

2004 MANUAL TRANSMISSIONS

Removal & Installation - TSX

TRANSMISSION REMOVAL

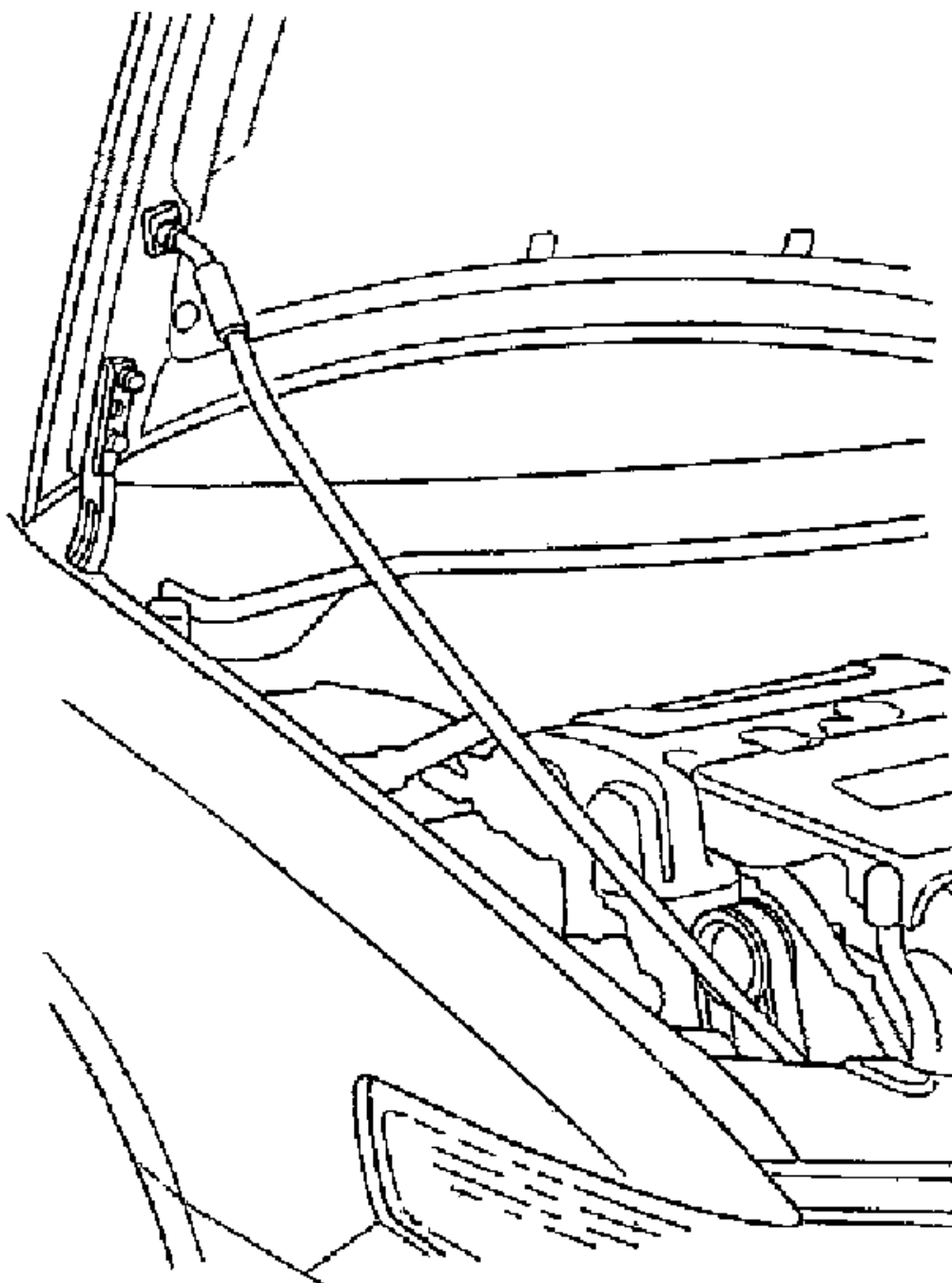
Special Tools Required:

- Engine hanger/adaptor VSB02C000015*
- Engine support hanger, A & Reds AAR-T-12566*
- Subframe adapter VSB02C000016*

* Available through the Honda Tool and Equipment Program.

NOTE: **Use fender covers to avoid damaging painted surfaces.**

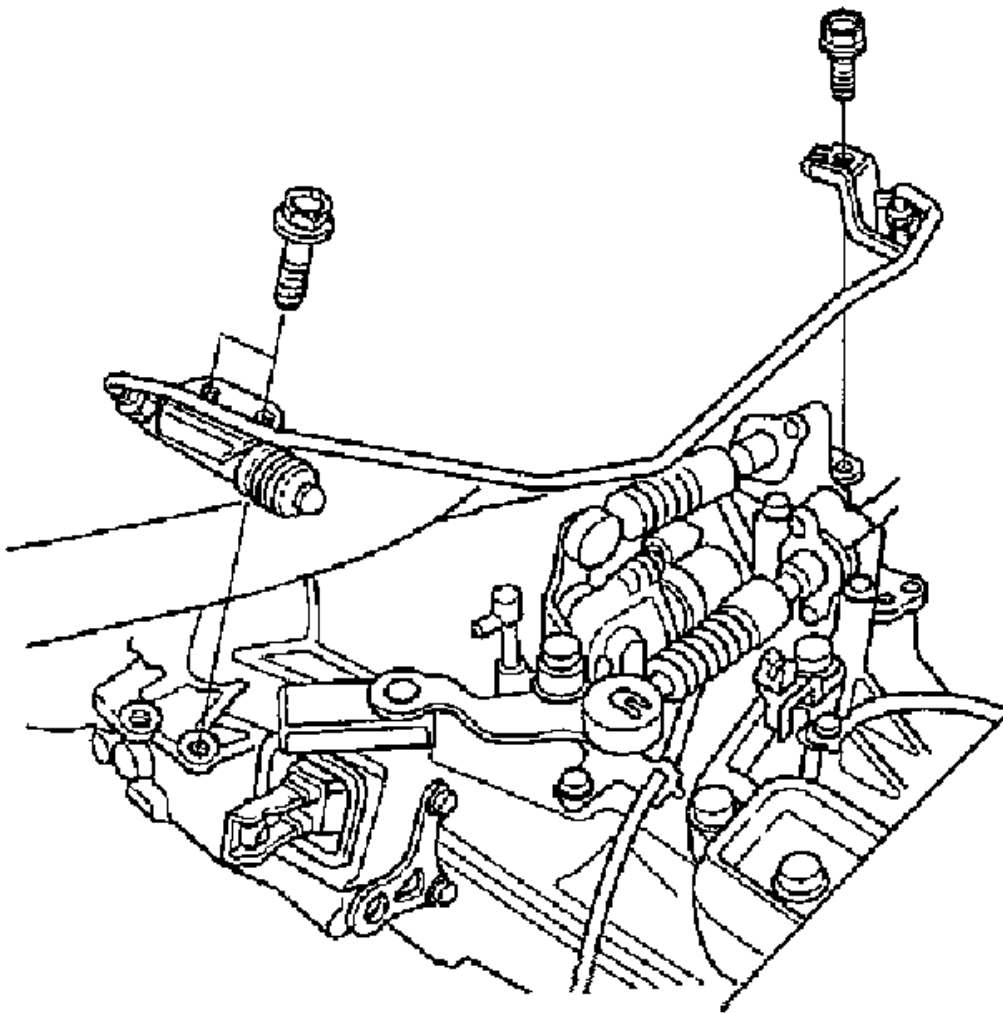
1. Secure the hood in its vertical position (support rod in the lower hole).



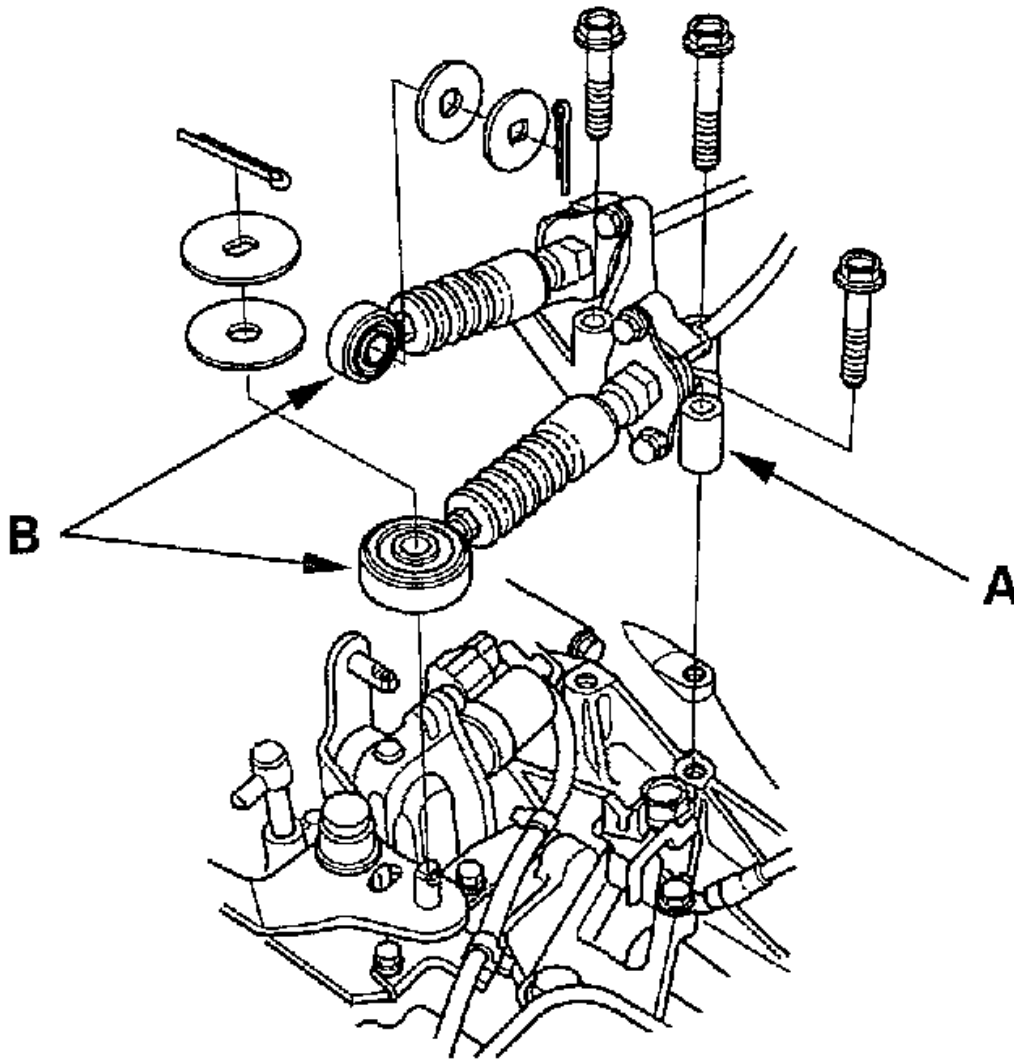
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Fig. 1: Secure The Hood With Support Rod In The Lower Hole

2. Make sure you have the anti-theft codes for the radio and the navigation system, then write down the frequencies for the radio's preset buttons. Disconnect the negative (-) cable first, then the positive (+) cable from the battery. Remove the battery.
3. Remove the air cleaner housing (see **AIR CLEANER REMOVAL/INSTALLATION**).
4. Remove the battery base (see step 6 of **ENGINE REMOVAL**).
5. Carefully remove the slave cylinder without bending the clutch line. Do not operate the clutch pedal once the slave cylinder has been removed.

**G01823168****Fig. 2: Removing The Slave Cylinder**

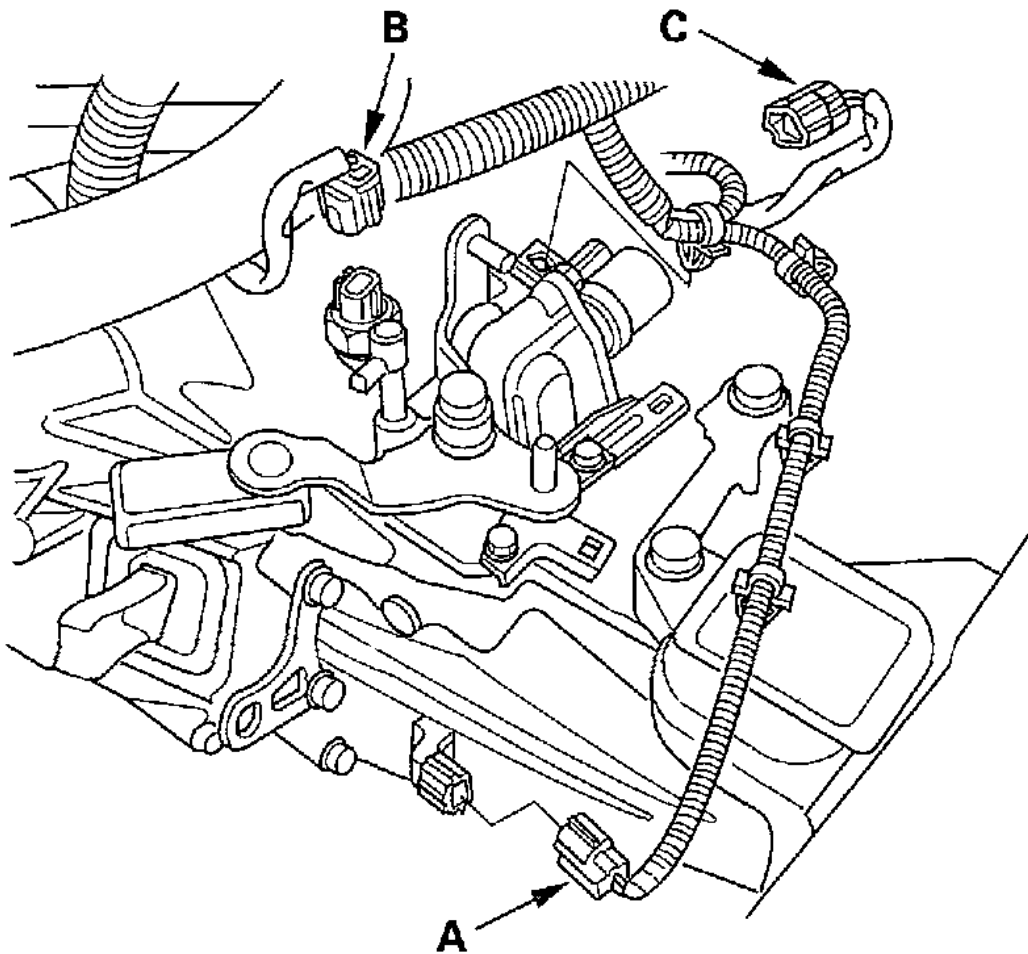
6. Remove the cable bracket (A), then disconnect the cables (B) from the top of the transmission housing. Carefully remove both cables and the bracket together to avoid bending the cables.



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Fig. 3: Removing The Cable Bracket, & Disconnecting The Cables From The Top Of The Transmission Housing

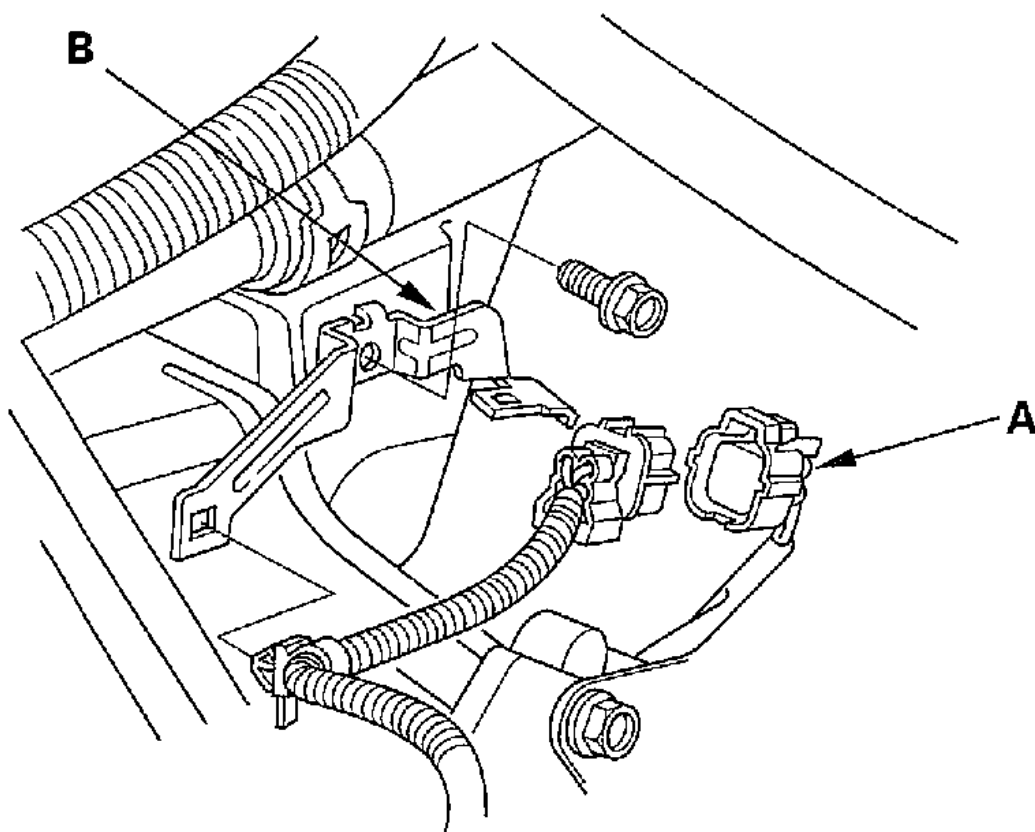
7. Disconnect the countershaft speed sensor connector (A), back-up light switch connector (B), and reverse lockout solenoid connector (C).



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Fig. 4: Disconnecting The Countershaft Speed Sensor, Back-Up Light Switch, And Reverse Lockout Solenoid Connectors

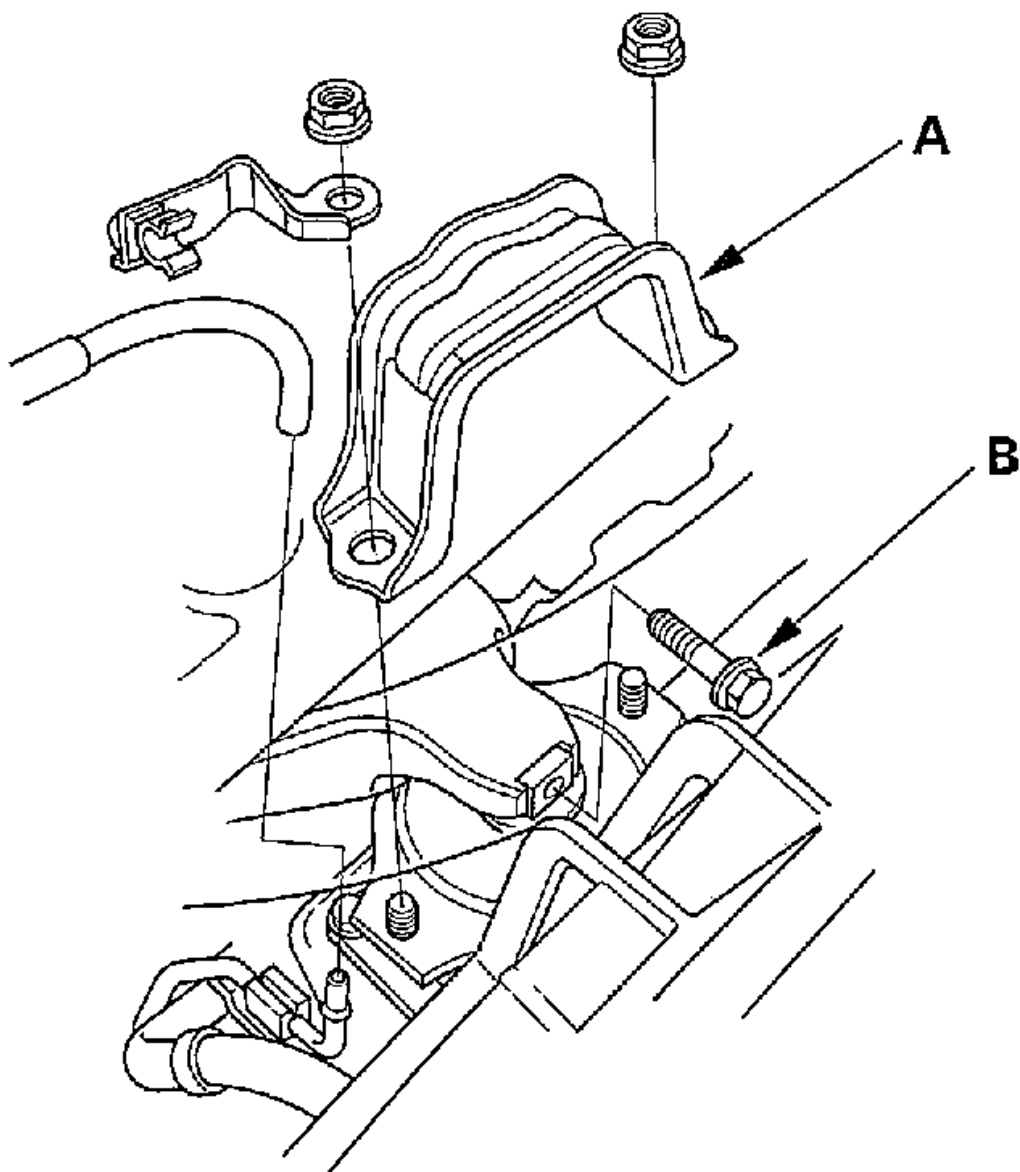
8. Disconnect the secondary heated oxygen sensor (secondary HO2S) connector (A), then remove the bracket (B).



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Fig. 5: Disconnecting The Secondary Heated Oxygen Sensor

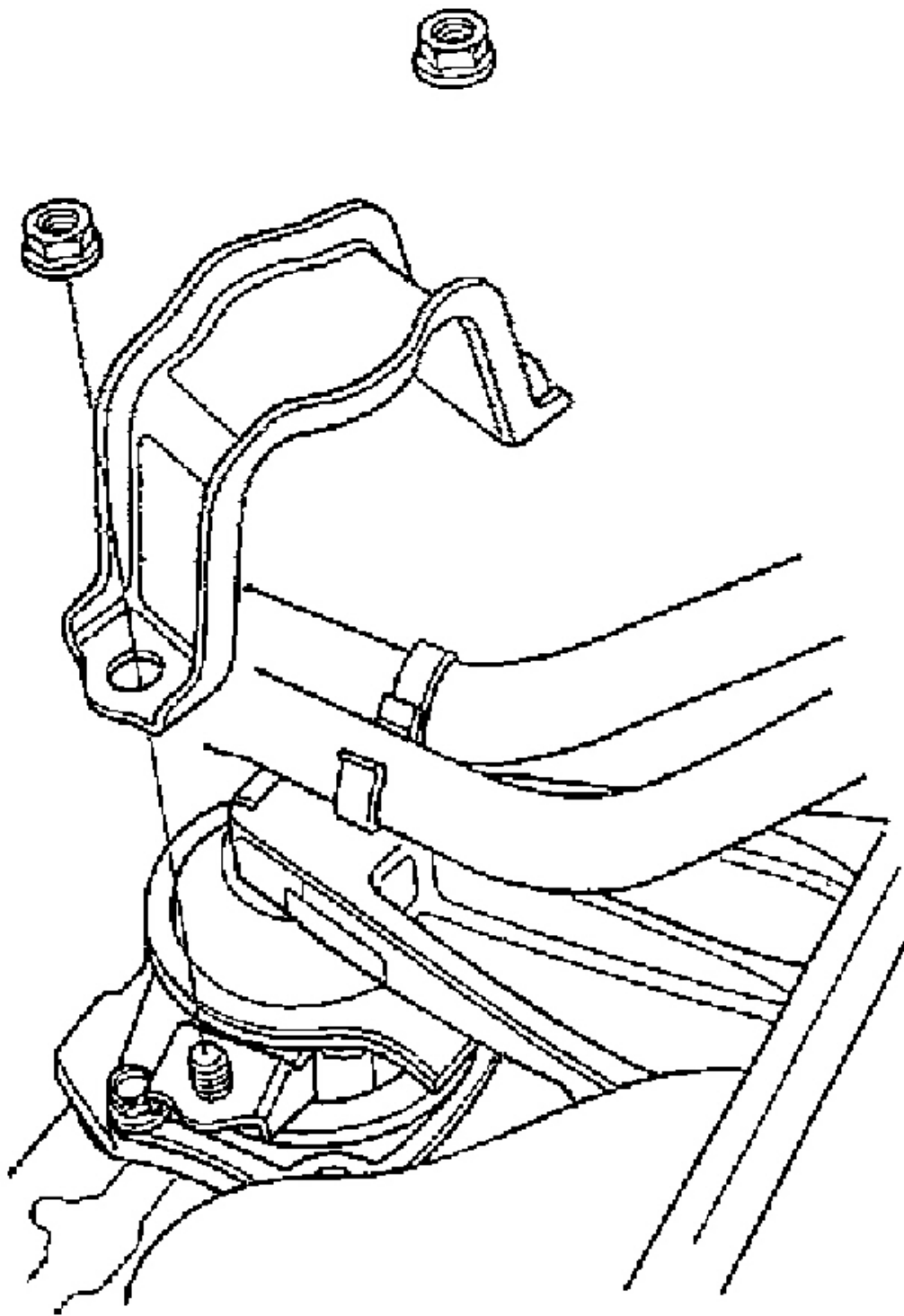
9. Remove the engine front mount stop (A) and the engine mount front mounting bolt (B).



