

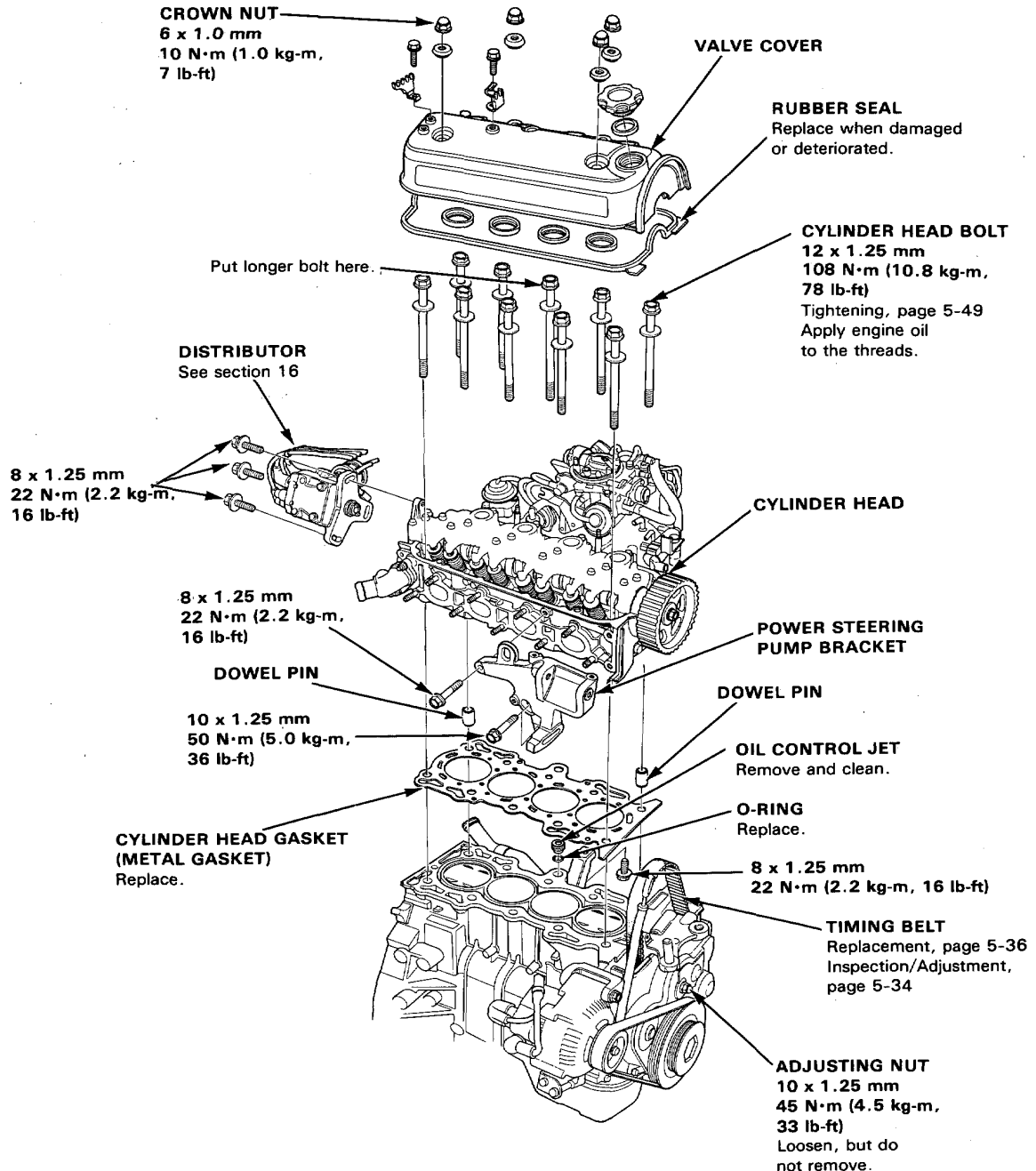
Cylinder Head

Removal

CAUTION:

- To avoid damaging the cylinder head, wait until the coolant temperature drops below 38 °C (100 °F) before removing it.
- In handling a metal gasket, care should be taken not to fold it or damage the contact surface of the gasket.

NOTE: Use new O-rings and gaskets when reassembling.





NOTE: Engine removal is not required in this procedure.
CAUTION: To avoid damaging the cylinder head, wait until the coolant temperature drops below 38 °C (100 ° F) before loosening the retaining bolts.

