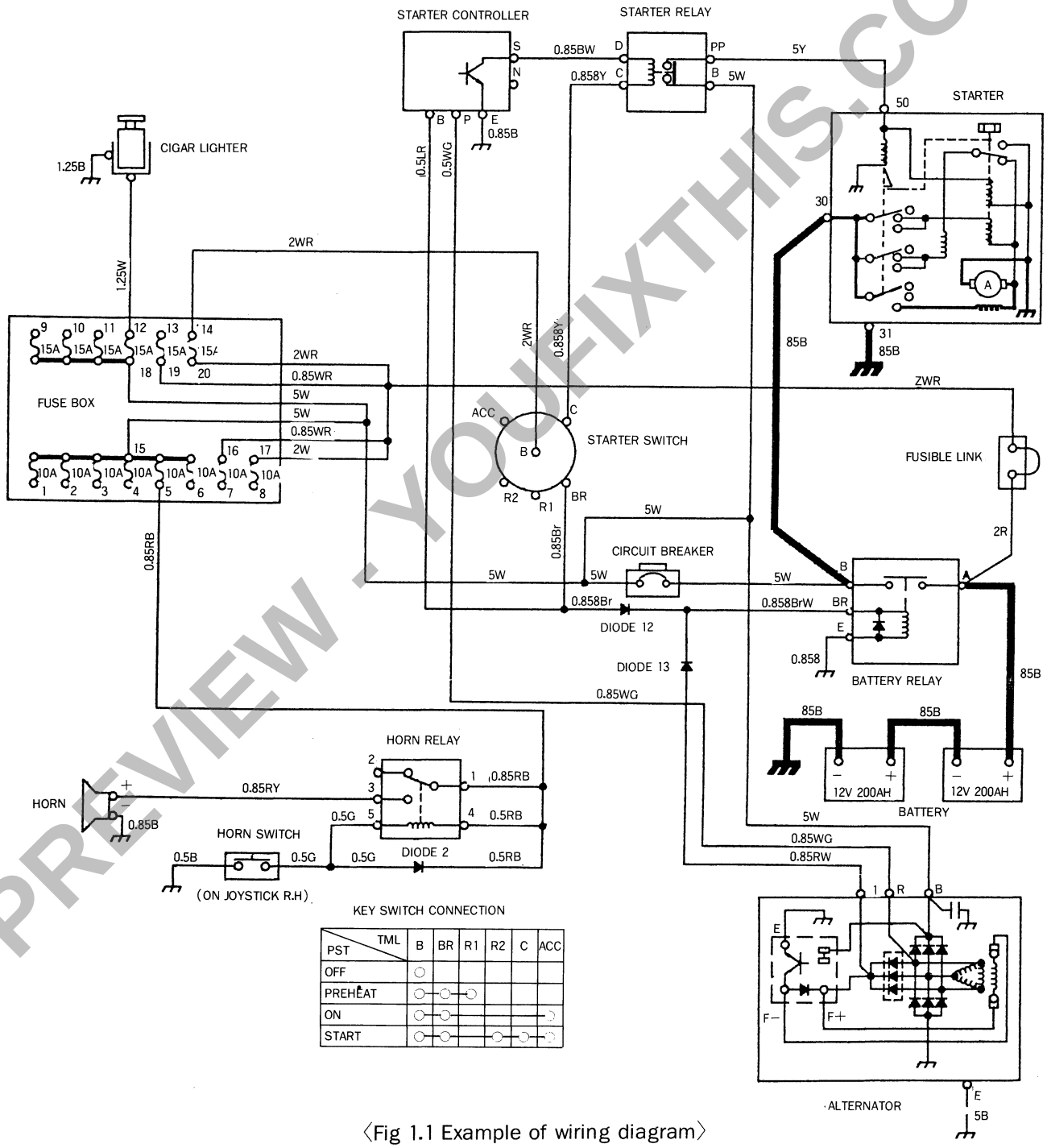
1. SYSTEM OVERVIEW

1.1 Wiring Diagram

Electrical units must have a complete circuit to operate. Wiring diagrams used to show the insulated wire circuit connections. Electrical power flows through the positive battery terminal, the insulated circuit, and the operating units. The circuit is completed through the metal frame and the battery ground. Each operating unit on the wiring diagram is represented by a symbol, either a simple line or an electrical schematic drawing.

