

1

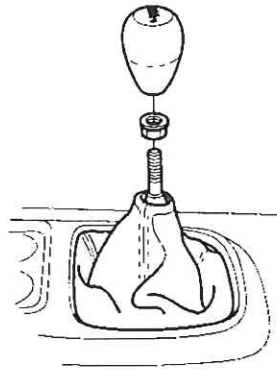


Transmission Removal

NOTE: Use fender covers to avoid damaging painted surfaces.

Make sure to have radio code.

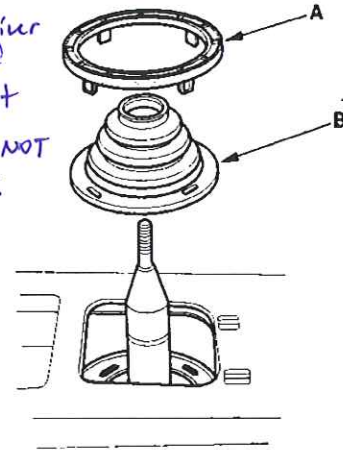
1. Disconnect the negative (-) cable first, then the positive (+) cable from the battery. Remove the battery.
2. Loosen the locknut, then remove the shift lever knob.



3. Remove the center console (see page 20-76).

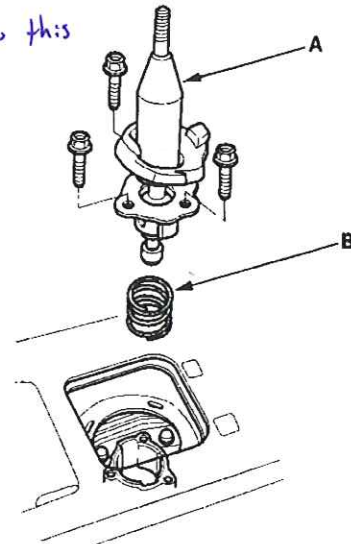
4. Remove the boot holder (A) and the shift boot (B).

Flat screwdriver on inside of plastic ring at arrows. DO NOT BREAK IT.



5. Remove the three bolts, then remove the shift lever (A) and the shift lever spring (B).

Remember how this goes on.

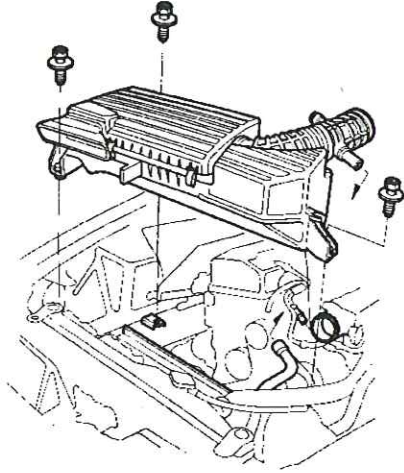


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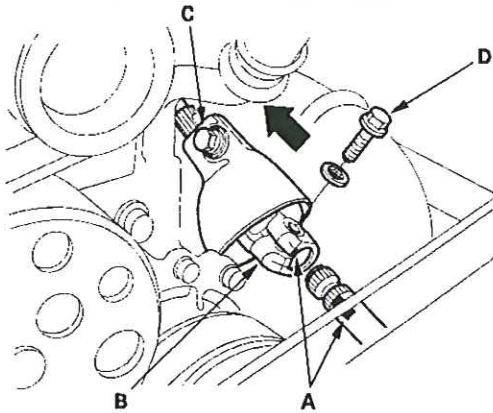
Manual Transmission

Transmission Removal (cont'd)

6. Remove the air cleaner housing assembly.



7. Turn the steering wheel to the straight-ahead position, then remove the key from the ignition switch to lock the steering column. Make a reference mark (A) across the steering joint (B).

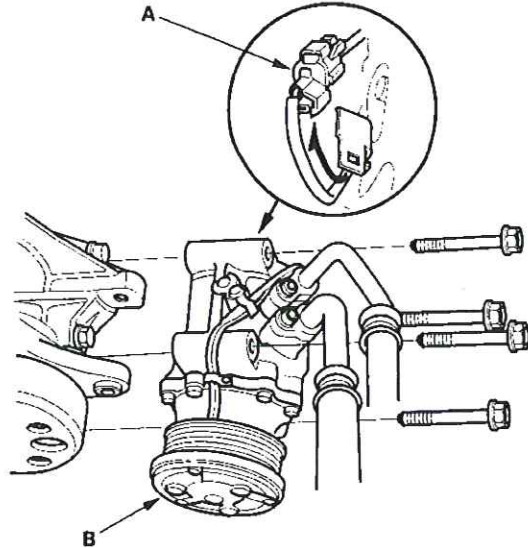


8. Loosen the upper steering joint bolt (C), and remove the lower steering joint bolt (D). Disconnect the steering joint from the gear box.

9. Remove the alternator-compressor belt and the alternator (see page 4-25).

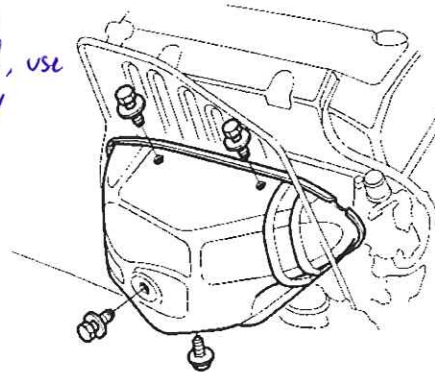
SEE NEXT PAGE

10. Disconnect the 1P connector (A), then remove the four mounting bolts and the A/C compressor (B).



11. Remove the four exhaust manifold cover mounting bolts.

Likely rusted, use spray



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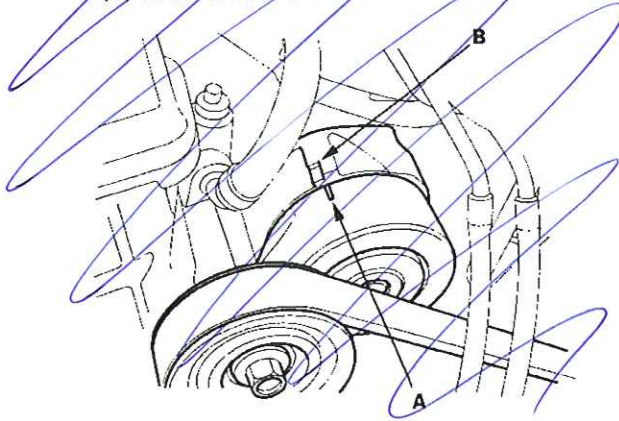
3

Alternator + Tensioner Removal

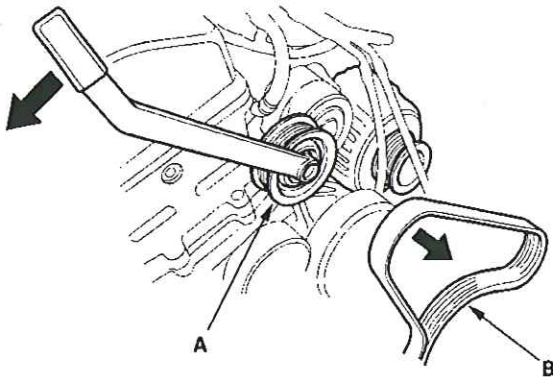


Alternator-compressor Belt Inspection and Replacement

1. Check that the pointer (A) on the auto-tensioner housing is not beyond the edge of the indicator rib (B) on the tensioner base.



2. Move the auto-tensioner (A) to relieve tension from the alternator belt (B), and remove the alternator-compressor belt.



