Description			Unit	Robex35-7	
Machine weight	Canopy	Rubber shoe	Kg	3320	
		Steel shoe		3330	
	Cabin	Rubber shoe		3230	
		Steel shoe		3240	
Standard bucket	Capacity		m^3	0.10	
	Width		mm	590	
Engine	Maker, model			MITSUBISHI S3L2	
	Rated power		ps(kW)/min^{-1}	27(19.9)/2400	
	Displacement		cc	1318	
Working range	Arm length		mm	1285(std.)	1585(long)
	Max.digging depth			3130	3425
	Max.vertical digging depth			2290	2560
	Max.digging height			5010	5215
	Max.dumping height			3540	3745
	Max.digging reach			5180	5465
	Min.swing radius	Front		2060	2135
		Swing		1700	1760
	Rear end radius			1410	
	Boom swing angle		deg	Left80/Right50	
Dimension	Overall length		mm	5010	
	Overall width			1580	
	Overall height			2420	
	Dozer(width × height)			1580×370	
Performance	Travel speed		km/hr	3.0/4.5	
	Swing speed		min^{-1}	8.7	
	Gradeability		deg(%)	30(58)	
	Max.digging force	Bucket	kN(kgf)	27.9(2840)	
		Arm		17.9(1830)	
	Max. drawbar pull			26.6(2710)	
Under-carriage	Ground pressure	Canopy&rubber shoe	kpa(kgf/cm^2)	30.1(0.31)	
		Cabin&rubber shoe		29.5(0.30)	
	Tumbler distance × track gauge		mm	1640×1280	
	Track shoe width			300	
	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	2×42+25.2	
	Auxiliary circuit oil flow			67.2	
	Relief valve setting pressure		MPa(kgf/cm^2)	20.6/17.2(210/175)	
Capacity	Hydraulic oil tank		ℓ	50.5	
	Engine oil			4.5	
	Fuel tank			42	
	Cooling water			5.5	
Noise	Noise level(LwA/LpA)		dB	96/80	

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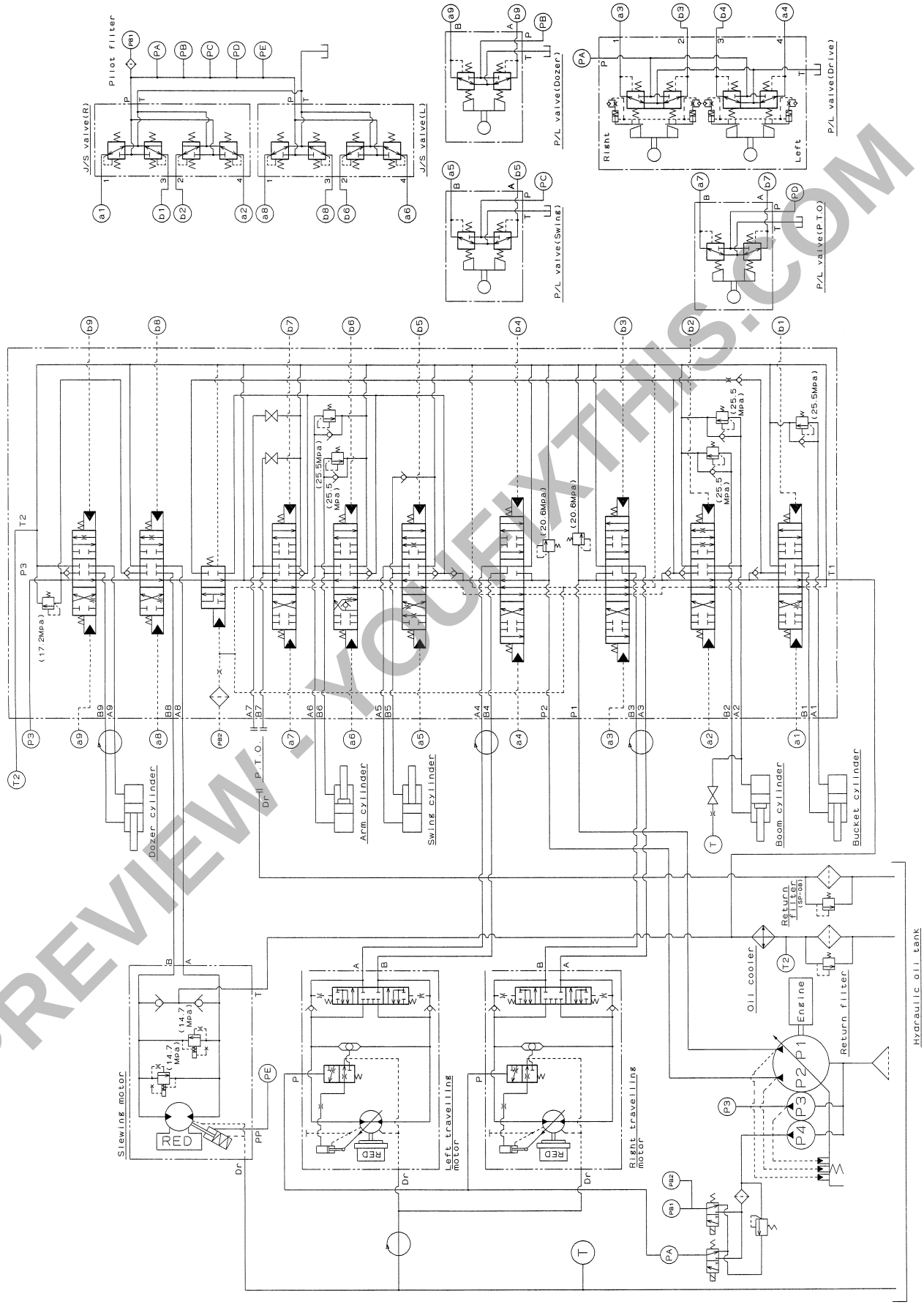
2-7-2 Maintenance procedure

