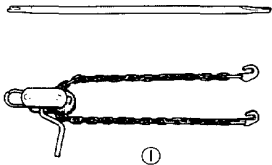


Special Tools

Special Tools				
Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07KAK—SJ40100	Engine Tilt Hanger Set	1	
				

Engine Removal/Installation



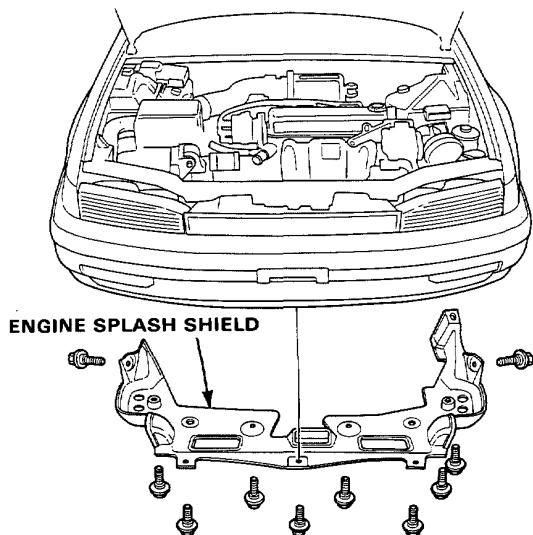
⚠ WARNING

- 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 car will not roll off stands and fall on you while working under it.

CAUTION:

- Use fender covers to avoid damaging painted surfaces.
- Unspecified items are common for the carburetor cars, PGM-FI cars, M/T cars, A/T cars, and the A/C equipped cars.
- Remove the wiring slowly while holding the coupler and the connector portion to avoid disconnecting.
- Mount the wiring or tubes to avoid misconnection. Also, be sure that they do not contact other cords or tubes or interference with other parts.

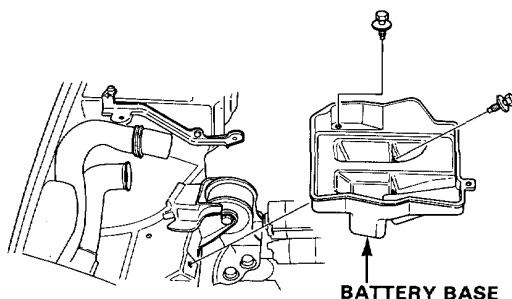
1. Fix the engine hood in a vertical position.
 - Do not remove the hood.
2. Remove the engine splash shield.



3. Disconnect the battery negative terminal first, then the positive terminal. Remove the battery.

CAUTION: Clean battery posts and cable terminals with sandpaper, assemble, then apply grease to prevent corrosion.

4. Remove the battery base.



5. Drain the engine oil. Remove the oil filler cap to speed draining. Reinstall the drain plug using a new washer.

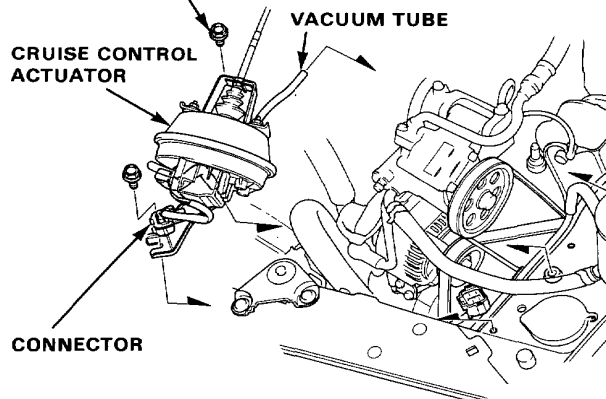
CAUTION: Used engine oil may cause skin cancer if repeatedly left in contact with the skin for prolonged periods. Although this is unlikely unless you handle used oil on a daily basis, it is still advisable to thoroughly wash your hands with soap and water as soon as possible after handling used oil.

6. Drain the coolant from the radiator into a clean pan so it may be reused. Remove the radiator cap to speed draining.

⚠ WARNING Use care when removing the radiator cap to avoid scalding by hot coolant or steam.

7. Drain transmission oil/fluid. Use a 3/8" drive socket wrench to remove the drain plug. Remove the oil filler plug or gauge to speed draining. Reinstall the drain plug using a new washer.
8. Remove the air intake duct and the air cleaner.
9. Disconnect the connector and the vacuum tube, then remove the cruise control actuator.