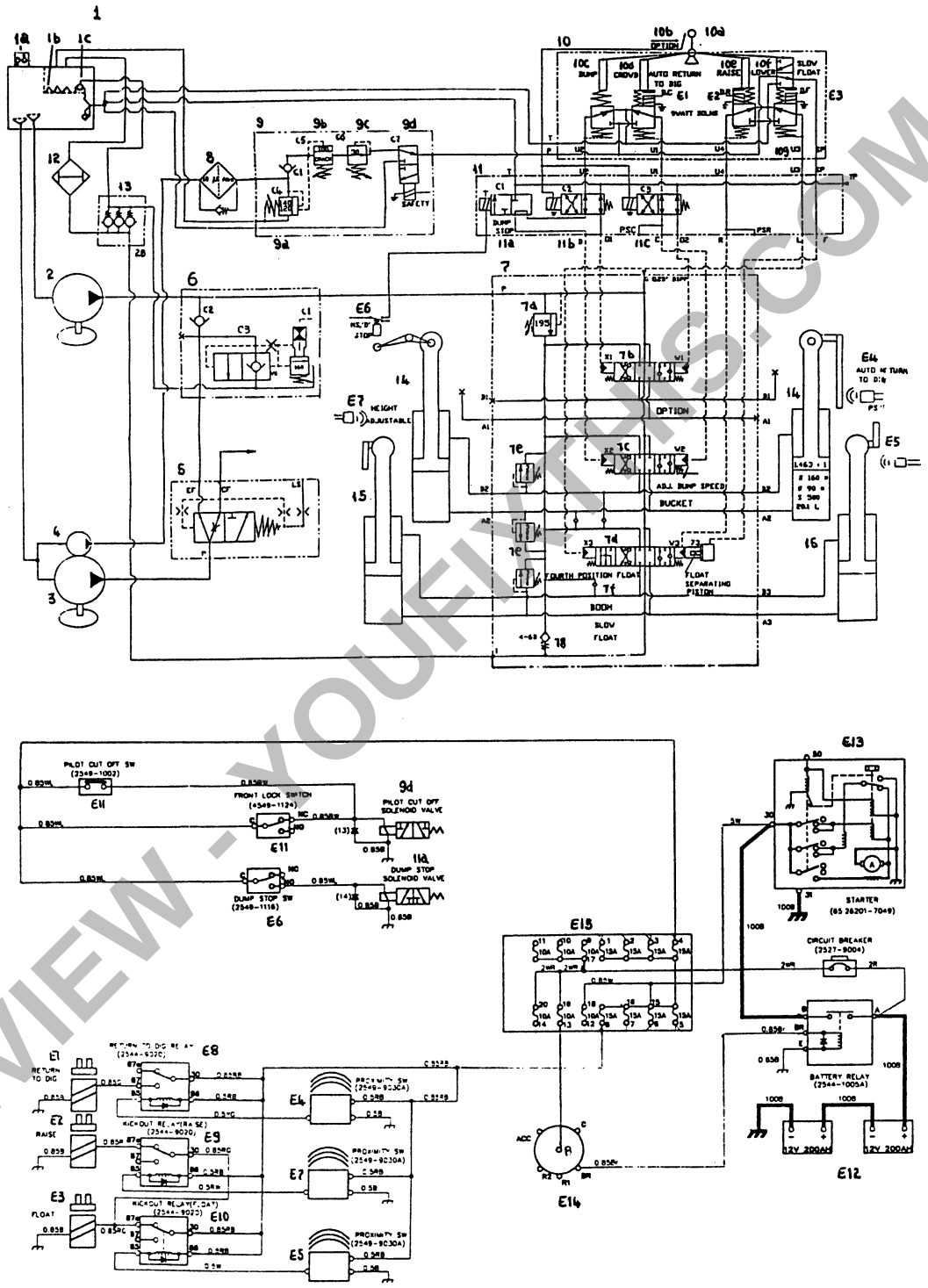


〈Fig 1.1 Example of wiring diagram〉

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

• Hydraulic circuit



〈Fig 6.1〉

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

3. SPECIFIED TIGHTENING TORQUE

- Standard bolts

The torque values given in the following table should be applied where a particular torque is not specfified.

kg·m

Bolt identification / Material / Bolt diameter ×pitch(mm)			
	4 T Low carbon steel	7 T High carbon steel	9 T Alloy steel
M 6×1.0	0.6 ± 0.2	0.75 ± 0.2	
M 8×1.25	1.3 ± 0.5	1.75 ± 0.5	2.0 ± 0.7
M10×1.25	2.8 ± 0.7	3.75 ± 0.9	5.0 ± 1.3
M12×1.25	6.25 ± 1.2	7.75 ± 1.5	9.65 ± 1.9
M14×1.5	8.75 ± 1.9	11.85 ± 2.3	14.50 ± 2.9
M16×1.5	13.3 ± 2.7	17.30 ± 3.5	20.40 ± 4.1
M18×1.5	19.2 ± 3.8	24.90 ± 5.0	29.30 ± 5.9
M20×1.5	26.3 ± 5.3	34.40 ± 6.9	40.40 ± 8.1
M22×1.5	33.0 ± 8.3	46.25 ± 9.2	54.10 ± 10.8
M24×2.0	45.8 ± 9.2	58.20 ± 14.0	70.60 ± 14.1
*M10×1.5	2.7 ± 0.7	3.7 ± 0.9	4.9 ± 1.2
*M12×1.5	5.8 ± 1.2	7.2 ± 1.4	9.1 ± 1.8
*M14×2.0	9.1 ± 1.8	11.2 ± 2.2	13.6 ± 2.2
*M16×2.0	12.7 ± 2.5	16.5 ± 3.3	19.5 ± 3.9

Note :
Bolts marked with an asterisk (*) are used for female threaded parts made of soft materials such as casting.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

1. ENGINE

Complaint	Cause	Correction
Trouble in starter circuit	1) Magnetic switch does not work when starter S/W is turned on.	
	(1) Wrong connections, wire broken or loosely connected	Correct
	(2) Starter switch points defective	Replace
	(3) Magnetic switch coil open or burned out	Replace
	(4) Plunger shaft bent or binding	Correct or replace
	(5) Pinion sticking	Correct or replace
	2) Magnetic switch operates but pinion does not come into engagment with ring gear	
	(1) Armature shaft bearings defective	Correct or Replace
	(2) Pinion or ring gear teeth worn excessively or distorted	Replace
	(3) Battery under-charged	Recharge or replace
	(4) Movement of pinion on shaft unsmooth	Clean
	(5) Plunger or contactor shaft sticking	Correct or replace
	3) Pinion engages ring gear but starter motor does not turn over	
	(1) Pinion clutch slipping	Replace
	(2) Armature field coil burned out	Replace
	(3) Brushes in poor contact with commutator	Correct or replace
	(4) Battery under-charged.	Recharge or replace
	(5) Starter motor circuit poorly grounded	Correct
Trouble in fuel system	1) Fuel not being pumped out from feed pump	
	(1) Fuel tank empty	Replenish
	(2) Fuel tank strainer clogged	Clean
	(3) Fuel pipe clogged or air in fuel line	Correct
	(4) Feed pump valves defective	Replace
	(5) Feed pump piston or push rod sticking	Correct or replace
	(6) Feed pump strainer clogged	Clean
	2) Fuel not being injected from injection pump	
	(1) Fuel filter element clogged	Replace
	(2) Fuel filter over flow valve remaining open	Replace
	(3) Air in filter or fuel pump	Bleed
	(4) Plunger or delivery valves sticking	Correct or replace
	3) Fuel injection timing incorrect	
	(1) Injection pump not properly installed	Correct
	(2) Injection timing incorrect	Correct
	(3) Cam or camshaft worn excessively	Replace
	4) Injection nozzles not working.	
	(1) Needle valves sticking	Correct or replace
	(2) Fuel leaking past clearance between nozzle needle valve	Correct or replace
	(3) Injection pressure incorrect	Adjust
Compression pressure insufficient	(1) Cylinder head gasket broken	Replace
	(2) Piston, piston rings or cylinder liners worn	Replace
	(3) Piston rings seized up	Replace
	(4) Valve clearance incorrect	Adjust
	(5) Valve not properly seated	Lap valve and valve seat
	(6) Valve stem seized up	Replace
	(7) Valve spring(s) weakened or broken	Replace

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2. ENGINE SPECIFICATION

Item		Specification
Engine type		Water cooled, four cycle, vertical in-line, overhead valve
Combustion chamber type		Direct injection
Cylinder liner type		Dry
No. of cylinder−bore×stroke	(mm)	6−102.0×118.0
Total piston displacement	(cm^3)	5,785
Compression ratio		17.5 : 1
Engine dimensions(L×W×H)	(mm)	1122×648×775
Engine weight(Dry)	(kg)	450
Fuel injection order		1−5−3−6−2−4
Specified fuel		Diesel fuel
Injection pump		In-line plunger, Bosch A type
Governor		Mechanical, RSV type
Injection nozzle		Multi hole
Injection starting pressure	(kg/cm^2)	150 or 185
Fuel filter type		Center bolt type
Water sedimentor(if so equipped)		Sediment/water level indicating type
Compression pressure(at warm)	(kg/cm^2)	31 at 200 rpm at sea level
Valve clearance(at cold)	Intake(mm)	0.40
	Exhaust(mm)	0.40
Lubrication method		Pressurized circulation
Oil pump		Gear type
Main oil filter type		Center bolt, full flow
Lubricating oil capacity	(ℓ)	21.5
Oil cooler		Water cooled integral type
Cooling method		Pressurized forced circulation
Coolant capacity(engine only)	(ℓ)	12.0
Water pump		Belt driven impeller type
Thermostat type		Wax pallet type
Alternator	V−A	24−25
Starter	V−kW	24−4.5

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

5. MAINTENANCE

5.1 Oil filter replacement

- Removal

1. Loosen the drain plug to drain the engine oil from the oil filter.
2. Remove the center bolt and the filter housing from the filter head along with the filter element.
3. Discard the used filter element.
4. Wipe the oil filter fitting face clean with a rag. This will allow the new oil filter to seat properly.

