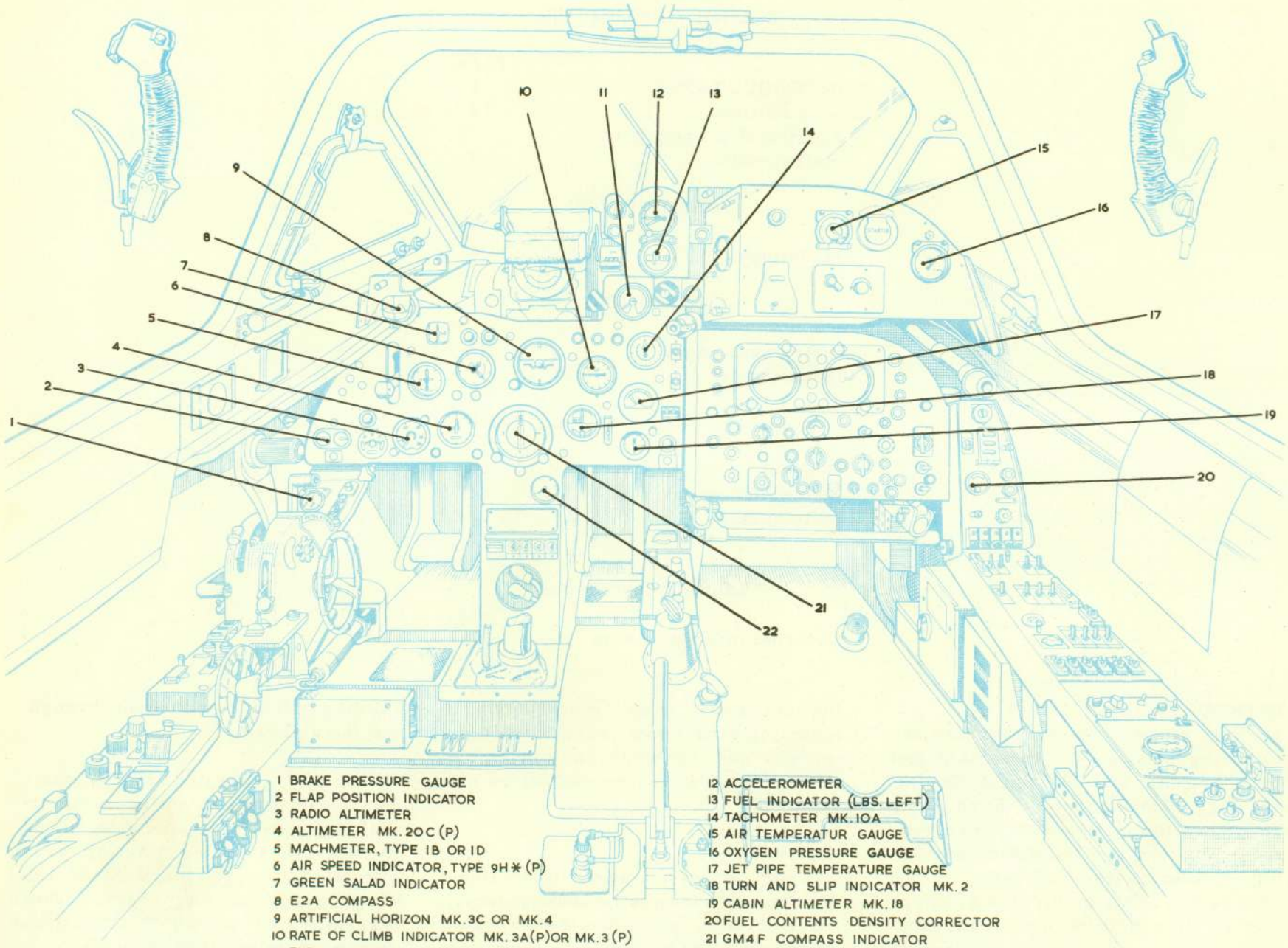
1. This chapter is divided into the following groups:- Armament and Photographic, Miscellaneous, Engine, and Flight Instruments. Each group describes the instruments concerned, their location and method of servicing, together with a reference to the 1275 series of Air Publications, where further information may be found. Details are also included concerning the instrument panel, mountings and mounting structures, access to components and removal and assembly procedures where the method is not apparent.

Illustrations

2. Each group contains illustrations and diagrams for the various systems; these show respectively the layout of components, cable and pipe runs, and the disposition of equipment throughout the aircraft.