6 x 1.0 mm
10 N·m (1.0 kg-m, 7 lb-ft)



(cont'd)

Engine Removal/Installation

(cont'd)

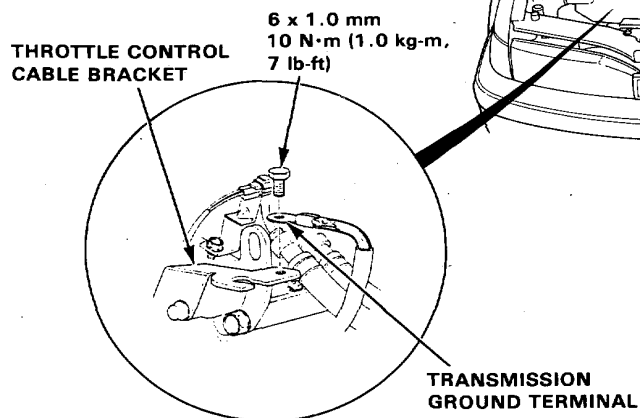
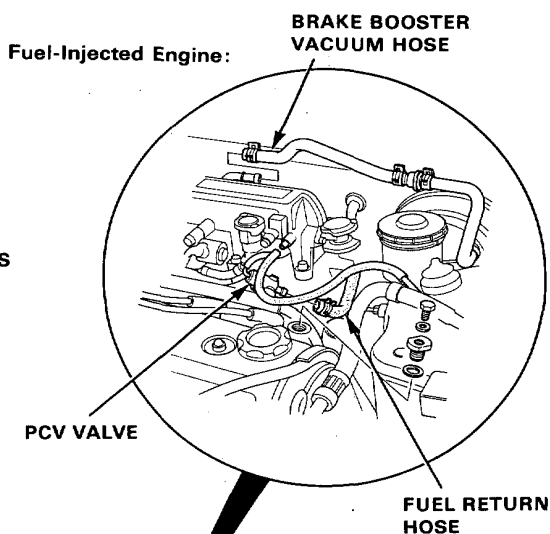
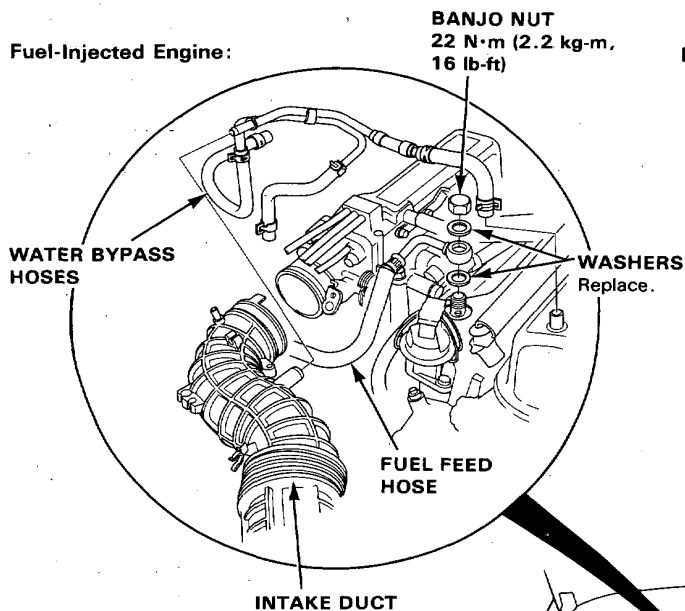
10. Relieve fuel pressure by slowly loosening the service bolt on the fuel pipe about one turn (Fuel-Injected Engine) (See section 11).

⚠ WARNING Do not smoke while working on the fuel system. Keep open flame away from work area. Drain fuel only into an approved container.

CAUTION:

- Before disconnecting any fuel line, the fuel pressure should be relieved as described above.
- Place a shop towel over the fuel filter to prevent pressurized fuel from spraying over the engine.

11. Remove the fuel feed hose.
12. Remove the fuel return hose from the PCV valve.
13. Disconnect the vacuum tube from the charcoal canister.
14. Disconnect the charcoal canister hose from throttle body.
15. Remove the brake booster vacuum hose and mount vacuum tube from the intake manifold.
16. Remove the ground cable from transmission.





