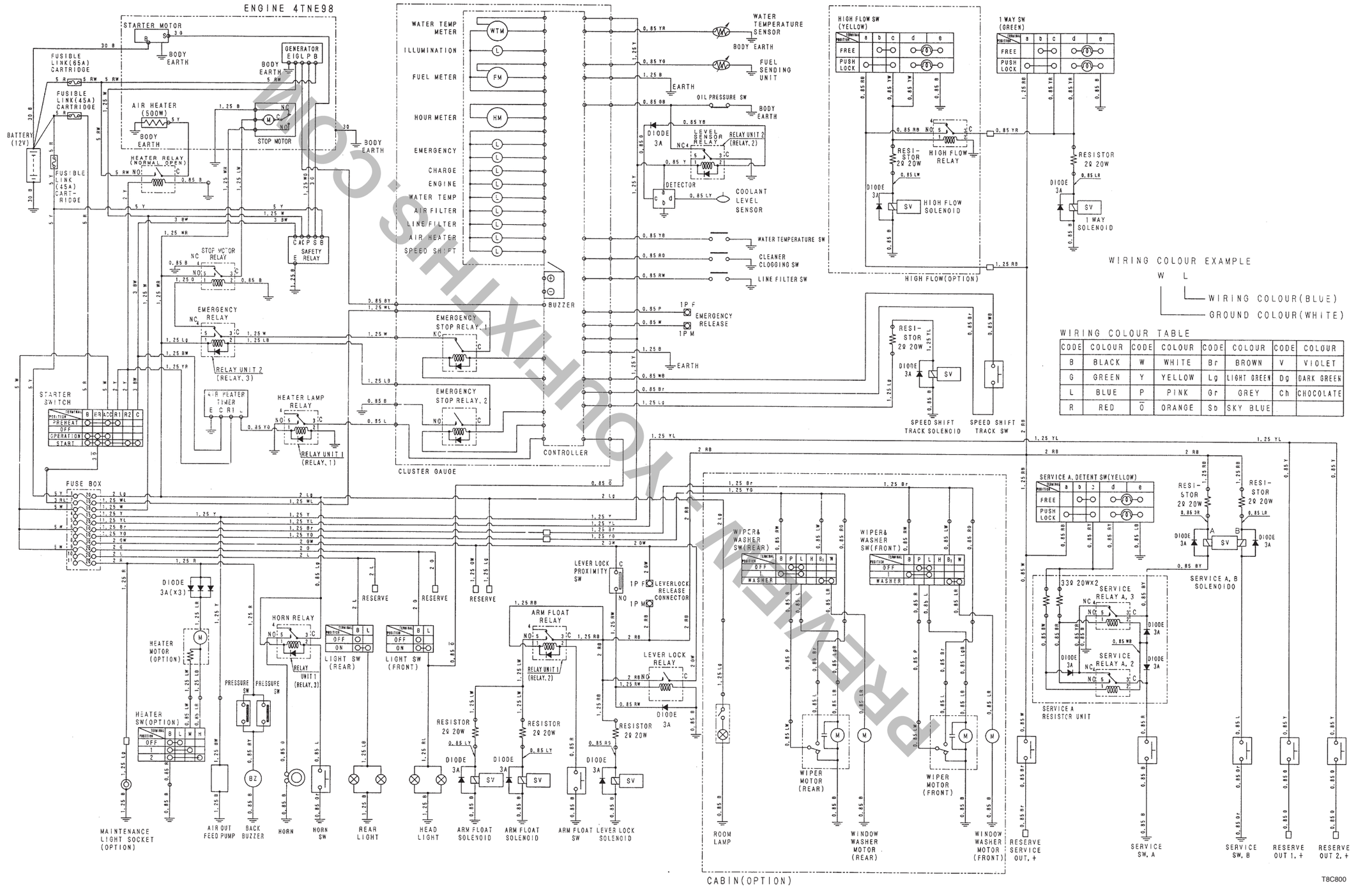
ELECTRICAL SYSTEM

ELECTRICAL WIRING DIAGRAM

Serial No. 21300004~21301932



WIRING COLOUR EXAMPLE

W L
- WIRING COLOUR(BLUE)
- GROUND COLOUR(WHITE)

WIRING COLOUR TABLE

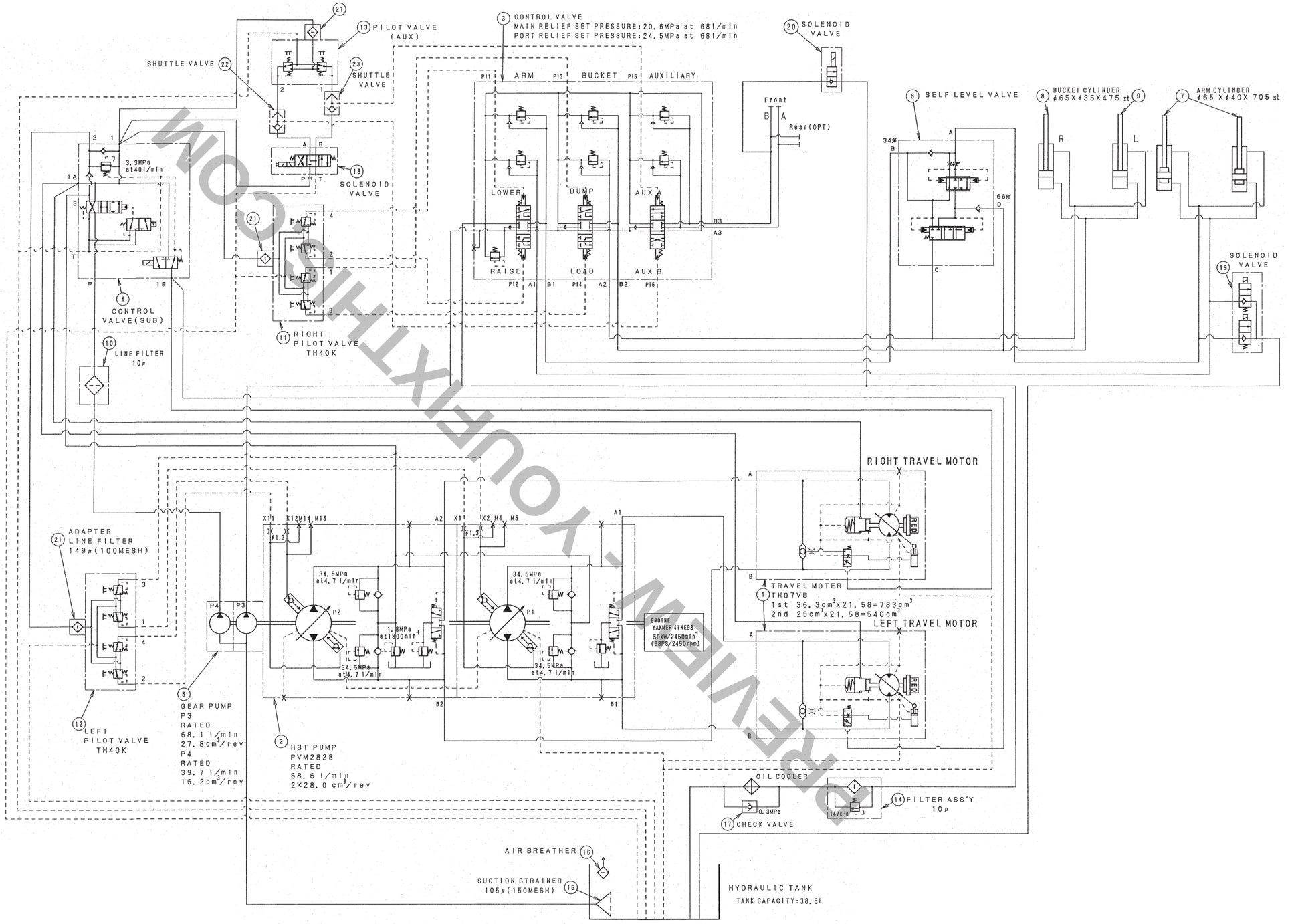
CODE	COLOUR	CODE	COLOUR	CODE	COLOUR	CODE	COLOUR
B	BLACK	W	WHITE	Br	BROWN	V	VIOLET
G	GREEN	Y	YELLOW	Lg	LIGHT GREEN	Dg	DARK GREEN
L	BLUE	P	PINK	Gr	GREY	Ch	CHOCOLATE
R	RED	O	ORANGE	Sb	SKY BLUE		