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Fig. 6: Removing The Engine Front Mount Stop & The Engine Mount Front Mounting Bolt

10. Remove the engine rear mount stop.

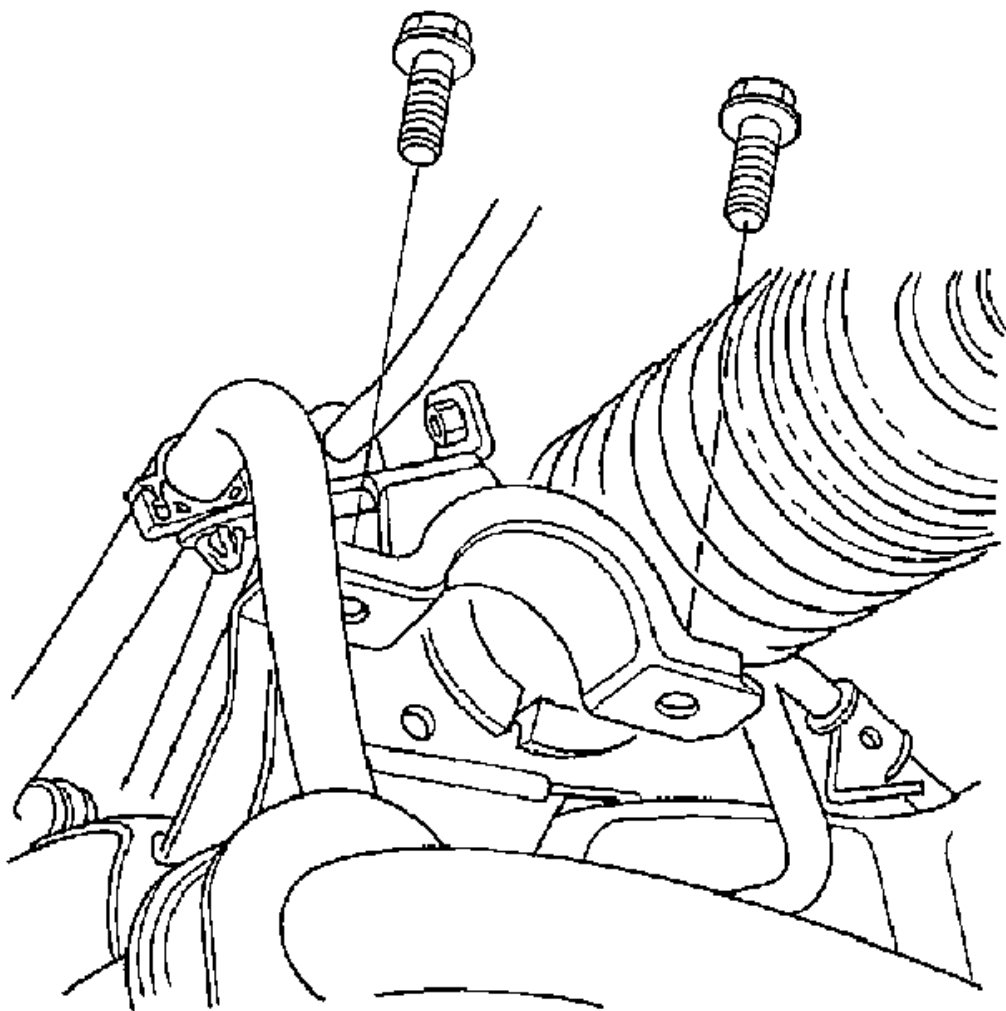


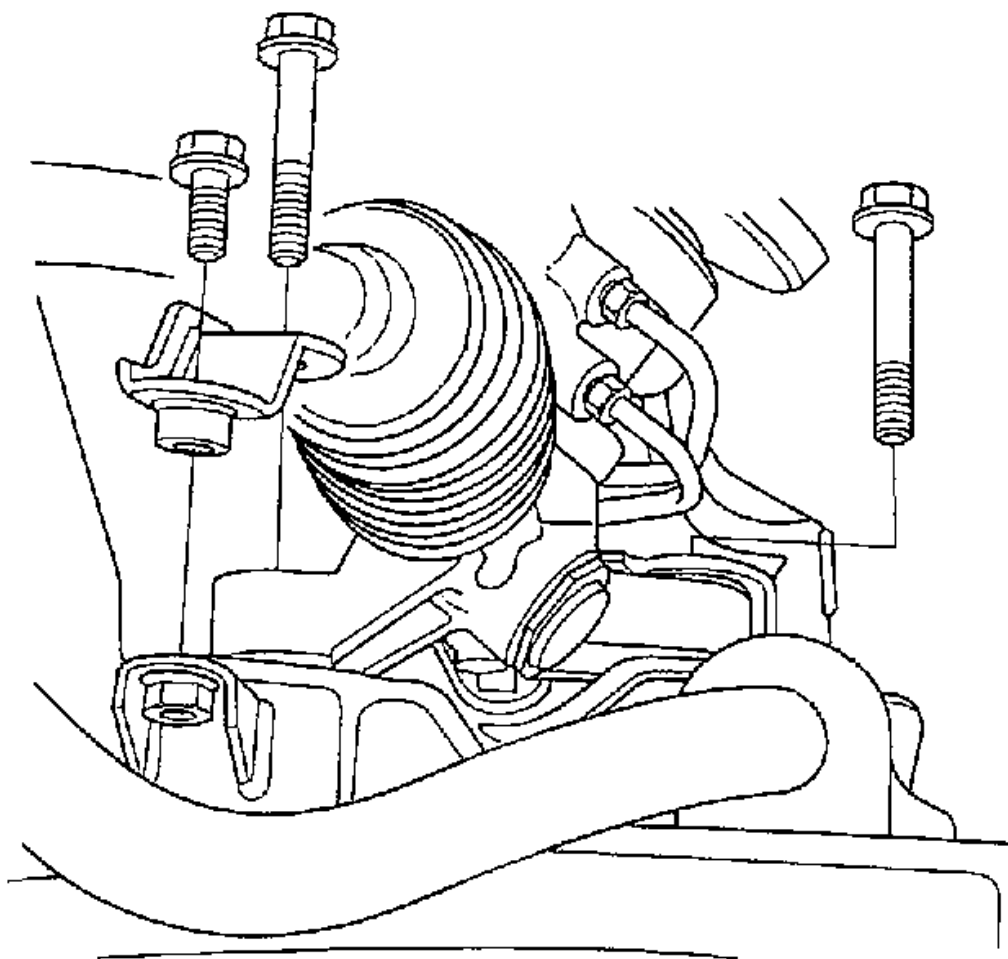
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Fig. 7: Removing The Engine Rear Mount Stop

11. Remove the steering gearbox mounting bolts.

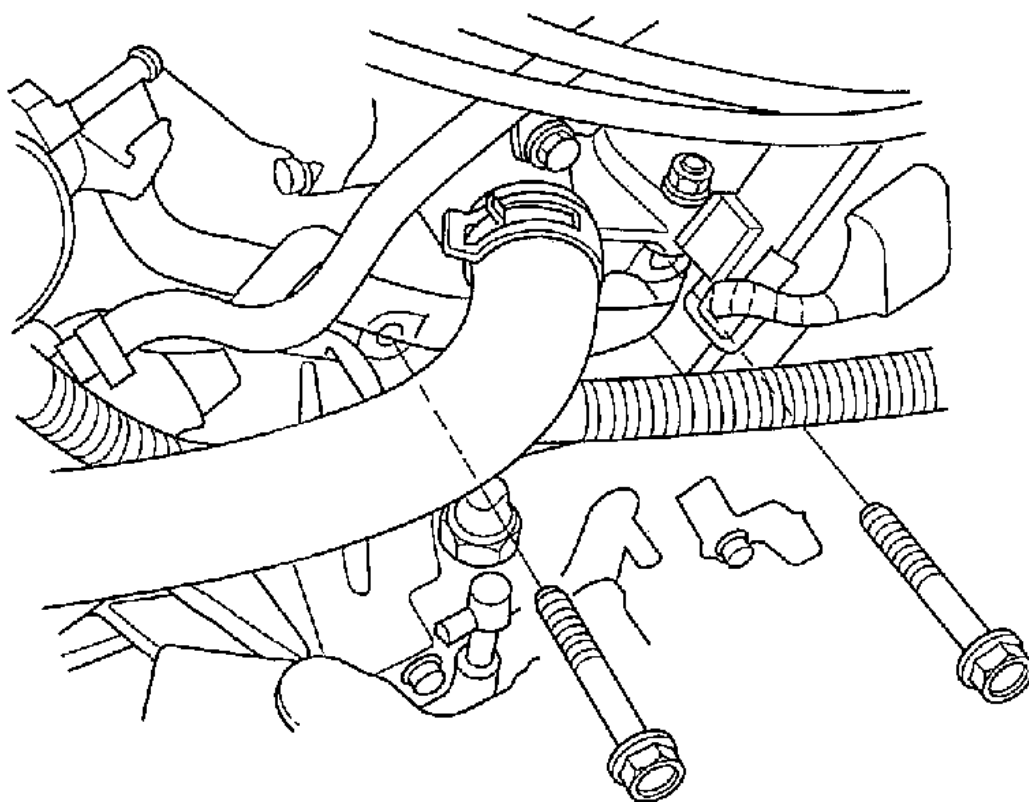
**G01823174****Fig. 8: Removing The Right Side Steering Gearbox Mounting Bolts**



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Fig. 9: Removing The Left Side Steering Gearbox Mounting Bolts

12. Remove the transmission upper mounting bolts.

**G01823176****Fig. 10: Removing The Transmission Upper Mounting Bolts**

13. Attach the special tool to the threaded holes in the cylinder head.

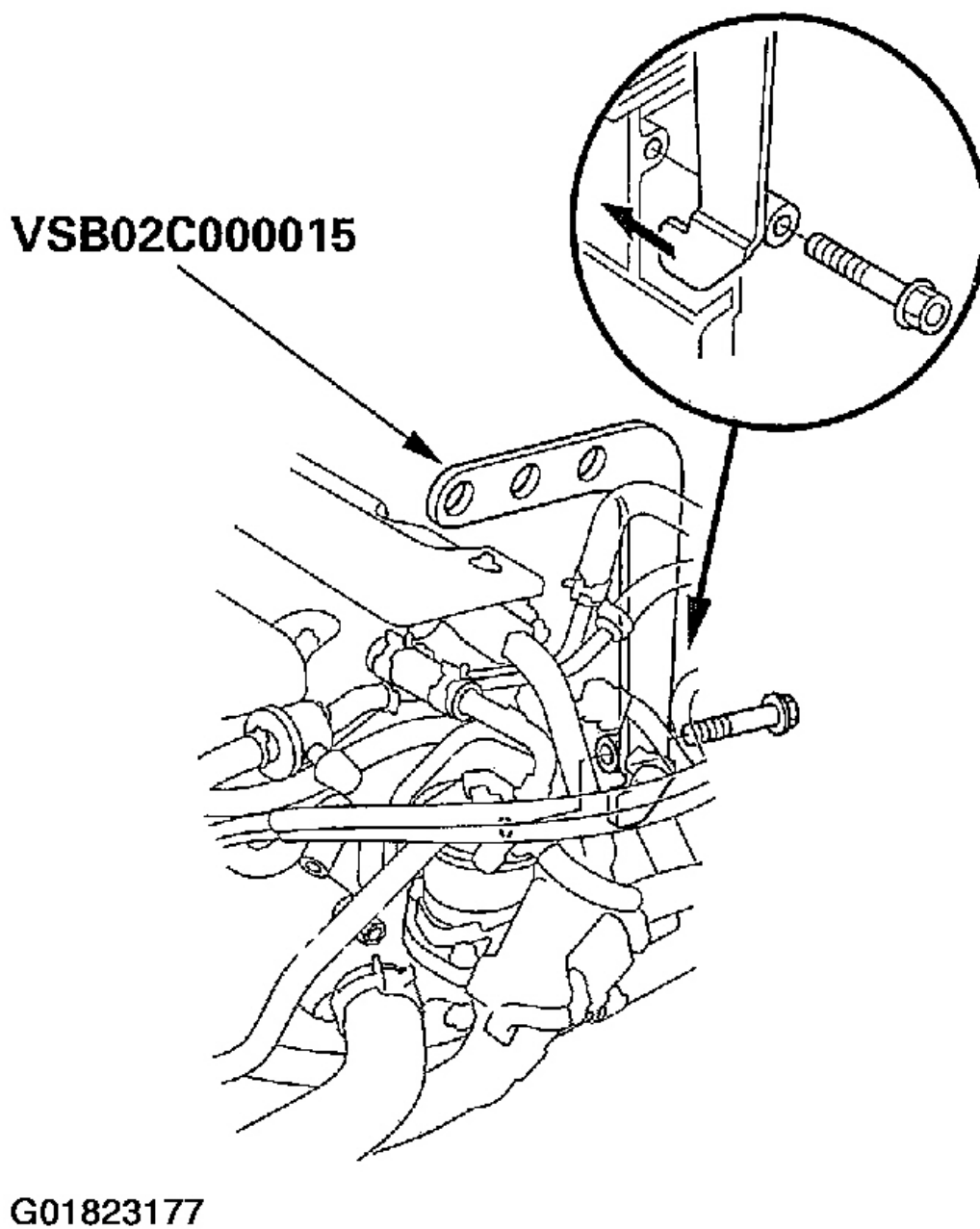
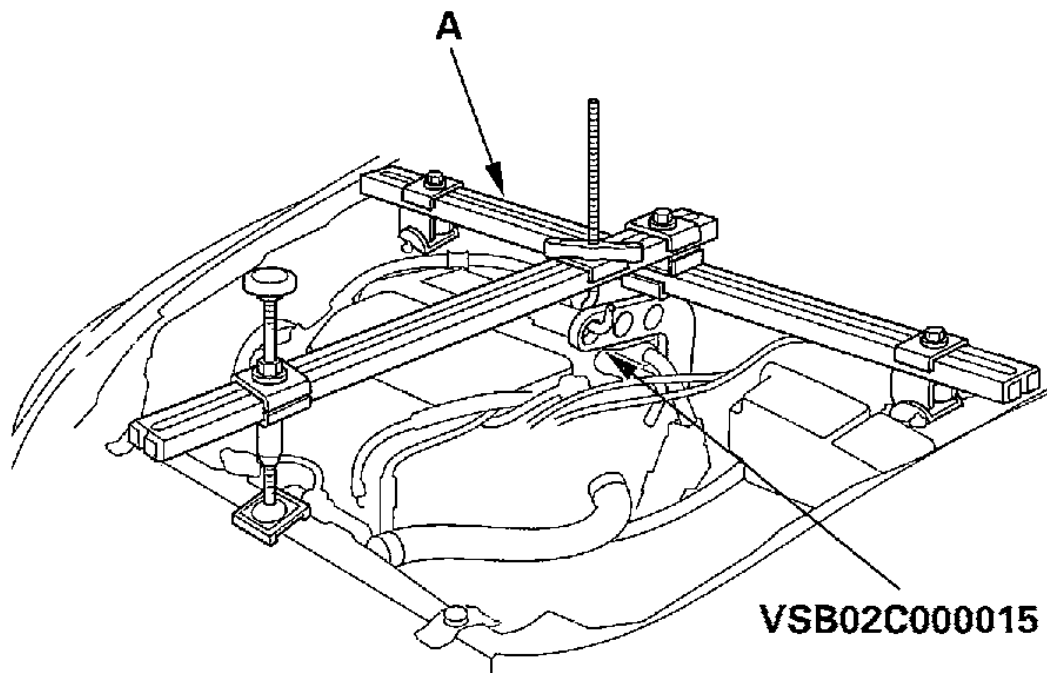


Fig. 11: Attaching The Special Tool To The Threaded Holes In The Cylinder Head

14. Install the engine support hanger (A) to the vehicle, then attach the hook to the special tool.

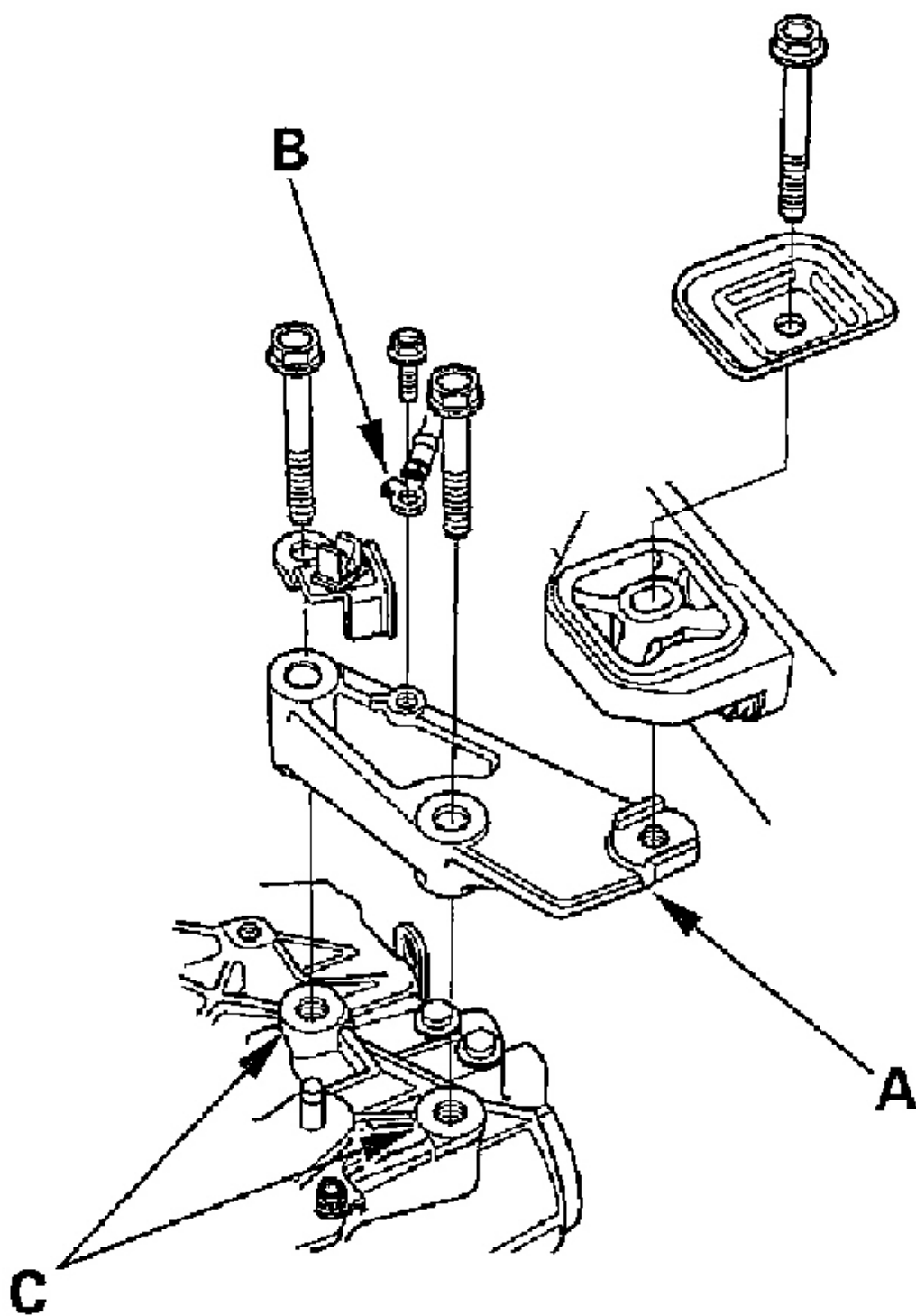


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Fig. 12: Installing The Engine Support Hanger To The Vehicle, & Attaching The Hook To The Special Tool

15. Remove the transmission mount bracket (A) and ground cable (B).

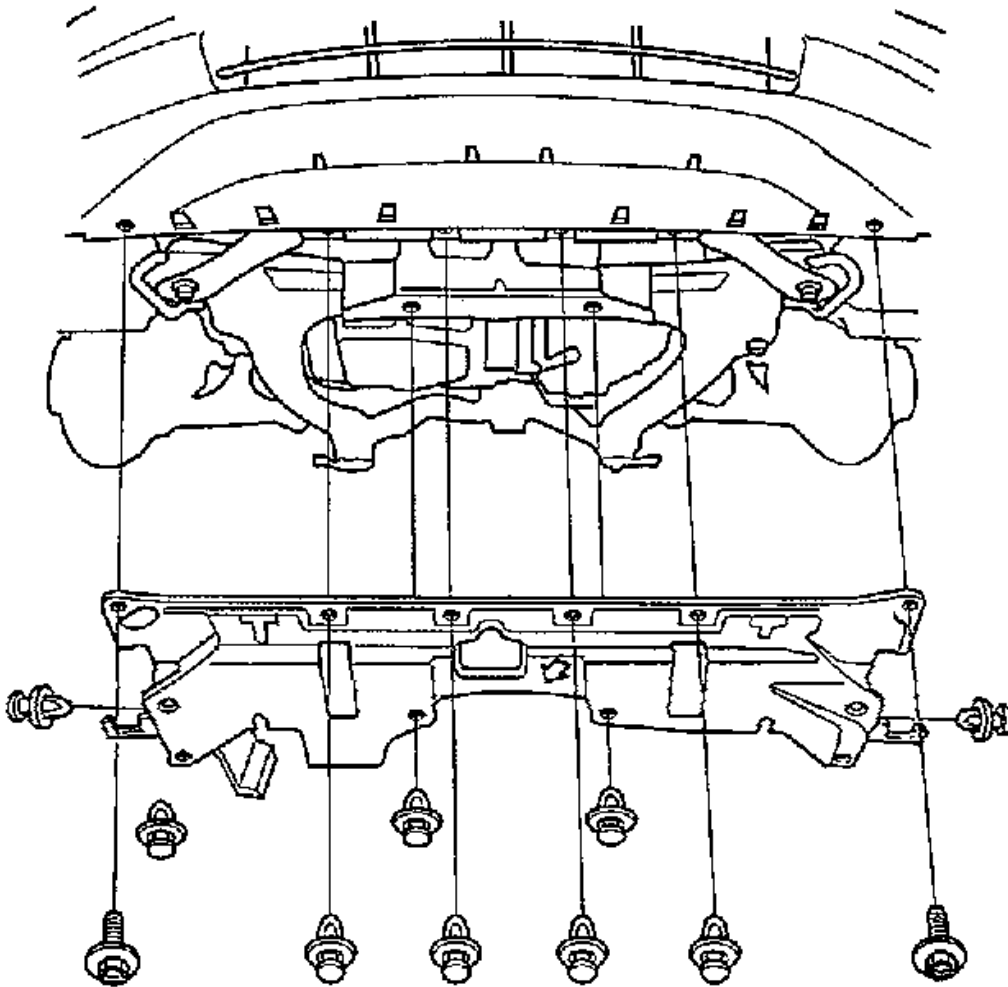
NOTE: Be careful not to drop the mount bracket collar (C).



