



TADANO

Publication No. GR-600XXL-1/S2(U)-1E

Service Manual

01

Rough Terrain Crane

Model **TR-600XXL-4**

Applicable Serial No. 545595 --

TADANO LTD.

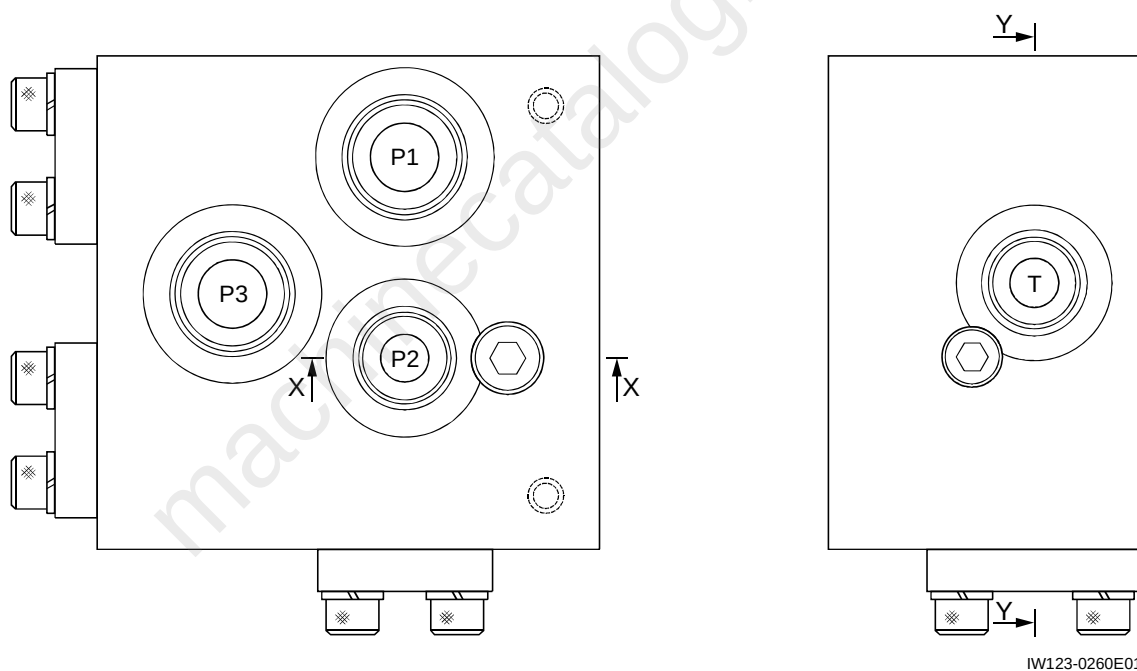
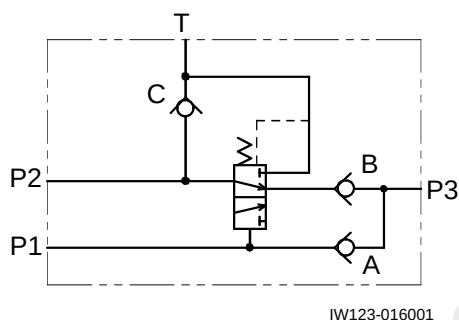
Hydraulic Valve (Emergency Steering) (Option)

B-5 Hydraulic Valve (Emergency Steering) (Option)

[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



Thread size and tightening torque

Sign / Port	Thread size	Tightening torque	
		N-m	ft-lbf
P1, P3	G1	196	145
P2, T	G3/4	167	123