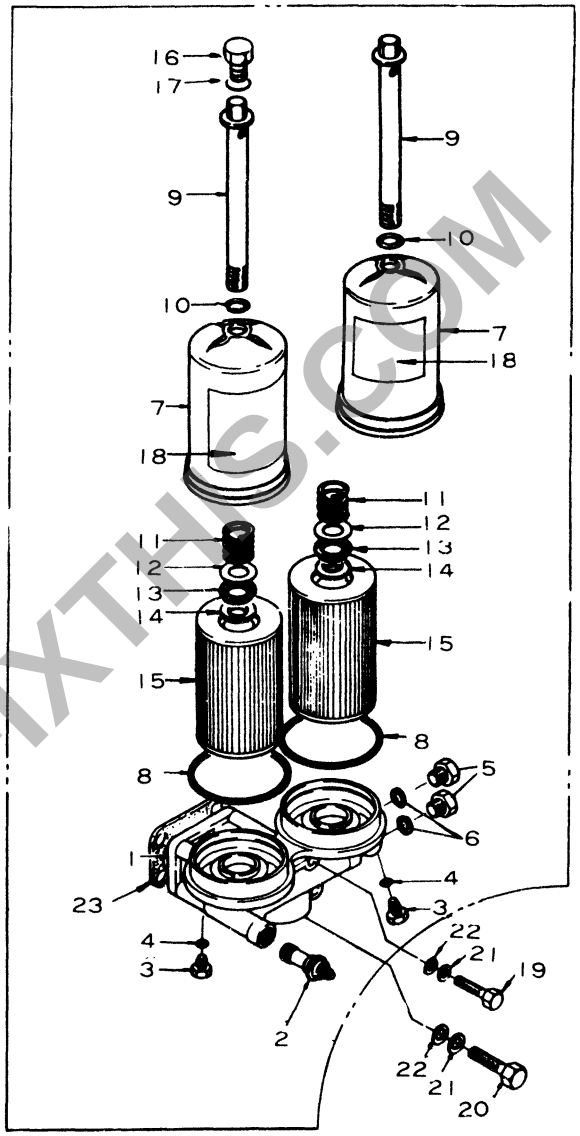
- Installation

Reassemble in reverse order.

Note :

· Make sure that O-rings are correctly seated to prevent oil leakage.

· Torque for center bolt : 5.3±1.0 kg·m
drain plug : 1.8±0.2 kg·m



〈Oil filter〉

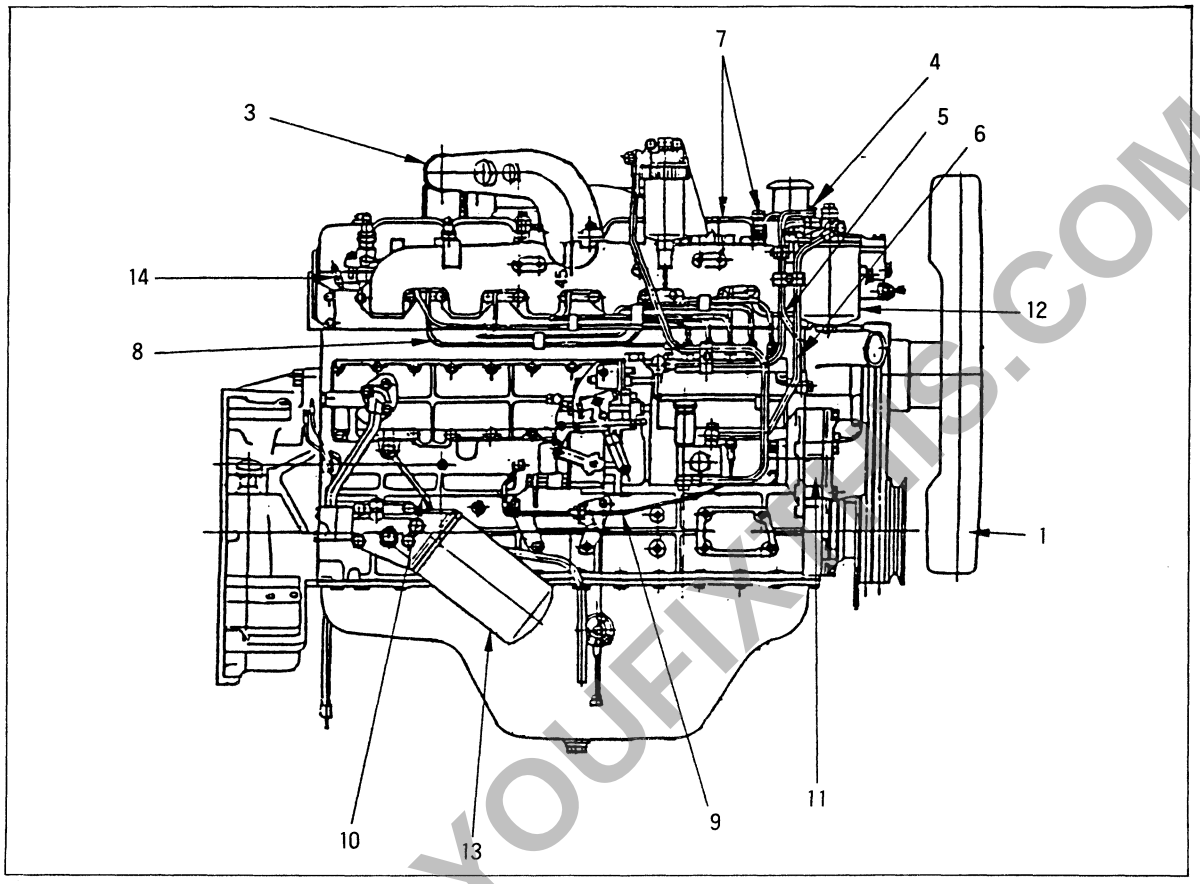
1. Head ; oil filter
2. Valve ; relief
3. Screw ; plug M10×1.25
4. O-ring P10
5. Screw ; plug M16×1.5
6. O-ring P16
7. Housing ; oil filter
8. O-ring G105
9. Bolt ; center
10. O-ring P16
11. Spring
12. Washer
13. O-ring
14. Washer
15. Element ; oil filter
16. Screw ; plug M10×1.25
17. O-ring P10
18. Plate ; caution
19. Bolt ; hex. M10×1.25×130
20. Bolt ; hex. M10×1.25×55
21. Washer
22. Washer
23. Gasket