NOTE:

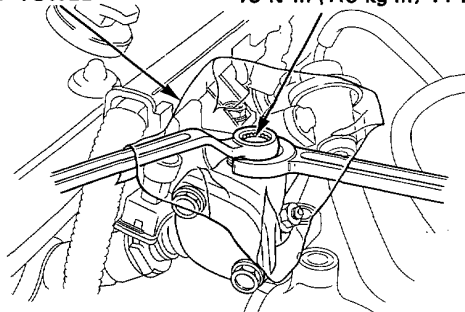
- Inspect the timing belt before removing the cylinder head.
 - Turn the crankshaft so that the No.1 cylinder is at top-dead-center (page 5-41).
 - Mark all emissions hoses before disconnecting them.
1. Disconnect the negative terminal from the battery.
 2. Drain the cooling system (page 5-69).
 3. Relieve fuel pressure (Fuel-Injected Engine).

▲WARNING Do not smoke while working on fuel system, keep open flame or spark away from work area. Drain fuel only into an approved container.

Fuel-Injected Engine:

SHOP TOWEL

SERVICE BOLT
 15 N·m (1.5 kg-m, 11 lb-ft)



FUEL PIPE

4. Disconnect the fuel feed hose.
5. Remove the vacuum hose, breather hose and air intake duct.
6. Remove the water bypass hose from the cylinder head.
7. Remove the charcoal canister hose from the throttle body.

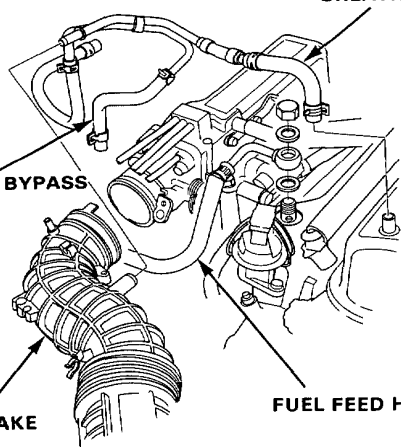
Fuel-Injected Engine:

BREATHING HOSE

WATER BYPASS
 HOSE

AIR INTAKE
 DUCT

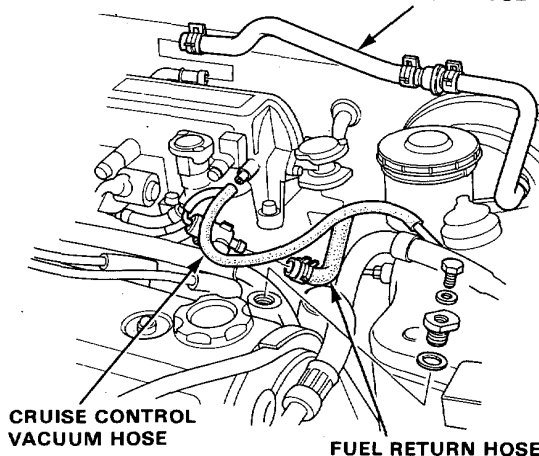
FUEL FEED HOSE



8. Remove the brake booster vacuum hose and mount vacuum tube (A/T only) from the intake manifold.
9. Remove the fuel return hose.
10. Remove the cruise control vacuum hose.

Fuel-Injected Engine:

BRAKE BOOSTER
 VACUUM HOSE



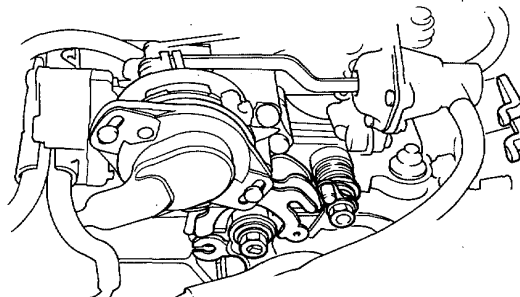
CRUISE CONTROL
 VACUUM HOSE

FUEL RETURN HOSE

11. Remove the throttle cable from the throttle body (page 5-55).
12. Remove the throttle control cable at the throttle body (A/T only).

NOTE: Take care not to bend the cable when removing it. Do not use pliers to remove the cable from the linkage. Always replace a kinked cable with a new one.

