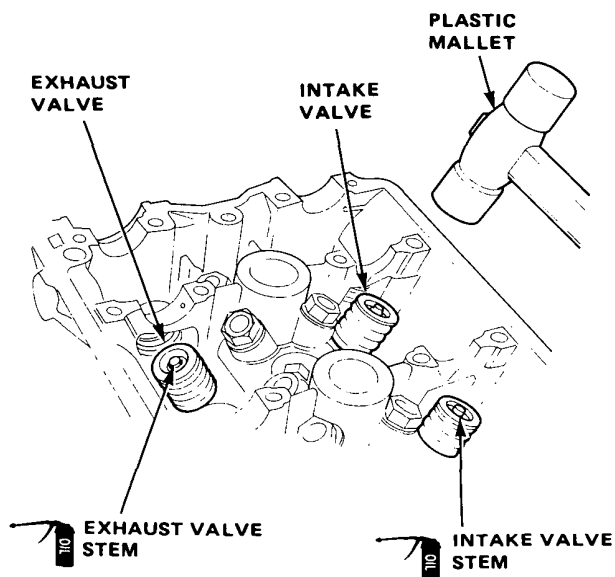


Valves

Installation

When installing valves in cylinder head, coat valve stems with oil before inserting into valve guides, and make sure valves move up and down smoothly.

When valves and springs are in place, lightly tap the end of each valve stem two or three times to ensure proper seating of valve and valve keepers (use plastic mallet).



Cylinder Head

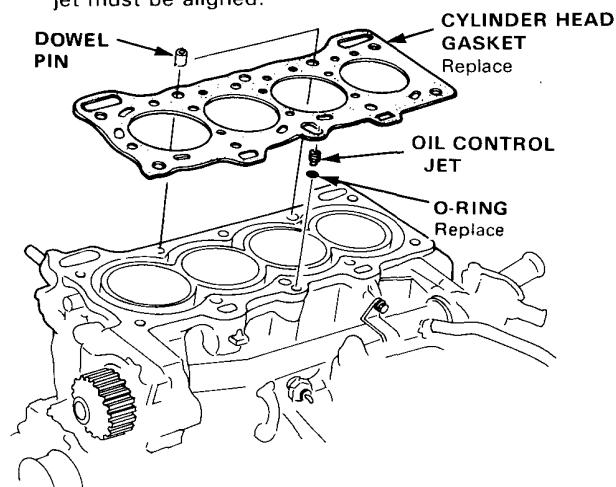


Installation

1. Install the cylinder head in reverse order of removal:

- Always use a new head gasket.
- Cylinder head and engine block surface must be clean.
- "UP" mark on timing belt pulley should be at the top.

NOTE: Cylinder head dowel pins and oil control jet must be aligned.

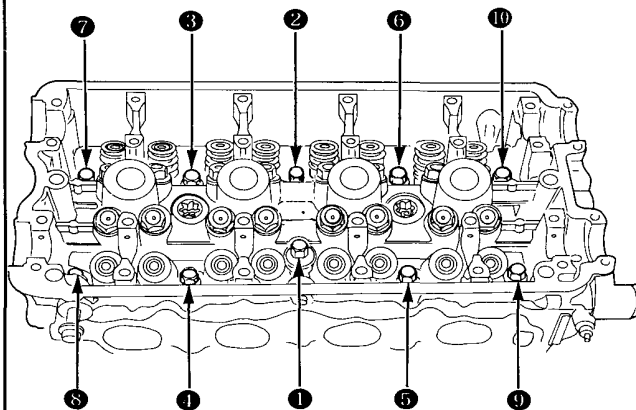


2. Tighten cylinder head bolts and nuts in two steps. In the first step tighten all bolts and nuts, in sequence, to about 30 N·m (3.0 kg·m, 22 lb·ft); in the final step tighten, in same sequence, to 65 N·m (6.5 kg·m, 47 lb·ft)

NOTE:

- Apply engine oil to the cylinder head bolts and the washers.
- Use the longer bolt at the position No.8 as shown.