3. Install the new belt in the reverse order of removal.

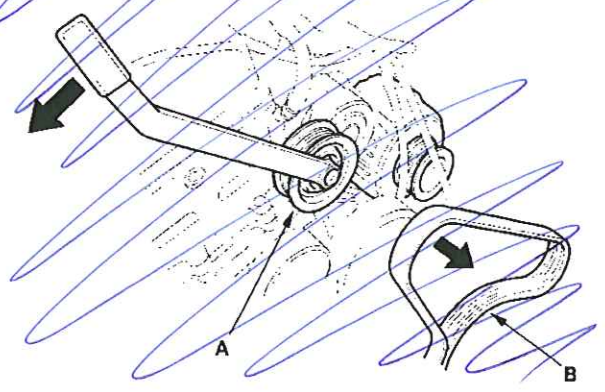
4

Alternator + Tensioner Removal

Charging System

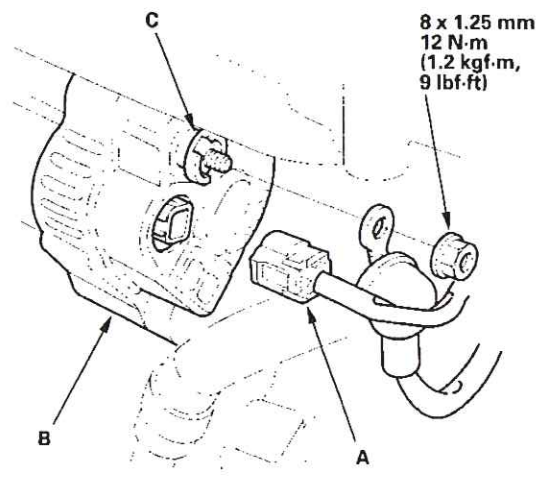
Alternator Replacement

1. Make sure you have the anti-theft code for the radio, then write down the frequencies for the radio's preset buttons.
2. Disconnect the negative cable front the battery, then disconnect the positive cable.
3. Move the auto-tensioner (A) to relieve tension from the alternator belt (B), and remove the alternator-compressor belt.

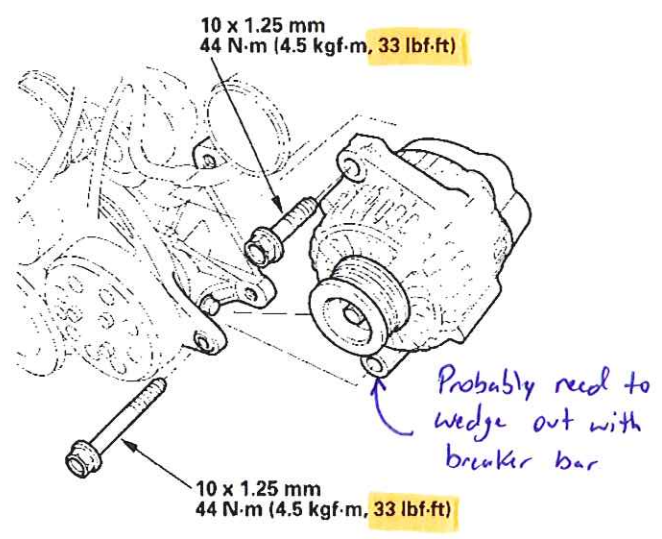


These are PITA

4. Disconnect the 4P connector (A) from the alternator (B), and disconnect BLK wire from the alternator B terminal (C).



5. Remove the mounting bolts, then remove the alternator.

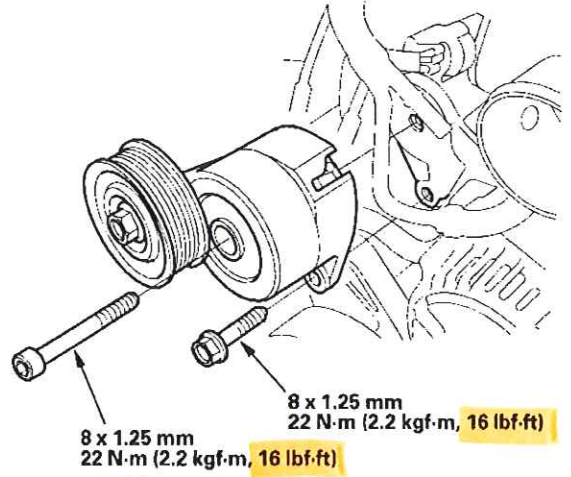


6. Install the alternator and alternator-compressor belt in the reverse order of removal.
7. Connect the positive cable and negative cable to the battery.
8. Enter the anti-theft code for the radio, then enter the customer's radio station presets.
9. Set the clock.
10. Perform the engine control module (ECM) idle learn procedure (see page 14-100).

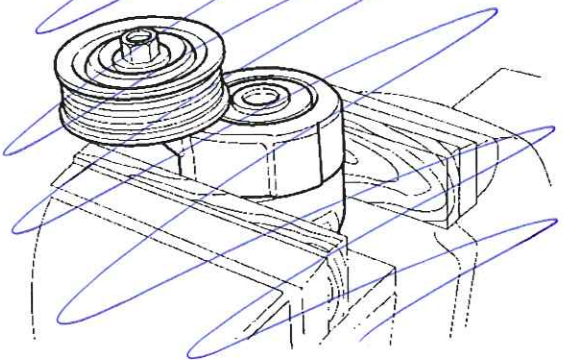
Charging System

Auto-Tensioner Inspection/Replacement (cont'd)

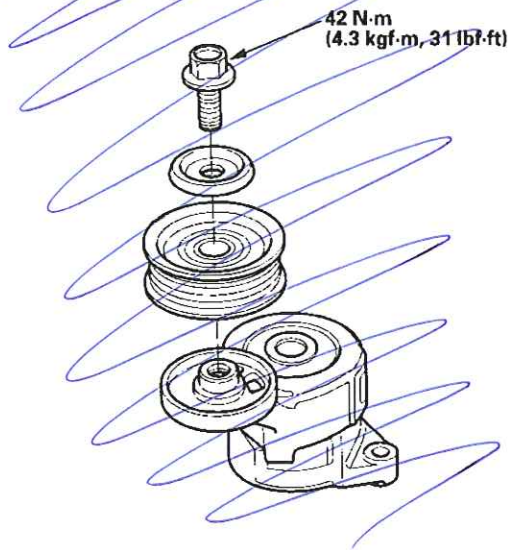
6. Remove the auto-tensioner.



7. If necessary, to remove the pulley bolt, secure the auto-tensioner in a bench vise with soft jaws. To prevent damage to the tensioner, always use soft jaws or equivalent materials between the tensioner and the vise.



8. Remove the pulley bolt (left-hand threads), and replace the tensioner pulley.

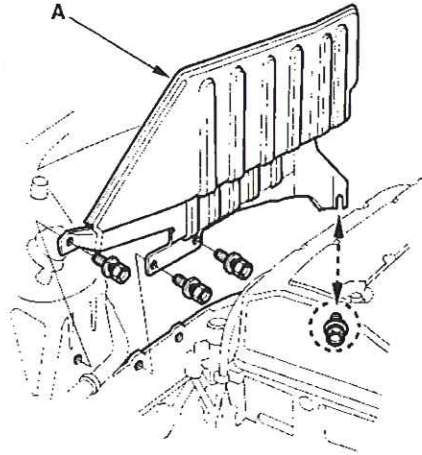


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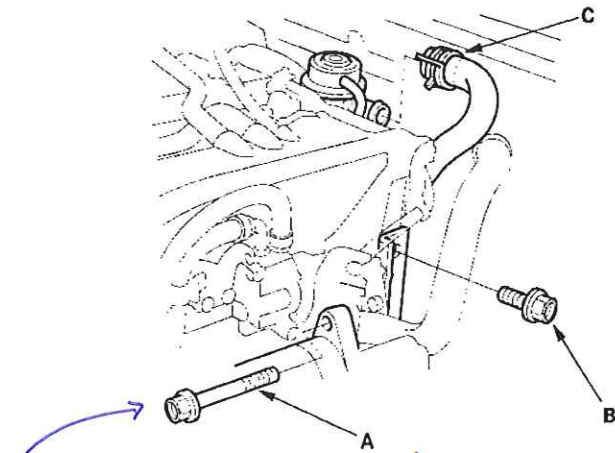
6



12. Remove the heat shield (A), then remove the exhaust manifold cover.



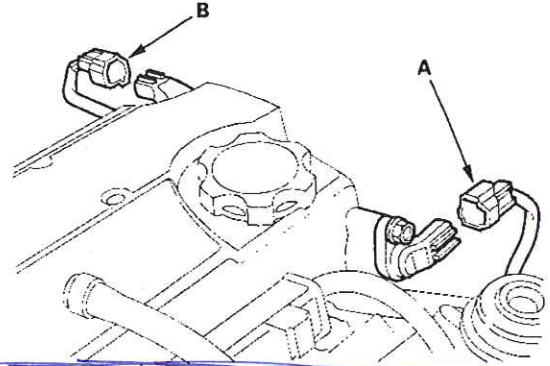
13. Remove the upper starter motor mounting bolt (A) and upper intake manifold bracket mounting bolt (B). Disconnect the hose (C) from the suction valve.



