SPECIFICATION TABLES

SPECIFICATIONS

Serial Number			51400007~
Machine Type			Cab
Machine Mass (not including operator)			
Rubber Crawler		kg	14230
Steel Crawler		kg	14155
Engine Rated Output		kW/min^{-1}	62.2/2050
Bucket Capacity (Standard Bucket)			
Rated Capacity		m^3	0.45
Struck Capacity		m^3	0.34
Performance			
Slew Speed		min^{-1}	13.8
Travel Speed: Rubber Crawler	1st / 2nd	km/h	3.0/5.3
Steel Crawler	1st / 2nd	km/h	2.8/5.0
Gradeability		% (degree)	70/(35)
Ground Pressure: Rubber Crawler		kPa	41.7
Steel Crawler		kPa	41.5
Noise Level: Sound-power level		dB (A)	L_{WA}102
Sound-pressure level		dB (A)	L_{PA}79
Auxiliary Hydraulic Flow Rate	1st / 2nd	L/min	106.6/51.9
Dimensions			
Overall Length in Transport Position		mm	7725/8155*
Overall Width		mm	2490
Overall Height: Rubber Crawler		mm	2785/2795*
Steel Crawler		mm	2785
Dimensions of Base Machine			
Tail Swing Radius		mm	2000
Upper Structure Rearmost Distance from Axis of Rotation		mm	2000
Clearance Height under Upperstructure:			
Rubber Crawler		mm	920
Steel Crawler		mm	920
Crawler Base: Rubber Crawler		mm	2880
Steel Crawler		mm	2880
Crawler			
Overall Length: Rubber Crawler		mm	3590
Steel Crawler		mm	3580
Overall Width		mm	2490
Track Shoe Width		mm	500
Ground Clearance: Rubber Crawler		mm	450
Steel Crawler		mm	450

*: When equipped with long arm.

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DISASSEMBLY AND ASSEMBLY

Removing the Engine

1. Disconnect the battery ground cable (1) from the battery.

2. Remove the engine hood, side cover L and R and engine cover [front].
   ☞ "Removing the Covers"

3. Remove the Counterweight.
   ☞ "Removing the Upper Frame"

4. Disconnect the electrical wiring from the air cleaner (2). Next, remove the air cleaner (2).

5. Remove the radiator and oil cooler.
   ☞ "Removing the Radiator and Oil Cooler"

6. Remove the hydraulic pump.
   ☞ "Removing the Hydraulic Pump"

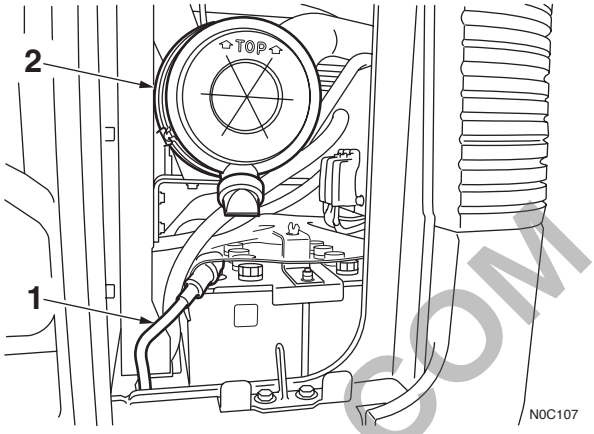
7. Remove the compressor (3).
   - Do not loosen the hose to the air conditioner, or the refrigerant gas may leak.
   a. Loosen the nut (5) of the idle pulley (4).
   b. Loosen the double-nut (6) and bolt (7) to release the V-belt (8) tension.
      - When re-assembling, press the midpoint between the crankshaft pulley (9) and the idle pulley (4) with the force of 98 N, and adjust the bolt (7) to produce a slack of approximately 8 mm.
   c. Remove the two installation bolts (10) from the compressor (3), and detach the compressor (3) from the engine.

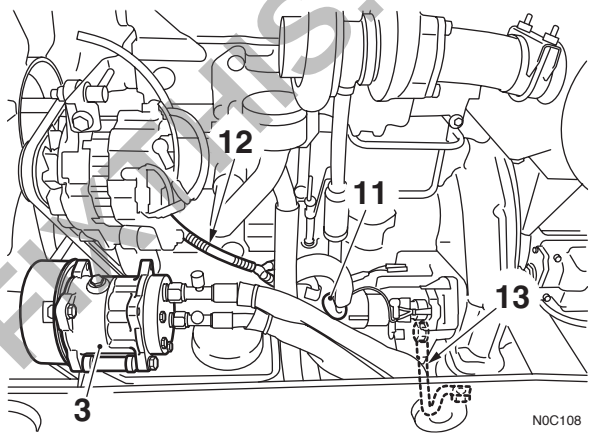
8. Disconnect the battery cable (11) and all the connections on the engine side of the electric wirings (12).
   - Attach identification labels to individual wirings.
   - Disconnect the wirings from the clamp and the band.

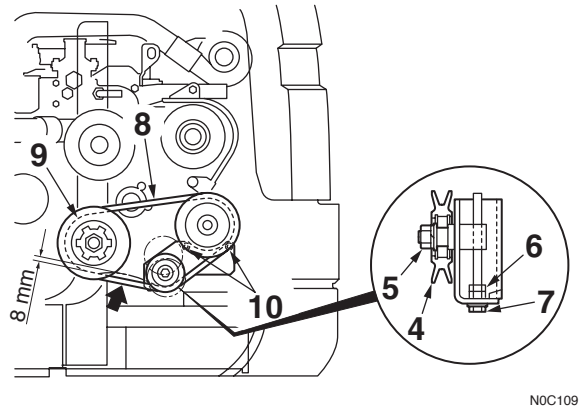
9. Disconnect the engine ground cable (13).

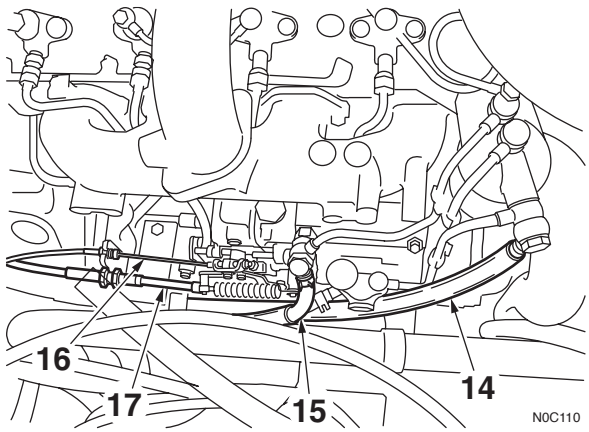
10. Disconnect the fuel hoses (14) and (15).

11. Disconnect the emergency stop wire (16) and accelerator wire (17) from the engine.
    - When re-assembling, make sure that the minimum bending radius of the emergency stop wire is at least 250 mm and check that the wire moves smoothly.







