

Service Manual

01

Rough Terrain Crane

GR-800XL-1

Model

TR-800XXL-4

Applicable Serial No. 545870 --

Hydraulic Pump (Double Variable Displacement Pump)

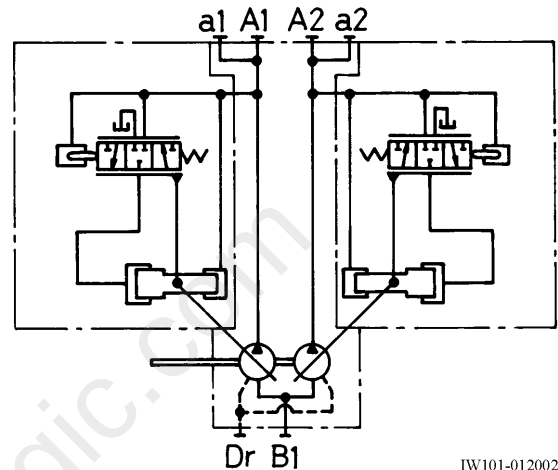
B-2 Hydraulic Pump (Double Variable Displacement Pump)

[NOTICE]

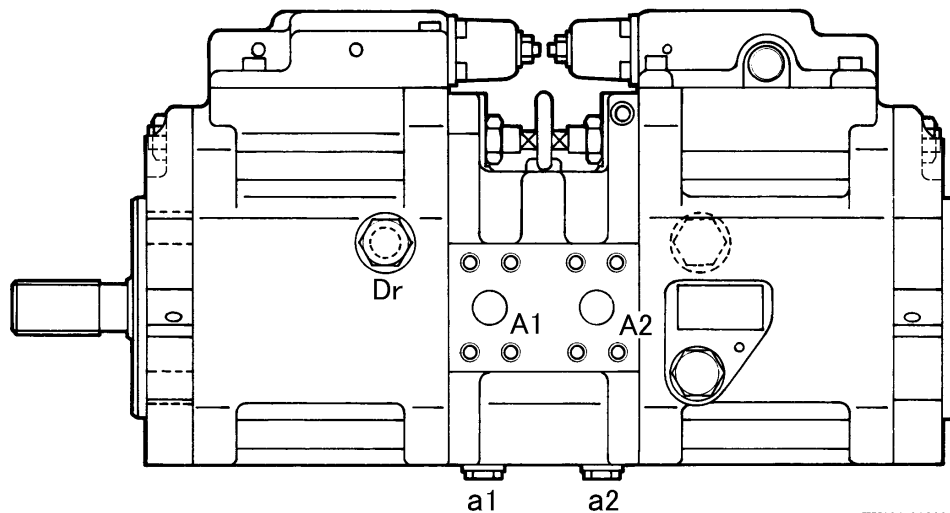
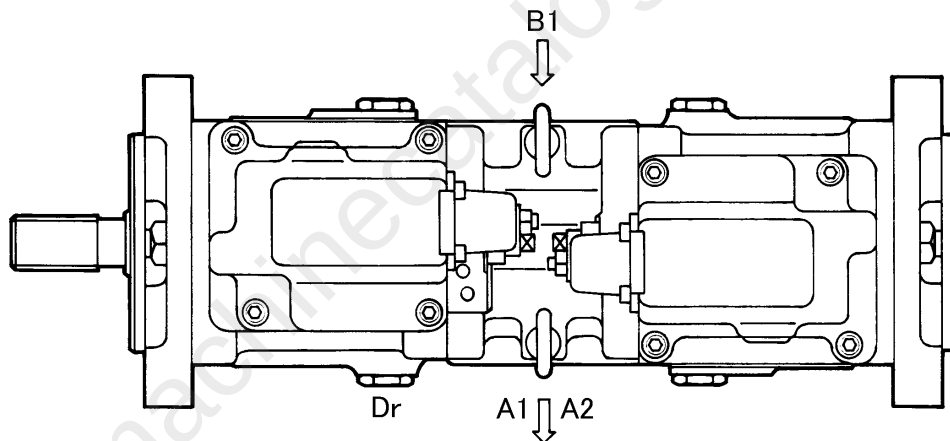
- ◆ There is a case that the appearance and so on differ from the parts for this machine. Although there is not so much difference in functions and disassembly procedures, make sure of the serial number of this machine and the part sales unit described in the parts catalog before starting disassembling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

1. Structure

This pump is a variable displacement piston pump.
The angle of the swash plate is controlled by the regulator.