	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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2-8 Hydraulic circuit diagram



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Bolt or nut	Thread, mm				Torque, kgf·m(lb·ft)[N·m]
	Diameter	Pitch	Width across flats	Clamp length	
Cylinder head bolt	M10	1.25	14	87	9±0.5(65±4)[88±5]
Rocker cover bolt	M8	1.25	12	40	1.15±0.15(8.3±1.1)[11.3±1.5]
Rocker shaft bracket bolt	M8	1.25	12	58	1.5±0.15(8.3±1.1)[11.3±1.5]
Thermoswitch	M16	1.5	17	31.5	2.3±0.4(16.6±3)[22.6±4]
Crankshaft pulley nut	M18	1.5	27	—	17.5±2.5(127±18)[172±25]
Main bearing cap bolt	M10	1.25	17	81	5.25±0.25(38±2)[51.5±2.5]
Connecting rod cap nut	M9	1.0	14	—	3.55±0.25(25.7±2)[34.8±2.5]
Rear plate bolt (for tractor engine)	M12	1.25	17	28	9.5±1(69±7)[93±10]
Rear plate bolt(standard)	M12	1.25	17	28	6.5±1(47±7)[64±10]
Rear plate bolt(stamping)	M8	1.25	12	16	1.15±0.15(8.3±1.1)[11.3±1.5]
Flywheel bolt	M12	1.25	19	29	13.5±0.5(98±4)[132±5]
Oil pan bolt (for tractor engine)	M8	1.25	12	25	2.8±0.3(20.3±2.2)[27.5±3]
Oil pan drain plug	M14	1.5	22	10	4±0.5(29±4)[39±5]
Pressure relief valve	M22	1.5	22	33	5±0.5(36±4)[49±5]
Oil filter	M20	1.5	—	—	1.2±0.1(8.7±0.7)[12±1]
Oil pressure switch	PT1/8	—	26	11	1±0.2(7.2±1.4)[10±2]
Fuel injection pipe nut	M12	1.5	—	—	3±0.5(22±4)[29±5]
Fuel leak0off pipe nut	M12	1.5	18	—	2.75±0.25(20±2)[27±2.5]
Delivery valve holder	—	—	19	—	4.5±0.5(32.5±4)[44±5]
Fuel injection nozzle holder	M20	1.5	21	—	5.5±0.5(40±4)[54±5]
Retaining nut for delivery valve holder body	M16	0.75	19	—	3.75±0.25(27±2)[37±2.5]
Sliding sleeve shaft	M10	1.25	14	29.5	3.6±0.6(26±4)[35±6]
Special nut for torque spring set	M12	1.0	17	—	2±0.5(14±4)[20±5]
Glow plug	M10	1.25	12	60	1.75±0.25(12.7±2)[17.2±2.5]
Glow plug connection plate	M4	0.7	8	—	0.125±0.025(0.9±0.2)[1.2±0.2]
Stop solenoid nut	M30	1.5	36	—	4.5±0.5(32.5±4)[44±5]
Starter B terminal	M8	1.25	12	—	1.1±0.1(8±0.7)[10.8±1]