17. Disconnect two connectors and remove the control box from the fire wall.

NOTE: Do not disconnect the vacuum hoses,

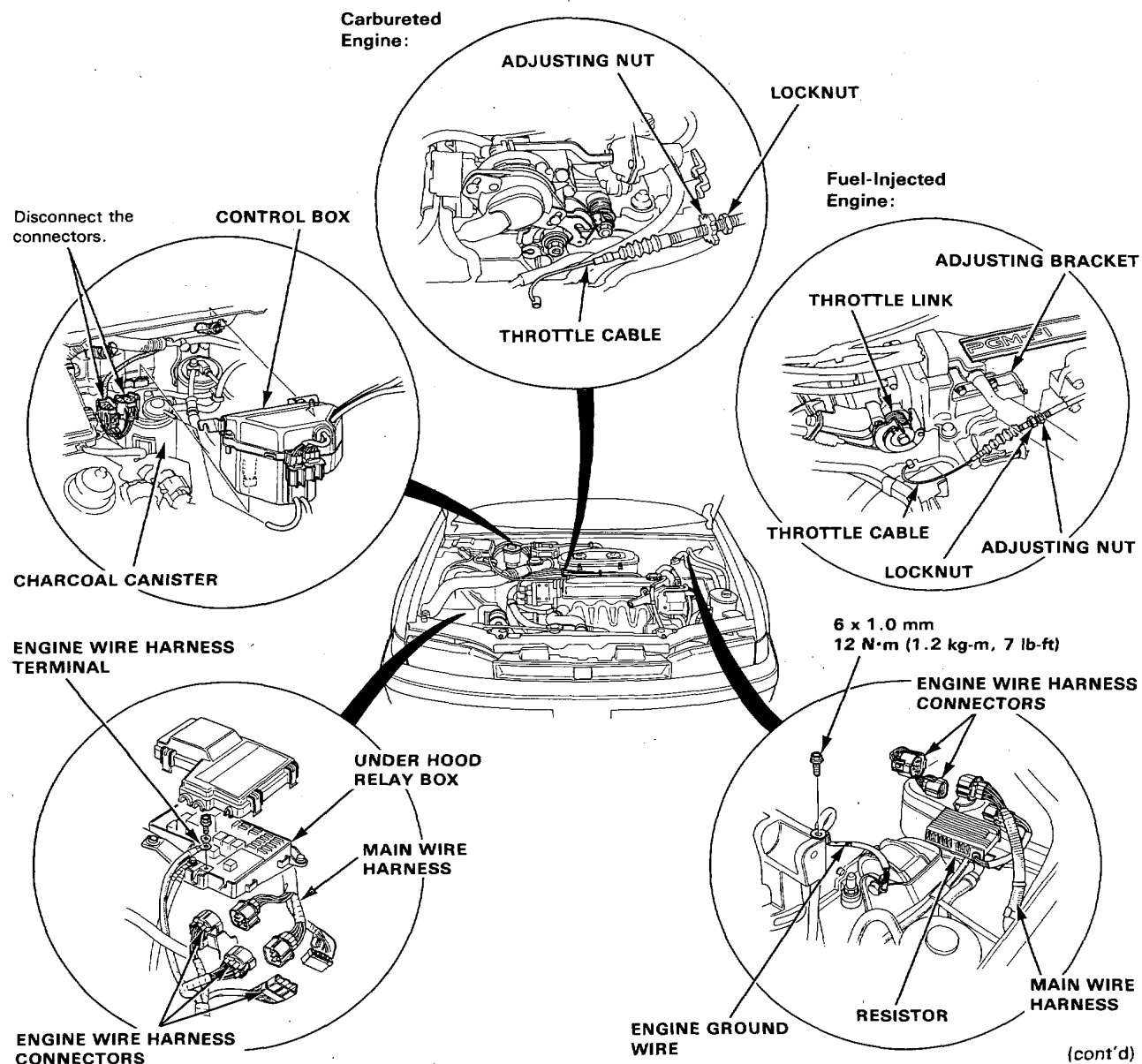
18. Disconnect three engine wire harness connectors from the main wire harness at right side of engine room, and remove the engine wire harness terminal and the starter cable terminal from under hood relay box and clamps. Then remove the transmission ground terminal.

19. Disconnect two engine wire harness connectors from main wire harness and resistor at left side of engine room.

20. Remove the engine ground wire from cylinder head cover and power steering pump bracket.

21. Remove the throttle cable by loosening the locknut, then slip the cable end out of the throttle bracket and accelerator linkage.

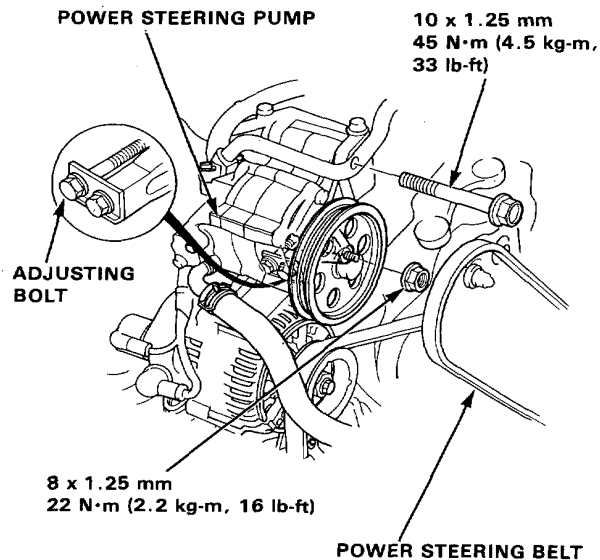
NOTE: Take care not to bend the cable when removing it. Do not use pliers to remove the cable from the linkage. Always replace a kinked cable with a new one.