CYLINDER HEAD BOLTS TORQUE SEQUENCE



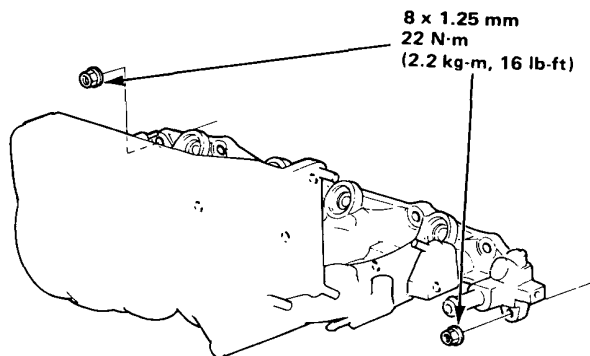
NOTE: Put longer bolt here.

(cont'd)

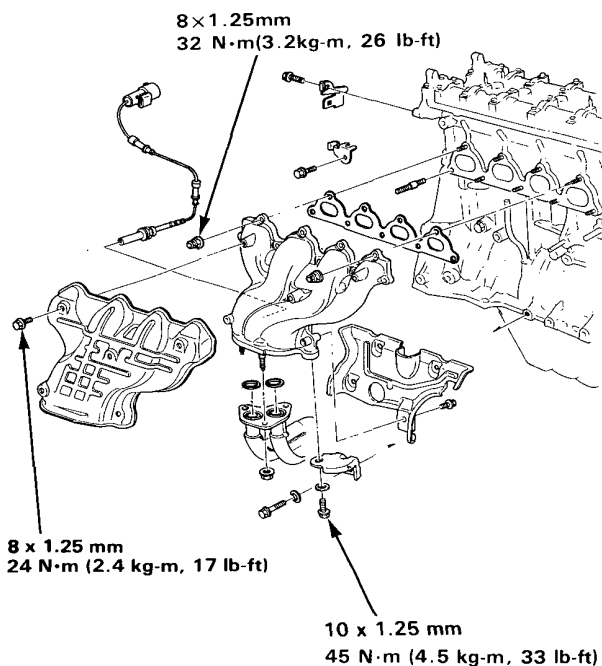
Cylinder Head

Installation (cont'd)

3. Install the intake manifold and tighten the nuts in a criss-cross pattern in 2 or 3 steps, beginning with the inner nuts.



4. Install the exhaust manifold and bracket.



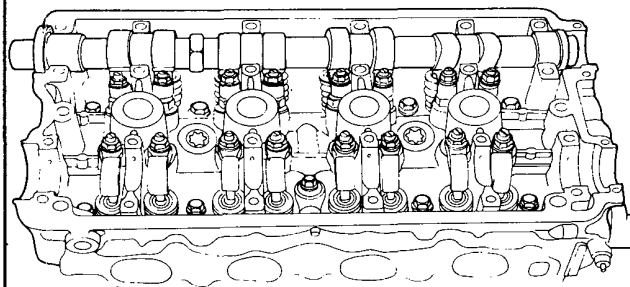
Cam/Rocker Arm and Camshaft Seal/Pulley

Installation

CAUTION:

- Make sure that the keyways on the camshafts are facing up (NO. 1 cylinder TDC).
- Valve locknuts should be loosened and adjusting screws backed off before installation.
- Replace the rocker arms in their original positions.

1. Place the rocker arms on the pivot bolts and the valve stems.

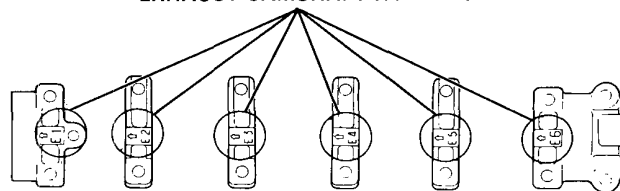


2. Install the camshafts and the camshaft seals with the open side (spring) facing in.

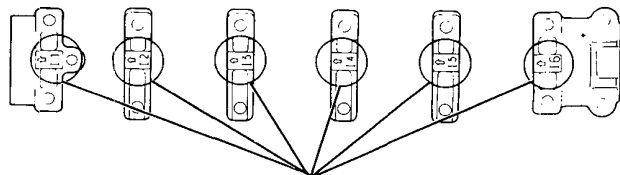
NOTE:

- "I" or "E" marks are stamped on the camshaft holders.
- Do not apply oil to the holder mating surface of camshaft seals.

