

## Chapter 17

### ACTUATOR, PLESSEY, TYPE CZ54042

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#### LEADING PARTICULARS

<b>Actuator, Type CZ54042</b>	....	Stores Ref. 5W/22
Voltage	....	24 d.c.
Current consumption (on normal load)	....	3 amp.
Maximum load	....	150 lb.
Normal load	....	100 lb.
Brush spring pressure	....	3.5 to 4.5 oz.
Weight	....	2 lb.
Travel of plunger	....	3 in.
Time for full travel (on normal load)	....	6 to 7 sec.
Distance between centres		
Plunger extended	....	13.75 in.
Plunger in mid-position	....	12.25 in.
Plunger in retracted position	....	10.75 in.

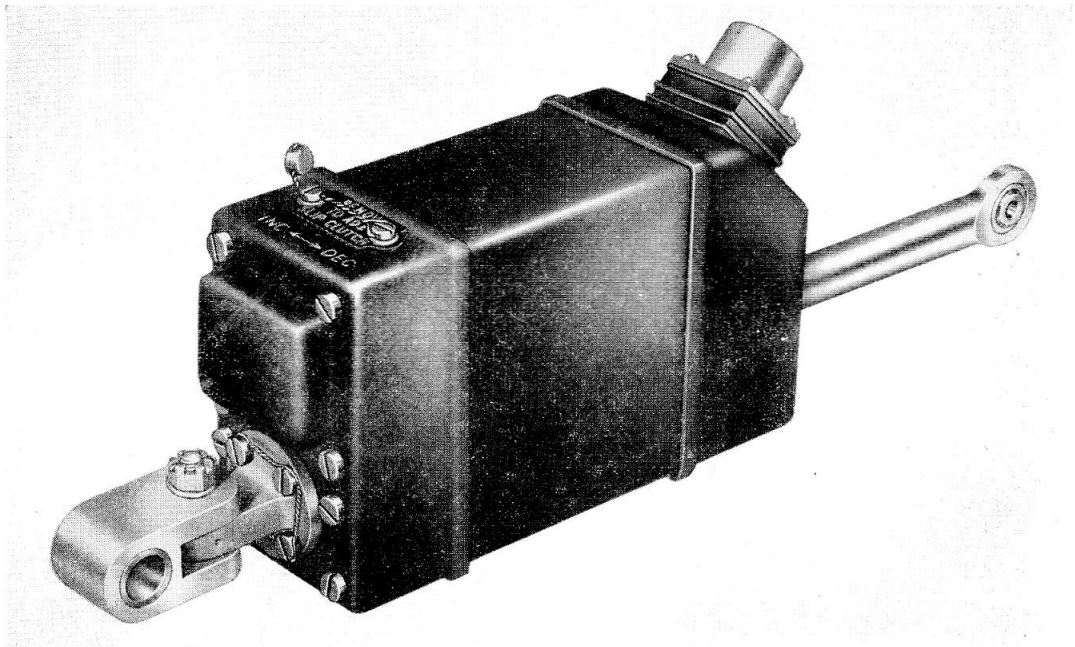
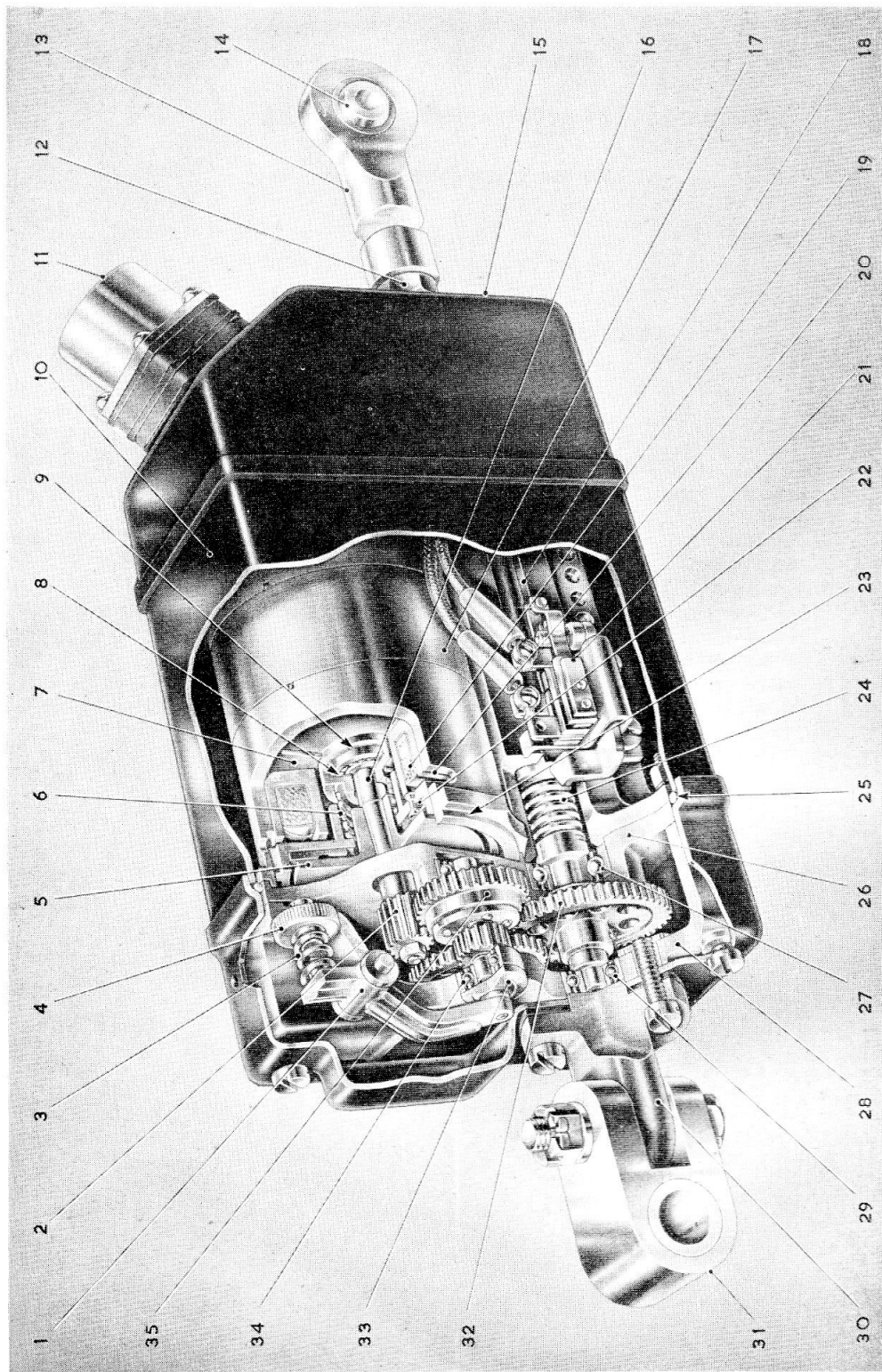