Carbureted Engine:



THROTTLE CONTROL
 CABLE (A/T only)

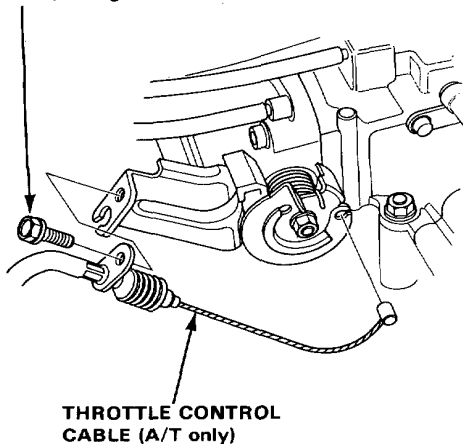
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Cylinder Head

Removal (cont'd)

Fuel-Injected Engine:

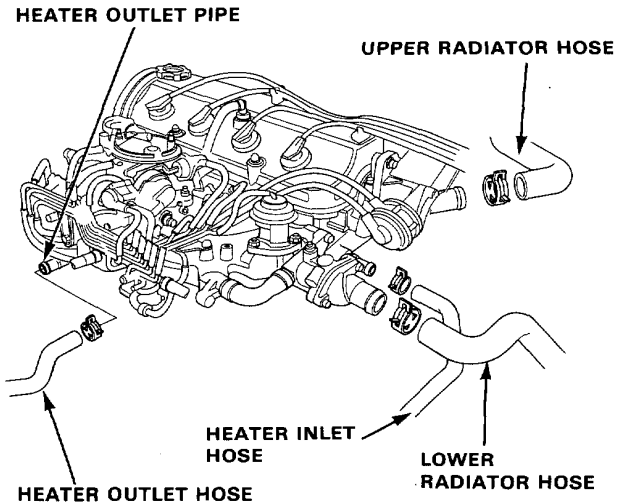
6 x 1.0 mm
12 N·m (1.2 kg-m, 9 lb-ft)



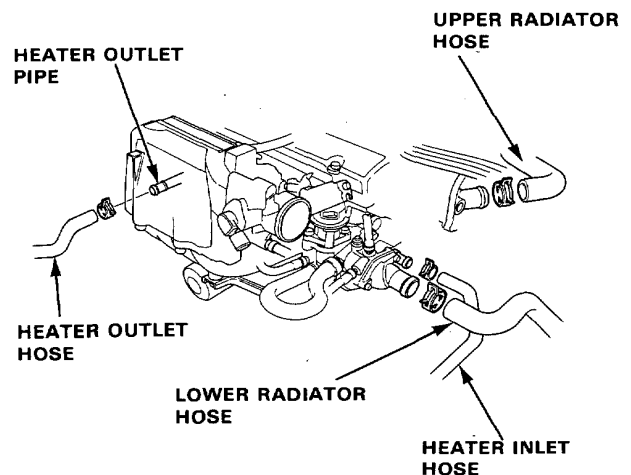
13. Disconnect the two connectors from the distributor.
 - Ignition coil connector
 - TDC/CRANK/CYL sensor connector
14. Remove the spark plug caps and distributor.
15. Remove the emission control box (page 5-55).
 - Do not disconnect emission hoses.
 - Disconnect the two connectors before removing it.
16. Remove the connector and the terminal from the alternator, then remove the engine wire harness from the valve cover.
17. Disconnect the engine wire harness connectors, then remove the harness clamps from the cylinder head and the intake manifold.
 - Four injector connectors (Fuel-Injected Engine)
 - EACV connector
 - TA sensor connector (Fuel-Injected Engine)
 - Thermostat (thermostat cover)
 - EGR valve lift sensor connector (Standard for some types)
 - Throttle angle sensor connector (Fuel-Injected Engine)
 - TW sensor connector
 - Coolant temperature gauge sending unit
 - Thermostat (water outlet cover) (Standard for some types)
 - Carburetor solenoid valve connectors (Carbureted Engine)
 - Air vent cut solenoid valve connector (Carbureted Engine except KP, KT models)

18. Remove the radiator hoses and heater hoses, then remove the heater outlet pipe bracket bolt from the intake manifold.