EXHAUST CAMSHAFT HOLDERS

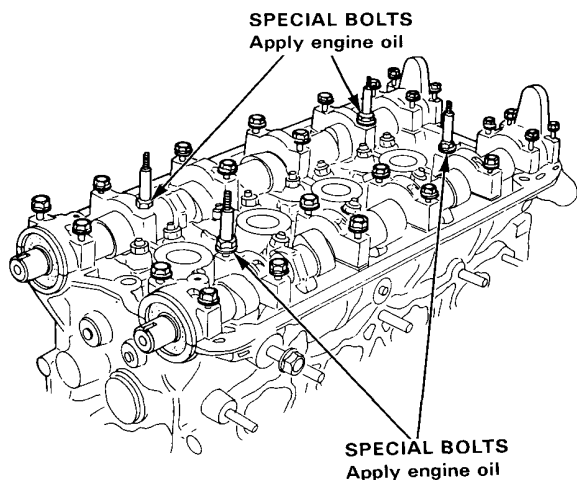


INTAKE CAMSHAFT HOLDERS

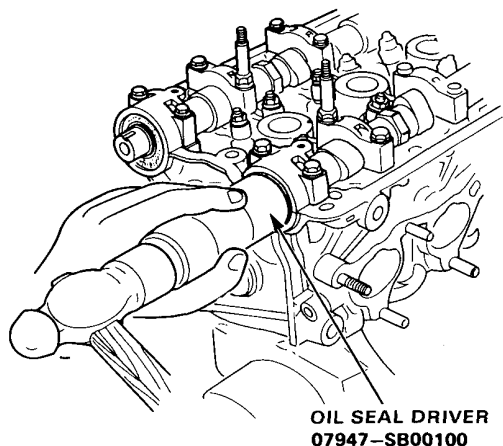




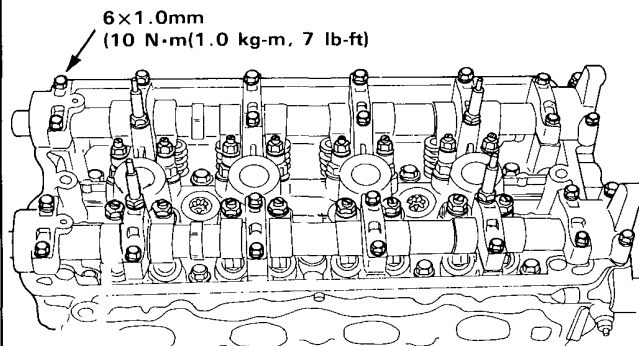
3. Apply liquid gasket to the head mating surfaces of the No.1 and No.6 camshaft holders then install them, along with the No.2, 3, 4 and 5.
4. Tighten the camshaft holders temporarily.
 - Make sure that the rocker arms are properly positioned on the valve stems.



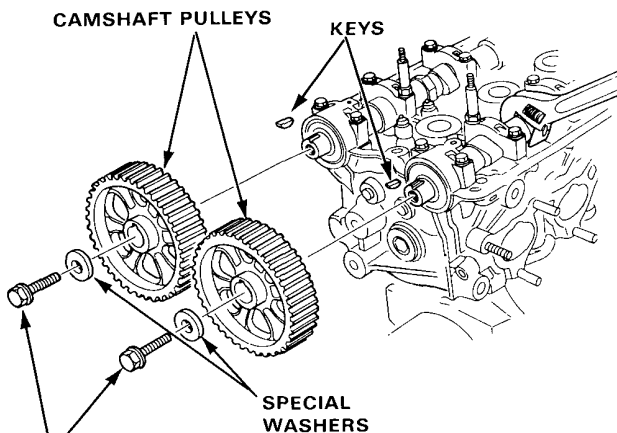
5. Press in the camshaft oil seal securely with the special tool.



6. Tighten each bolt two turns at a time in the sequence shown below to insure that the rockers do not bind on the valves.



7. Install keys into grooves in camshafts



RETAINING BOLTS
8×1.25 mm
38 N·m (3.8 kg-m, 27 lb-ft)

8. Push camshaft pulleys onto camshafts, then tighten retaining bolts to torque shown.
9. Adjust the valve timing (page 6-16).
10. After installation, check that all tubes, hoses and connectors are installed correctly.