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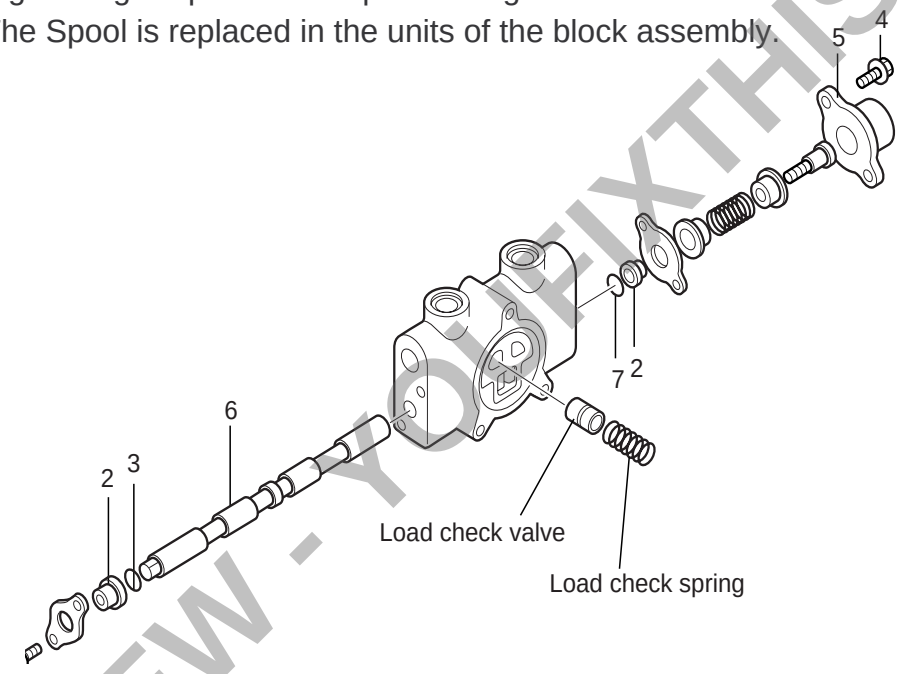
7-2-2 Replacing the O ring on the Spool

1. On the lever side

   1) Remove the mounting screws (1) of the O-ring presser from the block.
   2) Replace the backup ring (2) and O-ring (3).
   3) When mounting the O-ring presser, be sure not to damage the O-ring.

2. On the cap side

   1) Loosen the cap mounting screws (4) and remove the cap (5).
      Take out Spool (6) and replace O-ring (7)
   2) Rinse the Spool and insert it in the body.
   3) When installing the spring cap, be careful not to damage the O-ring.
      Tightening torque of the cap mounting screw is 9 N·m.
      The Spool is replaced in the units of the block assembly.



7-2-3 Removing the load check valve (For Drive (R), (L))

1. Remove the load check spring and load check valve from the valve block.
2. Keep each load check valve in order so as not to confuse it with other valve block.
2. Clean the parts sufficiently before assembling them.