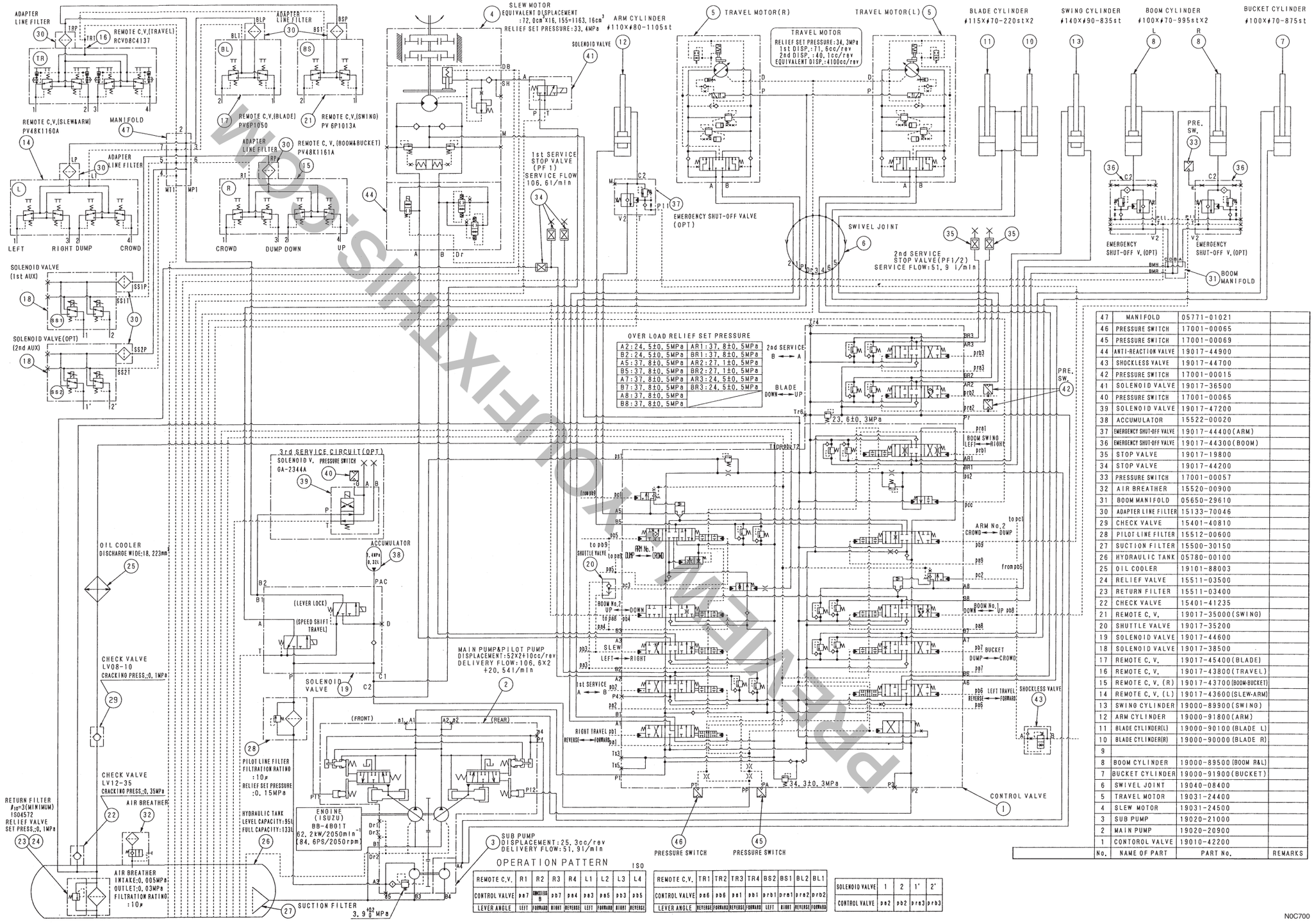


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HYDRAULIC SYSTEM

HYDRAULIC CIRCUIT DIAGRAM

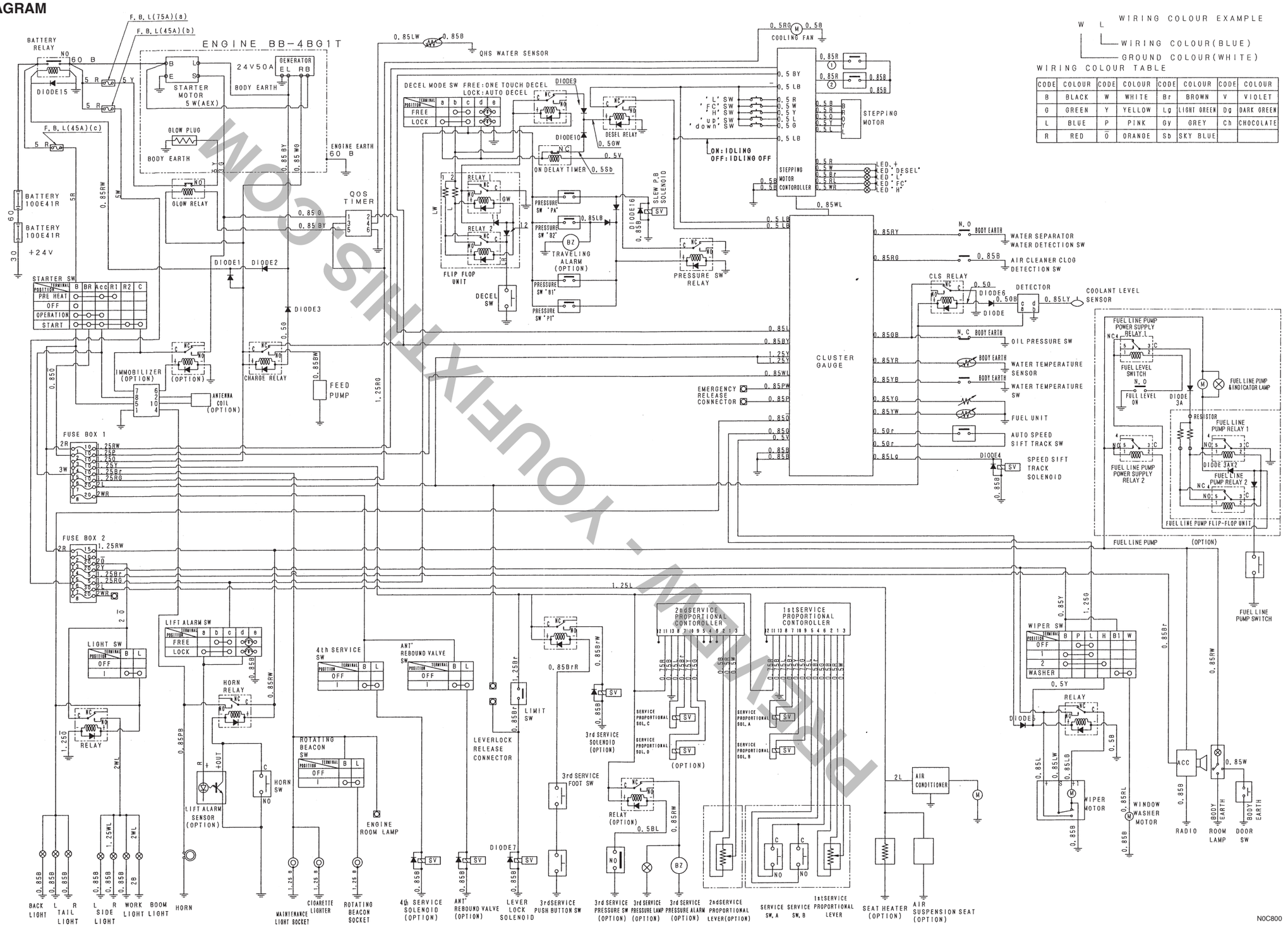


No.	NAME OF PART	PART No.	REMARKS
47	MANIFOLD	05771-01021	
46	PRESSURE SWITCH	17001-00065	
45	PRESSURE SWITCH	17001-00069	
44	ANTI-REACTION VALVE	19017-44900	
43	SHOCKLESS VALVE	19017-44700	
42	PRESSURE SWITCH	17001-00015	
41	SOLENOID VALVE	19017-36500	
40	PRESSURE SWITCH	17001-00065	
39	SOLENOID VALVE	19017-47200	
38	ACCUMULATOR	15522-00020	
37	EMERGENCY SHUT-OFF VALVE	19017-44400(ARM)	
36	EMERGENCY SHUT-OFF VALVE	19017-44300(BOOM)	
35	STOP VALVE	19017-19800	
34	STOP VALVE	19017-44200	
33	PRESSURE SWITCH	17001-00057	
32	AIR BREATHER	15520-00900	
31	BOOM MANIFOLD	05650-29610	
30	ADAPTER LINE FILTER	15133-70046	
29	CHECK VALVE	15401-40810	
28	PILOT LINE FILTER	15512-00600	
27	SUCTION FILTER	15500-30150	
26	HYDRAULIC TANK	05780-00100	
25	OIL COOLER	19101-88003	
24	RELIEF VALVE	15511-03500	
23	RETURN FILTER	15511-03400	
22	CHECK VALVE	15401-41235	
21	REMOTE C. V.	19017-35000(SWING)	
20	SHUTTLE VALVE	19017-35200	
19	SOLENOID VALVE	19017-44600	
18	SOLENOID VALVE	19017-38500	
17	REMOTE C. V.	19017-45400(BLADE)	
16	REMOTE C. V.	19017-43800(TRAVEL)	
15	REMOTE C. V. (R)	19017-43700(BOOM-BUCKET)	
14	REMOTE C. V. (L)	19017-43600(SLEW-ARM)	
13	SWING CYLINDER	19000-89900(SWING)	
12	ARM CYLINDER	19000-91800(ARM)	
11	BLADE CYLINDER(L)	19000-90100(BLADE L)	
10	BLADE CYLINDER(R)	19000-90000(BLADE R)	
9			
8	BOOM CYLINDER	19000-89500(BOOM R&L)	
7	BUCKET CYLINDER	19000-91900(BUCKET)	
6	SWIVEL JOINT	19040-08400	
5	TRAVEL MOTOR	19031-24400	
4	SLEW MOTOR	19031-24500	
3	SUB PUMP	19020-21000	
2	MAIN PUMP	19020-20900	
1	CONTOROL VALVE	19010-42200	

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ELECTRICAL SYSTEM

ELECTRICAL WIRING DIAGRAM



WIRING COLOUR EXAMPLE

W L

WIRING COLOUR(BLUE)

GROUND COLOUR(WHITE)

WIRING COLOUR TABLE

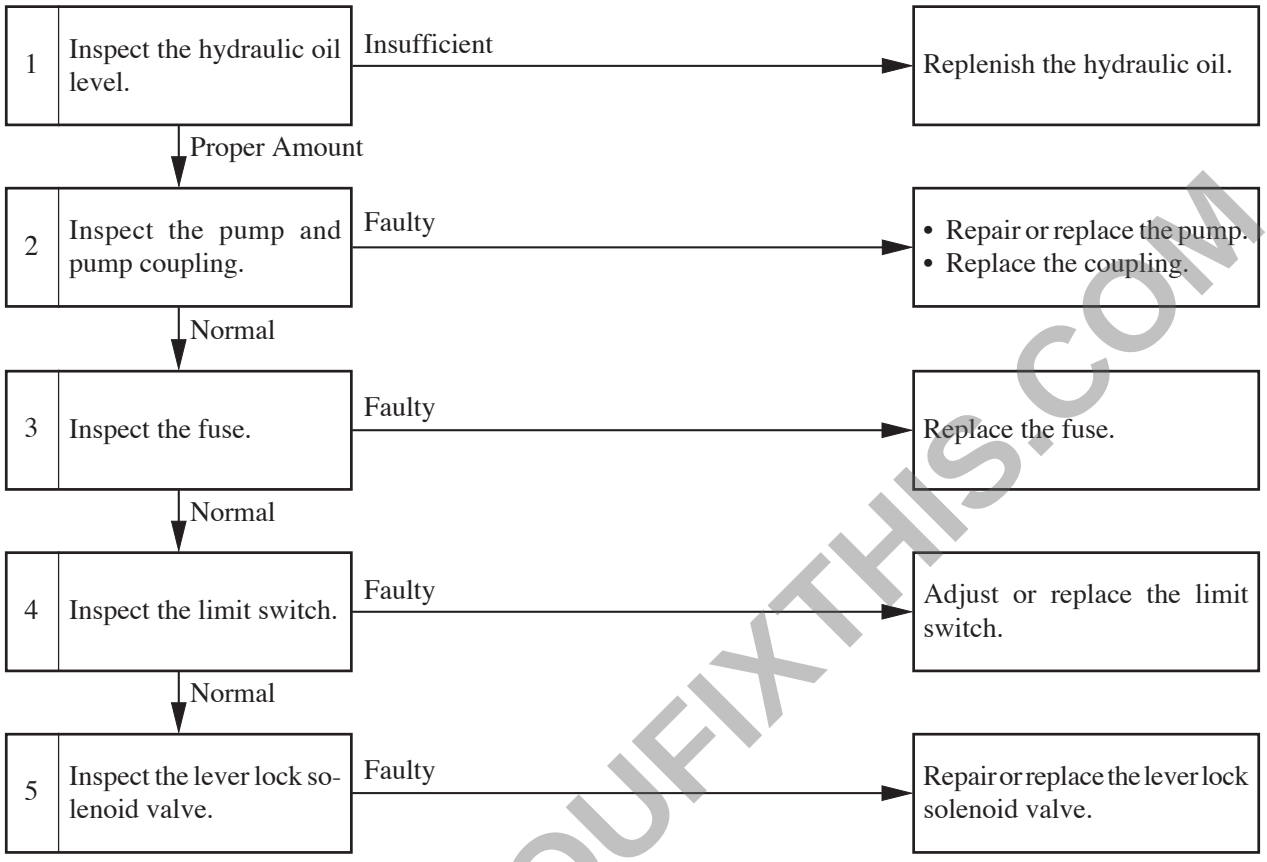
CODE	COLOUR	CODE	COLOUR	CODE	COLOUR	CODE	COLOUR
B	BLACK	W	WHITE	Br	BROWN	V	VIOLET
G	GREEN	Y	YELLOW	Lg	LIGHT GREEN	Dg	DARK GREEN
L	BLUE	P	PINK	Gy	GREY	Ch	CHOCOLATE
R	RED	O	ORANGE	Sb	SKY BLUE		