Fig. 1. General view of actuator



- |    |                        |    |                                |
|----|------------------------|----|--------------------------------|
| 1  | CLUTCH LEVER           | 29 | FINAL GEAR SPIGOT BEARING      |
| 2  | FIRST (MOTOR) GEAR     | 30 | END FITTING                    |
| 3  | CLUTCH SPRING          | 31 | END FITTING COUPLING           |
| 4  | CLUTCH ADJUSTING NUT   | 32 | FINAL OR LEAD SCREW GEAR       |
| 5  | FRICITION PLATE        | 33 | CLUTCH THRUST PAD              |
| 6  | BRAKE RETURN SPRING    | 34 | SPIGOT BEARING                 |
| 7  | AIR GAP ADJUSTING SHIM | 35 | SECOND GEAR, CONTAINING CLUTCH |
| 8  | SHIM                   |    |                                |
| 9  | BRASS CASE             | 22 | BRAKE SHOE ASSEMBLY            |
| 10 | SPACER CASE            | 23 | REGISTER                       |
| 11 | MULTI-POLE PLUG        | 24 | LEAD SCREW                     |
| 12 | LOCKNUT                | 25 | SEALING WASHER                 |
| 13 | PLUNGER END FITTING    | 26 | FRONT COVER (GEARBOX)          |
| 14 | SELF-ALIGNING JOINT    | 27 | LEAD SCREW BEARING             |
| 15 | FRONT COVER            | 28 | GEARBOX                        |
| 16 | ARMATURE SHAFT         |    |                                |
| 17 | MOTOR                  |    |                                |
| 18 | PLUNGER HOUSING        |    |                                |
| 19 | BRAKE COIL             |    |                                |
| 20 | AIR GAP CHECKING SLOT  |    |                                |
| 21 | 1/4 IN. LIMIT SWITCH   |    |                                |
| 22 | FRONT COVER            |    |                                |
| 23 | REGISTER               |    |                                |
| 24 | LEAD SCREW             |    |                                |
| 25 | SEALING WASHER         |    |                                |
| 26 | FRONT COVER (GEARBOX)  |    |                                |
| 27 | LEAD SCREW BEARING     |    |                                |
| 28 | GEARBOX                |    |                                |