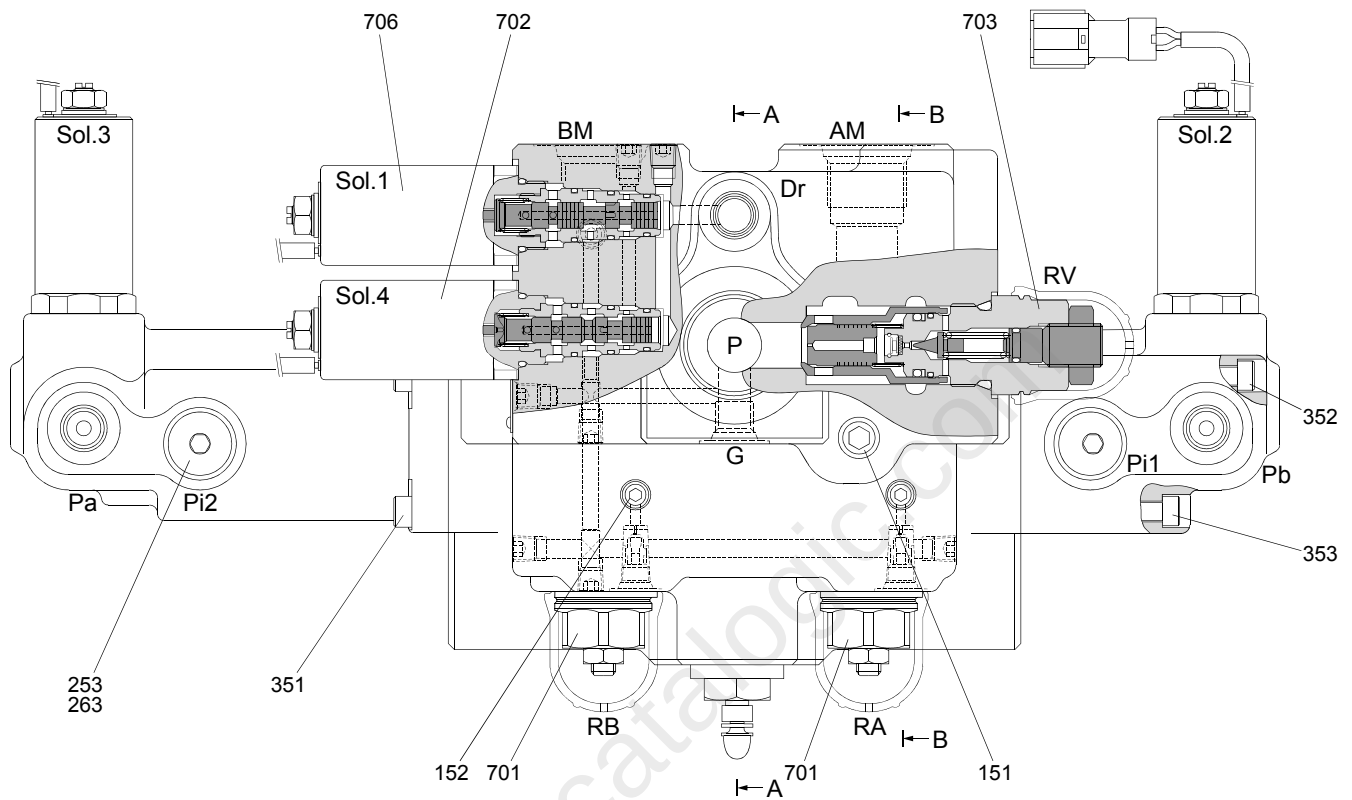
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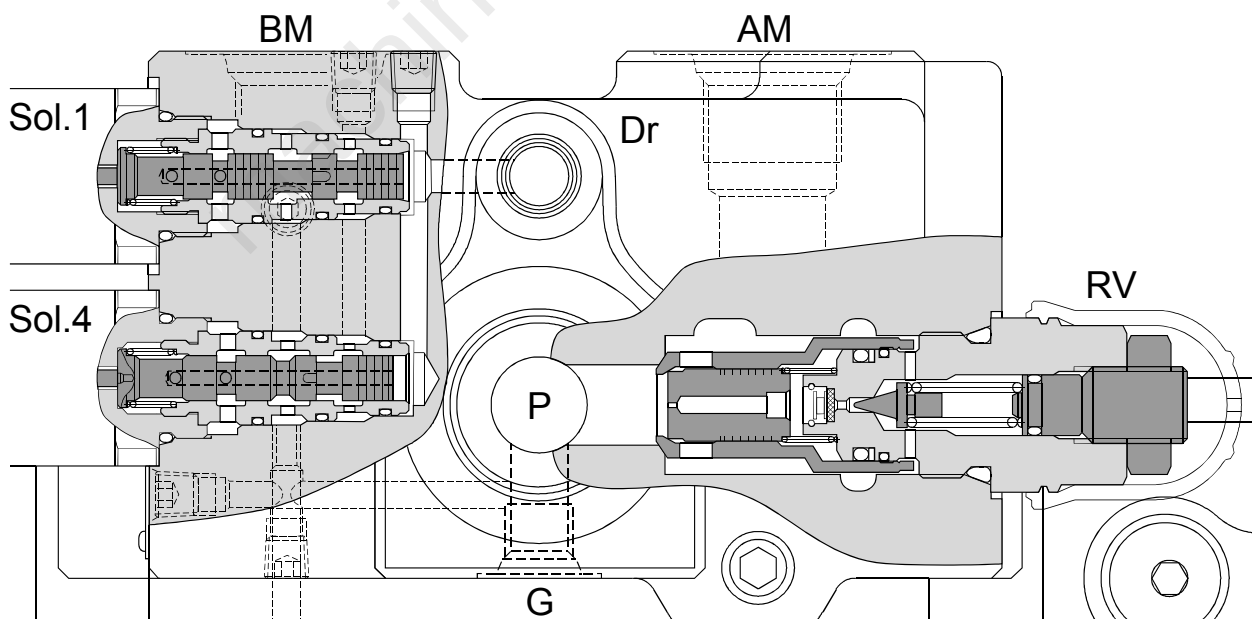
Hydraulic Pilot Control Valve (Swing)