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HYDRAULIC SYSTEM

HYDRAULIC CIRCUIT DIAGRAM

Standard
Serial No. 21300004~21301932



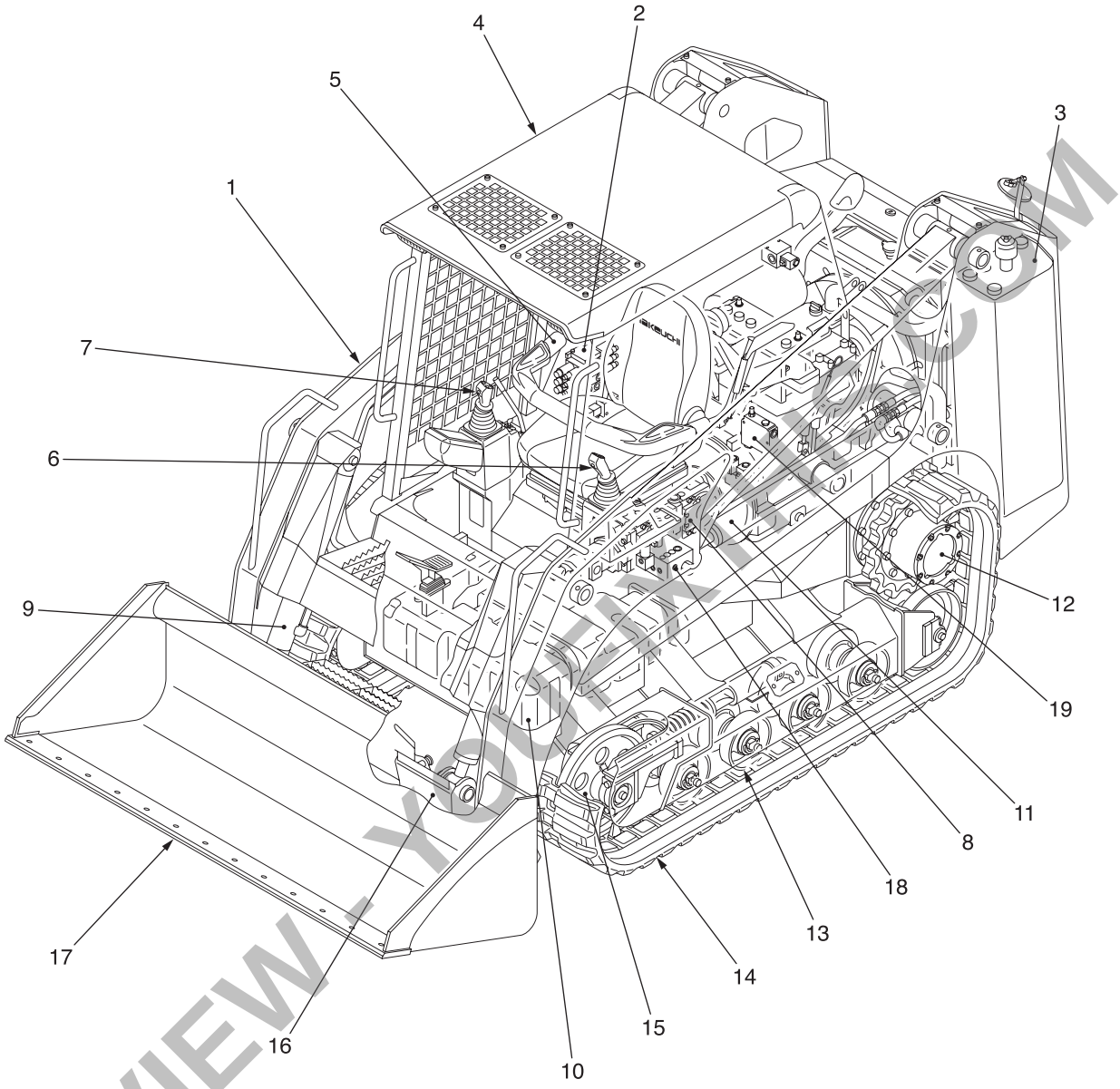
TL 130 HYDRAULIC CIRCUIT DIAGRAM

T8C7001

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NAMES OF COMPONENTS



1. Lift Arm
2. Control Valve
3. Hydraulic Tank
4. Canopy
5. Safety Bar
6. Pilot Valve (L. H.)
7. Pilot Valve (R. H.)
8. HST Pump
9. Bucket Cylinder
10. Fuel Tank
11. Arm Cylinder
12. Travel Motor
13. Track Roller
14. Crawler Belt
15. Idler
16. Quick Attachment
17. Bucket
18. Control Valve (Sub)
19. Self -Level Valve

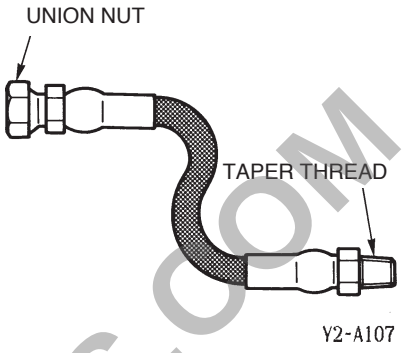
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TIGHTENING TORQUES

Hydraulic Hoses

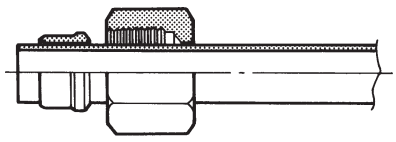
Hose Fitting Size	Torque			
	Union Nut (G)		Taper Thread (R)	
	N·m	ft-lb	N·m	ft-lb
1/8	9.8 $^{+4.9}_{0}$	7.3 $^{+3.5}_{0}$	11.8 ±1.2	8.7 ±0.8
1/4	24.5 $^{+4.9}_{0}$	18.1 $^{+3.5}_{0}$	29.4 ±2.9	21.7 ±2.1
3/8	49 $^{+4.9}_{0}$	36.2 $^{+3.5}_{0}$	53.9 ±5.4	39.8 ±3.9
1/2	58.8 $^{+4.9}_{0}$	43.4 $^{+3.5}_{0}$	88.3 ±8.8	65.1 ±6.4
3/4	117.7 $^{+4.9}_{0}$	86.8 $^{+3.5}_{0}$	147.1 ±14.7	108.5 ±10.7
1	137.3 $^{+4.9}_{0}$	101.3 $^{+3.5}_{0}$	196.1 ±19.6	144.7 ±14.3



