# CONTENTS


## CHAPTER 1
## GENERAL CAUTIONS FOR MAINTENANCE WORK

1-1 Correct Work ..... 1-1
1-2 Safety Precautions ..... 1-1
1-3 Preparations ..... 1-1
1-4 Cautions for Disassembly and Reassembly ..... 1-1
1-5 Cautions for Removal and Installation of Hydraulic Equipment ..... 1-2
1-6 Cautions for Removal and Installation of Hydraulic Piping ..... 1-2
1-7 Cautions for Handling Seals ..... 1-3
1-8 Correct Installation of Hydraulic Hose ..... 1-3
1-9 Specifications of Hydraulic Hose ..... 1-6
1-10 Air Release of Hydraulic Equipment ..... 1-8

## CHAPTER 2
## TECHNICAL DATA

2-1 Specifications ..... 2-1-1
2-2 Outline Drawing and Working Area ..... 2-2-1
2-3 Weight List of Main Parts ..... 2-3-1
2-4 Lifting Capacity List ..... 2-4-1
2-5 Specifications for Attachment ..... 2-5-1
2-6 Periodic Inspection and Servicing ..... 2-6-1
2-7 Fuel, Lube Oil and Grease Recommended ..... 2-7-1
2-8 Hydraulic Circuit Schematic ..... 2-8-1
2-9 Wiring Diagram ..... 2-9-1

## CHAPTER 3
## SERVICE STANDARDS

3-1 Machine Performance ..... 3-1-1
3-2 Engine ..... 3-2-1
3-3 Undercarriage ..... 3-3-1
3-3-1 Rubber Track Specifications ..... 3-3-1
3-3-2 Steel Track Specifications ..... 3-3-2
3-3-3 Common Specifications of Steel & Rubber Crawlers ..... 3-3-4
3-4 Controls ..... 3-4-1
3-5 Hydraulic Equipment ..... 3-5-1
3-5-1 Hydraulic Cylinders ..... 3-5-1
3-6 Implement ..... 3-6-1
3-6-1 Front Attachments ..... 3-6-1
3-6-2 Blade Moving Device ..... 3-6-2
3-7 List of Tightening Torque ..... 3-7-1
3-7-1 Machine ..... 3-7-1
3-7-2 Engine ..... 3-7-5
3-7-3 Tightening Torque for General Bolts and Nuts ..... 3-7-6
3-7-4 Hydraulic Fitting ..... 3-7-7
3-8 Pressure Adjustment ..... 3-8-1
3-8-1 Relief Valves ..... 3-8-1
3-8-2 Cut-Off Valve ..... 3-8-4


PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

## 2. Technical Data

### 2-1 Specifications

| Item | | | Unit | SV26 |
|---|---|---|---|---|
| Main specifications of machine | | | | |
| Dimensions | | | | |
| Overall length (Transportation position) <With rear counterweight> | | | mm | 4250 <4330> |
| Cabin | Overall height | Transportation position | mm | 2440 |
| | | Traveling position | mm | 2440 |
| | Overall width | Full machine width | mm | 1500 |
| Canopy | Overall height | Transportation position | mm | 2400 |
| | | Traveling position | mm | 2400 |
| | Overall width | Full machine width | mm | 1500 |
| Tumbler center distance (Steel track / rubber track) | | | mm | - |
| Track gauge | | | mm | 1250 |
| Minimum ground clearance | | | mm | 320 |
| Traveling performance | | | | |
| Travel speed | Steel track | Low speed (Forward/Reverse) | km/hr | 2.9 |
| | | High speed (Forward/Reverse) | km/hr | 4.8 |
| | Rubber track | Low speed (Forward/Reverse) | km/hr | 2.9 |
| | | High speed (Forward/Reverse) | km/hr | 4.8 |
| Permissible water depth limit | | | mm | 540 |
| Work performance | | | | |
| Bucket | Width (Standard) | | mm | 400 |
| | [Standard. JIS heaped capacity] | | cu.m | 0.06 |
| | Number of teeth / Installation method | | pcs. | 3 / Rubber pin lock type |
| Work range | | | | |
| Maximum digging depth | With blade raised <Long Arm> | | mm | 2515 <2770> |
| | With blade on the ground <Long Arm> | | mm | 2685 <2945> |
| Maximum depth of vertically digging | | | mm | 915 |
| Maximum dumping height <Long Arm> | | | mm | 2830 <2985> |
| Minimum front swing radius (with boom in front center) | | Cabin | mm | 1915 |
| | | Canopy | mm | |
| Minimum front swing radius (with boom in full swing) | | Cabin | mm | 1615 |
| | | Canopy | mm | |

PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

## 2-6 Periodic Inspection and Servicing

○: Verification and adjustment ●: Replacement □: Cleaning ■: Greasing

| Parts & Operations | | Daily | Every 50h | Every 250h | Every 500h | Every 1000h / Every year | Every 2000h / Every two years |
|---|---|---|---|---|---|---|---|
| General. | Missing or broken parts | ○ | | | | | |
| | Tightening of nuts and bolts | ○ | | | | | |
| | Motor state | ○ | | | | | |
| | Machine | □ | | | | | |
| Transmissions | Oil for travel gears | | ● 1st time | | ○ | ● | |
| | Rotation reducer | | ● 1st time | | ○ | ● | |
| Hydraulic circuit | Hydraulic oil | ○ | | | | ● | |
| | Aspiration filter | | | | | □ | |
| | Hydraulic oil return filter | | ● 1st time | | ● | | |
| | Operation of the accumulator | ○ | | | | | |
| Greasing | Greasing points | ■ | | | | | |
| | Rotation pin and crown | | ■ | | | | |
| Chassis | Bearing rollers and bearings, idler wheels | ○ | | | | ■ | |
| | Track tension | ○ | | | | | |
| Electrical equipment | Headlights, horn, travel alarm | ○ | | | | | |
| | Dashboard and indicators | ○ | | | | | |
| | System state | ○ | | | | | |
| Engine | Water separator | ○ | | | | | |
| | GO filter | | | ● | | | |
| | Air filter (dusty atmosphere every 250 h) | | | | ● | | |
| | Engine oil | ○ | ● 1st time | | ● | | |
| | Oil filter | | ● 1st time | | ● | | |
| | Cooling fluid | ○ | | | | | ● |
| | Belt | ○ | | | | ● | |
| | Radiator vents | ○ | | | □ | | |
| | Fuel hose, coolant hose | | | | | | ● |
| | Intake and exhaust valves | | | | | ○ | |
| | Injectors and injection pressure | | | | | | ○ |
| Heating | | | | | | ○ | |

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

## 2-7 Fuel, Lube Oil and Grease Recommended

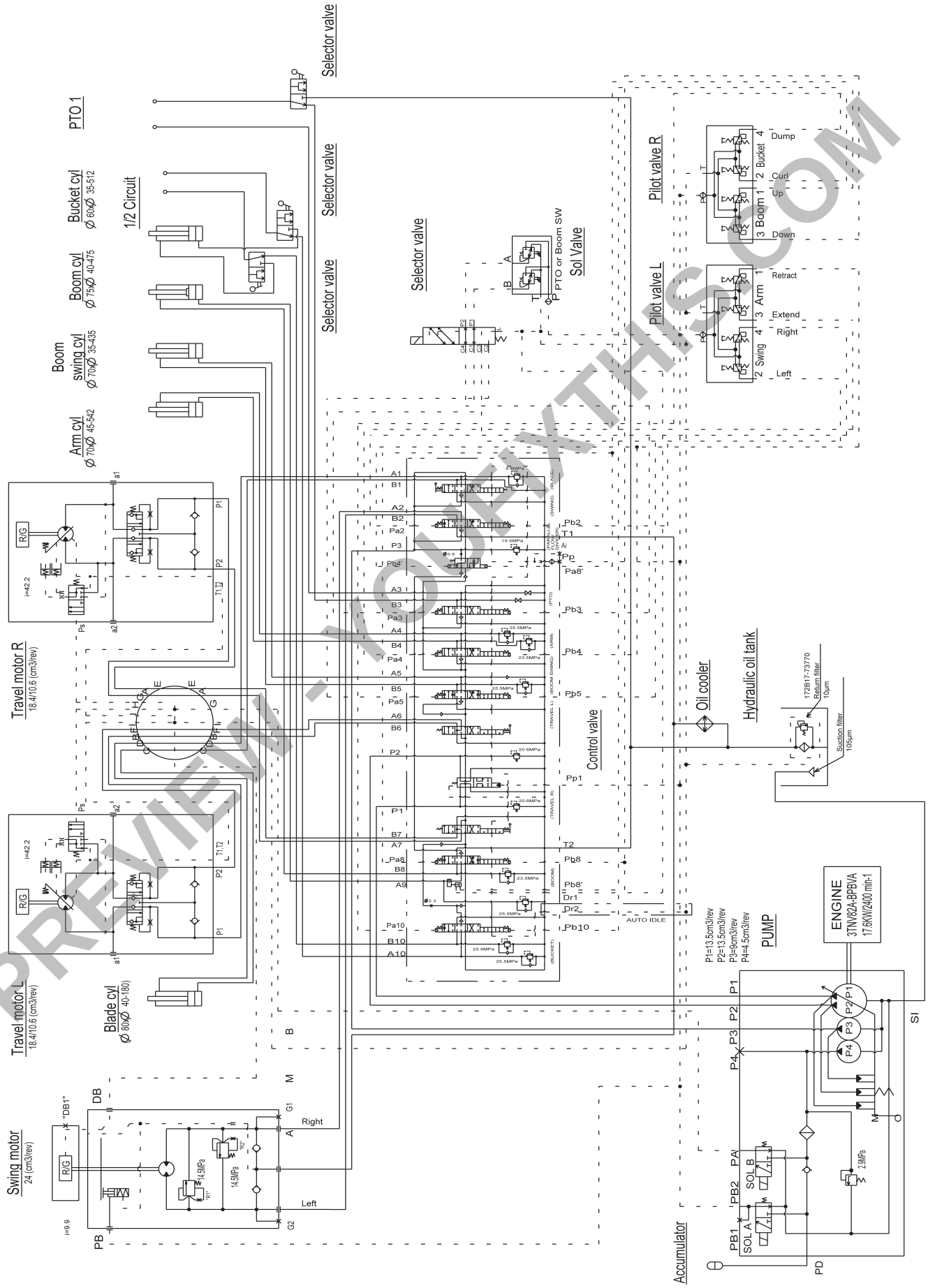
| Components | Fluid | Temperatures °C | | | | | | | | Quantity prescribed (L) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | - | -20 | -10 | 0 | 10 | 20 | 30 | + | | |
| Thermal engine | Engine oil | | SAE 10W CD | | | | | | | 3,7 + 0,4 | Oil filter |
| | | | SAE 10W-30 CD | | | | | | | | |
| | | | | SAE 15W-40 CD | | | | | | | |
| Travel gears | Box oil | SAE 90 (GL-4) | | | | | | | | 0,5 | by reducer |
| Hydraulic circuit | Hydraulic oil | | | ISO VG46 | | | | | | 25,2 | in the tank |
| | | | | | | | | | | 4,8 | the rest |
| Fuel tank | Diesel | | | | N° 2-D | | | | | 38,5 | – |
| | | | N° 3-D | | | | | | | | |
| | | N° 3-D (S) | | | | | | | | | |
| Cooling system | Long-life cooling fluid **YANMAR POWER COOLANT B–36** | | | | | | | | | 3,8 | radiator |
| | | | | | | | | | | 0,4 | expansion flask |