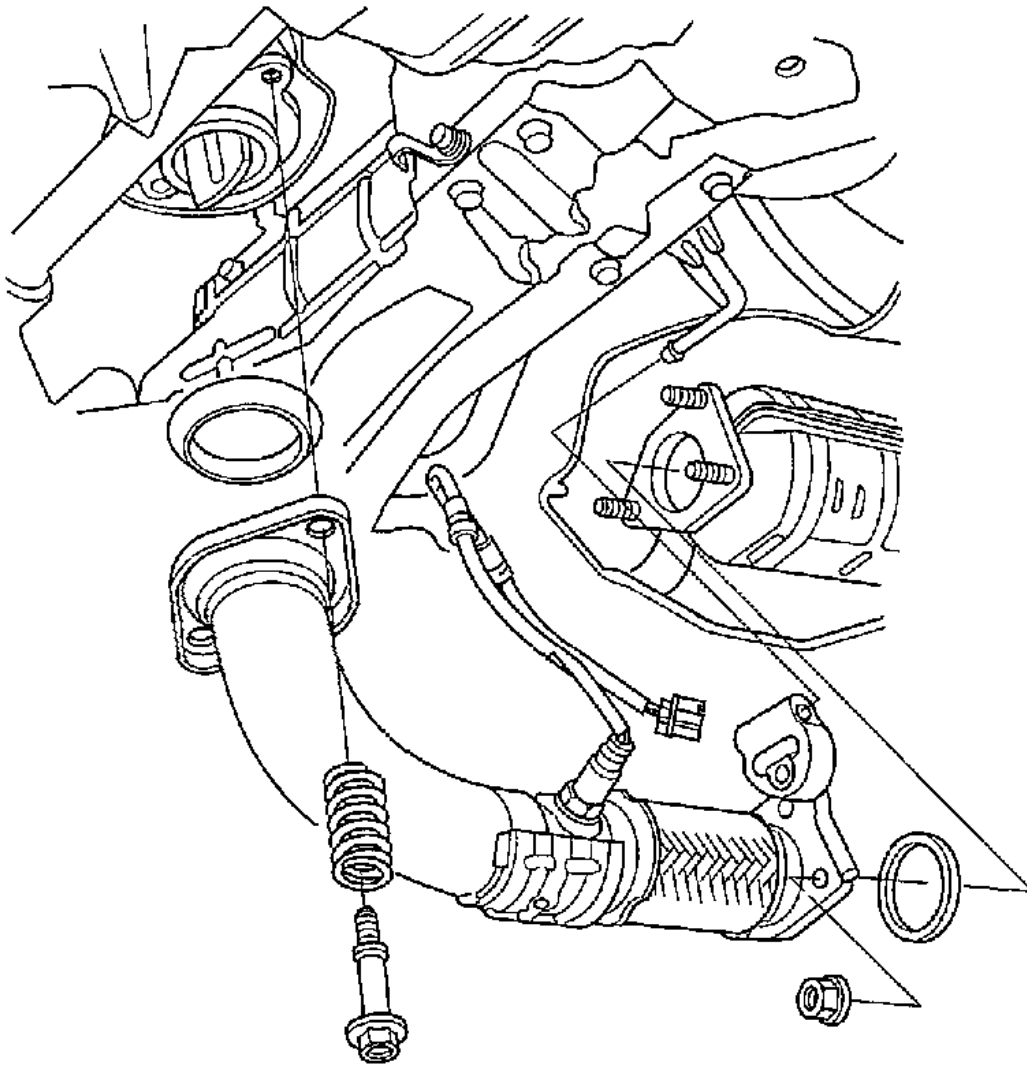
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Fig. 13: Removing The Transmission Mount Bracket And Ground Cable

16. Raise the vehicle, and make sure it is securely supported.
17. Drain the transmission fluid. Reinstall the drain bolt with a new washer (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**).
18. Remove the splash shield.

**G01823180****Fig. 14: Removing The Splash Shield**

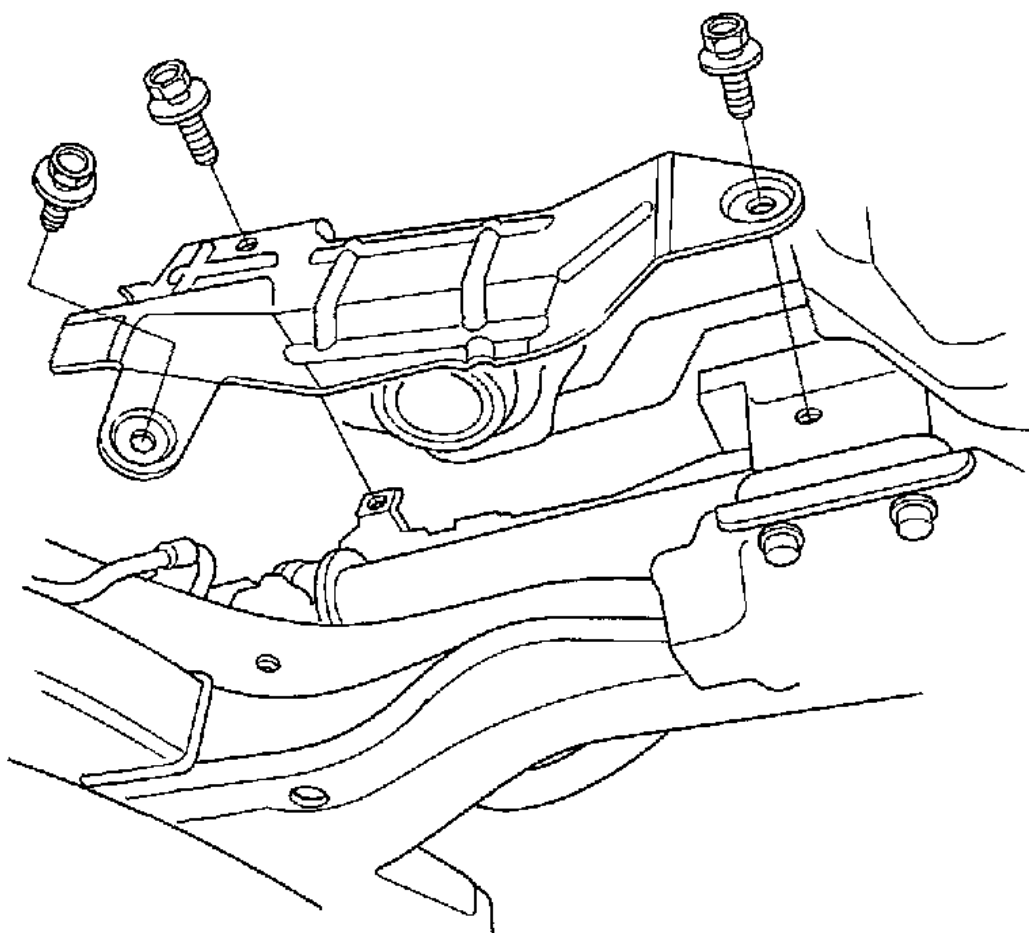
19. Remove the exhaust pipe A.



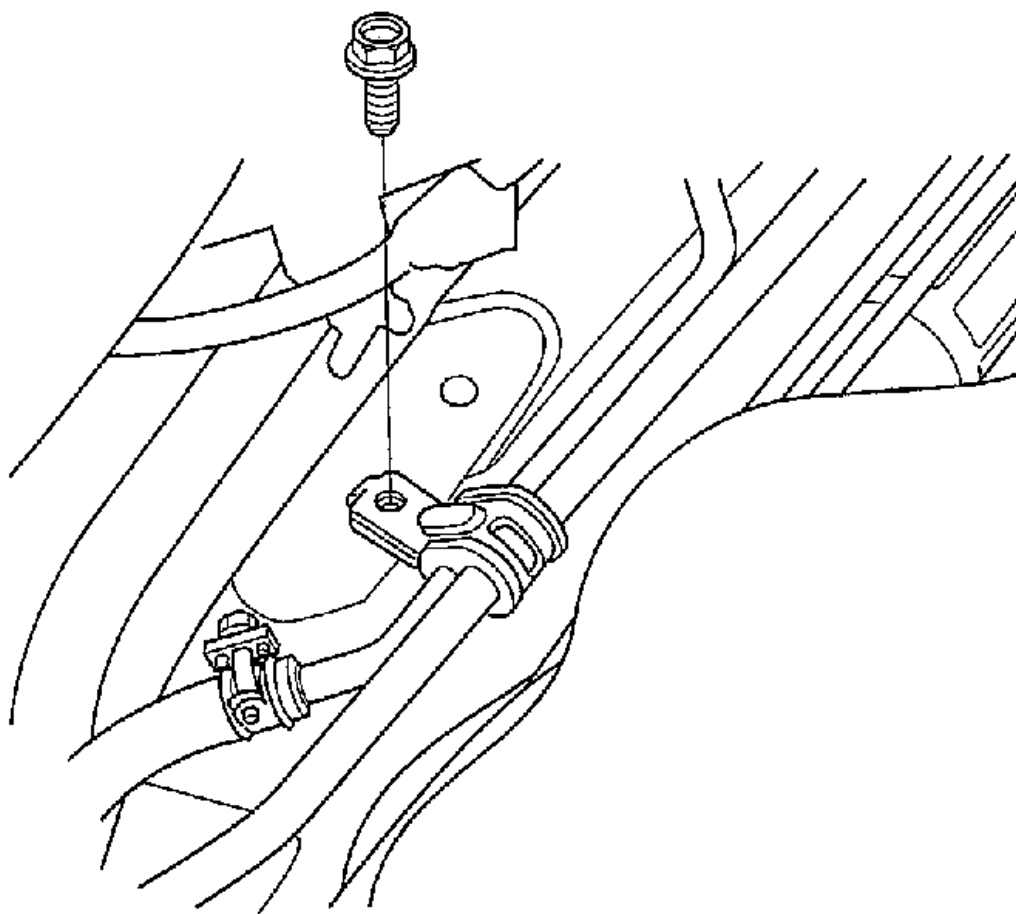
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Fig. 15: Removing The Exhaust Pipe A

20. Separate the front stabilizer link (see step 5 of **FRONT AXLE SHAFTS**).
21. Remove the damper fork (see step 6 of **FRONT AXLE SHAFTS**).
22. Separate the knuckle from the lower arm (see step 7 of **FRONT AXLE SHAFTS**).
23. Remove the inboard joint of driveshafts (see step 10 of **FRONT AXLE SHAFTS**).
24. Remove the intermediate shaft (see **INTERMEDIATE SHAFT**).
25. Remove the heat shield.

**G01823182****Fig. 16: Removing The Heat Shield**

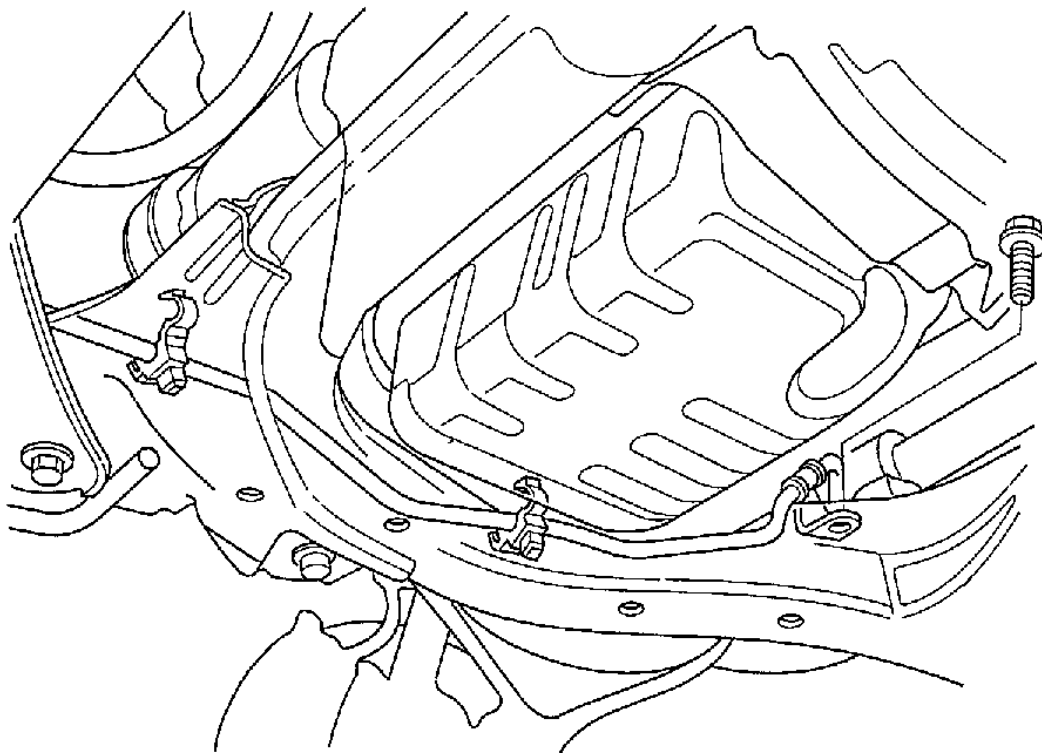
26. Remove the power steering line bracket mounting bolt.



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Fig. 17: Removing The Power Steering Line Bracket Mounting Bolt

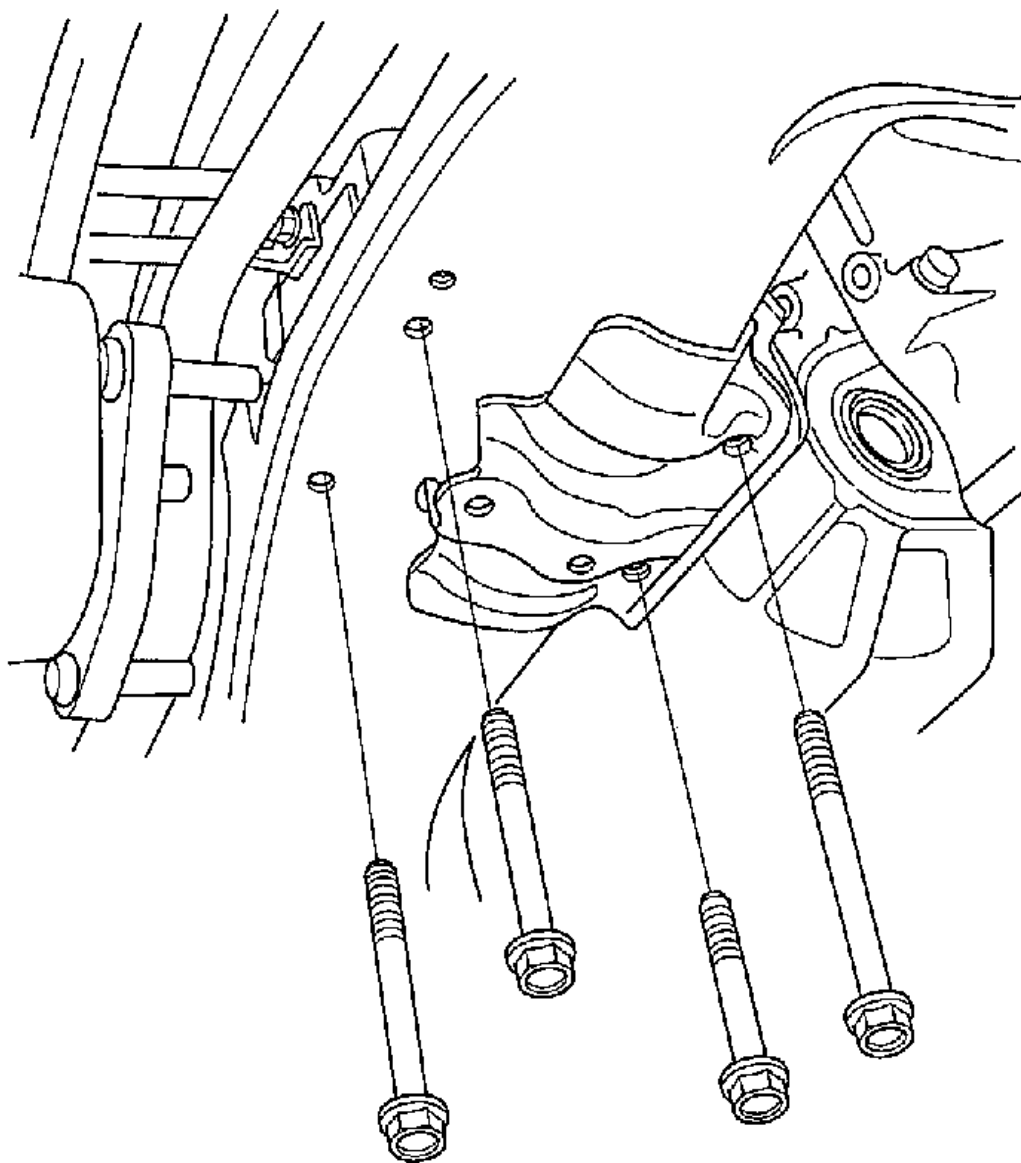
27. Remove the power steering line from the subframe (two clamps and one mounting bracket bolt).



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Fig. 18: Removing The Power Steering Line From The Subframe

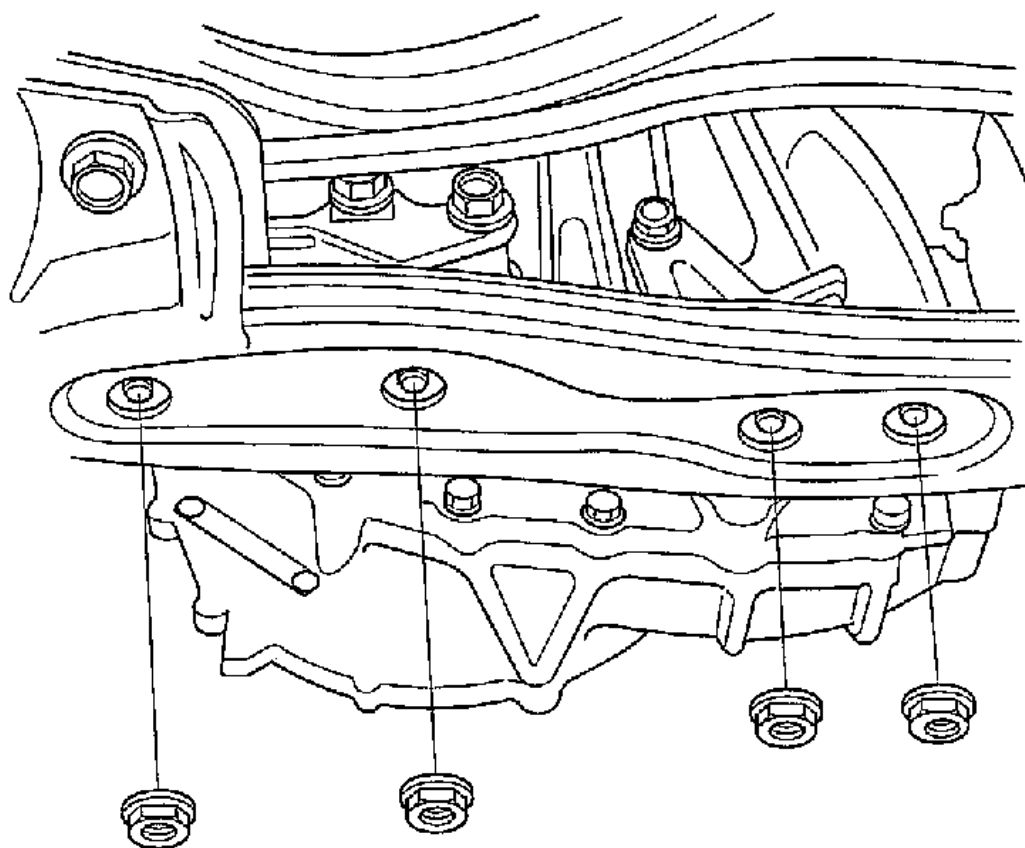
28. Remove the rear engine mount lower mounting bolts.



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Fig. 19: Removing The Rear Engine Mount Lower Mounting Bolts

29. Remove the transmission lower mount mounting nuts.



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Fig. 20: Removing The Transmission Lower Mount Mounting Nuts

30. Remove the middle subframe mounting bolts.

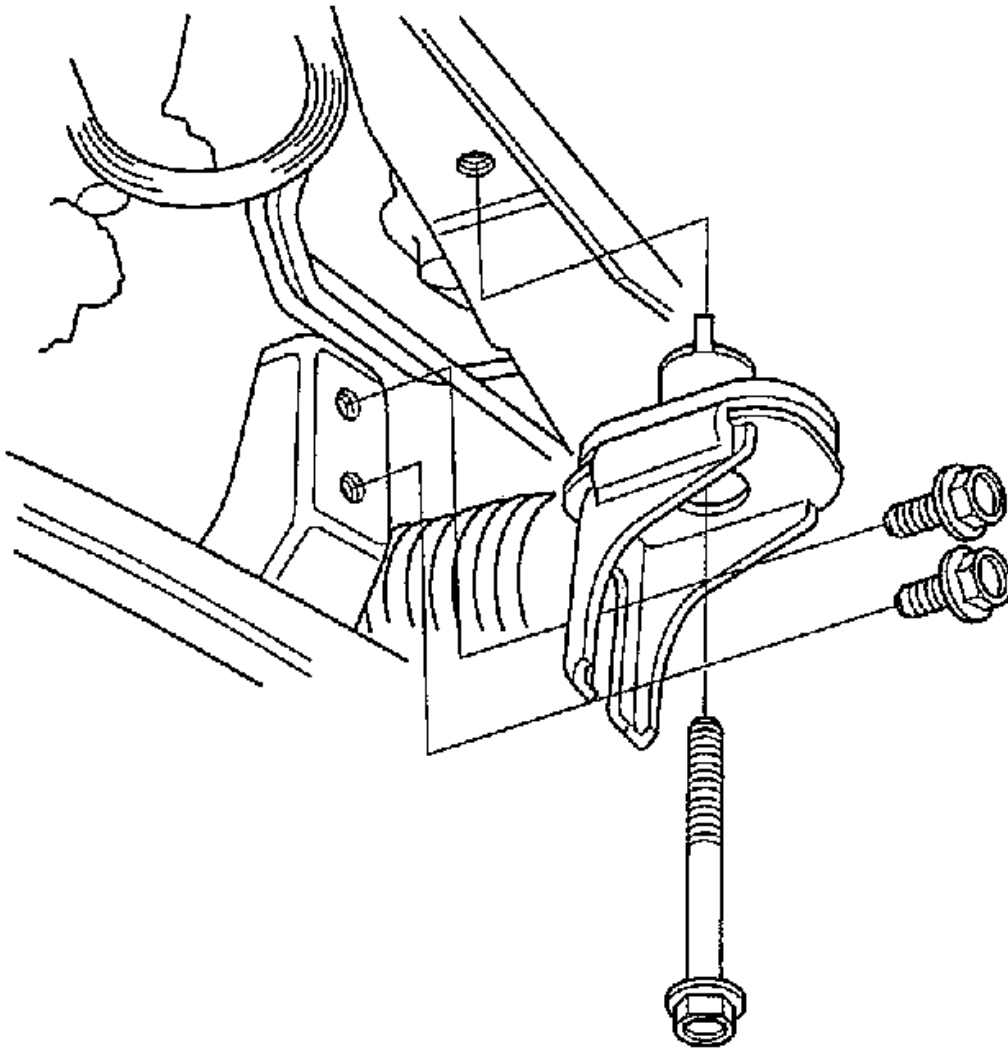
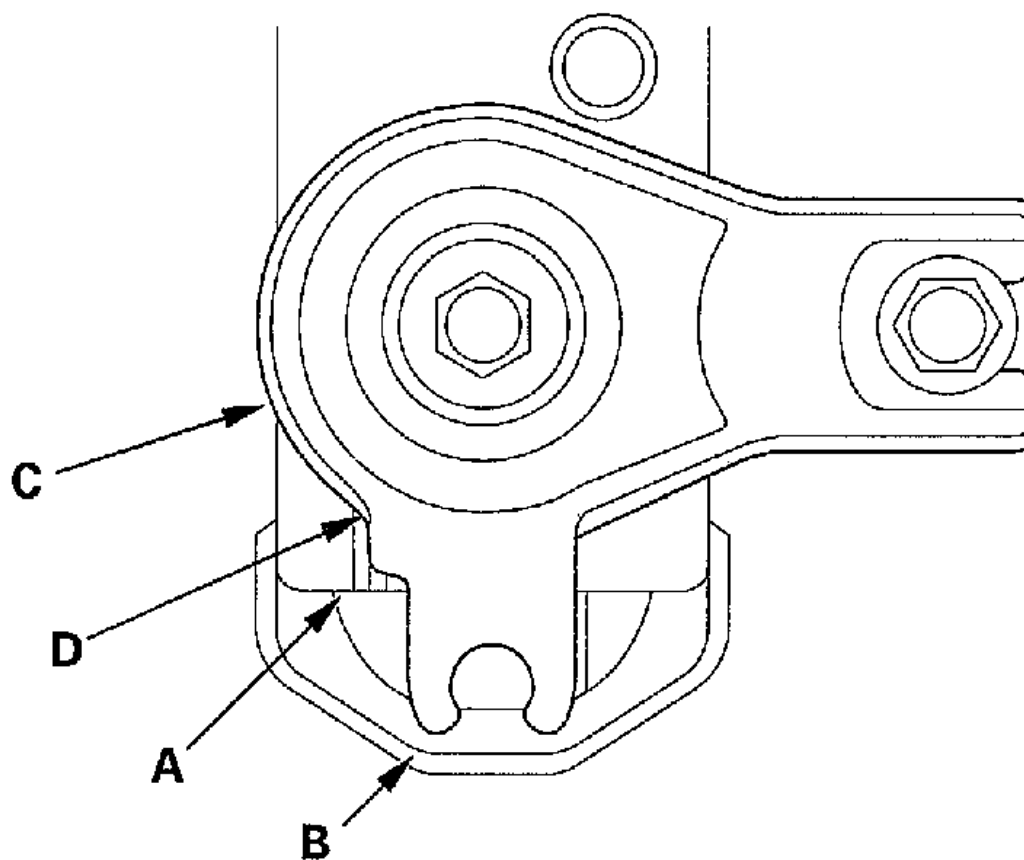
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Fig. 21: Removing The Middle Subframe Mounting Bolts

