Description			Unit	Robex75-7
Machine weight	Rubber shoe		Kg	7430
	Steel shoe			7530
Standard bucket	Capacity		m^3	0.25
	Width		mm	750
Engine	Maker, model			MITSUBISHI S4S
	Rated power		ps(kW)/min^{-1}	55.5(40.8)/2300
	Displacement		cc	3331
Working range	Max.digging depth		mm	3980
	Max.vertical digging depth			3215
	Max.digging height			6510
	Max.dumping height			4535
	Max.digging reach			6660
	Min.swing radius	Front		2450
		Swing		1925
	Rear end radius			1570
	Boom swing angle		deg	Left80/Right50
Dimension	Overall length		mm	6255
	Overall width			2150
	Overall height			2555
	Dozer(width × height)			2150×510
Performance	Travel speed		km/hr	3.1 / 4.8
	Swing speed		min^{-1}	9.7
	Gradeability		deg(%)	30(58)
	Max.digging force	Bucket	kN(kgf)	53.6(5465)
		Arm		39.8(4061)
	Max. drawbar pull			57.5(5865)
Under-carriage	Ground pressure	Canopy&rubber shoe	kpa(kgf/cm^2)	33.9(0.35)
		Cabin&rubber shoe		34.4(0.35)
	Tumbler distance × track gauge		mm	2200×1700
	Track shoe width			450
	Type of travelling motor			Piston shoe-in type
	Crawler tension system			Grease cylinder
Hydraulic	Type of hydraulic pump			Piston×2, Gear×1
	Pump oil flow		ℓ/min	2×78.2+46.7
	Auxiliary circuit oil flow			78.2
	Relief valve setting pressure		MPa(kgf/cm^2)	25.5/23.5(260/240)
Capacity	Hydraulic oil tank		ℓ	85
	Engine oil			7.5
	Fuel tank			130
	Cooling water			10.0
Noise	Noise level(LwA/LpA)		dB	98 / 78

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2-7-2 Maintenance procedure

	Inspection and maintenance item	Inspection and maintenance interval (hours)					
		7	50	100	250	500	1,000
1	Engine oil pan	Check oil level	Replace the engine oil (New machine only)		Replace the engine oil		Clean
	Engine oil filter		Replace the cartridge (New machine only)		Replace the cartridge		
2	Fuel filter			Check and clean		Replace the element	
3	Engine valve clearance		Inspect and adjust (New machine only)			Inspect and adjust	
4	Fan belt	Check and adjust					
5	Fuel tank	Check oil level	Drain water and sediment, clean strainer				
6	Radiator (sub-tank)	Check water level				Replace and clean	
	Radiator fin		Check and clean				
7	Air cleaner			Check and clean		Replace the element	
8	Hydraulic oil tank	Check oil level			Drain water and sediment		Replace oil
9	Hydraulic line filter			Replace the cartridge (New machine only)		Replace the cartridge	
10	Hydraulic suction filter			Clean the element (New machine only)		Replace the element	
11	Bucket teeth and others	Inspect					
12	Slew bearing		Inspect and grease				
13	Inspect crawler tension(grease cylinder) and grease the crawler	Check and adjust					
14	Battery liquid amount and specific gravity		Inspect, clean and supply distilled water				
15	Inspect each body part for loosening and damage	Check and tighten					
16	Each lever and instrument	Inspect					
17	Lubricating oil of slew/travelling reduction gear					Replace oil (after the first 500 service hours only for a new machine)	Replace oil
18	Electrical wiring	Inspect					
19	Water and oil leakage in each body part	Inspect					
20	Inspect and grease attachment	Inspect attachment					
21	PTO filter element				Replace the element		

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Tightening torque list:

In the present inspection, always check for loosened bolts or nuts and correctly tighten them according to the following tightening torque list.

