

Service Manual

02

Cargo Crane

Model **TM-1000-1**

Applicable Serial No. 655661--

Foreword

3. Outline of specifications

Item	Spec. No.						
	TM-1000-1 -004	TM-1000-1 -009	TM-1000-1 -014	TM-1000-1 -044	TM-1000-1 -024	TM-1000-1 -034	TM-1000-1 -054
No. of boom sections	5-section						
Winch	Hydraulic motor driven, spur gear speed reduction, provided with automatic brake and cable follower						
Outriggers extended width	Min. 7' 4-9/16" Mid. 10' 9-29/32" Max. 14' 1-9/32"						
Operation	Manual				Radio remote controls		
Maximum lifting capacity	20,000 lbf	16,000 lbf	14,000 lbf	20,000 lbf	16,000 lbf	14,000 lbf	
Safety devices	Anti-twoblock with alarm Hook safety latch Level gauge Hydraulic safety valves, check valves and holding valves Over load alert with load indicator - Load indication - Load moment ratio to rated load indication - Audible warning - External warning lamps						

Boom (Five-section boom)

3. Boom adjustment procedures

Before performing this work, supply grease (TNR) to each slide plate and to each grease cup.

3.1 Top slide plate installation procedure

Apply thread locking compound (Threebond 1305 or equivalent) to the button bolts before using them to secure the slide plate.

After tightening the button bolts, loosen each of them by half a turn and make sure the slide plate can move longitudinally (see Fig. 5).

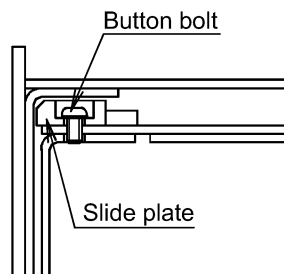


Fig. 5

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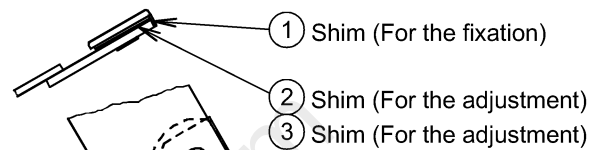
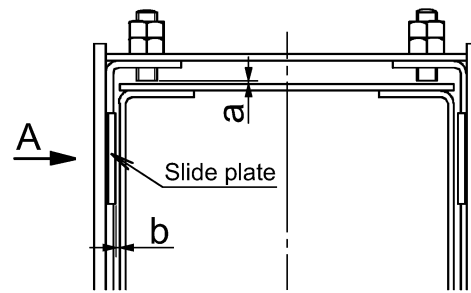
3.2 Adjustment of clearance between boom sections

1. Adjust dimension "a" (see Fig.6) to the following values:

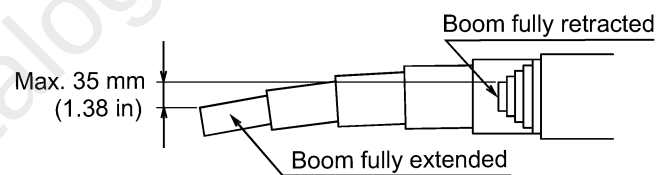
- With boom fully extended: $a = 2 \text{ mm (0.08 in)}$
And locks it with the nut.

2. Adjust dimension "b" (see Fig. 6) using shims-1, -2, and 3 such that the boom's degree of lateral bending and the boom's degree of lateral play comply with the following values:

- Boom lateral bending: max. 35 mm (1.38 in)
(see Fig. 8)
- Boom lateral play: max. 80 mm (3.15 in)
(see Fig. 9)

View A
Fig. 6

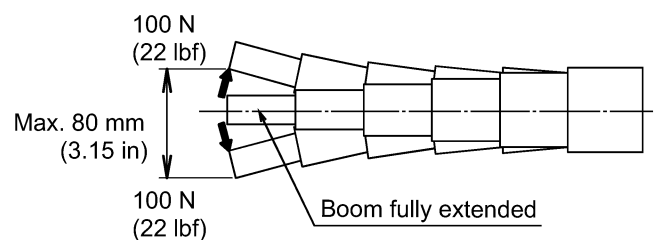
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Adjustment of boom lateral bending

IW536-0272E05

Fig. 8



Adjustment of boom lateral play

IW536-0272E06

Fig. 9

[NOTICE]

- ◆ Install the slide plates before assembling the boom.
- ◆ Shim-1 serves to retain the other shims, so it must be installed last.