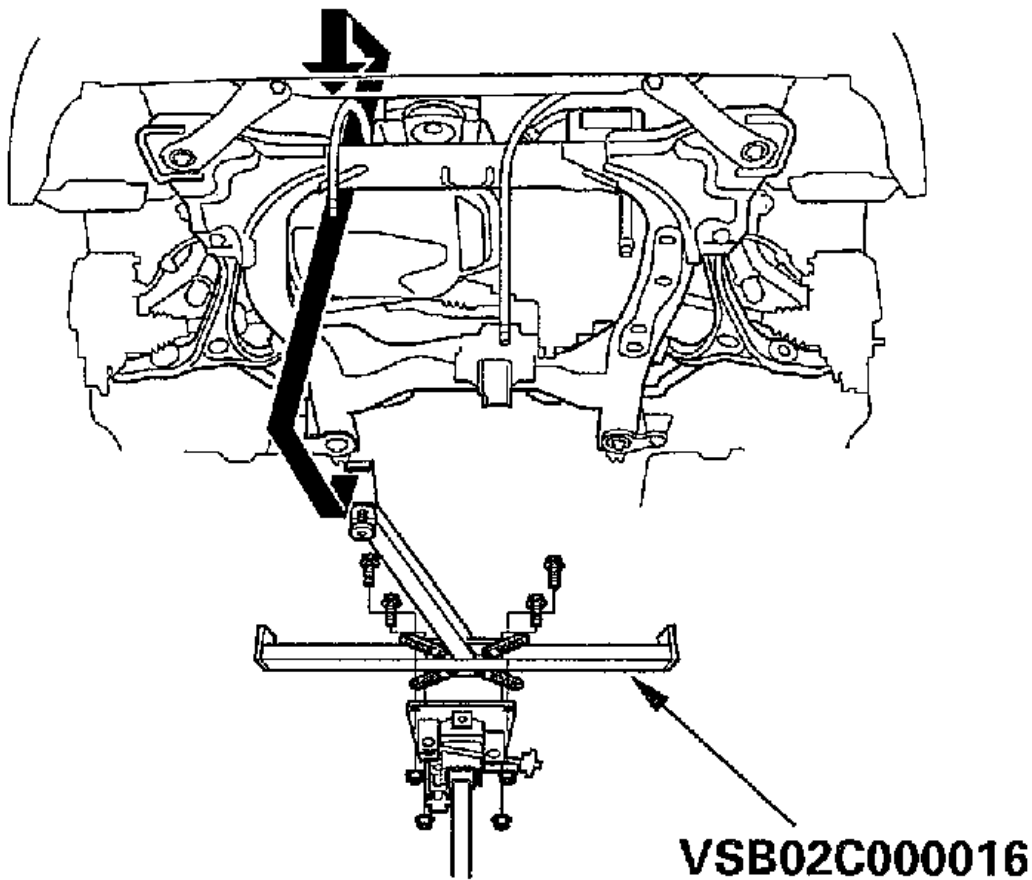
31. Make the appropriate reference lines (A) at both ends of the subframe (B) that line up with the edge (C) of the stiffeners (D).



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Fig. 22: Making The Appropriate Reference Lines At Both Ends Of The Subframe

32. Support the subframe with the subframe adapter and a jack.

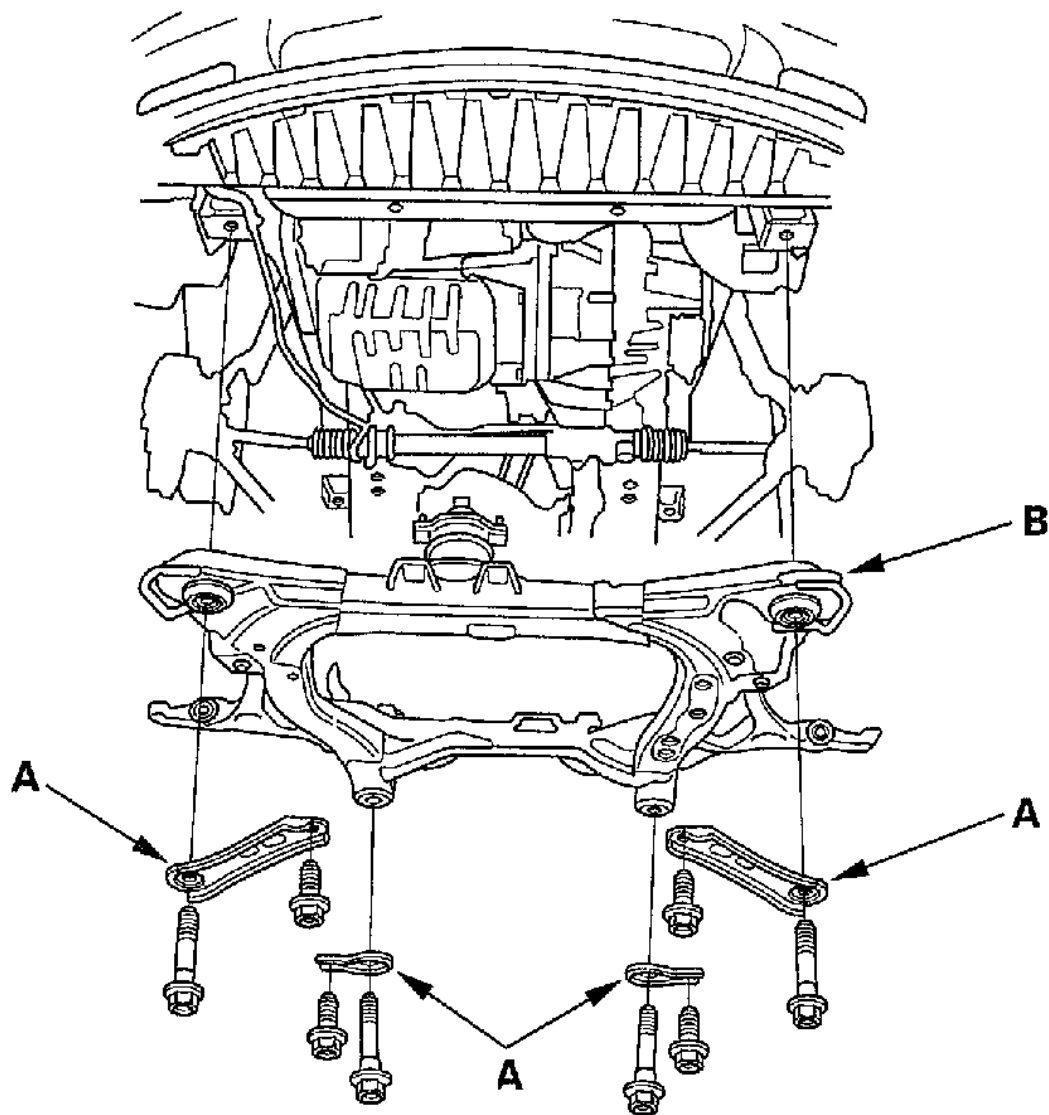


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Fig. 23: Supporting The Subframe With The Subframe Adapter And A Jack

33. Remove the front suspension subframe stays (A) and front suspension subframe (B).

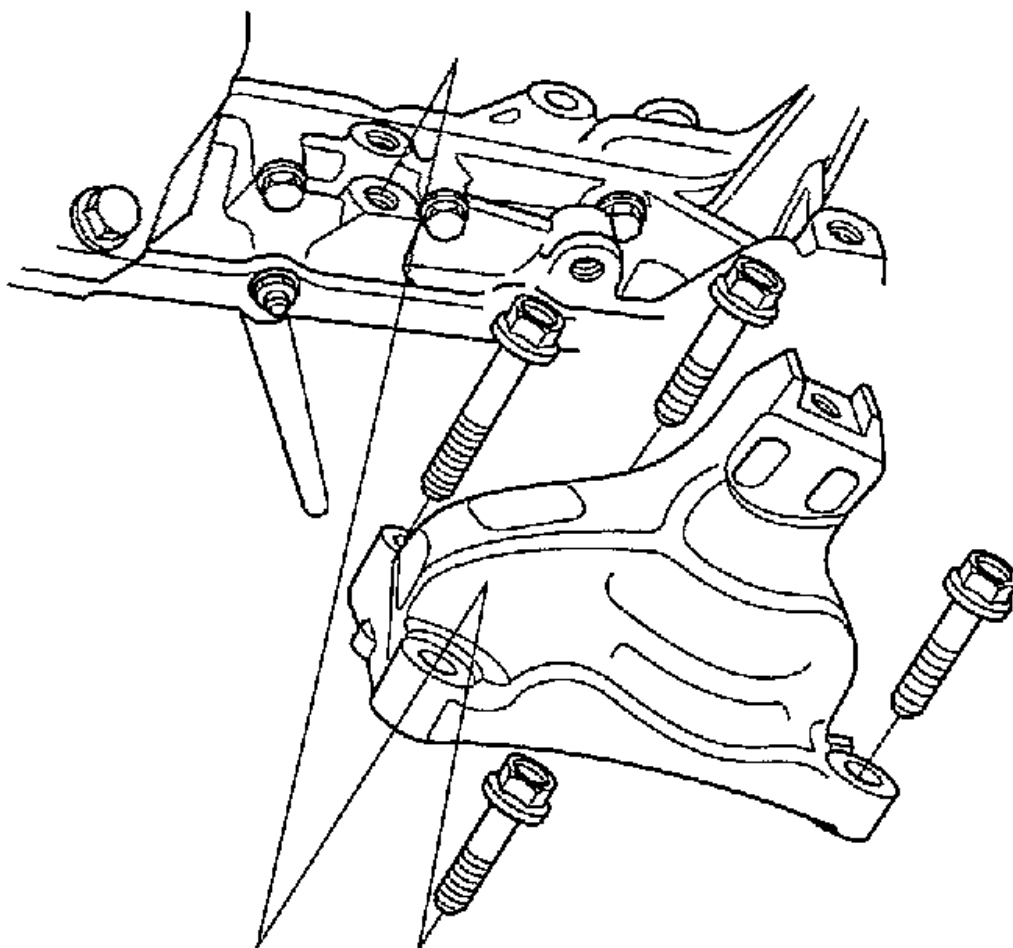
NOTE: Suspend the steering gearbox with an appropriate support before lowering the subframe.



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Fig. 24: Removing The Front Suspension Subframe Stays And Front Suspension Subframe

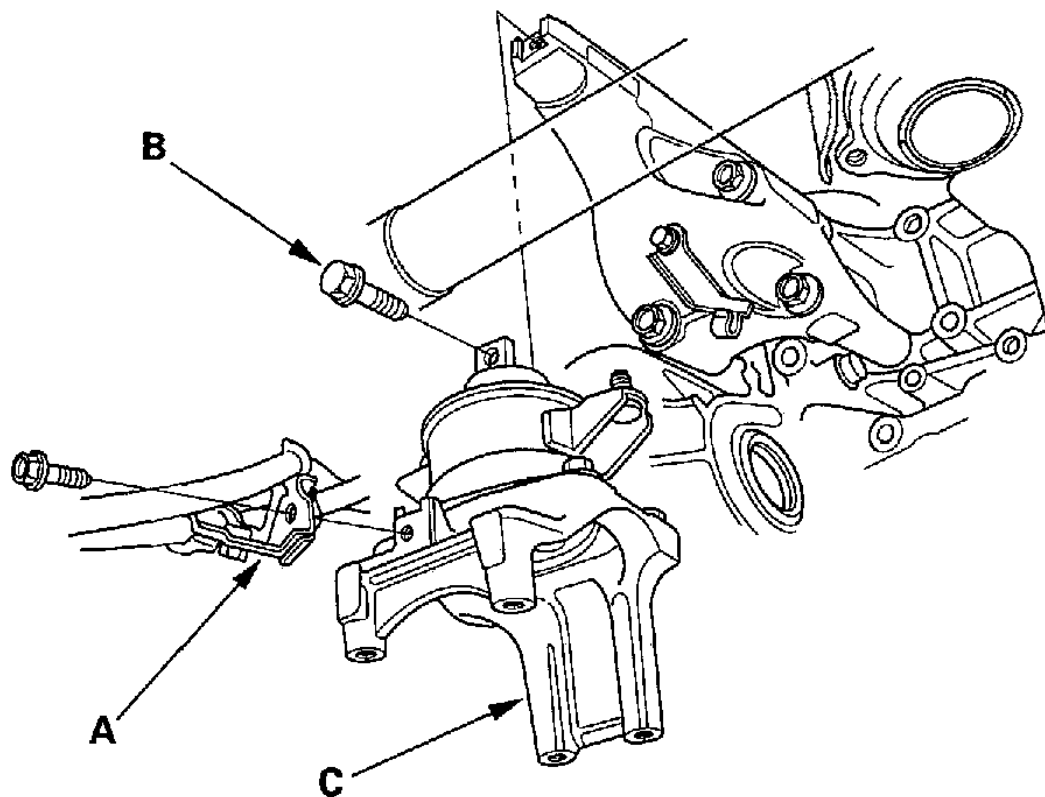
34. Remove the front engine mount upper bracket.



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Fig. 25: Removing The Front Engine Mount Upper Bracket

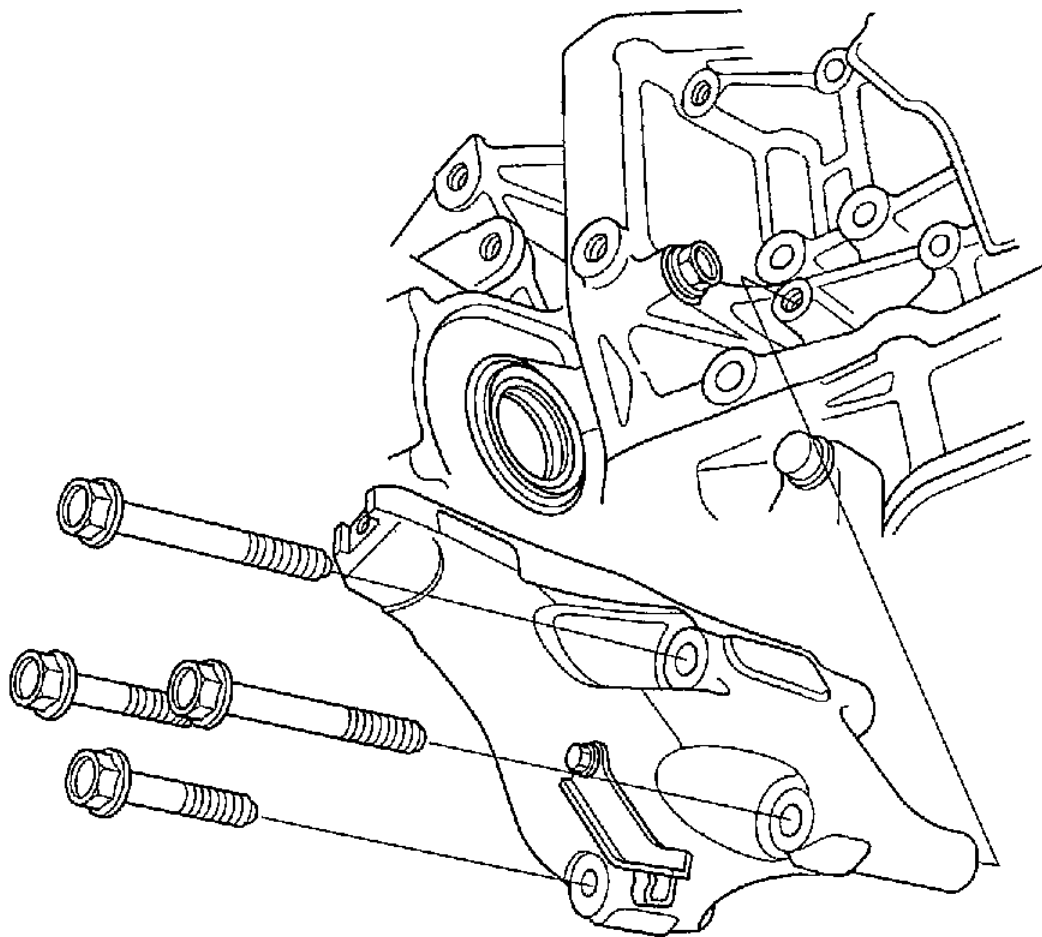
35. Remove the shift cable bracket (A), rear engine mount upper mounting bolt (B) and rear engine mount (C).



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Fig. 26: Removing The Shift Cable Bracket, Rear Engine Mount Upper Mounting Bolt And Rear Engine Mount

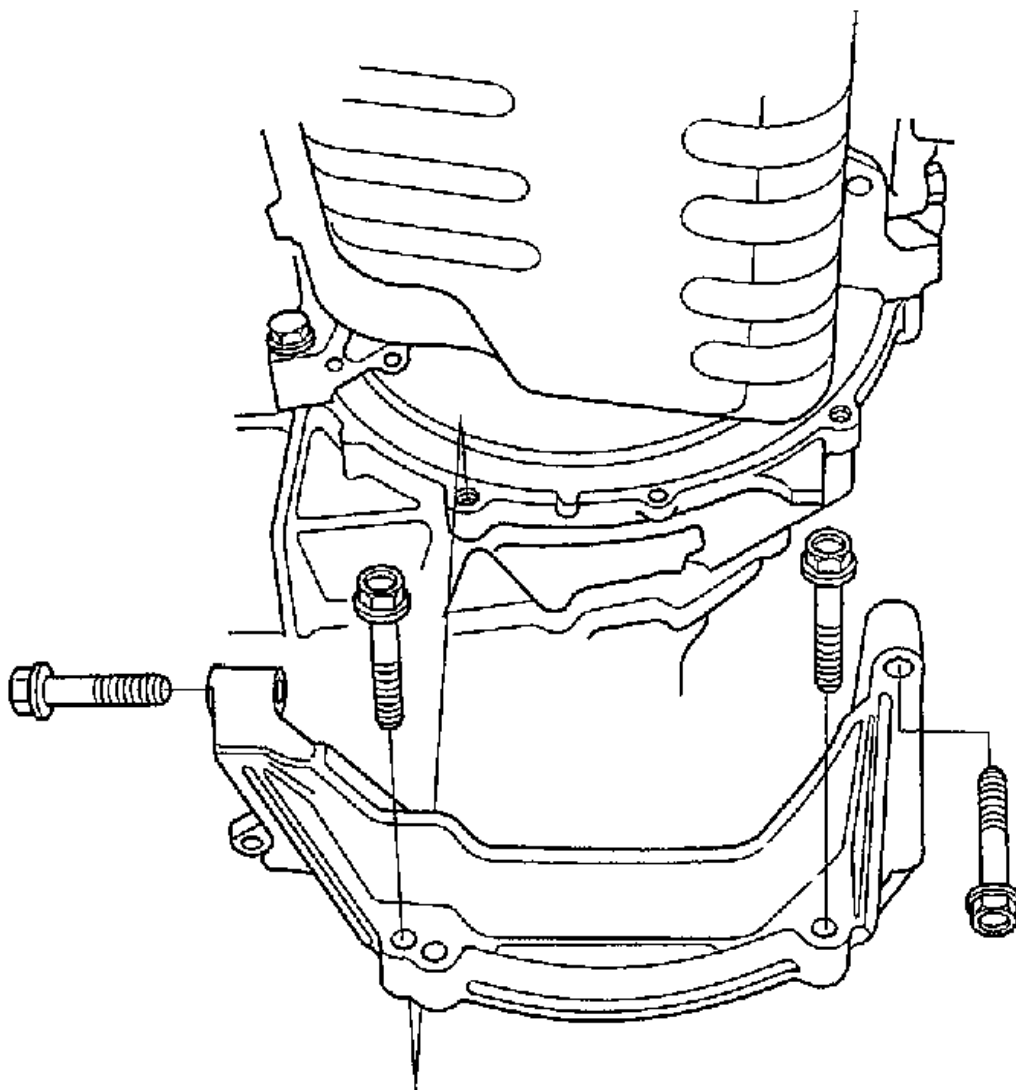
36. Remove the rear engine mount upper bracket.



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Fig. 27: Removing The Rear Engine Mount Upper Bracket

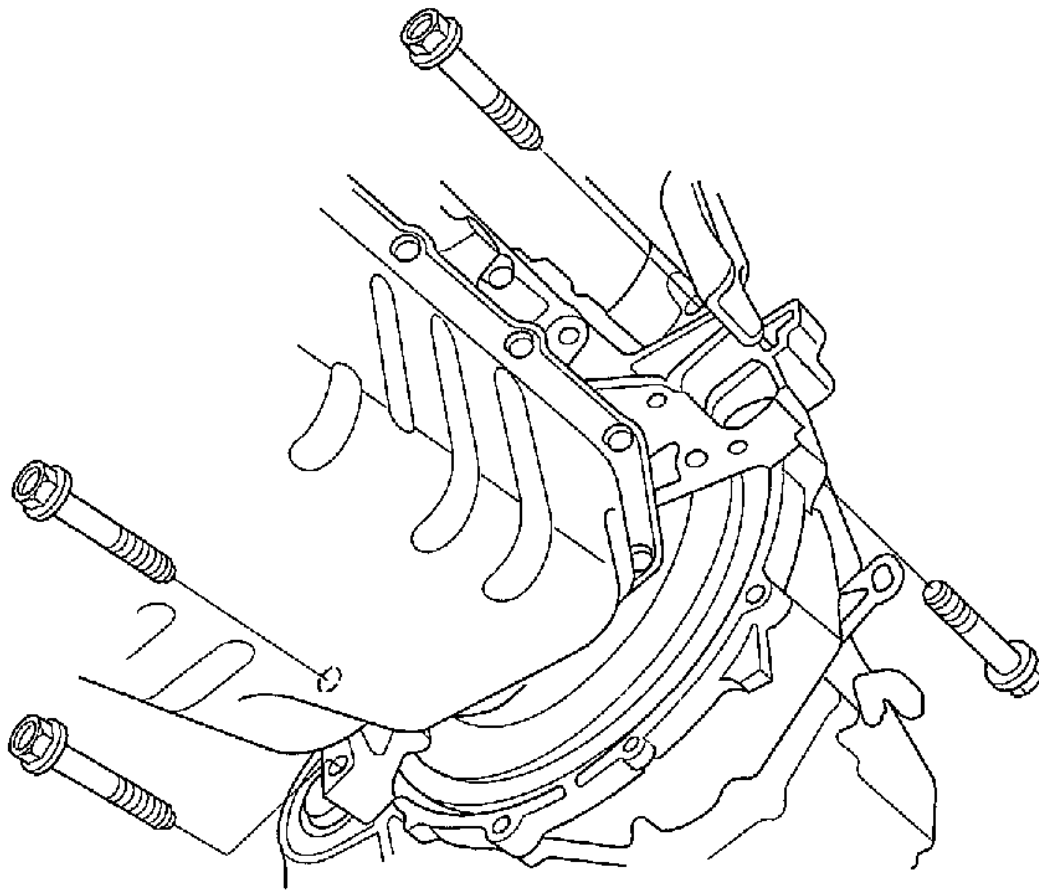
37. Remove the clutch cover.