Y2-A107

Bite Type Pipe Fitting for Steel Pipe

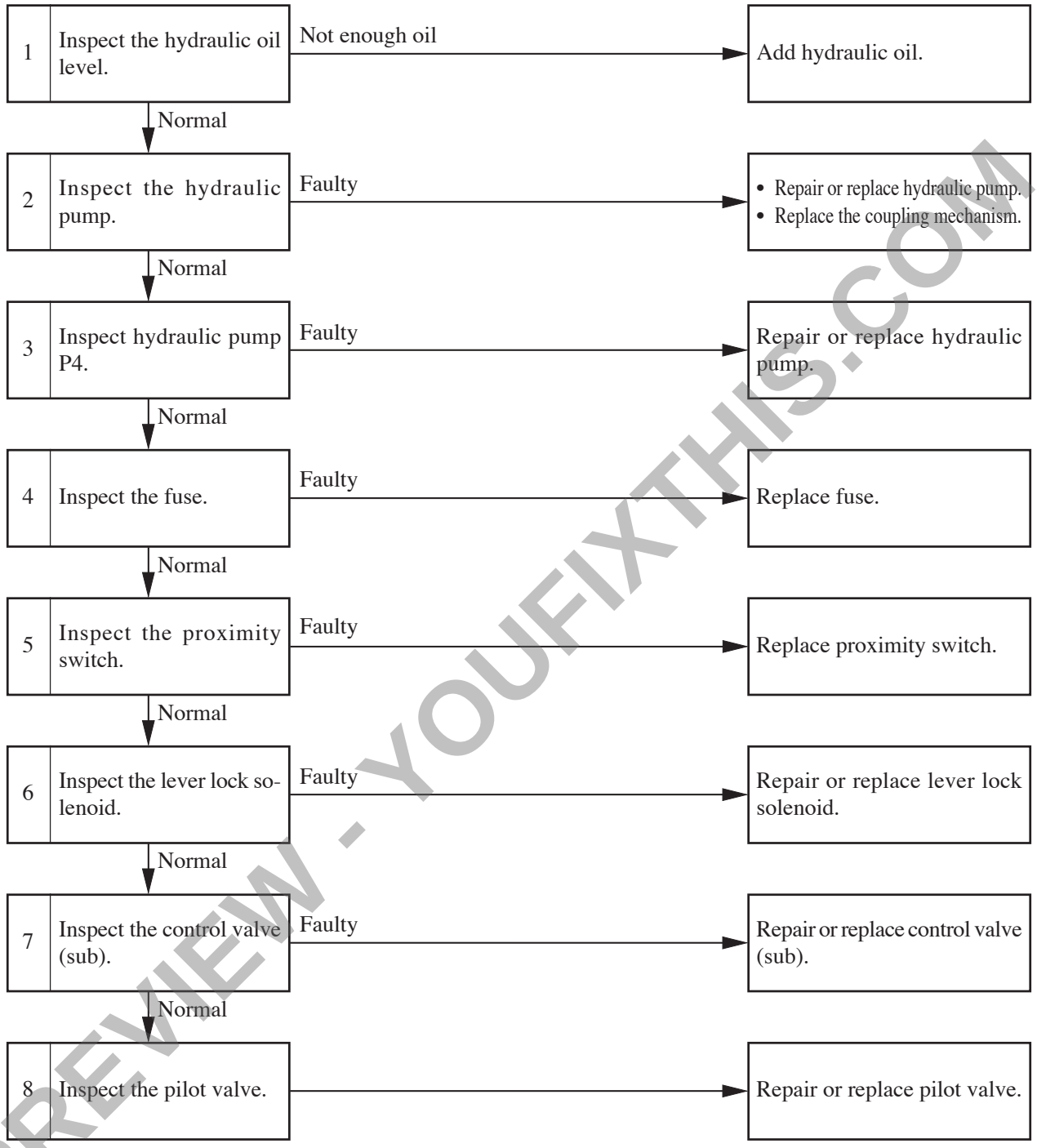
Pipe Outer Diameter (mm)	Torque	
	N·m	ft-lb
8	34.3 ±4.9	25.3 ±3.5
10	41.7 ±2.5	30.7 ±1.7
12	58.8 ±4.9	43.4 ±3.5
15	88.3 ±4.9	65.1 ±3.5
16	93.2 ±4.9	68.7 ±3.5
18	132.4 ±4.9	97.6 ±3.5
22	205.9 ±9.8	151.8 ±7.2
27.2	245.2 ±9.8	181.0 ±7.2
28	313.8 ±19.6	231.4 ±14.3
32	313.8 ±19.6	231.4 ±14.3
35	411.9 ±19.6	303.7 ±14.3


Y2-A108

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COMPLETE FAILURE OF ALL SYSTEMS.



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SPECIFICATION TABLES

SPECIFICATIONS

Serial Number		21300004~	
Type		Canopy	Cab
Standard Bucket Capacity			
Rated Capacity	m^3	0.351	←
Struck Capacity	m^3	0.260	←
Machine Mass (not including operator)	kg	3325	3410
Dimensions			
Overall Lenght: with bucket/without bucket	mm	3430/2740	←
Overall Width: with bucket/without bucket	mm	1675/1580	←
Overall Height	mm	2235 (2120*)	2235
Minimum Ground Clearance	mm	310	←
Front Clearance Radius: with bucket/without bucket	mm	2080/1375	←
Rear Clearance Radius	mm	1585	←
Overall Width of Crawler	mm	1580	←
Bucket Width	mm	1675	←
Angle of Departure	degree	30	←
Working Range			
Maximum Lift Height to Bucket Pin	mm	3030	←
Maximum Dumping Height	mm	2370	←
Maximum Dump Angle Fully Raised	degree	39	←
Maximum Bucket Rollback at Ground Level	degree	30	←
Reach Fully Raised	mm	730	←
Performance			
Breakout Force	kN	29.9	←
Travel Speed 1 st/2 nd	km/h	7.3/10.4	←
Gradeability	degree	30	←
Ground Pressure	kPa	33.3	←
Tipping Load	kg	2100	←
Cycle Time			
Raise-Full Load (Lift Arm)	Sec.	4.2	←
Lower-No Load (Lift Arm)	Sec.	2.7	←
Dump-Full Load (Bucket)	Sec.	2.7	←
Curl-Full Load (Bucket)	Sec.	2.1	←

*: 21300004~21301098

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Figure 7-9 Preventive Maintenance Schedule.

PREVENTIVE MAINTENANCE SCHEDULE FOR AIR CONDITIONING SYSTEMS

NOTE: Typical Maintenance Schedule: 3 months or 15,000 miles, 6 Months or 30,000 miles, 12 Months or 60,000 miles

Installation Date: _____ Mileage: _____

Last Maintenance Check: _____ Mileage: _____

Checked by _____ Mileage: _____

COMPONENT	MAINTENANCE INTERVAL (months) 3*	6*	12*	DONE
1. COMPRESSOR				
Check noise level	•			❑
Check clutch pulley	•			❑
Check oil level	•			❑
Run system 5 minutes	•			❑
Check belts for tension (120 lb max.)	•			❑
Inspect shaft seal (leakage)		•		❑
Check mounting bracket (tighten bolts)		•		❑
Check alignment to clutch w/crankshaft drive pulley		•		❑
Perform manifold gauge check			•	❑
Verify clutch is engaging			•	❑
CONDENSER				
2. Clean dirt/bugs/leaves from coils (w/compressed air)	•			❑
Check inlet/outlet for obstructions/damage	•			❑
RECEIVER-DRIER				
3. Check inlet line from condenser (hot to touch)	•			❑
Check sight glass (streaks or cloudiness)	•			❑
Replace if system is opened			•	❑

COMPONENT	MAINTENANCE INTERVAL (months) 3*	6*	12*	DONE
4. EXPANSION VALVE				
Inspect capillary tube (leakage/damage/looseness)			•	❑
5. EVAPORATOR				
Clean dirt/bugs/leaves form fins/tubes (w/compressed air)			•	❑
Check solder joints on inlet/outlet tubes (leakage)			•	❑
Inspect condensate drain (R-12 or oil leak)			•	❑
6. OTHER COMPONENTS				
Check discharge lines (hot to touch)	•			❑
Check suction lines (cold to touch)	•			❑
Inspect fittings/clamps/hoses		•		❑
Check thermostatic switch (proper operation)			•	❑
Outlets in cab (temperature check; 40 to 50°F)		•		❑
Check fan clutch (proper operation)		•		❑
Inspect all wiring connections		•		❑
Operate manual controls through full functions	•			❑

The following require monthly maintenance:

*Compressor – run system at least 5 minutes (40 degrees Fahrenheit minimum outside temp.) in order to circulate oil and lubricate components.

