Chapter 6

ELECTRO-PNEUMATIC VALVE, TYPE GB

LIST OF CONTENTS

LEADING PARTICULARS

Type GB/A/24	Stores Ref. 27Y/2764
Voltage	12 d.c.
Current consumption	1·0 amp.
Weight	2 lb. 9 oz.
Type GB/A/28	Stores Ref. 27Y/2765
Voltage	24 d.c.
Current consumption	0·5 amp.
Weight	2 lb. 9 oz.

DESCRIPTION

1. The electro-pneumatic valve, Type GB, is of conventional design and is used to control the flow of air to and from a double-acting pneumatic jack and may be operated by the thermostatic switch, Type FAP. Details of the types available are given under Leading Particulars.

2. The valve body carries a compressed air inlet and two compressed air outlets; it is bolted to the coil base and coil housing, which contain the armature. The armature carries the valve stem, which is threaded to retain two double-ended valve heads and, at its lower end, a spring and spring-adjusting nut. The valve heads are located in the gaps between three valve seats, which are externally screwed and locked by four nuts within the valve body.

3. The compressed air inlet communicates with the bore of the centre valve seat. The upper compressed air outlet communicates with the gap between the upper and centre valve seats. The lower compressed air outlet communicates with the gap between the lower and centre valve seats.

4. The maximum working air pressure is 300 lb. per sq. in. The electrical connections are brought out from the coil to two terminals on a terminal block. A terminal block cover, secured by screws, also serves as a cable clamp.

5. When the coil is not energized, the valve spring keeps the armature in its lower position, and the following conditions of air flow obtain:—

(1) Compressed air inlet.—Compressed air flows into the bore of the centre valve seat and passes via the lower valve to the lower compressed air outlet.

(2) Lower compressed air outlet.—Outflow of compressed air to pneumatic jack.

(3) Upper compressed air outlet.—This is now in communication with atmosphere via the upper valve and upper valve seat. Outflow of exhaust air from pneumatic jack to upper exhaust port.

6. When the coil is energized, the armature moves upwards, and the following conditions of airflow now obtain:—

(1) Compressed air inlet.—Compressed air flows into the bore of the centre valve seat and passes via the upper valve to the upper compressed air outlet.

(2) Upper compressed air outlet.—Outflow of compressed air to pneumatic jack.

(3) Lower compressed air outlet.—This is now in communication with atmosphere via the lower valve and lower valve seat. Outflow of exhaust air from pneumatic jack to lower exhaust port.

SERVICING

7. The bracket mounting bolts should be examined for security, and the electrical connections to the terminal block examined and tested, if necessary, for continuity. No other servicing is permitted.