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Fig. 28: Removing The Clutch Cover

38. Place the transmission jack under the transmission, and remove the transmission lower mounting bolts.

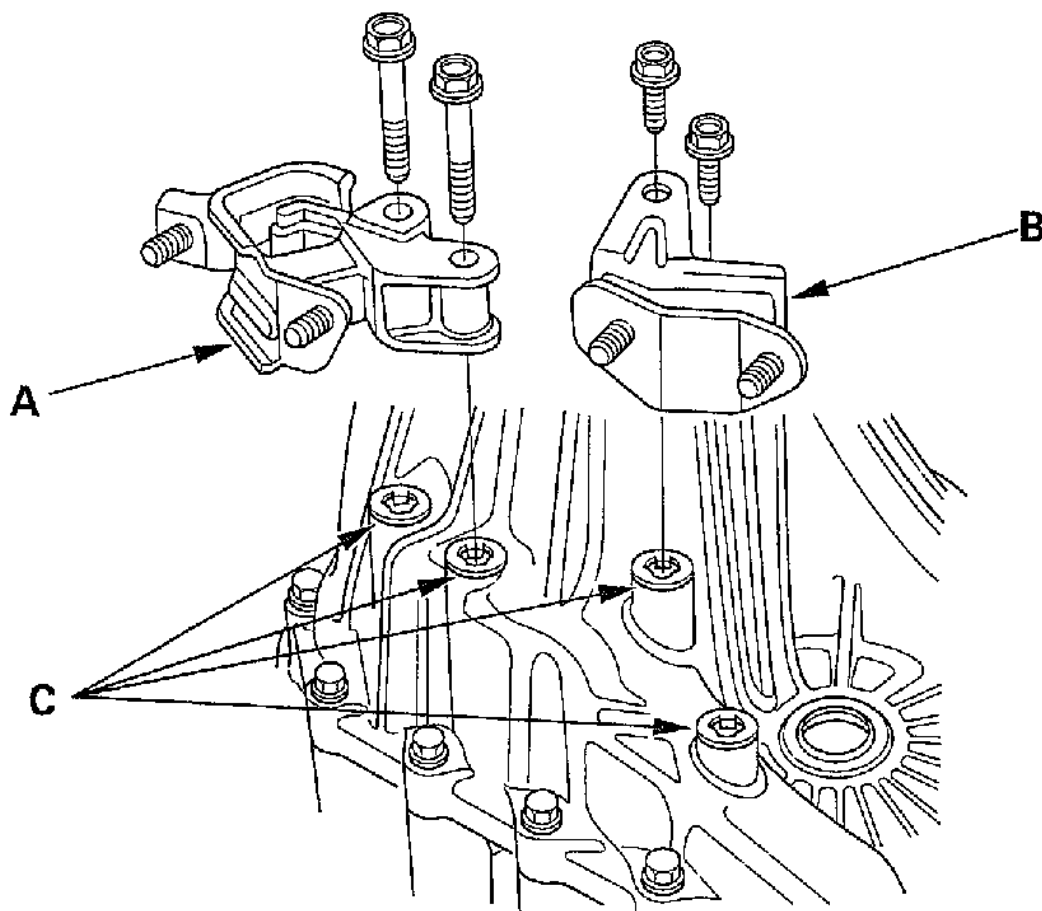


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Fig. 29: Removing The Transmission Lower Mounting Bolts

39. Pull the transmission away from the engine until the transmission mainshaft clears the clutch pressure plate, then lower the transmission on the transmission jack.
40. Remove the transmission lower front mount (A) and transmission lower rear mount (B).

NOTE: Be careful not to drop the mount bracket collar (C).



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Fig. 30: Removing The Transmission Lower Front Mount And Transmission Lower Rear Mount

41. Remove the release fork boot (A) from the clutch housing (B).

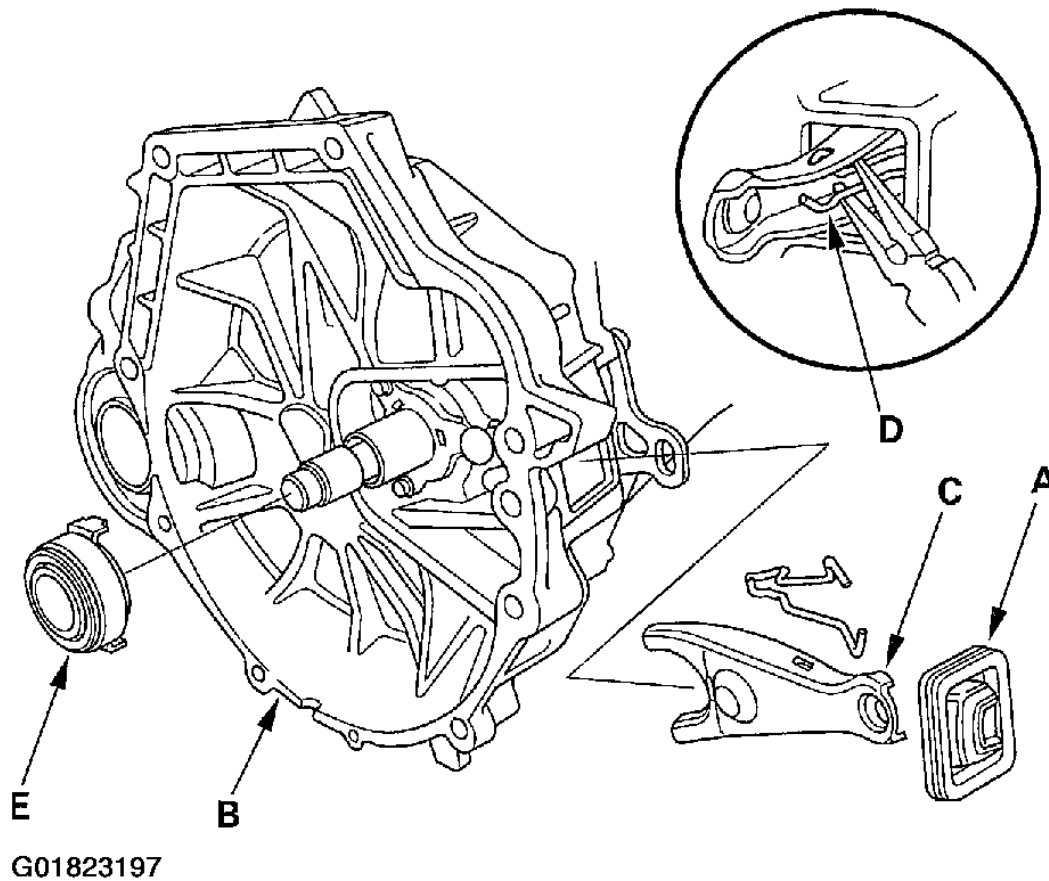


Fig. 31: Removing The Release Fork Boot From The Clutch Housing

42. Remove the release fork (C) from the clutch housing by squeezing the release fork set spring (D) with pliers. Remove the release bearing (E).

TRANSMISSION INSTALLATION

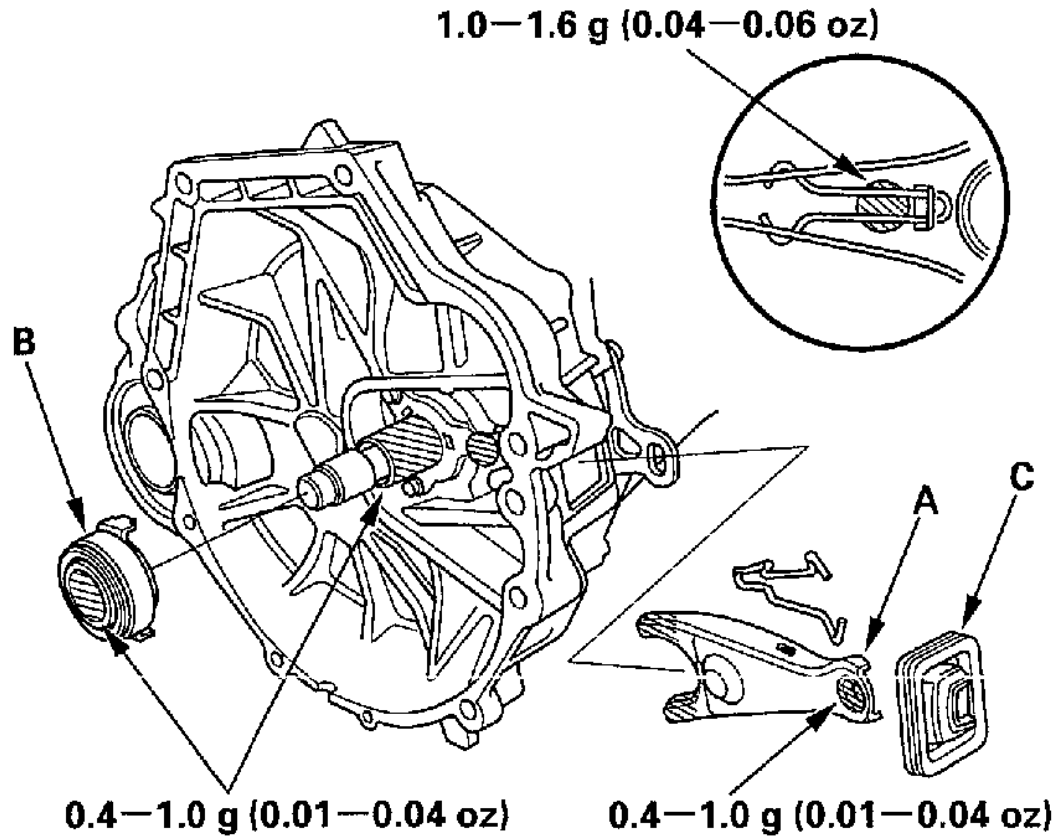
Special Tools Required:

- Engine hanger/adaptor VSB02C000015*
- Engine support hanger, A & Reds AAR-T-12566*
- Subframe adapter VSB02C000016*

*Available through the Honda Tool and Equipment Program 888-424-6857.

1. Check that the two dowel pins are installed in the clutch housing.
2. Apply super high temp urea grease (P/N 08798-9002) to the release fork (A) and the release bearing (B).

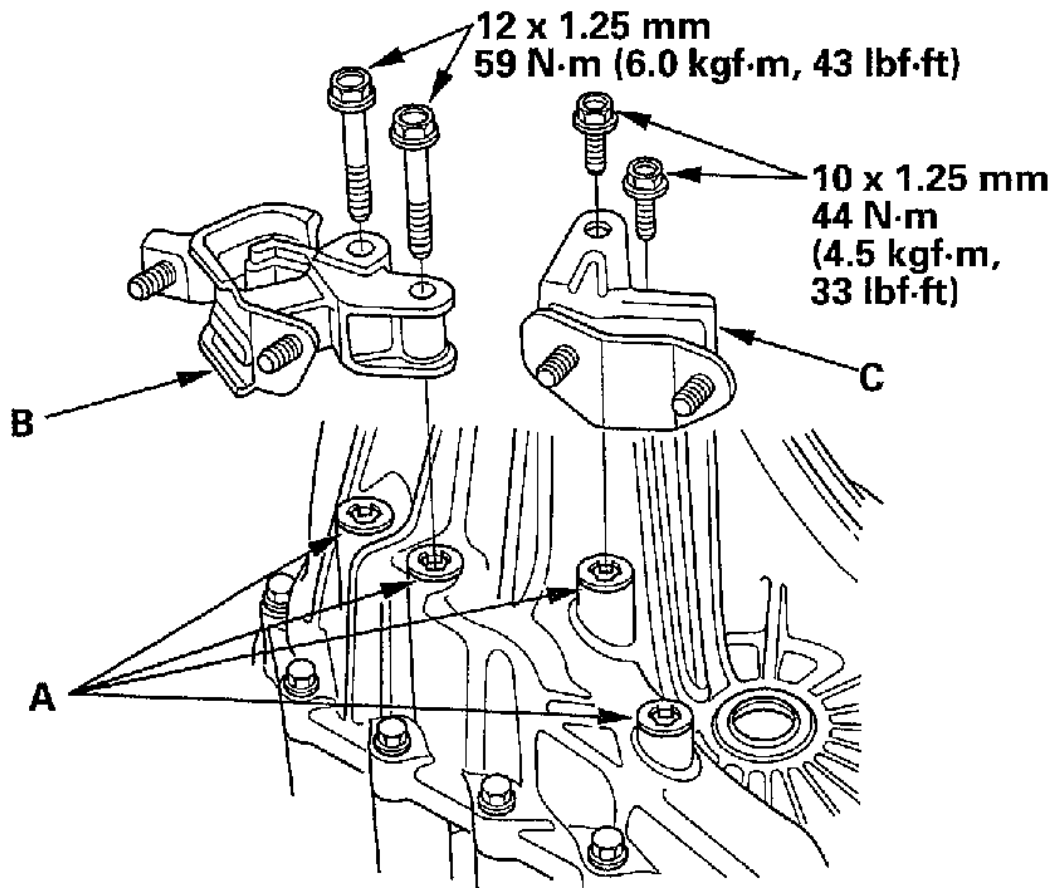
Install the release fork, the release bearing, and the boot (C).



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Fig. 32: Installing The Release Fork, The Release Bearing, And The Boot

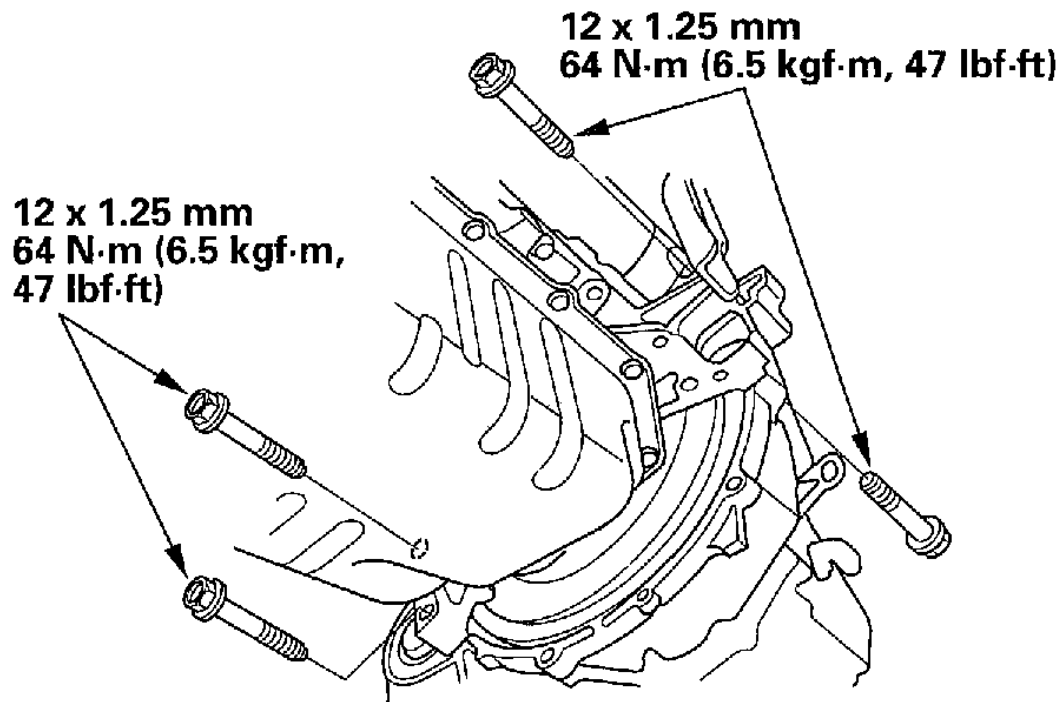
3. Check that the mount bracket collars (A) are installed in the transmission, then install the transmission lower front mount (B) and transmission lower rear mount (C).



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Fig. 33: Installing The Transmission Lower Front Mount And Transmission Lower Rear Mount

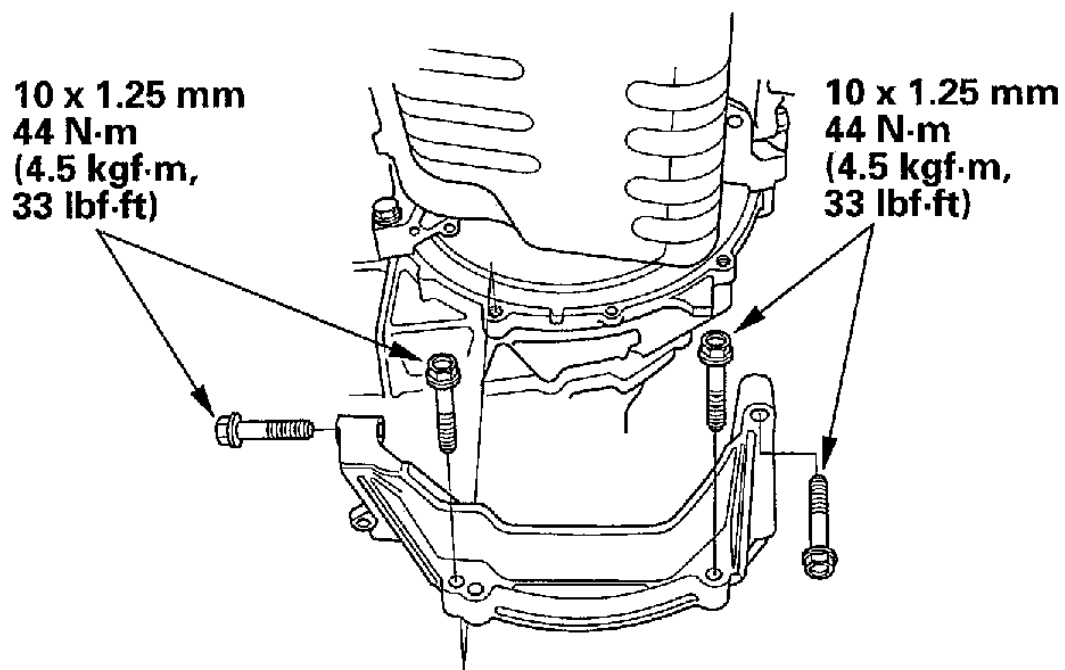
4. Place the transmission on the transmission jack, and raise it to the engine level.
5. Install the transmission mounting lower bolts.



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Fig. 34: Installing The Transmission Mounting Lower Bolts

6. Install the clutch cover.



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Fig. 35: Installing The Clutch Cover

7. Install the rear engine mount upper bracket.

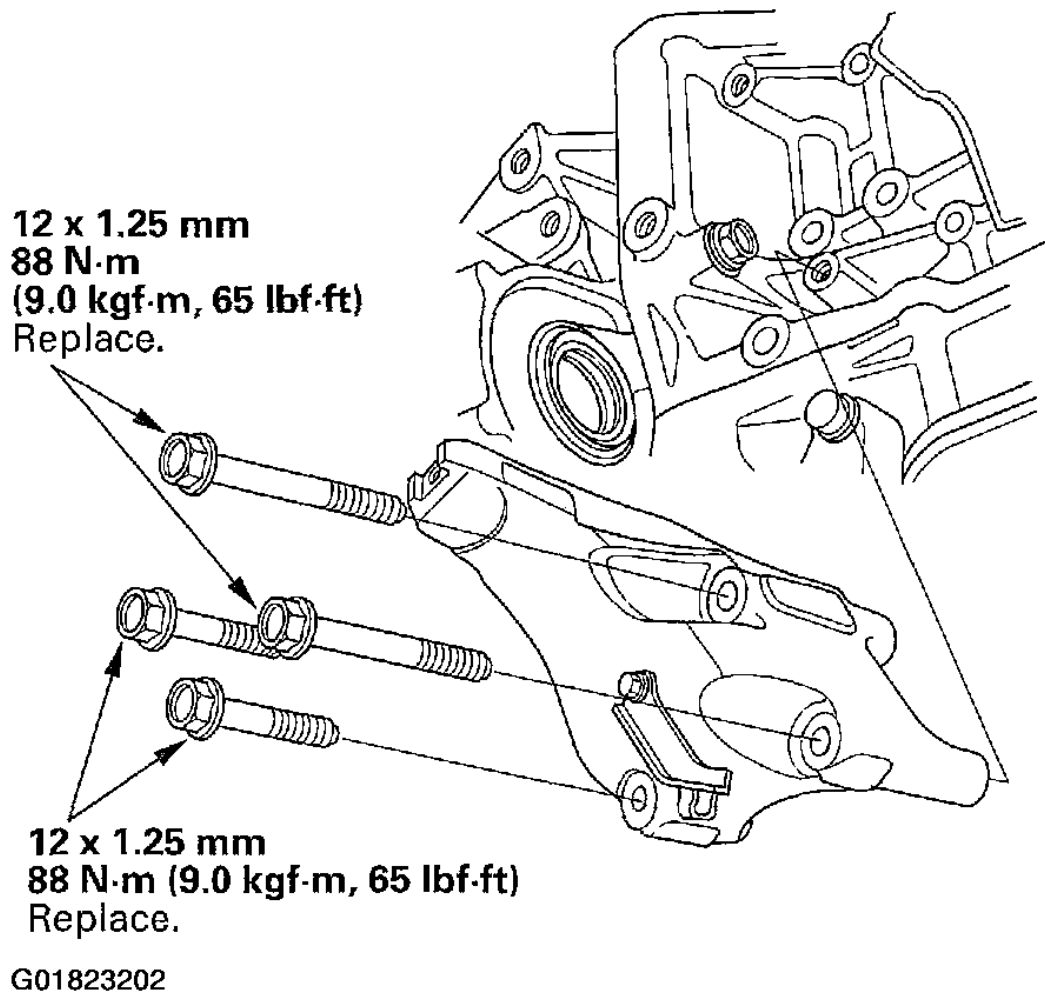


Fig. 36: Installing The Rear Engine Mount Upper Bracket

8. Install the rear engine mount (A), rear engine mount upper mounting bolt (B), and shift cable bracket (C).

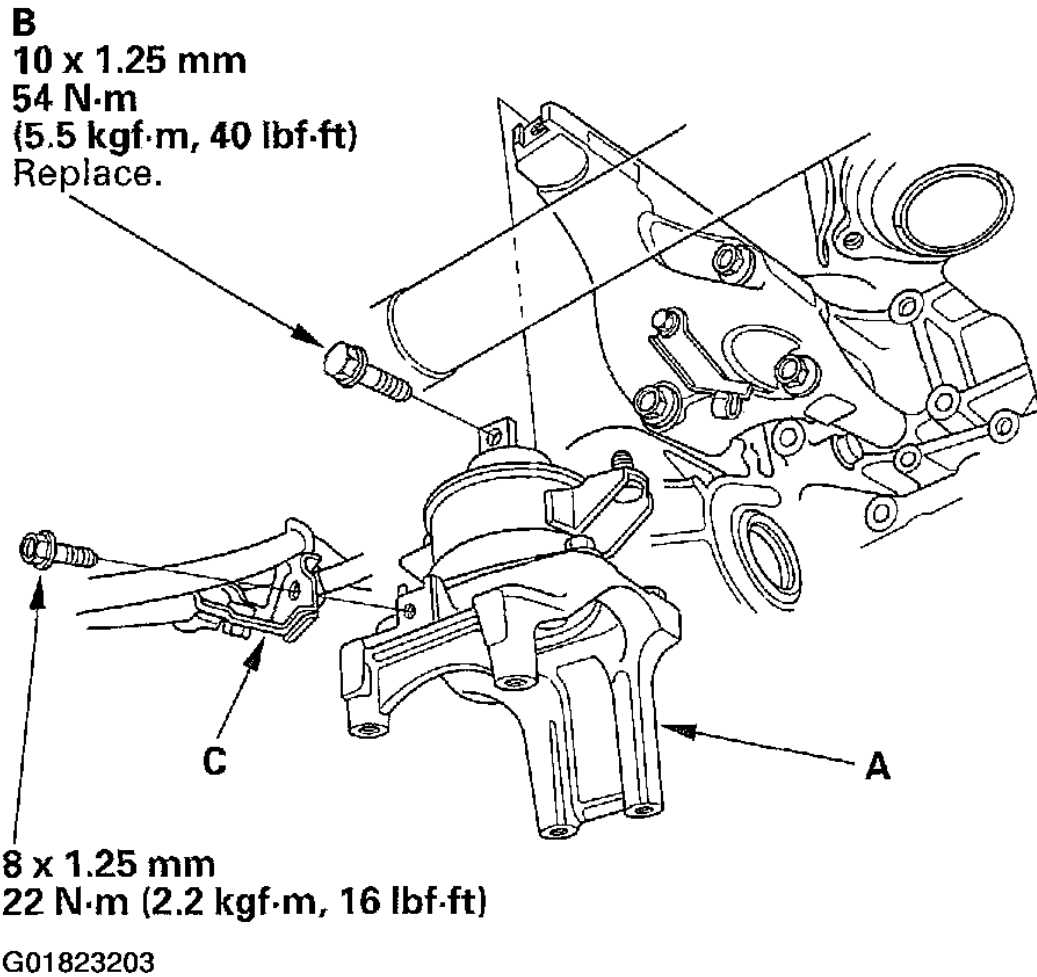
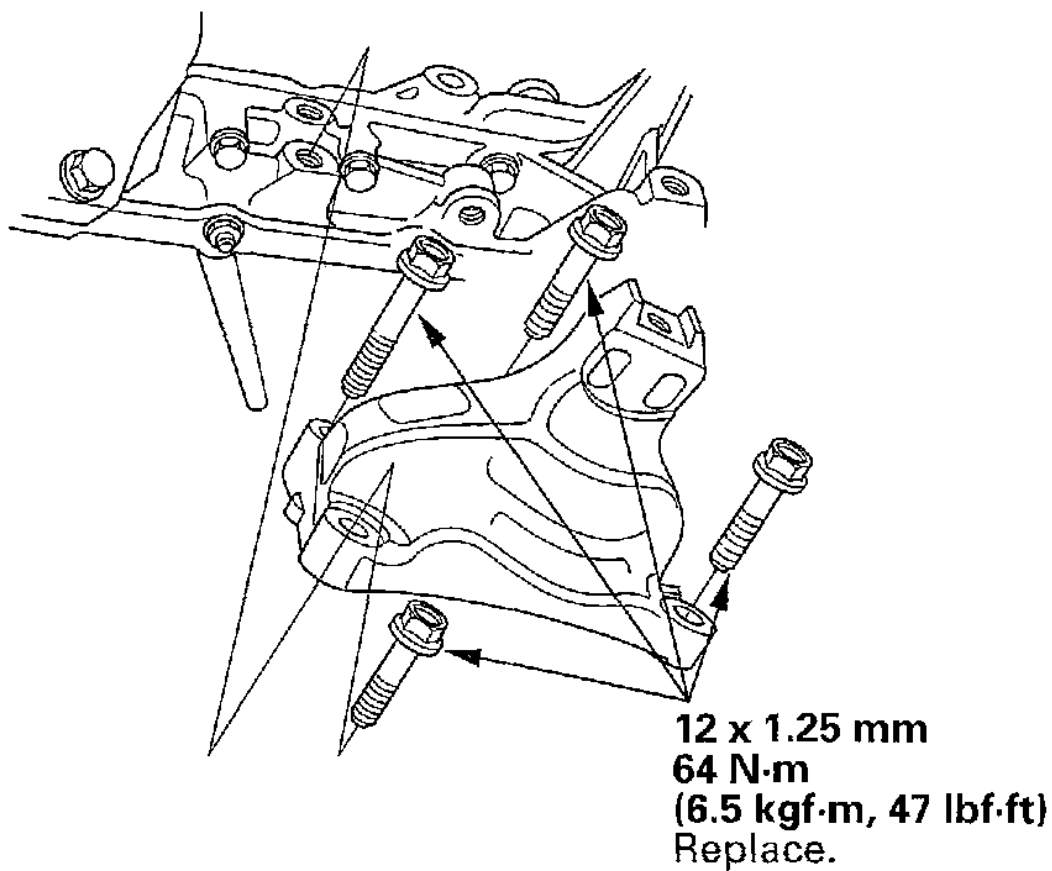


