Chapter 26

HIGH PRESSURE SWITCH, ANTI-DRIBBLE VALVE AND SOLENOID VALVE

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LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Solenoid and H.P. switch, with connections:—

CK 11855*A* *Mk.* 11	*Ref. No.* 37F/
CK 11855*B* *Mk.* 12	*Ref. No.* 37F/
CK 12422 *Mk.* 12 (*R.H.*)	*Ref. No.* 37F/20019
CK 13232 *Mk*, 11 (*R.H.*)	*Ref. No.* 37F/20049
CK 13232 *Mk.* 11 (*L.H.*)	*Ref. No.* 37F/20037
CK 18433	*Ref. No.* 37F/21017
CK 18825 (*R.H.*)	*Ref. No.* 37F/21023
CK 18825 (*L.H.*)	*Ref. No.* 37F/21022

(*R.H.*) = *Right hand.* (*L.H.*) = *Left hand.*

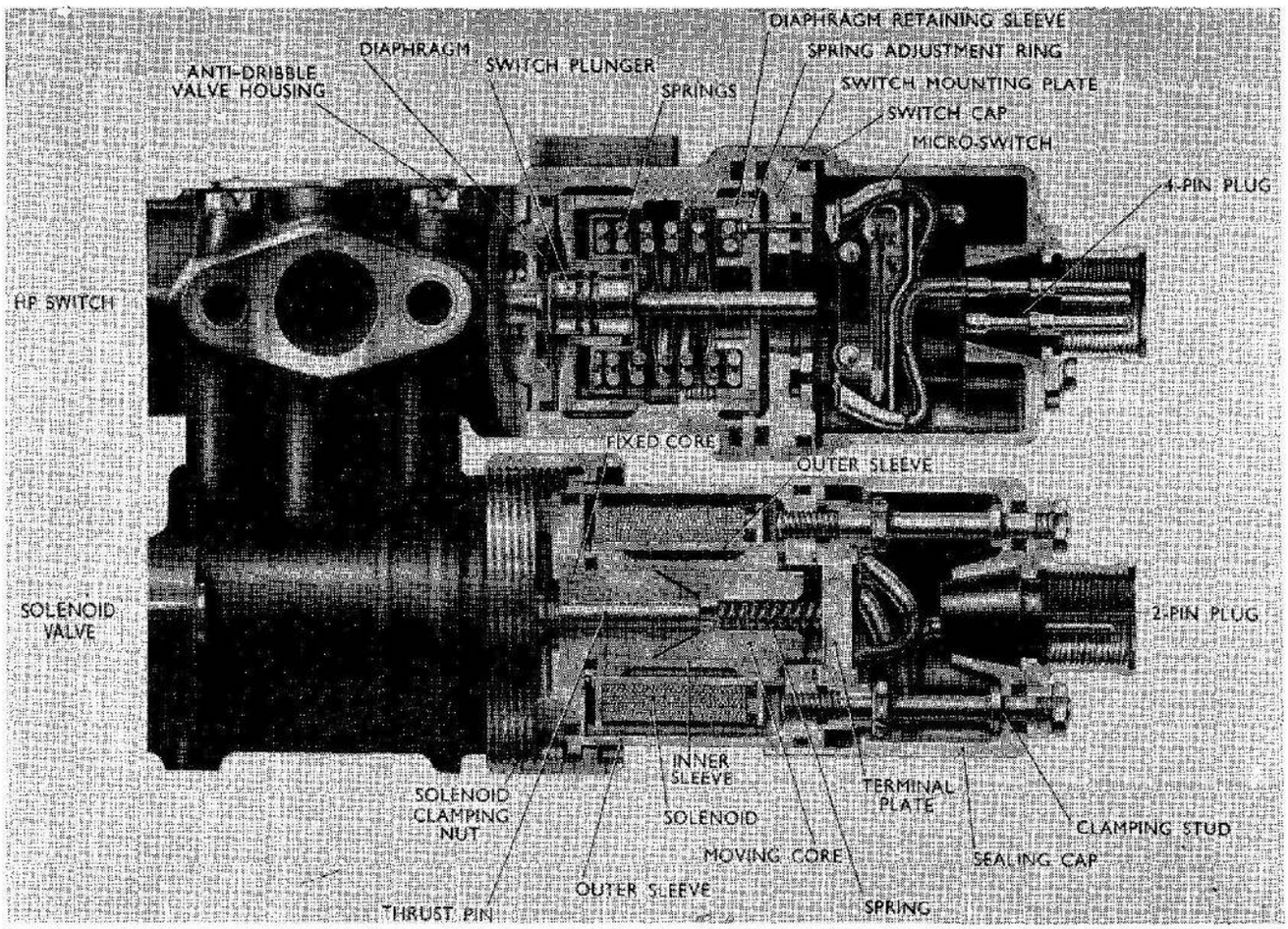

Fig. 1 Sectional view of high pressure switch and solenoid valve

Introduction

1. This is an electro-mechanical device used in Plessey Type liquid fuel turbo-starters. All electrical components in the unit are dealt with in this chapter; the mechanical parts and operational sequence of the system are given in A.P.1181B, Vol. 1 and Vol. 6.

DESCRIPTION

2. The unit consists of two inter-dependant components: (1) the high pressure switch and anti-dribble valve, and (2) the solenoid valve. Each of these two main components are constructed as a casting containing the valve assembly, with a case containing the associated electrical components. The cases are fitted to the castings containing the valve assemblies and the two castings are bolted together to form the complete unit. The units are supplied complete with R.H. or L.H. connections depending upon a particular aircraft's requirements, details being given under Leading Particulars.

Solenoid

3. The solenoid is a component of the main solenoid valve assembly, having an inner and an outer sleeve, a bobbin assembly, a moving core and a fixed core (*fig.* 1).

4. The bobbin is fitted over the inner sleeve, while the outer sleeve forms part of the casing, providing a seating for the terminal plate at one end and, at the other, the lip by which the clamping nut secures the solenoid assembly to the valve casting (*fig.* 1).

5. Carried concentrically within the inner sleeve are the moving core and the centre of the fixed core, with a thrust pin free to slide within the fixed core. One end of the thrust pin bears against the diaphragm shaft, and the other end against the moving core.

Electrical connections

6. Electrical connections to the solenoid are made through a two pin plug, wired internally to the terminal plate, and from the terminal plate to the bobbin of the solenoid. The plug is secured by the studs which retain the terminal plate to the outer sleeve of the solenoid valve (*fig.* 1).