

Chapter 42

ACTUATOR, PLESSEY, TYPE CZ64521

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LEADING PARTICULARS

Actuator, Type CZ64521	Stores Ref. 5W/403
Voltage (nominal 24-volts)	18-29 volts d.c.
Output of motor (4CZ92025)	0.0155 H.P. at 15,500 r.p.m. for $1\frac{1}{2}$ min.
Current consumption (normal load)	1.5 amp.
Working load	
Normal	75 lb.
Maximum	150 lb.
Operating time (normal working load)	30 sec.
Weight	3 lb. 4 oz.
Travel of plunger	5.5 in.
Fixing centres retracted	6.6 in.
Fixing centres extended	11.5 in.

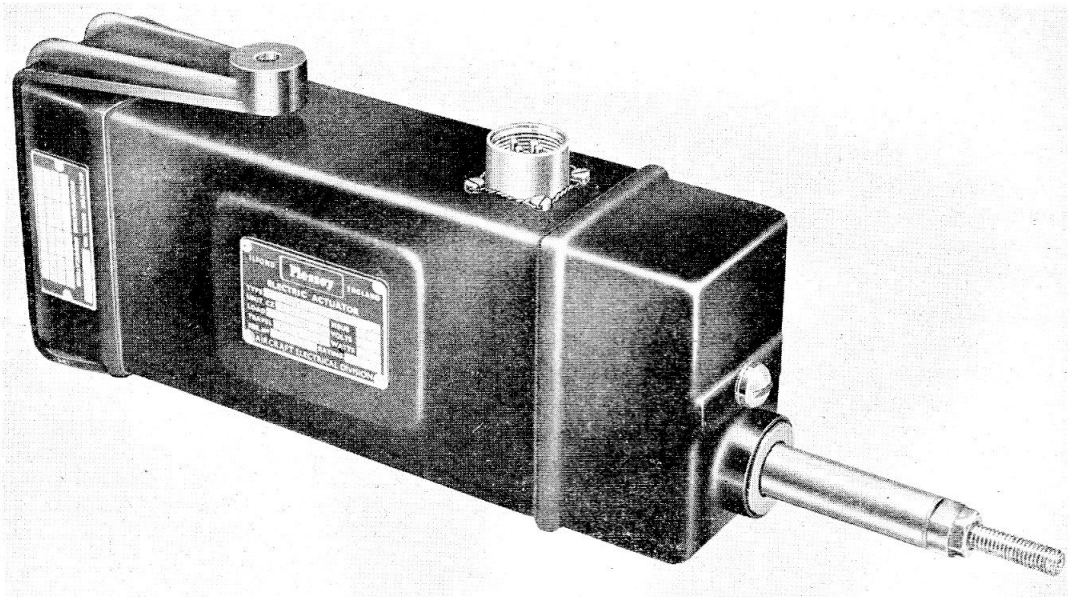


Fig. 1. General view of actuator Type CZ64521

Introduction

1. The Type CZ64521 actuator is one of the Jaguar series and is similar to the actuator described in A.P.4343, Vol. 1, Sect. 17, Chap. 2, App. 9. The special features of the Type CZ64521 actuator are

the slow speed of the plunger stroke and the relatively long plunger travel. There is no slip clutch fitted and the actuator is mounted by means of a trunnion-type mounting bracket.