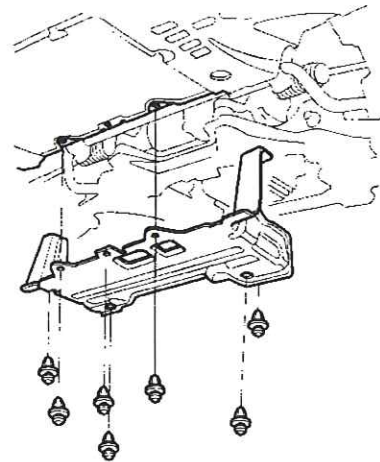
Should be straight shot behind the auto tensioner.

*** WATCH OUT FOR KNOCK SENSOR
DO NOT BREAK!

14. Disconnect the TDC1 (A) and TDC2 (B) sensor connectors.



PUT CAR ON JACK STANDS NOW
15. Remove the splash shield.

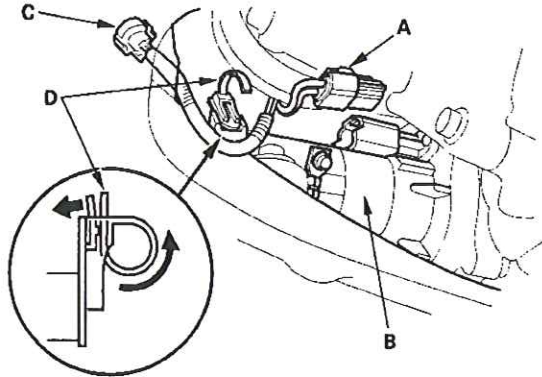


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Manual Transmission

Transmission Removal (cont'd)

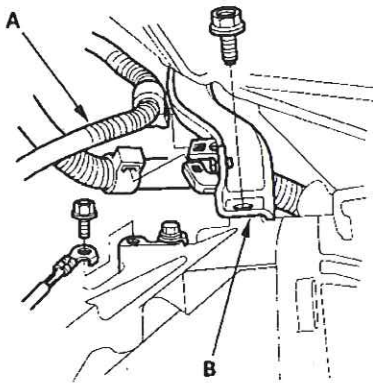
- 16. Disconnect the 2P connector (A) from the steering gearbox (B).



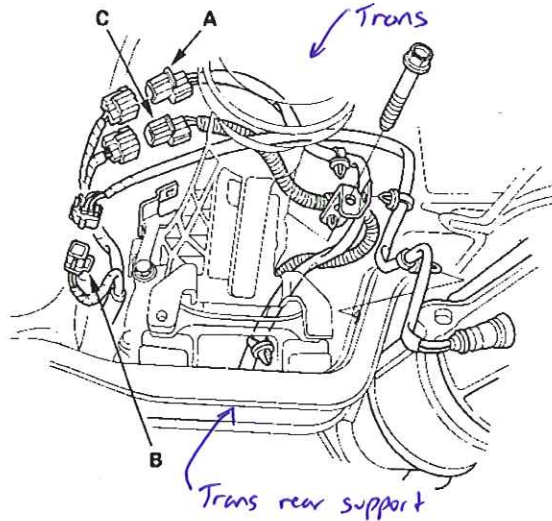
Probably not necessary

- 17. Disconnect the torque sensor 3P connector (C), and remove the wire harness clamp (D).
- 18. Remove the wire harness (A) and mounting bolt, then remove the intake manifold stay (B).

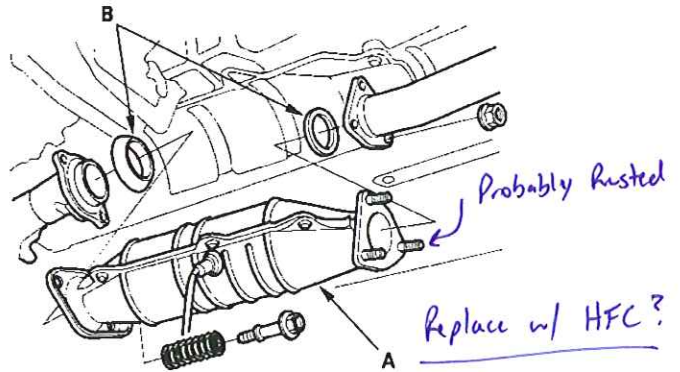
Viewed from underneath car



- 19. Disconnect the heated oxygen sensor (HO2S) (A), secondary heated oxygen sensor (secondary HO2S) (B), and the back-up light switch (C) connectors, then remove the wire harness from the transmission.



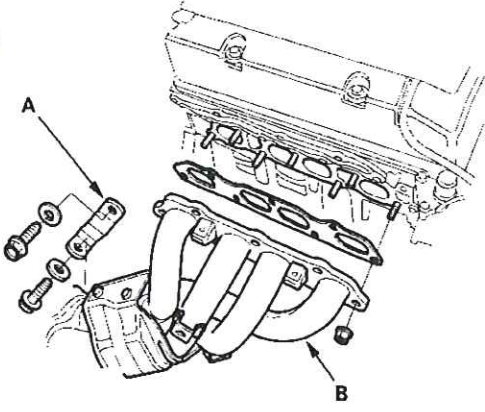
- 20. Remove the three way catalytic converter (TWC) (A) and gaskets (B).





21. Remove the exhaust manifold bracket (A) and the exhaust manifold (B).

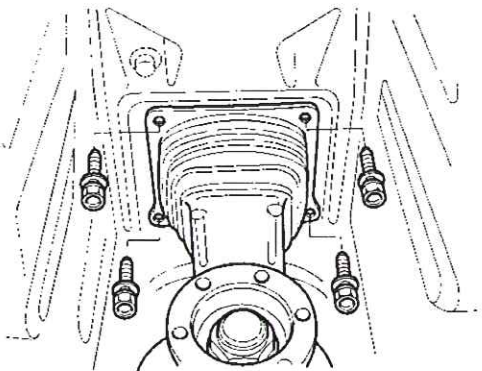
Probably rusted



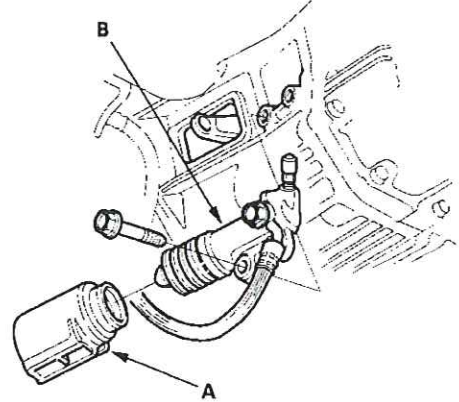
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22. Remove the propeller shaft (see page 16-17).