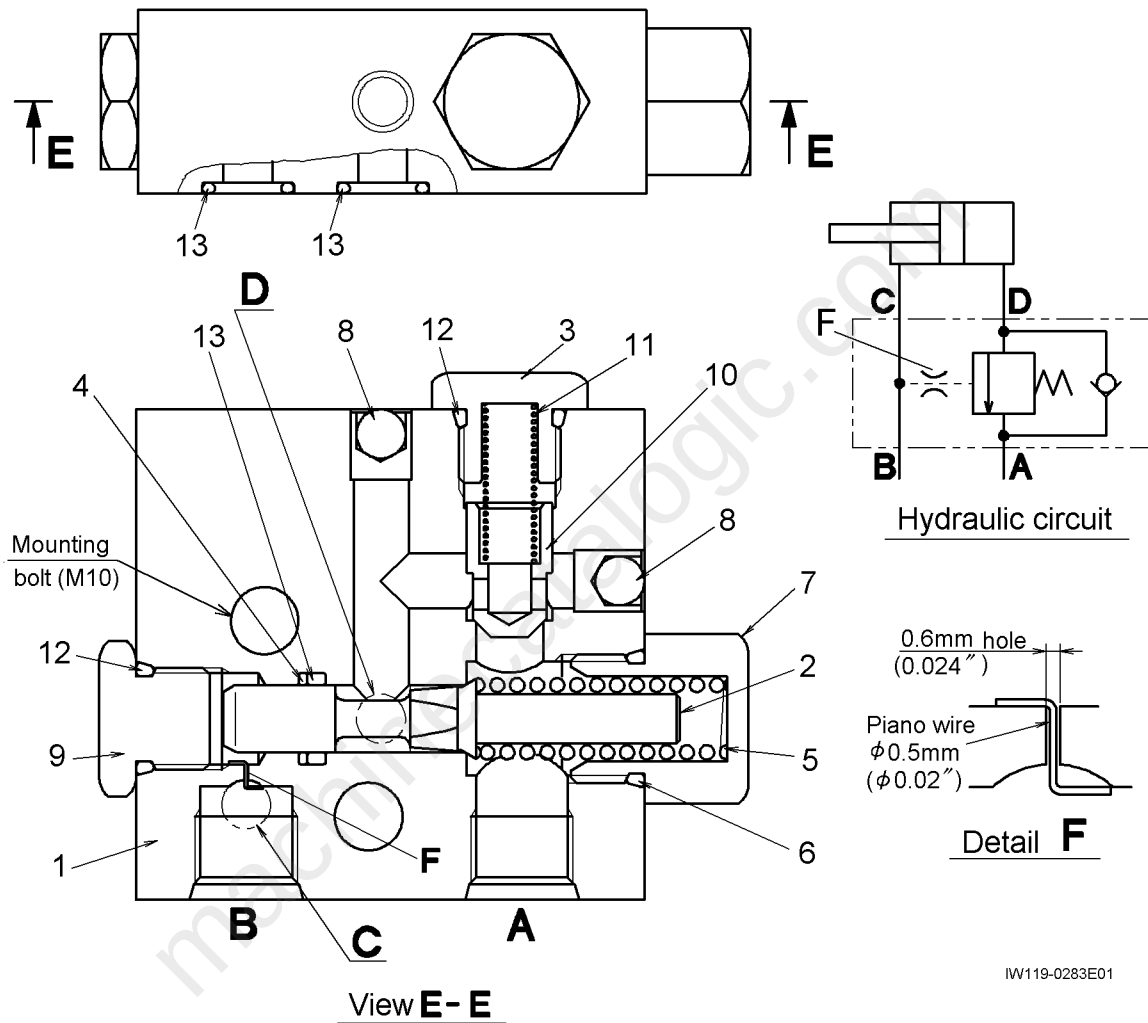
Counterbalance Valve (Telescoping)

G-3 Counterbalance Valve (Telescoping)

[NOTICE]

◆ There is a case that the appearance and so on differ from the parts for this machine. Although there is not so much difference in functions and disassembly procedures, make sure of the serial number of this machine and the part sales unit described in the parts catalog before starting disassembling operations.

1. Structure



- | | | | |
|----------------|-----------|------------|------------|
| 1. Body | 5. Spring | 9. Plug | 13. O-ring |
| 2. Spool | 6. O-ring | 10. Poppet | |
| 3. Plug | 7. Plug | 11. Spring | |
| 4. Backup ring | 8. Plug | 12. O-ring | |

Thread size and tightening torque

Sign / Port	Thread size	Tightening torque	
		N-m	ft-lbf
Plug-3, 9 Port-A, B	G3/8	44.0 - 54.0	32.5 - 39.8
Plug - 7	G1/2	88.1 - 108.1	65.0 - 79.7
Mounting bolt	M10	34.3 - 39.2	25.3 - 28.9

366-051-80001 △
 366-065-50000 △
 366-055-20000 △

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