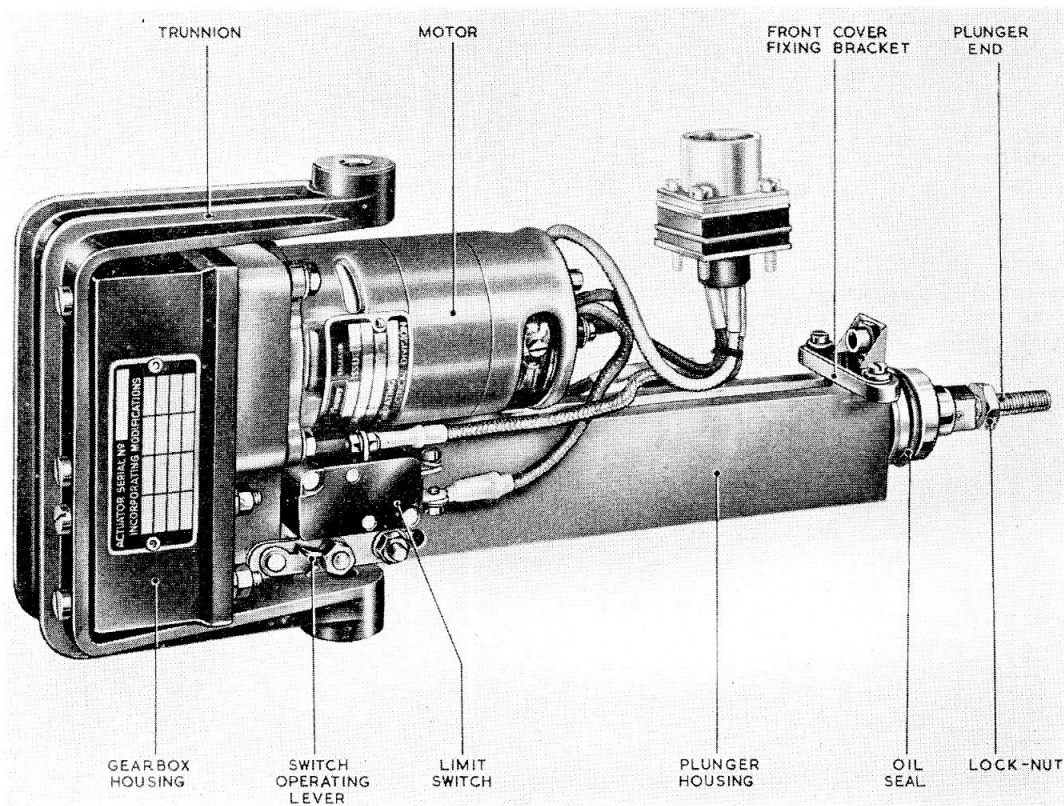


Fig. 2. View of actuator with cover removed

DESCRIPTION

2. A view of the actuator with the covers removed is shown in fig. 2. The special features of this type are described in paragraphs 3 to 7.

Plunger housing

3. To accommodate the longer length of travel, the plunger housing is longer than that of other actuators in the series. The design provides a relatively long plunger stroke with only a small range of adjustment of travel length. Only two pairs of slotted holes, one pair for each limit switch, are provided in the plunger housing for the fixing screws of the limit switches. These holes are just sufficiently long enough to allow for the adjustment necessary for setting the travel length of the plunger.

4. A special rig is required for the correct setting of the limit switches and the position of the switches must not be altered unless full instructions and facilities exist for the accurate adjustment necessary for the correct functioning of the actuator.

5. The plunger bearing bush, which is shown in fig. 3, is lengthened to provide a greater bearing area for the plunger. The bearing protrudes beyond the housing into a collar in the front cover, and is grooved internally and externally to accommodate two sealing rings which exclude dust and oil from the interior of the actuator.

End fittings

6. The actuator is anchored by means of a trunnion-type bracket which is secured

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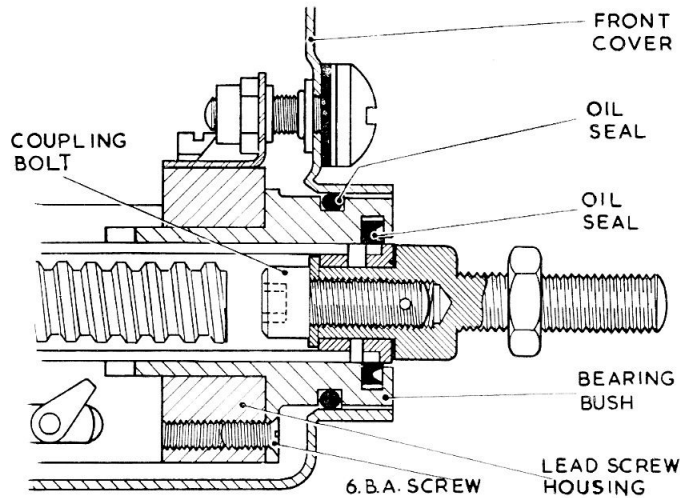


Fig. 3. Details of plunger

to the rear cover by the eight 4 B.A. main assembly bolts. Two 0.250 in. mounting holes are provided in the bracket; other dimensional details are shown in the installation drawing (fig. 4).

7. The actuator plunger is secured to the load by means of a 0.250 in. B.S.F. threaded extension to the plunger.

Electrical connections

8. The internal connections of the actuator, with a typical external control circuit, are

shown in fig. 5. The external electrical connections are made via a four-way plug. Details of the plug and the required mating socket are shown in the installation diagram (fig. 4).