N-m Tightening torque of the bolt and nut (Body)

Material / Size	8.8 N·m	10.9 N·m	12.9 N·m
M6	12.5	16	20
M8	30	39	45
M10	62	72	80
M12	100	120	130
M14	160	195	220
M16	250	305	340

N-m Tightening torque of the hydraulic pipings

PT screw

Torque / Size	N·m
1/4	36
3/8	55
1/2	86
3/4	130
1	195
1 1/4	300
1 1/2	400

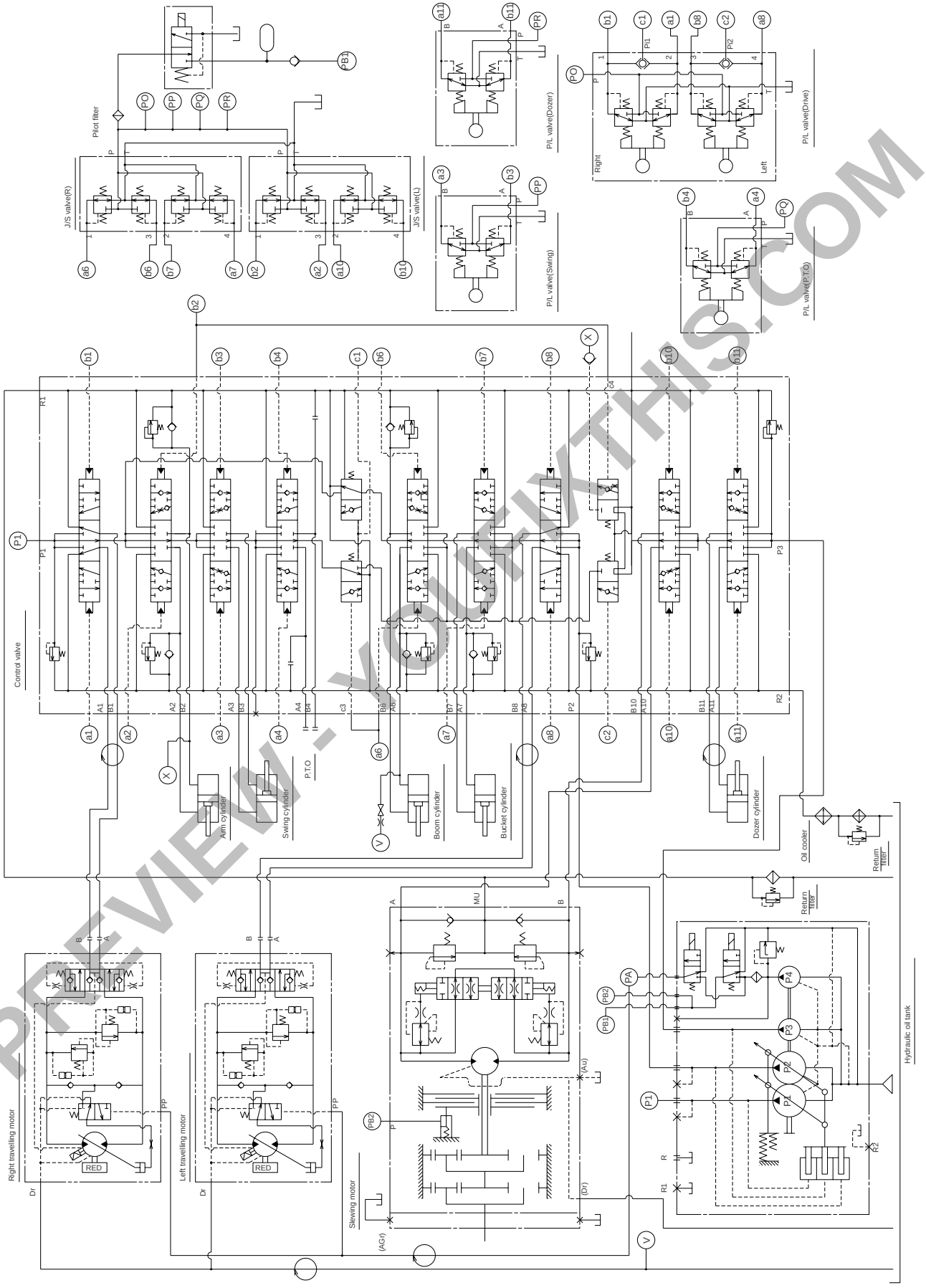
PF screw

Torque / Size	N·m
1/4	27-30
3/8	47-52
1/2	57-63
3/4	108-120
1	126-140

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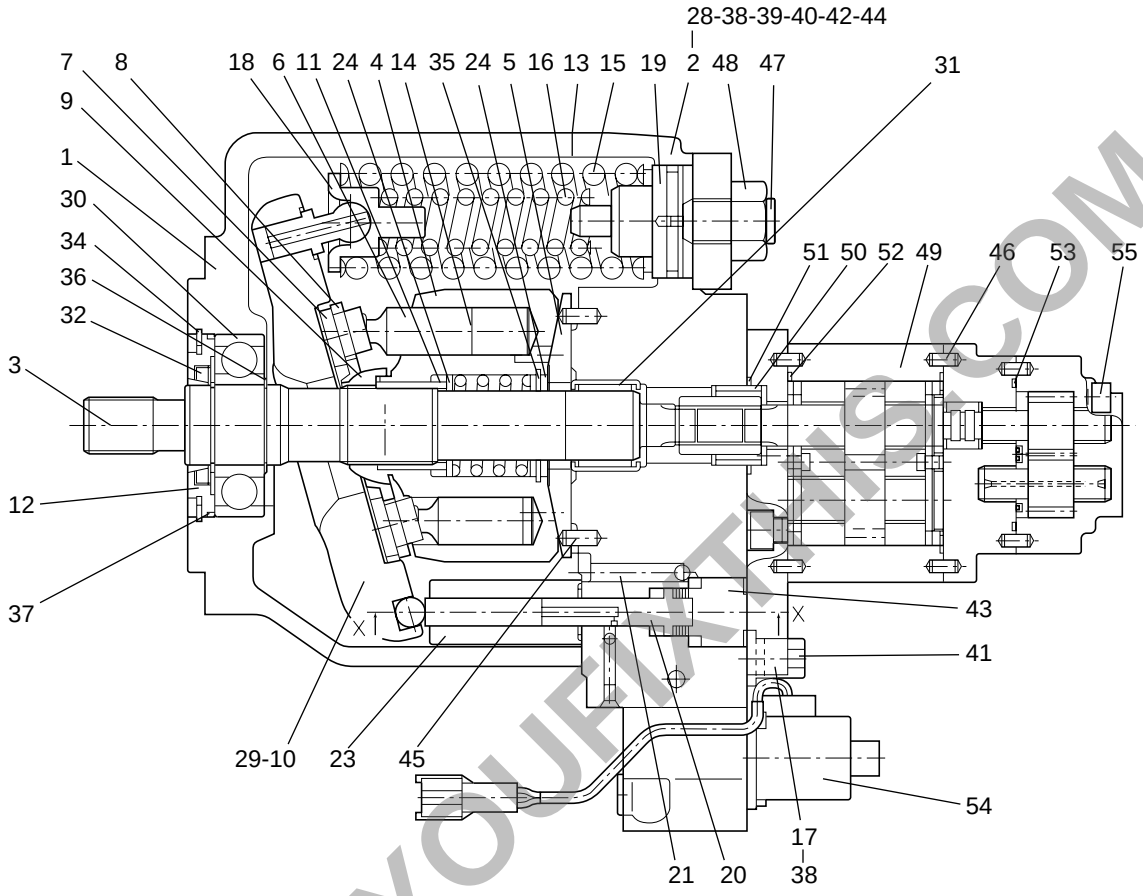
2-8 Hydraulic circuit diagram



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5-2 Structure



1. Body(S)
2. Body(H)
3. Shaft
4. Cylinder barrel
5. Valve plate
6. Piston
7. Shoe
8. Shoe holder
9. Barrel holder
10. Swash plate
11. Needle
12. Seal holder
13. Packing
14. Spring
15. Spring(T1)
16. Spring(T2)
17. Sleeve
18. Spring holder
19. Spring guide
20. Rod. P
21. Rod. G
22.
23. Control piston
24. Retainer
25.
26.
27.
28. Choke
29. Choke
30. Ball bearing
31. Needle bearing
32. Oil seal
33.
34. Snap ring
35. Snap ring
36. Snap ring
37. O-ring
38. O-ring
39. O-ring
40. O-ring
41. Socket head bolt
42. Parallel pin
43. Socket head plug
44. Plug
45. Spring pin
46. Spring pin
47. Set screw
48. Nut
49. Pump Ass'y
50. Coupling
51. O-ring
52. O-ring
53. O-ring
54. Valve block Ass'y
55. Socket head bolt

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5-3 Removing and installing the pump

5-3-1 Removing the pump

1. Remove the nipple, TEE, elbow and hoses around the pump. Attach a cap to the removed hoses to keep dust off. Store the nipples and elbows in treated oil.

