

## Chapter 17

# ACTUATOR, PLESSEY, TYPE CZ54042

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### LEADING PARTICULARS

<b>Actuator, Type CZ54042</b>	Stores Ref. SW/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.

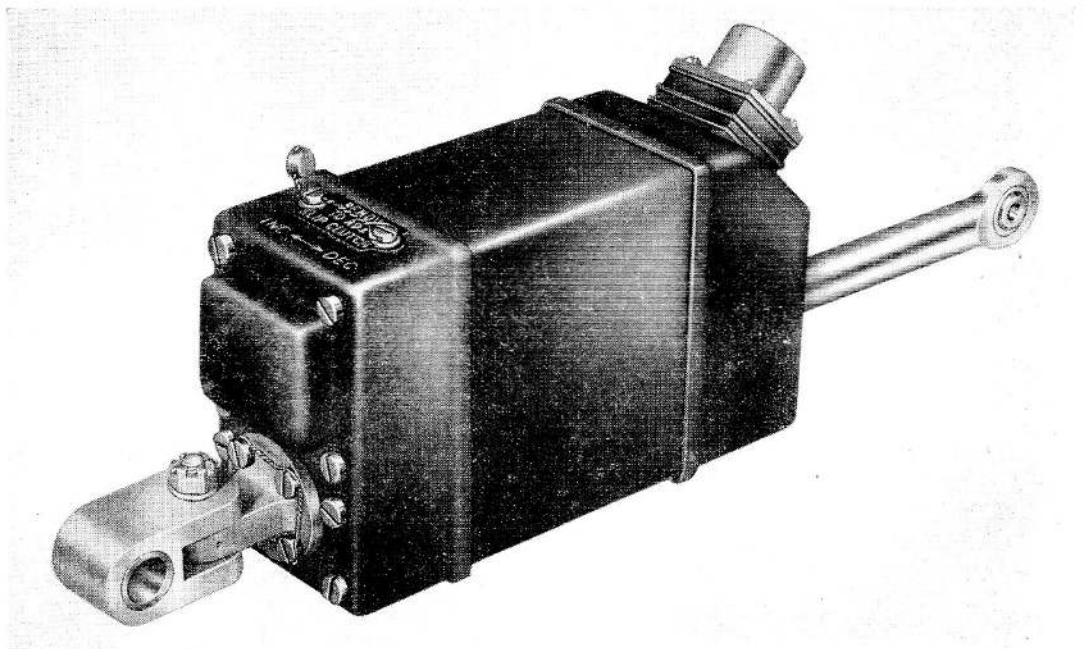
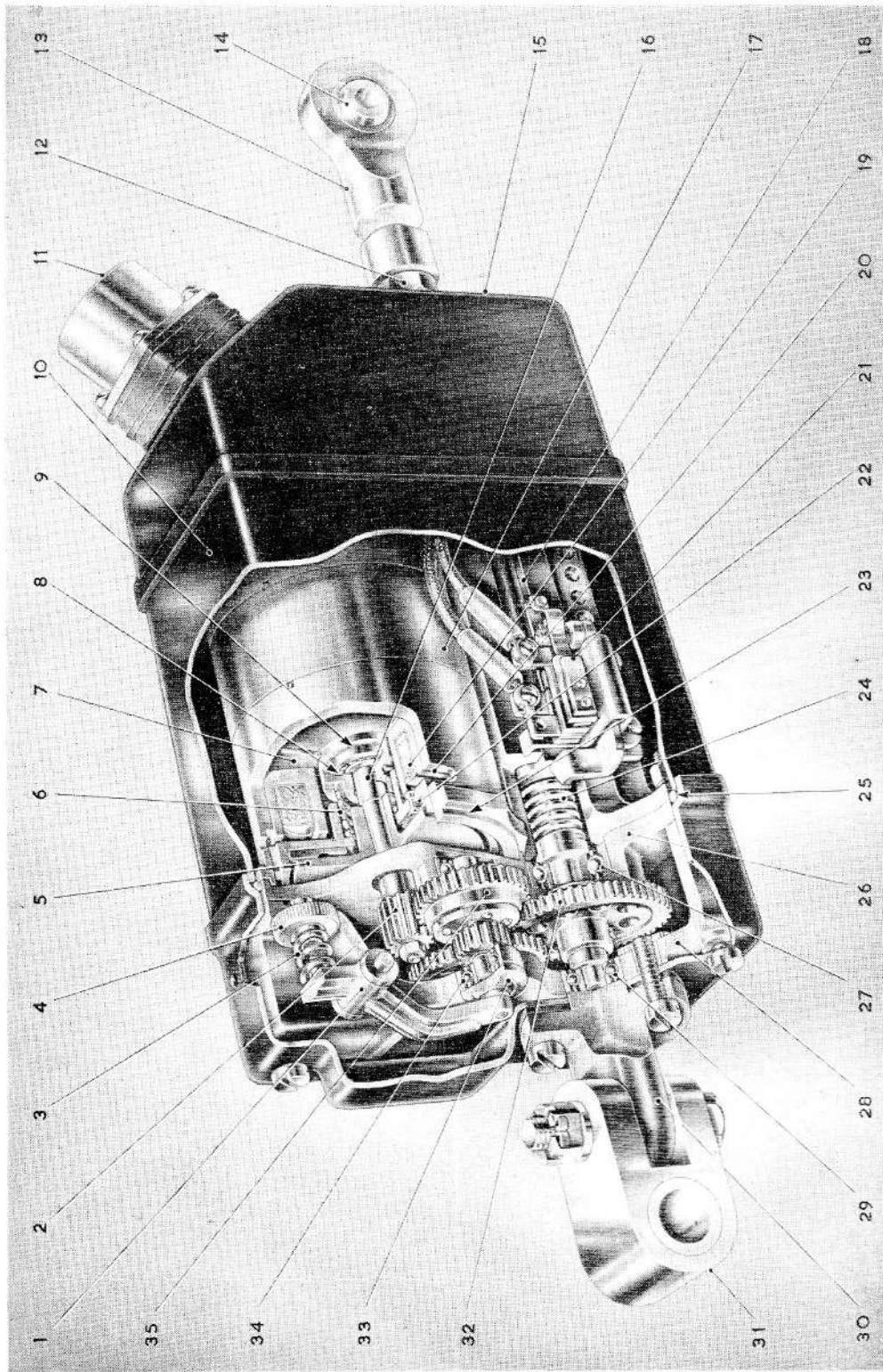