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PREVIEW

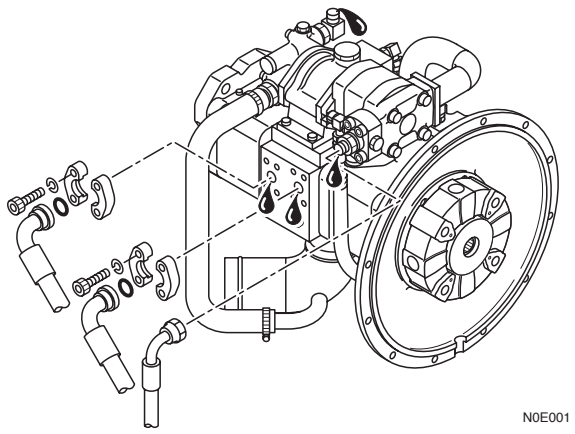
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NO OPERATIONS CAN BE DONE.



1. Inspect the hydraulic oil level.
   ☞ "III. Machine Configuration, Hydraulic Tank"

2. Inspect the pump and pump coupling.
   a. Disconnect the discharge hose from the pump side.
      Also fit a plug in the disconnected hose to keep the hydraulic oil from pouring out.
   b. With the engine emergency stop knob pulled out all the way, turn the start switch to the "START" position to cause the engine to begin cranking. Check that the hydraulic oil is discharged from the pump at this time.
      If the pump is normal, hydraulic oil will be discharged from it. If hydraulic oil is not discharged, the pump or the coupling is faulty.
      ☞ "IV. Hydraulic Units, Hydraulic Pump"

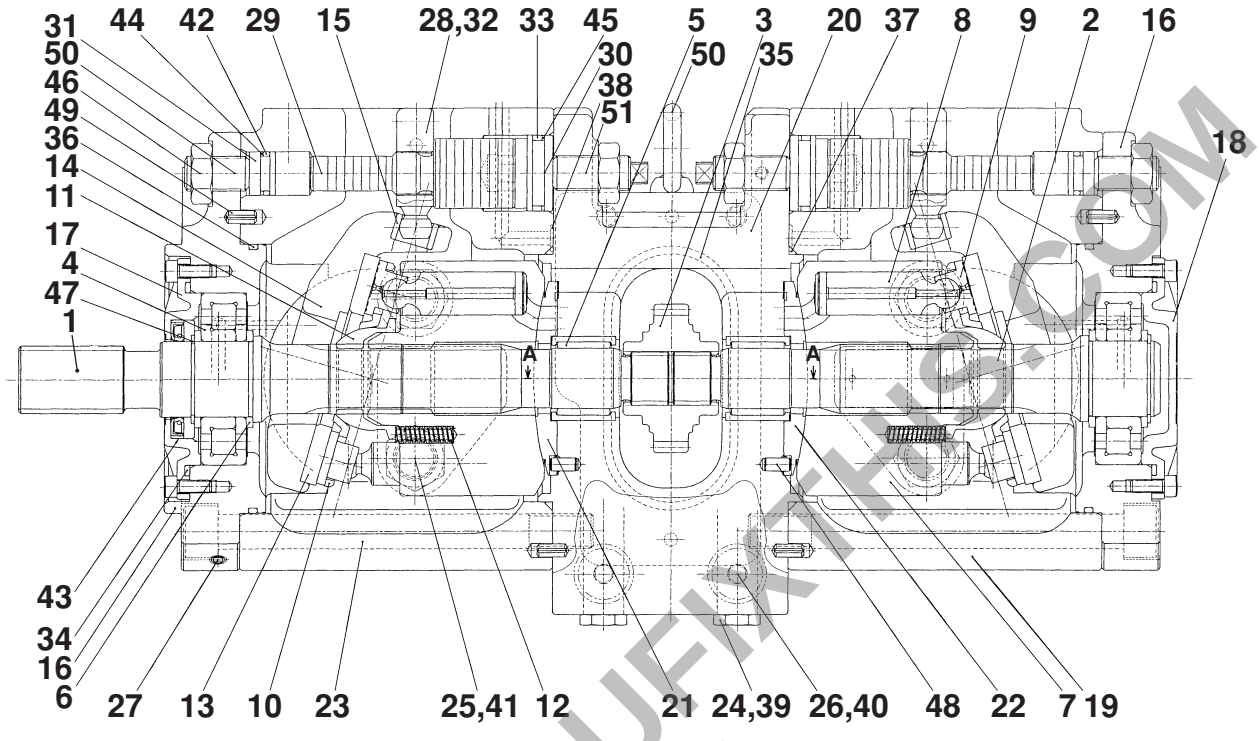

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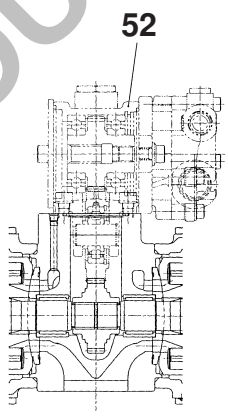
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HYDRAULIC PUMP

CONSTRUCTION





SECTION A-A

N0D100E

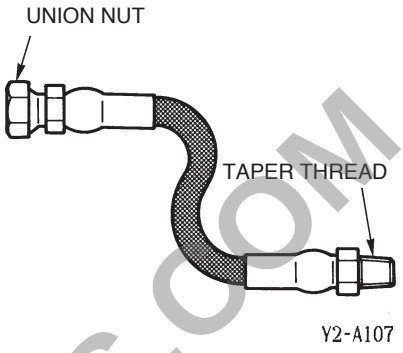
1. Shaft
2. Shaft
3. 1st Gear
4. Collar Bearing
5. Needle Bearing
6. Spacer
7. Cylinder Block
8. Piston
9. Shoe
10. Shoe Holder
11. Guide
12. Spring
13. Shoe Plate
14. Swash Plate
15. Bushing
16. Support
17. Cover
18. Cover
19. Housing
20. Block
21. Valve Plate
22. Valve Plate
23. Cap Screw
24. Plug
25. Plug
26. Plug
27. Plug
28. Pin
29. Servo Piston
30. Stopper
31. Stopper
32. Pin
33. O-ring
34. O-ring
35. O-ring
36. O-ring
37. O-ring
38. O-ring
39. O-ring
40. O-ring
41. O-ring
42. O-ring
43. Oil Seal
44. Backup Ring
45. Backup Ring
46. Nut
47. Ring
48. Pin
49. Spring Pin
50. Screw
51. Adjusting Screw
52. PTO Unit

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TIGHTENING TORQUES

Hydraulic Hoses

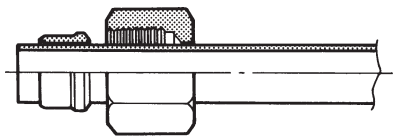
Hose Fitting Size	Torque			
	Union Nut (G)		Taper Thread (R)	
	N·m	ft-lb	N·m	ft-lb
1/8	9.8 $^{+4.9}_{0}$	7.3 $^{+3.5}_{0}$	11.8 ±1.2	8.7 ±0.8
1/4	24.5 $^{+4.9}_{0}$	18.1 $^{+3.5}_{0}$	29.4 ±2.9	21.7 ±2.1
3/8	49 $^{+4.9}_{0}$	36.2 $^{+3.5}_{0}$	53.9 ±5.4	39.8 ±3.9
1/2	58.8 $^{+4.9}_{0}$	43.4 $^{+3.5}_{0}$	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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CONTENTS

Safety Precautions 3
Cautions during Disassembly and Assembly 9
Cautions during Removal and Installation of the Hydraulic Units 9
Cautions during Removal and Installation of Piping 10
Handling of Seals 10
Tightening Torques 11

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SAFETY PRECAUTIONS

SAFETY ALERT SYMBOL

This symbol means Attention! Be Alert! Your Safety Is Involved.
The message that follows the symbol contains important information about safety.
Read and understand the message to avoid personal injury or death.