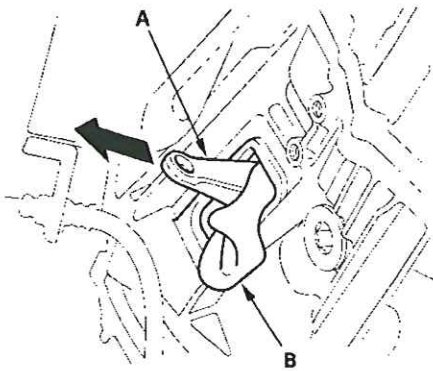
23. Remove the four shift boot holder mounting bolts.



24. Remove the release fork boot (A), then carefully remove the slave cylinder (B). **Do not operate the clutch pedal once the slave cylinder has been removed.**

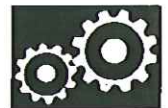


25. Pull out the release fork (A) from the release fork hanger. Wedge a shop towel (B) between the opening in the clutch housing and the release fork to hold the release fork in place.



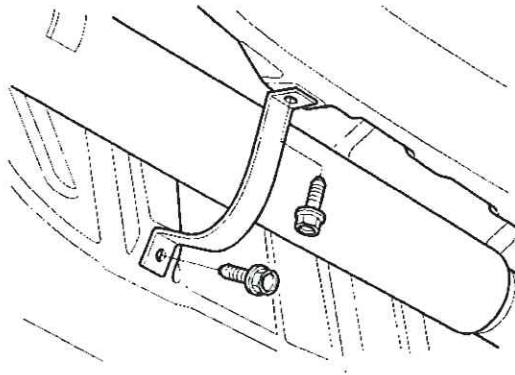
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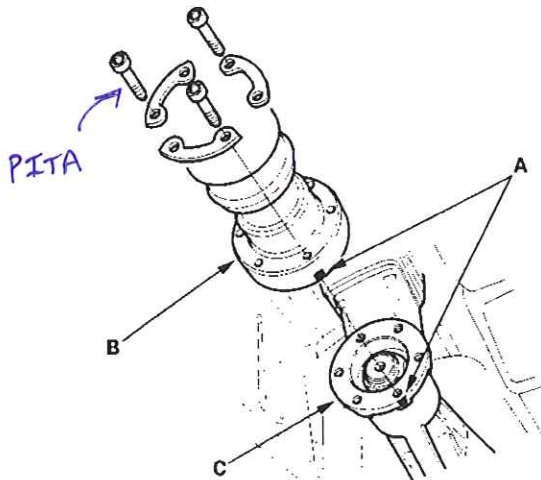


Propeller Shaft Removal

1. Raise the vehicle off the ground, and make sure it's securely supported.
2. Remove the propeller shaft protector.

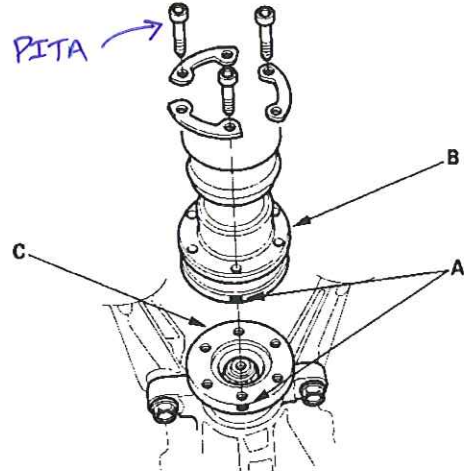


3. Make a reference mark (A) across the propeller shaft (B) and the transmission flange (C).



4. Separate the propeller shaft from the transmission.

5. Make a reference mark (A) across the propeller shaft (B) and the rear differential flange (C).



6. Separate the propeller shaft from the rear differential, then remove the propeller shaft.

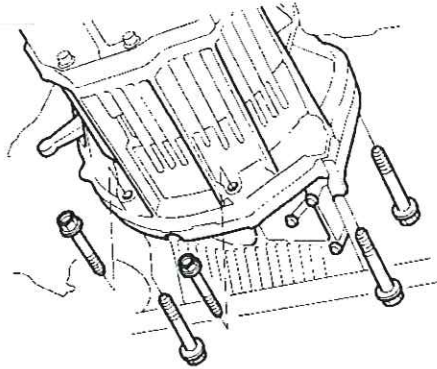


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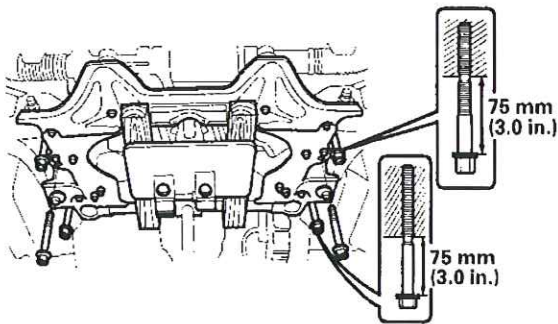
Manual Transmission

Transmission Removal (cont'd)

- 26. Remove the five lower transmission mounting bolts.



- 27. Place a floor jack under the front sub frame and the engine mounting stiffener.

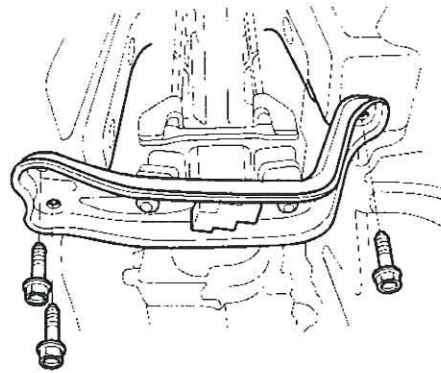


- 28. Remove the two center mounting bolts.
- 29. Loosen the four mounting bolts 75 mm (3.0 in.) as shown.

- 30. Lower the front subframe in until it touches the four loosened mounting bolts.

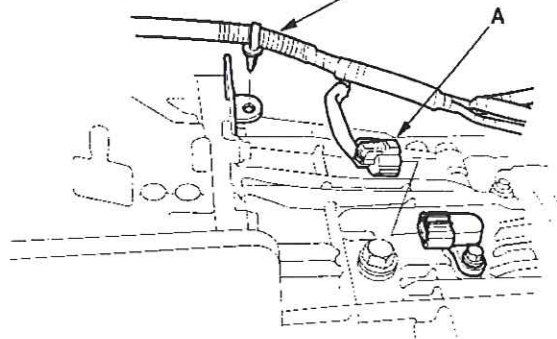
Leave jack in place

- 31. Place the floor jack under the transmission, and remove the three transmission rear mount bolts.



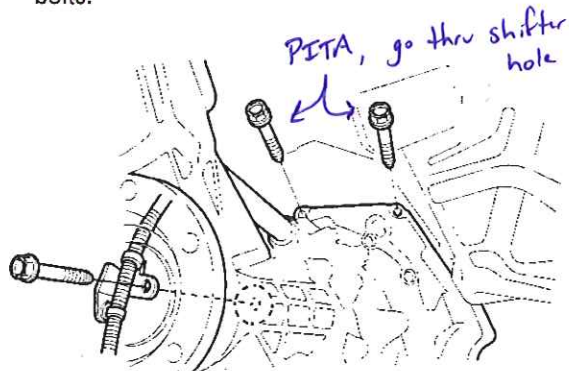
- 32. Lower the transmission. Disconnect the pick-up sensor connector (A), then remove the wire harness (B) from the transmission.

On top of trans



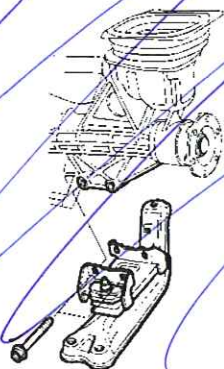


33. Remove the three upper transmission mounting bolts.



34. Pull the transmission away from the engine until it clears the mainshaft, then lower the transmission on the jack.

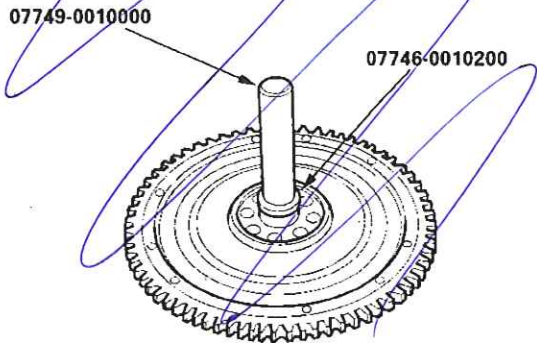
35. Remove the transmission rear mount from the transmission housing.



