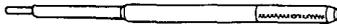


Engine Removal/Installation

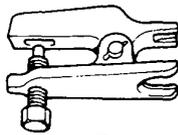


Special Tools

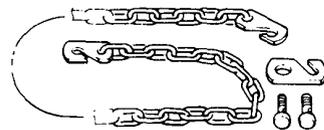
Ref. No.	Tool Number	Description	Q'ty	Remarks
①	07944-6110200	Pin Driver, 8 mm	1	
②	07941-6920002	Ball joint Remover	1	
③	07966-6340011	Engine Block Hanger	1	



①



②



③

Engine Removal/Installation

WARNING

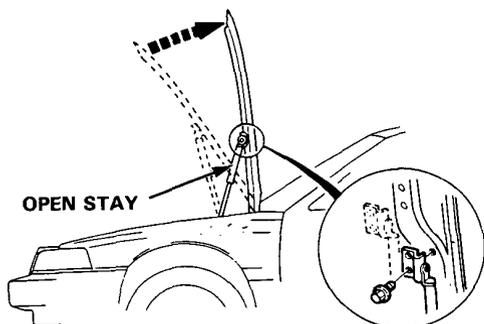
- Make sure jacks and safety stands are placed properly (pages 1-5 thru 7), and hoist brackets are attached to correct positions on the engine (page 5-36).
- Apply parking brake and block rear wheels, so car will not roll off stands and fall on you while working under it.

CAUTION: Use fender covers to avoid damaging painted surfaces.

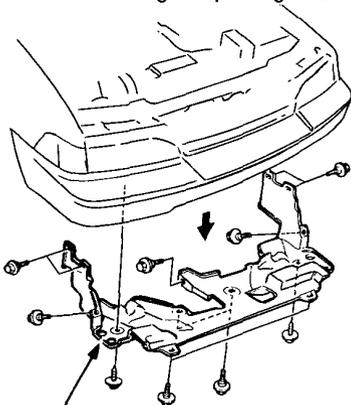
WARNING

Use care when removing radiator cap and when draining radiator, engine and transmission, to avoid scalding by hot coolant or oil.

1. Disconnect the battery negative terminal first, then the positive terminal.
2. Fix the engine hood in vertical position by removing the open stay mounting bolt on the hood side and fitting it to the mounting hole near the hinge.



3. Remove the battery and then the battery case.
4. Remove the air intake tube, air cleaner and resonator tube as an assembly.
5. Remove the engine splash guard.



SPLASH GUARD
Remove the splash guard from under the engine.

6. Remove the drain plug to drain engine oil.

- Remove the filler cap to speed draining.

CAUTION: After draining the engine oil, always replace drain washers with new ones.

7. Drain transmission oil.

- Use a 3/8" drive socket wrench to remove the drain plug.

- Remove the level gauge or filler bolt to speed draining.

8. Remove the drain plug to drain coolant from the radiator.

- Remove the radiator cap to speed draining.

- Loosen two engine drain bolts front and rear to drain coolant from the cylinder head.

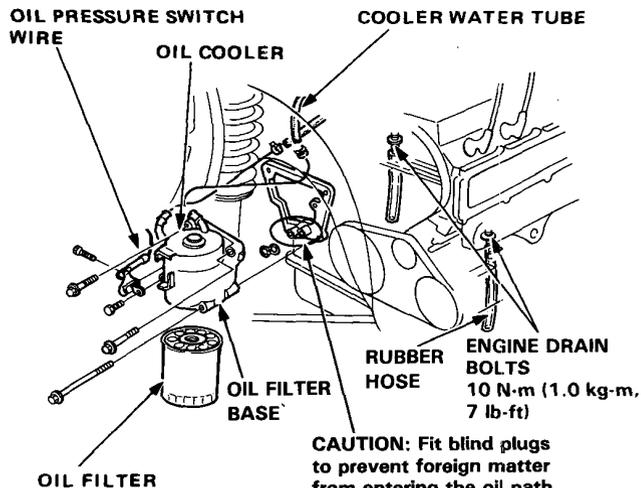
- Connect rubber hoses to the drain bolts for easy operation.