2. Remove the pump mounting bolts(5).

3. Remove the pump 1 from the flange 2. If removal is difficult, insert a screwdriver and remove the pump little by little with equal force applied on the right and left sides.

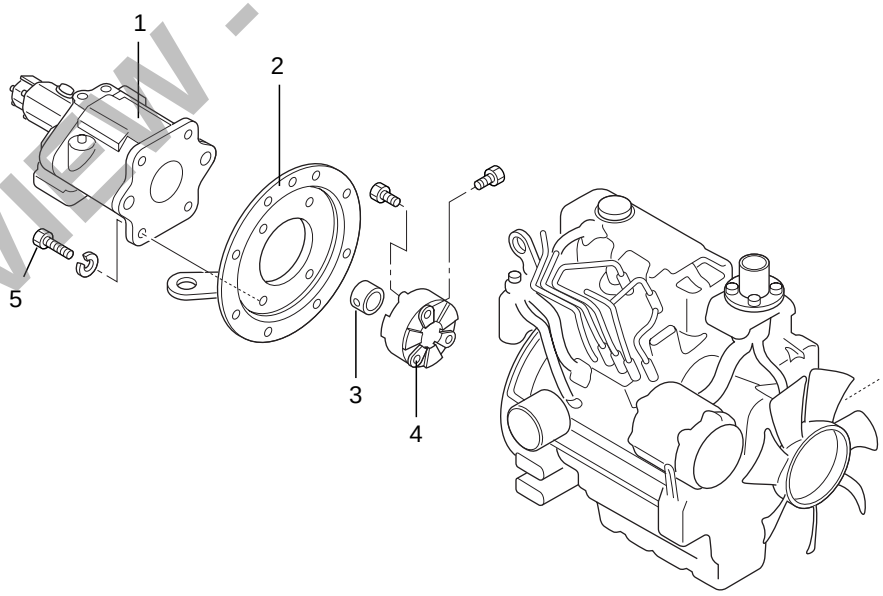
5-3-2 Installing the pump

1. Replace with a new pump and install it on the pump flange 2. Check that the spline of the shaft fits smoothly with the boss of the coupling.
   When tightening the bolts 5, tighten the left and right side bolts slowly and evenly.

Bolt	Tightening torque
M16 × 40 ℓ	305 N·m

* Precautions on installing the pump

1. When tightening the coupling boss 3, be careful so that coupling 4 does not tilt.
   Note) Make sure there is no misalignment.