Fig. 1. General view of actuator



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

Fig. 2. Sectional view of actuator

**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.

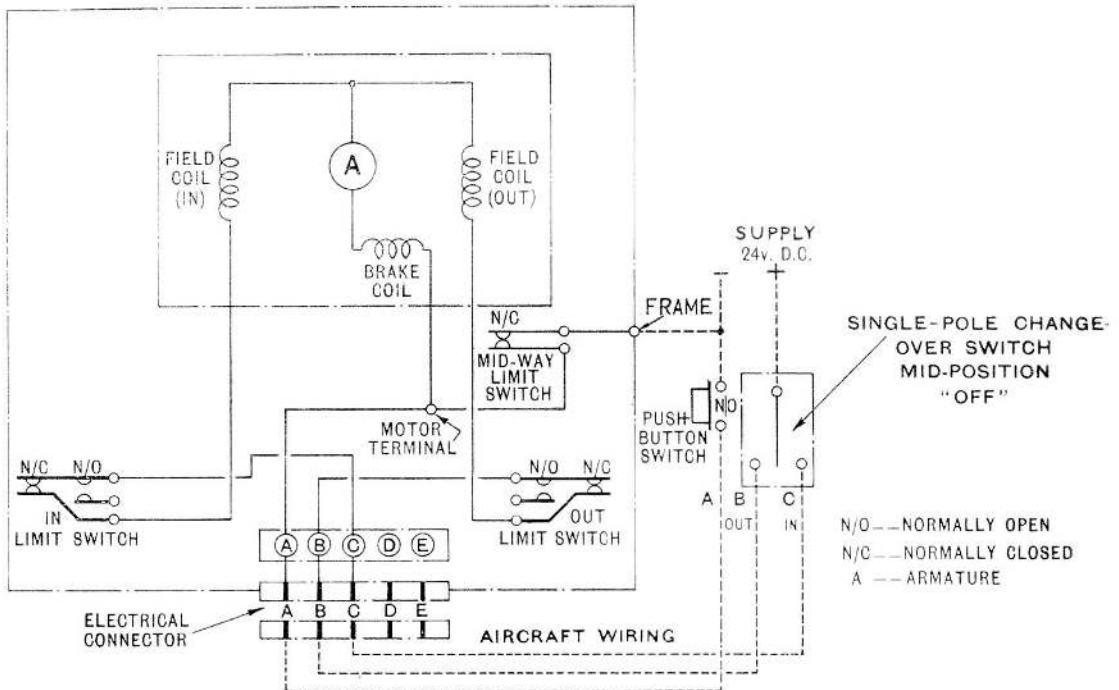


Fig. 3. Wiring diagram

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LIGHTNING MK. 1  
COVER PITOT HEAD  
EB2-88-5111