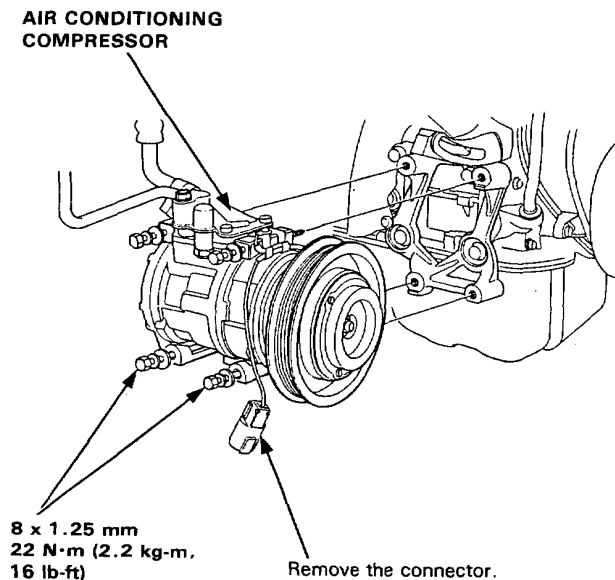
Engine Removal/Installation

(cont'd)

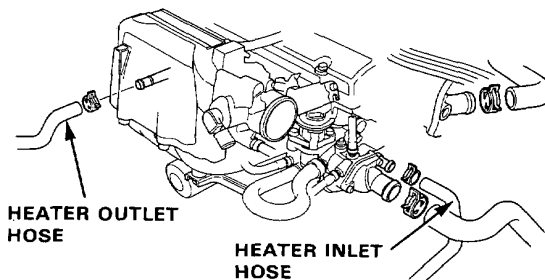
22. Remove the mounting bolts and V-belt from the power steering pump, then without disconnecting the hoses, pull the pump away from the mounting bracket.



23. Remove the mounting bolts and V-belt from the air conditioning compressor, then without disconnecting the hoses, pull the compressor away from the mounting bracket.

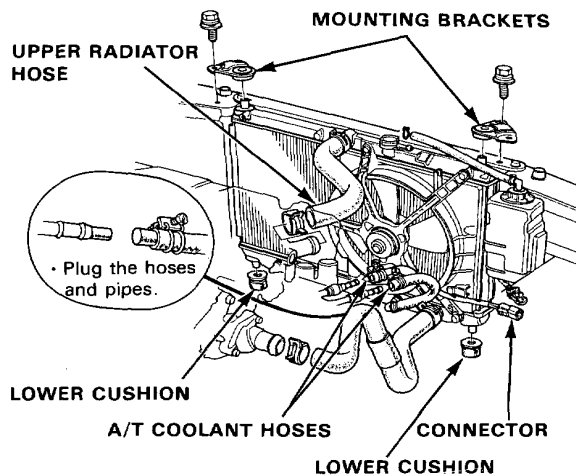


24. Disconnect the heater inlet hose from the cylinder head and the heater outlet hose from the connecting pipe.



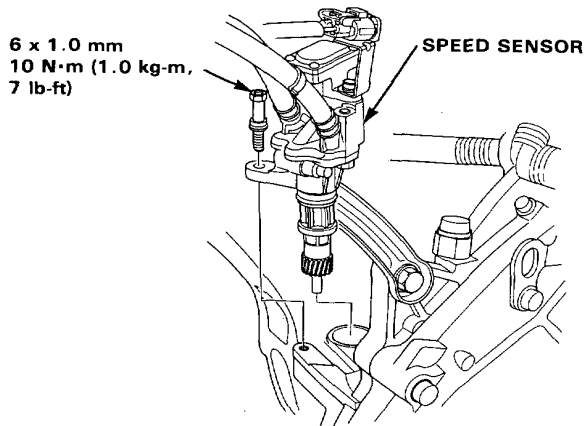
25. Disconnect the hoses and connectors to remove the radiator assembly.

- Upper and lower radiator hoses
- A/T cooler hoses
- Cooling fan motor connectors



26. Remove the speed sensor.

NOTE: Do not disconnect the hoses and the connector.