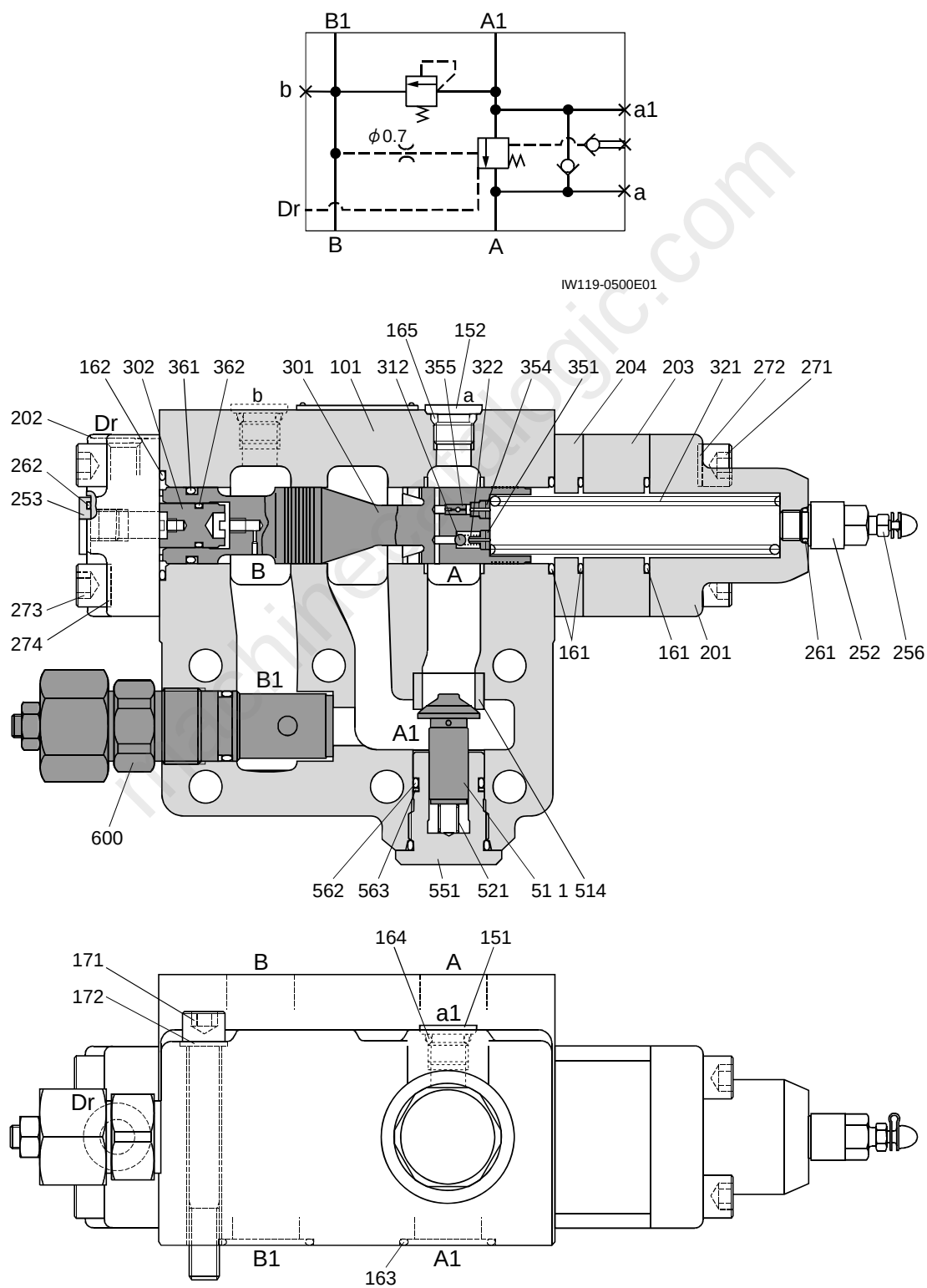
Counterbalance Valve (Winch)

F-4 Counterbalance Valve (Winch)

[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



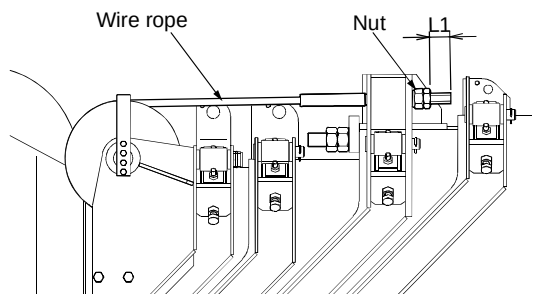
Boom (Five-Section Boom)

2.2 Removing the 3rd boom section

- 1 Remove the wire rope for top boom section extension/4th boom section retraction located on the top of the 2nd boom head by loosening the nut.