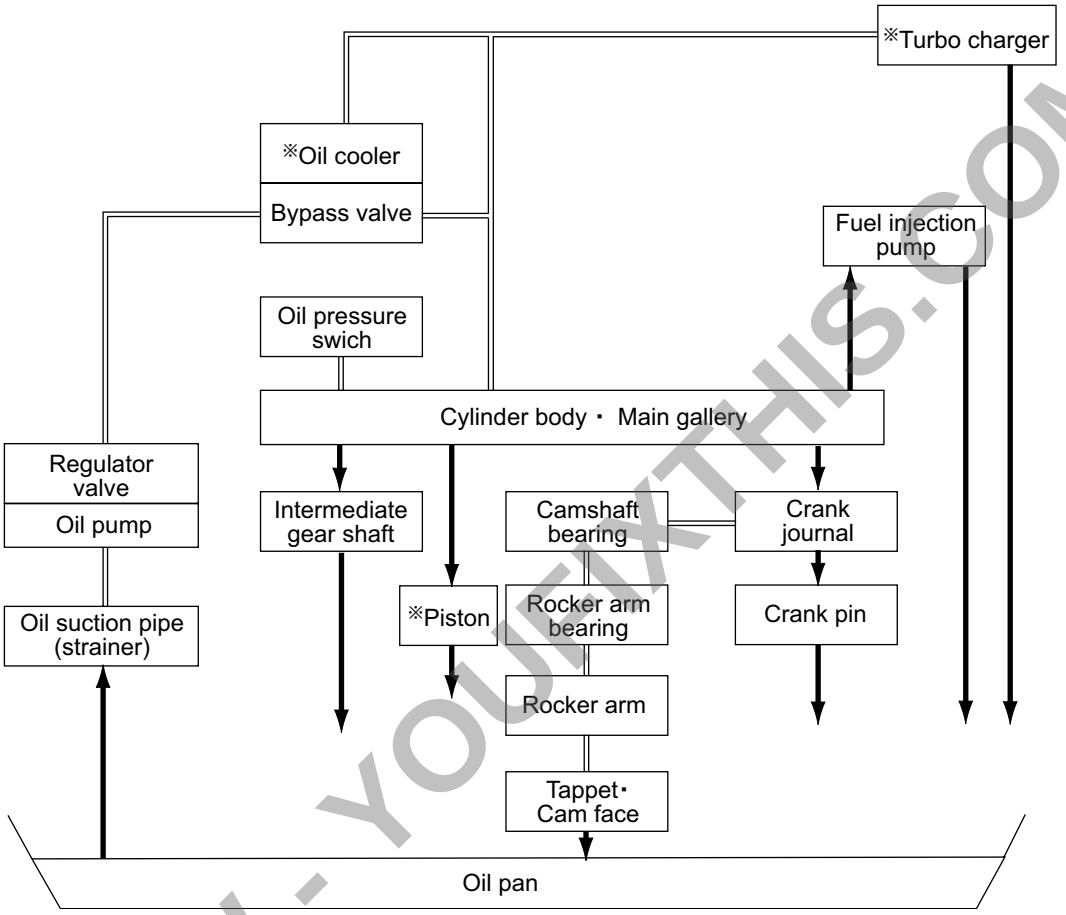
Maintenance notes: _____

_____

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5. Lubrication system

5.1 Lubrication system diagram



Note: It varies in the specifications of each model whether Oil cooler, Piston and Turbo charger of the * mark are attached.

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FOREWORD

This manual is intended for persons who engage in maintenance operations, and explains procedures for disassembly and reassembly of the machine, check and maintenance procedures, maintenance reference values, troubleshooting and outline specifications, etc. Please use this manual as a reference in service activities to improve maintenance techniques.
Further, please be advised that items contained in this manual are subject to change without notice due to design modifications, etc.

MACHINE FRONT AND REAR, LEFT AND RIGHT

The end where the bucket is mounted is the front and the end with the travel motors is the rear. Also the right and left sides of the operator when he is seated in the driver's seat are the right and left sides of the machine.

MACHINE SERIAL NUMBER

The machine serial number is stamped on the identification plate. When sending reports and inquiries, and when ordering parts, etc., be sure to include this number.

MANUAL CONTROL

Information on those to whom this manual is distributed is recorded in the ledger in the section in charge at this company, so please decide on a person to be in charge of it and control it. When there are updates or additions, etc., we will notify the person in charge.

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III . MACHINE CONFIGURATION

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DISASSEMBLY AND ASSEMBLY

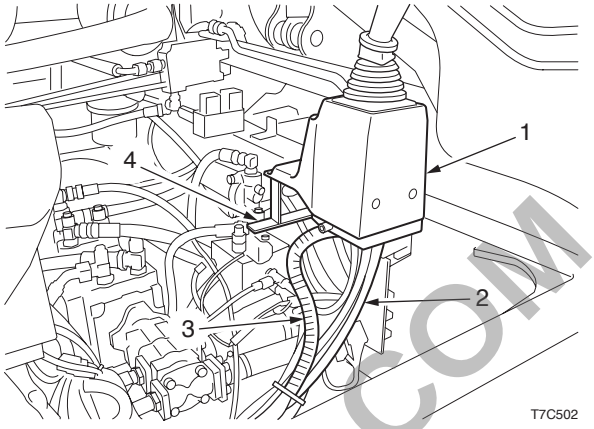
Removing the lever Stands

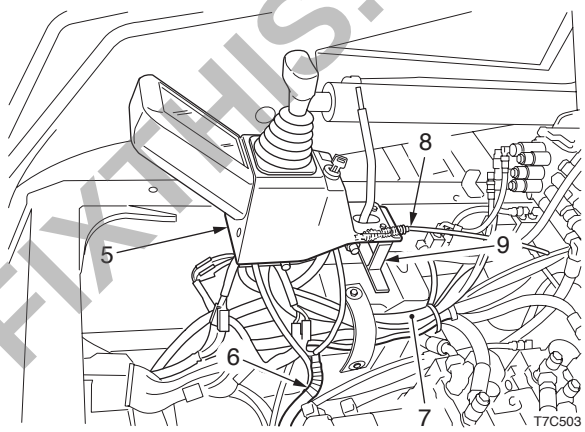
1. Tilt up the canopy.
   ☞ "Tilting Up the Canopy"

2. Remove the floor.
   ☞ "Removing the Floor Frame"

3. Remove the lever stand L.
   a. Remove the cover (1).
   b. Disconnect the hydraulic hoses (2) from the pilot valve.
      • Attach identification labels to individual hoses for correct reassembling.
   c. Disconnect the electric wiring (3).
   e. Remove the bolts and bracket L (4).

4. Remove the lever stand R.
   a. Remove the cover (5).
   b. Disconnect the electric wiring (6).
   c. Disconnect the hydraulic hoses (7) from the pilot valve.
      • Attach identification labels to individual hoses for correct reassembling.
   d. Disconnect the accelerator wire (8).
   e. Remove the bolts and bracket R (9).





Installing the Lever Stands

Follow the same procedure as for removal in the reverse order.

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Visual Inspection - System Off

Your observations and the corrective measures you take may be different depending on circumstances. The following inspection procedures are explained in more detail below:

1. Observe the System
2. Inspect Parts
3. Check Hoses and Fittings
4. Check for Refrigerant Leaks

Use the following procedures as a general rule in performing a visual inspection with the AC system off:

1. Observe the System

Your first inspection step is to answer the following question if you can:

- Has the vehicle just come in off the road and has the HVAC system been in use?
- Did the operator or work order explain or describe any problems about the system?
- Did someone else work on the system yesterday, 700 miles down the road? Your first inspection step is to answer these questions if you can.

CAUTION Even when someone has told you what is wrong with an HVAC system, you should perform a visual inspection. Always make a visual inspection before you hook up the manifold gauge set. Never add refrigerant to a system until you have made a complete visual and performance inspection.

2. Inspect Parts

Look at the system for what might come loose, leak, wear out or become dirty and not function the way it should. The main points for visual inspection of the system are emphasized in Figure 7-2.

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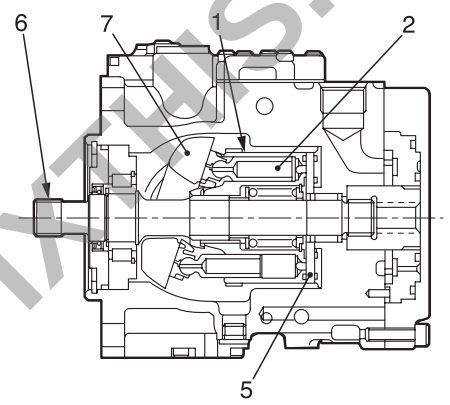
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OPERATION

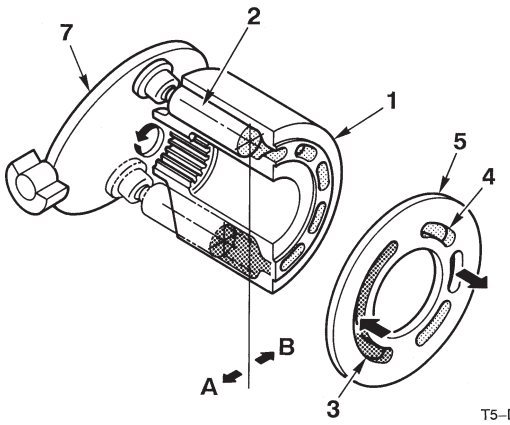
The pump covered here is a tandem pump for hydrostatic transmission. When combined together with an HST travel motor, the speed of the motor may be controlled from a speed of 0 to the specified maximum, in smooth gradations and without the switching of gears.