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

## 2-8 Hydraulic Circuit Schematic (12 sections)

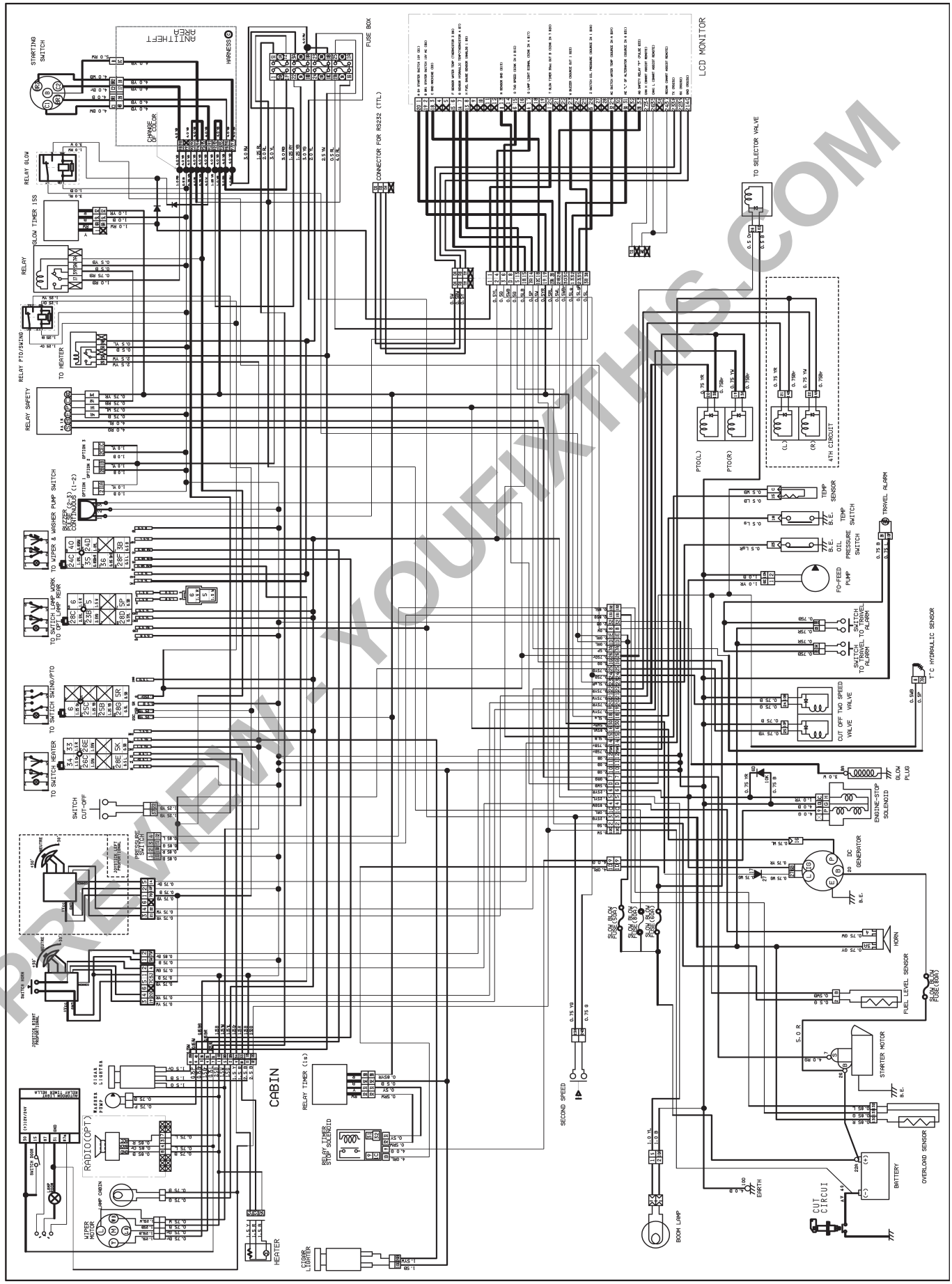



PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

## 2-9 Wiring Diagram




PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

## 3-7 List of Tightening Torque

### 3-7-1 Machine

| Applicable model | | | SV26 | | |
|---|---|---|---|---|---|
| Equipment No | | Tightening part | Thread size | Tightening torque N•m | Adhesive |
| Engine / Electrical equipment | | | | | |
| | 1 | Engine mount vibroisolating rubber | Nut 10 | 24,5 to 32,3 | - |
| | 2 | Engine × Engine mount | M10 | 67 to 79 | ThreeBond 1324 |
| | 3 | Engine mount × Stopper (Left) | M10×25 | 44,1 to 58,9 | ThreeBond 1324 |
| | 4 | Air cleaner | M8 | 19 to 22,6 | |
| | 5 | Air cleaner intake hose | Clamp 60 | 3,5 | |
| | 6 | Cooling water hose | Hose clip | 2,5 to 3,4 | |
| | 7 | Oil cooler hose | Hose clip 22 | 3 | |
| | 8 | Fuel level gauge unit | - | 10 to 15 | |
| | 9 | Fuel level gauge hose | Hose band 13 | 1,2 to 1,5 | |
| | 10 | Fuel oil tank drain plug | M18x1.5 | 7 to 10 | |
| | 11 | Fuel oil tank holding band | Nut 10 | 25 | |
| | 12 | Battery on support assy | M8 x 25 | 34 to 40,1 | |
| | 13 | Accelerator cable locknut | Nut 12 | 45 [clé écrou M12] (3.92 to 4.90) | |
| | 14 | Wire harness × Starter motor terminal | Nut 8 | 5,88 to 11,77 | |
| | 15 | LCD monitor × Panel cover | M6×20 | 1,0 to 1,5 | |
| | 16 | Panel cover (lower) × Panel cover (upper) | M5×16 | 2,55 to 3,3 | |
| | 17 | Safety switch (Cut-off lever) | Locknut (Fine thread) 20 | 19,6 to 24,5 | |
| | 18 | Accelerator dial (holding nut) | Nut M5 | 1.02 to 1.08 (1.33 to 1.47) | |
| | 19 | GPS controller | M6×30 | 9,5 to 11,3 | |
| | 20 | Buzzer × Buzzer bracket | M6×12 | 4,5 to 5,5 | |

PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

### 4-2-4 Cylinder Head

## Cylinder Head Components

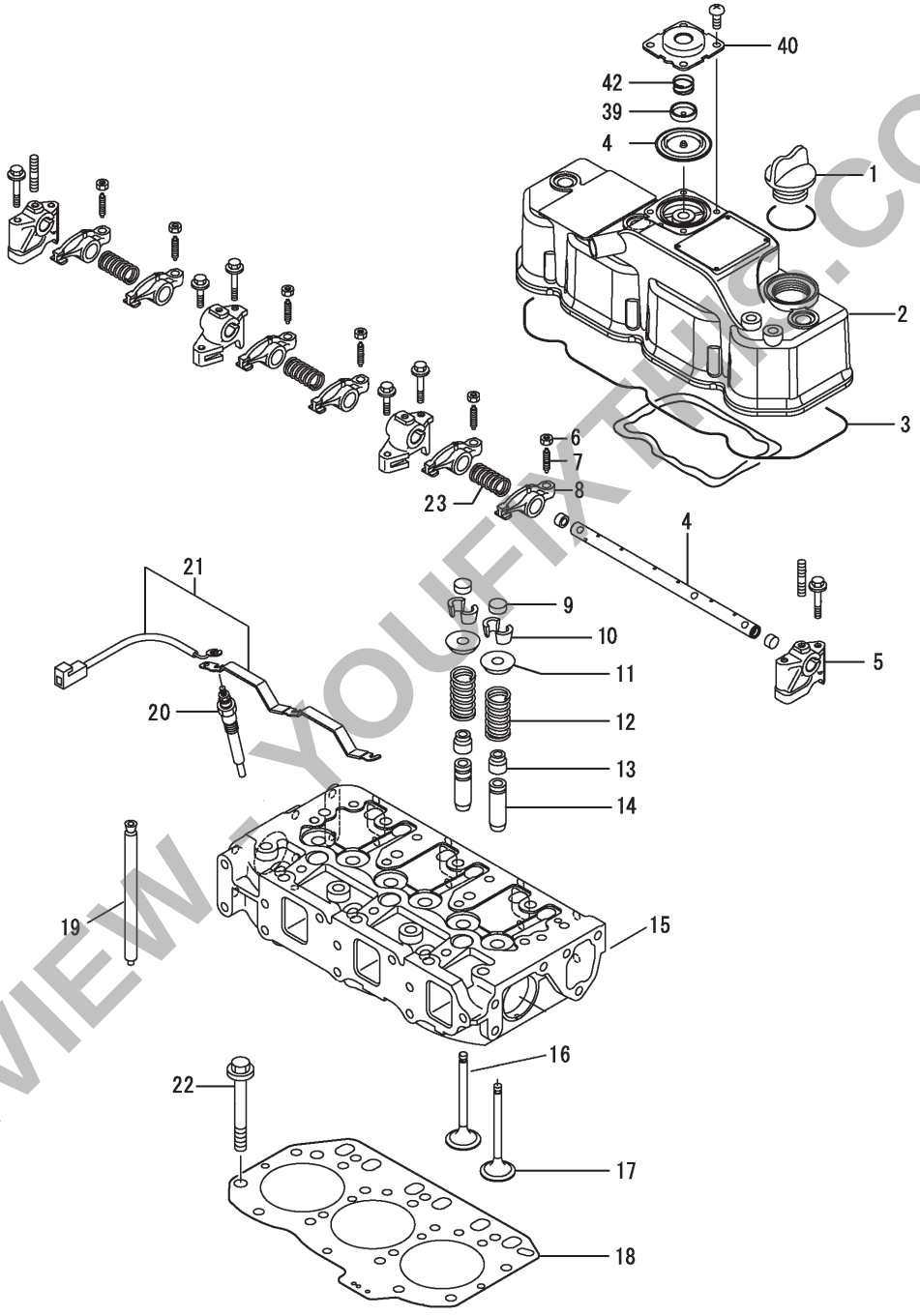



*Figure 4-2-1*

PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

1 – Oil Fill Cap
2 – Valve Cover / Intake Manifold
3 – Gasket
4 – Rocker Arm Shaft
5 – Rocker Arm Shaft Support
6 – Adjuster Lock Nut
7 – Valve Adjuster Screw
8 –RockerArm
9 – Valve Cap
10 – Keeper
11 – Valve Spring Retainer
12 – Valve Spring
13 – Valve Stem Seal
14 – Valve Guide
15 – CylinderHead
16 – Exhaust Valve
17 – Intake Valve
18 – Cylinder Head Gasket
19 – Push Rod (2 per cylinder)
20 – Glow Plug
21 – Glow Plug Wiring Harness
22 – Cylinder Head Bolt
23 – Rocker spring

## Disassembly of Cylinder Head

Prepare a clean, flat working surface on a workbench large enough to accommodate the cylinder head assembly. Discard all gaskets, O-rings and seals. Use new gaskets, O-rings and seals on reassembly of cylinder head.

***IMPORTANT***

*Mark all valve train components so they can be installed in their original locations.*

Note: Record all measurements taken during disassembly.

1. Drain coolant from engine into a suitable container.

***NOTICE***

Identify all parts and their location using an appropriate method. It is important that all parts are returned to the same position during the reassembly process.

---

2. Remove the coolant pump. *See Disassembly of Engine Coolant Pump on page 4-4-4.*
3. Remove the high-pressure fuel lines and fuel injectors from the cylinder head. *See Removal of Fuel Injectors on page 4-3-18.*

PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

### 4-9-2 Troubleshooting By Measuring Compression Pressure

Compression pressure drop is one of the major causes of increasing blow-by gas (engine oil contamination or increased engine oil consumption as a resultant phenomenon) or starting failure. The compression pressure is affected by the following factors:

1. Degree of clearance between the piston and cylinder
2. Degree of clearance at the intake/exhaust valve seat
3. Gas leak from the nozzle gasket or cylinder head gasket

The pressure will drop due to increased parts wear. Pressure drop reduces the durability of the engine.

A pressure drop may also be caused by a scratched cylinder or piston, dust entrance from the dirty air cleaner element or a worn or broken piston ring. Measure the compression pressure to determine the condition of the engine.

## Compression Pressure Measurement Method

1. Warm up the engine.
2. Stop the engine. Remove the high-pressure fuel injection lines as an assembly from the engine.
3. Remove the fuel injector from the cylinder to be measured. *See Removal of Fuel Injectors on page 4-3-27.*

**NOTICE**

Remove or install the high-pressure fuel injection lines as an assembly whenever possible. Disassembling the high-pressure fuel injection lines from the retainers or bending any of the fuel lines will make it difficult to reinstall the fuel lines.

4. Turn off the fuel supply valve in the fuel supply line. Disconnect the fuel injection pump stop solenoid at the connector. This prevents the fuel injection pump from injecting fuel during compression testing.
5. Before installing the compression gauge **((Figure 4-9-1, (1))** 2 valve engine, crank the engine with the stop solenoid disconnected for a few seconds to clear the cylinder of any residual fuel.
6. Install a nozzle seat at the tip end of the compression gauge adapter. Install the compression gauge and the compression gauge adapter at the cylinder to be measured.
7. Crank the engine until the compression gauge reading is stabilized.

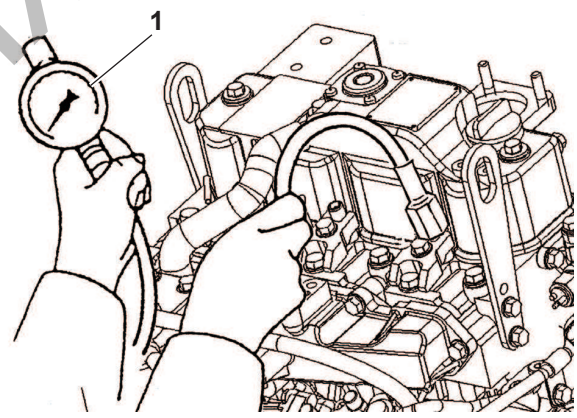



***Figure 4-9-1***

8. After performing the compression check remove the compression gauge and compression gauge adapter from the cylinder.
9. Reinstall the fuel injector, high-pressure fuel injection lines, and reconnect the stop solenoid. *See Reassembly of Fuel Injectors on page 4-3-32.*
10. Turn on the fuel supply valve and reconnect the injection pump stop solenoid.
11. Prime the fuel system.
    Check for leaks.
    Test the engine.

PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

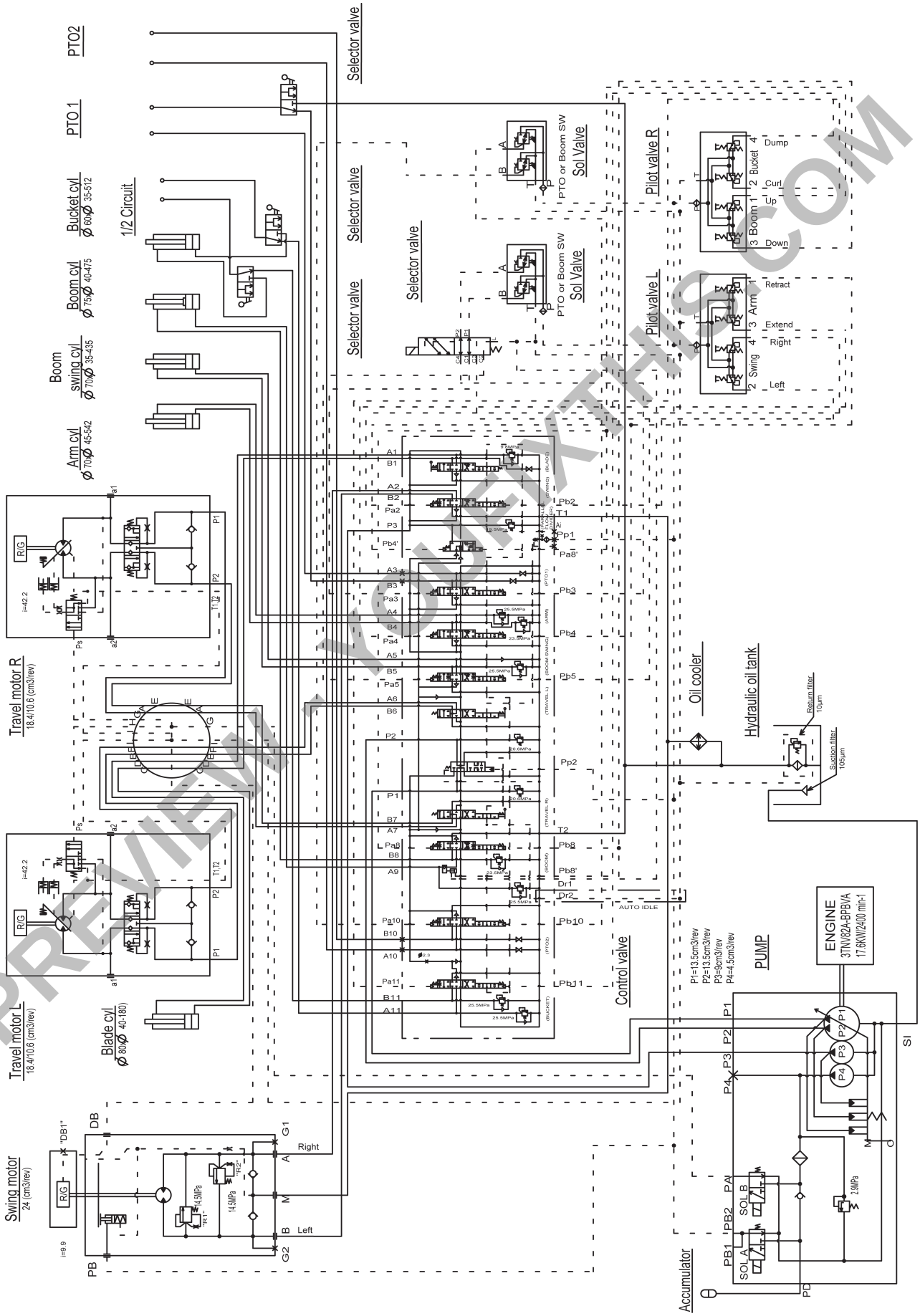
| Error code | Classification | Error description | Detection condition | Causes | Corrective measures |
|---|---|---|---|---|---|
| 00 000091.00 | Caution | Accelerator sensor malfunction: above normal operating range (SAEJ1843) | Sensor voltage is 4.6 V or more, or 0.2 V or less. | • Connection failure of connectors<br>• Defective accelerator sensor | Check the connectors, harnesses and engine control dial.<br>Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 000091.01 | Caution | Accelerator sensor failure: below normal operating range (SAEJ1843) | Sensor voltage is 4.6 V or more, or 0.2 V or less. | | |
| 00 000091.02 | Caution | Accelerator sensor malfunction: intermittent failure | Sensor voltage is 4.6 V or more, or 0.2 V or less. | • Connection failure of connectors<br>• Harness wiring failure (nearly broken wiring of sensor signal line, sensor 5 V line or sensor GND line)<br>• Defective accelerator sensor | Check the connectors, harnesses and accelerator sensor.<br>Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 000091.03 | Caution | Accelerator sensor malfunction: short circuit to high voltage side | Sensor voltage is 4.6 V or more, or 0.2 V or less. | • Connection failure of connectors<br>• Harness wiring failure (sensor GND line disconnected or sensor signal line short circuited to power supply)<br>• Defective accelerator sensor | |
| 00 000091.04 | Caution | Accelerator sensor malfunction: short circuit to low voltage side | Sensor voltage is 4.6 V or more, or 0.2 V or less. | • Connection failure of connectors<br>• Harness wiring failure (sensor signal line disconnected or short circuited to GND, or sensor 5V line disconnected or short circuited to GND)<br>• Defective accelerator sensor | |
| 00 000100.01 | Warning | Abnormal engine oil pressure | Engine oil pressure switch is on after engine has started. | • Low engine oil pressure<br>• Defective engine oil system<br>• Harness wiring failure (engine oil pressure switch wiring short circuited to GND)<br>• Defective engine oil pressure switch | Inspect the engine oil system. Check the harnesses and engine oil pressure switch.<br>Turn the starter switch to the "OFF" position and then to the "ON" position to check if the error code is displayed again. |
| 00 000100.04 | Warning | Engine oil pressure switch failure | Engine oil pressure switch is off while engine is stopped with starter switch in the "ON" position. | • Connection failure of connectors<br>• Harness wiring failure (engine oil pressure switch wiring disconnected or short circuited to power supply)<br>• Defective engine oil pressure switch | Check the connectors, harnesses and engine oil pressure switch. Turn the starter switch to the "OFF" position and then to the "ON" position to check if the error code is displayed again. |
| 00 000110.00 | Warning | Engine coolant temperature sensor malfunction: too high | Sensor voltage is 4.8 V or more. | • Engine overheating<br>• Insufficient amount of engine coolant<br>• Defective engine cooling system<br>• Defective coolant temperature sensor system | Inspect the engine cooling system. Check the connectors, harnesses and coolant temperature sensor. Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 000110.02 | Warning | Engine coolant temperature sensor malfunction: intermittent failure | Error undefined is detected 10 times. | • Connection failure of connectors<br>• Harness wiring failure (nearly broken wiring of sensor signal line, sensor 5 V line or sensor GND line)<br>• Defective coolant temperature sensor | Check the connectors, harnesses and coolant temperature sensor. Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 000110.03 | Warning | Engine coolant temperature sensor malfunction: short circuit to high voltage side | Sensor voltage is 4.8 V or more. | • Connection failure of connectors<br>• Harness wiring failure (sensor signal line disconnected or short circuited topower supply, or sensor GND line disconnected)<br>• Defective coolant temperature sensor | |



Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

## Hydraulic Circuit Schematic (13 sections)




PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

**⚠ WARNING**

**FUME / BURN HAZARD!**

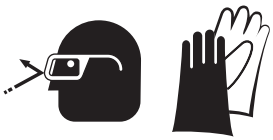


- **Always read and follow safety related precautions found on containers of hazardous substances like parts cleaners, primers, sealants and sealant removers.**

- **Failure to comply could result in death or serious injury.**

**⚠ CAUTION**

**COOLANT HAZARD!**



- **Wear eye protection and rubber gloves when you handle long life or extended life engine coolant. If contact with the eyes or skin should occur, flush eyes and wash immediately with clean water.**

- **Failure to comply may result in minor or moderate injury.**

**⚠ CAUTION**

**FLYING OBJECT HAZARD!**



- **ALWAYS wear eye protection when servicing the engine and when using compressed air or high-pressure water. Dust, flying debris, compressed air, pressurized water or steam may injure your eyes.**

- **Failure to comply may result in minor or moderate injury.**

**⚠ CAUTION**

**Be sure to secure the engine solidly to prevent injury or damage to parts due to the engine falling during work on the engine.**

**⚠ CAUTION**

**PINCH HAZARD!**



**Carefully rotate the alternator toward the cylinder block while loosening the V-belt. Failure to comply may result in minor or moderate injury.**

**⚠ CAUTION**

**If any oil pump component clearance exceeds its limit, the oil pump must be replaced as an assembly.**

***NOTICE***

- Only use diesel fuels recommended by Yanmar for the best engine performance, to prevent engine damage and to comply with EPA / ARB warranty requirements.
- Only use clean diesel fuel.
- NEVER remove the primary strainer (if equipped) from the fuel tank filler port. If removed, dirt and debris could get into the fuel system causing it to clog.

***NOTICE***

If any problem is noted during the visual check, the necessary corrective action should be taken before you operate the engine.

***NOTICE***

NEVER hold the key in the START position for longer than 15 seconds or the starter motor will overheat.

PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

4. Remove the rear oil seal **(Figure 4-2-62, (1))** from the flywheel housing **(Figure 4-2-62, (2))**.

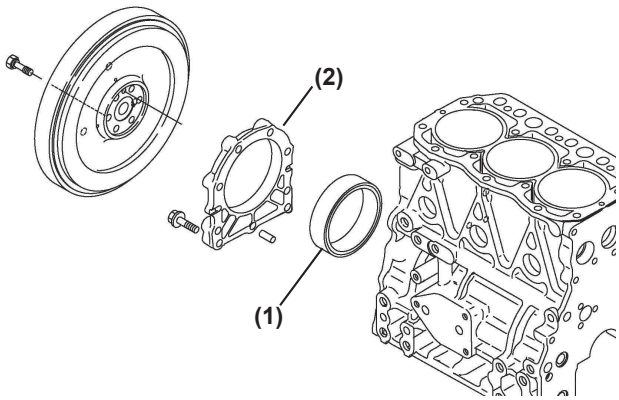



***Figure 4-2-62***

5. Apply a continuous bead of ThreeBond Liquid Gasket No. 1212, Yanmar Part No. 977770-01212 to the outside diameter of a new oil seal **(Figure 4-2-62, (1))**.
6. Install a new seal in the flywheel housing **(Figure 4-2-62, (2))** with the lip facing in away from the flywheel. Apply lithium grease to the lip of the seal.

