



TADANO

Publication No. TM-ZR500XL-4/S1(U)-1E

Service Manual

01

Cargo Crane

Model **TM-ZR500XL**

Applicable Serial No. EH8296 ~

TADANO LTD.

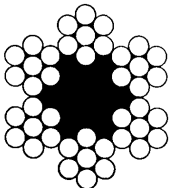
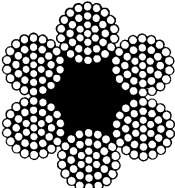
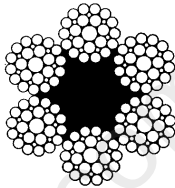
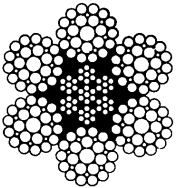
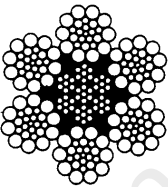
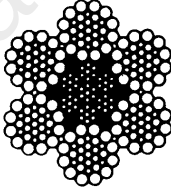
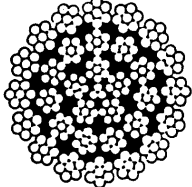
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Machine Elements

3.3 Construction (cross section)

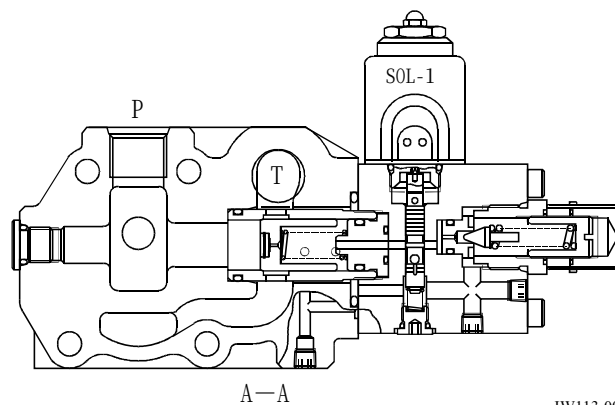
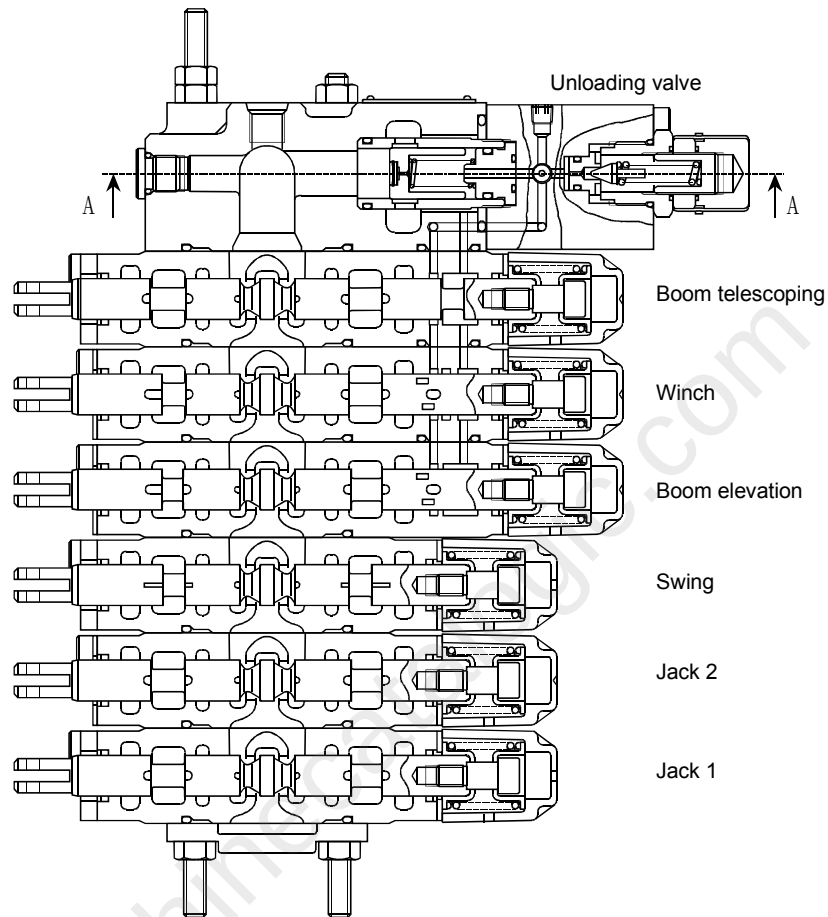
The chart below shows the constructions of wire ropes used often in Tadano cranes.

