Chapter 30

ACTUATOR, WESTERN, TYPE EJ 50, Mk. 35 AND 35A

LIST OF CONTENTS

				Pa	ra.					Pa	ra.
Introduction	••••			••••	1	Worm				 	6
Dismantling, assembly	inspectio	n, rep	air and	l re-	2	Electrica	l conn	ection		 	7
End fittings					3	Testing					
Fixing centre	s and stre	oke			4	Actuator	••••			 	8
Reduction ge	ars	,		.,	5	Motor		,	.,	 	9

LIST OF ILLUSTRATIONS

		İ	Fig.			I	Fig.
Fixed end fitting	 		1	Moving end fitting	 		2

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. This actuator is attached at the fixed

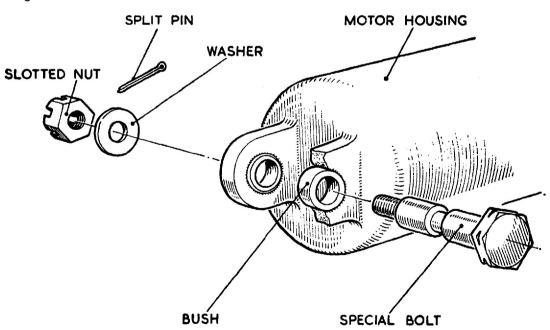


Fig. 1. Fixed end fitting

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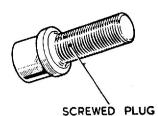


Fig. 2. Moving end fitting

end by a special bolt 0.249 in. diameter, which passes through a fixed trunnion which is integral with the motor housing, whilst the moving end 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 $9 \cdot 32$ in. $+0 \cdot 01$ in. -0
 - (b) Retracted centres 8.32 in. -0.01 in. +0
 - (c) Stroke length 1.00 inch
 - (d) Time of stroke at 28V and 50 lb. oppos-

ing load 33 seconds

Reduction gears

5. Four-stage epicyclic reduction gears are fitted, having a total reduction ratio of 581:1.

Worm

6. The worm is a single start, 14 threads per inch, right hand Acme thread.

Electrical connection

7. This actuator is fitted with a 4-pole Breeze plug, Ref. No. 5X/4003.

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 28 volts d.c. and 50 lb. opposing load.
 - (2) A functional test should be performed at 28 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 1.0 inch travel should not exceed the following figures:—

Load (lb.)	Max. current (amp.)	Max. time (sec.)
0	1 ·20	32
50	1 .25	33
100	1 ·30	34

Motor

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