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2. DISASSEMBLY

2.1 External parts(R.H)



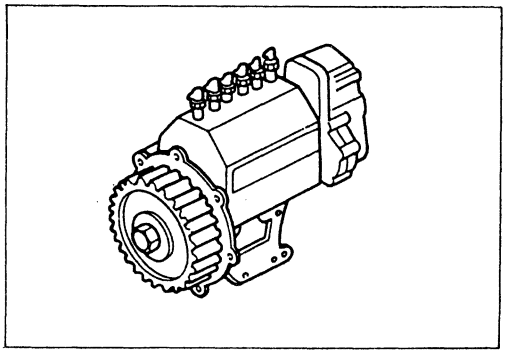
Disassembly steps

1. Cooling fan
2. Not installed
3. Intake pipe
4. Fuel return pipe
5. Fuel pipe : fuel filter to injection pump
6. Fuel pipe : feed pump to filter
7. injection nozzle and leak off pipe
8. injection pipe
9. Oil pipe ; injection pump to cylinder body
10. Oil pipe : filter to oil cooler
11. Injection pump with injection pump gear
12. Fuel filter
13. Oil filter
14. Glow plug

Important operations

Injection pump with injection pump gear

Use the shipping plugs(or something similar)to seal the injection pump delivery valve ports. This will prevent the entry of foreign material.