Hydraulic Pump

Cylinder block (1) has been constructed with nine pistons (2) built in, and the end surface comes in contact with the valve plate (5) containing intake port (3) and exhaust port (4). Cylinder block (1) rotates freely and is connected to drive shaft (6) via the spline. Swash plate (7), on the other hand, is connected to the housing and tilted somewhat, and piston (2) is constructed to follow swash plate (7) in its rotation.
Rotating drive shaft (6) at this point causes cylinder block (1) to rotate, causes piston (2) connection to cylinder block (1) to follow along with swash plate (7) to move in a back-and-forth motion, and causes the intake and exhaust pumps to begin working.
Thus the nine pistons (2) perform approximately a single intake (A) or exhaust (B) sweep for each rotation of cylinder (1), and operating drive shaft (6) in continuous rotations allows you to perform a continuous stream of intake and exhaust operations.
Note that since the sweep capacity of piston (2) depends on the degree of tilt of swash plate (7), the tilt of the plate may be changed to modify the total quantity of exhaust.



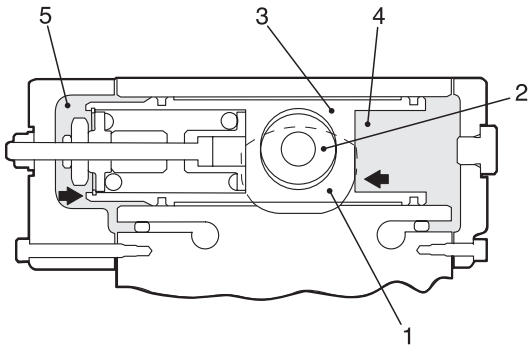
T6D108



T5–D104

Displacement Control

Bearings are attached to both sides of swash plate (1), the swash plate is connected to the housing so that the degree of tilt may be changed, and piston (2) is used to link the swach plate with control cylinder (3).
In a neutral position, since the charge pressure of swash plate (1) enters into chambers (4) and (5) to preserve equal pressure, control cylinder (3) remains at rest in a neutral position.



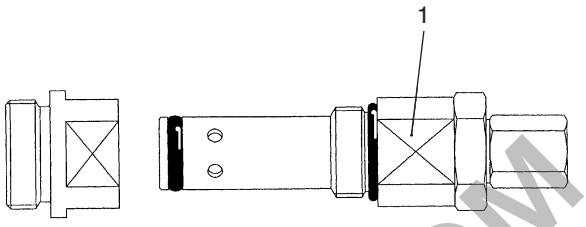
T6D109

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Main Relief Valve

1. Remove the sleeve (1).
   Sleeve: 49.04 ±4.90 N·m

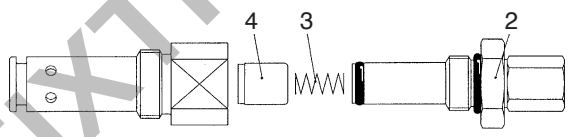
2. Remove the O-rings from sleeve (1).



T7D210

3. Remove the plug (2).
   Plug: 42.17 ±3.92 N·m

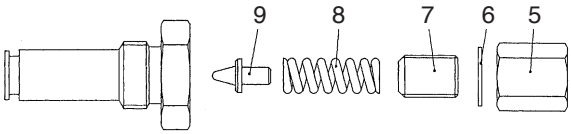
4. Remove the spring (3) and main poppet (4).



T7D211

5. Remove the Lock nut (5).
   Lock nut: 23.54 ±1.96 N·m

6. Remove the gasket (6), set screw (7), spring (8) and needle valve (9).



T7D212

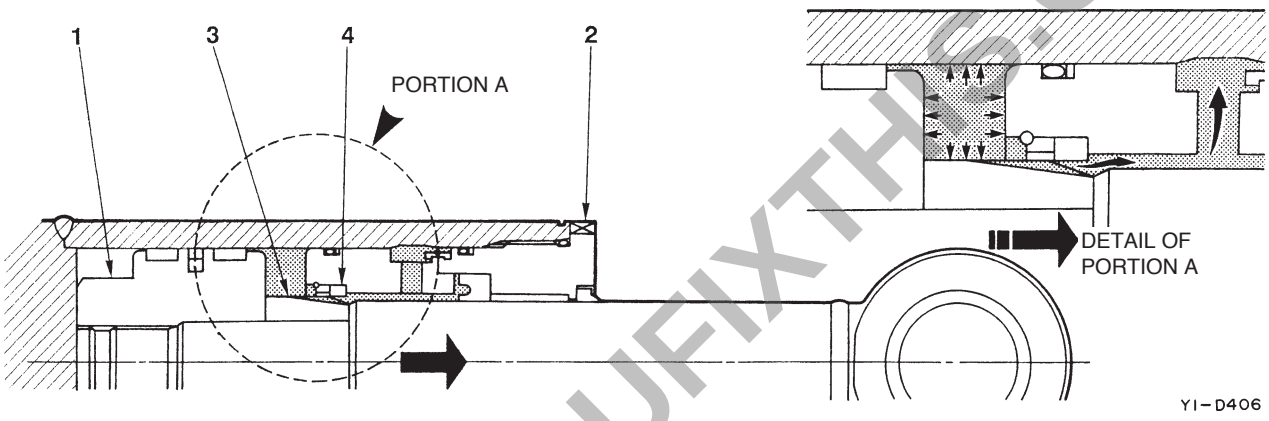
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OPERATION

Hydraulic oil flowing alternately in and out of the oil outlet and inlet on both sides (head and rod sides) of the piston acts on the piston and its force causes the piston to move back and forth.
In cylinders equipped with a cushion mechanism, the shock resulting from the piston colliding with the cover at the stroke end acts on that mechanism and is dampened by it.

Cushion Mechanism



Before the piston (1) nears the stroke end and collides with the cover (2), the cushion bearing (3) which precedes it enters the cushion seal (4), shutting off the return passage for the hydraulic oil on the rear end of the piston and making it possible for oil to be expelled only along the groove provided in the cushion bearing (3). This causes the piston (1) back pressure to become high, slowing the speed of the piston.

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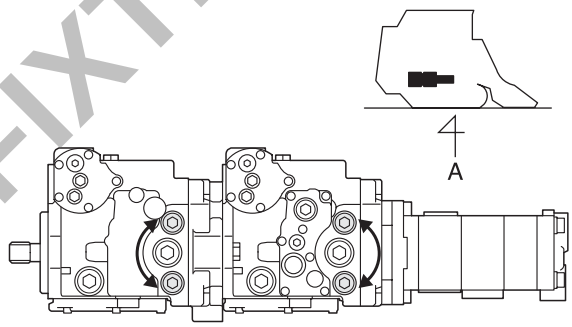
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1. Inspect the pilot valve.
   Measure the secondary pressure of the pilot valve.
   a. Disconnect the hose connecting the HST pump (P1, P2) and the pilot valve at the pump.
   b. Fit a pressure gauge to the hose.
   c. Engage the travel lever and measure the pressure.
   - The pilot valve is working properly if pressure varies from 0 to 3.0 MPa in accordance with movement of the angle of the travel lever.

2. Inspect the charge pressure.
   ☞ "II. Specifications, Standards for Judging Performance"

3. Inspect the output pressure of the HST pump
   ☞ "II. Specifications, Standards for Judging Performance"

4. Perform replacement test for the high pressure relief valves.
   Since it is highly unlikely that all four high pressure relief valves to fail simultaneously, it is possible to replace them one by one to test that they are individually functioning.
   - If the motor begins to run normally after a valve has been replaced, then you may assume that the valve in place before the test replacement is at fault.



VIEW "A"

T6E004

5. HST pump fault.
   ☞ "IV. Hydraulic Units, Hydraulic pump"

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2. TROUBLESHOOTING..... 2-1~2-6

2.1 QUICK REFERENCE TABLE FOR TROUBLESHOOTING 2-1

2.2 TROUBLESHOOTING BY MEASURING COMPRESSION PRESSURE 2-5

(1) Compression pressure measurement method 2-5

(2) Standard compression pressure 2-5

(3) Engine speed and compression pressure 2-6

(4) Measured value and troubleshooting 2-6

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(4) Servicing points

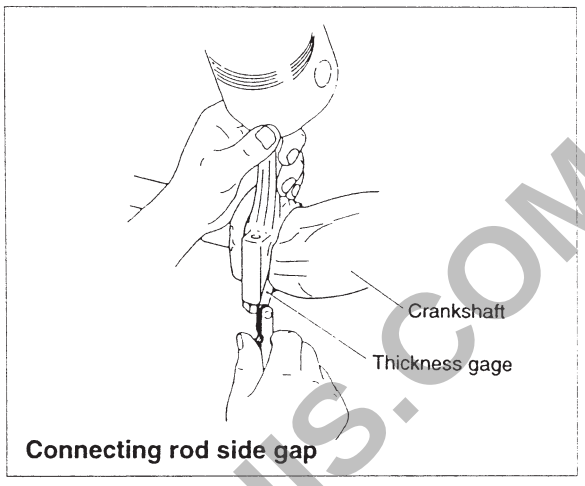
Point 1 **Oil pan**

Disassemble:

- Sealant is applied to the oil pan mounting surface on the block. Carefully operate so as not to damage or distort the bonding surface.