Cross section



IW134-012003

Enlarged view (Sol.1, Sol.4, RV)



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Winch System

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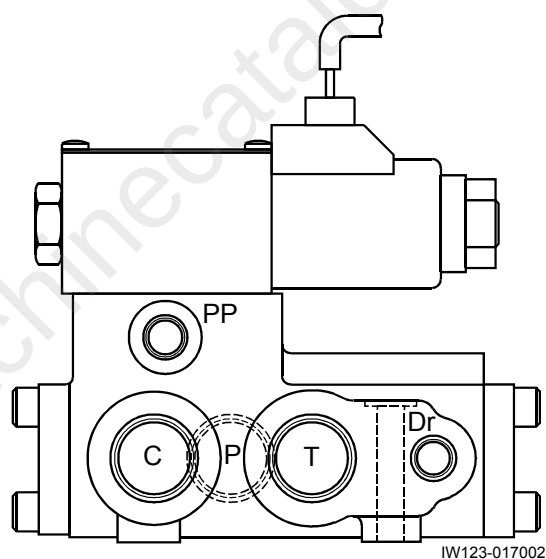
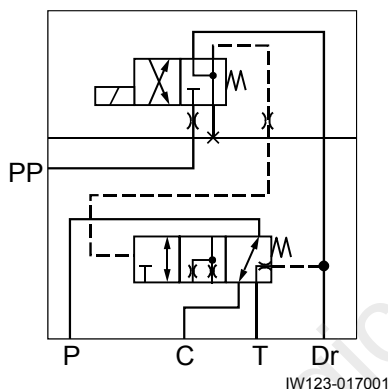
Hydraulic Valve

G-7 Hydraulic Valve

[NOTICE]