Clutch

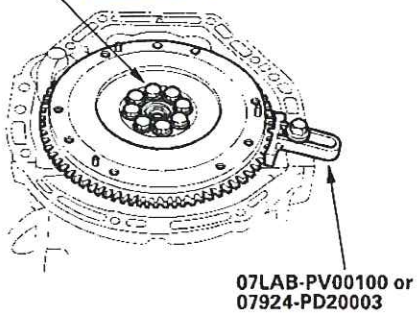
Clutch Replacement (cont'd)

- 4. Drive the new ball bearing into the flywheel using the special tools as shown. Apply a light coat of oil to the bearing surface.



- 5. Align the hole in the flywheel with the crankshaft dowel pin, and install the flywheel. Install the washer and mounting bolts finger-tight.
- 6. Install the special tool, then torque the flywheel mounting bolts in a crisscross pattern in several steps.

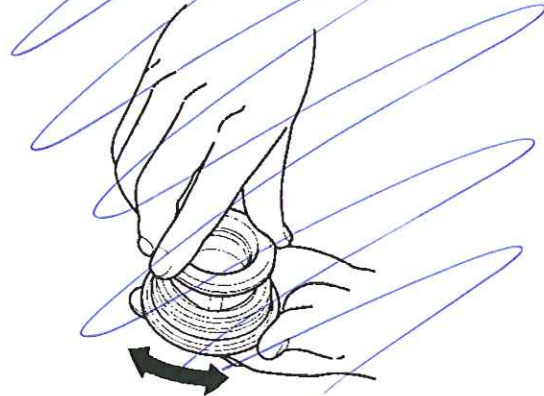
12 x 1.0 mm
 127 N·m (13.0 kgf·m, 94 lbf·ft) (94 ft-lbs)



Release Bearing Inspection

Check the release bearing for excessive play by spinning it by hand, if there is excessive play, replace the release bearing with a new one.

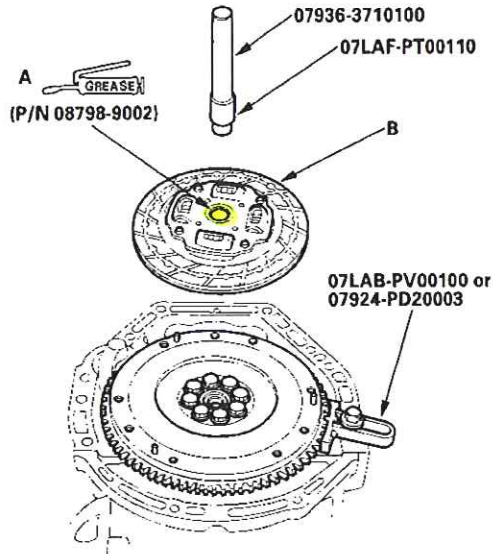
NOTE: The release bearing is packed with grease. Do not wash it in solvent.



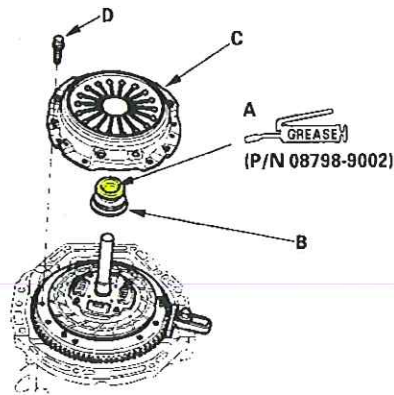


Clutch Disc and Pressure Plate Installation

1. Apply a thin, uniform coat of super high temp urea grease (P/N 08798-9002) to the splines (A) of the clutch disc (B). Slide the clutch disc onto the mainshaft, and remove extra overflow grease.
2. Install the ring gear holder.



3. Install the clutch disc using the special tools.
4. Apply super high temp urea grease (P/N 08798-9002) into the groove (A) of the release bearing (B), then install the release bearing on the pressure plate (C).

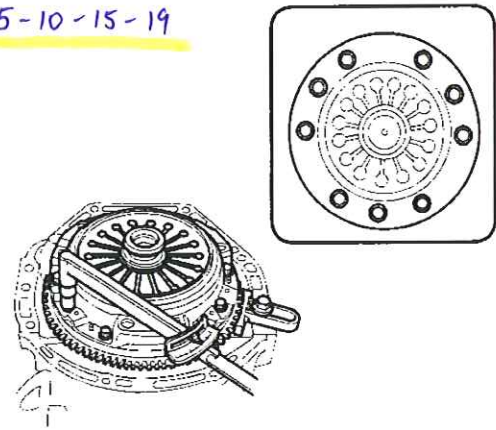


5. Install the pressure plate and the mounting bolts (D) finger-tight. Make sure the release bearing does not come off.

6. Torque the mounting bolts in a crisscross pattern. Tighten the bolts in several steps to prevent warping the diaphragm spring.

PRESSURE PLATE MOUNTING BOLT TORQUE:
25 N-m (2.6 kgf-m, 19 lbf-ft)

5-10-15-19

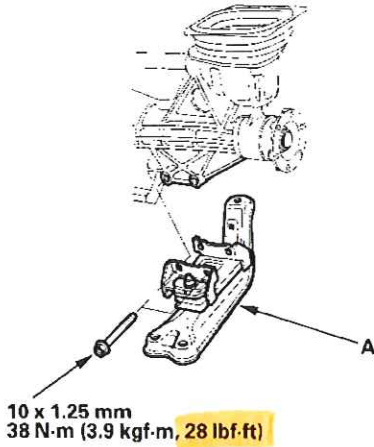


7. Remove the special tools.
8. Make sure the diaphragm spring fingers are all the same height.

Manual Transmission

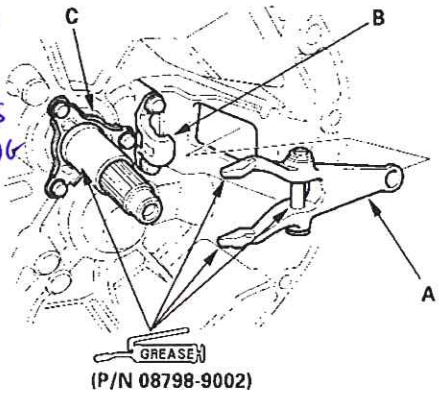
Transmission Installation

1. Install the transmission rear mount (A).

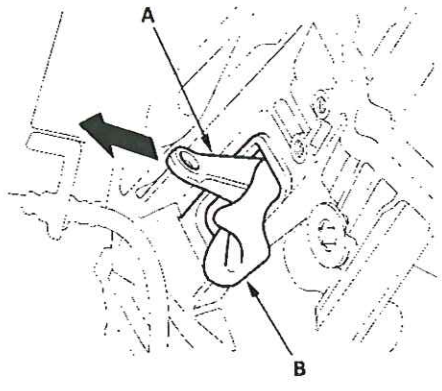


2. Check the two dowel pins are installed in the clutch housing.
3. Apply super high temp urea grease (P/N 08798-9002) to the release fork (A), release hanger (B), and release bearing guide (C). Install the release fork into the opening in the clutch housing.