Reassemble:

- Apply sealant (code No. 977770-01212) before reassembly.



Connecting rod side gap

Point 2 **Piston w/rod**

Disassemble:

- Measure the connecting rod side gap.

Standard	0.20 ~ 0.40 mm

- Carefully remove the carbon deposit on top of the cylinder so as not to damage the inner side of the cylinder.
- Set the piston at the BDC position and remove the connecting rod cap. Then set the piston at the TDC position, and push the connecting rod big end with the wooden shaft of a hammer. Proceed carefully so as not to cause the cylinder block catch the rod big end. Set the rod caps and crankpin metals in their correct combinations.

Reassemble:

- Apply oil especially carefully to the sliding contact surfaces of the pistons, rods and rings.
- Use the piston insertion tool (see 11.1-9 in Chapter 11) to insert each piston w/rod in the cylinder block and install the bearing metal cap.

Nm(kgf•m)

–	Standard (apply lube oil)
4TNE94•98	53.9~58.8 (5.5~6.0)
4TNE106 (T)	78.5~83.4 (8.0~8.5)

Point 3 **Mounting flange**

Disassemble:

Place the engine on a stable base with the cylinder block upper surface facing down, and remove the mounting flange carefully so as not to damage the combustion surface.

Reassemble:

Apply sealant (code No. 977770-01212) and install the mounting flange by matching the two dowel pins. After assembly, raise the engine with its mounting flange on the bottom side.

⚠ CAUTION

Unforeseen injury may arise due to falling of slipping when raising or reversing the engine. Carefully operate so as not to lose balance.

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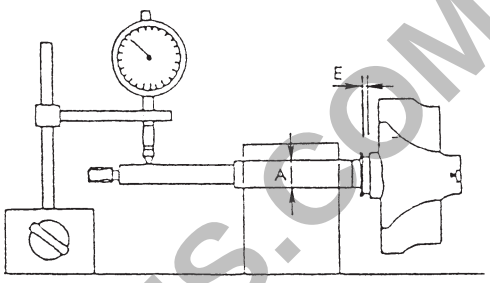
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(2.4) Turbine shaft 1

① Inspect any contact trace, chipping, thermal discoloration or deformation at the turbine wheel. Check the shaft portion for bend, the journal portion for thermal discoloration or abnormal wear, and the seal ring groove for surface defect or wear. Replace with a new one if defective.

② Measure the turbine shaft journal outside diameter (A) and seal ring groove width (E). Replace with a new turbine shaft if beyond the wear limit.

Journal outside diameter (A)
Wear limit : 7.98 mm
Ring groove width (E)
Wear limit : 1.29 mm



V block

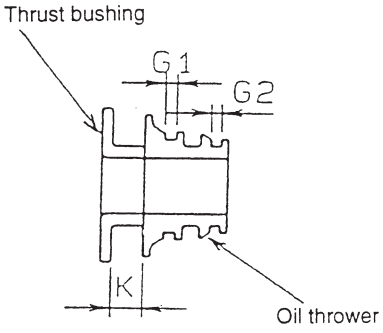
③ Measure the turbine shaft run-out, and replace with a new turbine shaft if it exceeds 0.011 mm.

(2.5) Heat insulating plate 20

Inspect the heat insulating plate for any contact trace, thermal deformation or corrosion. Replace with a new one if defective.

(2.6) Thrust bushing, oil thrower 2 and thrust bearing 6

Inspect each part for wear, surface defect and discoloration. Replace with a new one if defective even within the wear limit.



① Thrust bushing
Measure the distance between grooves (K) of the thrust bushing, and replace with a new one if the wear limit is exceeded.
Wear limit : 4.07 mm

② Oil thrower 2
Measure the seal ring groove widths (G1) and (G2), and replace with a new one if the wear limit is exceeded.
Wear limits : G1: 1.31 mm, G2: 1.11 mm

③ Thrust bearing 6
Measure the thrust bearing width (J), and replace with a new one if the wear limit is exceeded.
Wear limit : 3.98 mm

(2.7) Floating bearing 5

① Inspect the floating bearing for abnormal wear, discoloration or surface defect. Replace with a new one if defective.

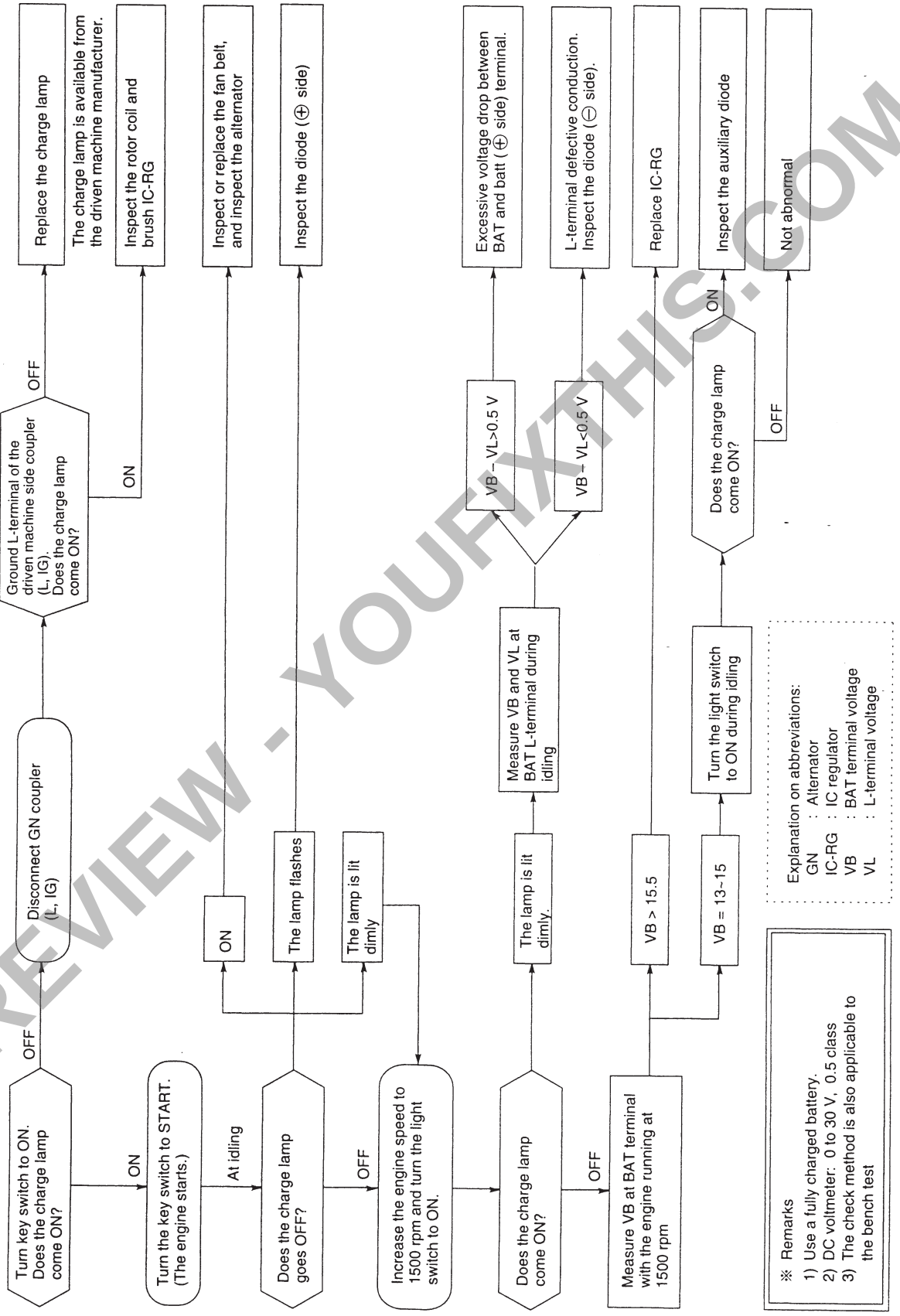
② Measure the inside diameter (C) and outside diameter (D). Replace the bearing if either wear limit is exceeded.
Wear limits:
Outside diameter (D): 12.31 mm **Inside diameter (C):** 8.04 mm

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10.1.3 Troubleshooting



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Precautions for Service Work

(1) Precautions for Safety

Read the safety precautions given at the beginning of this manual carefully and always mind safety in work.