■ SIGNAL WORDS

Safety messages appearing in this manual and on machine decals are identified by the words "DANGER", "WARNING" and "CAUTION". These signal words mean the following:

⚠ DANGER	⚠ WARNING	⚠ CAUTION
The word "DANGER" indicates an imminently hazardous situation which, if not avoided, can result in serious injury or death.	The word "WARNING" indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.	The word "CAUTION" indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

IMPORTANT: The word "IMPORTANT" is used to alert against operators and maintenance personnel about situations which can result in possible damage to the machine and its components.

This manual is intended for trained and qualified personnel only. Warnings or cautions described in this manual do not necessarily cover all safety measures. For maintenance work, each person must take adequate safety precautions against possible hazards present in the respective working environment.

Observe all safety rules

- Operation, inspection and maintenance of this machine must be performed only by a trained and qualified person.
- All rules, regulations, precautions and safety procedures must be understood and followed when performing operation, inspection and maintenance of this machine.
- Do not perform any operation, inspection and maintenance of this machine when under the adverse influence of alcohol, drugs, medication, fatigue, or insufficient sleep.

Wear appropriate clothing and personal protective equipment

- Do not wear loose clothing or any accessory that can catch on controls or in moving parts.
- Do not wear oily or fuel stained clothing that can catch fire.


E3A040

- Wear a hard hat, safety shoes, safety glasses, filter mask, heavy gloves, ear protection and other protective equipment as required by job conditions. Wear required appropriate equipment such as safety glasses and filter mask when using grinders, hammers or compressed air, as metal fragments or other objects can fly and cause serious injury.
- Use hearing protection when operating the machine. Loud prolonged noise can cause hearing impairments, even the total loss of hearing.

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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 dozer blade 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 operator'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

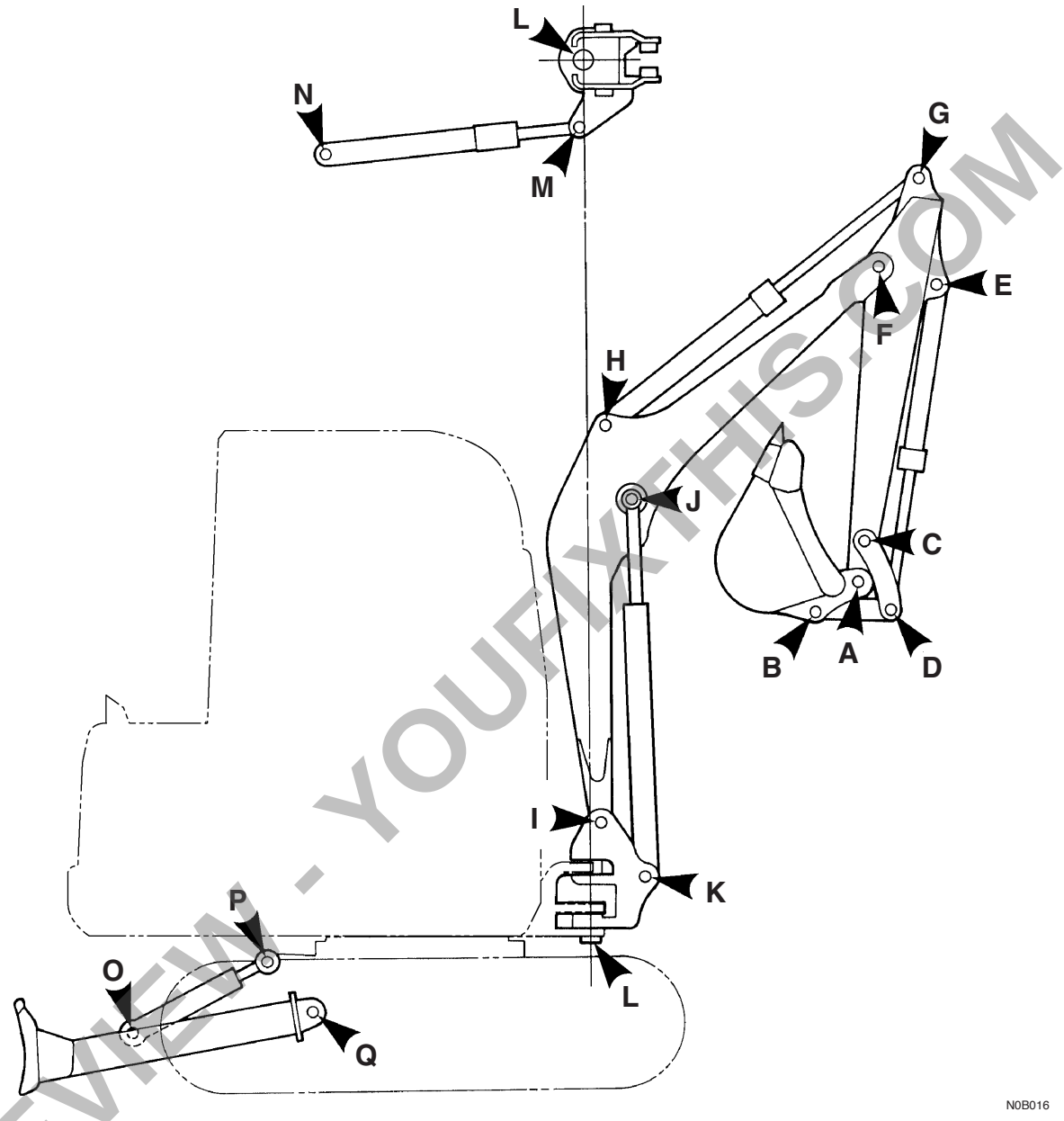
Information on those to whom this manual is distributed is recorded in the ledger in the section in charge at this company, so please decide on a person to be in charge of it and control it. When there are updates or additions, etc., we will notify the person in charge.

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ATTACHMENTS

Pin and Bushing Clearances

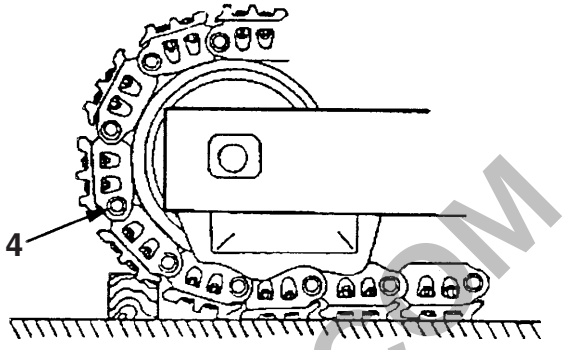


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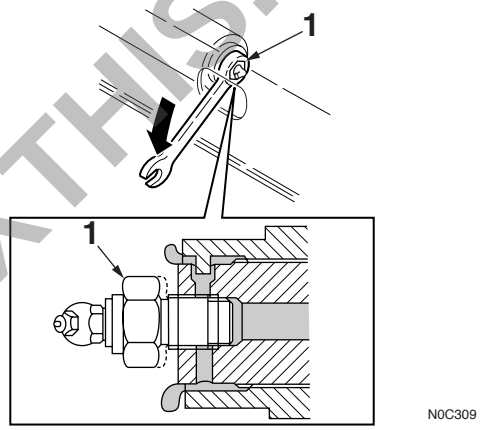
Removing the Steel Crawler

1. Stop the machine so that master pin (4) is front of the idler.
   - Support the crawler by inserting wood under the crawler.



N0C312

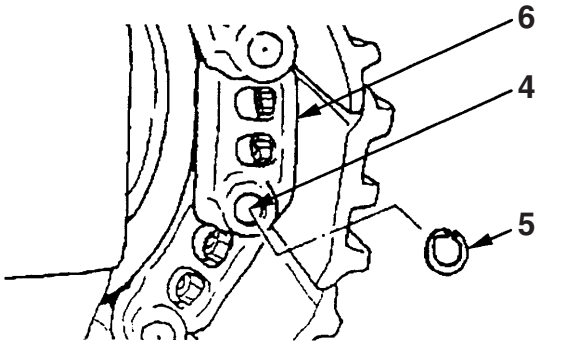
2. Release the crawler tension.
   a. Using the Spanner, slowly loosen the grease discharge valve (1) and drain the grease.
   If the grease does not drain easily, lift the body and turn the crawler forward or backward.
   b. Tighten the grease discharge valve (1).



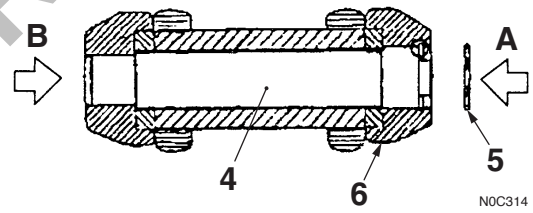
N0C309

3. Remove the snap ring (5).
   - When the snap ring (5) interferes with the master link (6), first allow a clearance between the snap ring (5) and the master pin (4) by tapping the master pin (4) from the snap ring (5) side, and then remove the snap ring (5).

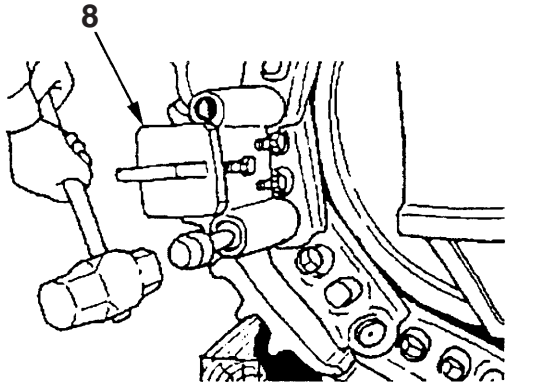
4. Pull out the master pin (4) by using the master pin jig (8).
   - The master pin jig: ST1970.
   - Be sure to remove or install the master pin in the proper direction.
   A: Installation direction
   B: Removal direction



N0C313



N0C314



N0C315

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Chapter Review

The purpose of these brief inspection procedures is for vehicle system maintenance and to determine if further, more detailed service is required. The uses of a manifold gauge set, system troubleshooting, recovery, flushing, evacuating and charging are explained in the next chapter.

