Group 3.D

MECHANICALLY OPERATED FLIGHT INSTRUMENTS

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Introduction

1. This Group contains a description of the mechanically operated flight instruments installed in this aircraft. For a general description of the instrument installation, reference should be made to Group 1.A. The location and access to all the instruments and their associated equipment is given in Group 1.C. Detailed information on the standard components used will be found in the relevant Air Publications listed in Table 1.

DESCRIPTION

Standby compass

2. A standby compass, for use if the navigation display *(Group 3.A)* fails, is mounted on a bracket attached to the windscreen frame adjacent to the cabin hood's centre lock. The compass is illuminated by a special *(non-magnetic)* internal lamp, which is provided with a normal and standby supply. *(Sect.5, Chap.1, Group F.1).*

Note . . .

When a compass swing is carried out on this aircraft, the cabin hood must be fully closed when readings are taken, as with the hood open, large deviations can be expected.

Accelerometer

3. The accelerometer is located at the top left hand corner of the centre instrument panel, and gives visual indication of the acceleration forces imposed on the

aircraft's structure during flight in the direction of the aircraft's Z axis *(i.e. upwards and downwards along the line of flight)*. The indications of positive or negative 'g' forces are given by three concentrically mounted pointers moving over a common scale. One pointer indicates instantaneous accelerations in both directions and the other two record the maximum plus and minus readings and remain at those readings until they are reset manually through the mechanism provided. A transit lock, operated by a knob at the rear of the instrument, is provided to lock the mechanism during transit and this must be turned to 'unlock' on installation. This instrument is not shock-absorber mounted as this would have a damping effect on the operating mechanism.

Slip tube

4. The slip tube is located just above the attitude indicator on the pupil's flying instrument panel. It is a ball-in-tube type of inclinometer which is provided as a complementary instrument to the pupil's attitude indicator and artificial horizon.

Clock

5. Provision is made on the starboard side of the pupil's flying instrument panel, for the installation of a clock, this is supplied by the Services.

SERVICING

General

6. The necessary servicing to maintain the instruments in an efficient condition and the standard serviceability tests which should be applied, together with the equipment to be used and the method of conducting the tests is contained in the relevant Air Publications listed in Table 1.

REMOVAL AND ASSEMBLY

General

7. The removal of the flight instrument panels is described in Group 1.B. Once access has been obtained, the removal of the instruments from the panels should present no difficulties.

TABLE 1

Equipment used and Air Publication reference

Equipment Type	Air Publication
Standby compass, Type E.2B	A.P.1275B, Vol.1, Sect.10
Accelerometer, Mk.2	A.P.1275A, Vol.1, Sect.12
Clock, Mk.4	A.P.1275A, Vol.1, Sect.19