Fig. 37: Installing The Rear Engine Mount, Rear Engine Mount Upper Mounting Bolt, And Shift Cable Bracket

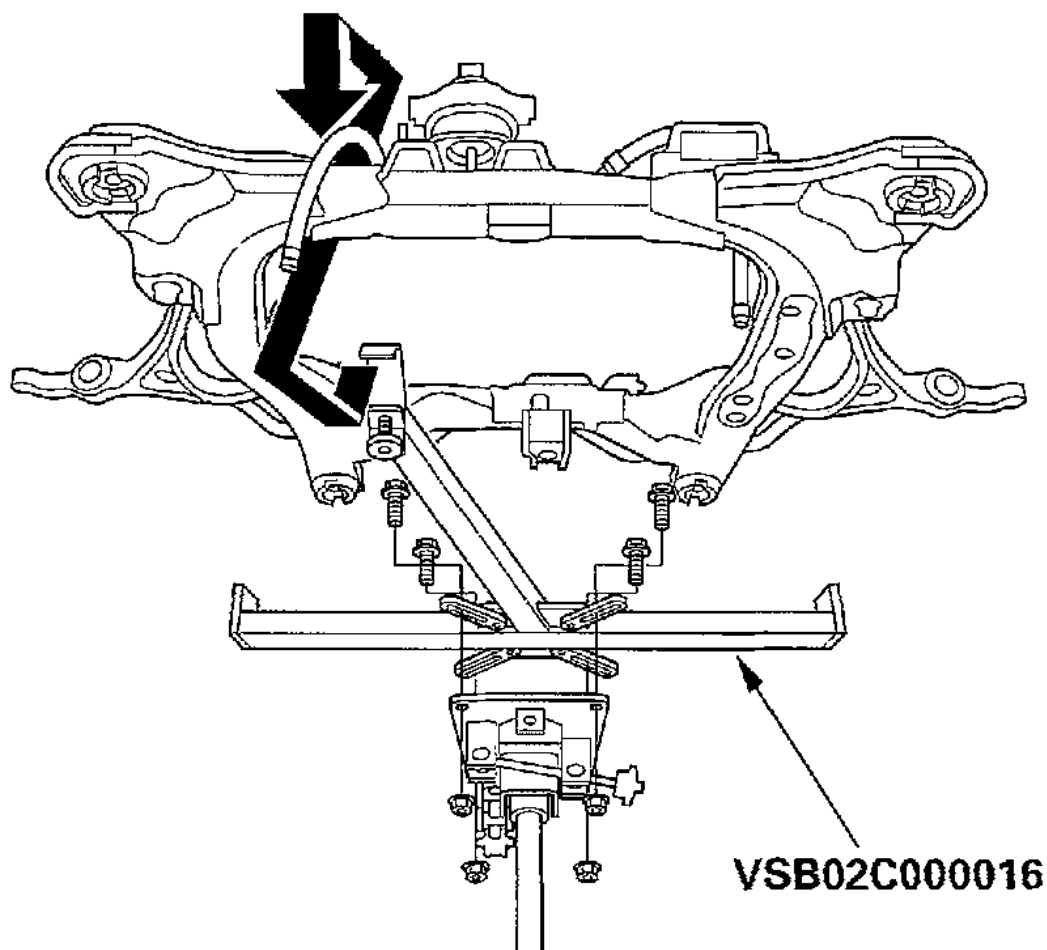
9. Install the front engine mount upper bracket.



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Fig. 38: Installing The Front Engine Mount Upper Bracket

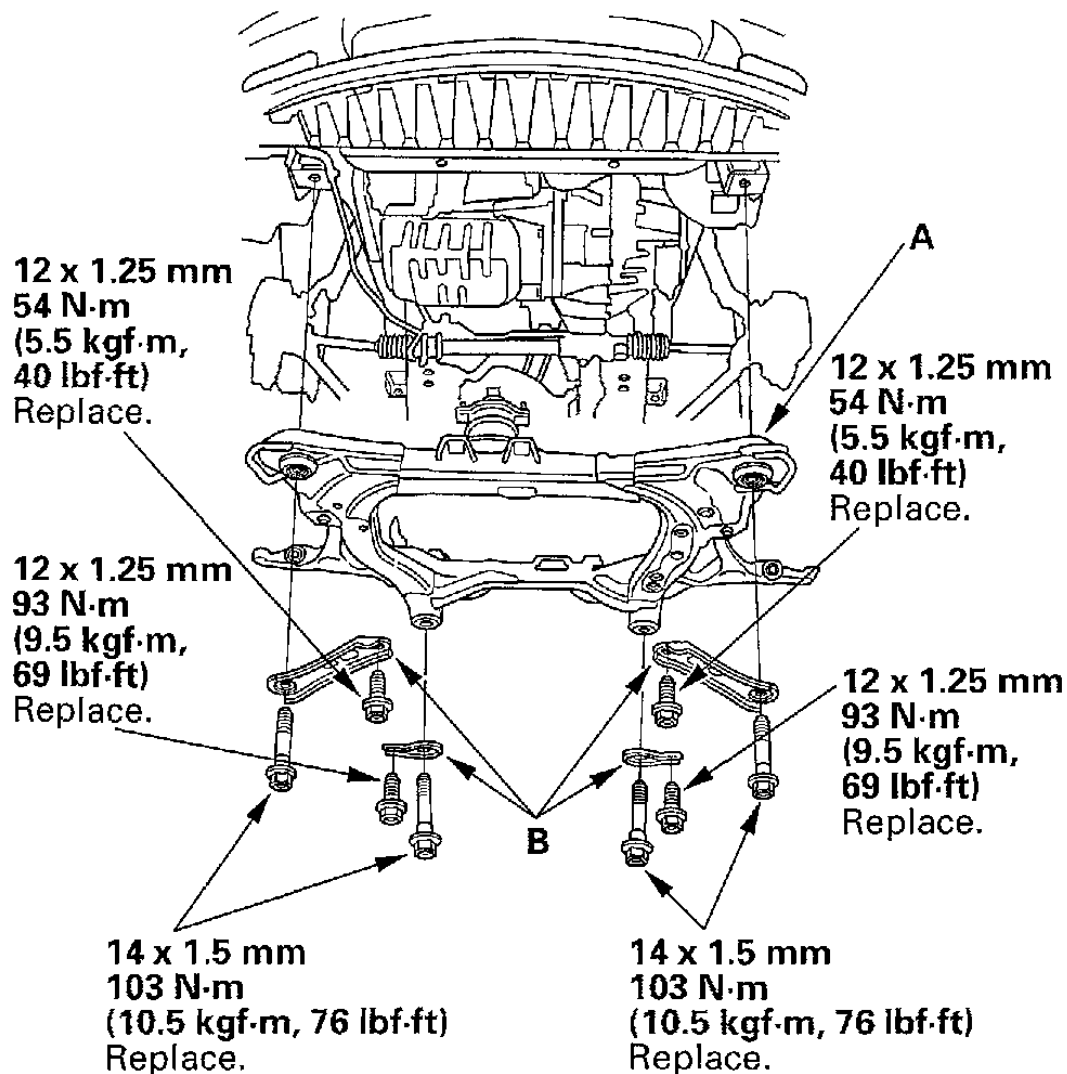
10. Support the subframe with the subframe adapter and a jack.



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Fig. 39: Support The Subframe With The Subframe Adapter And A Jack

11. Install the front suspension subframe (A) and front suspension subframe stays (B).



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Fig. 40: Installing The Front Suspension Subframe And Front Suspension Subframe Stays

12. Align the reference marks (A) with edge (B) of both rear stiffer (C), and tighten the rear subframe mounting bolts, then front bolts, and tighten the stiffener bolts to the specified torque.

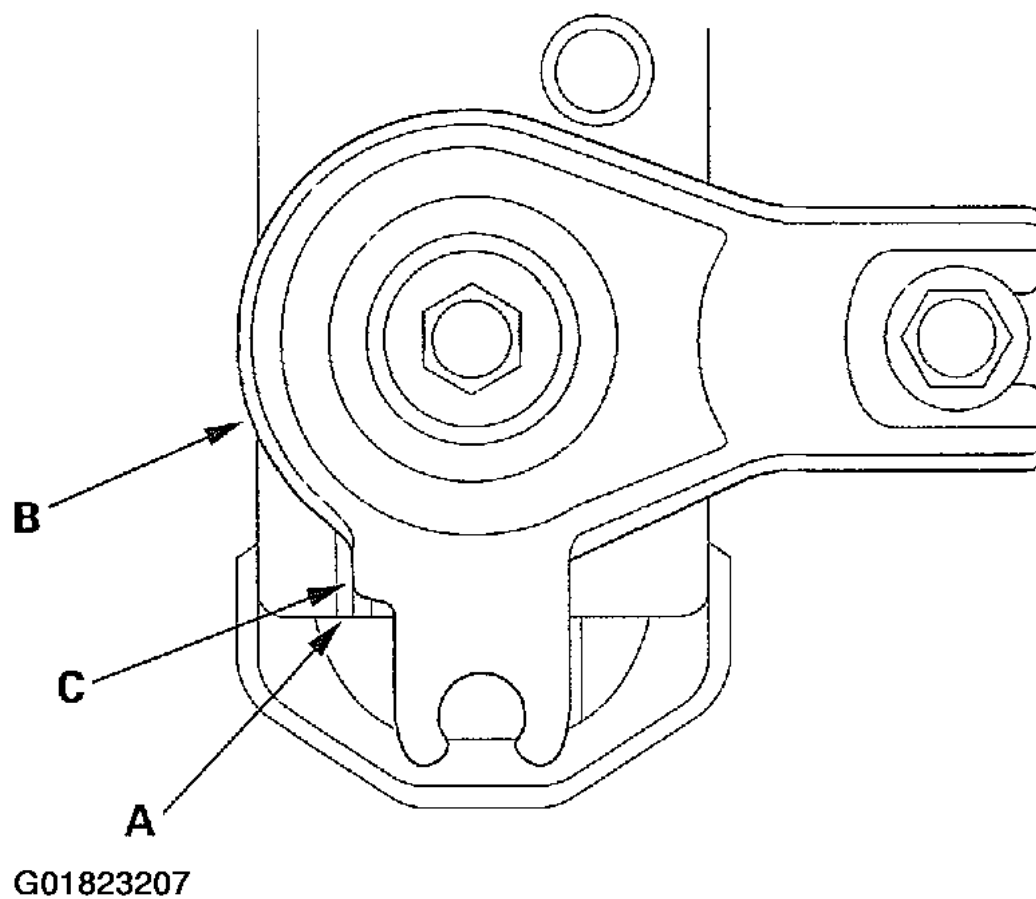
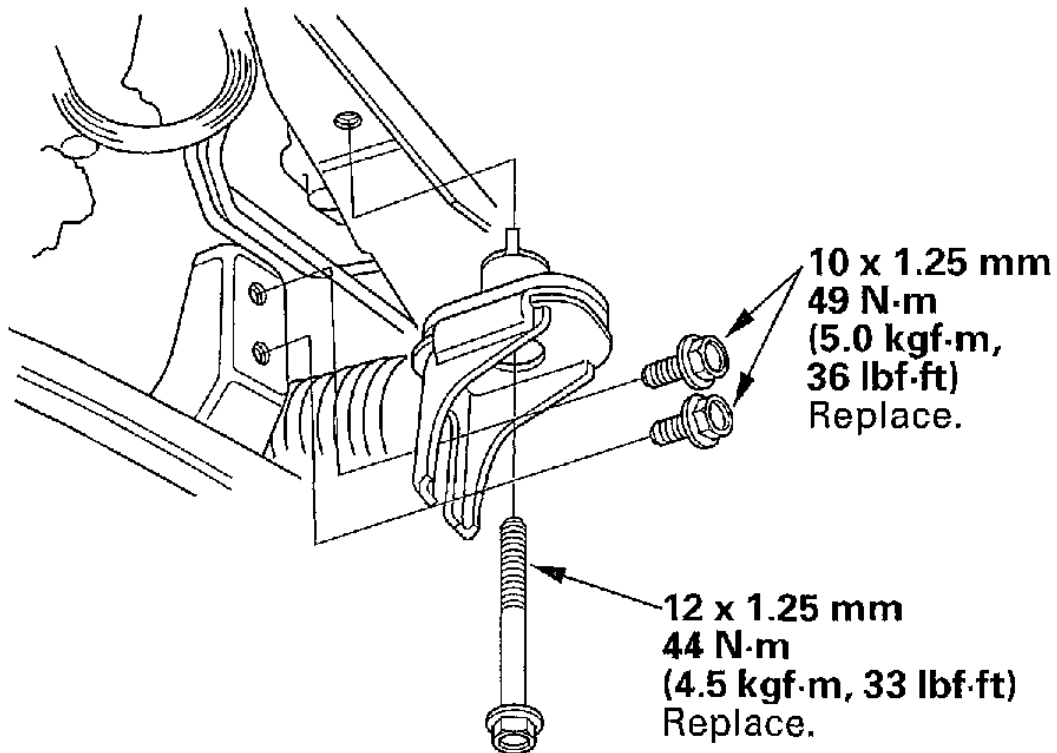


Fig. 41: Aligning The Reference Marks & Tightening The Rear Subframe Mounting Bolts, Front Bolts, And The Stiffener Bolts

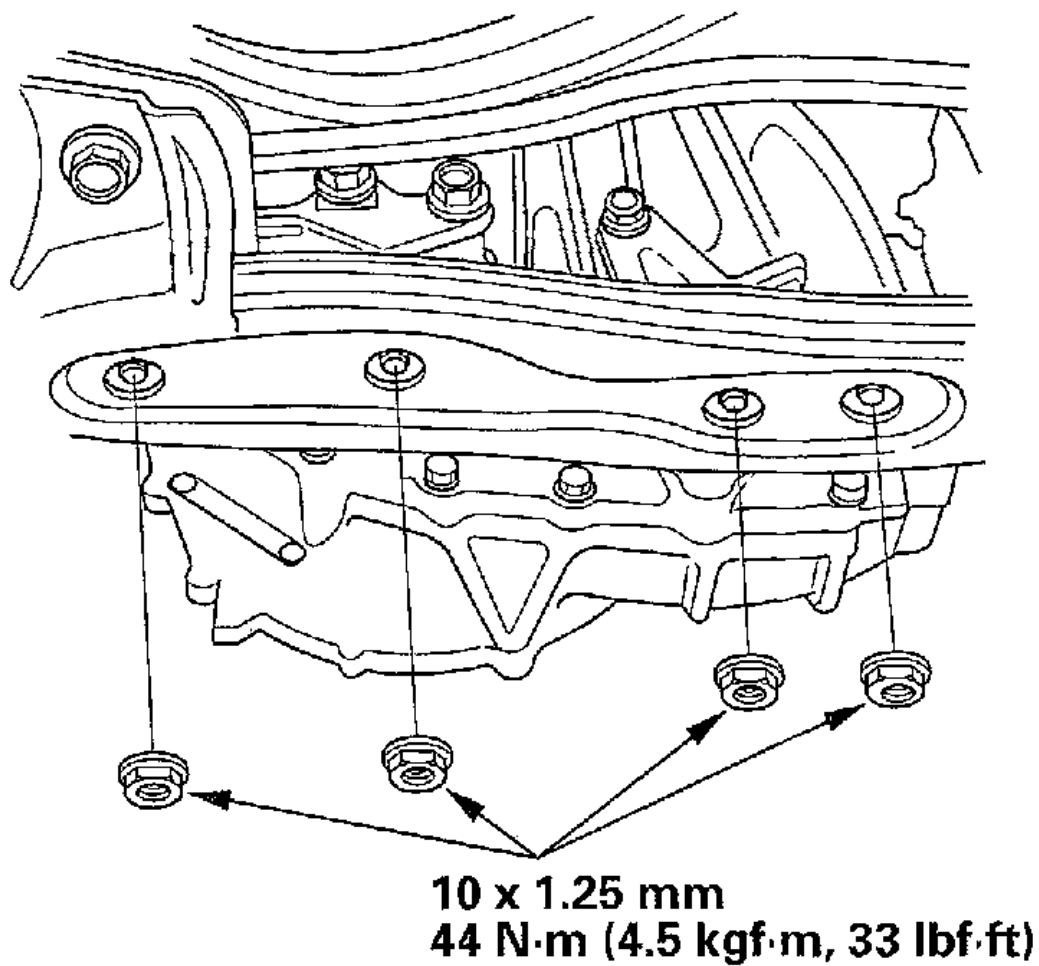
13. Install the middle subframe mounting bolts.



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Fig. 42: Installing The Middle Subframe Mounting Bolts

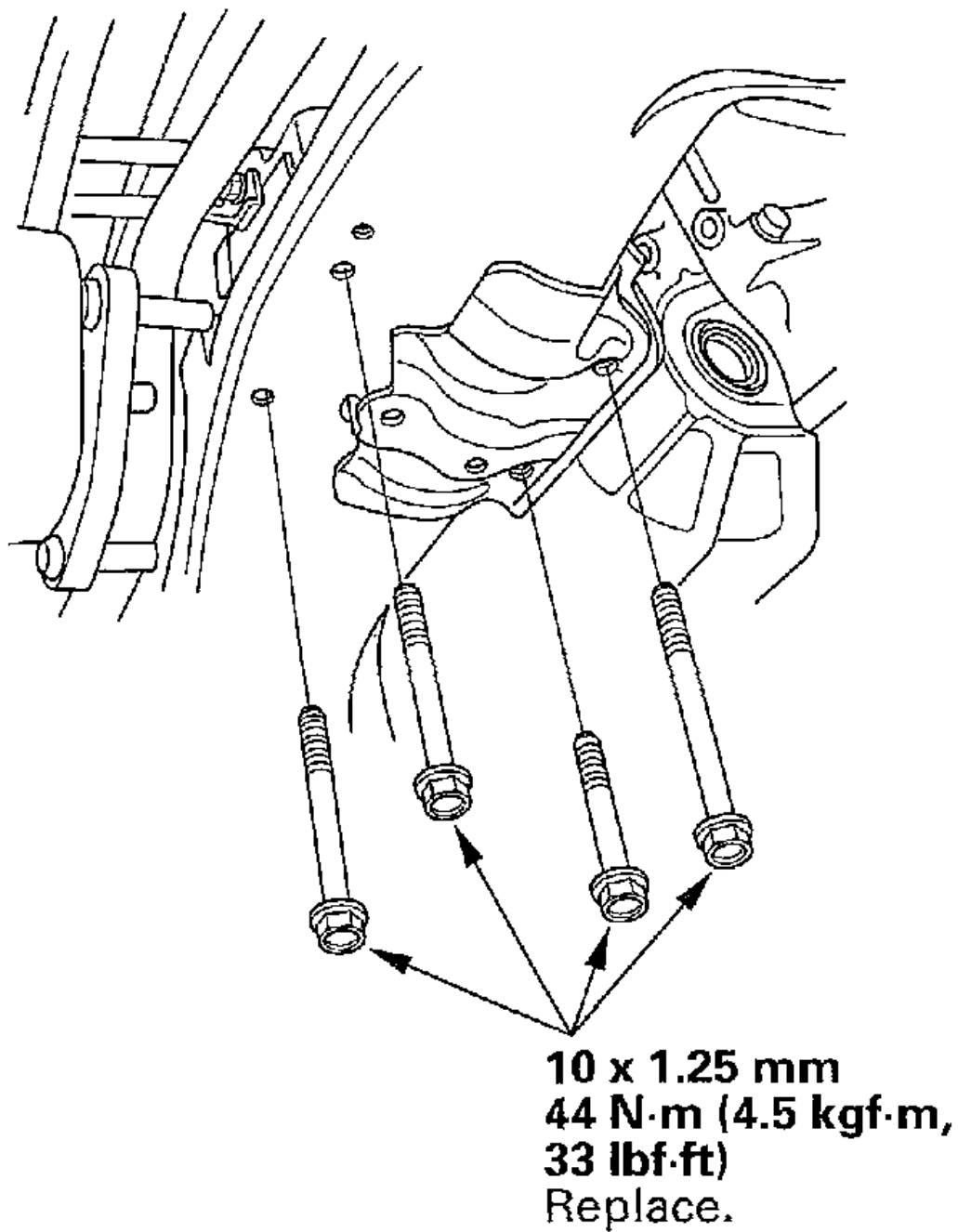
14. Install the transmission lower mount mounting nuts.