[NOTICE]

- ◆ Before loosening the nut, measure the length of the wire rope protrusion (L1) as a guide for reassembly.

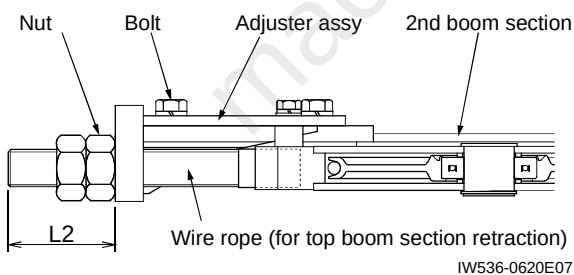


2. Remove the wire rope for top boom section located on the top of the 2nd boom head by loosening the nut.

[NOTICE]

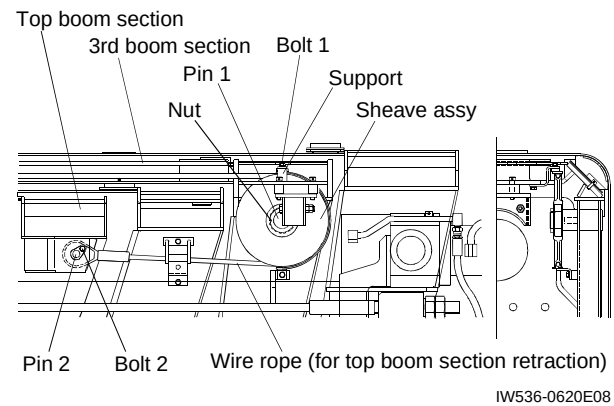
- ◆ Before loosening the nut, measure the length of the wire rope protrusion (L2) as a guide for reassembly.

3. Remove the adjuster assy from the 2nd boom section by loosening the bolt.

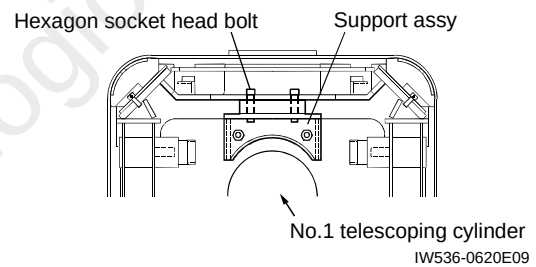


4. Remove the supports (on both sides of the rear end of the 3rd boom section) by loosening the bolt 1, and remove the pin and sheave assy by loosening the nut.

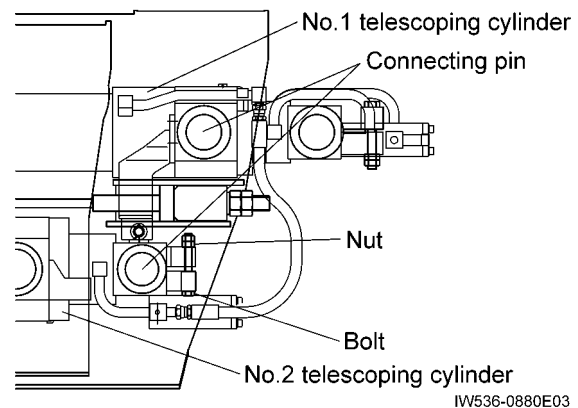
5. Remove the pin from the rear end of the top boom section by loosening the bolt 2 and remove the wire ropes for top boom section retraction (2 pieces).



6. Remove the support assy of the No. 1 telescoping cylinder located at the rear end of the 3rd boom section by loosening the hexagon socket head bolt.



7. After removing the retaining ring, remove the pin that secures the No. 1 telescoping cylinder and No. 2 telescoping cylinder to the 2nd boom section. Then loosen the nut and remove the bolt.