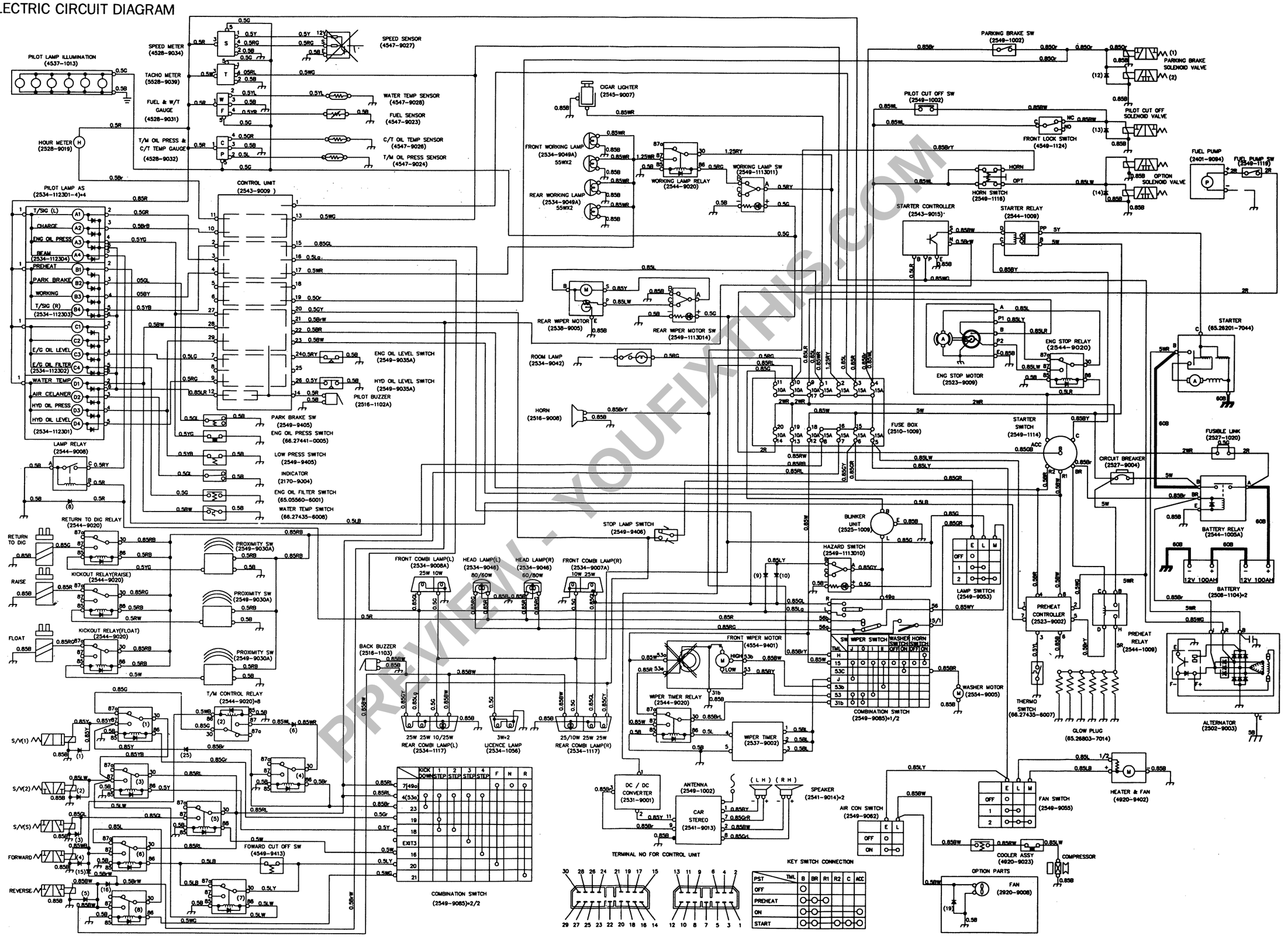


Flange mounted injection pump removal

1. Remove th injection pump flange bolts.
2. Pull the injection pump with the injection pump drive gear free.

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

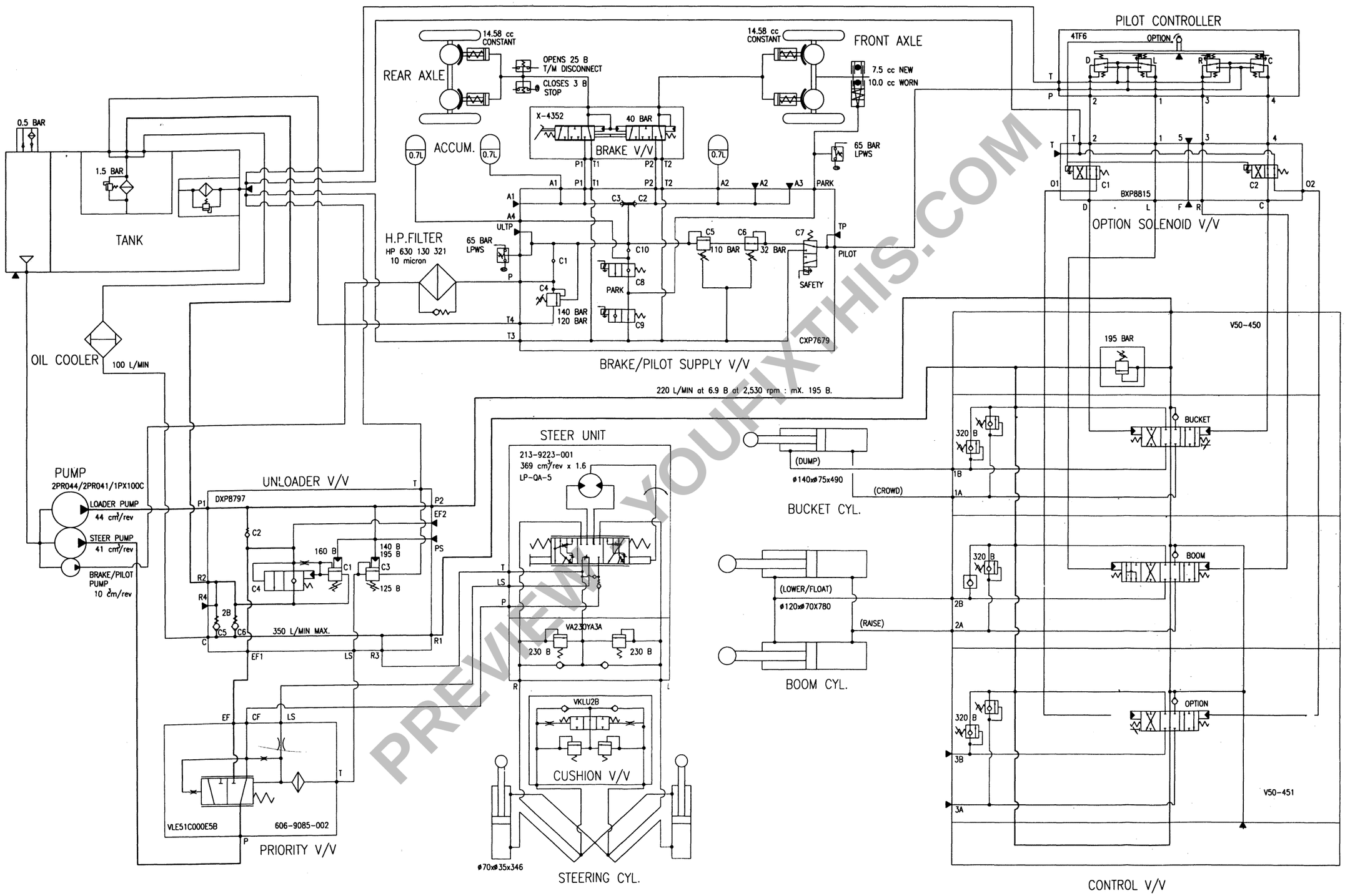
• ELECTRIC CIRCUIT DIAGRAM



PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

• HYDRAULIC CIRCUIT DIAGRAM



PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

4. TIGHTENING TORQUE FOR NUTS & BOLTS OF MAJOR PART

A) Cylinder head cover kg·m(lb.ft)

- Torque for bolts of cylinder head cover ····· 2.1±0.5(15.2±3.6)
- Torque for new bolts of cylinder head ····· 7.0→9.5±0.5 (50.6)→(68.6±3.6)
- Torque for reused bolts of cylinder head ····· 7.0→11.5±0.5 (50.6)→(83.1±3.6)
- Torque for glow plug ····· 2.7±0.25(19.5±1.8)

B) Cylinder body kg·m(lb.ft)

- Torque for bolts holding water pump to cylinder body ····· 5.3±1(38.3±7.2)
- Torque for bolts holding crankshaft bearing cap ····· 2.4±1(73.5±7.2)
- Torque for bolts holding push rod chamber cover ····· 2.6±0.5(18.8±3.6)

C) Oil pan and Dipstick kg·m(lb.ft)

- Torque for nut holding dipstick ····· 2.9±0.3(21.0±2.2)
- Torque for bolts of oil pan ····· 2.6±0.5(18.8±3.6)
- Torque for drain plug of oil pan ····· 8.0±1.0(57.8±7.2)

D) Camshaft and Rocker Arm kg·m(lb.ft)

- Torque for bolts of rocker arm shaft bracket ····· 3.1±0.5(22.4±3.6)
- Torque for nuts of screw for valve clearance adjustment ····· 2.6±0.5(18.8±3.6)
- Torque for bolts of flange holding camshaft ····· 2.6±0.5(18.8±3.6)
- Torque for bolts holding camshaft gear ····· 16±1.5(115.7±10.5) (Apply engine oil)
- Torque for bolts holding idle gear ····· 5.5±1(39.8±7.2)

E) Crankshaft, Piston and Flywheel kg·m(lb.ft)

- Torque for bolts of connecting rod bearing cap ····· 12±0.25(86.7±1.80) (Apply MoS_2 grease)
- Torque for nuts holding V−belt pully ····· 60±5(433.8±36.2)
- Torque for bolts holding flywheel to crankshaft ····· 22.3±2.2(161.2±15.9)

F) Thermostat and Thermostat Housing kg·m(lb.ft)

- Torque for bolts thermostat housing cover ····· 2.6±0.5(18.8±3.6)
- Torque for bolts of thermostat housing ····· 5.3±1(38.3±7.2)

G) Intake and Exhaust Manifold kg·m(lb.ft)

- Torque for bolts holding intake manifold ····· 2.6±0.5(18.8±3.6)
- Torque for bolts holding exhaust manifolds ····· 2.9±0.3(21±2.2)

H) Timing gear case and Flywheel Housing kg·m(lb.ft)

- Torque for bolts of timing gear case ····· 2.6±0.5(18.8±3.6)
- Torque for bolts of timing gear case cover ····· 2.6±0.5(18.8±3.6)
- Torque for bolts inside of flywheel housing ····· 16.0±1.0(115.7±7.2)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2. ENGINE RUNS ROUGH

Complaint	Cause	Correction
Rough of idling	(1) Injection timing incorrect	Adjust
	(2) Injection pipes loosened	Tighten
	(3) Injection nozzle defective	Correct
	(4) Volume of fuel injection unequal	Correct or replace
	(5) Movement of control rack sluggish	Correct of replace
	(6) Operation of plungers unsmooth	Correct of replace
	(7) Control pinions not engaged with control rack correctly	
	(8) Air in injection pump	Bleed
Engine runs rough at Low and medium Speed(hunting occurs)	(1) Governor idling spring binding	Correct or replace
	(2) Governor spring weakening	Correct or replace
Engine runs at high speed and does not stop	(1) Linkage or cable between accelerator pedal and injection pump binding	Correct
	(2) Injection pump control rack binding	Correct