High usage and operating condition variations are tough on air conditioning and heater components. You should establish and follow regular inspection and maintenance procedures to improve overall system function and component service life.

The typical inspection should not take more than 15 to 20 minutes unless component replacement and/or complete system evacuation and recharging is warranted. The survey results shown in Figure 7-1, indicate belts, compressor clutch assembly, condenser and the refrigerant lines are the most frequent problem areas. However, your own experience with service and maintenance may vary from survey results.

Inspection should first be visual and by feel. Some of your electrical system inspection will be done as you inspect other components (checking leads, connections and for loose wires). When you check the electrical circuit, begin with the engine off but ignition on. A system performance inspection with the engine running and system on really combines electrical and AC or heater system function.

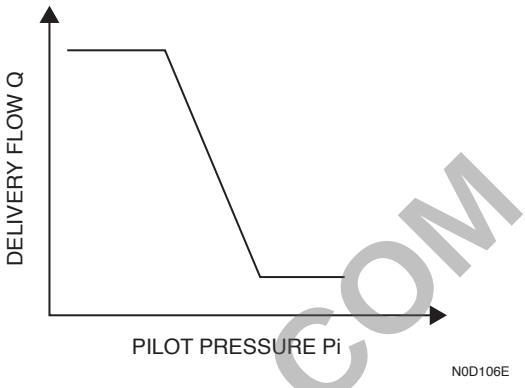
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1. Flow Rate Control

The pilot pressure Pi from the control valve controls the inclination angle (delivery rate) of the swash plate of the pump.

The regulator employs the negative control system that reduces the delivery rate Q as the pilot pressure Pi increases. When the pilot pressure Pi for the flow required for the operation is commanded, the pump delivers only that required flow, eliminating unnecessary power consumption.

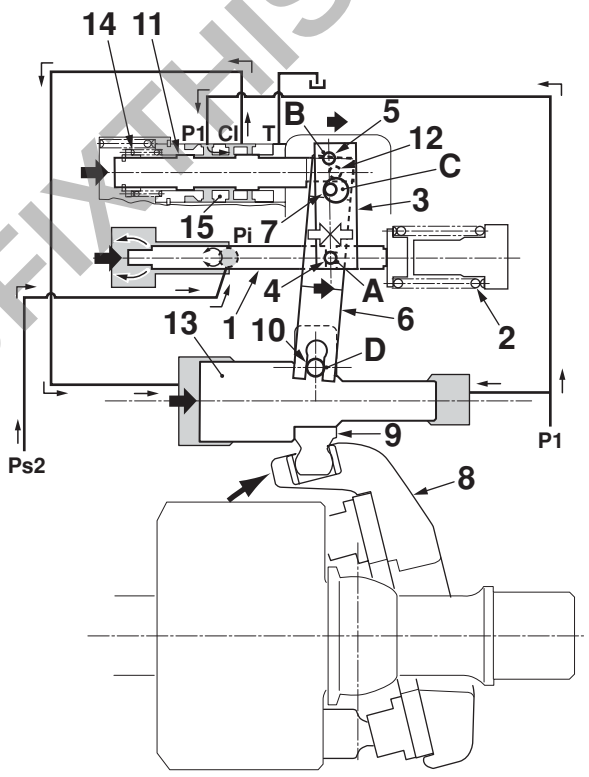


Flow Rate Reduction

When the pilot pressure Pi from the port Ps2 of the control valve increases, the piston (1) moves to the right and stops still at the position where the force of the spring (2) and the hydraulic pressure balance. The pin (4) fixed to the lever (3) is fitted in the slot (A) of the piston (1), and the lever (3) pivots left-handedly on the fixed pin (5) of the supporting point (B) as the piston (1) moves. In the hole (C) of the lever (3), the pin (7) fixed to the lever (6) protrudes, and the pin (7) moves to the right as the lever (3) turns left-handedly. The pin (10) fixed to the tilt-rotating pin (9) that tilts the swash plate (8) at an inclination angle is fit in the opposing-flat section (D) of the lever (6), and the lever (6) pivots right-handedly on the opposing- flat section (D). The spool (11) is connected to the lever (6) via the pin (12), and the spool (11) moves to the right.

When the spool (11) moves, the delivery pressure P1 is conducted to the port C1 through the spool (11) and to the large diameter section of the servo piston (13). The delivery pressure P1 is always conducted to the small diameter section of the servo piston (13), and the difference of the areas causes the servo piston (13) to move to the right, reducing the inclination angle.

When the servo piston (13) moves to the right, the opposing-flat section (D) moves to the right too. As the spool (11) is equipped with the spring (14) that exerts the force to keep the spool (11) pulling to the left, the pin (7) is thrust against the hole (C) of the lever (3). Therefore, as the opposing-flat section (D) moves, the lever (6) pivots left-handedly on the hole (C), and the spool (11) moves to the left. With this movement, the opening between the sleeve (15) and the spool (11) starts narrowing gradually, and the servo piston (13) stops at the position where the opening completely closes.

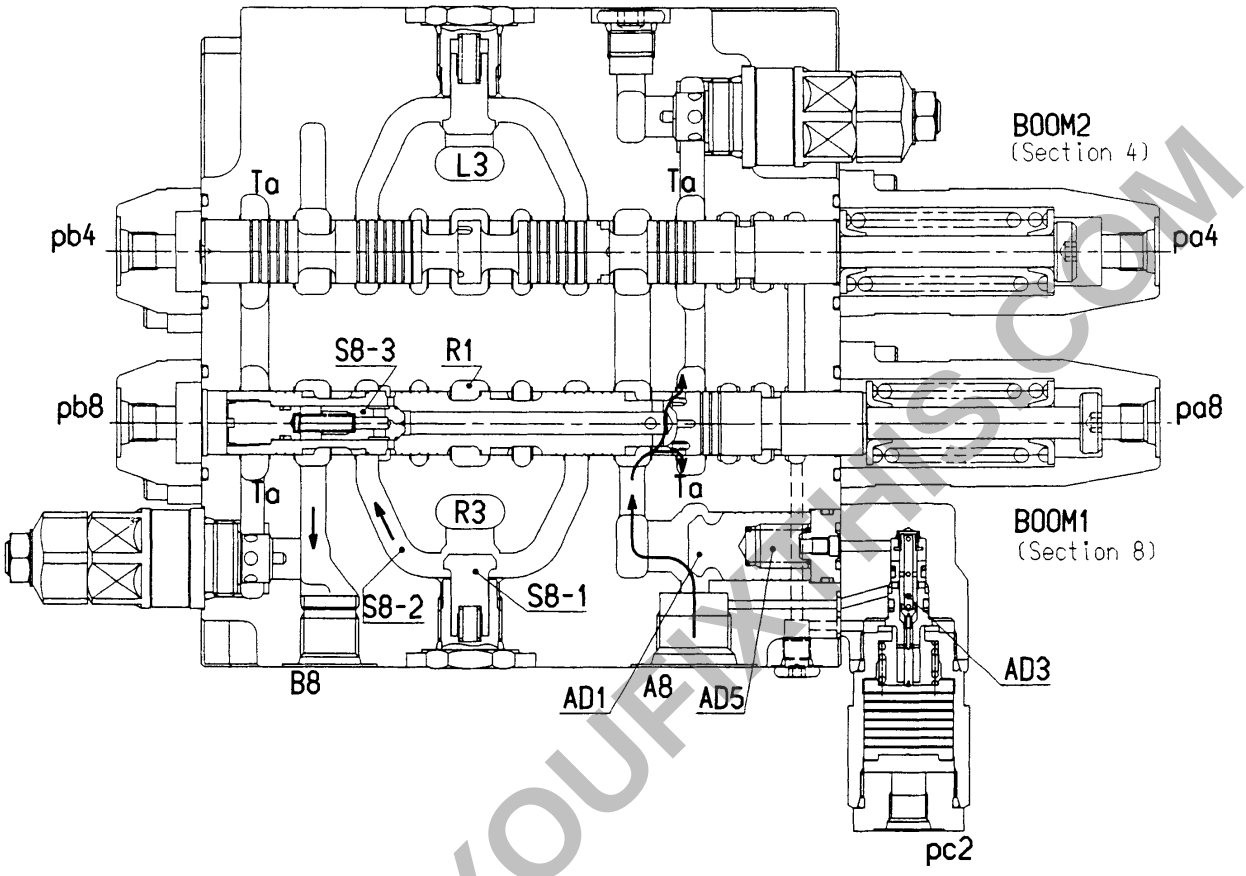


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Lower (Regeneration)

Fig.9



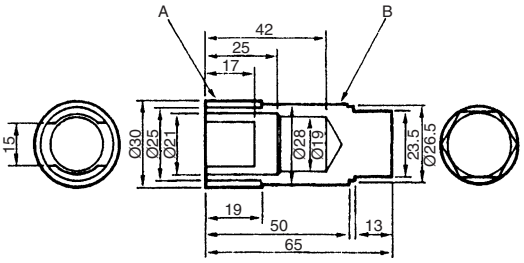
When the boom 1 spool is switched by pressurizing the pilot port pb8 of the boom 1 (section 8), the neutral passage R1 closes. The oil supplied from the port P2 passes through the parallel passage R3, the load check valve S8-1, and the spool head section, and flows into the port B8. Concurrently, if the poppet AD3 of the anti-drift valve is switched by pressuring the port pc2 to reduce the pressure in the spring cabinet AD5, the poppet AD1 opens, and the return oil from the port A8 flows back into the tank passage Ta. Part of the return oil pushes open the poppet S8-3 within the boom 1 spool, and passes through the passage S8-2 to join the port B8, preventing the cavitation on the side of the cylinder rod.