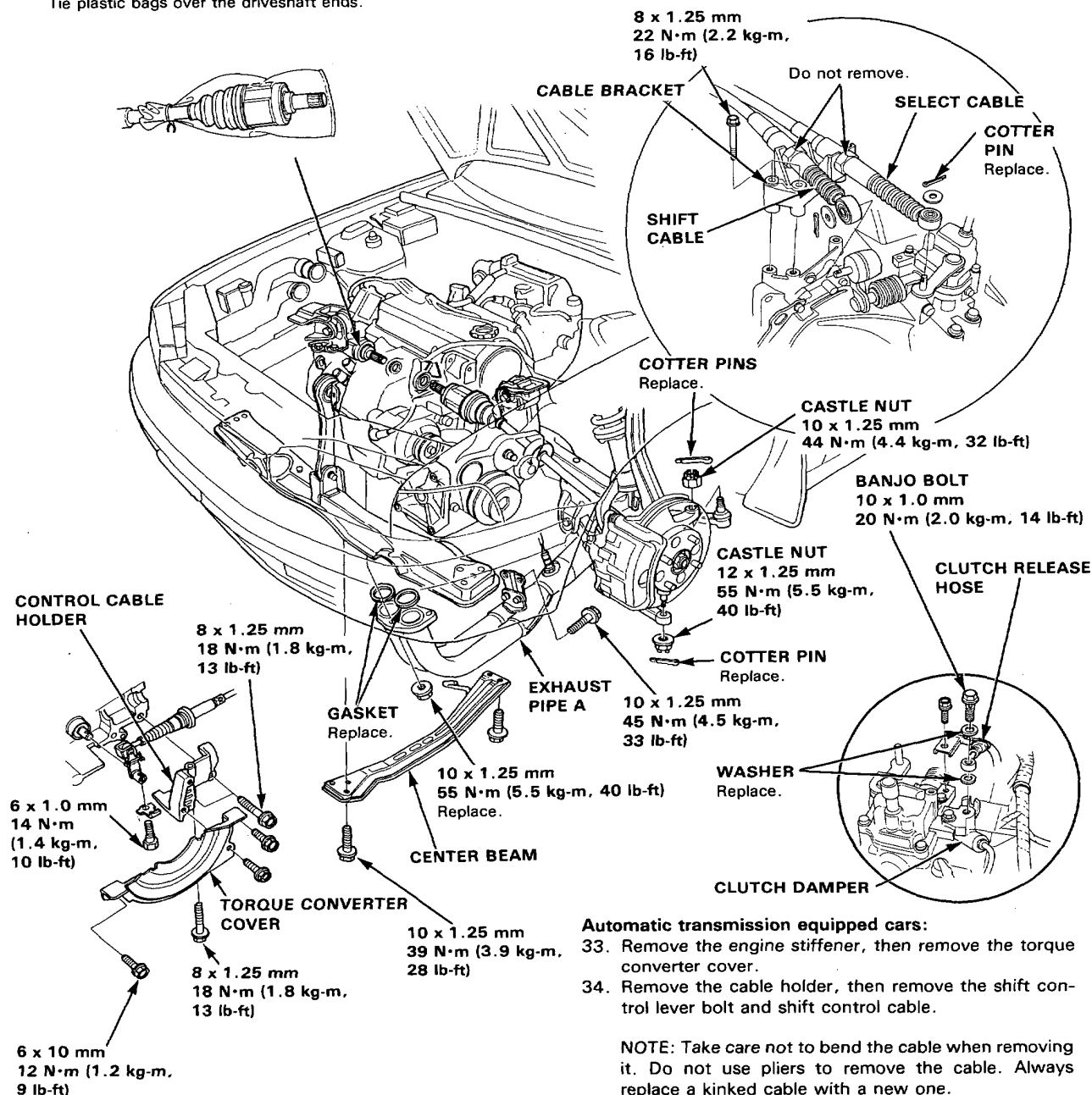
27. Remove the center beam.
28. Remove the exhaust pipe A self-locknut and bracket mounting bolts.
29. Remove the balljoints of the tierod ends and suspension lower arms (See section 12).
30. Remove the driveshafts (See section 10).

NOTE: Coat all precision finished surfaces with clean engine oil or grease.
Tie plastic bags over the driveshaft ends.

Manual transmission equipped cars:

31. Remove the clutch release hose from the clutch damper on the transmission housing.
32. Remove the shift cable and the select cable with the cable bracket from the transmission.