INSTALLATION

9. The installation instructions in Sect. 17, Chap. 2, App. 9 for the installation of Jaguar actuators are applicable to this actuator, except that there is no eye bolt fitted to the end of the plunger. When fitting the threaded end of the plunger to the

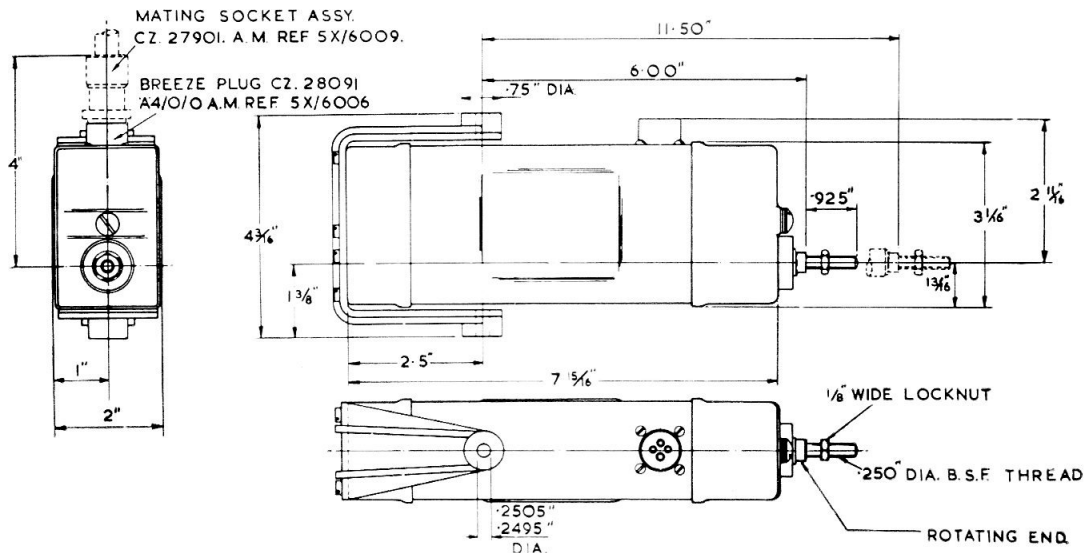


Fig. 4. Installation drawing

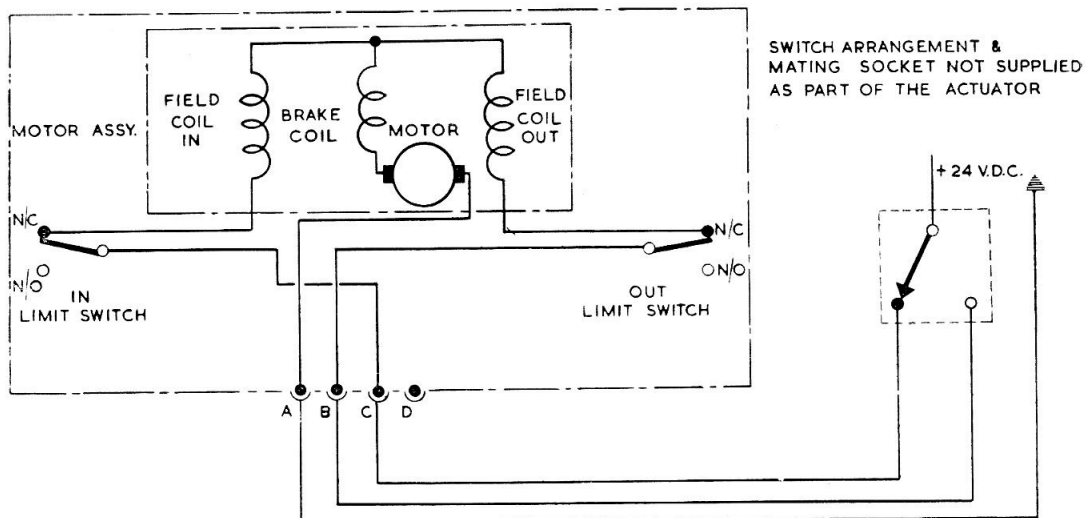


Fig. 5. Circuit diagram

attachment on the actuator load, the screw must enter without strain.

SERVICING

10. The actuator is fully lubricated during overhaul and requires no internal re-lubrication during its overhaul life. The external fittings should be kept well lubricated with a low temperature grease.

11. During routine inspections, check that

the external screws and the actuator mounting are secure. Check the security of the plug and socket connection.

Insulation resistance test

12. With an insulation resistance tester measure the insulation resistance between the electrical circuit and earth; this test can be effected at the Breeze plug whilst still installed in the aircraft. The insulation resistance must not be less than 50,000 ohms.