(2) Preparation for Service Work

Preparation is necessary for accurate, efficient service work. Check the customer ledger file for the history of the engine.

- Preceding service date
- Period/operation hours after preceding service
- Problems and actions in preceding service
- Replacement parts expected to be required for service
- Recording form/check sheet required for service

(3) Preparation before Disassembly

- Prepare general tools, special service tools, measuring instruments, oil, grease, nonreusable parts, and parts expected to be required for replacement.
- When disassembling complicated portions, put match-marks and other marks at places not adversely affecting the function for easy reassembly.

(4) Precautions in Disassembly

- Each time a parts is removed, check the part installed state, deformation, damage, roughening, surface defect, etc.
- Arrange the removed parts orderly with clear distinction between those to be replaced and those to be used again.
- Parts to be used again shall be washed and cleaned sufficiently.
- Select especially clean locations and use clean tools for disassembly of hydraulic units such as the fuel injection pump.

(5) Precautions for Inspection and Measurement

Inspect and measure parts to be used again as required to determine whether they are reusable or not.

(6) Precautions for Reassembly

- Reassemble correct parts in correct order according to the specified standards (tightening torques, and adjustment standards). Apply oil important bolts and nuts before tightening when specified.
- Always use genuine parts for replacement.
- Always use new oil seals, O-rings, packing and cotter pins.
- Apply sealant to packing depending on the place where they are used. Apply of grease to sliding contact portions, and apply grease to oil seal lips.

(7) Precautions for Adjustment and Check

Use measuring instruments for adjustment to the specified service standards.

How to Read this Manual

(1) Range of Operation Explanation

This manual explains the troubleshooting, installation/removal, replacement, disassemble/reassembly, inspection, adjustment and adjusting operation procedures for the TNV series engines with direct injection system.

Refer to the manufacturer’s manual for each of the fuel injection pump, governor, starting motor and alternator except for their installation.

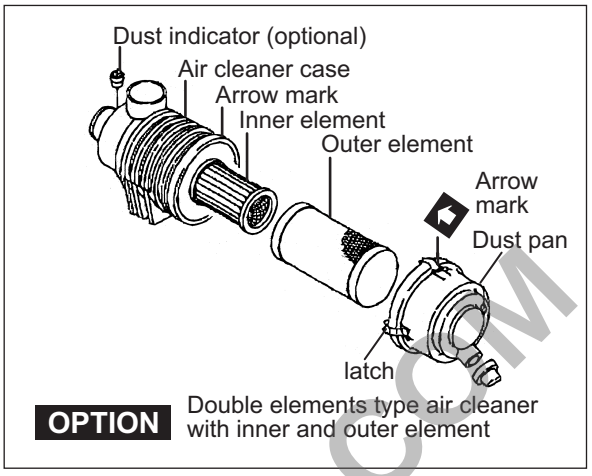
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3)Blow air [0.29 to 0.49 MPa (3.0 to 5.0 kgf/cm^2)] from inside the element to blow dust off as shown in the illustration right.
Apply the air blowing pressure as low as possible so as not to damage the element.
If having the air cleaner with double elements, never remove and clean the inner element.
The aim of installing the inner element is for back up protecting from intaking dust during engine running when leaving the outer element to reinstall after removing it or when damaging the outer element unexpectedly during engine running.

4)Replace the element with new one, If the element is damaged, excessively dirty or oily.

5)Remove the inside dust cover of the dust pan, and clean inside of the dust pan.

6)Reinstall the element with the wing bolt. (do not leave the gasket.) Reattach the inside dust cover to the dust pan and install the dust pan to the air cleaner case placing the TOP mark upward.



IMPORTANT:

- When the engine is operated in dusty conditions, clean the element more frequently.
- Do not run the engine with removed air cleaner or element, as this may cause foreign material to enter and damage the engine.

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[NOTICE]

1)When a diaphragm is damaged, pressure control inside the crankcase becomes insufficient, and troubles occur. When the internal pressure of the crankcase decreases too much due to the damage of a spring, much blowby gas containing oil is reduced in intake air system, and it may cause the combustion defect by the early dirt of the intake valve or the urgent rotation of the engine by the oil burning.

When pressure progresses in the crank case too much due to the wrong operation of the diaphragm and so on, it is considered that oil leakage from the joint of a oil pan, a oil seal and so on will occur. When a diaphragm is damaged, blowby is discharged from the breathing hole on the side of diaphragm cover, and not reduced in the intake manifold. Therefore, be careful of the diaphragm trouble.

2)At lubricating oil replacement or lube oil supply

The amount of lubricating oil isn't to be beyond the standard upper limit (in the engine horizontally, the upper limit mark of the dip stick). Since the blowby gas redactor is adopted, be careful that the amount of oil mist may be inducted in the combustion chamber and the oil hammer sometimes may occur, when the lubricating oil quantity is beyond the upper limit or an engine is operated beyond the allowable maximum angle of an engine.

[Reassembly]

Replace the diaphragm with new one, when it is damaged.

Point7

[Disassemble]

- Keep the removed push rods by attaching tags showing corresponding cylinder Nos.

[Reassemble]

- Always apply oil to the contact portions of the push rods and clearance adjusting screws.

Point8

[Disassemble]

- Loosen the cylinder head bolts in two steps in the illustrated order.
- Place the cylinder head assy on a paper board to prevent the combustion face from any damage.

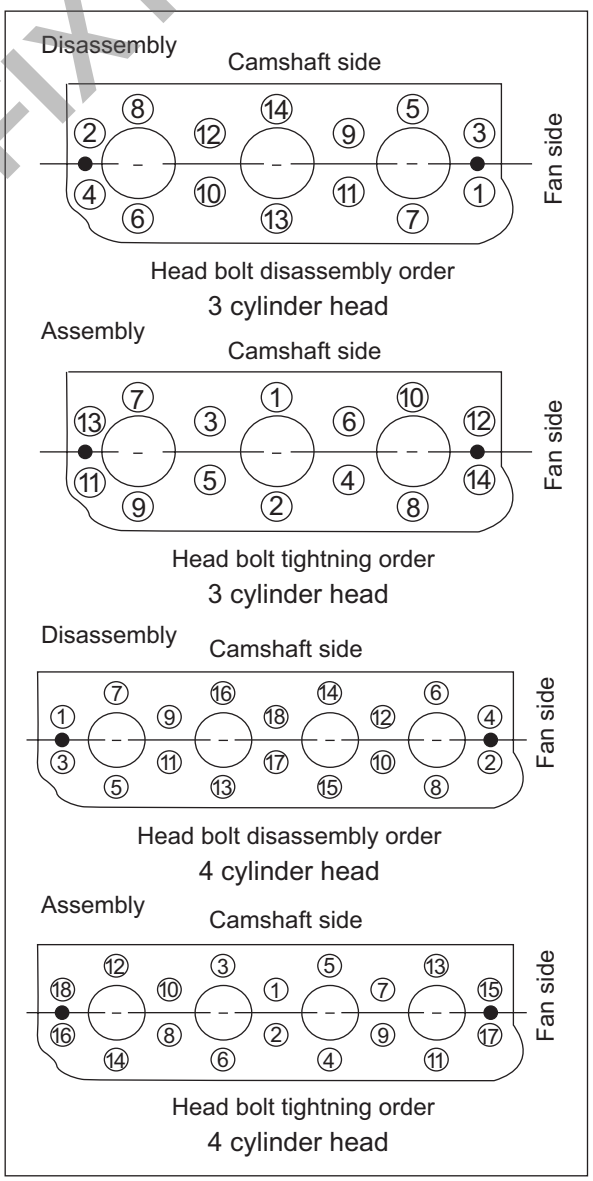
[Reassemble]

- Remove the head gasket with a new one.
- Uniformly install the head bolts manually after applying oil on the threaded and seat portions.
- They shall be tightened in two steps in the reverse of the order for disassembly.
- Tightening torque

N•m (kgf•m)