## Crankshaft Bearing Oil Clearance

Oil clearance should be checked during disassembly to determine the extent of wear, and during assembly to ensure long engine life. The same procedure is done for both connecting rods and main bearings. *See Removal of Pistons on page 4-2-28* or *Removal of Crankshaft on page 4-2-30 for specific information*.

## Inspection of Cylinder Block

1. Ensure that oil passages are clear and unobstructed.
2. Check for discoloration or evidence of cracks. If a fracture is suspected, use the color check method or the MAGNAFLUX® method to determine if the cylinder block is fractured.
3. Measure cylinders for roundness, taper, and inspect for evidence of scoring. Consider honing, re-boring or replacing the cylinder block if the measurements are not within specification.

- Take measurements at three places **(Figure 4-2-63) (a, b, and c)**, and in two directions **(d and e)** in each cylinder. Collect and record the measurements. *See "3-2 Engine Service Standard" section for the service limit.*

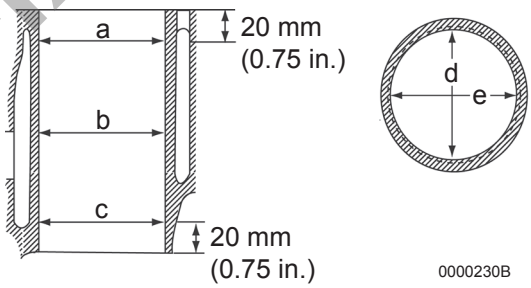



***Figure 4-2-63***

PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

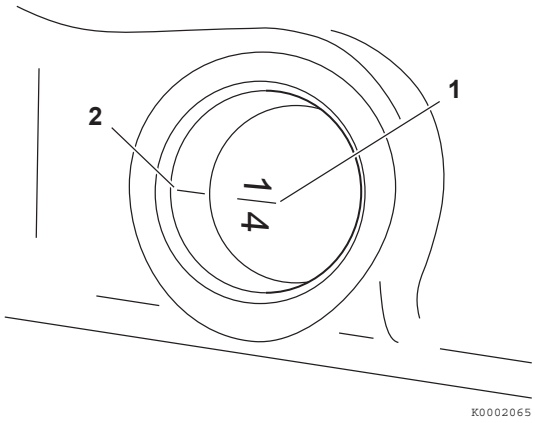
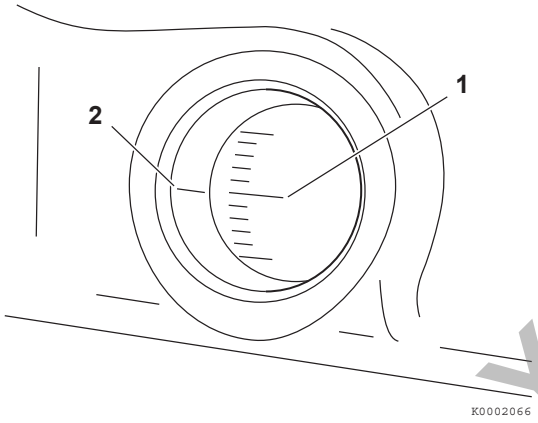



*Figure 4-3-43*



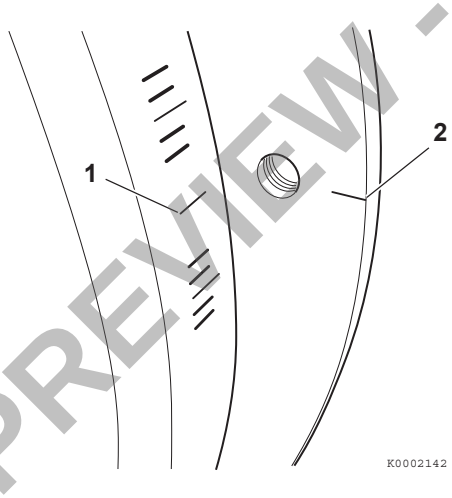




*Figure 4-3-44*

10. Rotate the crankshaft counter-clockwise until the dial indicator shows that the injection pump plunger is at the bottom of its stroke. Rock the crankshaft back and forth slightly to confirm a point where the dial indicator shows no movement. Zero the dial indicator.
11. Slowly rotate the crankshaft clockwise until the dial indicator shows a pump plunger lift of 2.5 mm (0.098 in.).
12. Check the position of the flywheel target timing mark (previously determined) **(Figure 4-3-44, (1))** in relation to the timing reference mark **(Figure 4-3-44, (2))** on the flywheel housing or engine back plate. If the two marks are aligned, the fuel injection timing is correct. If the marks do not align, the fuel injection timing must be adjusted. *See Adjusting Fuel Injection Timing on page* 4-3-22.
13. If the injection timing is correct, remove the dial indicator and adapter. Replace the pump plunger plug and its copper gasket and tighten to specifications. Replace the flywheel inspection port cover. Open the fuel supply valve and remove the clamp from the fuel supply hose and the fuel return hose.
14. Prime the fuel system. Operate the engine and check for leaks.

## Adjusting Fuel Injection Timing

If the timing marks did not align when performing the *Checking Fuel Injection Timing on page* 4-3-22, the following steps must be performed to properly time the engine.

1. Leave the dial indicator installed in the fuel injection pump. Do not disturb the reading on the dial indicator.
2. Rotate the flywheel until the target timing mark **(Figure 4-3-45, (1))** and the timing reference mark **(Figure 4-3-45, (2))** on the flywheel housing or back plate are aligned.

**NOTICE**

Do not rotate the crankshaft during the remainder of this procedure.



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

## 4-7 Alternator

### 4-7-1 Before You Begin Servicing

Before performing any service procedures within this section, read the following safety information and review the *Safety* section on page *4-1-1*.

PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

| Error code | Classification | Error description | Detection condition | Causes | Corrective measures |
|---|---|---|---|---|---|
| 00 001078.04 | Warning | Engine fuel injection pump rotation sensor malfunction: short circuit to low voltage side | • Engine speed cannot be detected although engine start recognition (E8) is on.<br>• Amount of instantaneous decrease in engine speed is over the rated value. | • Connection failure of connectors<br>• Insufficient engine speed (battery voltage reduction, defective starter system, frozen fuel or increase of load from implement side accompanied by engine rotations)<br>• Harness wiring failure (sensor signal line disconnected or short circuited to GND, or starter signal line short circuited to power supply) | Check the connectors, harnesses and rotation sensor.<br>Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 001079.02 | Caution | Sensor 5 V malfunction: intermittent failure | Detected monitoring voltage is approx. 0 V. | • Harness wiring failure (sensor 5 V line short circuited to GND) | Check the harnesses.<br>Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 001079.03 | Caution | Sensor 5 V malfunction: short circuit to high voltage side | Detected monitoring voltage is 5.5 V or more. | • Harness wiring failure (sensor 5 V line short circuited to power sup-ply or sensor GND line disconnected) | Check the harnesses.<br>Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 001079.04 | Caution | Sensor 5 V malfunction: short circuit to low voltage side | Detected monitoring voltage is 4.5 V or less. | • Harness wiring failure (sensor 5 V line short circuited to GND) | Check the harnesses.<br>Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 000638.03 | Warning | Rack actuator malfunction: short circuit to high voltage side | Detected rack actuator current is above the upper limit. | • Connection failure of connectors<br>• Harness wiring failure (rack actuator line short circuited to power supply)<br>• Defective rack actuator | Check the connectors, harnesses and rack actuator.<br>Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 000638.04 | Warning | Rack actuator malfunction: short circuit to low voltage side | Detected rack actuator current is below the lower limit. | • Connection failure of connectors<br>• Harness wiring failure (rack actuator line disconnected or short circuited to GND)<br>• Defective rack actuator | |
| 00 000638.07 | Warning | Rack actuator malfunction: mechanical failure | Specified operation is not performed in rack operation check at start up. | Sticking of rack | |
| 00 001078.04 | Warning | Engine fuel injection pump rotation sensor malfunction: short circuit to low voltage side | Detected rack actuator current is below the lower limit. | • Connection failure of connectors<br>• Harness wiring failure (rack actuator line disconnected or short cir-cuited to GND)<br>• Defective rack actuator | |
| 00 001079.02 | Caution | Sensor 5 V malfunction: intermittent failure | Detected monitoring voltage is approx. 0 V. | • Harness wiring failure (sensor 5 V line short circuited to GND) | Check the harnesses.<br>Turn the starter switch to the “OFF” position and then to the “ON” position to check if the error code is displayed again. |
| 00 001079.03 | Caution | Sensor 5 V malfunction: short circuit to high voltage side | Detected monitoring voltage is 5.5 V or more. | • Harness wiring failure (sensor 5 V line short circuited to power supply or sensor GND line disconnected) | |
| 00 001079.04 | Caution | Sensor 5 V malfunction: short circuit to low voltage side | Detected monitoring voltage is 4.5V or less | • Harness wiring failure (sensor 5 V line short circuited to GND) | |