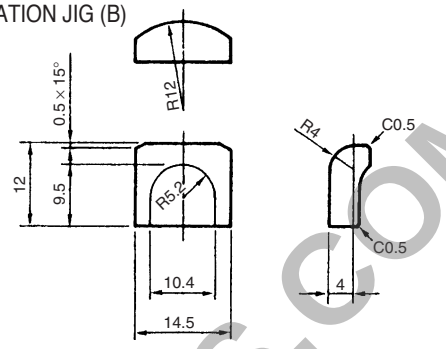
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DISASSEMBLY AND ASSEMBLY

Table of Special Tools

NAME, DIMENSION	Q'ty
INSTALLATION JIG (A)  MATERIAL A; S45C MATERIAL B; SCM415N WITH CEMENTATION HARDENING Y1-D302E	1

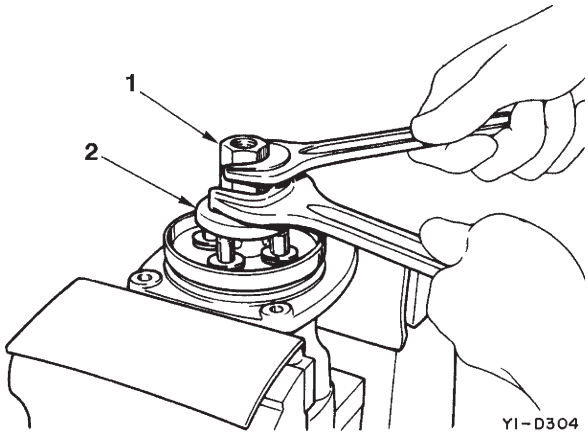
NAME, DIMENSION	Q'ty
INSTALLATION JIG (B)  MATERIAL B; SCM415N WITH CEMENTATION HARDENING Y1-D303E	2

General Cautions

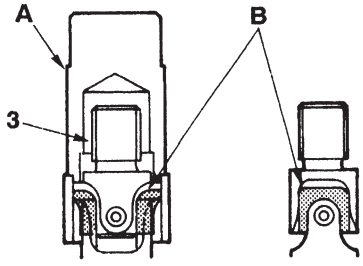
- Since all parts in the pilot valve are precision machined, carry out disassembly and reassembly operations in a clean place and take special care not to scratch the parts.
- Before disassembly, clean the outside surfaces of the pilot valve.
- Clean each of the disassembled parts and apply clean hydraulic oil to them.
- Replace all seals with new ones each time the pilot valve is disassembled.
- During assembly, remove all the foreign matter from each part and check them to make sure there are no burrs, bruises using or other marks on them. Remove all burrs and bruises using an oil stone.
- Apply thin coating of grease to seals when assembling them.

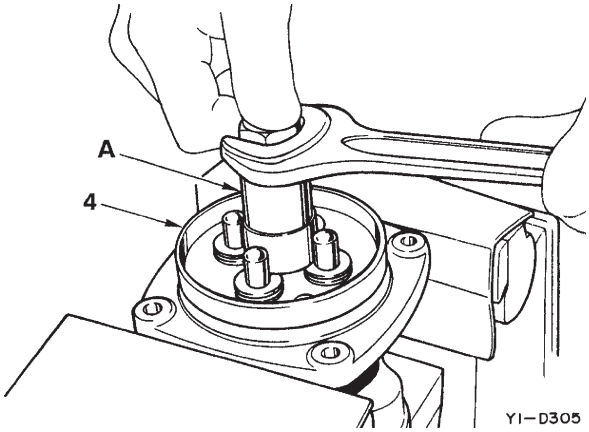
Disassembly

1. Remove the lock nut and the adjust nut (1), then remove the disc (2).
   - Using copper or lead plates, fasten the valve in a vise.



2. Remove the joint (3), then remove the plate (4).
   - Use installation jigs (A) and (B).





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TROUBLESHOOTING

Symptom	Probable Causes	Remedy
Oil leaks from piston rod sliding surface (an oil ring forms on the piston and this enlarges and drips off).	• Foreign matter is caught in the inner diameter portion of the rod packing, backup ring or dust seal.	• Remove the foreign matter.
	• The inner diameter lip of the rod packing, backup ring or dust seal is damaged or abnormal.	• Replace the affected parts.
	• Piston rod sliding surface is scratched.	• Smooth the sliding surface with an oil stone (1.6 S or lower) • If it leaks after the sliding surface has been smoothed, replace the rod packing and other seals. • If it leaks after the seals have been replaced, replace the piston rod.
	• The hardened chrome plating is separating from the piston rod.	• Repair the hardened chrome plating.
Oil leaks from the outer circumference of the rod cover.	• O-ring is damaged.	• Replace the affected parts.
	• Backup ring is damaged.	• Replace the affected parts.
Oil leaks from welded portion.	• The tube's welds are damaged.	• Replace the affected parts.
Cylinder natural drop (this is the maximum amount of movement of the piston in 10 minutes when a static weight corresponding to the maximum use pressure multiplied by the cylinder's surface area) is 0.5 mm or greater.	• Foreign matter is caught in the wear ring sliding surface.	• Remove the foreign matter.
	• The sliding surface of the wear ring is scratched or abnormal.	• Replace the affected parts.
	• The piston packing sliding surface is scratched.	• Replace the affected parts.
	• The O-ring is damaged.	• Replace the affected parts.

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OPERATION

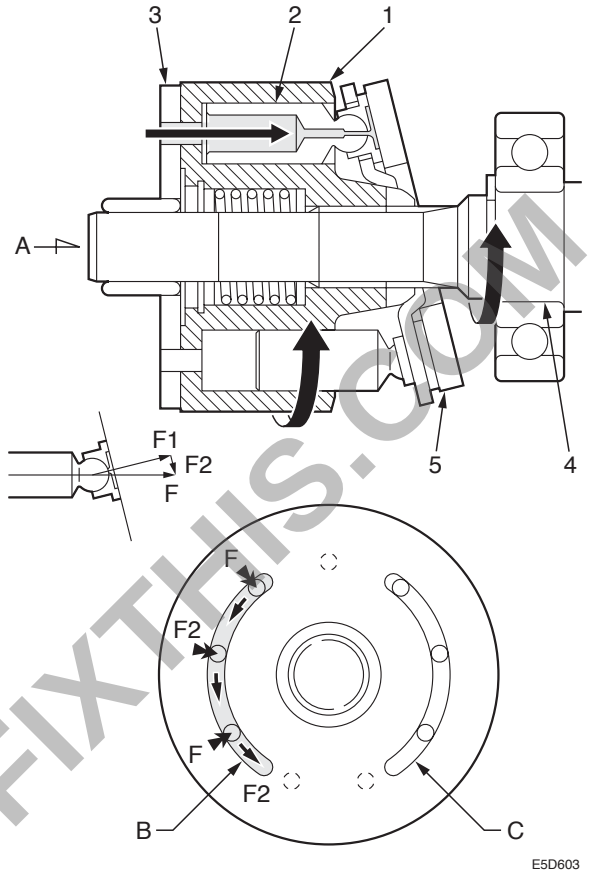
Hydraulic Motor

9 pistons (2) are fitted in the cylinder block (1) and there is a valve plate (3) with two half moon ports, B and C in the end. Also, the cylinder block (1) rotates freely and is joined to the shaft (4) via the spline. On the other band, the swash plate (5) is fastened to the housing.

When high pressure oil is introduced into port B, one piston (2) makes contact and force F bears on the swash plate (5).

F = P × A P: Pressure A: Piston Sectional Area

The force F which the piston (2) applies to the swash plate (5) is divided into force F1, which pushes the plate, and force F2, which rotates the cylinder block (1). The total sum of the components in the direction of rotation of the high pressure side piston generates a rotational force in the cylinder block (1) and via the spline, torque is transmitted to the shaft (4), turning it. Conversely, if high pressure oil is introduced to port C, rotation is the reverse of the above.

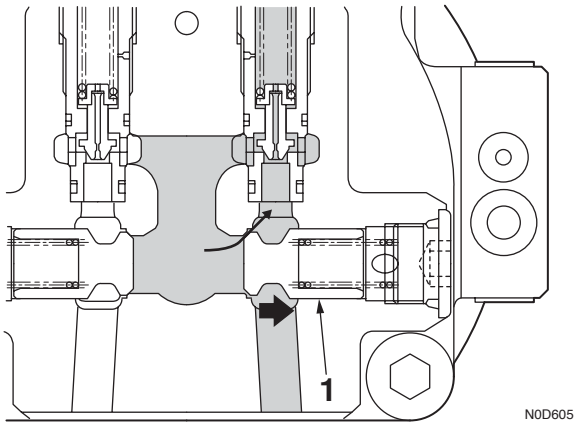


Makeup Valve

The makeup valve provides two functions.

One function prevents the cavitation caused by over-run of the piston motor and prevents the deviation of the travel of the machinery. If the motor is pumped by the inertia of the machinery and the rotational speed of the motor becomes equivalent to the rotational speed achieved by the oil supplied to the motor, the shortfall is replenished through the makeup valve (1) to the motor main circuit to prevent the vacuum from being generated in the circuit.

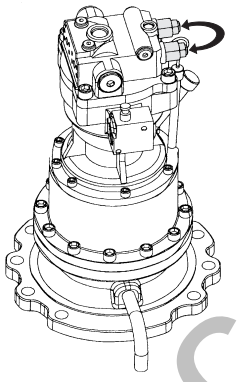
The other function works when the brake is applied to the motor, closing the circuit between the control valve and the motor. This function replenishes the leakage from the motor drain and the valve through the makeup valve (1) to prevent the vacuum being generated in the circuit, allowing the braking function to work in the normal circuit state.