Carbureted Engine:

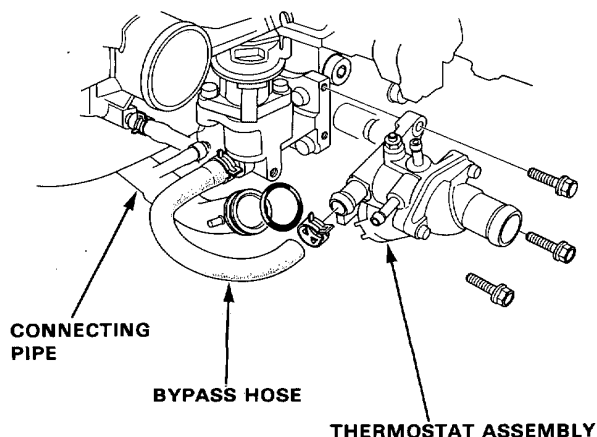


Fuel-Injected Engine:





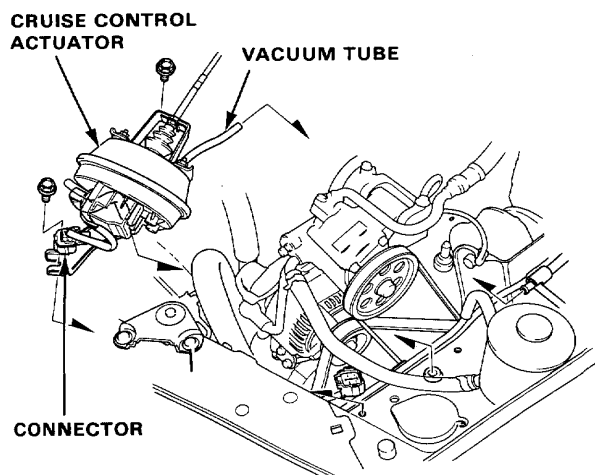
19. Remove the thermostat assembly from the intake manifold.



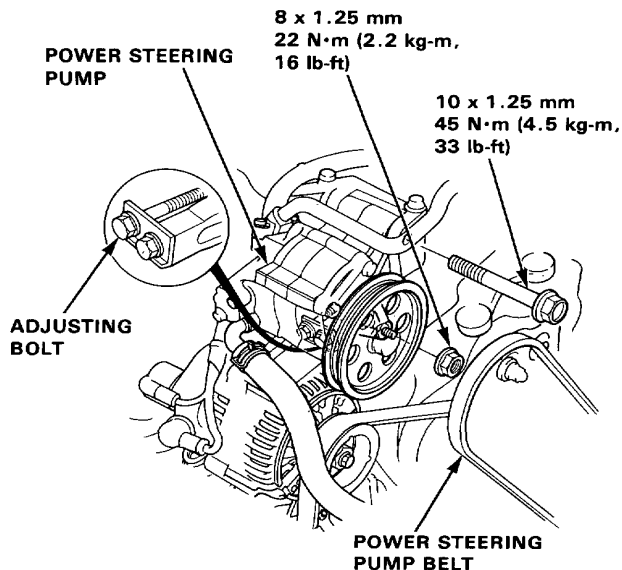
20. Disconnect the connector and the vacuum tube, then remove the cruise control actuator.

NOTE:

- Do not disconnect the control cable.
- Take care not to bend the cable when removing the actuator. Always replace a kinked cable with a new one.



21. Remove the mounting bolts and the V-belt from the power steering pump, then without disconnecting the hoses, pull the pump away from the mounting bracket.



22. Lift the car up and support it on safety stands.

▲ WARNING

- Make sure jacks and safety stands are placed properly and hoist brackets are attached to correct positions on the engine (See section 1)
- Apply parking brake and block rear wheels, so the car will not roll off stands and fall while you are working under it.

23. Remove the left front wheel.
24. Remove the splash shield (page 5-36).
25. Remove the intake manifold bracket bolts.

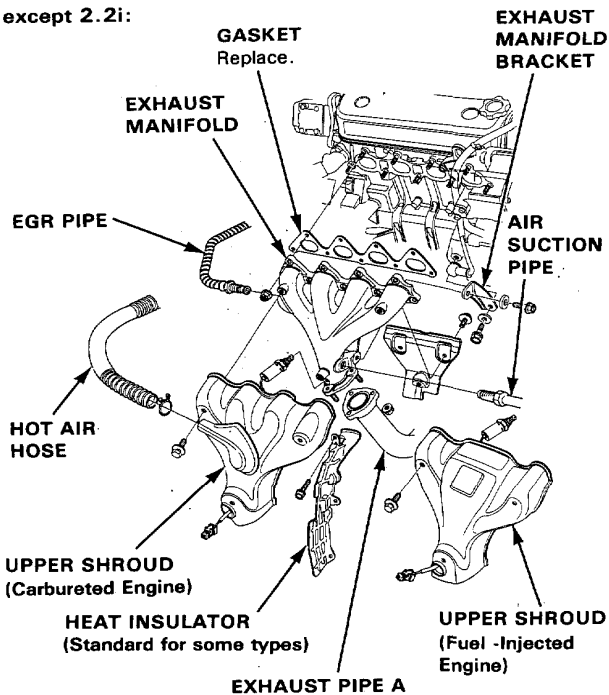
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Cylinder Head