Fig. 2. Sectional view of actuator

RESTRICTED

### Introduction

1. The actuator, Type CZ54042, belongs to the Jaguar series of actuators as described in A.P.4343, Vol. 1, Sect. 17, Chap. 2, App. 9. It is used with loads, such as air intakes or fuel cocks, which in their operation require a direct thrust or pull not normally exceeding 100 lb.

### DESCRIPTION

2. A sectional view of the actuator appears in fig. 2. The general construction is as described in the Appendix on Jaguar actuators, to which reference should be made for further information.

### Limit switches

3. Three limit switches are fitted on this actuator. The "in" and "out" switches are mounted alongside one another on one side of the actuator, whilst the third, the mid-way limit switch, is fitted at the other side. It is connected as shown in the wiring

diagram in fig. 3, and thus the motor can be stopped when the plunger has completed half its stroke.

4. The stroke of the plunger is set to its required length by altering the position of the "in" and "out" limit switches. Such action should never be taken, however, without the permission of a competent authority, as a special setting rig is required for the purpose in order to obtain the accurate adjustment necessary for the correct functioning of the actuator.

### INSTALLATION

5. The instructions given in A.P.4343, Vol. 1, for Jaguar actuators, are applicable to this actuator.

### SERVICING

6. The servicing of this actuator is as given for other Jaguar actuators.

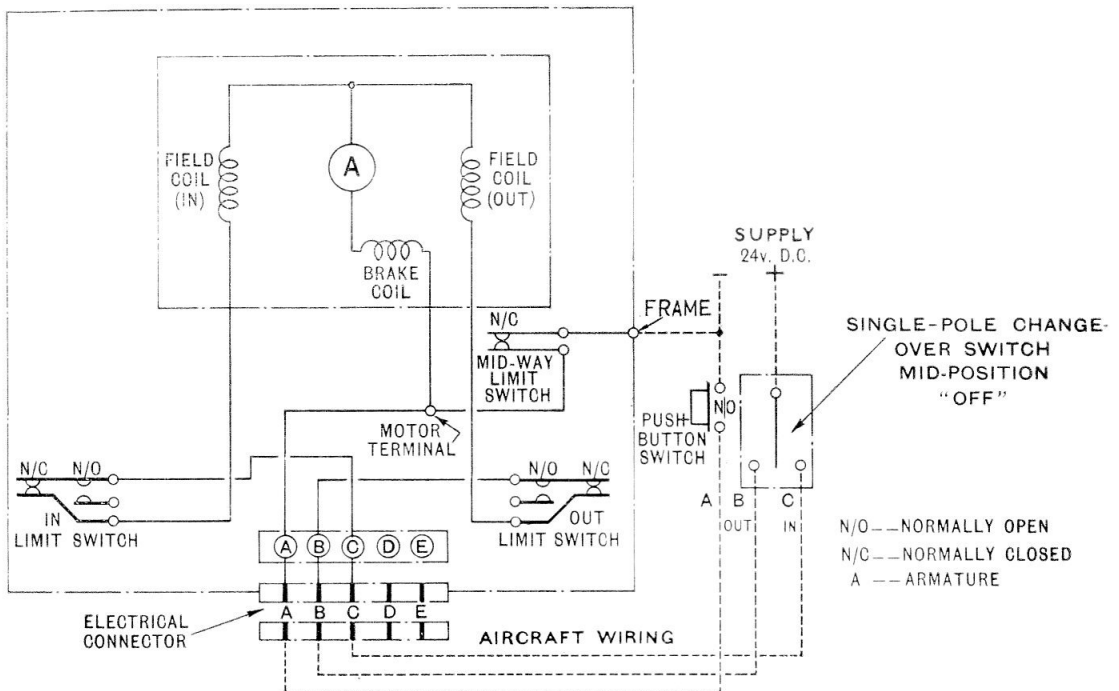


Fig. 3. Wiring diagram