Chapter 29

ACTUATOR, WESTERN, TYPE EJ 50, Mk. 26

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LIST OF ILLUSTRATIONS

Introduction

1. This actuator differs from that described in A.P.4343, Vol. 6, Sect. 17, Chap. 2, App. 15 on Western EJ 50 series in respect of end fittings, length and time of stroke, reduction gears, worm thread and electrical connection. Details of these variations are given below.

DISMANTLING, INSPECTION, REPAIR AND RE-ASSEMBLY

2. These are all described in A.P.4343, Vol. 6, Sect. 17, Chap. 2, App. 15.

End fittings

3. The actuator is attached at the fixed

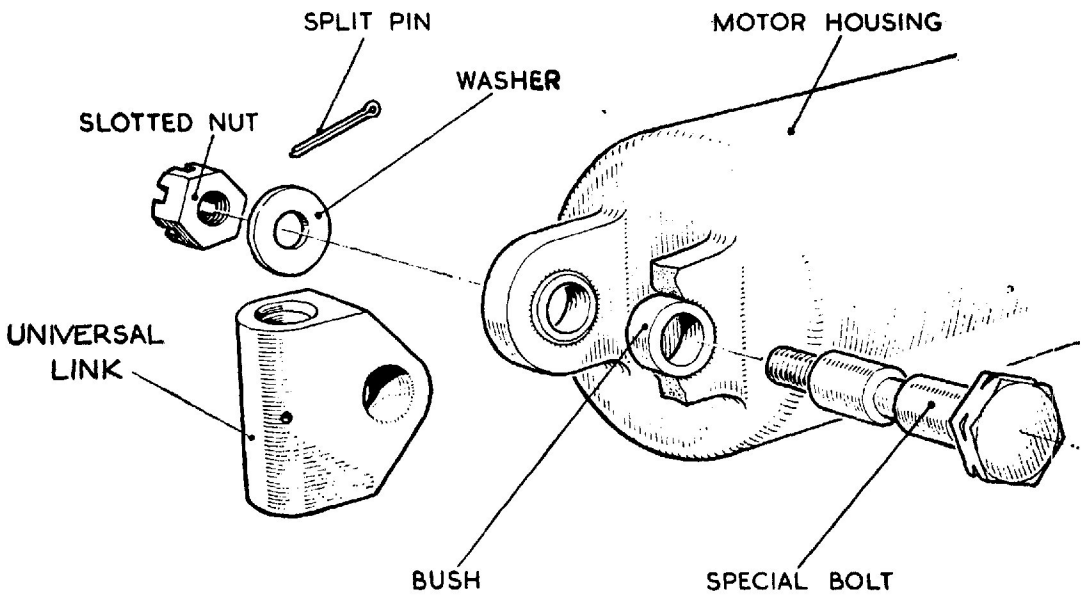

Fig. 1. Fixed end fitting

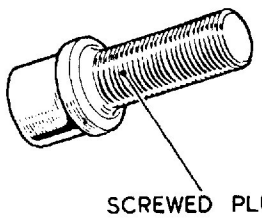

Fig. 2. Moving end fitting

end by a bolt or pin (not supplied with the actuator) which passes through a $\frac{1}{4}$ in. diameter hole in a universal link. This link moves in a fixed trunnion, which is integral with the motor housing, on a special bolt 0·249 in. diameter. The moving end of the actuator is attached by a $\frac{1}{4}$ in. screwed plug.

Fixing centres and stroke

4. The fixing centres, length and time of stroke, are as follows:—

(a) Extended centres 10·35 in. $^{+0\cdot01}_{-0}$ in.

(b) Retracted centres 8·35 in. $^{-0\cdot01}_{+0}$ in.

(c) Stroke length .... 2·00 in.

(d) Time of stroke at 24V and 50 lb. opposing load .... 10·5 seconds

Reduction gears

5. Three-stage epicyclic reduction gears are fitted, having a total reduction ratio of 118 : 1.

Worm

6. The worm is a two start, 16 threads per inch, right hand Acme thread.

Electrical connection

7. This actuator is fitted with a 4-pole Breeze plug, Ref. No. 5X/6006.

TESTING

Actuator

8. Load tests as follows are to be carried out on the actuator after repair and reassembly:—

(1) A running-in test of approximately 10 runs in each direction to be made at 24 volts d.c. and 50 lb. opposing load.

(2) A functional test should be performed at 24 volts d.c. and opposing loads of zero, 50 lb and 100 lb. The current consumption and the time the piston takes to complete its 2·00 in. travel should not exceed the following figures:—

Load (*lb.*)	*Max. current* (*amp.*)	*Max. time* (*sec.*)
0	1·2	8·5
50	1·5	10·5
100	2·0	16·0

Motor

9. Motor tests are described in A.P.4343, Vol. 6, Sect. 17, Chap. 2, App. 15.