Download full manual at youfixthis.com

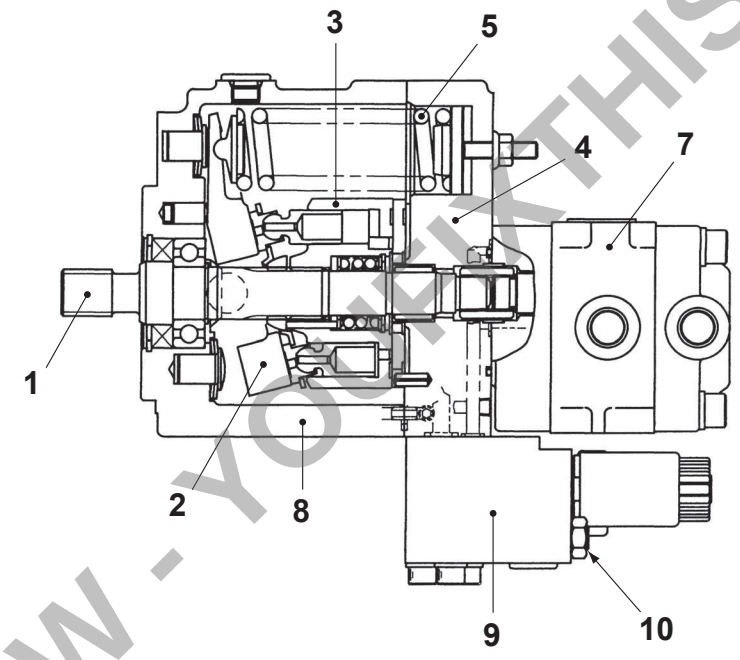
PREVIEW - YOUFIXTHIS.COM

## 6-3 Hydraulic Pump

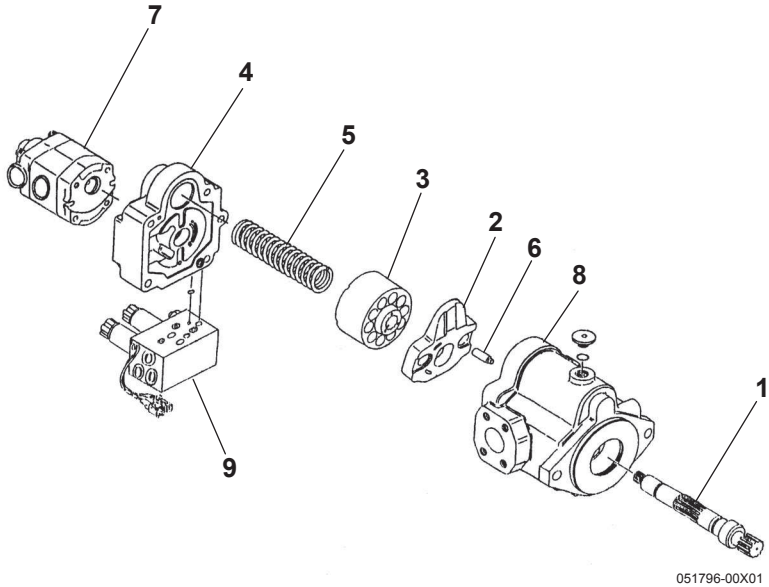
### 1. Outline

#### 1) Piston Pump

The piston pump consists of a drive shaft, a swash plate, a rotary group, body H, a control spring, a control rod, a gear pump, a body S, a valve block assembly, a relief valve, and other components. It is a variable displacement piston pump that discharges two equivalent volumes for the pumps P1 and P2 by means of a rotary group.
One rotary group is divided into one intake port and two discharge ports.
The gear pump P3 and the pilot pump P4 are connected to the piston pump via the coupling and these pumps and the piston pump share one intake port.
The control system is a simultaneous incline angle full horsepower control.




| No. | Part |
|---|---|
| 1 | Drive shaft |
| 2 | Swash plate |
| 3 | Rotary group |
| 4 | Body H |
| 5 | Control spring |
| 6 | Control rod |
| 7 | Gear pump |
| 8 | Body S |
| 9 | Valve block assembly |
| 10 | Pilot pump P4 relief valve |




051796-00X01



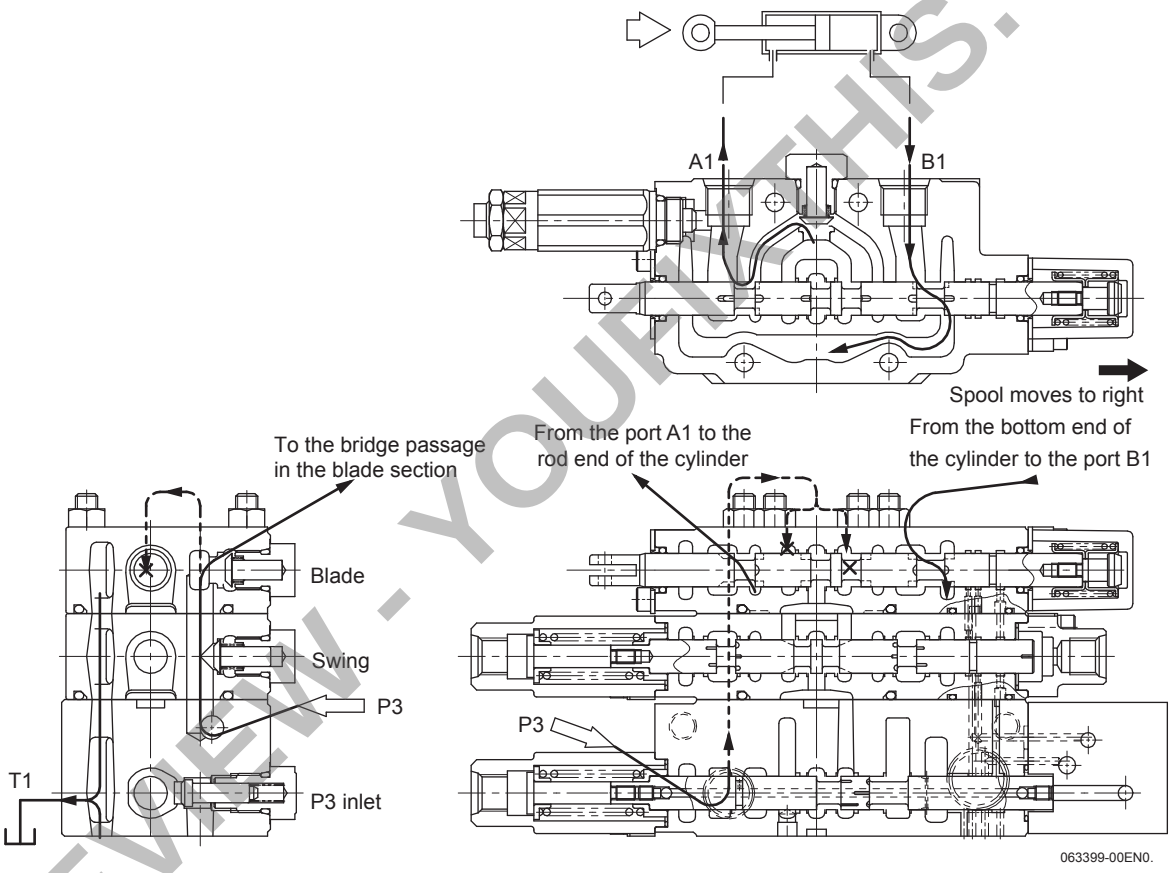
PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

**8) Blade Operation**

(1) Blade up operation

When the blade lever is pulled back to raise the blade, the spool of the blade section is pushed. Because the P3 by-pass passage is blocked by the blade spool and the passage between the port A1 and the bridge passage is opened as the blade spool has been moved, the oil from the port P3 flows through the P3 parallel passage, the load check valve in the blade section and the bridge passage to the port A1 and is fed to the rod end of the blade cylinder. Meanwhile, the return oil from the bottom end of the blade cylinder flows through the port B1 to the return oil pas-sage, which is opened as the blade spool has been moved.

Thus, the blade cylinder is retracted to raise the blade.




PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

**5) Reassembly of relief valves**

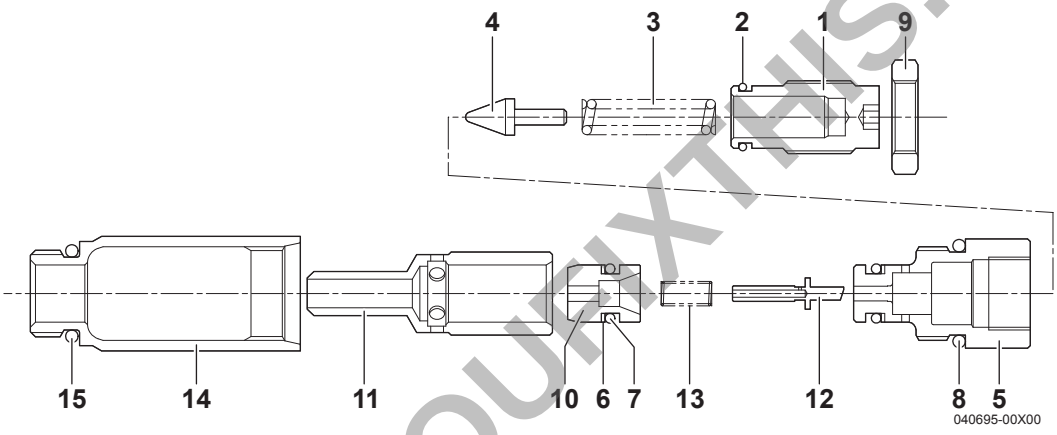
***WARNING:***

*Relief valves are the most essential parts in terms of performance and safety. In addition, it is extremely difficult to reset relief valve pressures. If a relief valve failure occurs, replace the whole relief valve assembly.*

*The reassembly procedure below serves as a reference for performing reassembly after the relief valve is disassembled due to unavoidable circumstances, for example, in failure investigations.*

*Never use relief valves that have been reassembled according to the procedure below on an actual machine.*

(1) Reassembly of system relief valves




Assembly of system relief valve

[1] Check that the O-ring **2** is installed securely in the groove at the end of adjust screw **1**, and then install spring **3** and poppet **4** into the hole in adjust screw **1**.