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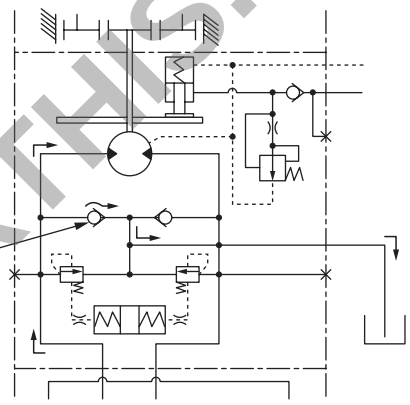
3. Inspect the slew relief valve.
   Try switching the left and right slew relief valves. If slewing becomes possible, the relief valve is faulty.
   ☞ "II. Specifications, Standards for Judging Performance"



N0E017

4. Inspect the check valve of the slew brake valve.
   If foreign matter is caught in one end of the check valve (1), or if the valve is sticking, right or left slewing will be impossible.
   - If foreign matter is caught in one of the check valves, the hydraulic oil returns to the tank from the check valve.

   ☞ "IV. Hydraulic Units, Slew Motor"



N0E018

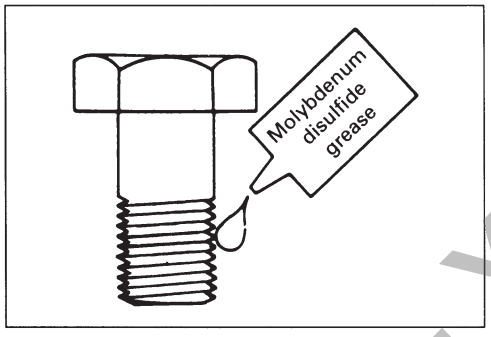
5. The slew motor is faulty.
   ☞ "IV. Hydraulic Units, Slew Motor"

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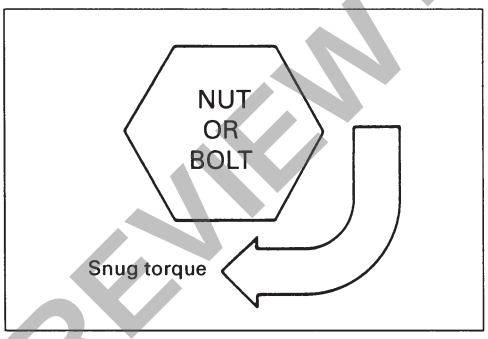
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ANGULAR NUT AND BOLT TIGHTENING METHOD

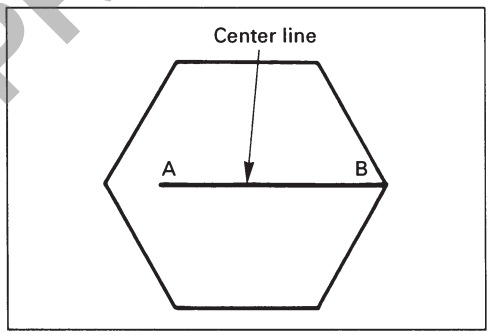
1. Carefully wash the nuts and bolts to remove all oil and grease.



2. Apply a coat of molybdenum disulfide grease to the threads and setting faces of the nuts and bolts.



3. Tighten the nuts and bolts to the specified torque (snug torque) with a torque wrench.

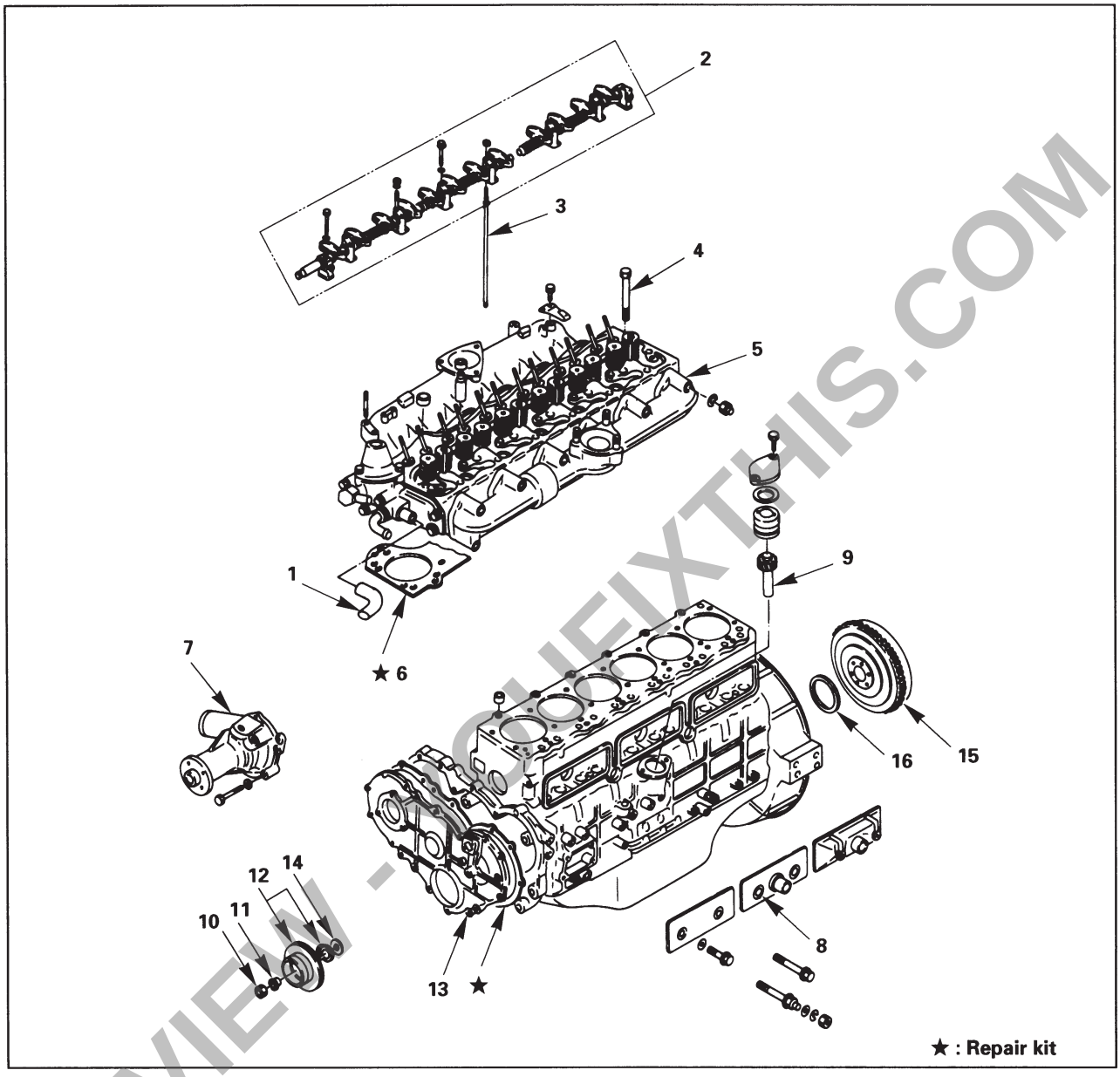


4. Draw a line [A-B] across the center of each bolt.

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MAJOR COMPONENTS - I



Disassembly Steps

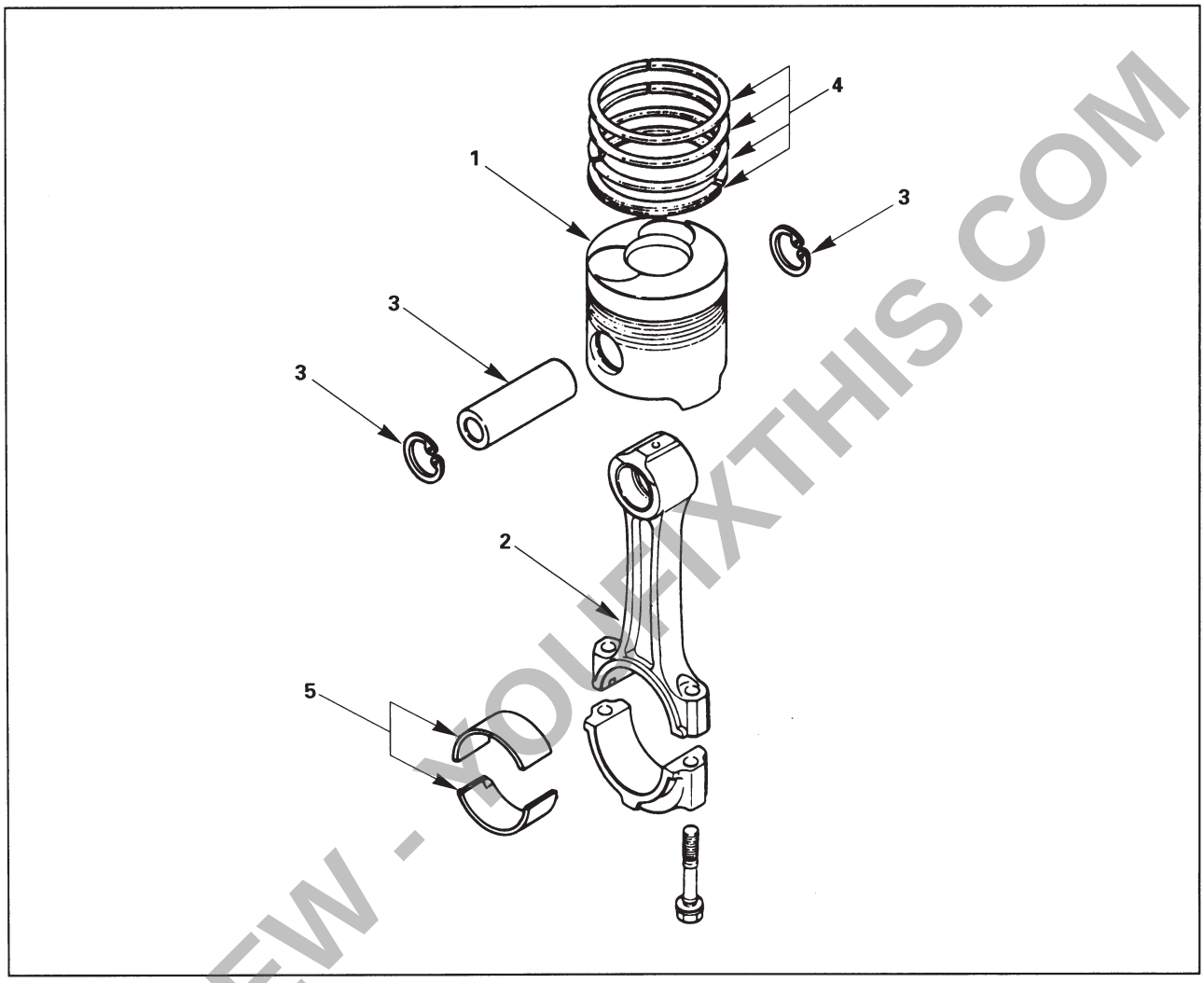
1. Rubber hose ; water by-pass
▲ 2. Rocker arm shaft assembly
3. Push rod
▲ 4. Cylinder head bolt
5. Cylinder head assembly
6. Cylinder head gasket
7. Water pump assembly
8. Tappet chamber cover
9. Oil pump driving pinion
▲ 10. Starting handle nut
▲ 11. Taper bushing
12. Crankshaft pulley and dust thrower
13. Timing gear cover
14. Oil thrower
▲ 15. Flywheel
▲ 16. Rear oil seal