8. Remove the nut for the wire rope (for 4th boom section extension) located on the rear end of the 2nd boom section, then loosen the bolt and remove the support.

Air Conditioner

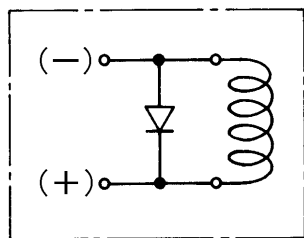
14.Control table

INPUT/OUTPUT				Input															Output																
				Input from Panel															LCD display on panel																
				ON/OFF Switch		Temp. UP switch	Temp. DOWN switch	Blowout mode change switch			DEF mode switch	Air blow UP switch	Air blow DOWN switch	In/outside air switch		A/C switch	Eva sensor	M/A			Blowout mode				In/outside air mode		Air blow mode				A/C sign	Temp. control display	Relay		
				OFF	ON			VENT	B/L	FOOT				Circulated air	Fresh air			ON	OFF	For air mix	For blowout mode	For inside and outside air mode	FACE	B/L	FOOT	DEF	Circulated air	Fresh air	Lo	M ₁			M ₂	Hi	For compressor clutch
CONTROL				-	ON	-	-	-	-	-	-	-	-	-	-	-	-	COOL MAX	FACE position	Circulated ait position	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	ON	COOL MAX (display one bar)	—	OFF	
Air mix M/A control	COOL→WARM			OFF	Status before turning OFF is held.	ON	OFF	-	-	-	-	-	-	-	-	-	Operates to WARM	-	-	-	-	-	-	-	-	-	-	-	-	-	Bar increases from left	-	-		
	WARM→COOL			OFF		OFF	ON	-	-	-	-	-	-	-	-	-	-	Operates to COOL	-	-	-	-	-	-	-	-	-	-	-	-	Bar decreases from right	-	-		
Blowout mode M/A control	FACE mode			OFF		-	-	ON	OFF	↑	↑	-	-	-	-	-	-	-	FACE pos.	-	ON	OFF	↑	↑	-	-	-	-	-	-	-	-	-	-	
	B/L mode			OFF		-	-	OFF	ON	OFF	↑	-	-	-	-	-	-	-	B/L pos.	-	OFF	ON	OFF	↑	-	-	-	-	-	-	-	-	-	-	
	FOOT mode			OFF		-	-	OFF	↑	ON	OFF	-	-	-	-	-	-	-	FOOT pos.	-	OFF	↑	ON	OFF	-	-	-	-	-	-	-	-	-	-	
	DEF mode			OFF		-	-	OFF	↑	↑	ON	-	-	-	-	-	-	-	DEF pos.	-	OFF	↑	↑	ON	-	-	-	-	-	-	-	-	-	-	
Inside and outside air M/A control	Circulated air mode			OFF		-	-	-	-	-	-	-	-	ON	OFF	-	-	-	-	-	Circ. air	-	-	-	-	ON	OFF	-	-	-	-	-	-	-	-
	Fresh air mode			OFF		-	-	-	-	-	-	-	-	OFF	ON	-	-	-	-	-	Fresh air	-	-	-	-	OFF	ON	-	-	-	-	-	-	-	
Blower amplifier control	Lo			OFF		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	OFF	↑	↑	-	-	-	-	-	
	M ₁			OFF		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	OFF	ON	OFF	↑	-	-	-	-	-		
	M ₂			OFF		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	OFF	↑	ON	OFF	-	-	-	-	-	-	
	Hi			OFF		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	OFF	↑	↑	ON	-	-	-	-	-	-	
Compressor clutch control	Thermo operation			OFF		-	-	-	-	-	-	-	-	-	-	ON	OFF	Note1	-	-	-	-	-	-	-	-	-	-	-	ON	-	Note1	-		
	Frost formation detection			OFF		-	-	-	-	-	-	-	-	-	-	ON	OFF	Note2	-	-	-	-	-	-	-	-	-	-	-	ON	-	Note2	-		
	Fretting prevention			OFF		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	OFF	OFF	ON	ON	-	-	-	Note3	-		
Water pump relay control	Bars displayed on LCD are eight.		Water pump relay ON	OFF		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Eight bars display	-	ON		
	Bars displayed on LCD are seven or less.		Water pump relay OFF	OFF		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Seven or less bars display	-	OFF		
A/C ON signal output	Signal output at A/C ON			OFF		-	-	-	-	-	-	-	-	-	ON	OFF	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-		
Abnormal detection and subsequent control	Abnormality of M/A and its I/O circuit	Open circuit detection	Air mix M/A	OFF	ON	-	-	-	-	-	-	-	-	-	-	-	OFF	-	-	-	-	-	-	-	-	-	-	-	-	Blinking of HOT sign	-	-			
			Blowout mode M/A	OFF	ON	-	-	-	-	-	-	-	-	-	-	-	-	-	OFF	-	Blinking of human character sign				-	-	-	-	-	-	-	-	-		
			In/outside air mode M/A	OFF	ON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	OFF	-	-	-	-	Blinking in/outside air		-	-	-	-	-	-	-		
	Abnormality of sensors and their input circuits	Open or short-circuit detection	Eva sensor	OFF	ON	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Blinking of A/C sign	-	OFF	-			
			Between operation panel and control amplifier	OFF	ON	-	-	-	-	-	-	-	-	-	-	-	-	-	OFF	OFF	OFF	-	-	-	-	-	-	-	-	Blinking of bar display "Frame"	OFF	OFF			