Construction	6 strands $\times$ 7 wires ; fiber core	6 strands $\times$ 37 wires ; fiber core	6 strands $\times$ 29 wires, filler ; fiber core	6 strands $\times$ 29 wires, filler ; IWRC
Construction symbol	6×7	6×37	$6 \times \text{Fi}(29)$	$7 \times 7 + 6 \times \text{Fi}(29)$
Cross section				
Construction	6 strands $\times$ 26 wires, Warrington-Seale ; IWRC	6 strands $\times$ 31 wires, Warrington-Seale ; IWRC	Nuflex	
Construction symbol	$7 \times 7 + 6 \times \text{WS}(26)$	$7 \times 7 + 6 \times \text{WS}(31)$	$1 \times 3 + 5 \times 7 + 11 \times 7 + 16 \times 7$	
Cross section				

ISA01-01-2E78

Manual Control Valve (Hook-in Spec)

Cross section



IW113-003002

Boom (Five-Section Boom)

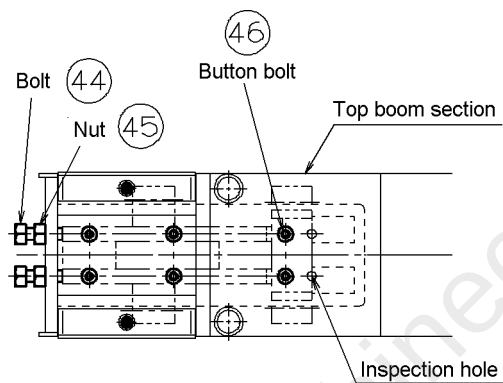
4. Install the wire rope support in accordance with the following steps (see Fig.4):

Apply thread locking compound (Threebond 1305 or equivalent) to the button bolts and use them to loosely fit the wire rope support.

Tighten the bolts until the wire rope support's longitudinal play is eliminated, then lock them in position with the nuts.

Verify through the inspection holes that the wire rope support is pressed firmly against the stopper.

Tighten the button bolts to a torque of 18.1 ft-lb (24.5 N-m).



View from top of top boom section

Fig. 4

IW536-027003

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).