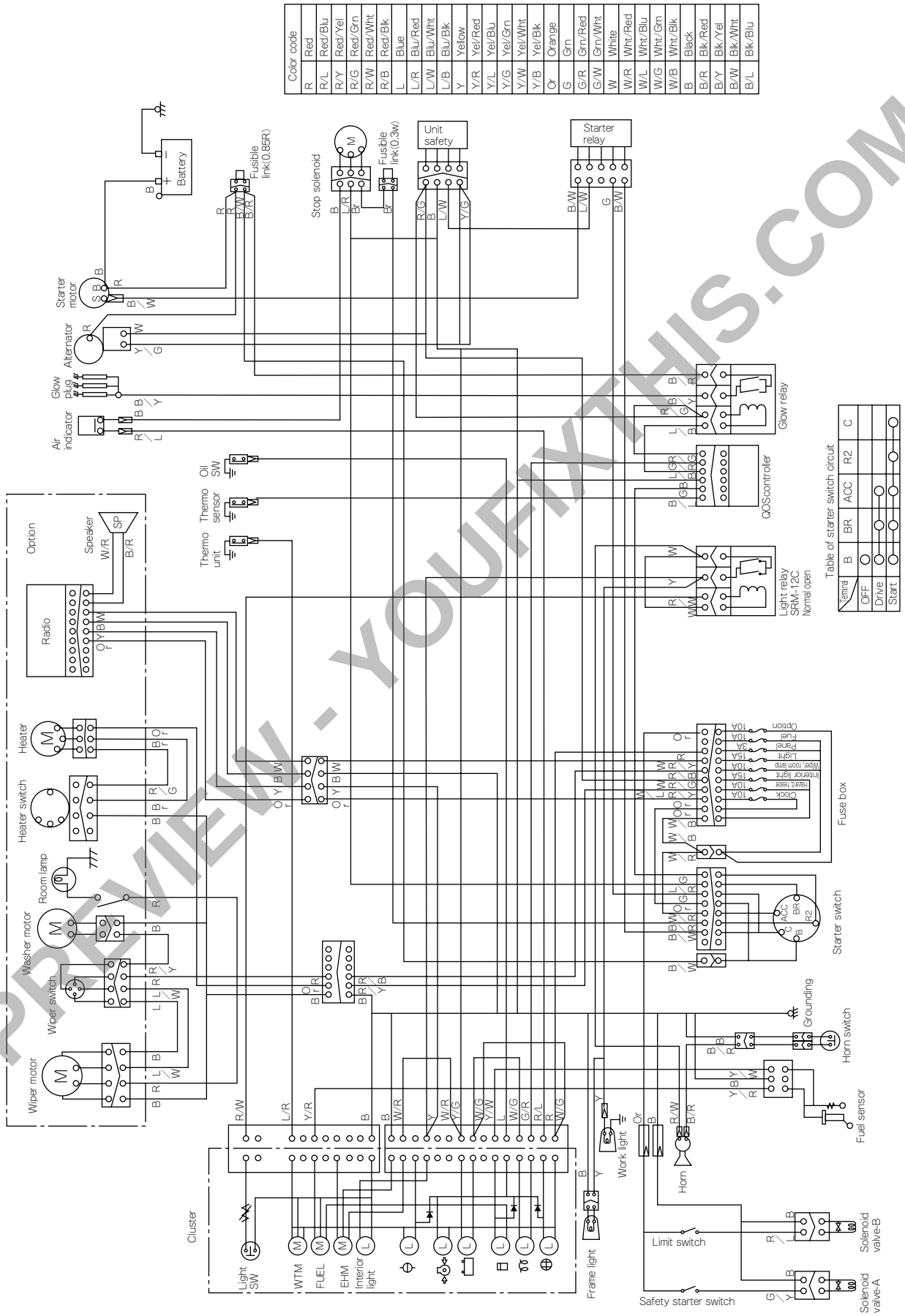


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22-1 Structure and function

22-1-1 Electric circuit diagram

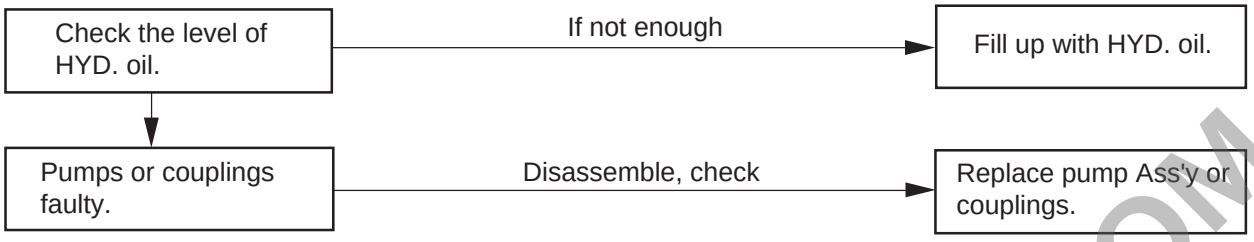


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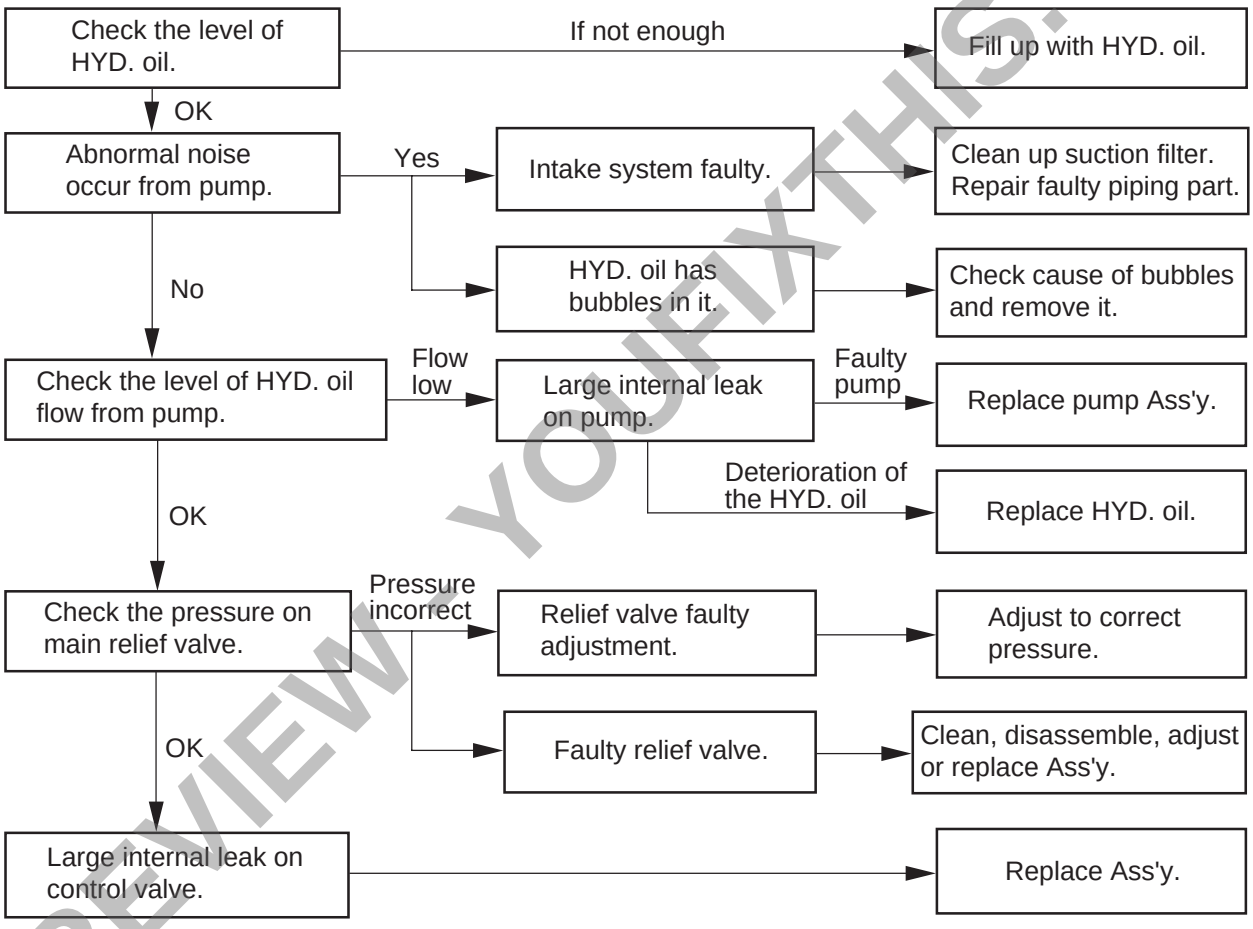
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23-1 Troubleshooting

23-1-1 All functions not operational



23-1-2 Operation power is weak



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1. Precautions on Maintenance
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10. Pilot valve(2)(Swing·PTO)
11. Pilot valve(3)(Dozer)
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13. Travel Motor
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15. Swivel Joint
16. Crawler
17. Spring Case and Grease Cylinder
18. Idler
19. Sprocket
20. Track Roller
21. Carrier Roller
22. Electrical Equipment
23. Troubleshooting

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5-4 Performance test of the hydraulic pump

5-4-1 Measuring instrument

Hydraulic pressure tester	Measuring range of flow rate (ℓ/min)	7~200 ℓ
	Measuring range of pressure (MPa)	0 ~ 34.3
	Measuring range of temperature (°C)	0 ~ 150
	Port size	PF1 O ring type
	Pressure gauge	49 MPa, 4.9 MPa
	Tachometer	Diesel tachometer (digital type)
	Hose for testing	Equivalent to the hose of 27.4 MPa high pressure (Nominal size PF1/ 2-PF1/ 2 × 1m)

5-4-2 Preparation

1. Park machine on flat ground and stop engine.

5-4-3 Connecting tester

1. Remove the hose on the pump port of the control valve.
2. Connect the removed hose to the outlet of the tester.
3. Connect the hose on the discharge of the pump to the inlet of the tester.
4. Connect pressure gauge to port measuring port.