Note 1. OFF temperature: 4-6°C(39.2-42.8°F), ON temperature: 5.5-8.5°C(41.9-47.3°F)
Note 2. Timer set temperature:6-10°C(42.8-50°F), Timer cancellation temperature:6-12°C(42.8-53.6°F), Count up time: 10±1 minutes, Timer reset temperature: 7-13°C(44.6-55.4°F)
Note 3. When compressor clutch is never turned ON after power ON of vehicle main key, also when compressor clutch is turned ON only once when air blow M2 or higher continues for five minutes. This control is cleared by main key power OFF in the vehicle, and starts the control again by turning it ON. Compressor clutch ON time: 1±0.6 seconds

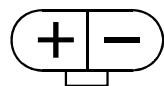
Solenoid Valve (Spring Lock Check Release)

Solenoid valve assy



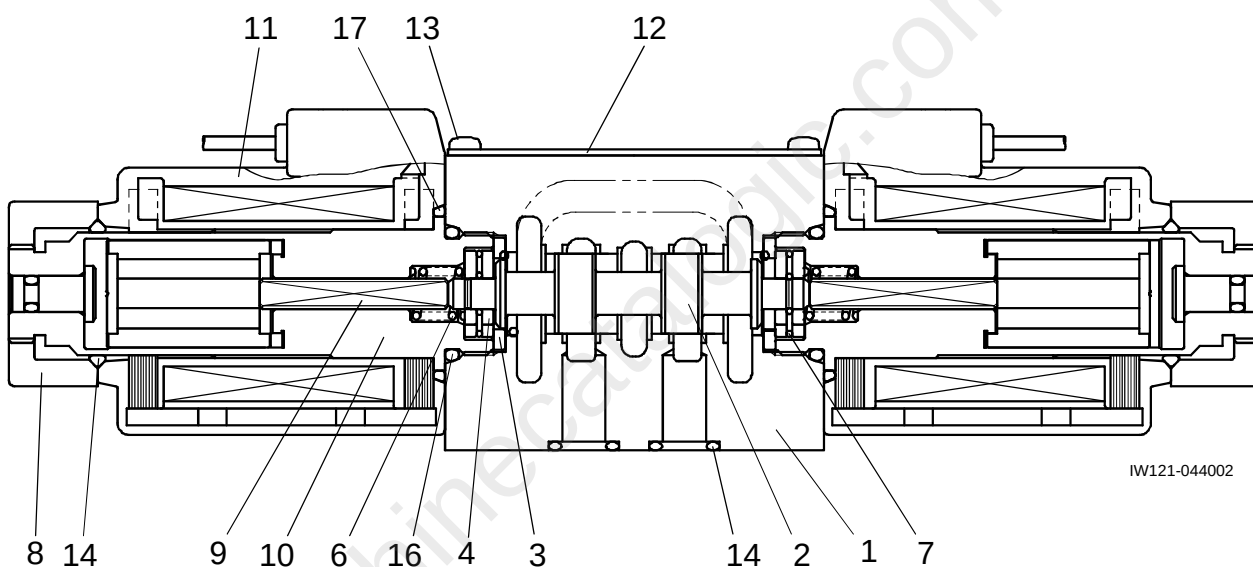
IW121-023002

Connector



(+): White
(-): Black

IW121-0542E01



IW121-044002

- | | | | |
|-------------|------------------|--------------------|------------|
| 1. Body | 6. Spring | 10. Solenoid guide | 14. O-ring |
| 2. Spool | 7. Detent spring | 11. Solenoid coil | 15. O-ring |
| 3. Retainer | 8. Nut | 12. Name plate | 16. O-ring |
| 4. Retainer | 9. Rod | 13. Screw | 17. O-ring |

Thread size and tightening torque

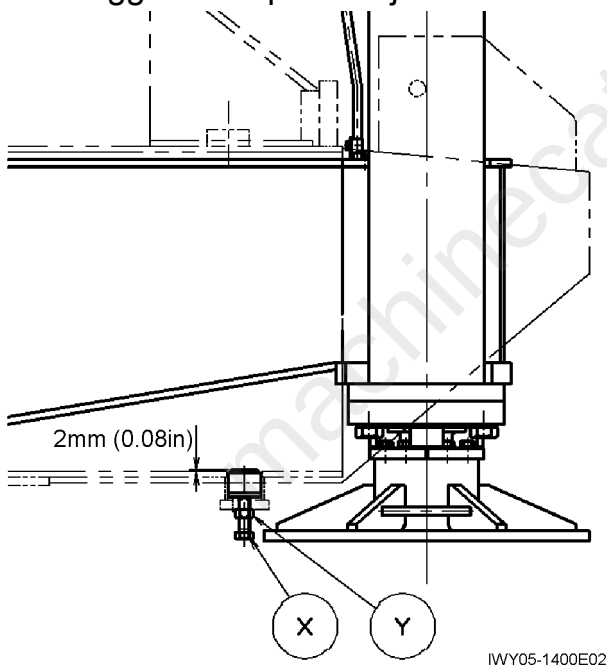
Sign / Port	Thread size	Tightening torque	
		N-m	ft-lbf
8	-	5 – 7	3.6 – 5.1

Check (Crane Operation)

7. Alarms