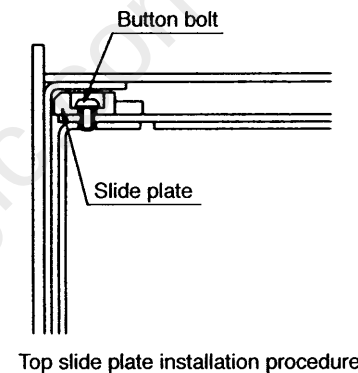
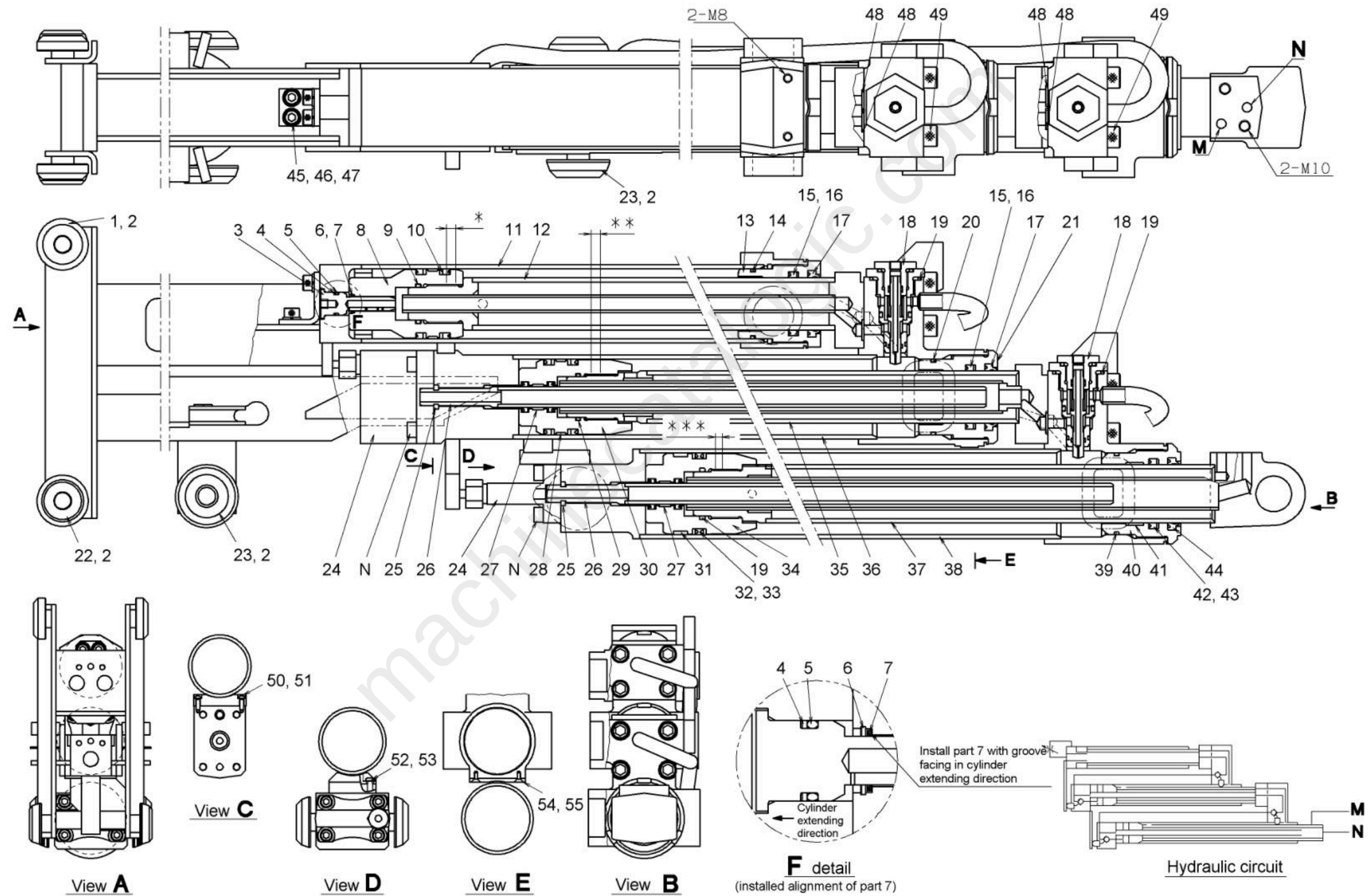


Fig. 5

Telescoping Cylinder (Five-Section Boom)

Cylinder assembly (part-1 on page 1)
detail



IW157-025002E

AMA

5. List of Error Nos. Related to AMA

No.	Description	Cause	Measures
E14	Improper setting of model selection dipswitch	Boom length value or boom angle value left unadjusted	Adjust
E15		Improper setting of dipswitch	Set property
E16			
E17	Improper setting of function selection dipswitch	Improper setting of dipswitch	Set property
E18			
E20	Abnormal display of load	Maladjusted boom length value	Compare the actual boom length with the boom length value displayed on the display window on the AMA main unit. Adjust boom length value and check precision. [To make the boom length value appear on the display window, turn the rotary switch to the “2” position.]
		Maladjusted boom angle value	Compare the actual boom angle with the boom angle value displayed on the display window on the AMA main unit. Adjust the boom angle value and check precision. [To make the boom angle value appear on the display window, turn the rotary switch to the “3” position.]
		Faulty pressure detector on the cylinder side or the rod side	Compare the lifted load with the actual load value displayed on the display window on the AMA main unit.
		Faulty AMA itself	Replace the AMA main body if check result is normal.
E21	Faulty CPU	Faulty AMA itself	Replace the AMA main body
E29			
E22	Faulty hardware		
E23			
E24	Faulty length detector	Connector (CN3) disconnected	Connect.
		Maladjusted cord of the boom length detector when installed	Make sure that the error occurs on the occasions that the boom is almost fully extended or almost fully retracted. Adjust the cord so that the yellow tape on the cord is located close to the opening when the boom is fully retracted. Then adjust the boom length value and check precision.
		Faulty boom length detector	Fully retract the boom and measure the resistance of the potentiometer. [1-2 of CN3 : 5,000±1,000Ω 1-3 of CN3 : 300±50Ω] If a measured value is out of the standard range, replace the boom length detector.
		Faulty AMA itself	Replace the AMA main body if check result is normal.

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Tadano TM-ZR500XL-4 Cargo Crane Service Manual

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