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PISTON AND CONNECTING ROD REASSEMBLY STEPS

MIRROR COMPONENT



Reassembly Steps

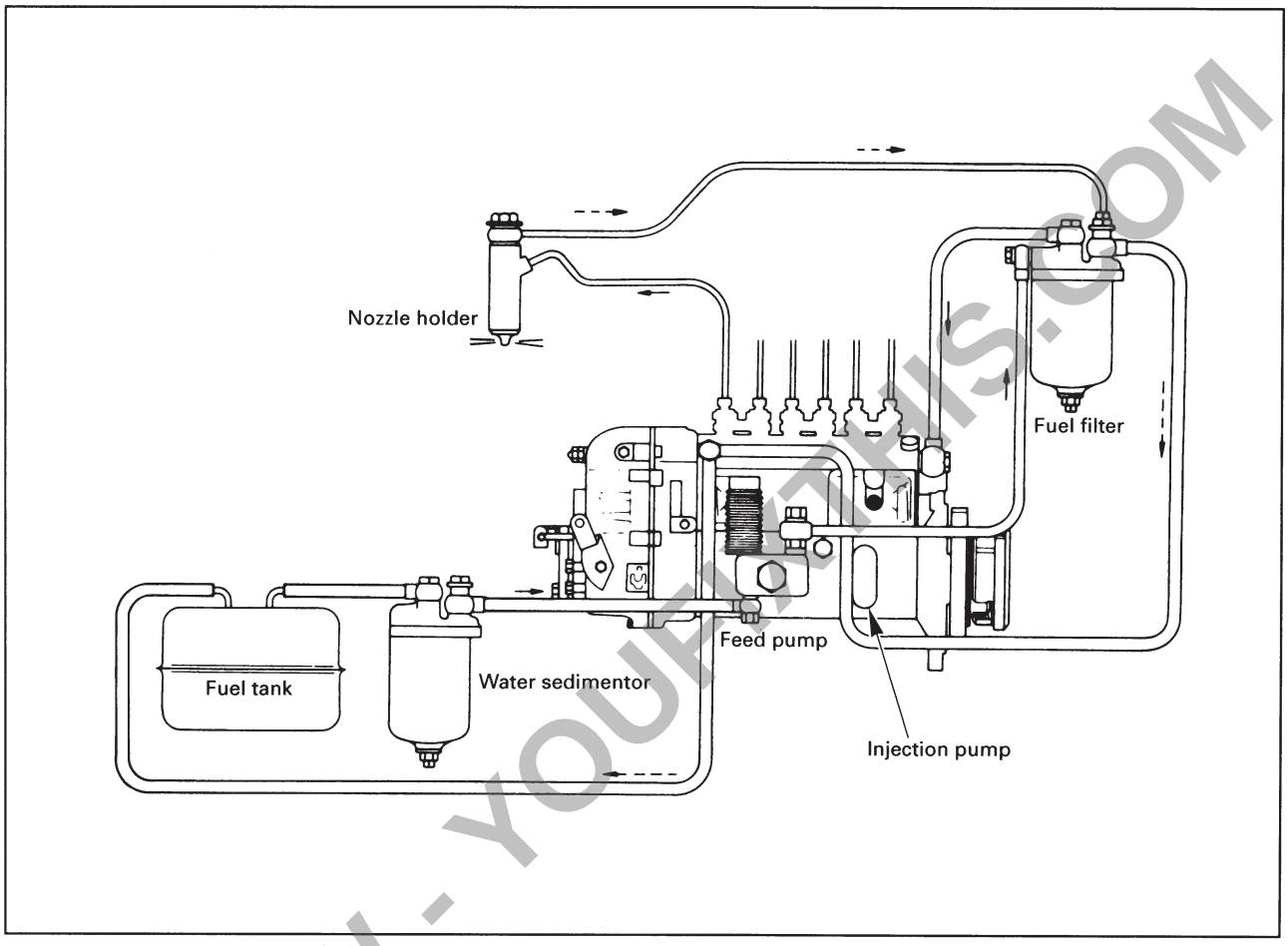
▲ 1. Piston
▲ 2. Connecting-rod
▲ 3. Piston pin, Snap ring
▲ 4. Piston ring
▲ 5. Connecting rod bearing

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GENERAL DESCRIPTION

This illustration is based on the 6BG1 engines.



The fuel system consists of the fuel tank, the water sedimentor, the fuel filter, the injection pump, and the injection nozzle.

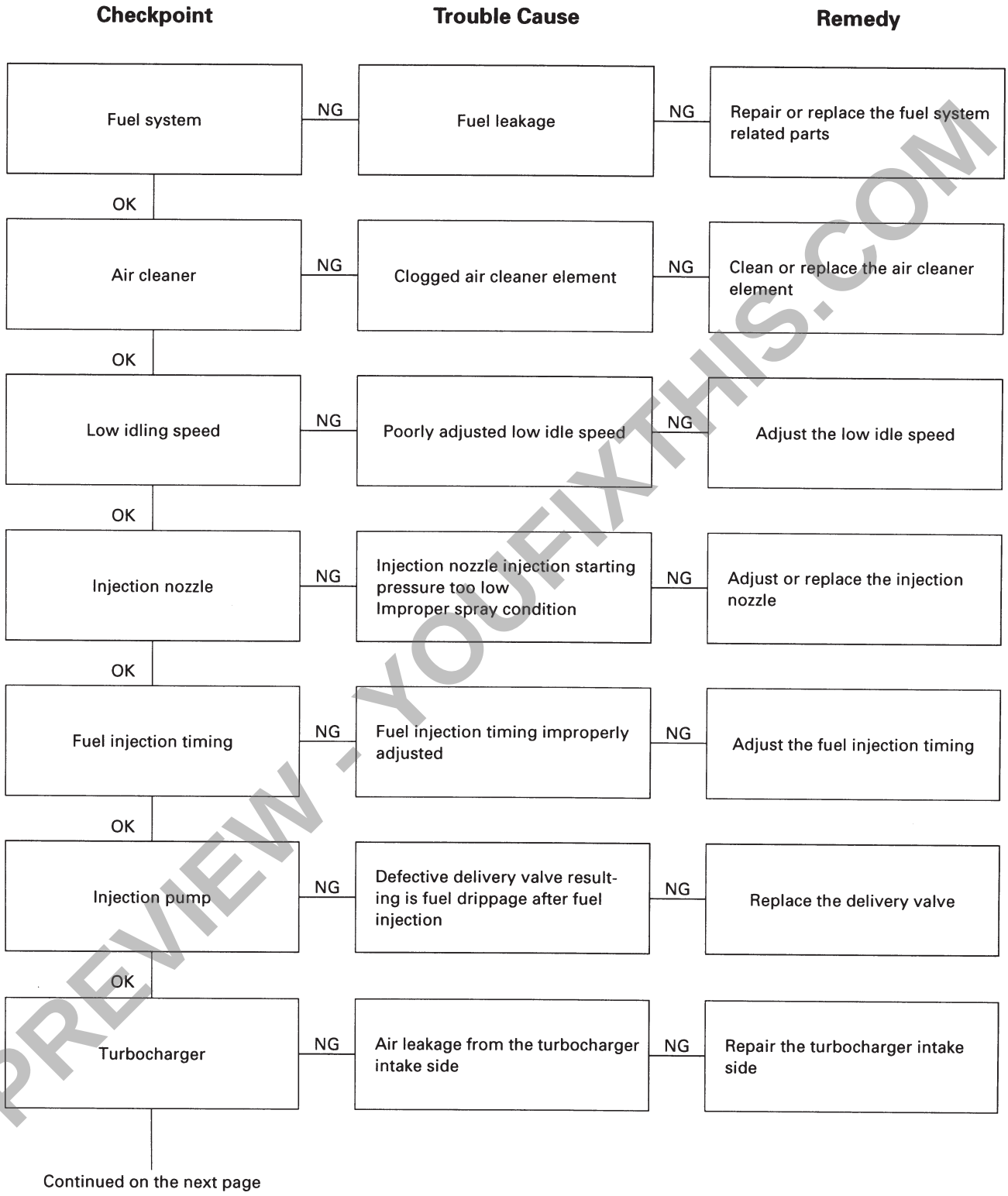
The fuel from the fuel tank passes through the water sedimentor and the fuel filter where water particles and other foreign material are removed from the fuel.

Fuel, fed by the injection pump plunger, is delivered to the injection nozzle in the measured volume at the optimum timing for efficient engine operation.

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EXCESSIVE FUEL CONSUMPTION



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