Item	Type of alarm	Sound	Checking procedure
AML limit	Electronic buzzer	• 280Hz • continuous low tone	Occurs at 100% when main switch is ON and PTO switch is () ON. (Intermittent low tone sound occurs at 90% and above.)
Overwind warning	Electronic buzzer	• 2300Hz • continuous high-low tones	Occurs when the overwind switch of either the main or auxiliary winch is turned ON by winch hoist-up operation.
Outrigger operation switch detection	Electronic buzzer	• 2300Hz • Intermittent beeping	Sounds when either the outrigger extension/retraction or jack slide selector switch has been left in any position other than neutral 10 seconds after operation is completed.
E/G cover interference automatic stop	Electronic buzzer	• AML buzzer: sounds 3 seconds	When main switch is ON and PTO switch is (I) ON, make sure that the operation stops while boom angle is 8° or less and swing angle is between 135° and 220°.

8. Outrigger slide plate adjustment



1. With the outriggers fully retracted, install the slide plate and the plate into the outrigger box.
2. Adjust the slide plate with the bolt X so that the slide plate is 2mm away from the upper surface of outrigger box bottom plate.
3. Tighten the nut Y to secure the bolt X in position.

Full Version Available

Tadano TR-600XXL-4 Rough Terrain Crane Service Manual

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