DONT FORGET TO REINSTALL FORK IN TRANS BEFORE BOLTING IT BACK TO ENGINE

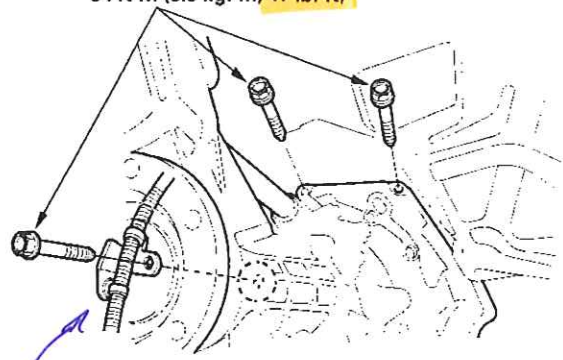


4. Pull the release fork (A) out until it stops, then wedge a shop towel (B) between the release fork and clutch housing to hold the release fork in place.



5. Place the transmission on a transmission jack, and raise it to the engine level.
6. Install the three upper transmission mounting bolts.

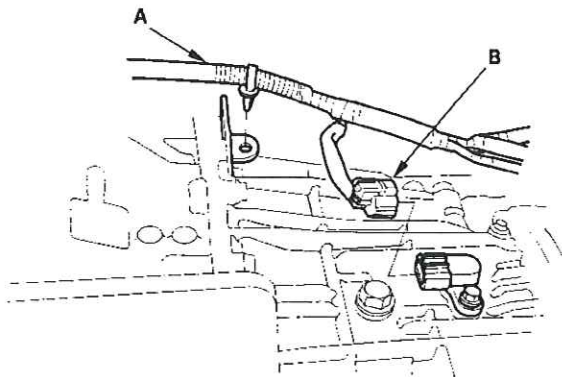
12 x 1.25 mm
64 N·m (6.5 kgf·m, 47 lbf·ft)



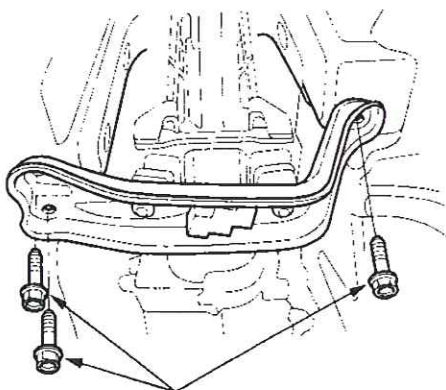
Dont forget this wire stay



7. Install the wire harness (A) to the transmission, then connect the pick-up sensor connector (B).



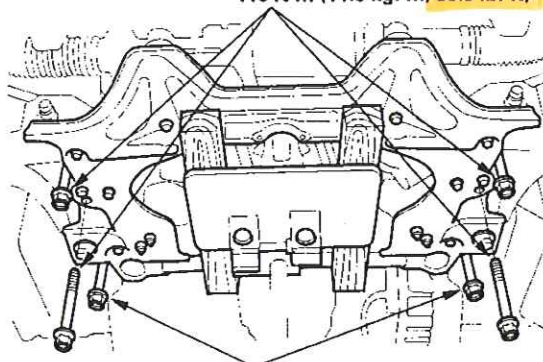
8. Raise the transmission, then install the three transmission rear mount bolts.



10 x 1.25 mm
38 N·m (3.9 kgf·m, 28 lbf·ft)

9. Place a floor jack under the front subframe and the engine mounting stiffener, and raise it to the frame.

SPECIAL BOLTS
Replace.
14 x 1.5 mm
116 N·m (11.8 kgf·m, 85.3 lbf·ft)

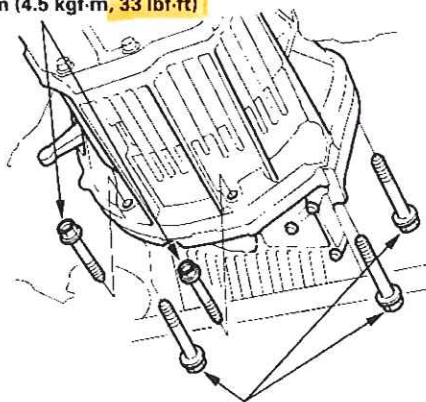


SPECIAL BOLTS
Replace.
12 x 1.25 mm
59 N·m (6.0 kgf·m, 43 lbf·ft)

10. Tighten the four mounting bolts, and install the two center mounting bolts.

11. Install the five lower transmission mounting bolts.

10 x 1.25 mm
44 N·m (4.5 kgf·m, 33 lbf·ft)



12 x 1.25 mm
64 N·m (6.5 kgf·m, 47 lbf·ft)

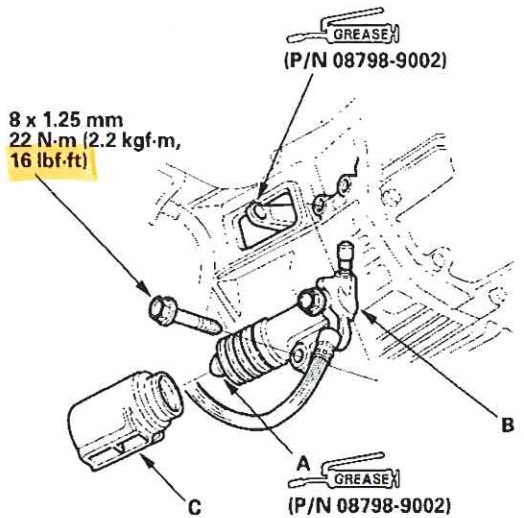
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Manual Transmission

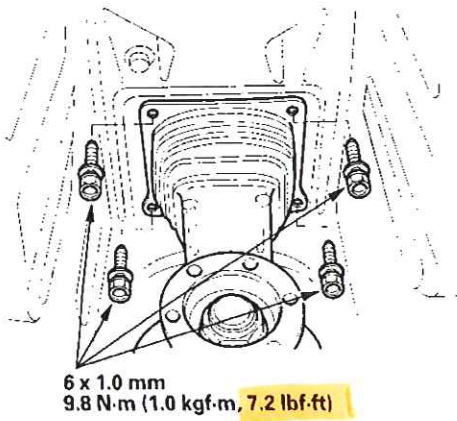
Transmission Installation (cont'd)

GO TO NEXT PAGE

- 12. Remove the shop towel, and install the release fork onto the release hanger.
- 13. Apply super high urea grease (P/N 08798-9002) to the end of the slave cylinder push rod (A). Install the slave cylinder (B) and the release fork boot (C).

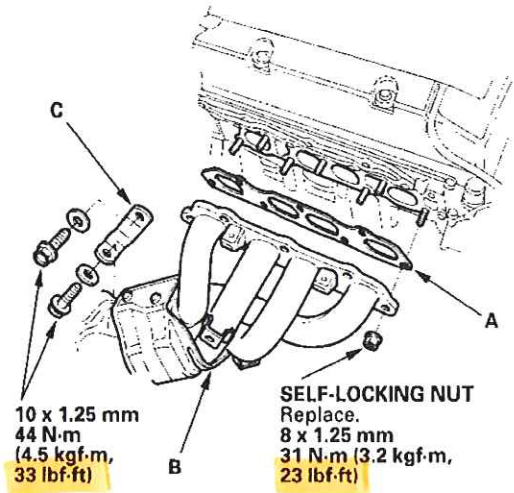


- 14. Install the four shift boot holder mounting bolts.

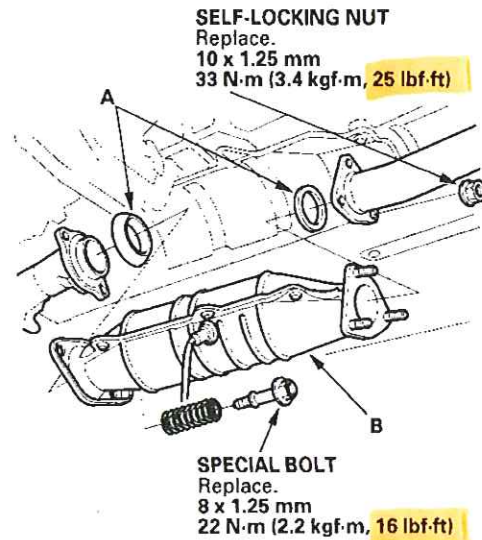


- 15. Install the propeller shaft (see page 16-18).