9. Disconnect the pressure switch wire from the oil filter case.

10. Disconnect two water hoses from the engine oil cooler.

11. Remove the oil filter to drain the oil.

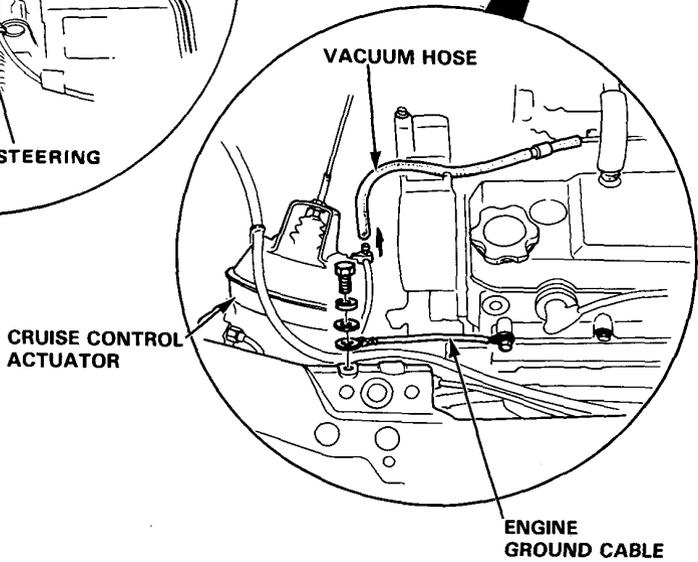
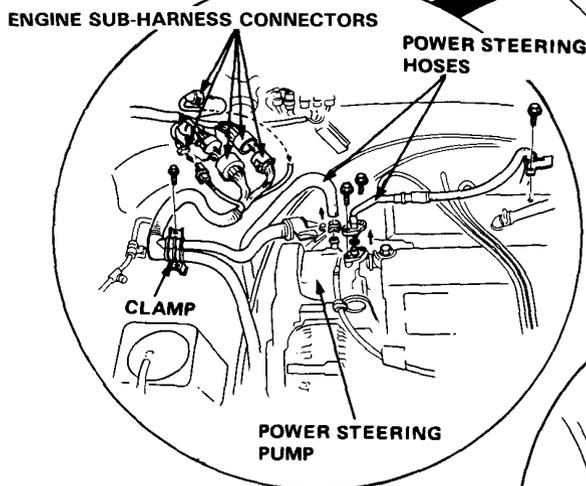
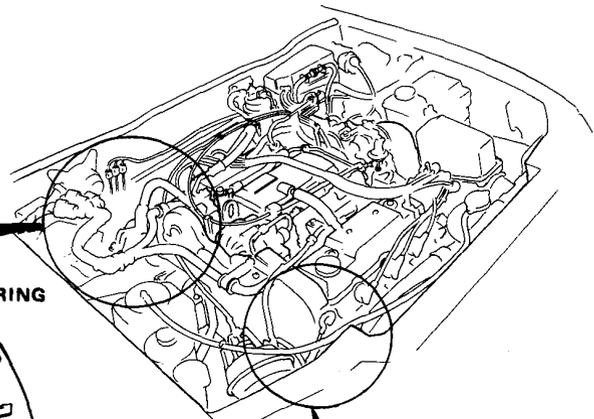
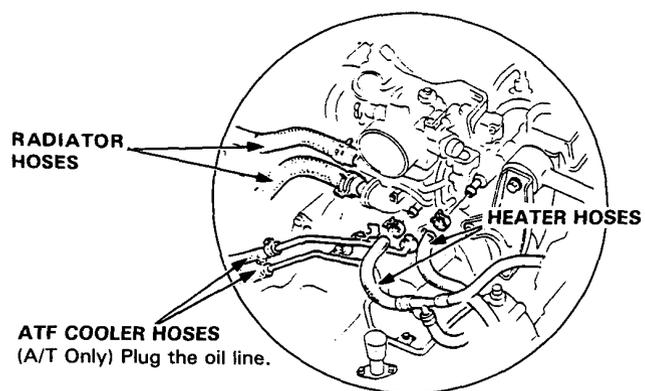
12. Remove the oil filter base from the engine block.



CAUTION: Fit blind plugs to prevent foreign matter from entering the oil path in the cylinder block.