3. ENGINE LACKS POWER

Complaint	Cause	Correction
Engine lacks power continuity	(1) Valve clearance incorrect	Adjust
	(2) Valve poorly seated	Correct or replace
	(3) Cylinder head gasket defective	Replace
	(4) Piston rings worn or sticking	Replace
	(5) Injection timing incorrect	Adjust
	(6) Volume of fuel delivery insufficient	Adjust
	(7) Nozzle injection pressure incorrect on nozzle seized	Adjust or replace
	(8) Feed pump defective	Correct or replace
	(9) Restrictions in fuel pipes	Correct
	(10) Volume of intake air insufficient	Service air cleaner
	(11) Throttle valve sticking	Correct or replace
	(12) Clutch slipping	Adjust or replace
	(13) Brake dragged	Adjust or replace
Engine lacks power on acceleration	(1) Compression pressure insufficient	Engine overhaul
	(2) Injection timing incorrect	Adjust
	(3) Injection timer out of function	Correct or replace
	(4) Nozzle injection pressure or splay angle incorrect	Adjust or incorrect
	(5) Feed pump defective	Correct or replace
	(6) Volume of intake air insufficient	Service air cleaner
	(7) Throttle valve sticking	Correct or replace
Engine overheating	(1) Cooling water level to low	Replenish and check for leakage
	(2) Radiator cap pressure valve spring weakened	Replace
	(3) Restictions in radiator core	Correct or replace
	(4) Restrictions in oil cooler	Correct or replace
	(5) Fan belt loosened, worn or broken	Adjust or replace
	(6) Thermostat defective	Replace
	(7) Water pump defective	Replace
	(8) Injection timing in correct	Adjust
	(9) Cylinder head gasket defective	Replace

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

1. MACHINE SPECIFICATION

1.1 General

I t e m			Specification
Standard bucket capacity			1.8 m^3
Operating weight			9,950 kg
Engine	Model		DAEWOO DB58T
	Rated output power		138 PS/2,300 rpm
	Max. torque		45 kg·m/1,600 rpm
Dimension	Overall length		6,952 mm
	Overall width		2,400 mm(Without Bucket)
	Overall height		3,214 mm
	Bucket width		2,450 mm
	Wheel base		2,900 mm
	Threads		1,930 mm
	Ground clearance		406 mm
	Dumping clearance		2,713 mm(Without tooth)
	Dumping reach		1,128 mm(Without tooth)
	Max. Dump angle		49°
	Max. Tilt-back angle		43°
	Tire size		17.5-25-12 PR
Performance	Travel speeds		7~37 km/h
	Steering angle		±40°
	Min. turning radius		4,950 mm
	Payload		3,250 kg
	Cycle Time	Lift	5.5 sec
		Dump	1.0 sec
		Drop	3.5 sec
	Gradeability		20°/37 %
Power Train	Transmissiom		Full power shift
	No.of gears		4 Forward/3 Reverse
Brakes	Service brake		Full hydraulic, 4-wheel, wet disc type
	Parking brake		Dry disc, spring-applied on drive shaft

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

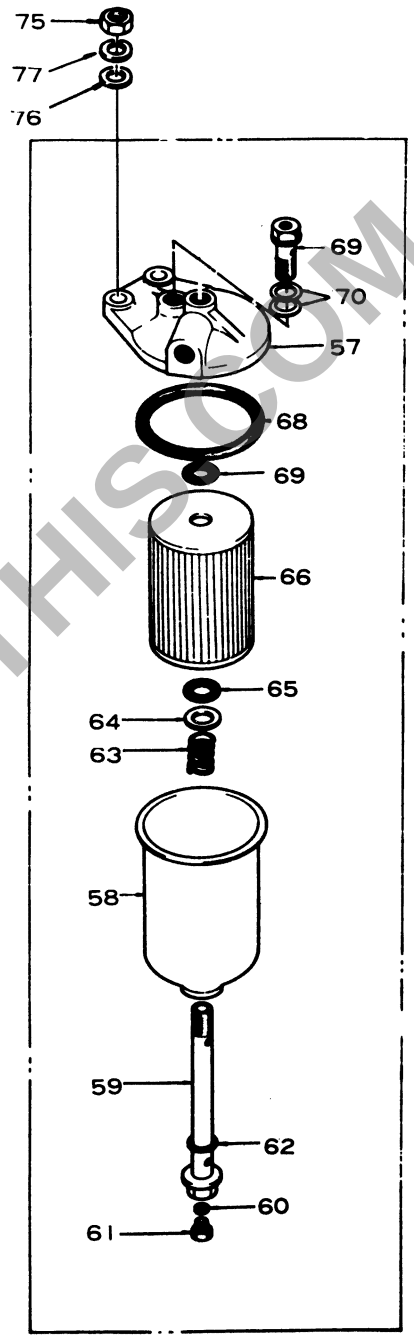
5.2 Fuel filter replacement

• Removal

1. Loosen the drain plug to drain the fuel from the fuel filter.
2. Loosen the center bolt to remove the filter housing, the spring, the washer, the packing, and the filter element.
3. Discard the used filter element.

• Installation

1. Wash the filter housing and the other parts immersing them into clean diesel oil.
2. Reassemble the parts in reverse order. Use the new element.
3. Make sure that the packings are correctly seated to prevent fuel leakage.