[2] Check that backup ring **6** and O-rings **7** and **8** are installed securely on poppet guide **5**, and then fit the tapped hole of poppet guide **5** onto the poppet side of the assembly that has been assembled in step [1] and screw the poppet guide onto the assembly.

***WARNING:***

*Take care to install O-ring **7** and backup ring **6** in their correct positions.*

*(Be sure to install the backup ring on the outer threaded side of the poppet guide.)*

*If installed in the wrong position, the O-ring can protrude, resulting in internal leaks or malfunction of the control valve. In the worst-case scenario, this may lead to damage to other hydraulic equipment.*

*Look through the smaller hole in poppet guide **5** to check that poppet **4** is fitted in the seat of poppet guide **5**. If it is not fitted, pressure may not build up and control valve malfunction may occur.*

[3] Install nut **9** onto the threaded portion of adjust screw **1** protruding from the assembly that has been assembled in step [2].

[4] Check that O-ring **7** and backup ring **6** are installed securely in the groove on the outer face of valve **10**, and then insert valve **10** into socket **11**.

***WARNING:***

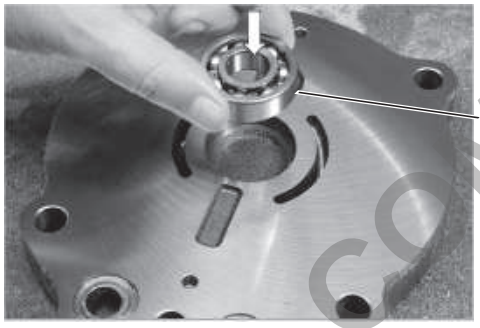
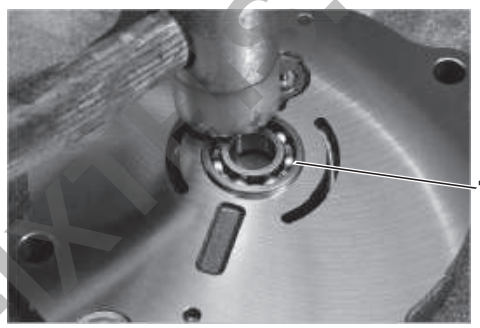
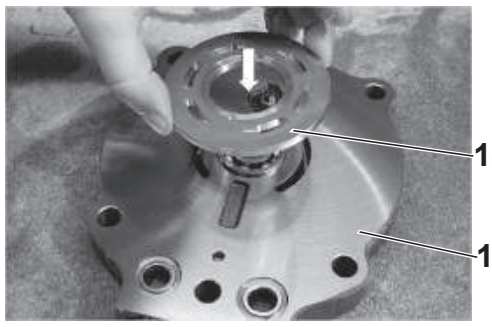
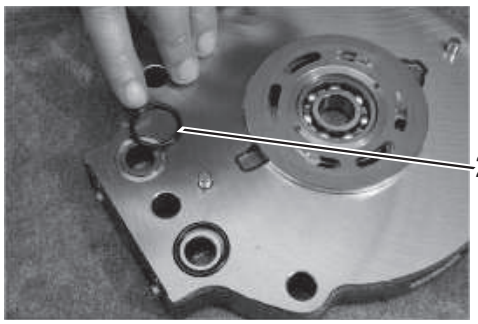
*Take care to install O-ring **7** and backup ring **6** in their correct positions.*

*(Be sure to install the backup ring on the seat side of the valve.)*

*If installed in the wrong position, the same trouble as described in step [2] may occur.*



PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

| Procedure | |
|---|---|
| **(2) Reassembly of the base plate assy**<br>-Assemble the bearing **17** into its seat in the base plate. |  |
| - By using a rubber hammer, push the bearing **17** in its seat in the base plate. |  |
| -Assemble the valve plate **18** to the base plate **19**.<br>Note:<br>Bronze surface must be upwards. |  |
| -Insert the 2 pins 20 into their seats in the base plate. |  |
| -Insert the O-ring seals 21 from its seats in the base plate. |  |

PREVIEW - YOUFIXTHIS.COM

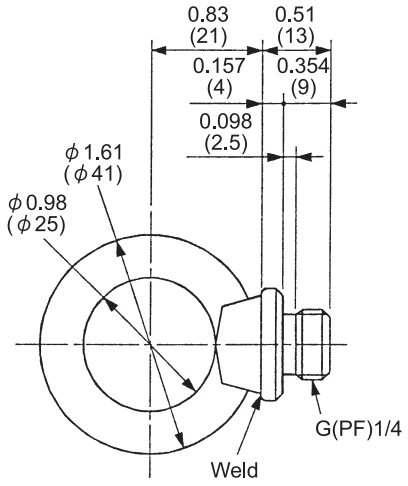


Download full manual at youfixthis.com

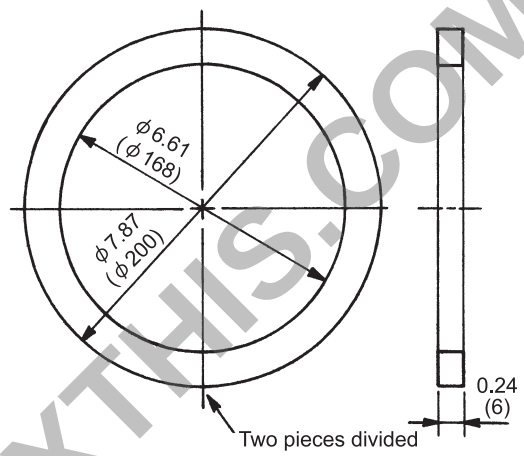
## 4. Special Tools

Unit : in. (mm)