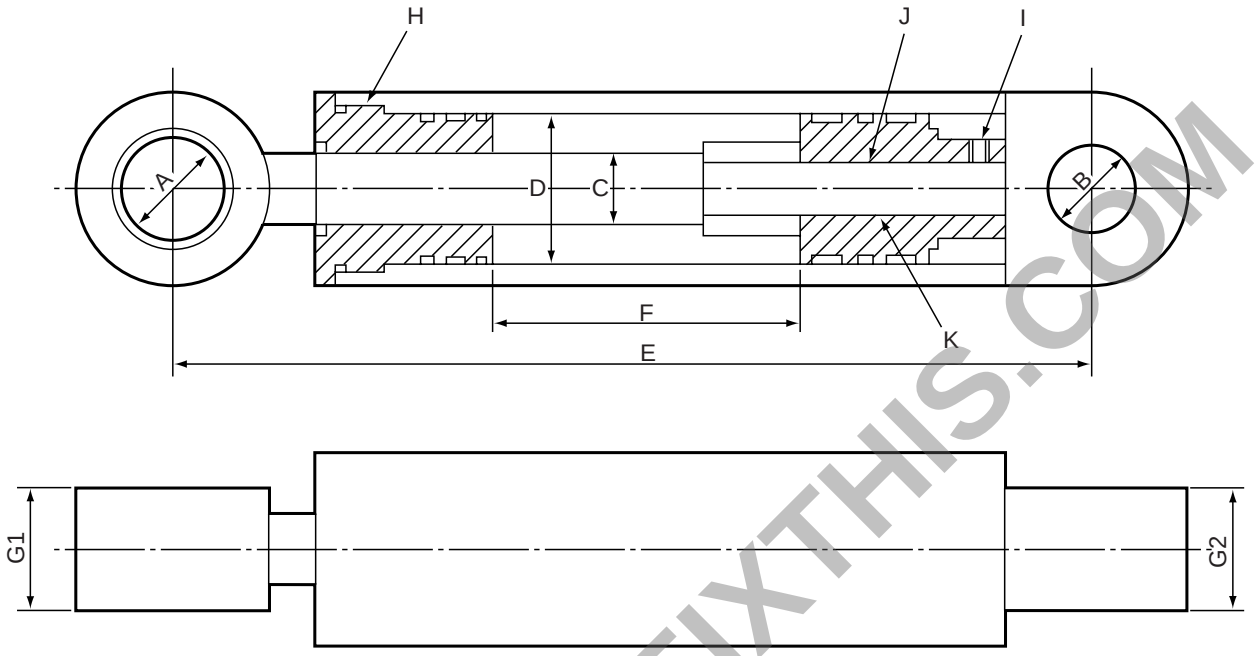
5-4-4 Measuring procedure

Open the throttle valve of the tester and start the engine. Read the pressures on the pressure gauge and measure the flow at that time. At the same time, record the engine speed.

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14-1 Structure



Item \ Cylinder			Boom	Arm	Bucket	Swing	Dozer
Weight kg			106	90	57	89	48
Trust force*	Pushing	ton	28.3	19.6	15.9	26.0	26.0
	Pulling	ton	18.7	11.3	10.0	17.2	17.2
A	Pin diameter (rod)	mm	ø70	ø60	ø60	ø70	ø70
B	Pin diameter (head)	mm	ø70	ø60	ø60	ø70	ø70
C	Rod diameter	mm	ø70	ø65	ø55	ø70	ø70
D	Cylinder bore	mm	ø120	ø100	ø90	ø120	ø120
E	Maximum extended length	mm	2130	2220	1741	1730	870
	Maximum contracted length	mm	1310	1345	1081	1080	645
F	Stroke	mm	820	875	660	631	225
G1	Clevis width	mm	90	80	80	80	80
G2			90	90	80	90	80
H	Tightening torque	N·m	450	400	360	450	450
I	Tightening torque	N·m	35	17	17	35	35
J	Tightening torque	N·m	3600	2350	1750	3300	3300
K	Size of piston screw (size × pitch)		M45 × 2.0	M42 × 2.0	M39 × 2.0	M45 × 2.0	M45 × 2.0
*Main relief pressure		MPa	24.5	24.5	24.5	24.5	23.5

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