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



Engine Removal/Installation

(cont'd)

35. Attach a chain hoist to the engine. Raise the hoist to remove all slack from the chain.
36. Remove the rear engine mounting bolt.
37. Remove the front engine mounting bolt.
38. Remove the side transmission mount and mounting bolt.
39. Remove the side engine mount and mounting bolt.
40. Check that the engine/transaxle is completely free of vacuum tubes, fuel and coolant hoses, and electric wires.
41. Slowly raise the engine approximately 6". Check once again that all tubes, hoses and wires have been disconnected from the engine/transaxle.
42. Raise the engine/transaxle all the way and remove it from the car.
43. Remove the rolling insulator from the rear beam.

AUTOMATIC TRANSMISSION:

REAR ENGINE MOUNT

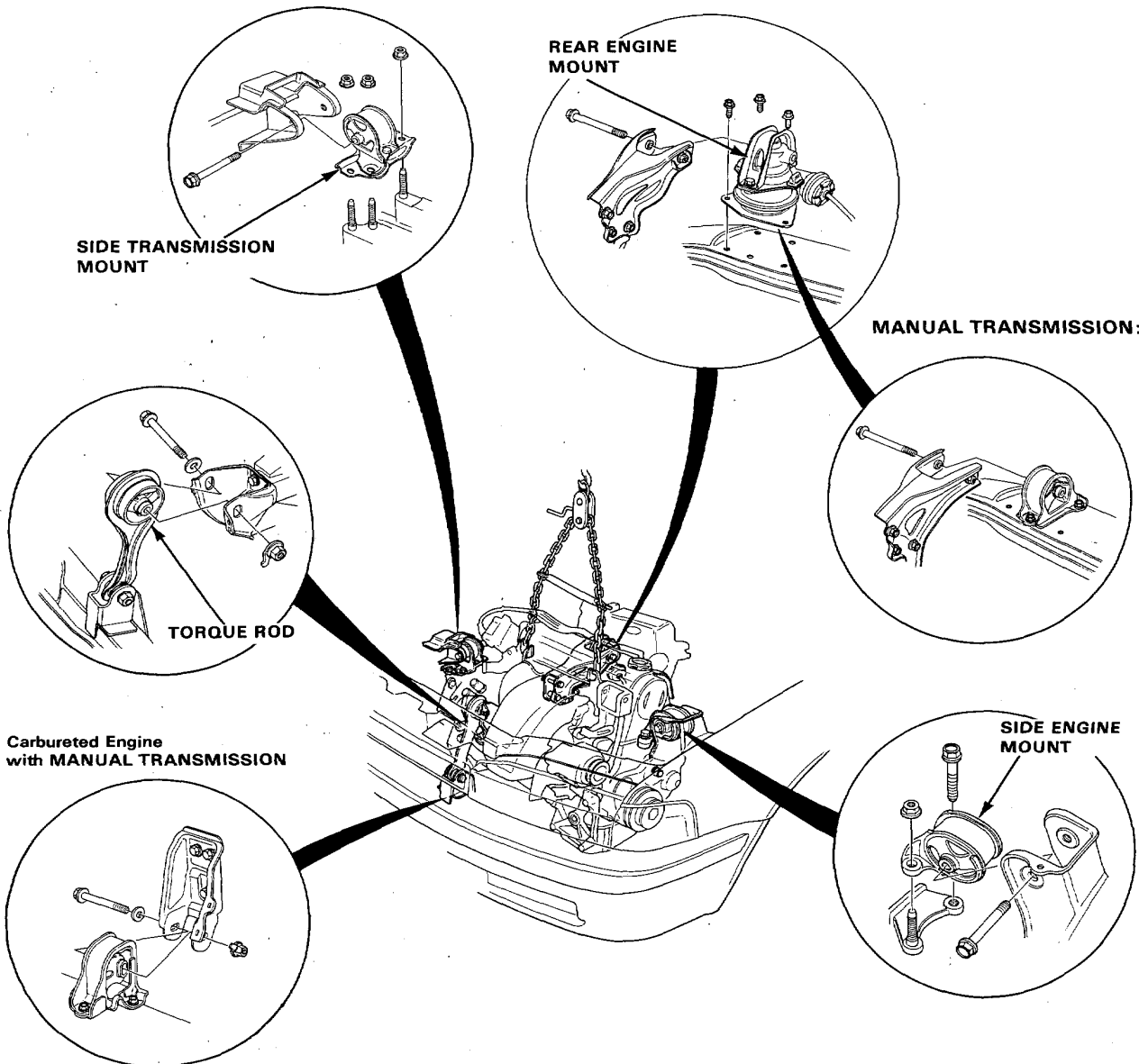
MANUAL TRANSMISSION:

SIDE TRANSMISSION MOUNT

TORQUE ROD

Carbureted Engine with MANUAL TRANSMISSION

SIDE ENGINE MOUNT





44. Install the engine in the reverse order of removal.

After the engine is in place:

- Torque the engine mounting bolts in sequence shown below.