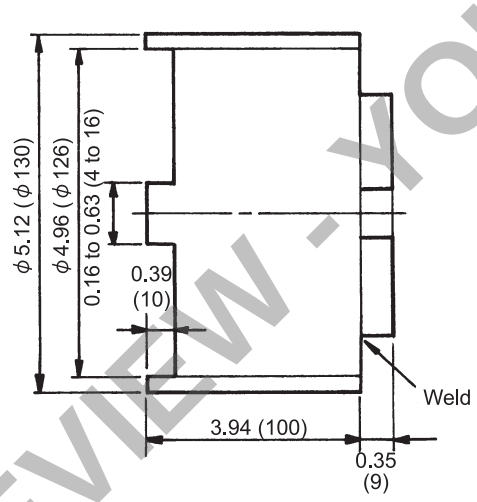
S-2 : Eye bolt

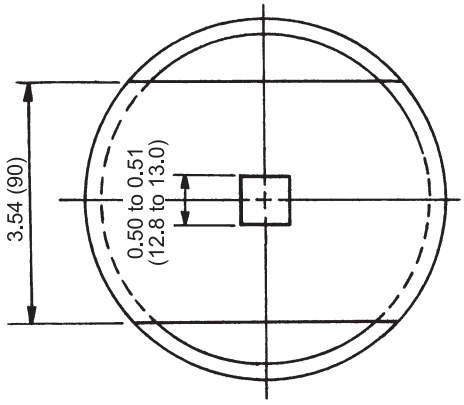



S-2 : Housing disassembly jig

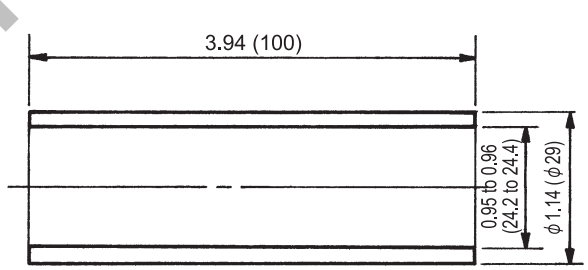



S-3 : Ring nut tightening jig

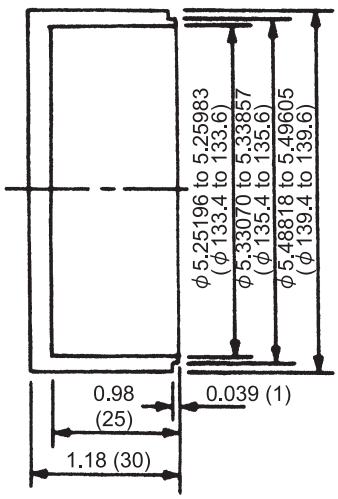



S-4 : Ball bearing disassembly jig



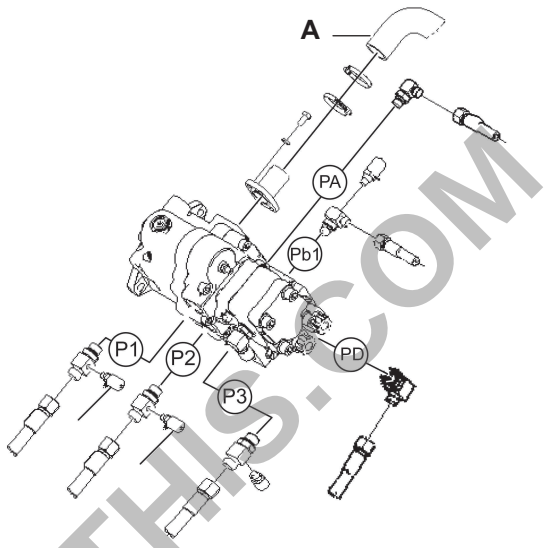
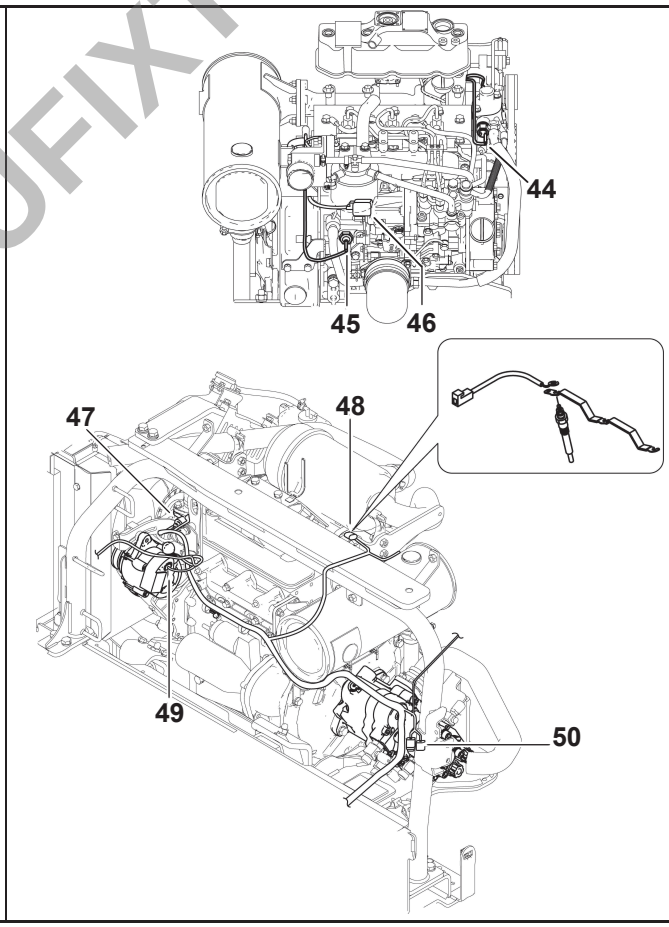

S-5 : Angular bearing press-fitting jig




PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

| Procedure | |
|---|---|
| (24) Disconnect hydraulic hoses from hydraulic pump.<br>A. Suction hose<br>PA. Hose PA (swivel joint)<br>Pb1. Hose PB1<br>P1. Hose P1<br>P2. Hose P2<br>P3. Hose P3<br>PD. Hose PD (accumulator)<br>***Notes:***<br>• *Put marks on removed hoses to reconnect them to correct positions.*<br>• *Put cap or cover each hose end and fitting on pump for dust prevention.* |  |
| (25) Disconnect the engine parts connected to harness A<br>-Temperature sensor **44**<br>- Oil pressure switch **45**<br>- Engine-stop solenoid **46**<br>- Thermo-switch **47**<br>-Glow plug **48**<br>-Generator **49**<br>-Cut-off valve **50** |  |

PREVIEW - YOUFIXTHIS.COM


Download full manual at youfixthis.com

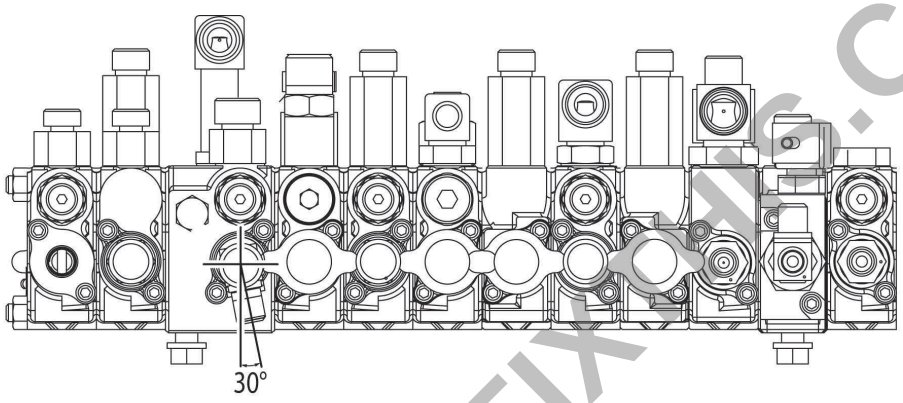
**2) Reinstallation**

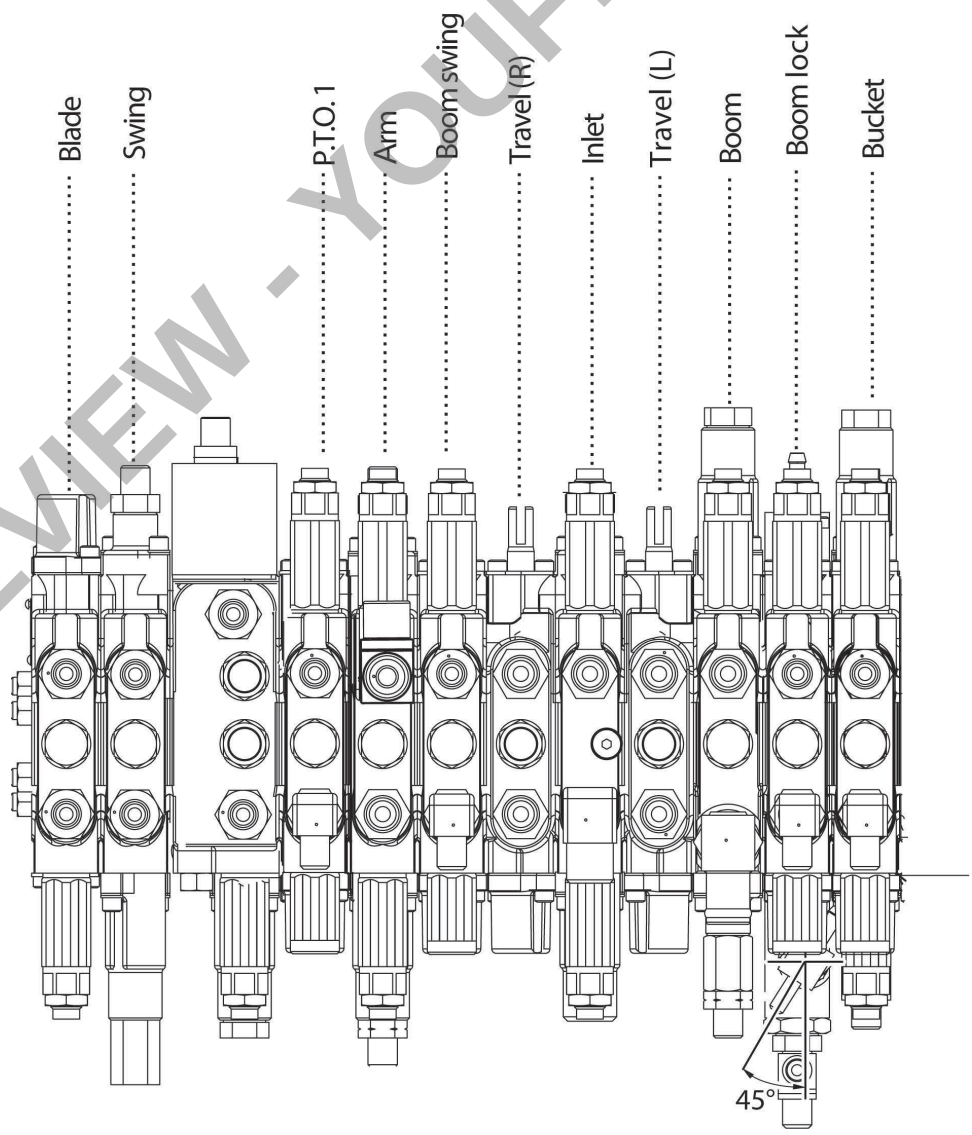
Reinstall the control valve in the reverse order to the removal procedure.

***Notes:***

- *Be careful not to contact the hoses with other hoses when reinstalling the hoses.*
- *After reinstalling the control valve, raise the hydraulic oil temperature to 50 to 60 °C and apply load (relief valve set pressure) to all the sections to check for oil leak.*

Connector and joint setting angles (Standard type)




PREVIEW - YOUFIXTHIS.COM



Download full manual at youfixthis.com

# PREVIEW ONLY

You're viewing 24 of 549 pages

## The full manual includes:

- All 549 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

**Yanmar SV26 Service Manual**

**Scan or click anywhere**
**youfixthis.com**

*Click anywhere on this page to get the full manual*