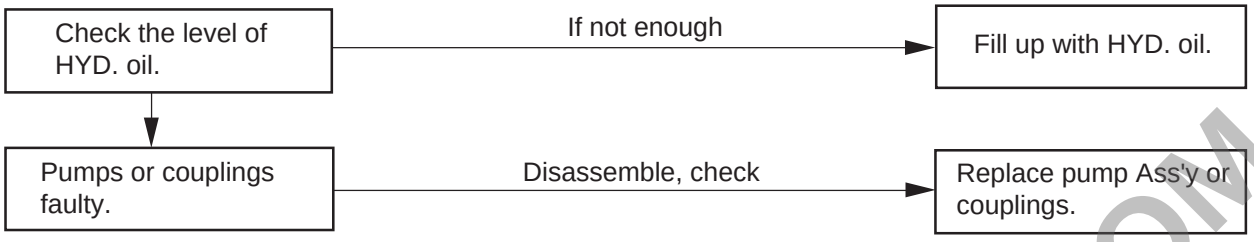
7-2-4 Replacing the relief valve assembly and the O-ring.

1. Remove the inlet section assembly and the relief valve.
2. If necessary, replace the O-ring or the relief valve assembly.
3. During installation, give grease to the O-ring.
4. When the relief set, cap nut of adjusting screw and hexagon nut are loosened, always check relief set pressure using the pressure gauge.
   At this time, the relief set pressure and flow rate shall be conformed to the specification indicated on the page of external drawing.
5. When the relief valve assembly is removed, check whether the small hole on the center of relief piston is clogged with foreign matter.

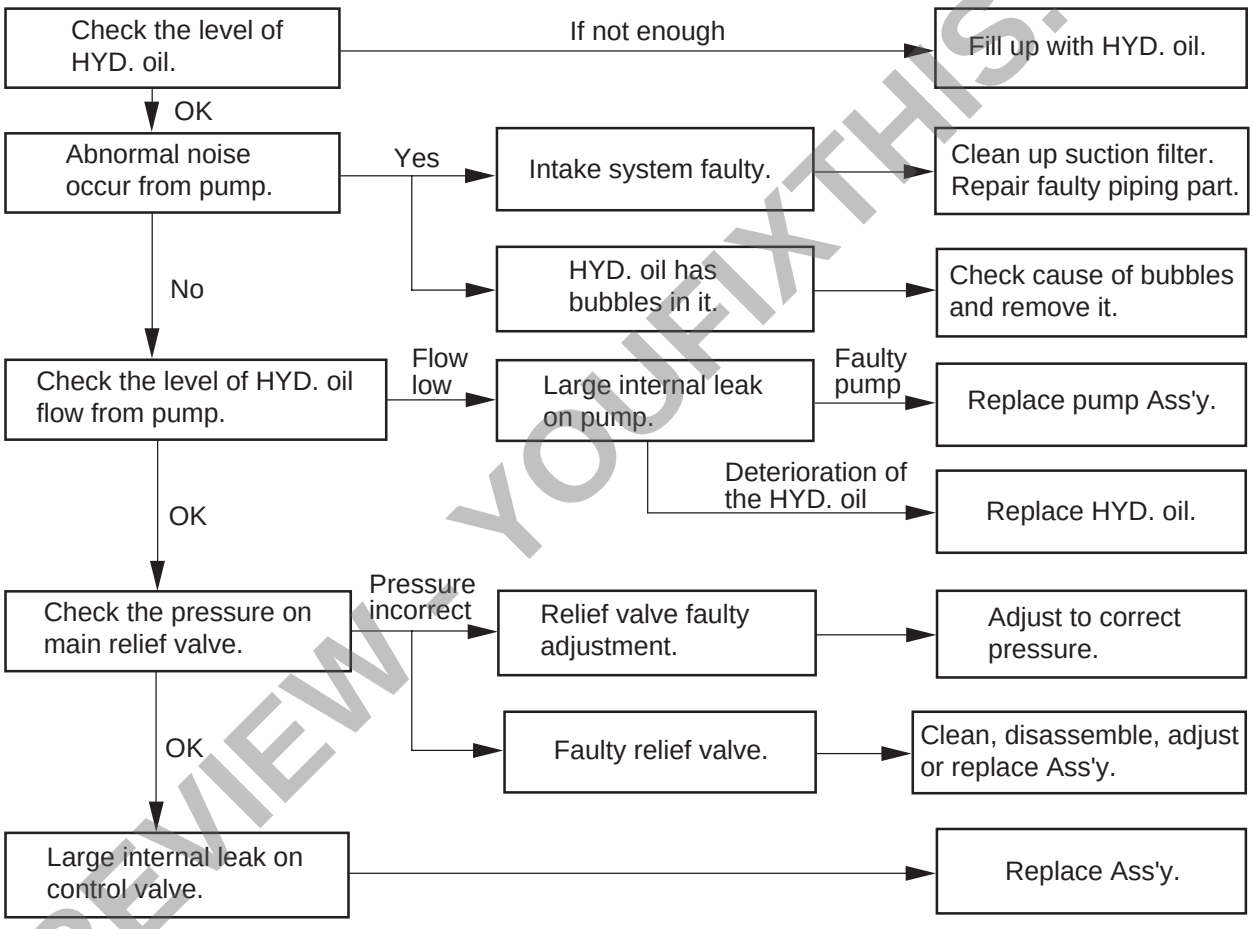
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23-1 Troubleshooting