CAUTION: Failure to tighten the bolts in the proper sequence can cause excessive noise and vibration, and reduce bushing life: check that the bushings are not twisted or offset.

- Check that the spring clip on the end of each driveshaft clicks into place.

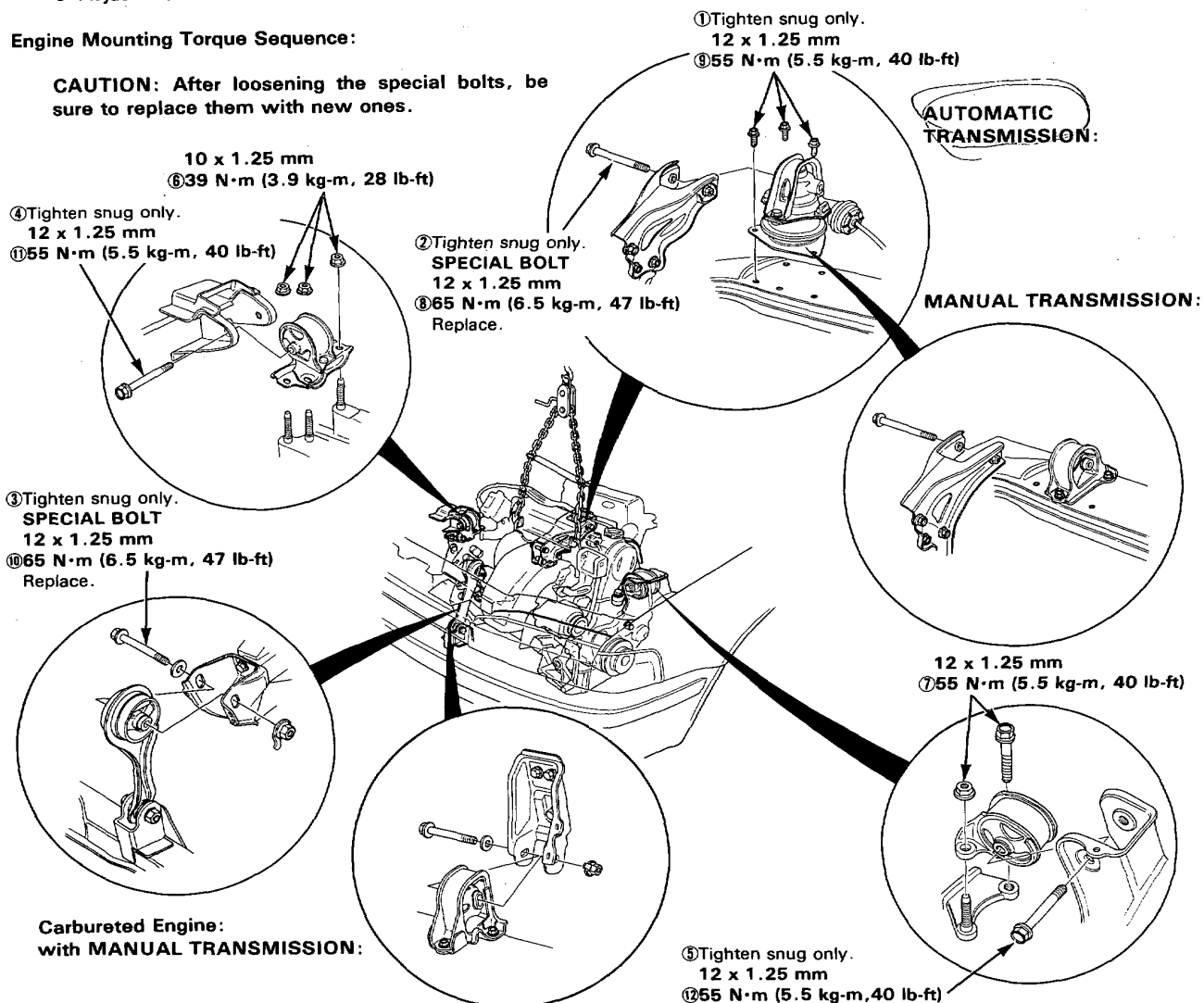
CAUTION: Use new spring clips on installation.

- Bleed air from the cooling system at the bleed bolt with the heater valve open.
- Adjust the throttle cable.