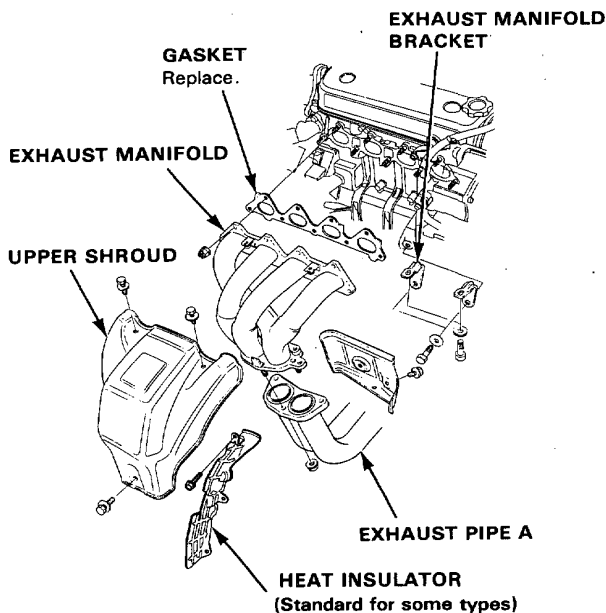
Removal (cont'd)

26. Remove the exhaust manifold upper shroud.
27. Remove the exhaust manifold bracket.
28. Disconnect the exhaust pipe A from the exhaust manifold.
29. Remove the exhaust manifold from the cylinder head.
30. Remove the exhaust manifold heat insulator.

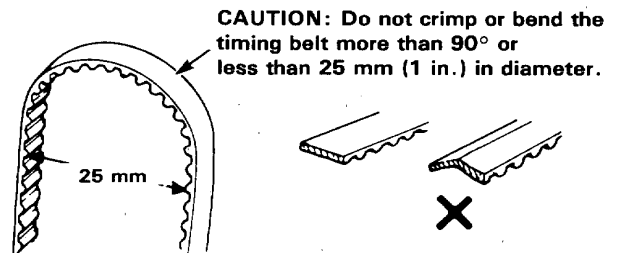
except 2.2i:



2.2i:

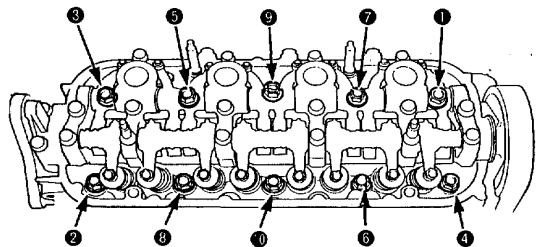


31. Remove the valve cover and engine ground wire.
32. Remove the side engine mount bracket stay, then remove the timing belt upper cover.
33. Loosen the timing belt adjusting bolt, and release the timing belt.
NOTE: Push the tensioner to release tension from the belt, then retighten the adjusting bolt.
34. Remove the timing belt from the driven pulley.

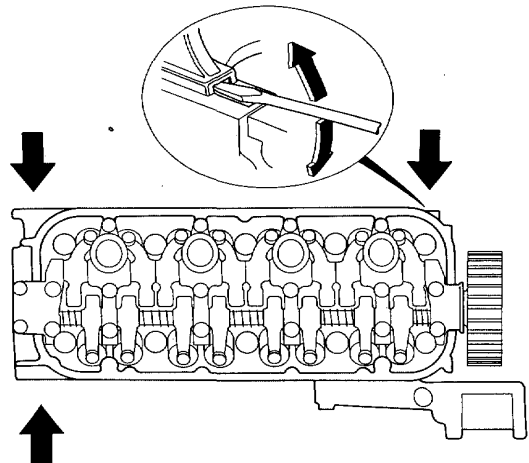


35. Remove the cylinder head bolts, then remove the cylinder head.
CAUTION: To prevent warpage, unscrew the bolts in sequence 1/3 turn at a time; repeat the sequence until all bolts are loosened.