- 16. Install the gasket (A), exhaust manifold (B), and the exhaust manifold bracket (C).



- 17. Install the gaskets (A) and three way catalytic converter (TWC) (B).



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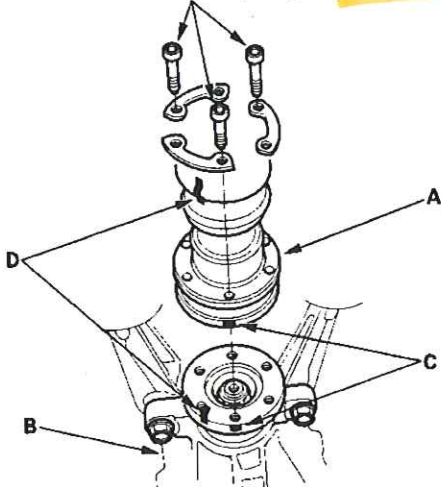
Driveline/Axle

Propeller Shaft Installation

1. Install the propeller shaft (A) onto the rear differential (B) by aligning the reference marks (C).

NOTE: When the propeller shaft is replaced, align the white marks (D) on the new propeller shaft with the white mark on the differential.

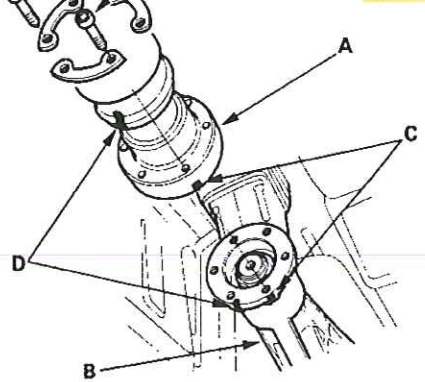
SPECIAL BOLTS
Replace.
8 x 1.25 mm
32 N·m (3.3 kgf·m, 24 lbf·ft)



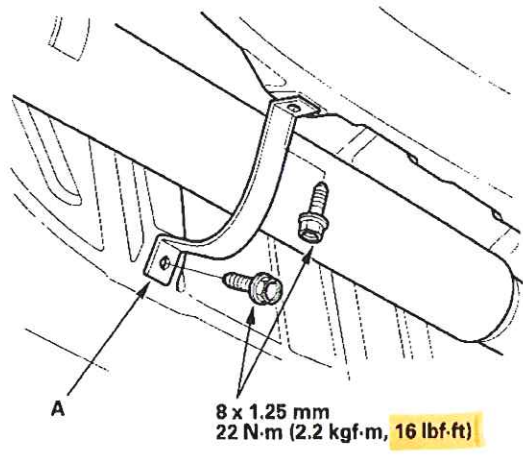
2. Install the propeller shaft (A) to the transmission (B) by aligning the reference marks (C).

NOTE: When the propeller shaft is replaced, align the white marks (D) on the new propeller shaft with the white mark on the transmission.

SPECIAL BOLTS
Replace.
8 x 1.25 mm
32 N·m (3.3 kgf·m, 24 lbf·ft)



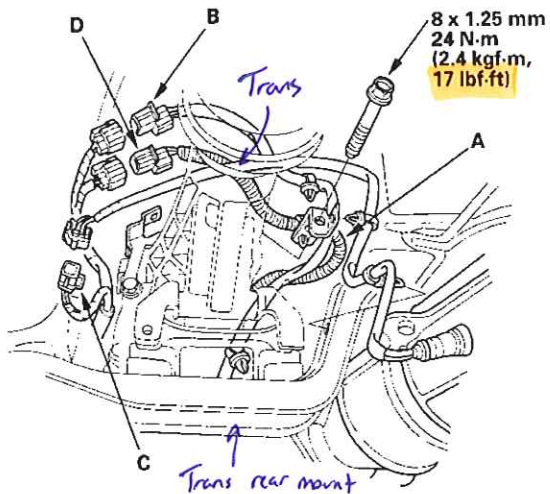
3. Install the propeller shaft protector (A).



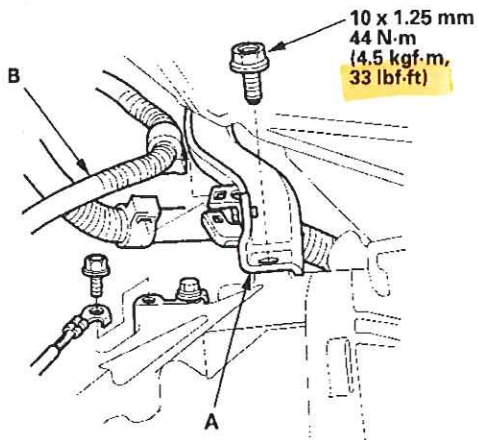
GO BACK TO PAGE 16



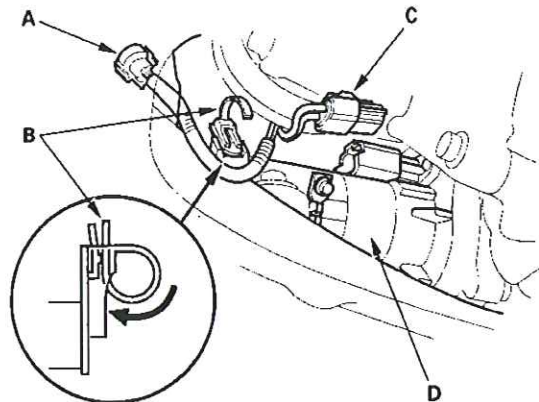
- 18. Install the wire harness (A) onto the transmission, then connect the heated oxygen sensor (HO2S) (B), secondary heated oxygen sensor (secondary HO2S) (C), and the back-up light switch (D) connectors.



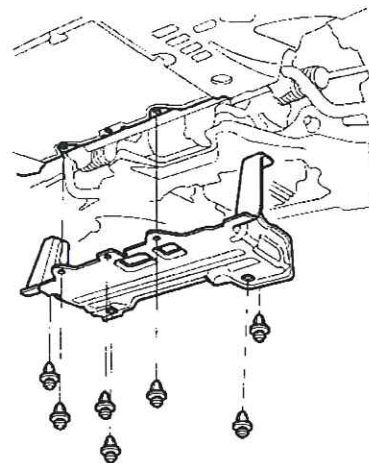
- 19. Install the intake manifold bracket (A) lower mounting bolt, then install the wire harness (B) on the intake manifold bracket.



- 20. Reconnect the torque sensor 3P connector (A), and install the wire harness clamp (B).



- 21. Reconnect the 2P connector (C) to the steering gearbox (D).
- 22. Install the splash shield.