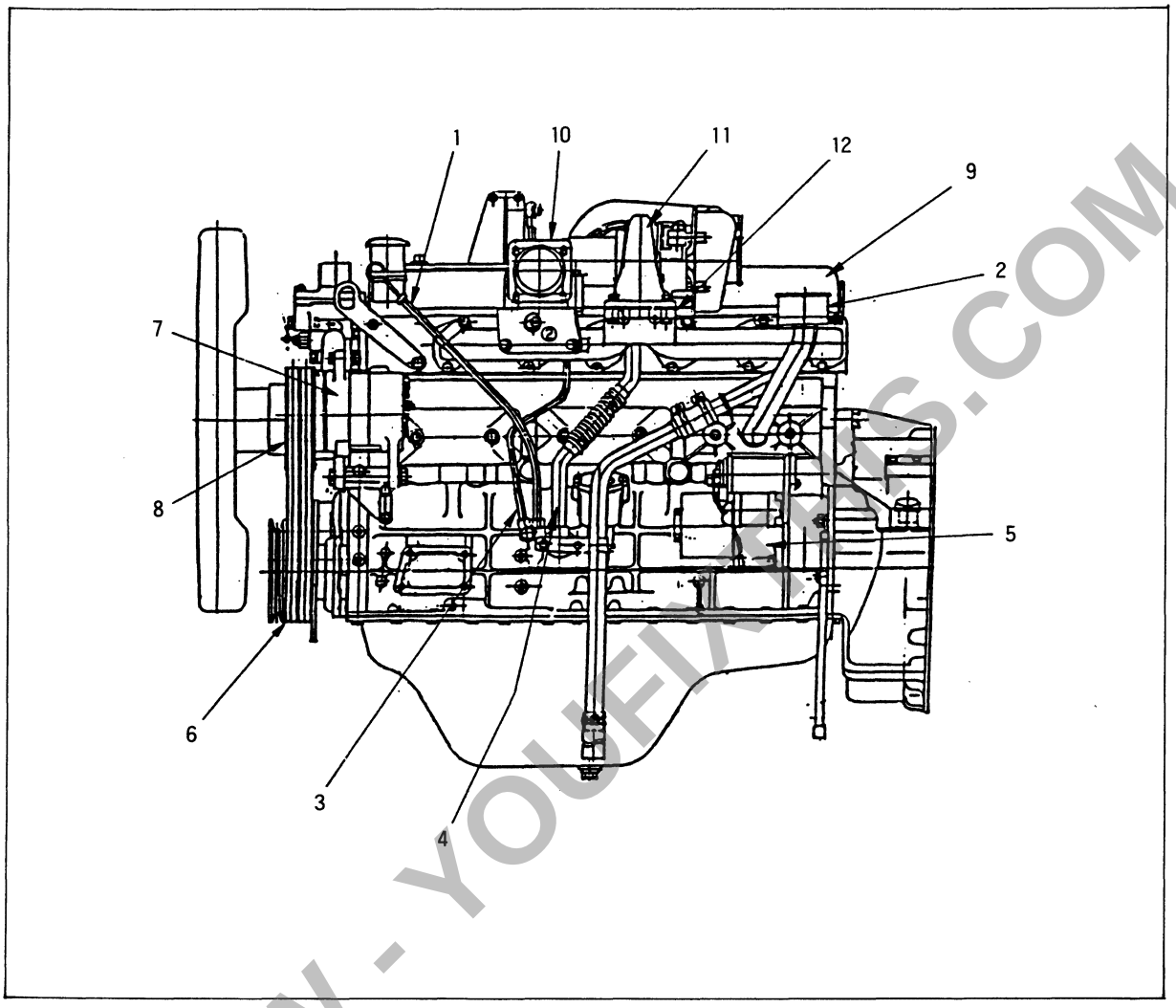


57. Cover
58. Housing
59. Bolt ; center
60. O-ring
61. Screw ; plug
62. O-ring
63. Spring
64. Seat ; spring
65. Packing
66. Element
67. Packing
68. Packing
69. Valve ; over flow
70. Ring ; seal
75. Nut ; hex. M10
76. Washer
77. Washer

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2.2 External parts(L.H)



Disassembly steps

1. Dipstick
2. Air breather
3. Oil feed pipe
4. Oil drain pipe
5. Starter motor
6. Fan belt
7. Alternator
8. Fan pulley
9. Cylinder head cover
10. Turbo adapteor
11. Turbocharger
12. Gasket

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

I) Oil cooler, Oil Filter, and Oil Pump kg·m(lb.ft)

- Torque for bolts holding oil filter ····· 5.3±1.0(38.3±7.2)
- Torque for bolts holding oil cooler ····· 2.6±0.5(18.5±3.6)
- Torque for bolts holding oil delivery pipe to oil pump ····· 2.6±0.5(18.5±3.6)
- Torque for bolts holding oil delivery pipe to cylinder body ····· 5.3±1.0(38.3±7.2)

J) Fuel system kg·m(lb.ft)

- Torque for nuts holding nozzle holder ····· 1.9±0.2(13.7±1.5)
- Torque for bolt holding fuel return pipe to fuel filter ····· 4.2±0.8(30.4±5.8)
- Torque for bolt holding fuel supply pipe from fuel filter to fuel injection pump ····· 1.7±0.1(12.3±0.7)
- Torque for bolt holding fuel supply pipe from fuel feed pump to fuel filter ····· 4.2±0.8(30.4±5.8)
- Torque for nuts holding injection pipe to nozzle holder ····· 3.1±0.2(22.4±1.5)

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

4. ENGINE NOISY

It is important to check the engine components systematically to pinpoint the cause of abnormal engine noise at it generally consists of various noises that originate in rotating part, sliding parts, etc.

Complaint	Cause	Correction
Crankshaft bearing	(1) Oil clearance excessive due to worn bearing or crankshaft	Replace or grind crankshaft
	(2) Crankshaft worn out-of-round	Replace or grind crankshaft
	(3) Restrictions in oil ports	Clean
	(4) Bearings seized up	Replace or grind crankshaft.
Connecting-rod or Connecting-rod bearing	(1) Connecting-rod bearings worn	Replace
	(2) Crankpins worn out-of-round	Replace or grind
	(3) Connecting-rod bent	Replace
	(4) Bearing seized up	Replace or grind
Pistons, piston pins and piston rings	(1) Piston clearance excessive due to worn piston and piston rings	Replace
	(2) Piston or piston pin worn	Replace
	(3) Piston seized up	Replace
	(4) Piston rings broken	Replace
Others	(1) Crankshaft thrust bearing worn	Replace
	(2) Crankshaft end play excessive	Replace thrust bearings
	(3) Idle gear end play excessive	Replace thrust collar
	(4) Timing gear backlash excessive	Replace
	(5) Valve clearance incorrect	Adjust
	(6) Valve seized up with in valve guide	Replace
	(7) Valve springs broken	Replace
	(8) Valve seat insert defective	Correct
	(9) Tappet and cams worn	Replace
	(10) Rocker arms and rocker arm shaft worn excessively	Replace

5. FUEL CONSUMPTION EXCESSIVE

Complaint	Cause	Correction
Trouble in fuel system	(1) Injection timing incorrect	Adjust
	(2) Volume of fuel injection excessive	Adjust
Others	(1) Clutch slipping	Correct or replace
	(2) Brake(s) dragging	Correct or replace
	(3) Tire under-inflated	Correct
	(4) Gear selection inadequate	Select gears according to load

PREVIEW - YOUFIXTHIS.COM

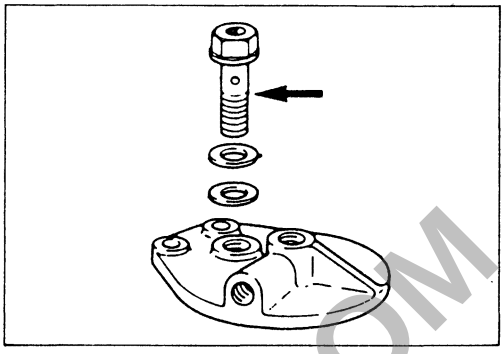
Download full manual at youfixthis.com

5.3 Injection nozzle

Check the overflow valve for clogging.
Check the ball side for suction leakage.

