Cylinder Head - Remove - 4 Cylinder Engines

SMCS - 1100-011

Removal Procedure

Start By:

- a. Remove the exhaust manifold. Refer to Disassembly and Assembly, "Exhaust Manifold Remove and Install" for the correct procedure.
- b. Remove the fuel injectors. Refer to Disassembly and Assembly, "Fuel Injector Remove" for the correct procedure.
- c. Remove the glow plugs. Refer to Disassembly and Assembly, "Glow Plugs- Remove and Install" for the correct procedure.
- d. Remove the rocker shaft and the pushrods. Refer to Disassembly and Assembly, "Rocker Shaft and Pushrod Remove" for the correct procedure.
- e. Remove the water temperature regulator housing. Refer to Disassembly and Assembly, "Water Temperature Regulator Housing Remove and Install" for the correct procedure.
- f. Remove the fuel manifold. Refer to Disassembly and Assembly, "Fuel Manifold (Rail) Remove and Install" for the correct procedure.
- g. Remove the inlet manifold. Refer to Disassembly and Assembly, "Inlet Manifold Remove and Install" for the correct procedure.

NOTICE

Keep all parts clean from contaminants.

Contaminants may cause rapid wear and shortened component life.

NOTICE

Care must be taken to ensure that fluids are contained during performance of inspection, maintenance, testing, adjusting and repair of the product. Be prepared to collect the fluid with suitable containers before opening any compartment or disassembling any component containing fluids.

Dispose of all fluids according to local regulations and mandates.

1. Drain the coolant from the cooling system into a suitable container for storage or for disposal. Refer to Operation and Maintenance Manual, "Cooling System Coolant - Drain" for the correct draining procedure.

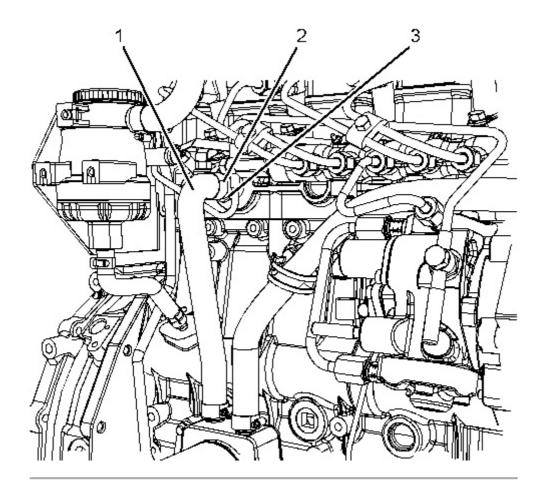


Illustration 1 g03865389

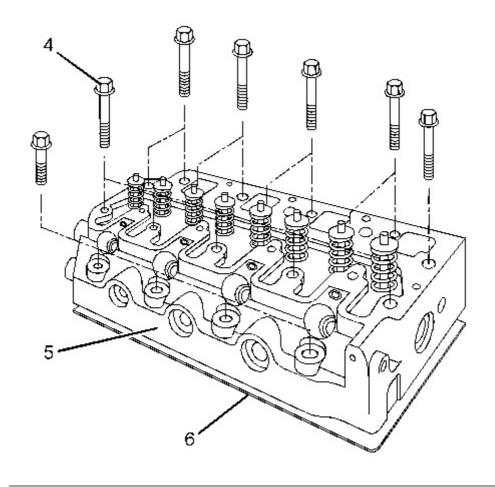


Illustration 2 g03865399

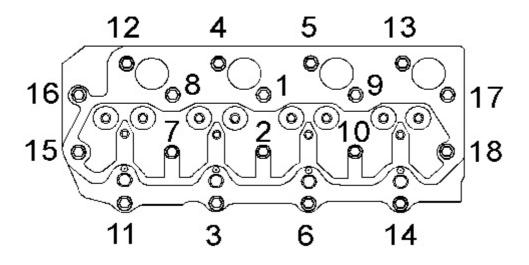


Illustration 3 g03337990

The cylinder head tightening sequence for four cylinder engines

2. Loosen hose clamp (2) and disconnect hose (1) from outlet (3).

3. Gradually loosen bolts (4) in reverse numerical order. Loosening the bolts in reverse numerical order will prevent distortion of the cylinder head.

Loosen the cylinder head bolts in the reverse order to the sequence that is shown in Illustration 3.

- 4. Remove bolts (4) from cylinder head (5).
- 5. Attach a suitable lifting device to cylinder head (5). The weight of the cylinder head is approximately 30 kg (66 lb). Carefully lift the cylinder head off the cylinder block.

Note: Do not use a lever to separate the cylinder head from the cylinder block. Take care not to damage the machined surfaces of the cylinder head during the removal procedure. Avoid contamination of the cylinder bores with coolant or with debris.

NOTICE

Place the cylinder head on a surface that will not scratch the face of the cylinder head.

6. Remove cylinder head gasket (6).

Note: The original cylinder head gasket should be retained for identification purpose. Gaskets of different thickness are available. Refer to Specifications, "Cylinder Head" for the correct information.

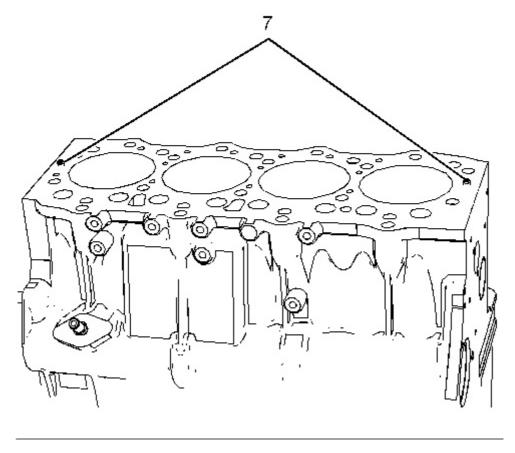


Illustration 4 g03800372

Typical example

7. Note the position of dowels (7) in the cylinder block. Do not remove the dowels unless the dowels are damaged.

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