

Cylinder Heads

Removal

Engine removal is not required for this procedure.

⚠ WARNING Make sure jacks and safety stands are placed properly and hoist brackets are attached to correct positions on the engine.

CAUTION:

- Use a fender cover (special tool) to avoid damaging painted surfaces.
- Unplug the wiring connectors carefully while holding the connector portion to avoid damage.
- To avoid damaging the cylinder heads, wait until the engine coolant temperature drops below 100°F (38°C) before loosening the retaining bolts.
- Do not open the engine cover when the roof panel is stored (NSX-T open top).

NOTE:

- Unspecified items are common.
- Mark all wiring and hoses to avoid misconnection. Also, be sure that they do not contact other wiring or hoses or interfere with other parts.
- Inspect the timing belt before removing the cylinder head.
- Turn the crankshaft pulley so that the No. 1 piston is at top dead center (see page 6-19).

1. Disconnect the negative terminal from the battery.

2. Remove the expansion tank cap.

⚠ WARNING Use care when removing the expansion tank cap to avoid scalding by engine coolant or steam.

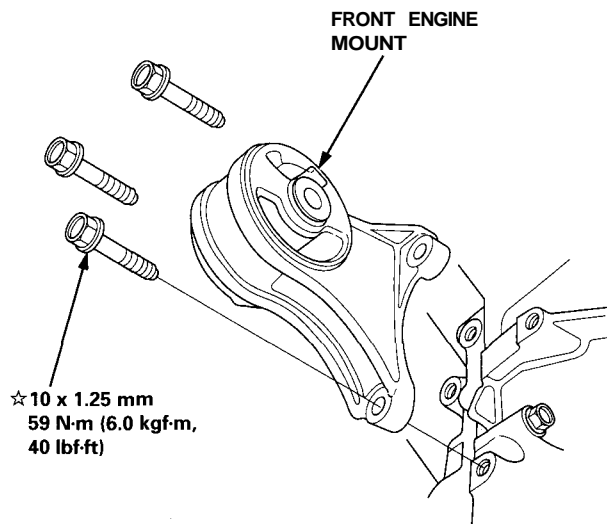
3. Raise the car, then remove the right rear wheel/tire.

4. Drain the engine coolant (see page 10-5).

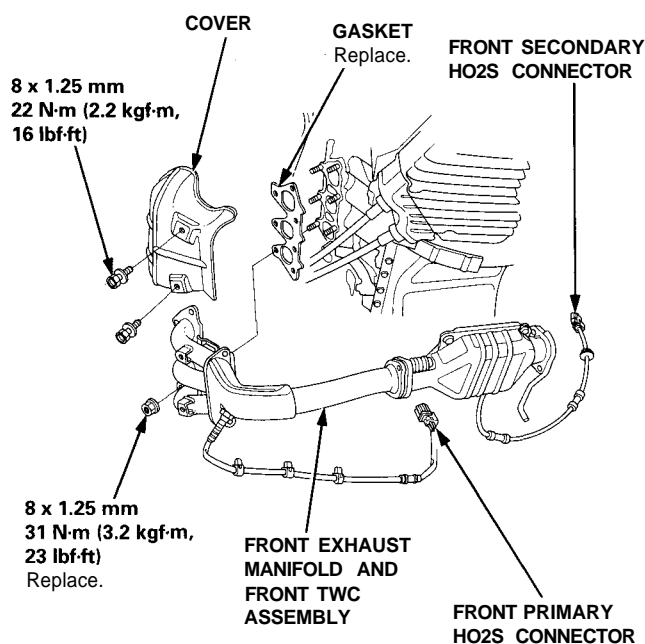
☆: CORROSION RESISTANT BOLT

5. Remove the front exhaust manifold (M/T).

- 1. Remove the center rod assembly and under guard (see page 5-7).
- 2. Remove the rear beam rod assembly (see page 5-8).
- 3. Remove the front engine mount, then remove the front beam (see page 5-8).
- 4. Remove the front mount.



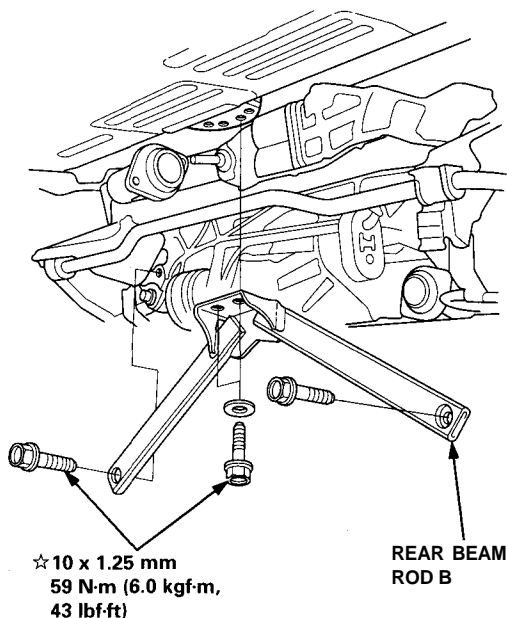
- 5. Disconnect the front primary heated oxygen sensor (front primary HO2S) connector and front secondary heated oxygen sensor (front secondary HO2S) connector, then remove the front exhaust manifold and front three way catalytic converter (TWC) assembly.



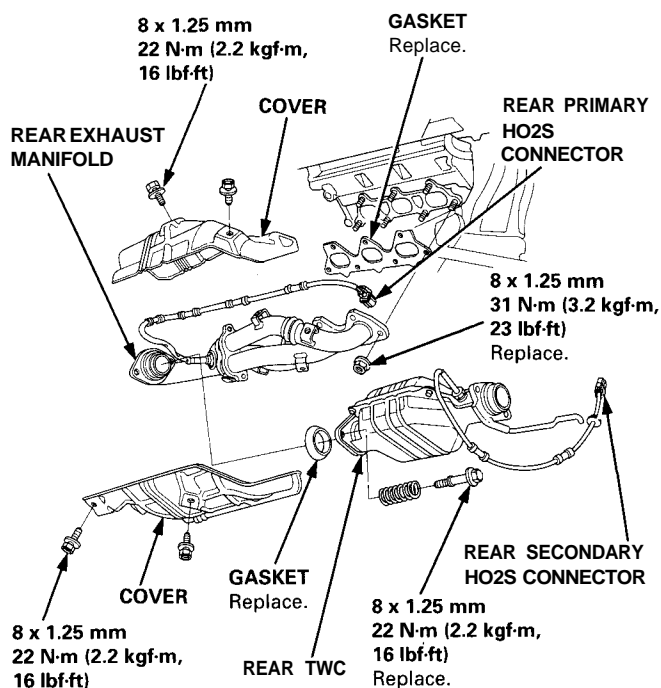


6. Remove the rear exhaust manifold (M/T).

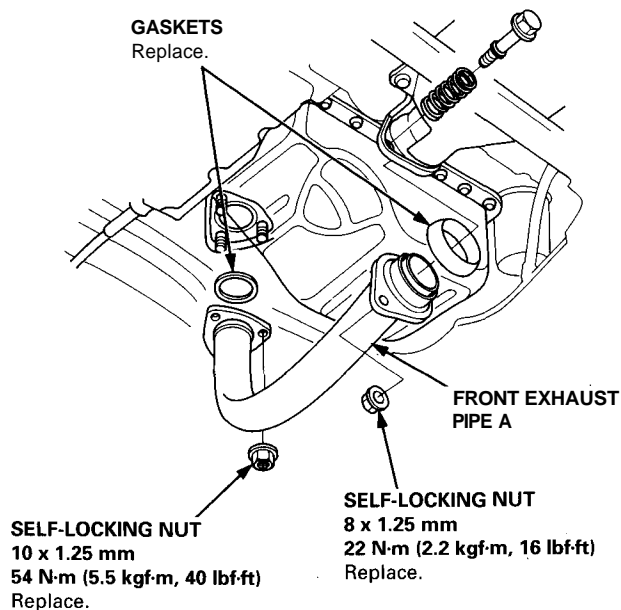
- 1. Remove the muffler (see page 5-9).
- 2. Remove the rear beam rod B.



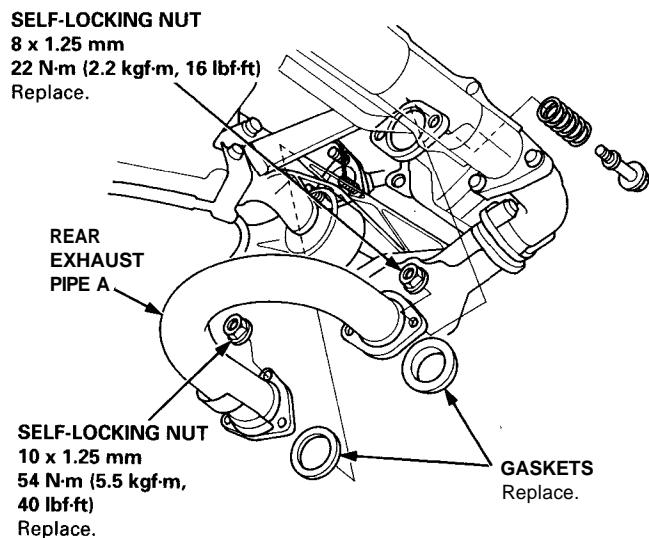
- 3. Disconnect the rear secondary heated oxygen sensor (rear secondary HO2S) connector, then remove the rear TWC.
- 4. Remove the rear exhaust manifold covers.
- 5. Disconnect the rear primary heated oxygen sensor (rear primary HO2S) connector, then remove the rear exhaust manifold.



7. Remove the engine under guard, then remove the front exhaust pipe A (A/T).



8. Remove the rear exhaust pipe A (A/T).



9. Remove the engine oil cooler base assembly (see page 6-15).

10. Lower the car.

11. Remove the strut brace (see page 5-3).

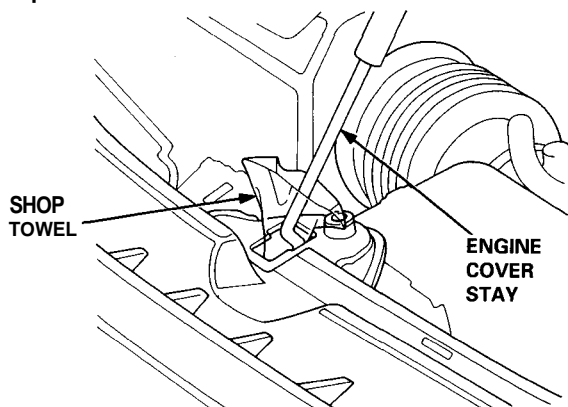
(cont'd)

Cylinder Heads

Removal (cont'd)

12. Remove the engine cover stay from the strut brace, then set the engine cover stay between the engine cover and rear hatch latch (NSX-T open top).

CAUTION: Use a shop towel to avoid damaging painted surfaces.



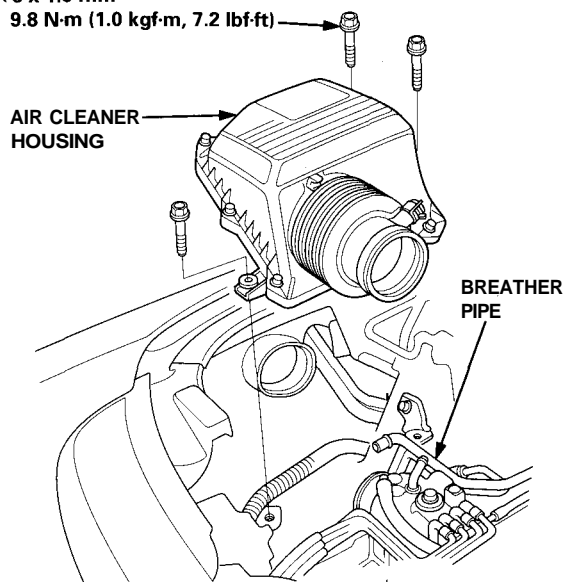
13. Relieve fuel pressure (see [section 11](#)).

⚠ 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.

14. Remove the fuel feed pipe and fuel return hose (see page [5-5](#)).
15. Remove the evaporative emission (EVAP) control canister hose and brake booster vacuum hose (see page [5-5](#)).
16. Disconnect the breather pipe and vacuum hose, then remove the air cleaner housing.

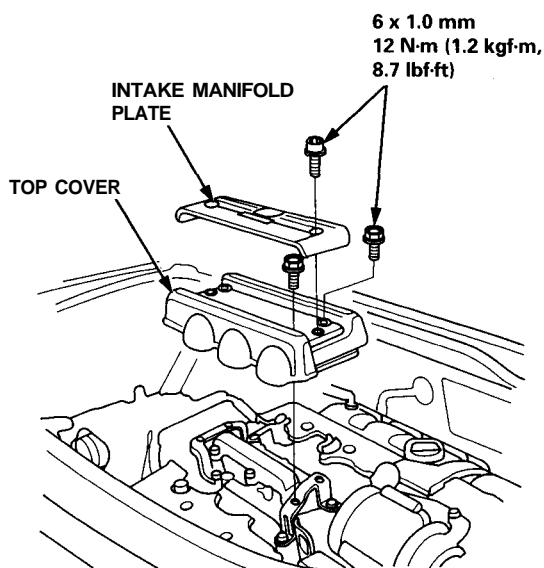
☆ 6 x 1.0 mm

9.8 N·m (1.0 kgf·m, 7.2 lbf·ft)



☆: CORROSION RESISTANT BOLT

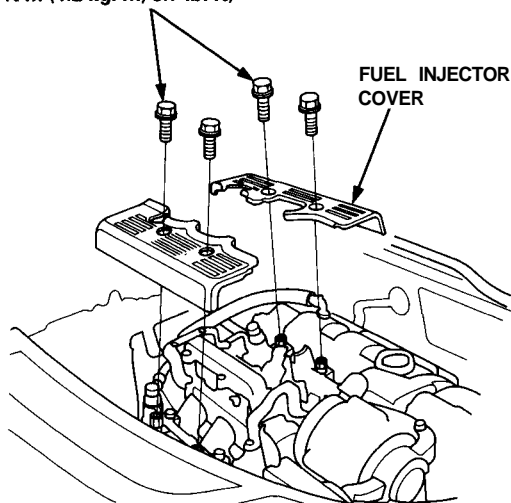
17. Remove the hoses, then remove the expansion tank (see page [5-5](#)).
18. Remove the radiator hoses and heater hose (see page [5-6](#)).
19. Disconnect the two connectors, then remove the control box (see page [5-6](#)).
20. Remove the intake manifold plate and top cover.



21. Remove the fuel injector covers.

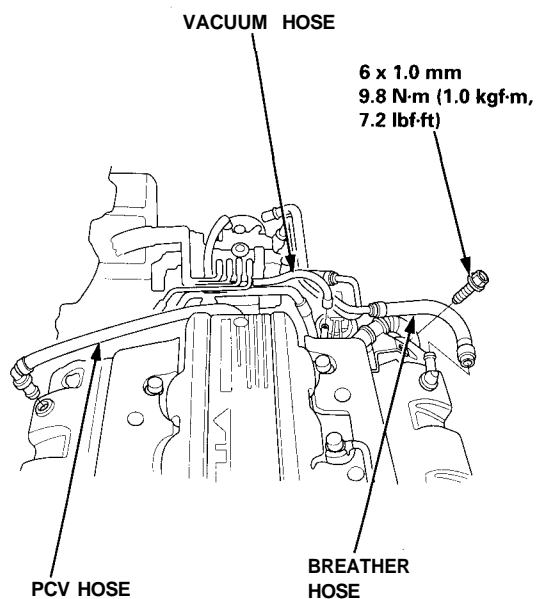
6 x 1.0 mm

12 N·m (1.2 kgf·m, 8.7 lbf·ft)

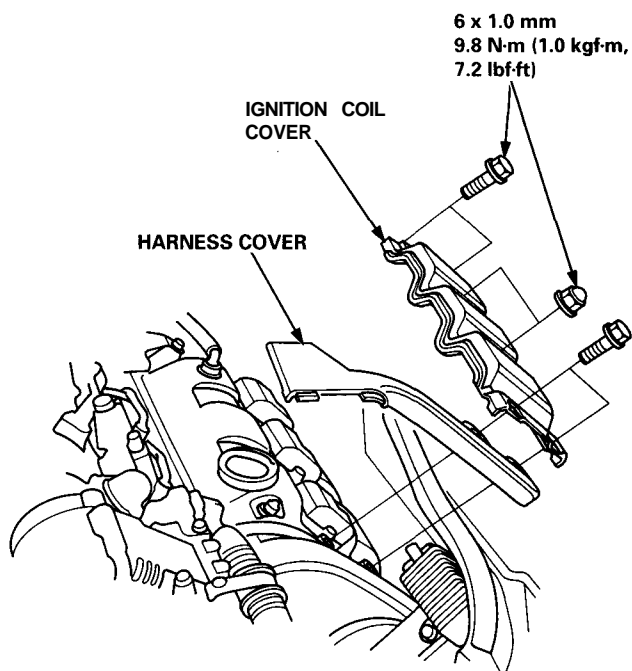




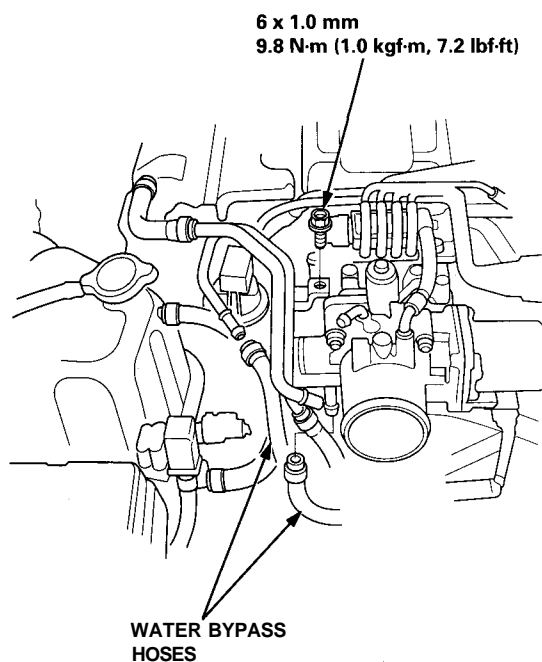
22. Remove the breather hose, positive Crankcase ventilation (PCV) hose and vacuum hose.



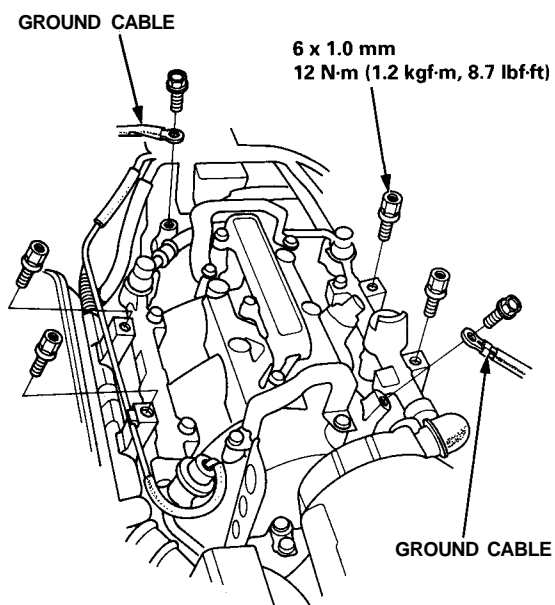
23. Remove the ignition coil cover and harness cover.



24. Remove the water bypass hoses.



25. Remove the harness covers and ground cables from the intake manifold.



(cont'd)

Cylinder Heads

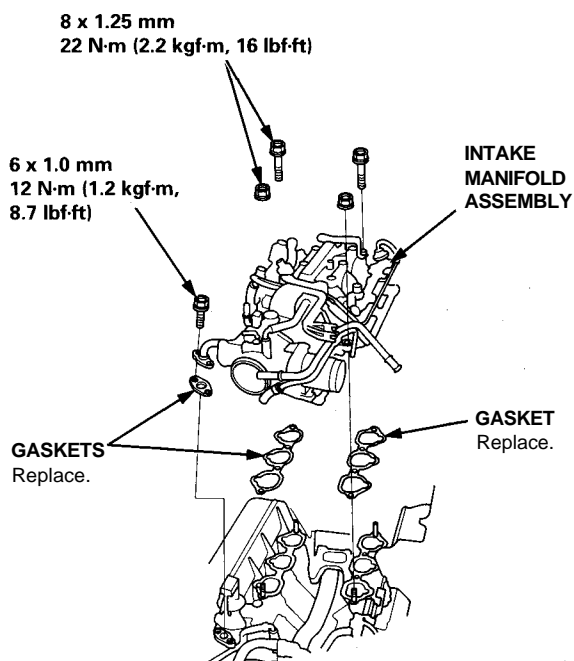
Removal(cont'd)

26. Remove the engine wire harness connectors and wire harness clamps from the cylinder head and intake manifold.

- Six injector connectors
- Intake air temperature (IAT) sensor connector
- CKP/CYP sensor connector
- Heated oxygen sensor (HO2S) connectors
- Ignition control module (ICM) connectors
- Engine coolant temperature (ECT) sensor connector
- Coolant temperature gauge sending unit connector
- Radiator fan control sensor connector
- Exhaust gas recirculation (EGR) valve lift sensor connector
- Throttle position sensor connector
- Engine oil pressure gauge sending unit connector
- Knock sensor connector
- VTEC solenoid valve connectors
- VTEC pressure switch connectors
- Engine oil pressure switch connector
- Alternator connector
- Alternator terminal
- Throttle body 6P connector

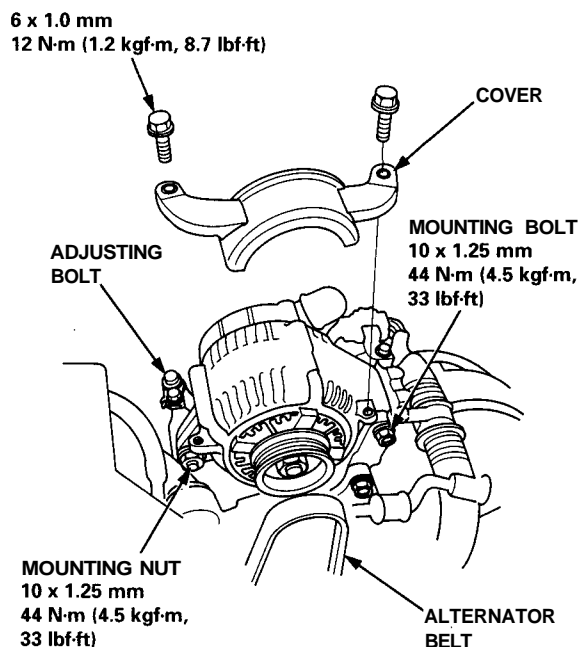
27. Remove the ignition coils and connector.

28. Remove the EGR pipe and intake manifold assembly.

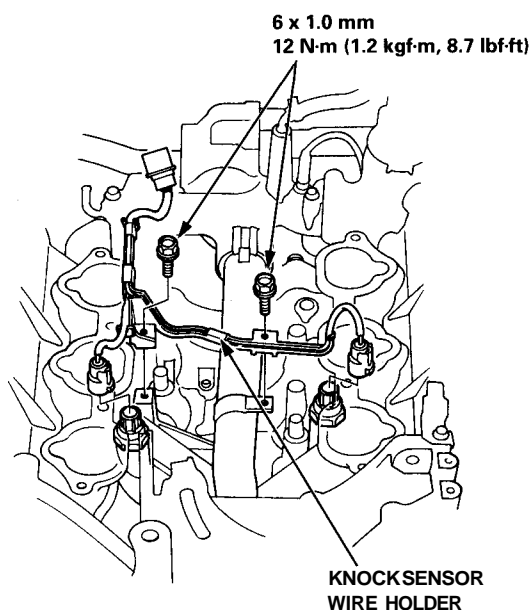


29. Loosen the adjusting nut and idler pulley center nut, then remove the air conditioning compressor belt (see page 6-17).

30. Remove the cover, adjusting bolt, mounting bolt and mounting nut, then remove the alternator belt and alternator.

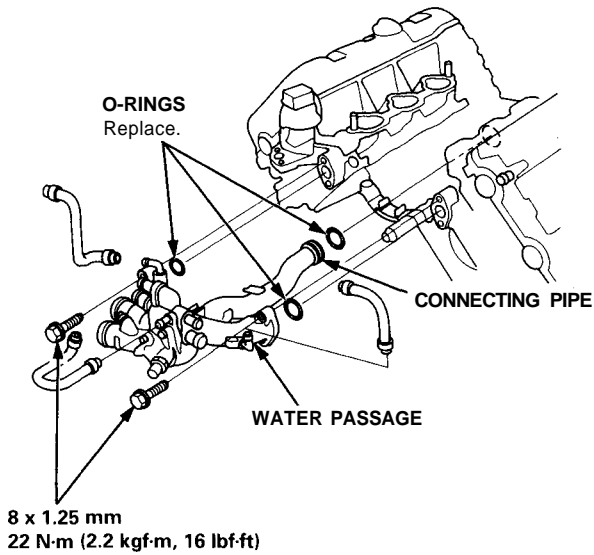


31. Disconnect the knock sensor connector, then remove the wire holder.

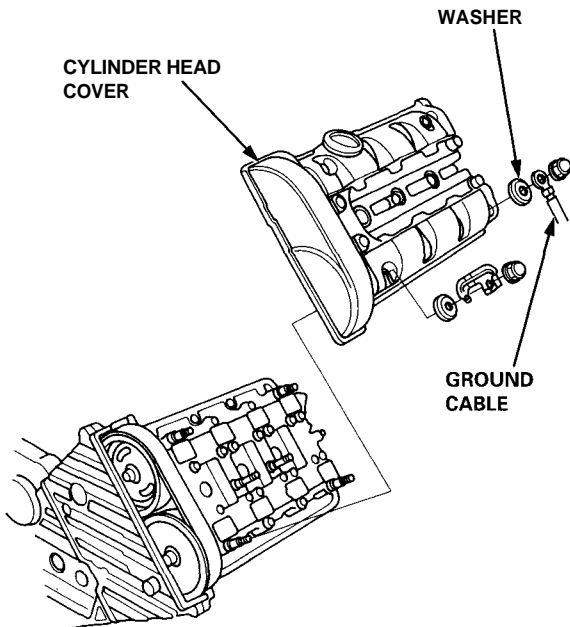




32. Remove the water passage.

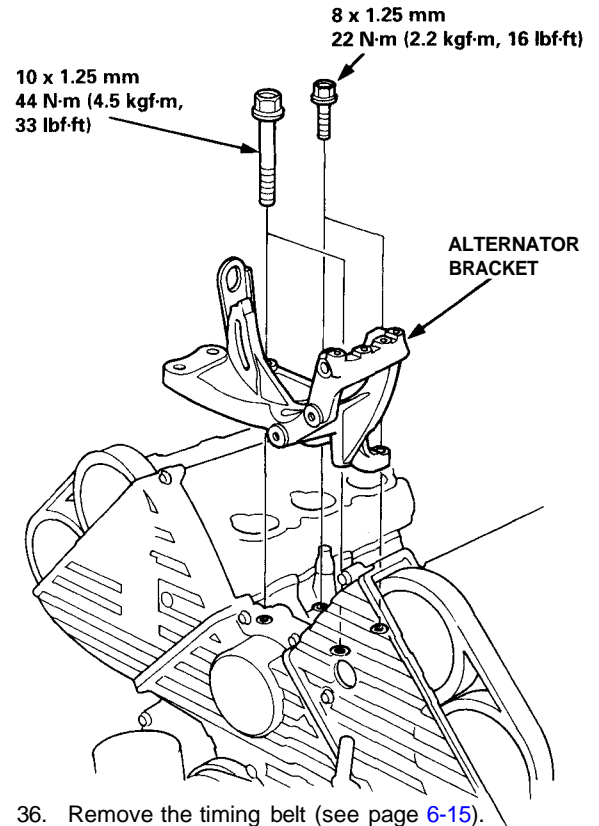


33. Remove the cylinder head covers.



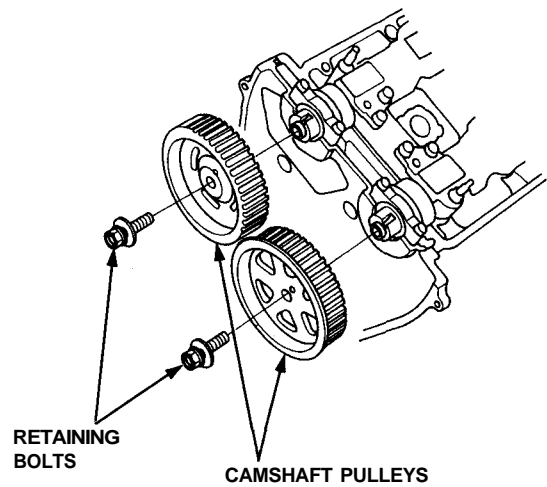
34. Remove the alternator bracket stiffener (see page 6-16).

35. Remove the alternator bracket.



36. Remove the timing belt (see page 6-15).

37. Remove the camshaft pulleys.

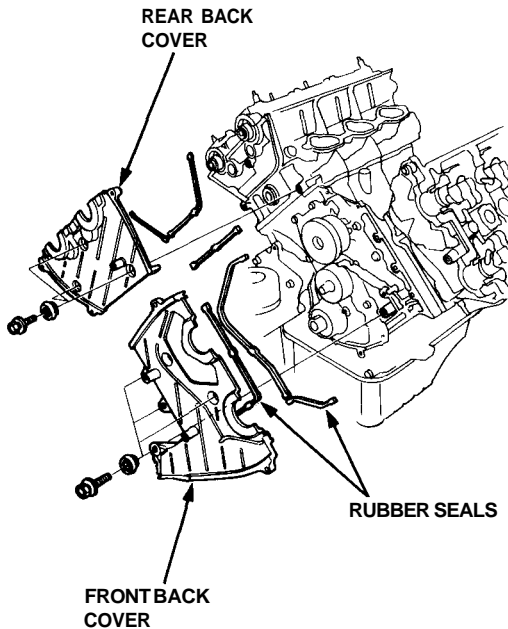


(cont'd)

Cylinder Heads

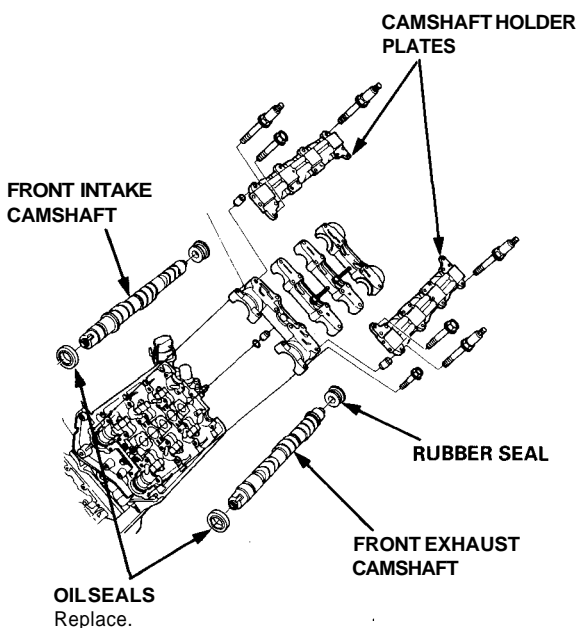
Removal (cont'd)

38. Remove the front and rear back covers.



39. Loosen the rocker arm locknuts and the adjusting screws.

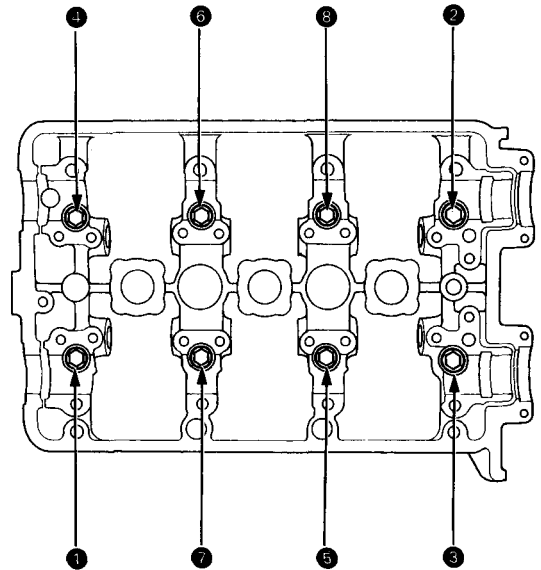
40. Remove the camshaft holder plates, camshaft holders and camshafts.



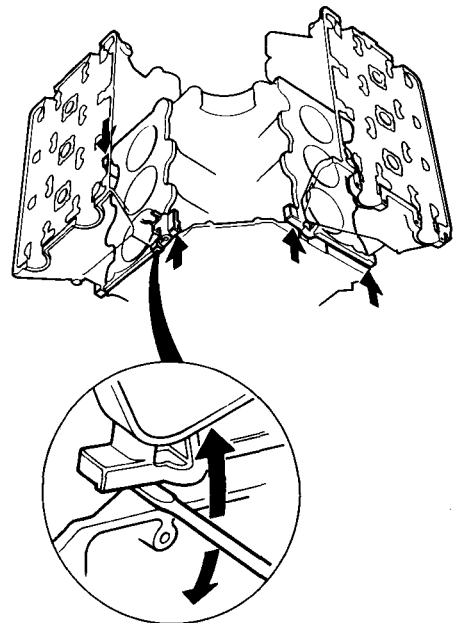
41. Remove the cylinder head bolts, then remove the cylinder head.

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.



42. Remove the front and rear exhaust manifolds (A/T see page 9-5).