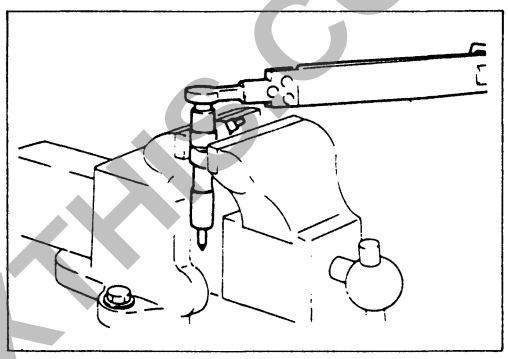
kg/cm²(psi)

Overflow valve opening Pressure(reference)	1.5(21.33)



Inspection procedure

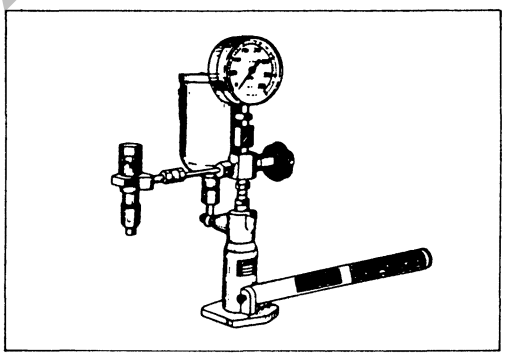
1. Clamp the injection nozzle holder in a vise.
2. Use a wrench to remove the injection nozzle holder cap.
3. Remove the injection nozzle holder from the vise.

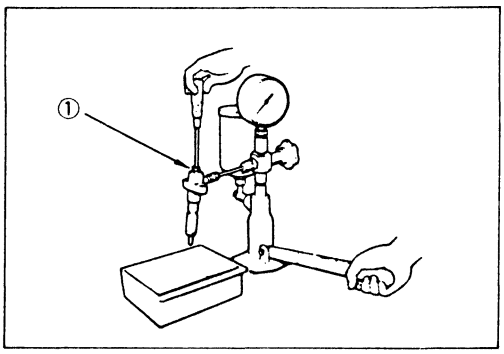


• **Adjusting procedure**

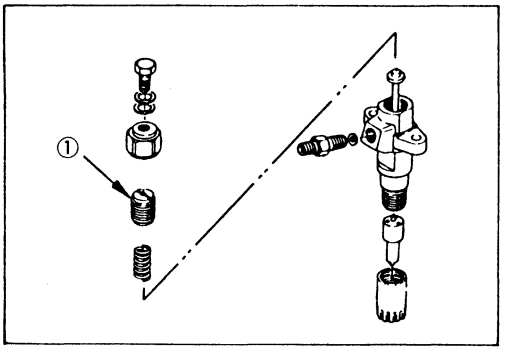
Injection starting pressure check

1. Install the injection nozzle holder to the injection nozzle tester.
2. Loosen the adjusting screw ①.
3. Check the injection nozzle starting pressure and the spray condition by operating the injection nozzle tester.
4. Adjust the injection nozzle starting pressure. Turn the adjusting screw clockwise while operating the injection nozzle tester handle.





Injection starting pressure	150 or 185 kg/cm²

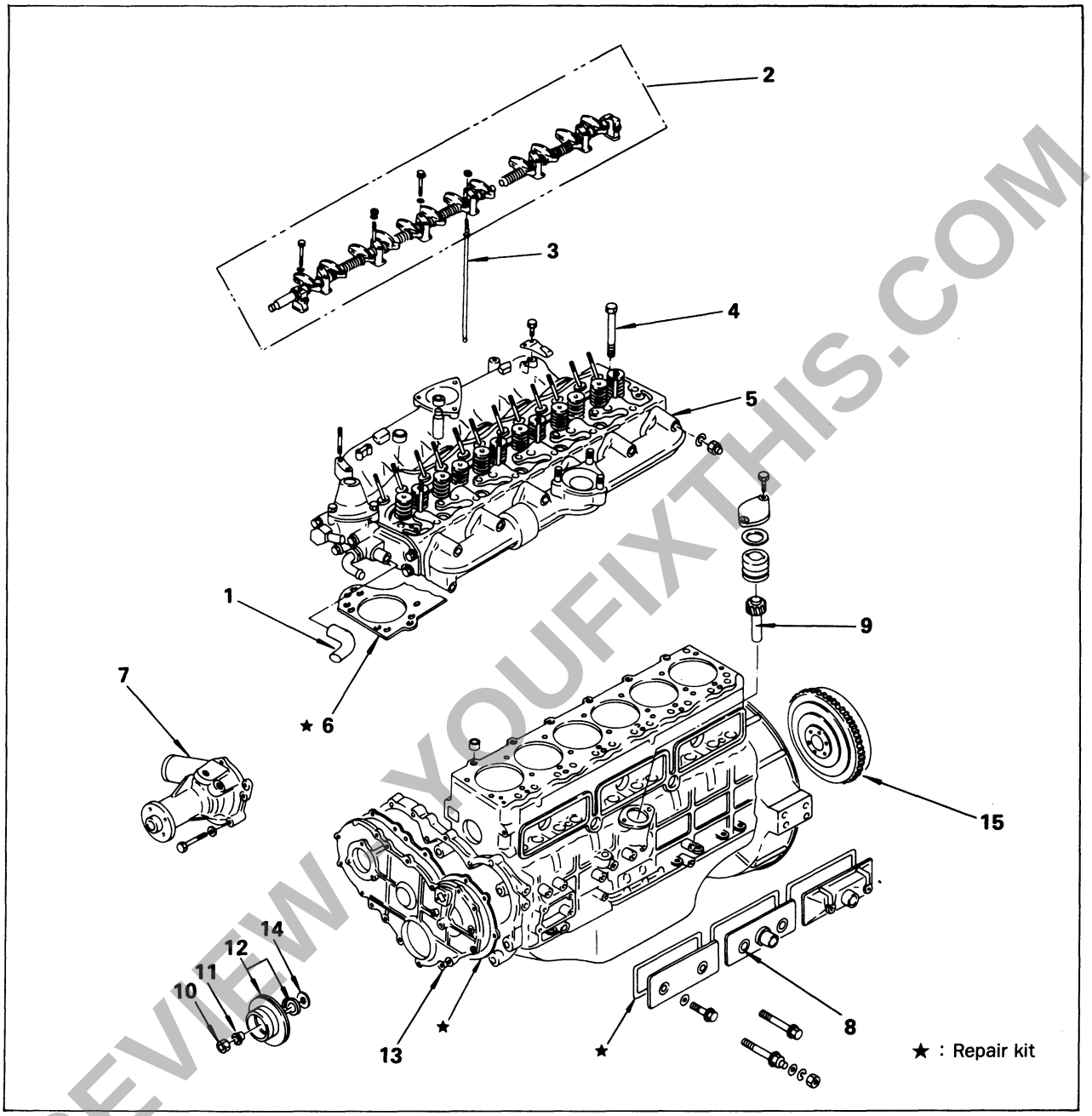


WARINING :
TEST FLUID FROM THE NOZZLE TESTER WILL SPRAY OUT UNDER GREAT PRESSURE. IT CAN EASILY PUNCTURE A PERSON'S SKIN. KEEP YOUR HANDS AWAY FROM THE NOZZLE TESTER AT ALL TIMES.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

2.3 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 assmbly
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
4. Oil thrower
▲ 15. Flywheel

PREVIEW YOUFIXTHIS.COM
Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 18 of 365 pages

The full manual includes:

- All 365 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Daewoo DB58T, MEGA200 Service Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual