GIRLING MK.IIB SERVO UNIT

DESCRIPTION

The Mk.IIB type vacuum servo unit is shown in Fig. 17. The design of the vacuum chamber and the retaining band which holds the two halves of the shell together, makes the outside shape slightly different from the earlier type of servo unit. Internally, the vacuum piston has been replaced by a diaphragm and the vacuum connection is now located in the vacuum chamber and not in the hydraulic body.

OPERATION

In Fig. 18, the unit is shown in the "at rest" position with no pressure in the hydraulic system. The valve is open to the inlet manifold and the vacuum on both sides of the diaphragm is equal.

When the foot pedal is applied, hydraulic pressure is exerted throughout the whole system and equally on both ends of the composite valve control piston. As one end of the piston is larger than the other an equal pressure at both ends causes a greater thrust to be exerted on the large end, the piston moves to the left and the T-shaped lever opens the valve to the atmosphere. The air admitted to the right-hand end of the vacuum cylinder drives the diaphragm to the left and the piston rod pushes the output piston down the bore.

During operation the output piston is kept in contact with the piston rod. The piston sleeve remains stationary during the initial movement and allows the ball to drop and seal off the fluid port in the piston (see Fig. 19).

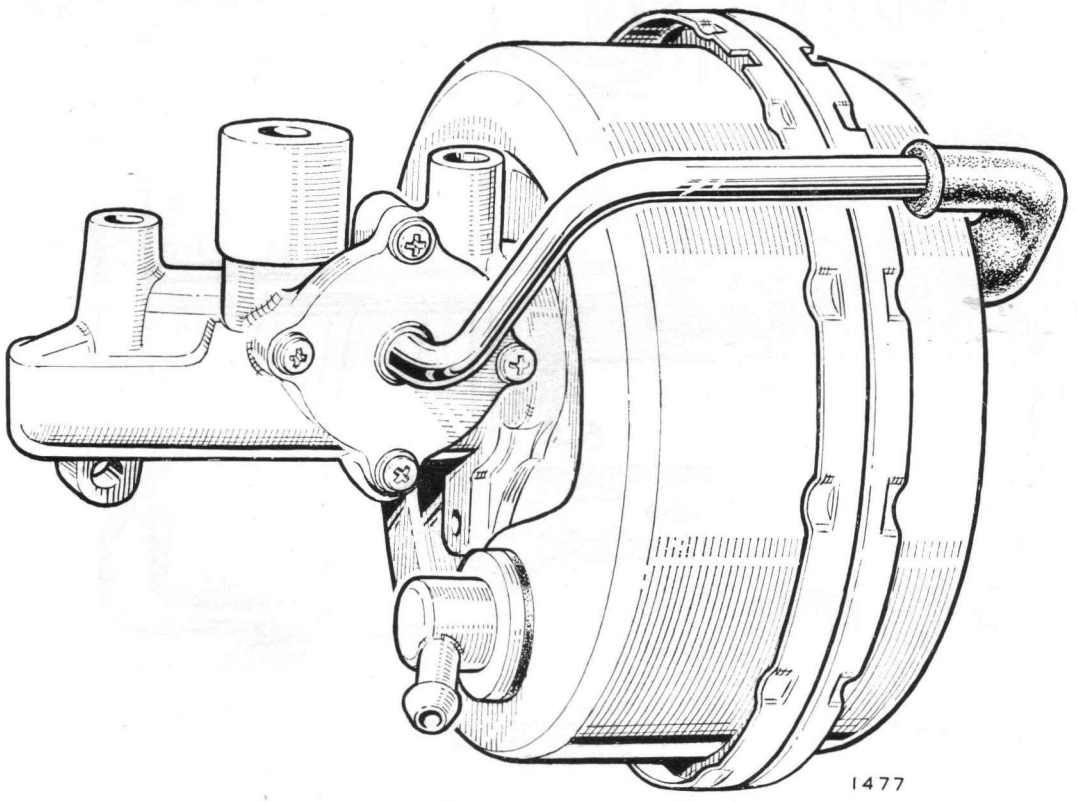

Fig. 17. *MK. IIB Servo Unit*