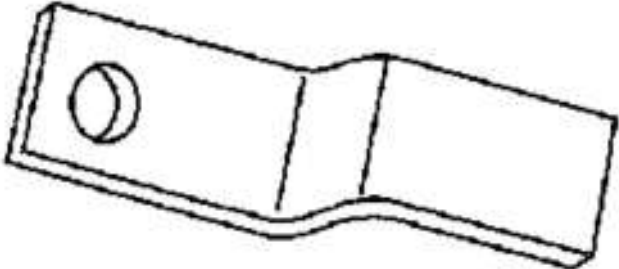


REMOVAL

TRANSMISSION - 4X2

Special Tool(s)

SPECIAL TOOL(S) SPECIFICATION

 <p data-bbox="480 858 791 917">ST1636-A</p>	<p data-bbox="831 633 1406 701">Retainer, Torque Converter 307-346 (T97T-7902-A)</p>
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Removal

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING & LIFTING** .
2. Disconnect the battery ground cable. For additional information, refer to **BATTERY, MOUNTING AND CABLES** .

NOTE: Drain the transmission fluid if the transmission is disassembled, or installation of a new transmission is required.

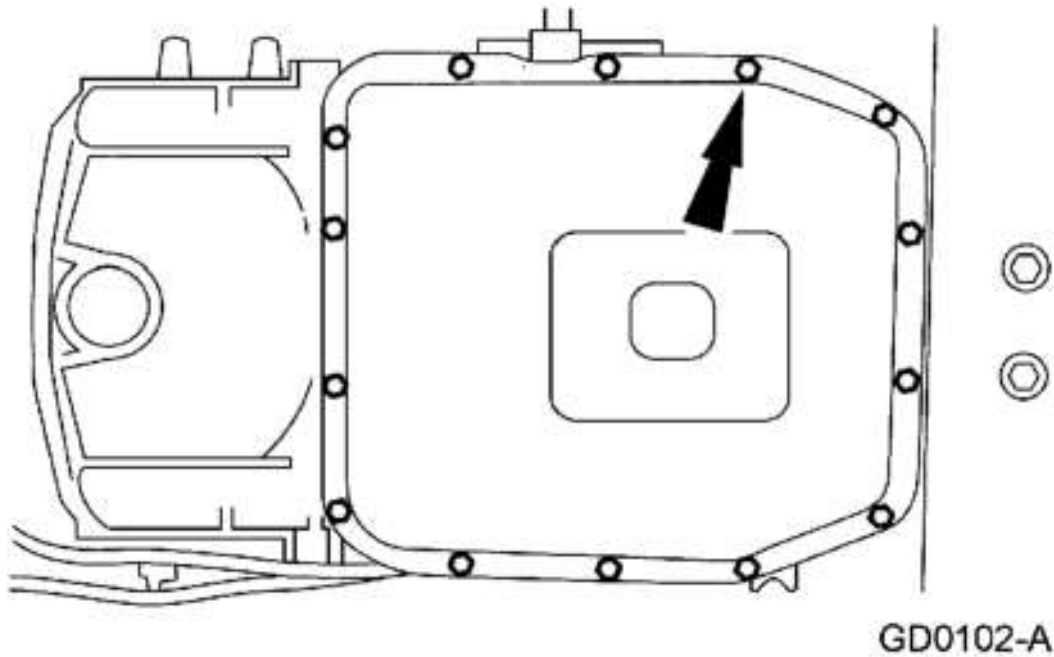


Fig. 214: Locating Transmission Fluid Pan Bolts
 Courtesy of FORD MOTOR CO.

3. Loosen the transmission fluid pan bolts and allow the fluid to drain.
4. After the fluid has drained, remove the transmission fluid pan and drain the remaining fluid from the pan.

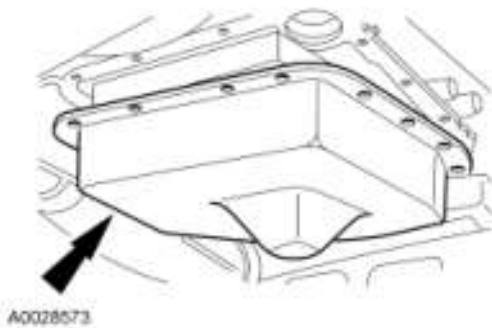


Fig. 215: Removing Transmission Fluid Pan
 Courtesy of FORD MOTOR CO.

NOTE: It is not necessary to torque the transmission fluid pan bolts in this step.

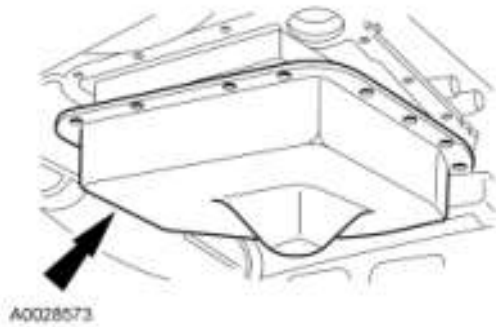


Fig. 216: Installing Transmission Fluid Pan
Courtesy of FORD MOTOR CO.