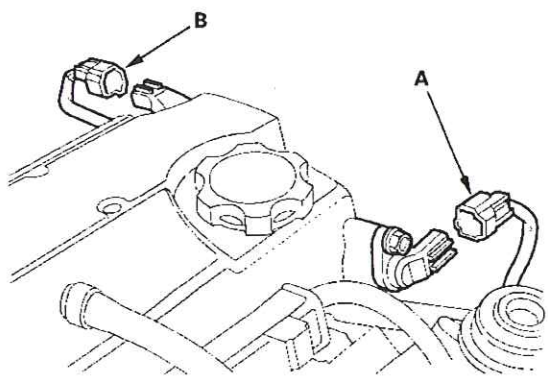
Can lower car to the ground now

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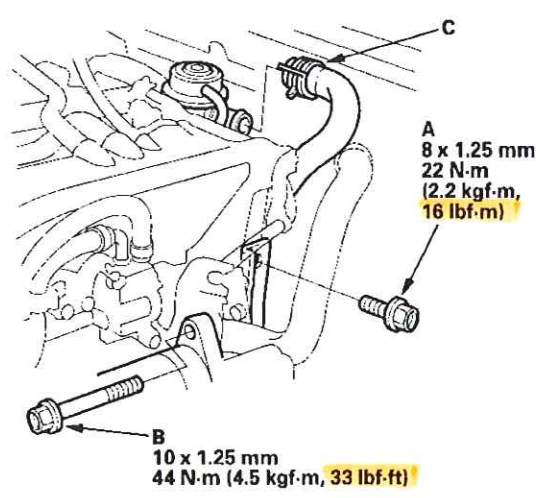
Manual Transmission

Transmission Installation (cont'd)

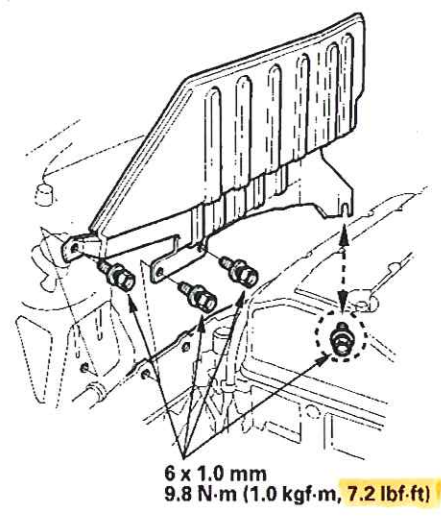
23. Connect the TDC1 (A) and TDC2 (B) sensor connectors.



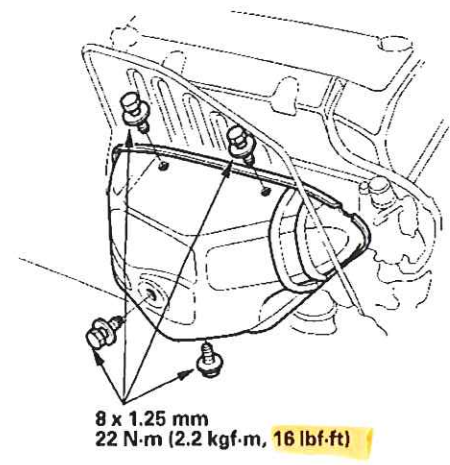
24. Install the upper intake manifold bracket mounting bolt (A) and upper starter motor mounting bolt (B). Connect the hose (C) to the suction valve.

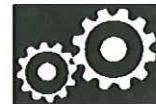


25. Install the heat shield.

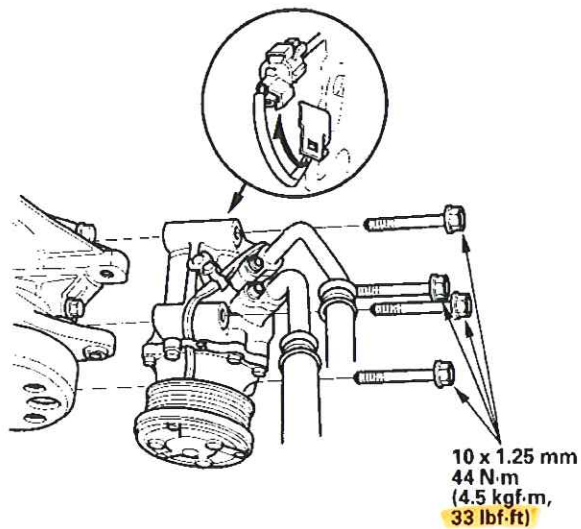


26. Install the exhaust manifold cover.



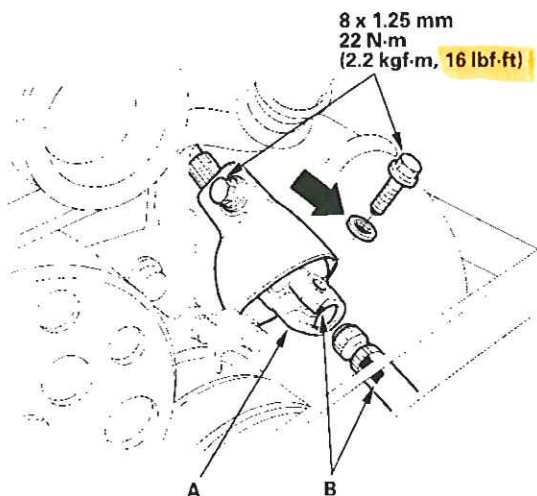


27. Install the A/C compressor, then connect the 1P connector.

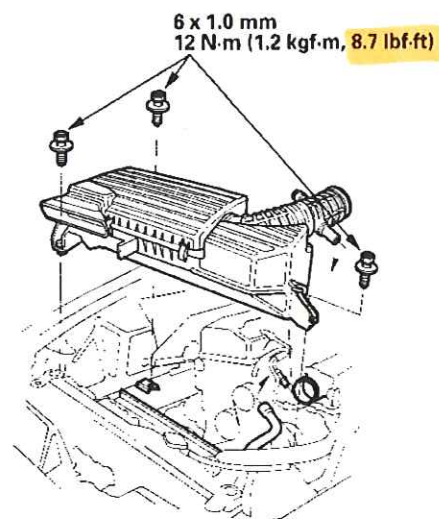


28. Install the alternator and the alternator-compressor belt (see page 4-25). *SEE P.4-5 For Torques*

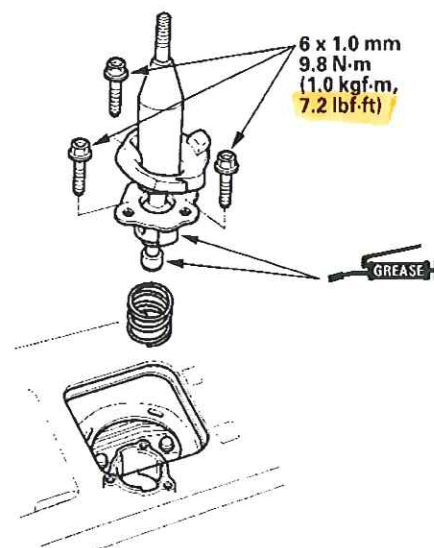
29. Connect the steering joint (A) by aligning the reference marks (B).



30. Install the air cleaner housing assembly.



31. Install the shift lever spring and the shift lever.

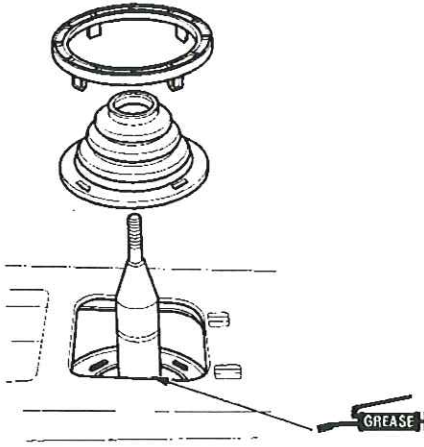


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Manual Transmission

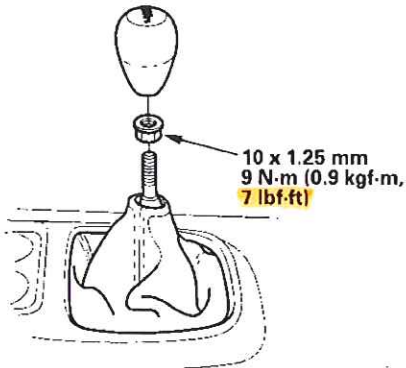
Transmission Installation (cont'd)

32. Install the shift boot and the boot holder.



33. Install the center console (see page 20-76).

34. Install the shift lever knob, and tighten the locknut.



35. Install the battery. Connect the positive (+) cable first, then the negative (-) cable to the battery.

36. Check the transmission fluid (see page 13-3).

37. Test-drive the vehicle.

38. Check the clutch operation.

39. Check the transmission for noise and smooth operation.

40. Check the front wheel alignment (camber angle, caster angle, and front toe) (see page 18-5).