	TNV82A	TNV84-88
First step	30.0 to 34.0 (3.1 to 3.5)	41.1 to 46.9 (4.2 to 4.8)
Second step	61.7 to 65.7 (6.3 to 6.7)	85.3 to 91.1 (8.7 to 9.3)

	4TNV94L/98	4TNV106 (T)
First step	49.0 to 58.8 (5.0 to 6.0)	88.3 to 98.1 (9.0 to 10.0)
Second step	103.1 to 112.9 (10.5 to 11.5)	188.0 to 197.8 (19.0 to 20.0)

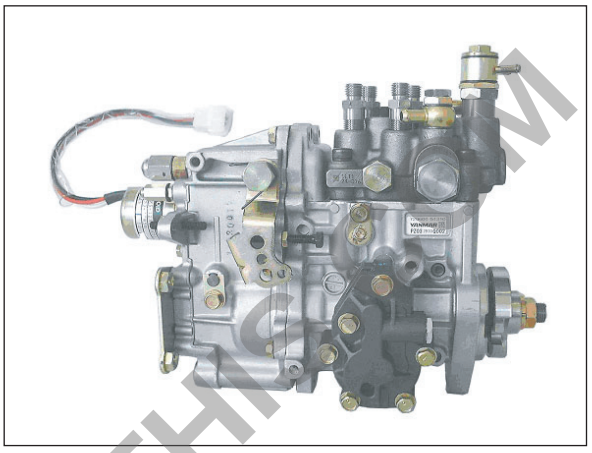


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7. Fuel injection pump / Governor

Only the outline of the MP fuel pump is explained in this chapter. Refer to the MP pump service manual of the separate volume for the disassembly and assembly.

7.1 Introduction



It is described about the features of the fuel injection pump, YDP-MP, manufactured by Yanmar, disassembly, assembly and adjustment procedure.

Fuel injection pump is the most important equipment, which is enable to make the sensitive adjustment according to the variable load of the engine.

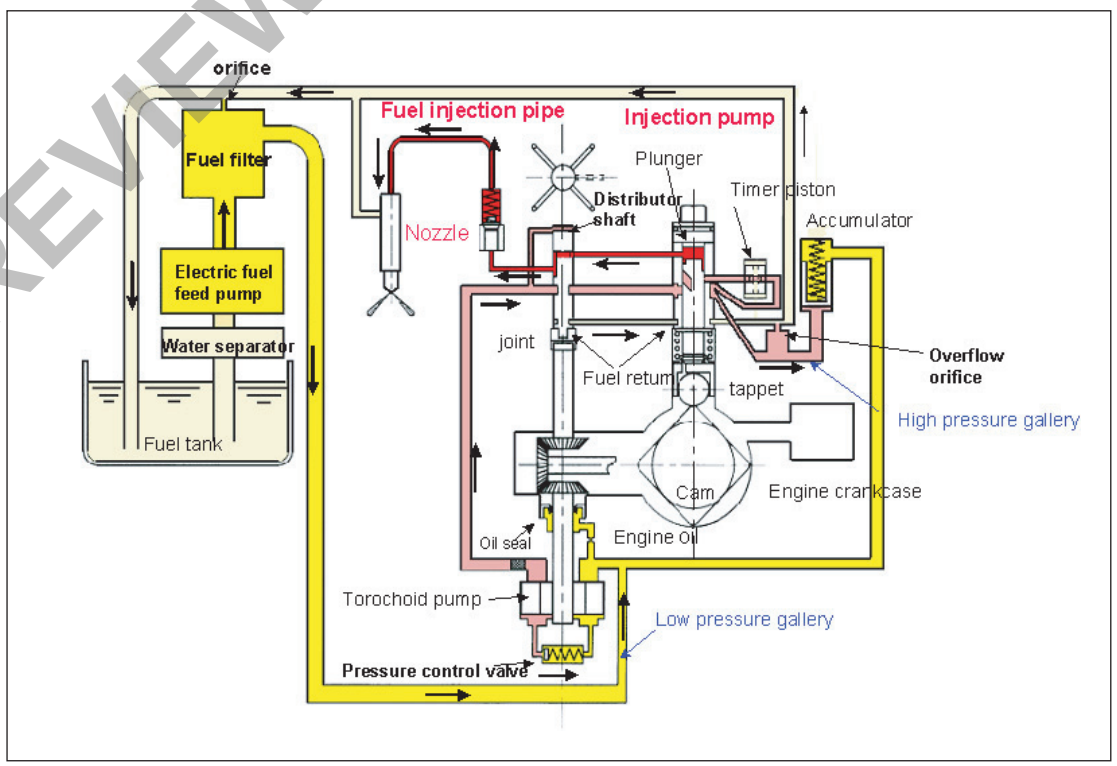
Therefore all of the parts are required not only very precise machining but also finest, assembling with top level.
The careful arrangement of keeping off the dust and the rust when disassemble, adjustment and reassemble of the fuel injection pump is made in the market.

Yanmar YDP-MP Pump is a distributor type pump which is unified of Mono-plunger, a distributing shaft, a hydraulic head which equipped the delivery valve for each cylinder, pump housing which has a cam shaft internally and governor.
The fuel, which is pressurized by the up and down movement of the plunger driven by the cam-rotation, is supplied through the distributor shaft, which is rotating accordingly.

There are a model YDP-MP2 and a model YDP-MP4, and plunger diameter and fuel cam speed are different.

7.2 Fuel injection pump

7.2.1 Fuel system diagram



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9.1.8 Characteristic test

Since the characteristics can be checked roughly by means of a simple no-load test as explained below.
NOTE: Complete the test quickly since the rating of the starting motor is 30 seconds.

(1) No-load test

Fix the starting motor on a test bench and connect wiring as shown in Fig.31. When the switch is closed, a current flows in the starting motor, which is rotated at no-load. Measure the current, voltage and number of revolutions then and check if they satisfy the specified characteristics.

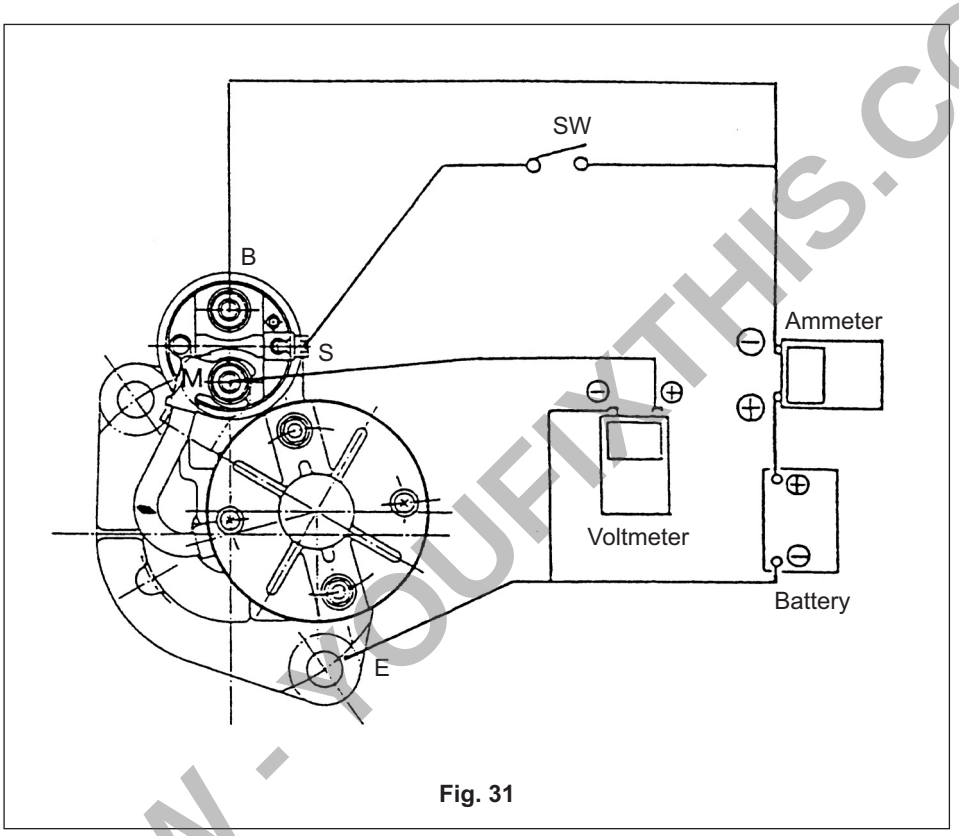


Fig. 31

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