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1. Structure



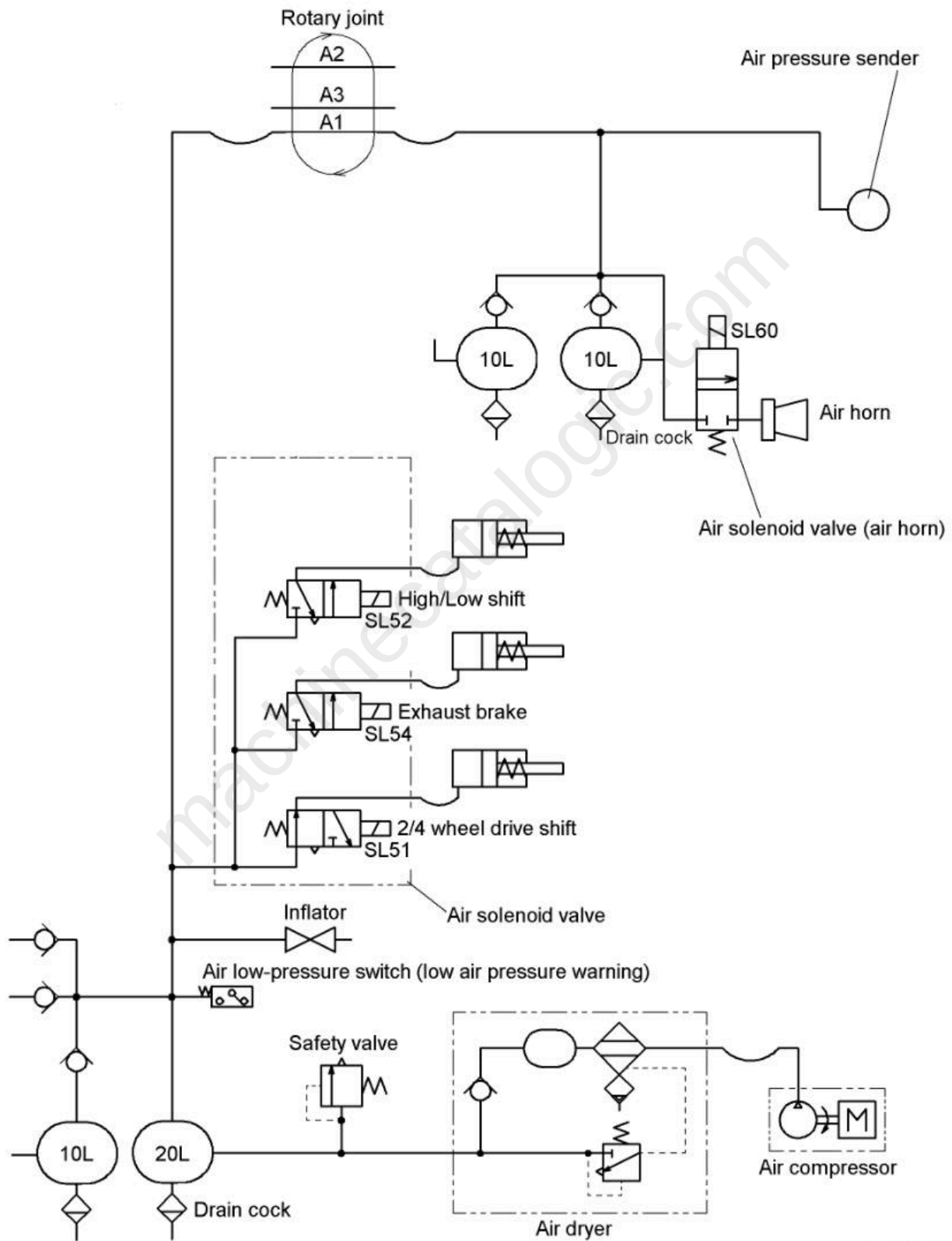
Thread size and tightening torque

Sign / Port	Thread size	Tightening torque		
		N-m	kgf-m	ft-lbf
P, C, T	G3/4	167	17	123
PP, Dr	G1/4	29.4	3	22

Control System

2. General of pneumatic control devices

Pneumatic Circuit



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Booster

2. Function

This booster receives pressurized air from the relay valve into the air cylinder, and outputs hydraulic pressure in proportion to the pneumatic pressure to the wheel cylinders and other members of the brake system. It comprises the following three major components.

1. Air cylinder

The air cylinder incorporates air piston assy 8, return spring 11. The return spring side is always open to the atmosphere, and the opposite side is subject to the output pressure of the relay valve.

2. Oil cylinder

Oil piston 14-1 is connected to air piston assy 8 by piston pin 16, via valve 15, and pin holder 17 prevents the pin from coming off. The pressurized oil in the oil cylinder is sealed by a tight fit between the valve in valve 15 and oil piston 14-1.