Electrically-operated instruments

3. The description of each electrically-operated instrument is supplemented by a wiring diagram which serves as a combined theoretical drawing and routing chart. These diagrams show cable breakdown points, terminal blocks and plug and



1 BRAKE PRESSURE GAUGE
2 FLAP POSITION INDICATOR
3 RADIO ALTIMETER
4 ALTIMETER MK. 20C (P)
5 MACHMETER, TYPE 1B OR 1D
6 AIR SPEED INDICATOR, TYPE 9H* (P)
7 GREEN SALAD INDICATOR
8 E2A COMPASS
9 ARTIFICIAL HORIZON MK.3C OR MK.4
10 RATE OF CLIMB INDICATOR MK. 3A(P)OR MK.3 (P)
11 FUEL CONTENTS GAUGE
12 ACCELEROMETER
13 FUEL INDICATOR (LBS. LEFT)
14 TACHOMETER MK.10A
15 AIR TEMPERATUR GAUGE
16 OXYGEN PRESSURE GAUGE
17 JET PIPE TEMPERATURE GAUGE
18 TURN AND SLIP INDICATOR MK. 2
19 CABIN ALTIMETER MK. 18
20 FUEL CONTENTS DENSITY CORRECTOR
21 GM4F COMPASS INDICATOR
22 OIL TEMPERATURE GAUGE

Fig. 1 Location of instruments

socket connections, together with a reference to power supplies contained in Chapter 1 of this Section.

DESCRIPTION

Mountings

4. The main instrument panel, composed of a light alloy with a matt black finish, is located on the port side of the cabin and is supported on four Equiflex anti-vibration mountings secured to the aircraft structure. The panel is secured to the mountings by Oddie type fasteners. A subsidiary panel located on the lower left hand of the instrument panel contains the brake pressure gauge.

SERVICING

Instrument Panel

5. At regular intervals the instrument panel should be inspected for security in its mountings and the anti-vibration mountings should be rigidly fixed to the aircraft structure with all nuts, bolts and bonding connections clean and tight. To avoid damage to the instruments due to vibration, the small springs which comprise each mounting should be intact. The four Oddie fasteners securing the instrument panel to the aircraft structure should turn freely. Access to the rear of the instrument panel is gained by releasing the four fasteners and lowering the panel rearwards and downwards on its lower bearing hinges.

Note...

Before the instrument panel is lowered, the gyro gun sight should be raised to the combat position to avoid fouling the cables behind the panel.

Instruments

6. Brief servicing instructions for individual instruments have been included at the end of each group; the information given should be read as a supplement to the relevant Air Publication mentioned in each instance.

7. All instruments should be inspected periodically for signs of damage, deterioration, or corrosion, and where necessary repair or renewed according to the servicing instructions laid down in each group. All electrical instrument connections must be clean and tight, i.e., free from damaged coverings, frayed insulation, or corroded plugs, sockets and connectors.

8. Rubber pipe connections to the pressure head system must also be inspected for signs of deterioration and, where necessary, renewed.

9. Care should be taken to prevent damage to the engraved covering panel for the trans-illuminated system of instrument panel lighting.

REMOVAL AND INSTALLATION

General

10. At such times when the instrument panel is lowered or instruments are removed for servicing the aircraft must be rendered electrically safe beforehand. The method is described in the General Information group of Sect. 5, Chap. 1.

Instrument Panel

11. To remove the instrument panel from the aircraft, and this should be necessary only in exceptional circumstances, adopt the following procedure:-

(1) Move the control column to the rear.

(2) Withdraw the four Oddie fasteners.

(3) Lower the instrument panel rearwards and downwards for access and remove the GM4F indicator and artificial horizon, also other instruments as necessary.

(4) Disconnect all pipes, electrical connectors and leads.

(5) Withdraw the split pins from the lower bearing hinge bolts and unscrew the nuts.

(6) Supporting the weight of the instrument panel, remove the lower bearing hinge bolts. The panel may now be removed from the cabin.

To refit the panel, reverse the removal procedure taking care to secure all bonding leads and connectors, and replace all instruments when lower bearing hinges are refitted.

Instruments

12. No fixed procedure is laid down for the removal of instruments from the instrument panel. Generally, the method of attachment is by four screws passing through the instrument panel which engage with stiffnuts on the instrument casing. Access is gained to the rear of instruments, for the purpose of breaking down electrical connections and disconnecting pipes, after lowering the instrument panel. Before electrical instruments are removed for servicing, the aircraft electrical system must be rendered electrically safe.