- Check the clutch pedal free play.
- Check that the transmission shifts into gear smoothly.
- Adjust the tension of the following drive belts: Alternator (Air Conditioner) belt (page 5-11). Power steering belt (page 5-13).
- Clean battery posts and cable terminals with sandpaper, assemble, then apply grease to prevent corrosion.
- Inspection for fuel leakage.
 - After assembling fuel line parts, turn on the ignition switch (do not operate the starter) so that the fuel pump is operated for approximately two seconds and the fuel is pressurized. Repeat this operation two or three times and check whether any fuel leakage has occurred at any point in the fuel line.

Engine Mounting Torque Sequence:

CAUTION: After loosening the special bolts, be sure to replace them with new ones.



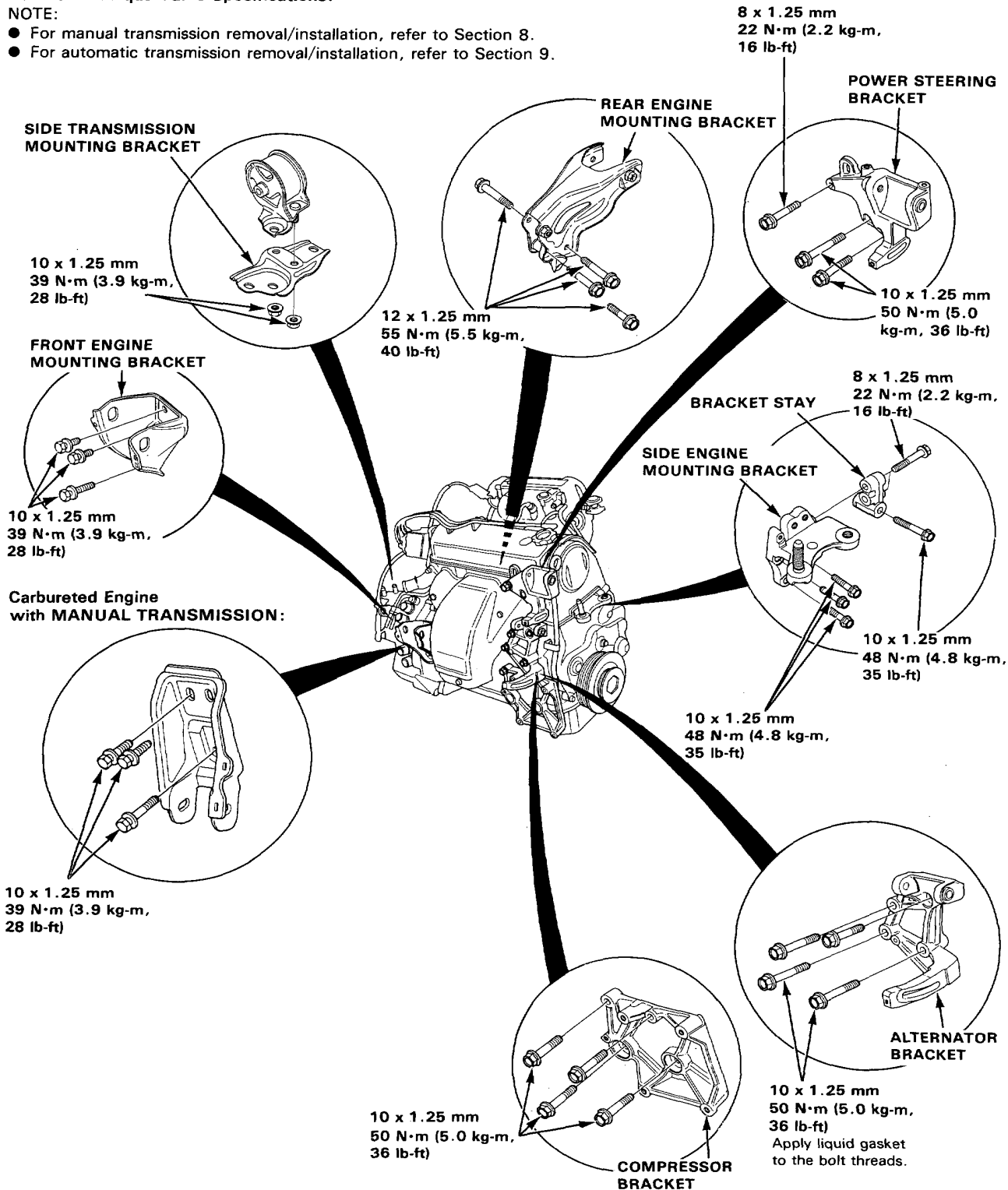
Engine Removal/Installation

(cont'd)

Additional Torque Valve Specifications:

NOTE:

- For manual transmission removal/installation, refer to Section 8.
- For automatic transmission removal/installation, refer to Section 9.





Subframe Torque Value Specifications:

CAUTION: After loosening the special bolts, be sure to replace them with new ones.