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Fig. 43: Installing The Transmission Lower Mount Mounting Nuts

15. Install the rear engine mount lower mounting bolts.



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Fig. 44: Installing The Rear Engine Mount Lower Mounting Bolts

16. Install the power steering line to the subframe (two clamps and one mounting bracket bolt).

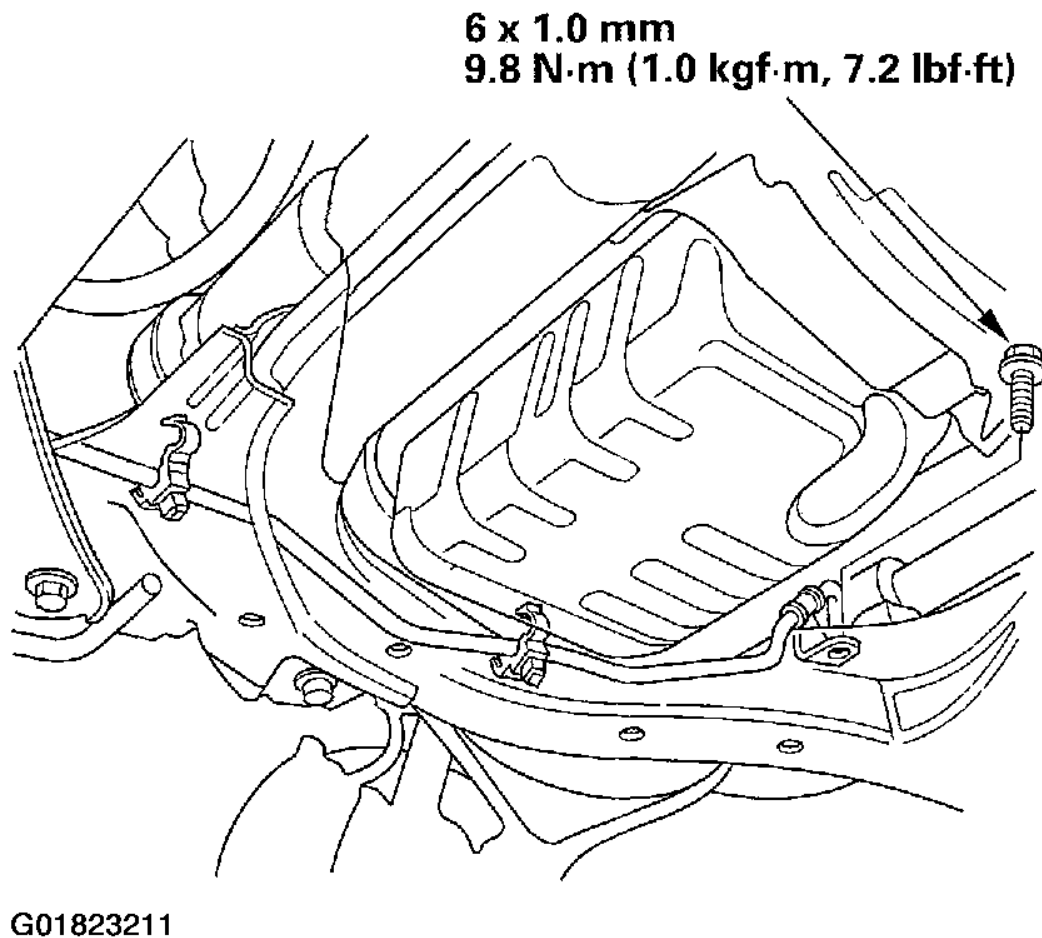


Fig. 45: Installing The Power Steering Line To The Subframe

17. Install the power steering line bracket mounting bolt.

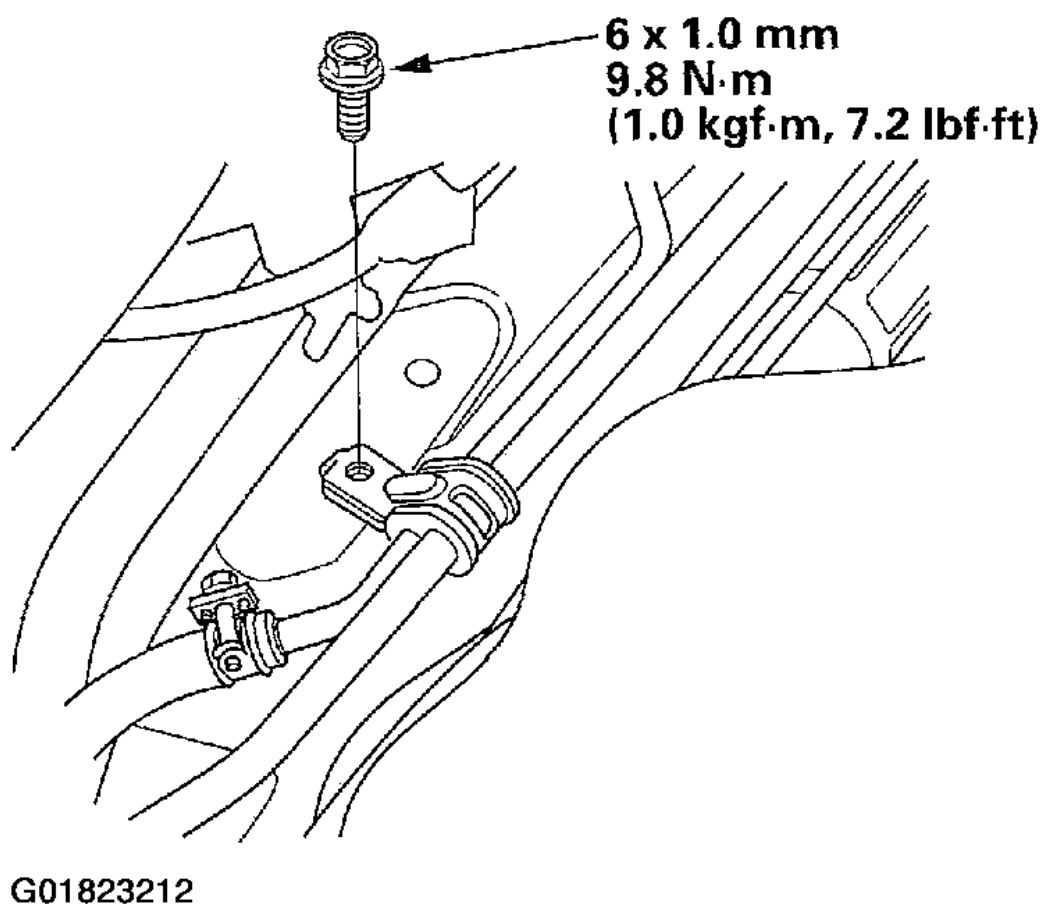
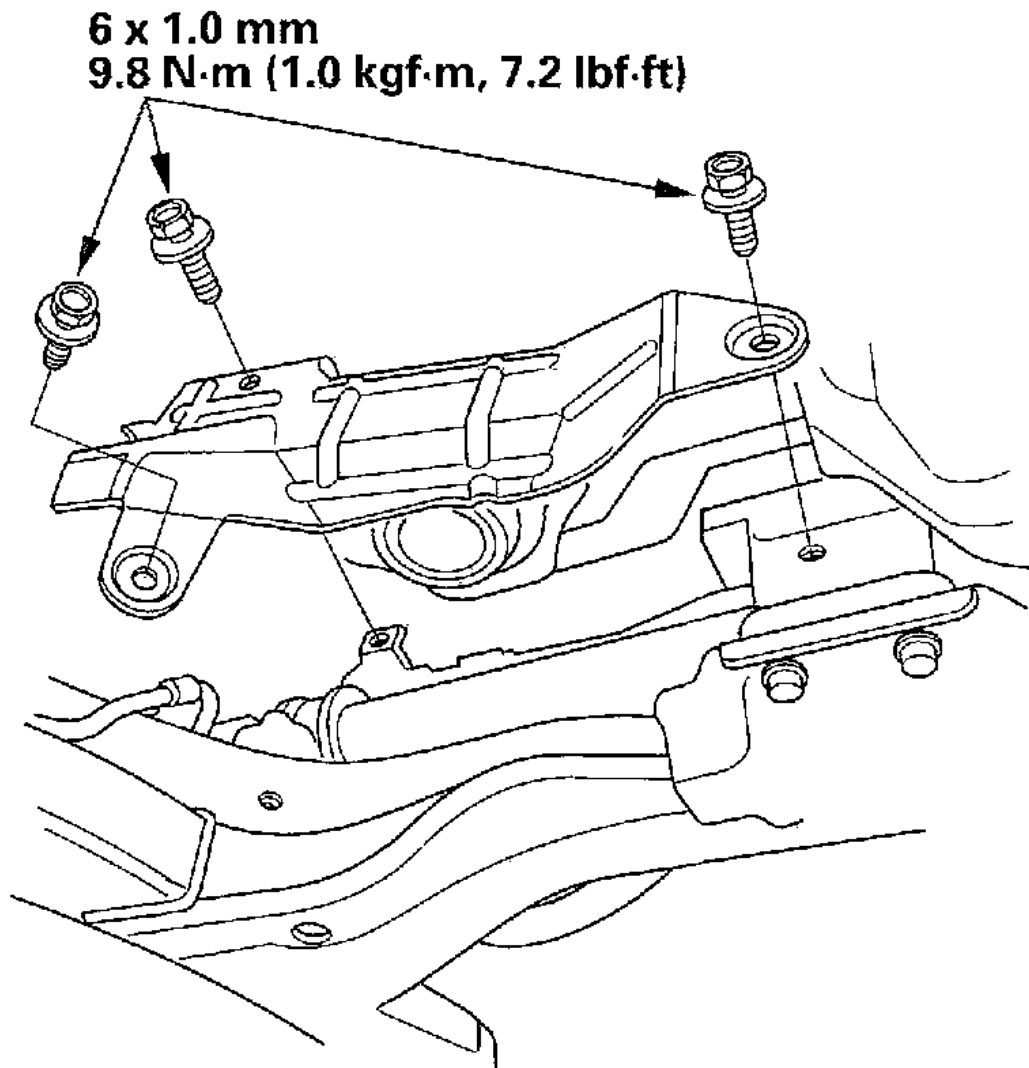


Fig. 46: Installing The Power Steering Line Bracket Mounting Bolt

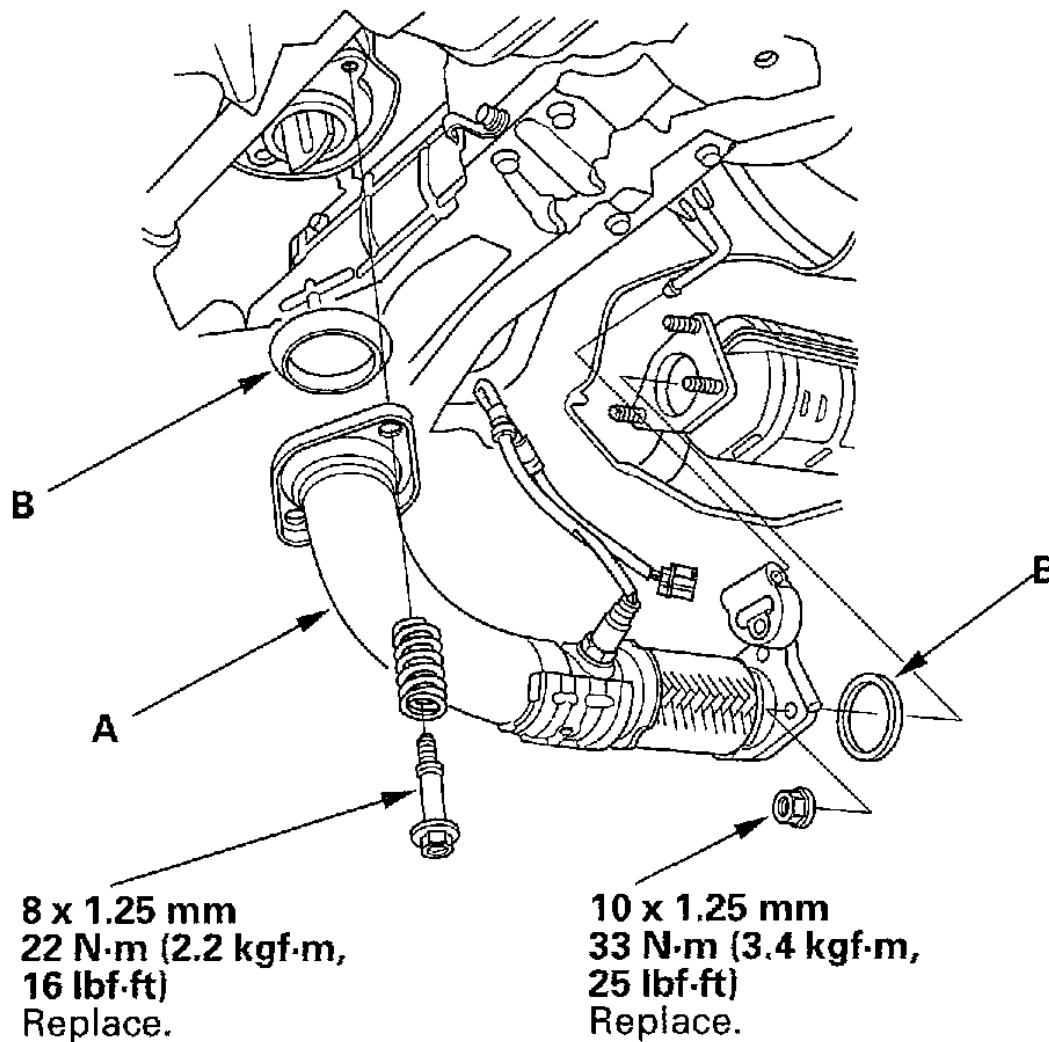
18. Install the heat shield.



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Fig. 47: Installing The Heat Shield

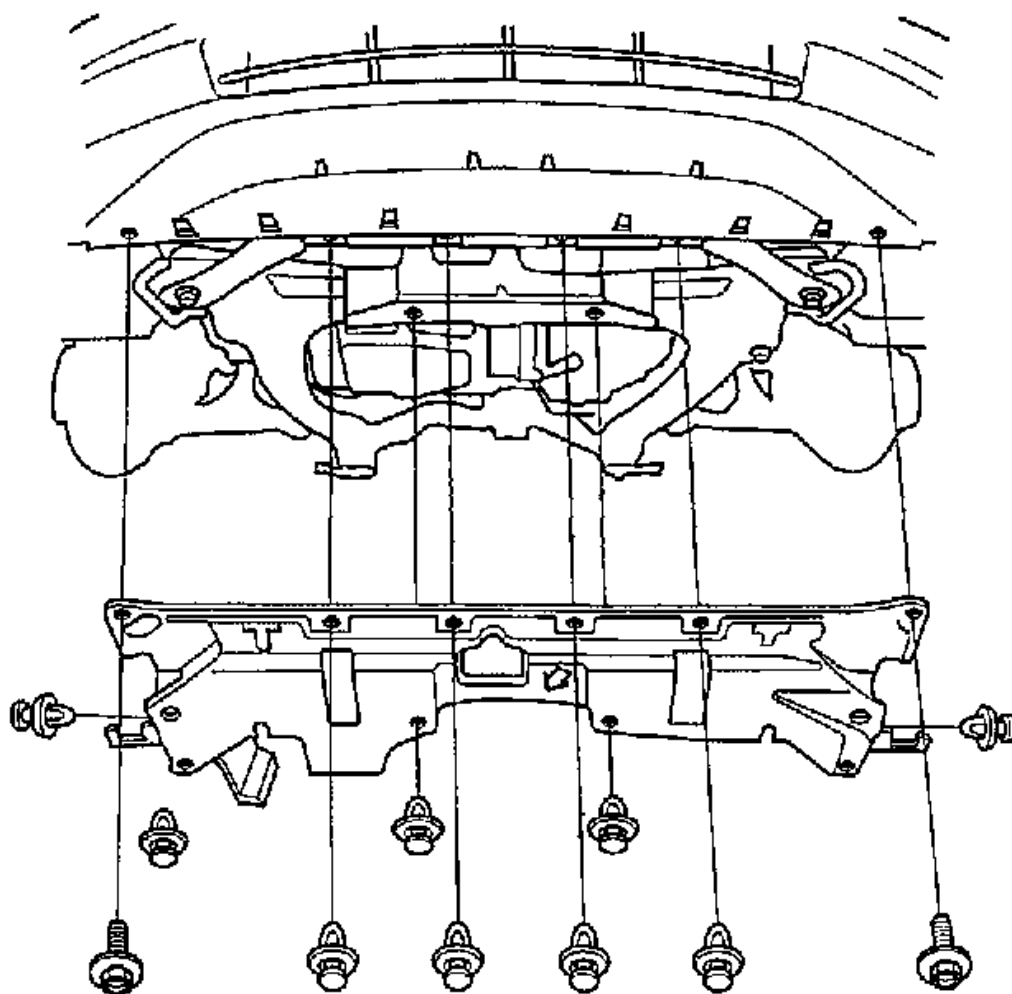
19. Install the intermediate shaft (see **INTERMEDIATE SHAFT**).
20. Install the inboard joint of driveshafts (see **INSTALLATION**).
21. Install the knuckle onto the lower arm (see step 5 of **INSTALLATION**).
22. Install the damper fork (see step 7 of **INSTALLATION**).
23. Connect the front stabilizer (see step 9 of **INSTALLATION**).
24. Install exhaust pipe A and NEW gaskets (B).



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Fig. 48: Installing Exhaust Pipe A

25. Install the splash shield.



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Fig. 49: Installing The Splash Shield

26. Check that the mount bracket collars (A) are installed in the transmission, then install the transmission mount bracket (B) and ground cable (C).

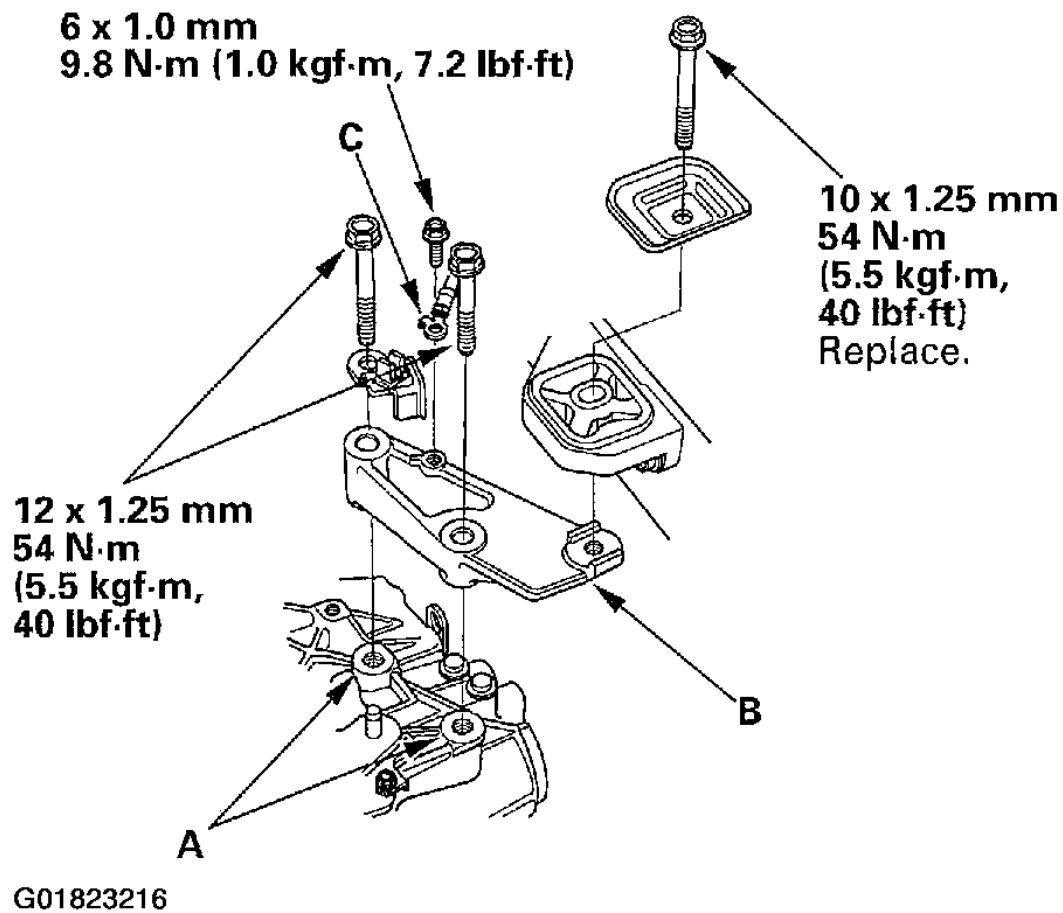
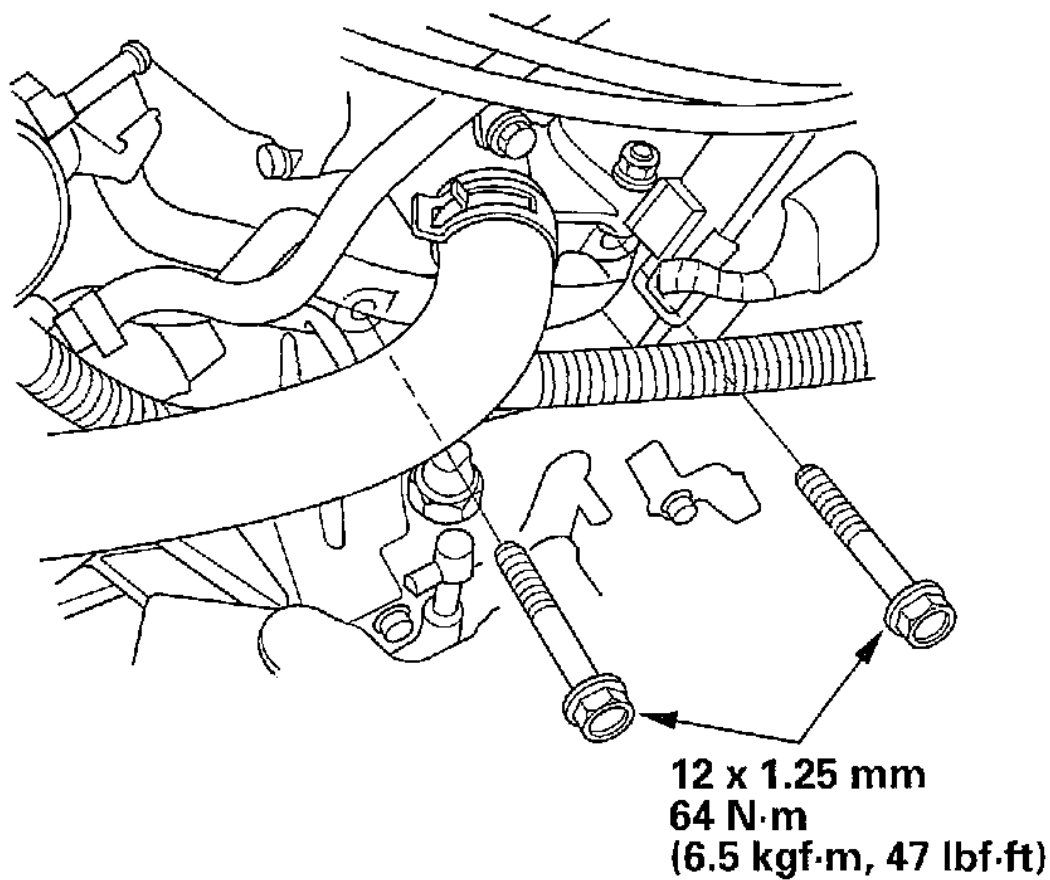


Fig. 50: Installing The Transmission Mount Bracket And Ground Cable

27. Install the transmission upper mounting bolts.



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Fig. 51: Installing The Transmission Upper Mounting Bolts