3. Relay valve

This valve serves to make the brake applied and released quickly.

Hydraulic Pressure Setting Table

Y-1 Hydraulic Pressure Setting Table

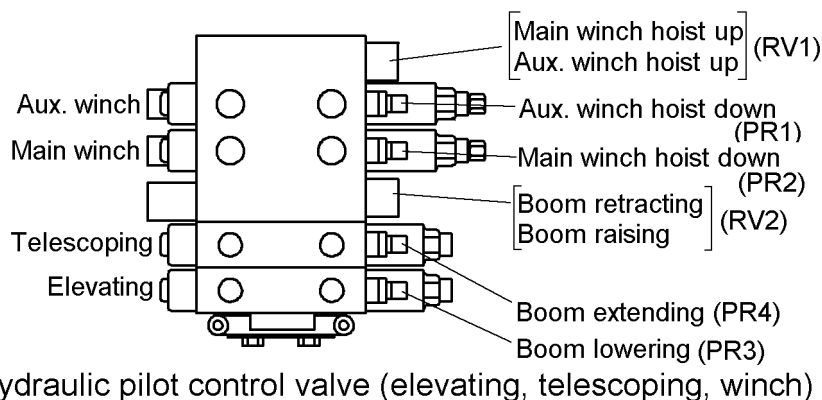
1. Winch

[NOTICE]

- ◆ Oil temperature: 50 ± 5 °C (113 - 131°F) (Hydraulic oil: TADANO Hydraulic oil LL)
- ◆ Confirm set pressure on AML (load moment indicator) moment display.
- ◆ Shift the elevation slow stop cancel switch to OFF side.

Item	Set pressure			Engine speed (min ⁻¹)	Check procedure
	MPa	kgf/cm ²	psi		
Main winch hoisting up (RV1)	27.5±0.5	280±5	3980±70	2150 (MAX.)	1. Place the main winch brake in the hold state. *1 2. Turn the PTO switch ON. 3. Move the main winch control lever fully to the hoist up position while the boom elevating control lever is fully moved to the boom lowering position. In this state, set the engine speed to 2150 min ⁻¹ and check the pressure.
Aux. winch hoisting up (RV1)					
Aux. winch hoisting down (PR1)	8.8±0.5	90±5	1280±70	670 (IDL.)	1. Place the auxiliary winch brake in the hold state. *1 2. Turn the PTO switch ON. 3. Move the boom telescoping /auxiliary winch control lever fully to the hoist down position while the boom elevating control lever is fully moved to the boom lowering position. In this state, check the pressure.
Main winch hoisting down (PR2)	8.8±0.5	90±5	1280±70	670 (IDL.)	1. Place the main winch brake in the hold state. *1 2. Turn the PTO switch ON. 3. Move the main winch control lever fully to the hoist down position while the boom elevating control lever is fully moved to the boom lowering position. In this state, check the pressure.

(*1): When the winch brake is in the hold state, the winch brake will not be released and winch drum will not rotate by hoist up or hoist down operation. To have the winch brake placed in the hold state, remove the pipes for the winch brake release to the hydraulic motor for winch. The pilot pressure for the winch brake release will be produced during the hoist up or hoist down operation, therefore, fit on the cap to avoid the oil leak. (After checking the pressure, return the pipes to the original position and bleed the winch brake release circuit.)



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Location of Hydraulic Parts (Upper)

List of components illustrated in the “Cab and swing table” figure (in alphabetical order)

Compressor (air conditioner, option)

Condenser (air conditioner, option)

78.Hose reel

38.Hydraulic motor (air conditioner, option)

34.Hydraulic motor (oil cooler)

79-2.Hydraulic valve (Protection of No.2 cylinder retraction while mode II is selected) (SL238)

33.Oil cooler

52.Orbitrol

48.Priority valve

61.Remote control valve (lever)

27.Rotary joint

47.Sequence valve (pilot pressure)

46.Solenoid control valve (jib set) (SL192, SL193, SL222, SL223)

89.Solenoid valve (air conditioner, option) (SL280)

36.Solenoid valve (oil cooler) (SL281)

Full Version Available

Tadano TR-800XXL-4 Rough Terrain Crane Service Manual

Tadano TR-800XXL-4 rough terrain crane service manual with repair procedures, adjustments and troubleshooting for the main systems. Instant PDF download.

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