CYLINDER HEAD BOLTS LOOSENING SEQUENCE



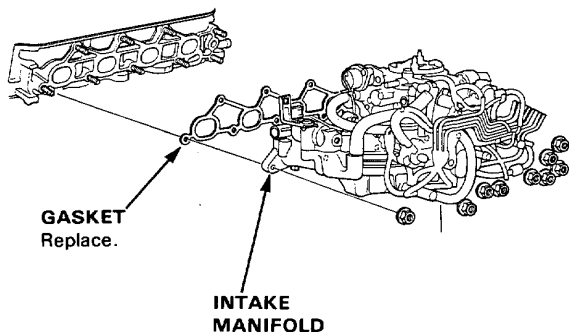
NOTE: Separate the cylinder head from the block with a flat blade screwdriver as shown.



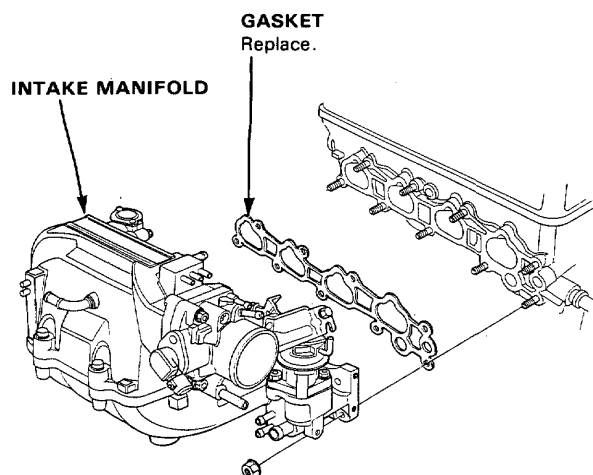


36. Remove the intake manifold.

Carbureted Engine:



Fuel-Injected Engine:

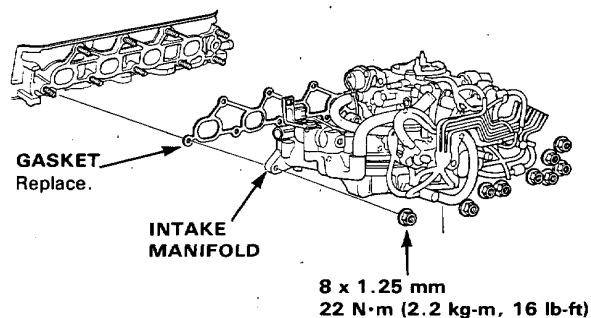


Installation

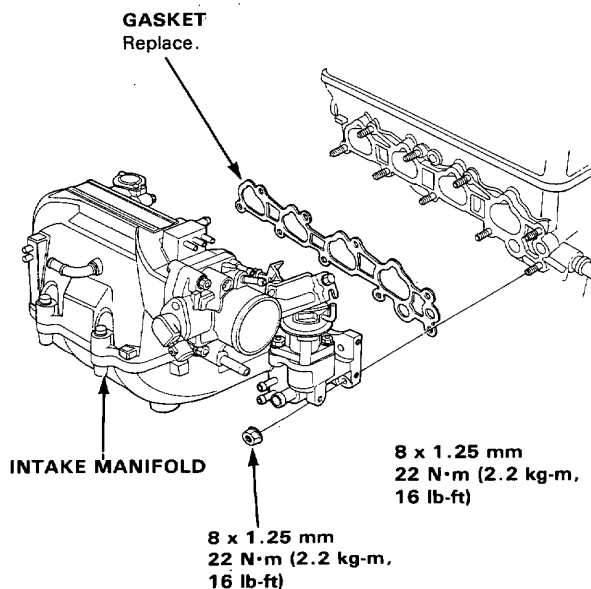
Install the cylinder head in the reverse order of removal:

- Always use a new head gasket.
 - Cylinder head and engine block surface must be clean.
 - "UP" mark on camshaft pulley should be at the top.
 - Turn the crankshaft so the No.1 cylinder is at TDC (top dead center) (page 5-41).
1. Install the intake manifold and tighten the nuts in a criss-cross pattern in 2 or 3 steps, beginning with the inner nuts.
- Always use a new intake manifold gasket.

Carbureted Engine:



Fuel-Injected Engine:



(cont'd)