

Repair instructions

Checking of the oil pressure

The oil pressure can be checked by connecting a manometer with hose to the connection for the oil pressure contact (thread size in cylinder head = 1/8"). The oil pressure should at running speed and temperature be 150-500 kPa (1.5-5 kp/cm², 21.3-71.1 lbf/in²).

If the oil pressure is too high or too low the reducing valve can be replaced first and then the oil pressure checked again.

The valve is fitted on the right-hand side of the cylinder block in front of the oil filter (Fig. 83).

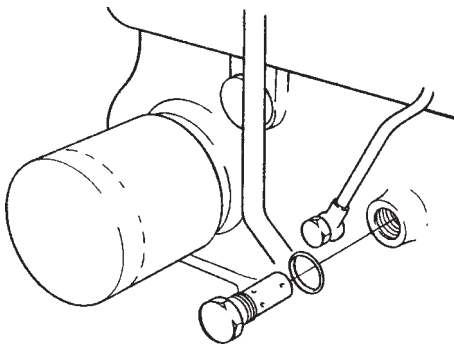


Fig. 83. Replacement of reducing valve

Oil pump

Dismantling of the oil pump

1. See under the heading "Dismantling of the timing gears" on pages 40 and 41. Carry out the work steps 1 to 9.
2. Remove the circlip for the intermediate gear. Take care of the circlip, sleeve washer, spring, shims and oil pump cover.

Inspection of the oil pump

1. Check that the oil pump cover and the inner and outer rotor are not worn or damaged.
2. Check the clearance between the outer and inner rotor (Fig. 84). Max. permissible clearance 0.25 mm (.0098 in).

Note. Contact Volvo Penta service department if the shaft journal for the intermediate gear and oil pump needs to be replaced.

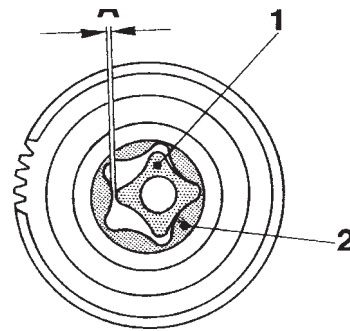


Fig. 84. Checking of oil pump clearance

1. Inner rotor
 2. Outer rotor
- A. Max 0.25 mm (.0098 in)

Fitting of the oil pump

When fitting the oil pump follow the items 4-10 and 12-17 under the heading "Fitting and adjustment" (transmission) on pages 42-44.

Replacing the oil filter

A WARNING! Hot oil can result in burn injuries.

1. Place a collection vessel under the oil filter.
2. Unscrew the oil filter and discard (watch out for oil spillage). Use a filter extractor.
3. Moisten the new filter's rubber gasket with oil and check its mating surface on the bracket.
4. Screw on the new filter by hand until the gasket makes contact with the sealing surface, and then tighten the filter an additional 1/2 turn.
5. Replenish if necessary the oil in the engine and start it. Check that no leakage occurs.

Oil channels

Clean up and flush the oil channels in the engine with cleaning liquid and then with steam or flushing oil at a pressure of 300-400 kPa (3-4 kp/cm², 42.6-56.8 lbf/int) in connection with more extensive engine overhaul.

Note: Do not forget to clean the oil pressure pipe between the cylinder block and cylinder head.

Clean the drilled oil channels in the cylinder block, crankshaft and in the connecting rods with a cleaning brush.