23-1-1 All functions not operational



23-1-2 Operation power is weak

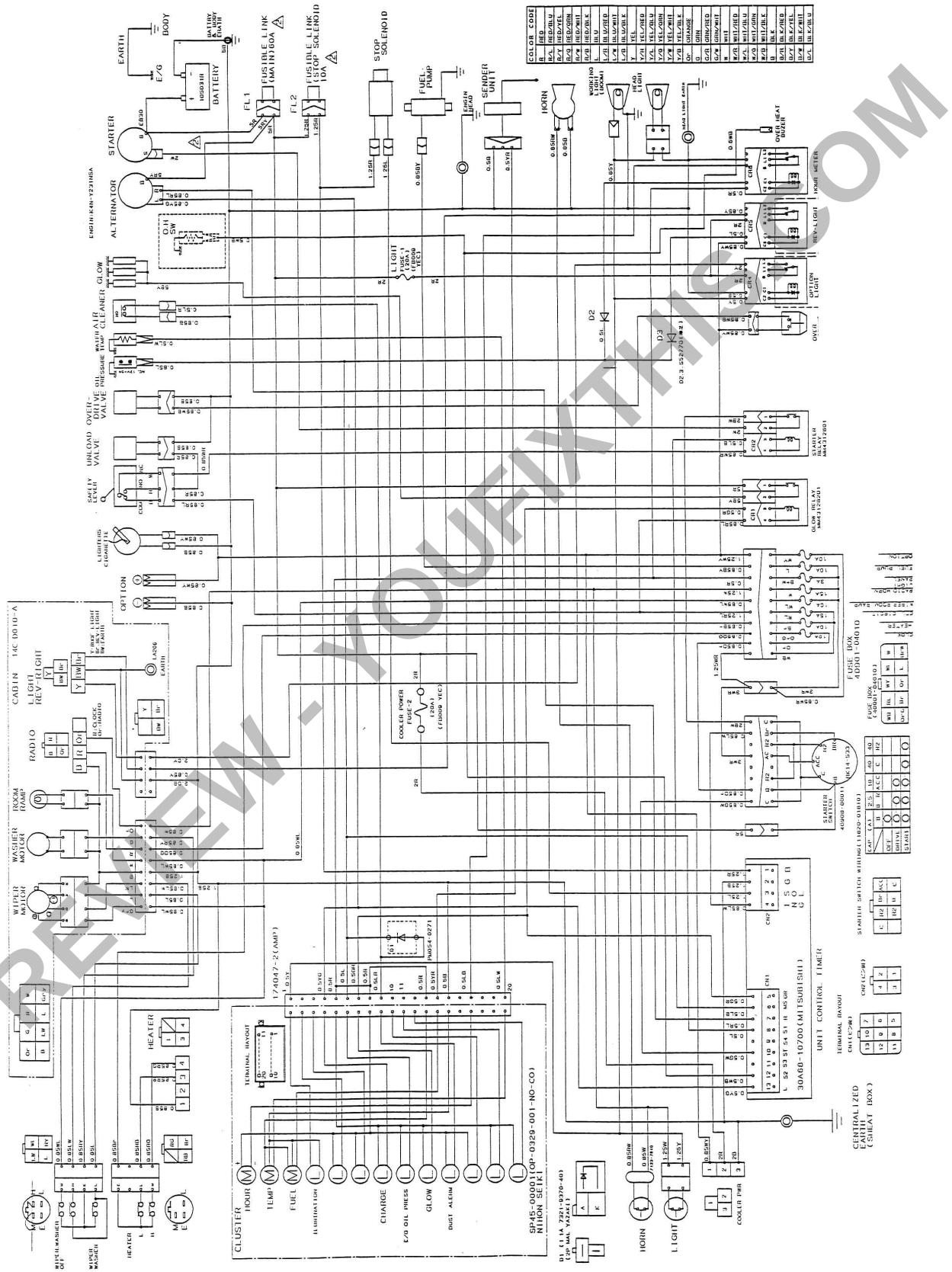


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22-1 Structure and function

22-1-1 Electric circuit diagram



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   (Travel)
10. Pilot valve (2)
    (Swing, PTO)
11. Pilot Valve (3)
    (Dozer)
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4-4 Inspection and maintenance procedure for engine parts

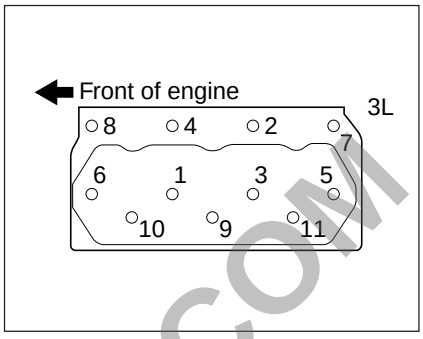
Inspecting and Adjusting Valve Clearance

NOTE

Make an adjustment to the valve clearance when the engine is cold.

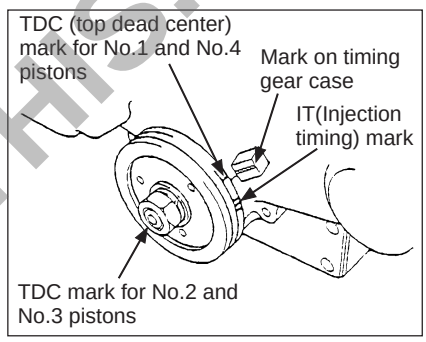
(1) Slightly loosen the cylinder head bolts and retighten them to the specified torque in number sequence.

Tightening torque	9 ± 0.5 kgf·m (88 ± 5 N·m)



Cylinder head bolt tightening sequence

(2) Find top dead center compression position for No.1 piston by using the procedure that follows:
   (a) Turn the crankshaft until TDC mark on the crankshaft pulley is aligned with the mark on the timing gear case.
   (b) With No.1 piston at top dead center on the compression stroke, the rocker arms will not be moved when the crankshaft is turned approximately 20° in both directions.
   (c) With No.1 piston at top dead center on the compression stroke, the rocker arms will not be moved when the crankshaft is turned approximately 20° in both directions.



Timing mark

(3) Loosen the lock nut for the adjusting screw. With a feeler gauge inserted between the rocker arm and valve cap, adjust the valve clearance by turning the adjusting screw.

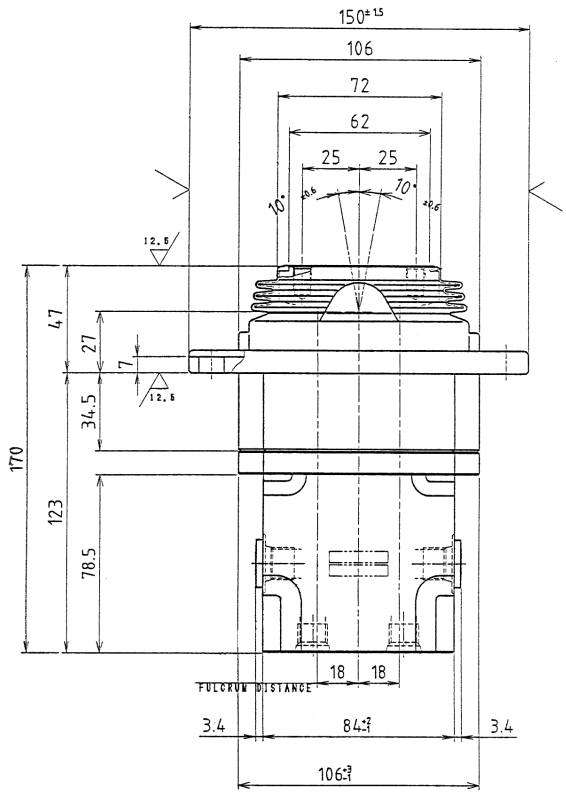
Unit: mm(in.)

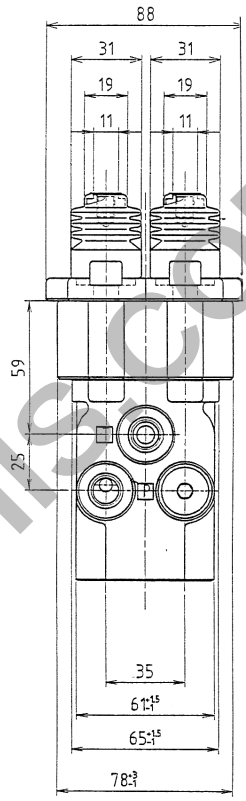
Item	Standard
Valve clearance (both inlet and exhaust valves)	0.25(0.0098)

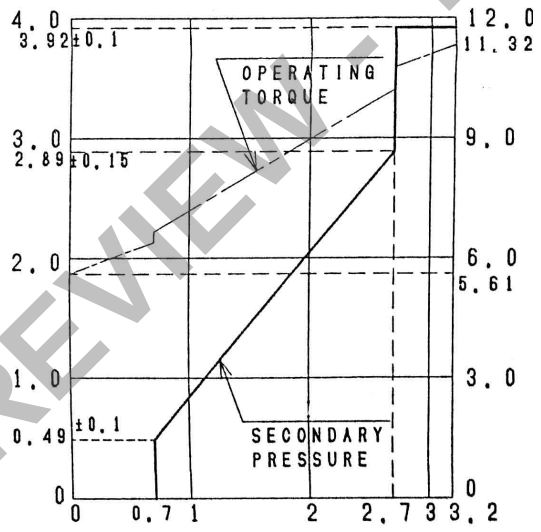
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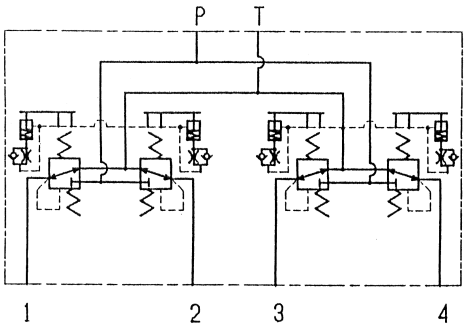
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9-1 Specification







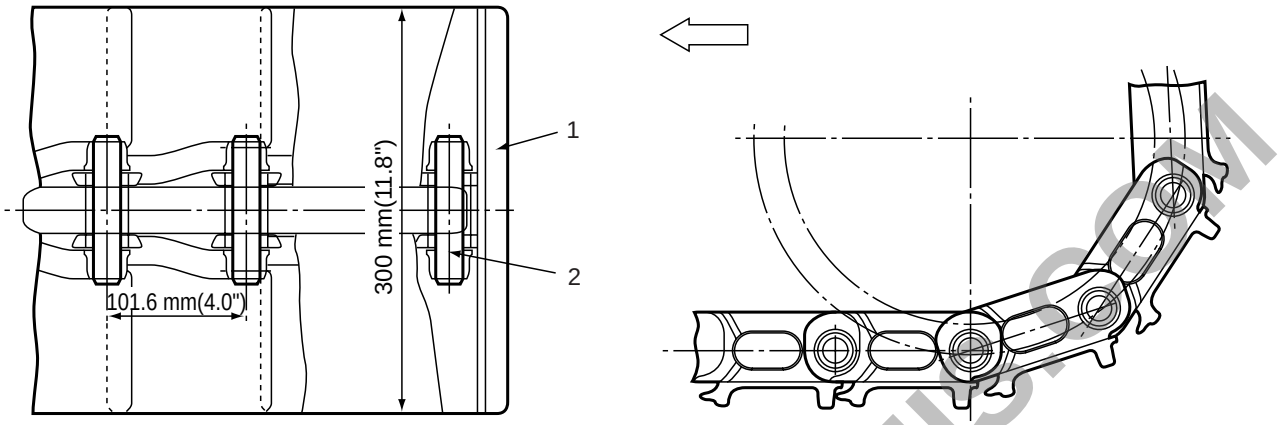


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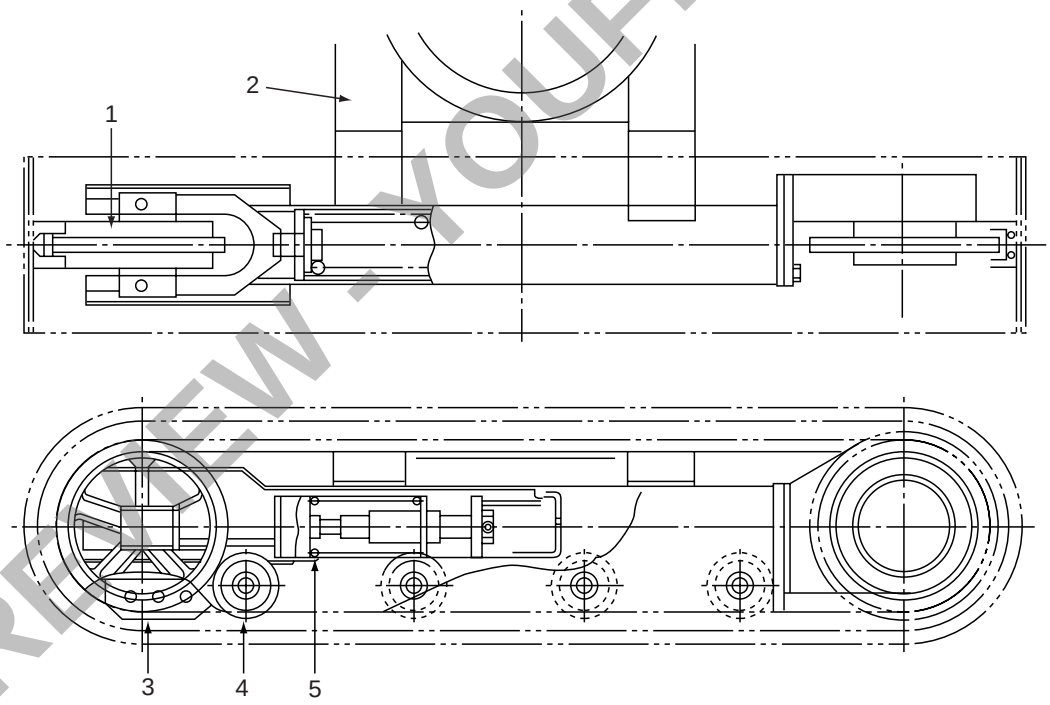
16-1 Structure and operation

16-1-1 Crawler (steel)



1. Shoe
2. Pin

16-1-2 Track frame



1. Idler
2. Track frame
3. Guard (for steel crawler)
4. Track roller
5. Spring

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