13. Disconnect upper and lower radiator hoses from the water passage.
14. Disconnect the ATF cooler hose from the cooler pipes (Automatic only).
15. Disconnect the engine sub-harness from the body side.
 - Four connectors and clamp in the right engine compartment
 - Two main fuse connectors and coupler in the left engine compartment (illustration on next page)
 - Coil wire and primary lead connectors, and condenser connector (illustration on next page)
 - Two ground cables for the cylinder head and transmission
16. Disconnect the connector from the power steering pump, and disconnect the two hoses.
17. Disconnect the hose from the cruise control actuator.



(cont'd)

Engine Removal/Installation

(cont'd)

18. Disconnect the vacuum hose from brake booster.

19. Relieve the fuel pressure (section 6).

CAUTION: Before disconnecting the fuel line, fuel pressure should be relieved by loosening the service bolt on the top of the fuel filter while engine is stopped.

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

20. Disconnect the fuel hose and fuel return hose.

21. Disconnect the throttle cable from the throttle body.

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.

22. Disconnect the emission hoses from the control box from the connection stay.

23. Remove the speed sensor.

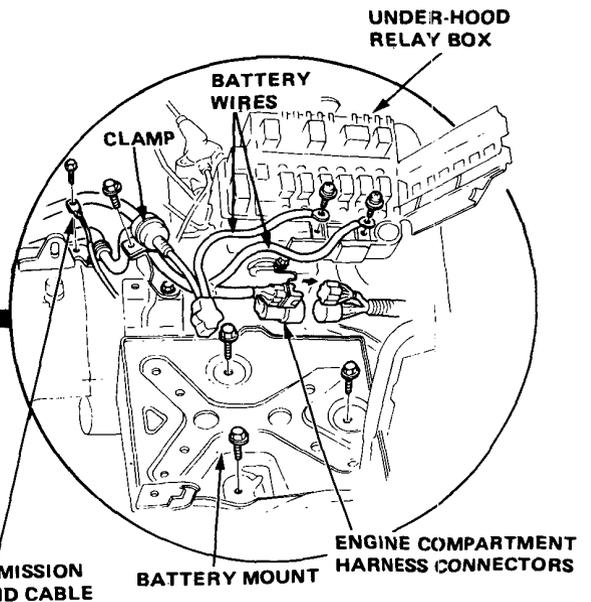
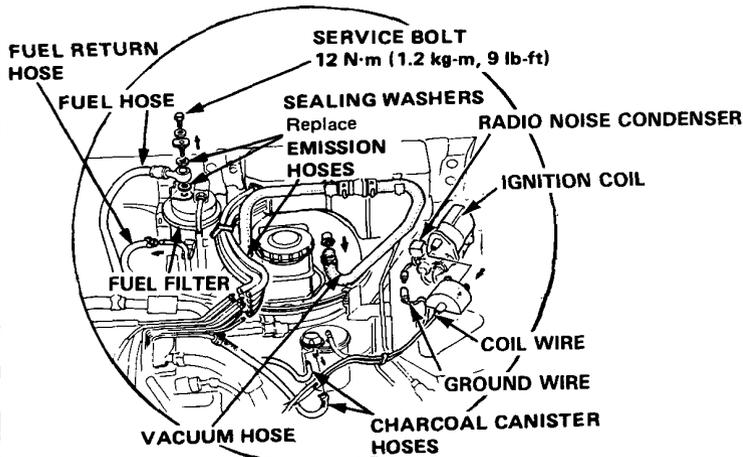
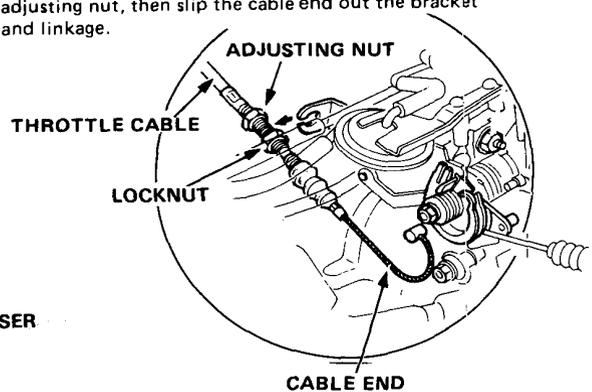
24. Loosen adjusting bolt to remove the compressor belt; and then remove the air conditioner compressor (illustration on next page).

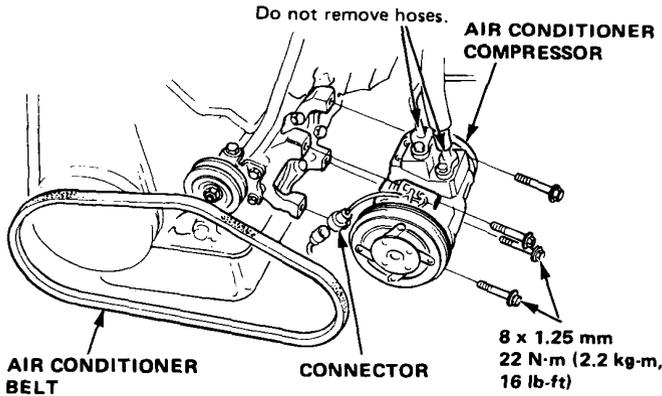
NOTE: The compressor can be removed without disconnecting the hoses.

- Place the removed compressor on the frame so as not to damage it.

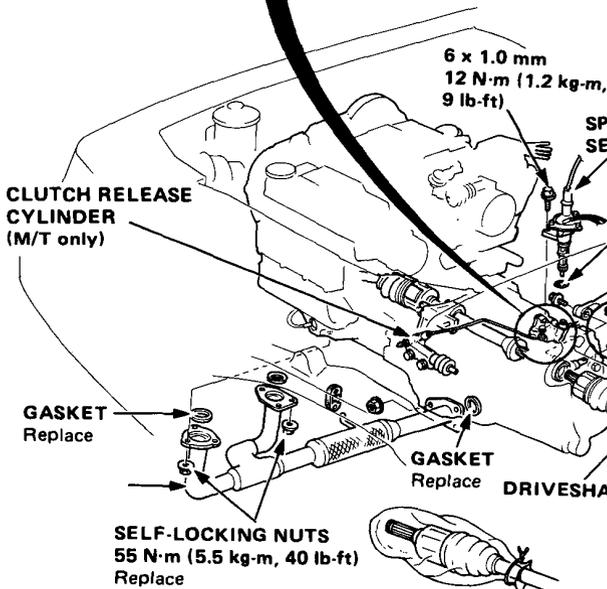
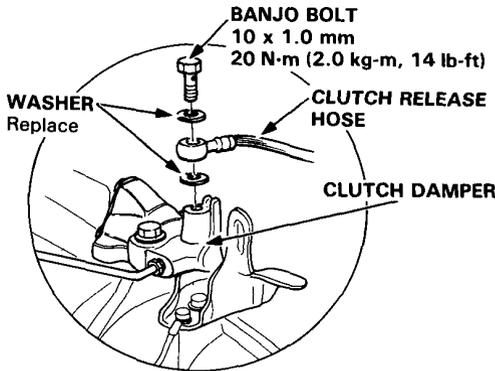
THROTTLE CABLE

Remove the throttle cable by loosening the locknut and adjusting nut, then slip the cable end out the bracket and linkage.



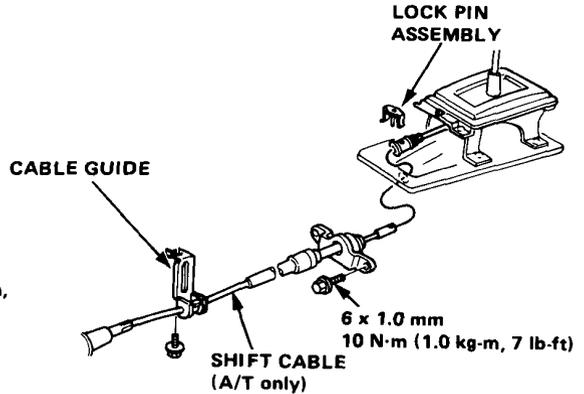


25. Remove the exhaust pipe from the front and rear manifolds.



CAUTION: If you disconnect the hoses from the speed sensor, power steering fluid will flow out.

26. Disconnect the shift cable from the selector (A/T only).



- Remove the center console.
- Place the shift lever in reverse, then remove the lock pin from the end of the shift cable.

NOTE: On reassembly, check the cable adjustment (section 14)

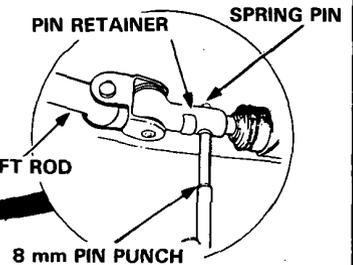
27. Remove the change rod and change extension (M/T only).

28. Remove the clutch release hose from the clutch damper on the transmission housing (M/T only).

29. Remove the ball joint.

- Use ball joint remover 07941-6920003.

30. Remove the drive shaft.



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

(cont'd)

Engine Removal/Installation

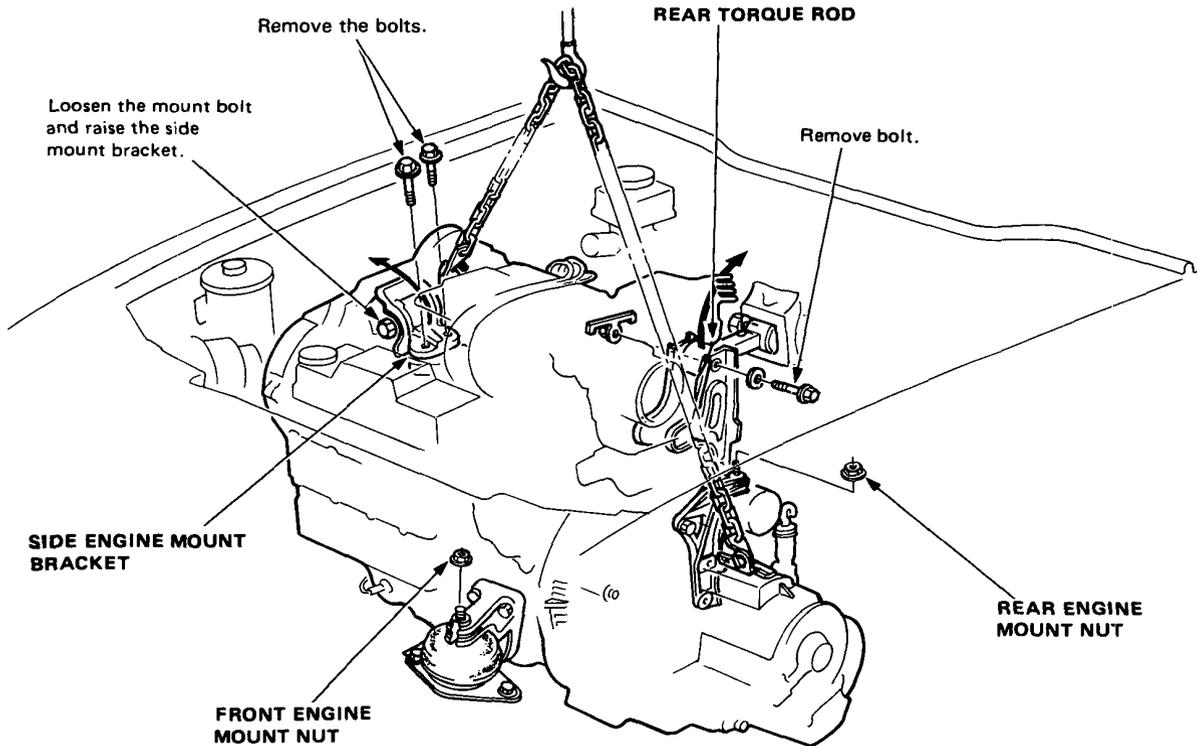
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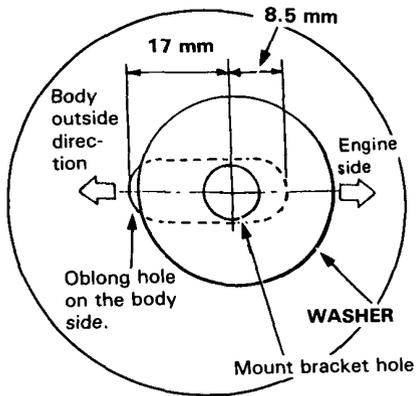
31. Attach a chain hoist to the engine block and raise the hoist just enough to remove slack from chain.
32. Remove the engine side mount bracket bolts, then remove the transmission mount nut and the bracket bolts.
33. Remove the front and rear engine mount nuts.
34. Remove the torque rod.
35. Check that wires and tubes are completely removed from the engine, and lift the engine slowly with the chain. Remove the front and rear engine brackets from the mount bolts.

36. Tilt the engine about 30 degrees, then hoist it out of the engine compartment.

CAUTION: Use care to avoid damaging the body.

WARNING Do not crawl under the car when hoisting the engine.





NOTE:

- For proper suppression of noise and vibration, and maximum bushing life, tighten the bolts in the sequence shown with the bushings centered in their mounts.

⑦ Tighten without eccentricity or pinching to prevent noise and vibration and to maintain bushing durability.
 12 x 1.25 mm
 75 N·m (7.5 kg-m, 54 lb-ft)

SPECIAL BOLT
 10 x 1.25 mm
 39 N·m (3.9 kg-m, 28 lb-ft)
 Do not loosen the bolts. If loosened, replace the bolts.

10 x 1.25 mm
 39 N·m (3.9 kg-m, 28 lb-ft)

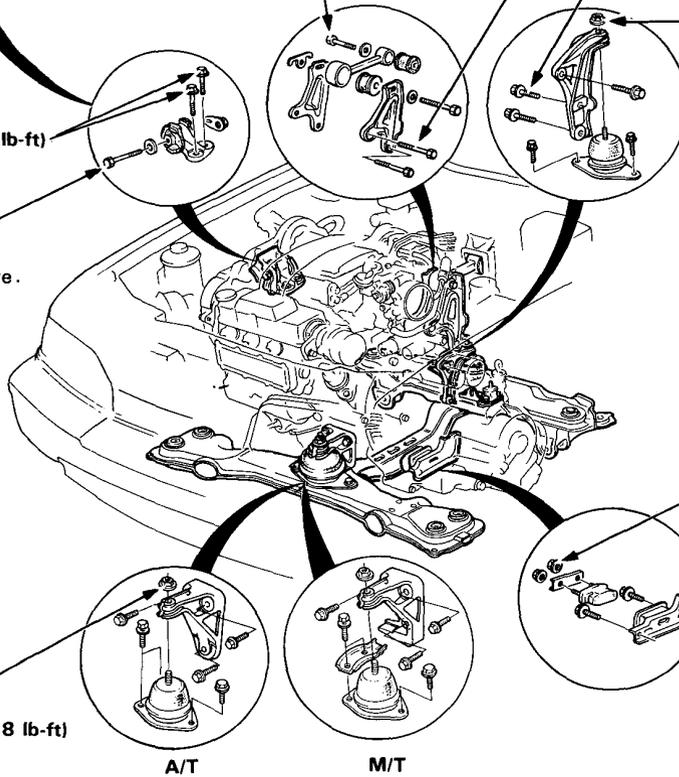
① 10 x 1.25 mm
 25 N·m (2.5 kg-m, 18 lb-ft)

④ 10 x 1.25 mm
 55 N·m (5.5 kg-m, 40 lb-ft)

③ Tighten temporarily.
 ⑤ Tighten the bolt at the position illustrated above.
 10 x 1.25 mm
 39 N·m (3.9 kg-m, 28 lb-ft)

② 10 x 1.25 mm
 25 N·m (2.5 kg-m, 18 lb-ft)

⑧ Check that the rubber damper on the center beam is centered in its mount on the transmission. If not, loosen the bolts for the center beam and insulator and adjust as necessary.
 10 x 1.25 mm
 55 N·m (5.5 kg-m, 40 lb-ft)



37. Install the engine in the reverse order of removal. After the engine is in place:
- Torque engine mount bolts in sequence shown. **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 the differential. **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 tension.
- Adjust the alternator belt tension.
- Check the clutch pedal free play.
- Check that the transmission shifts into gear smoothly.
- Connect the air conditioning hoses, wiring and V-belt.
- Clean battery posts and cable terminals with sandpaper, assemble, then apply grease to prevent corrosion.

(cont'd)

Engine Removal/Installation

(cont'd)

NOTE: For proper suppression of noise and vibration, and maximum bushing life, tighten the bolts to the torque mentioned below.