28. Install the steering gearbox mounting bolts.

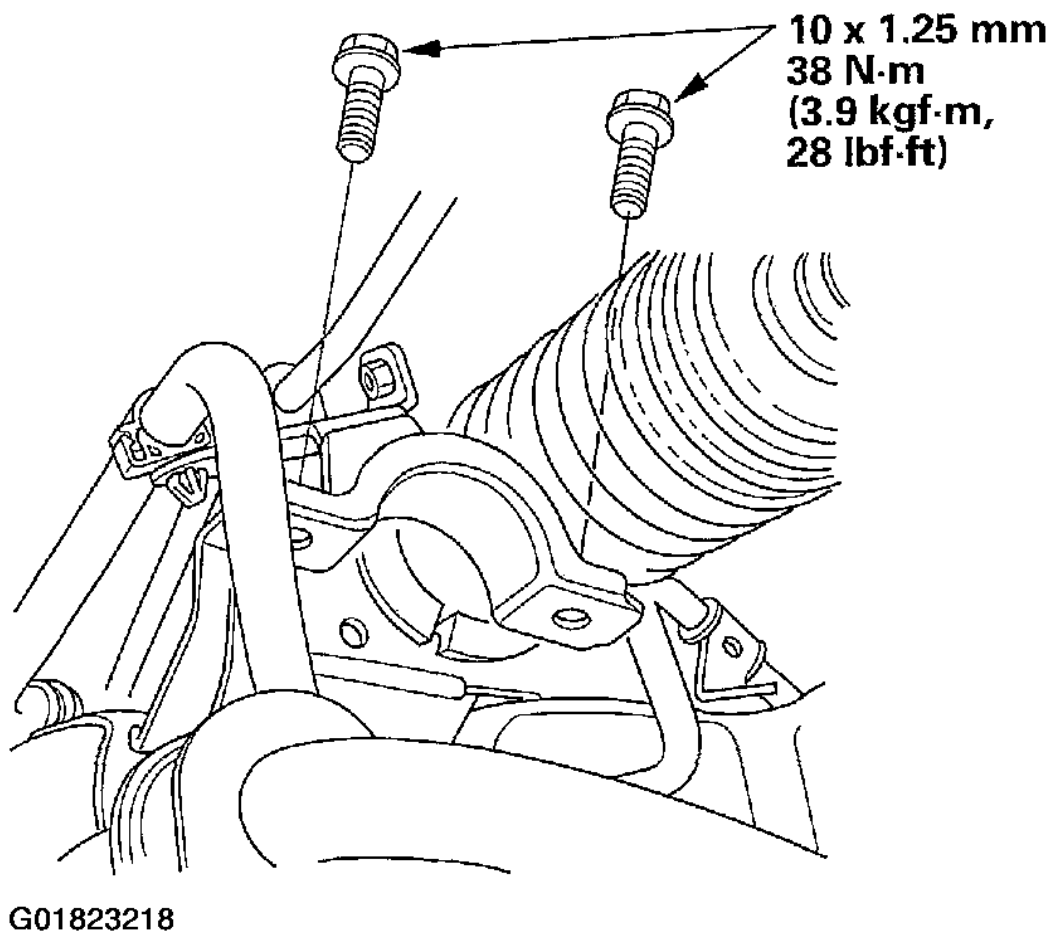
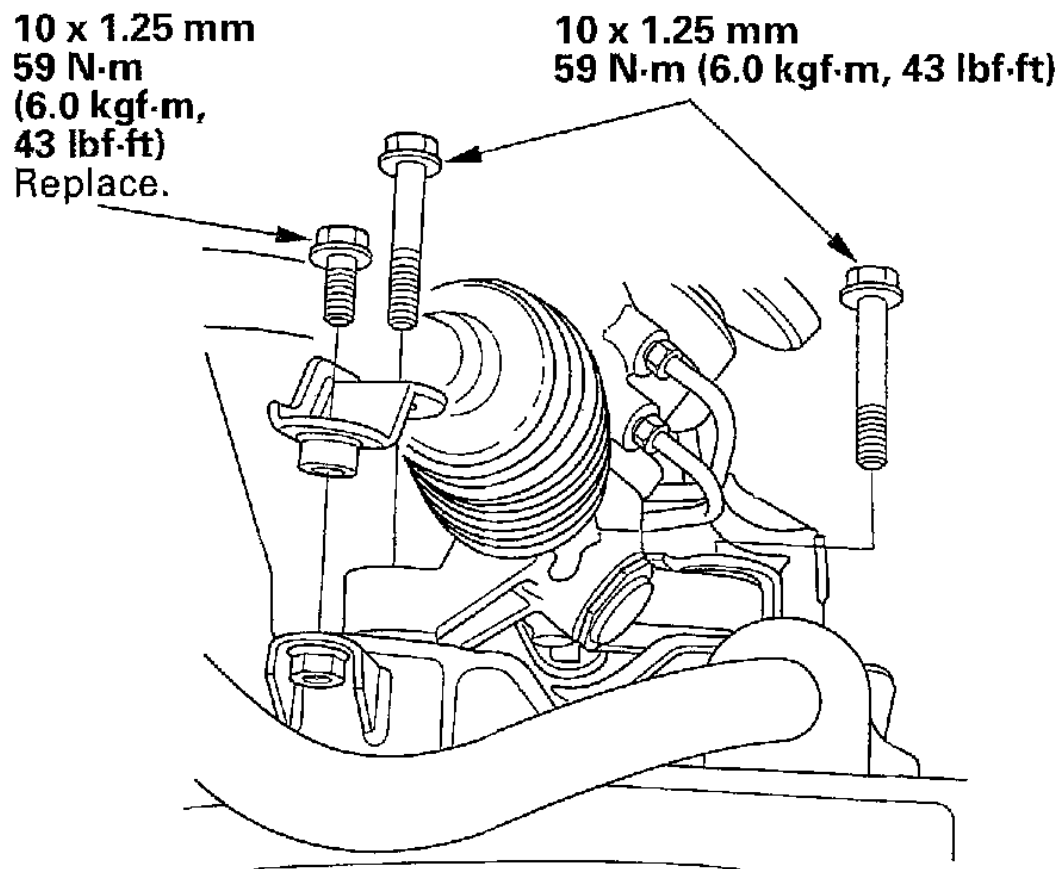


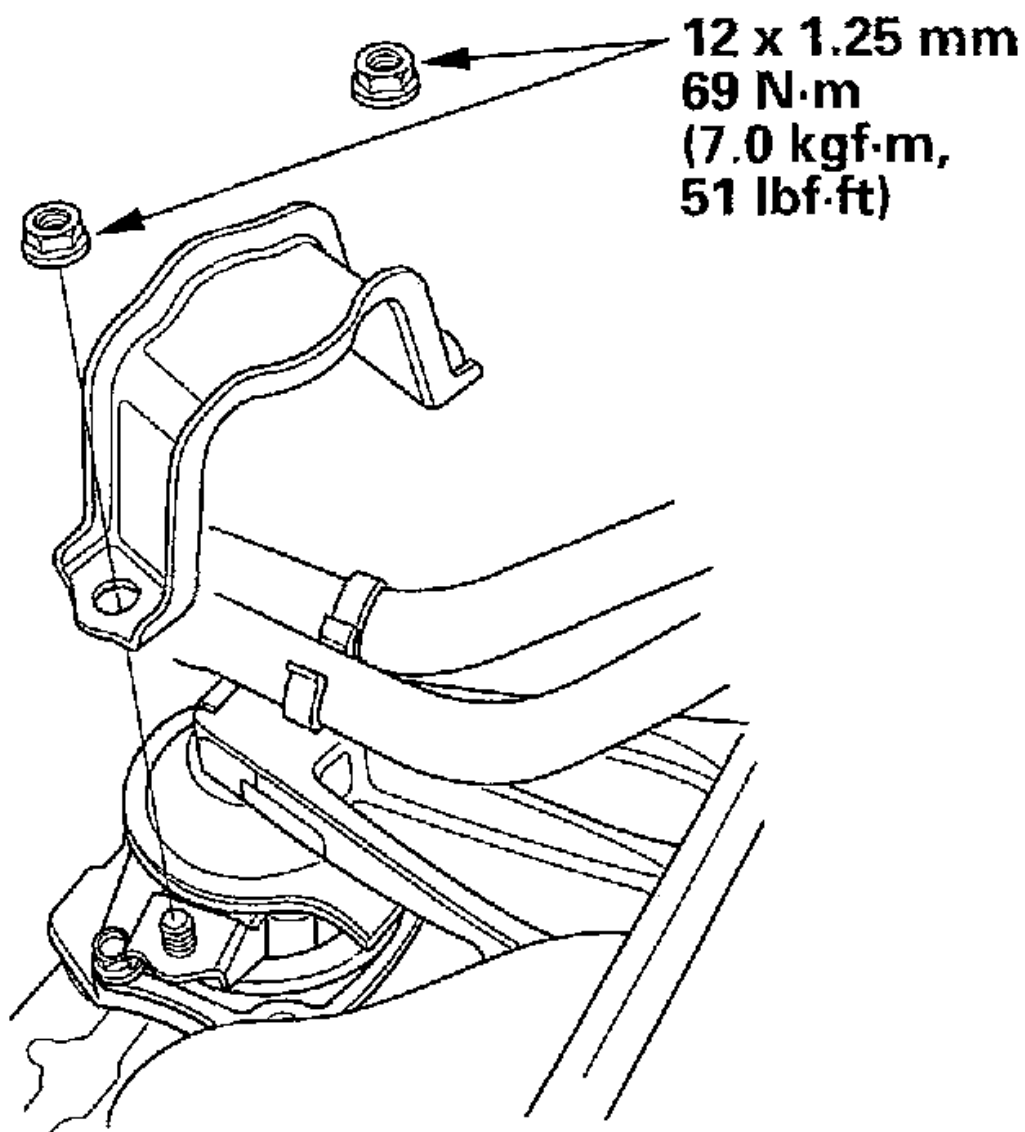
Fig. 52: Installing The Right Side Steering Gearbox Mounting Bolts



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Fig. 53: Installing The Left Side Steering Gearbox Mounting Bolts

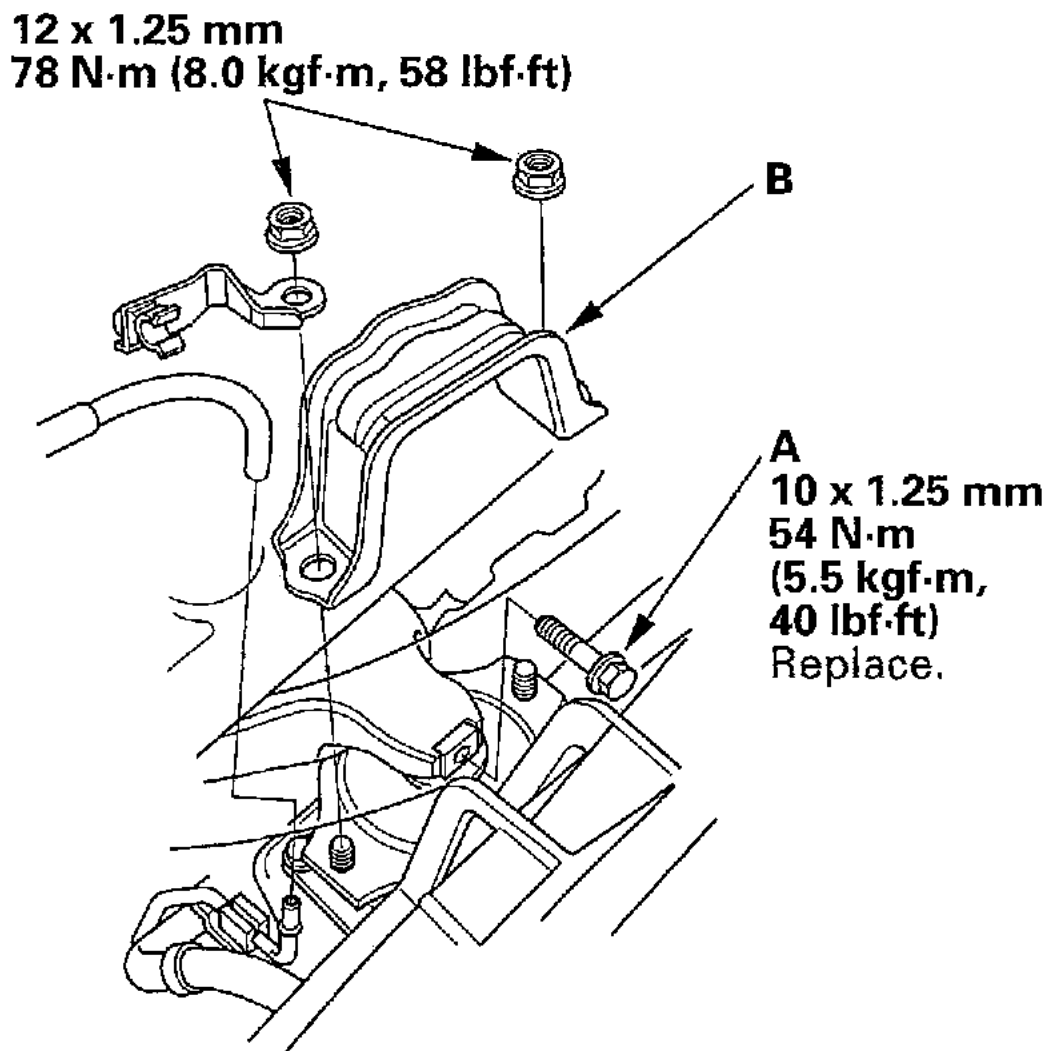
29. Install the engine rear mount stop.



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Fig. 54: Installing The Engine Rear Mount Stop

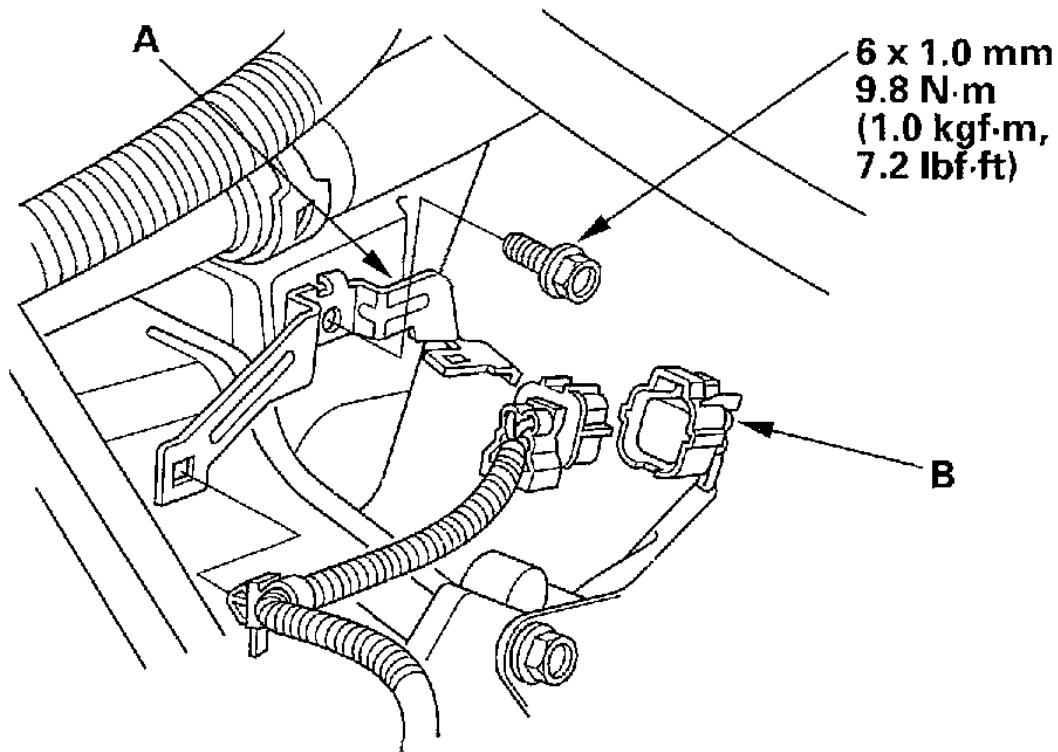
30. Install the engine mount front mounting bolt (A) and the engine front mount stop (B).



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Fig. 55: Installing The Engine Mount Front Mounting Bolt (A) And The Engine Front Mount Stop

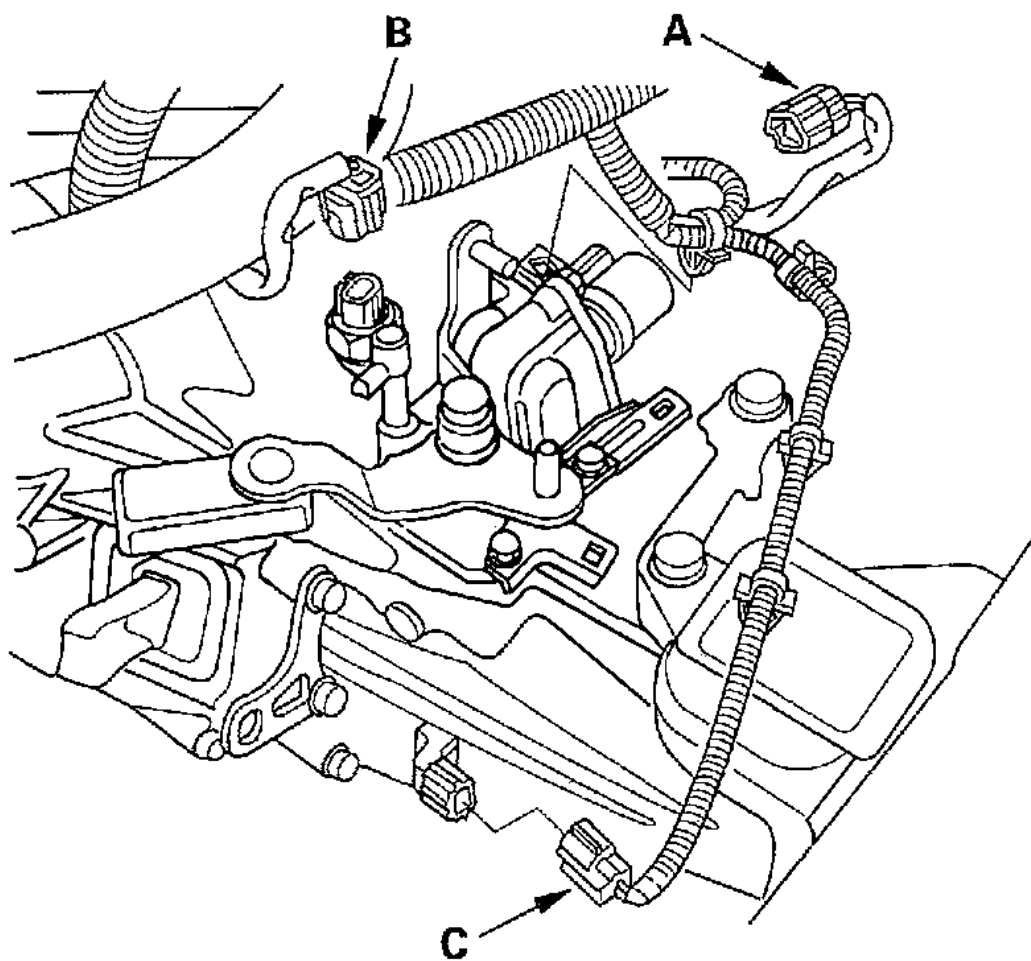
31. Install the bracket (A), then connect the secondary heated oxygen sensor (secondary HO2S) connector (B).



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Fig. 56: Installing The Bracket, Then Connect The Secondary Heated Oxygen Sensor (Secondary HO2S) Connector

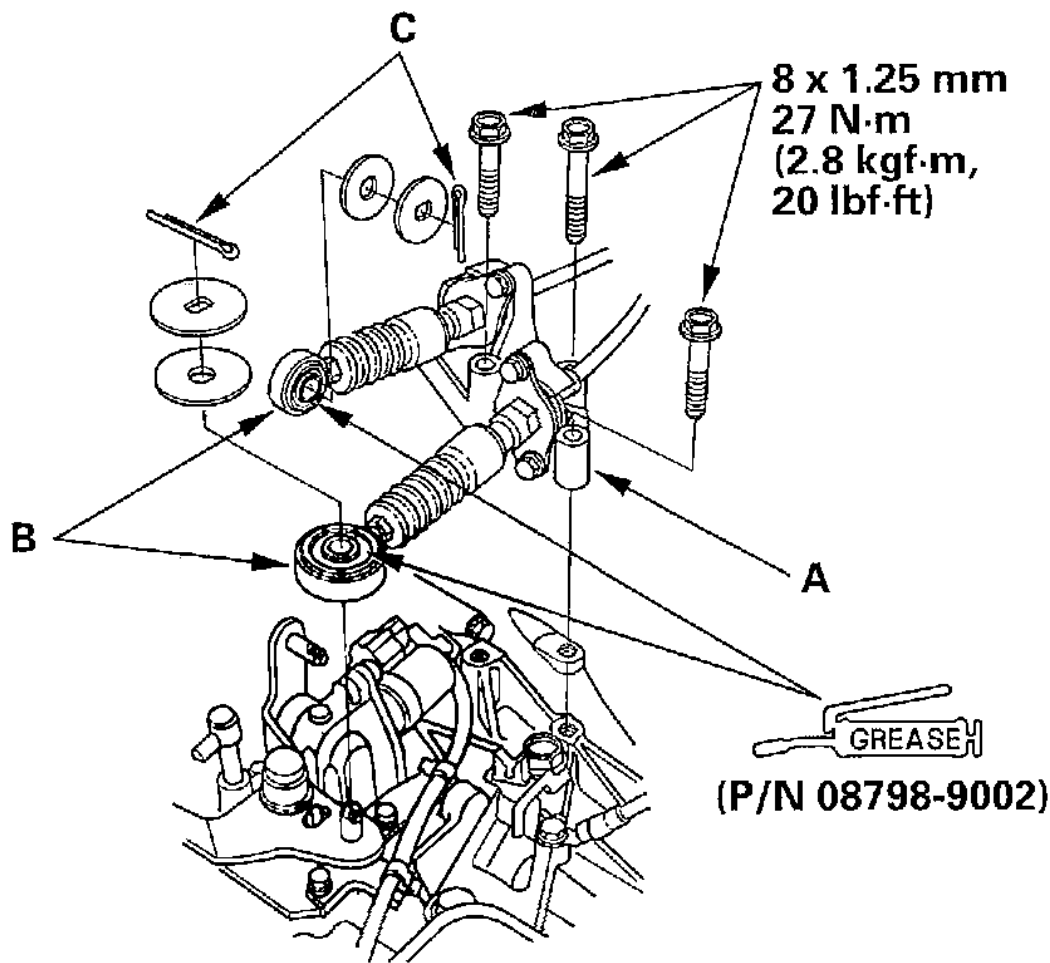
32. Connect the reverse lockout solenoid connector (A), back-up light switch connector (B), and countershaft speed sensor connector (C).



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Fig. 57: Connecting The Reverse Lockout Solenoid, Back-Up Light Switch, And Countershaft Speed Sensor Connectors

33. Install the cable bracket (A) and cables (B).



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Fig. 58: Installing The Cable Bracket And Cables

34. Apply a light coat of super high temp urea grease (P/N 08798-9002) to the cable ends, and install new cotter pins (C).
35. Apply super high temp urea grease (P/N 08798-9002) to the end of the cylinder rod. Install the slave cylinder. Take care not to bend the clutch line.

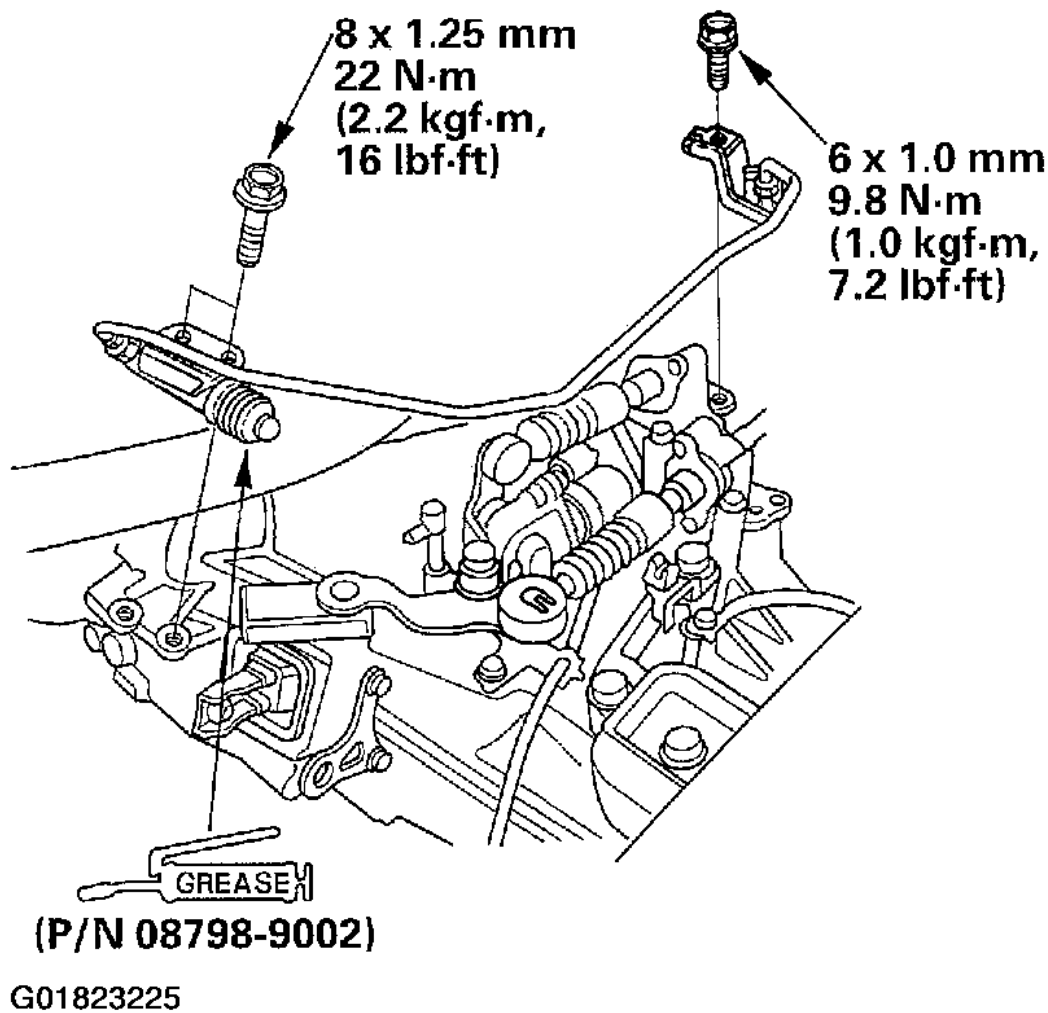


Fig. 59: Installing The Slave Cylinder

36. Install the battery base (see step 43 of **ENGINE INSTALLATION**).
37. Install the air cleaner housing (see **AIR CLEANER REMOVAL/INSTALLATION**).
38. Install the battery. Connect the positive (+) cable first, then the negative (-) cable to the battery.
39. Refill the transmission fluid (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**).
40. Test-drive the vehicle.
41. Check the clutch operation.
42. Check the front wheel alignment (see **WHEEL ALIGNMENT PROCEDURES**).
43. Enter the anti-theft codes for the radio and navigation system, then enter the customer's radio station presets.