5. Install the transmission fluid pan.
6. Mark the driveshaft flange and rear axle pinion flange for correct alignment during installation.

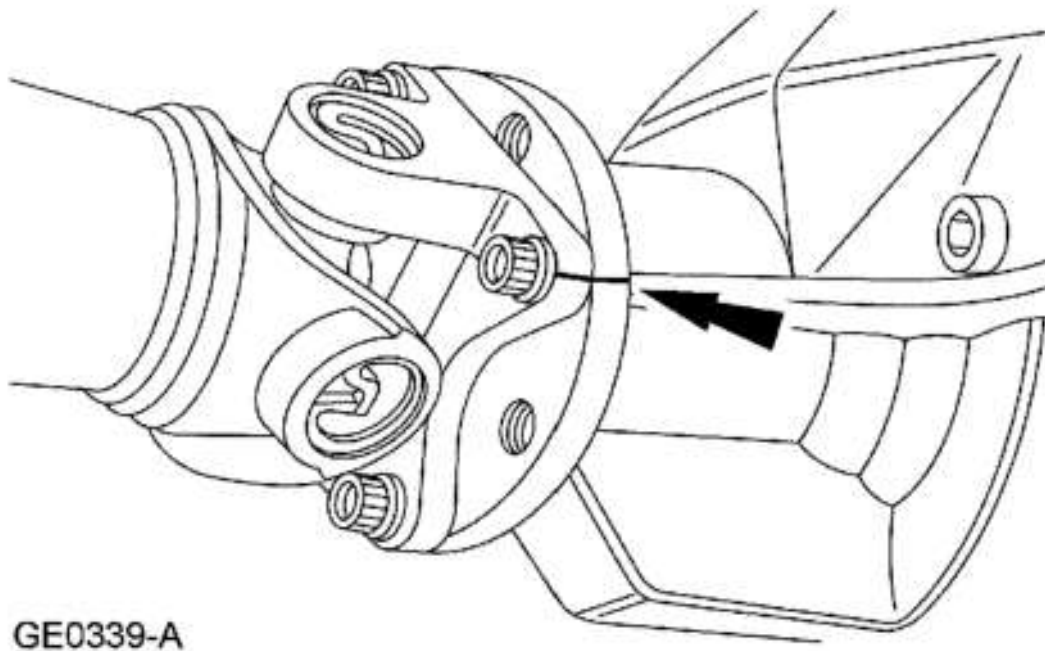
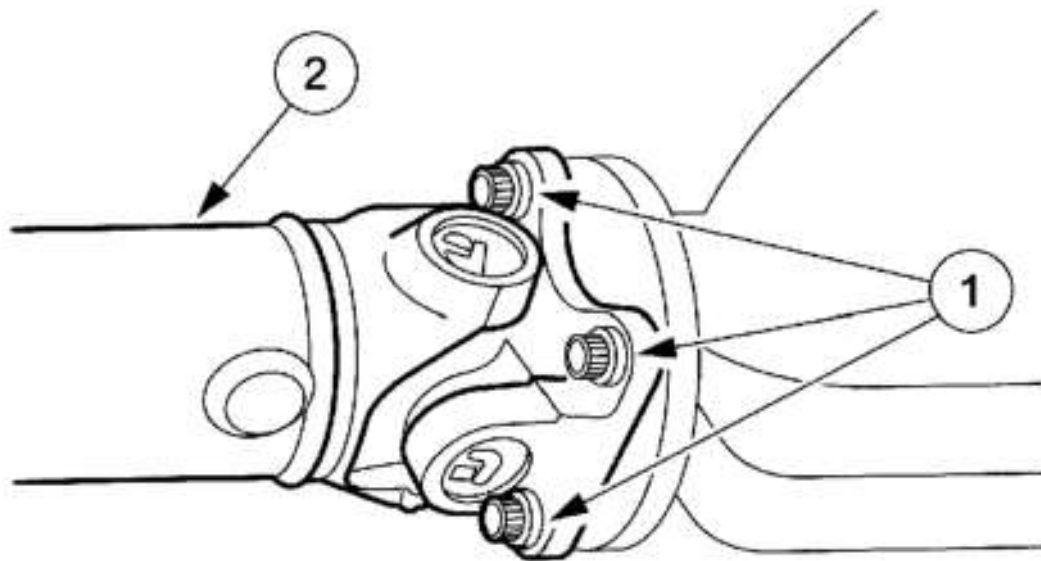


Fig. 217: Marking Driveshaft Flange & Rear Axle Pinion Flange
Courtesy of FORD MOTOR CO.

7. Remove the rear driveshaft.
 1. Remove the 4 bolts.
 2. Remove the driveshaft.



GD1420-A

Fig. 218: Removing Rear Driveshaft
Courtesy of FORD MOTOR CO.

8. Remove the fuel line bracket from the extension bolt.

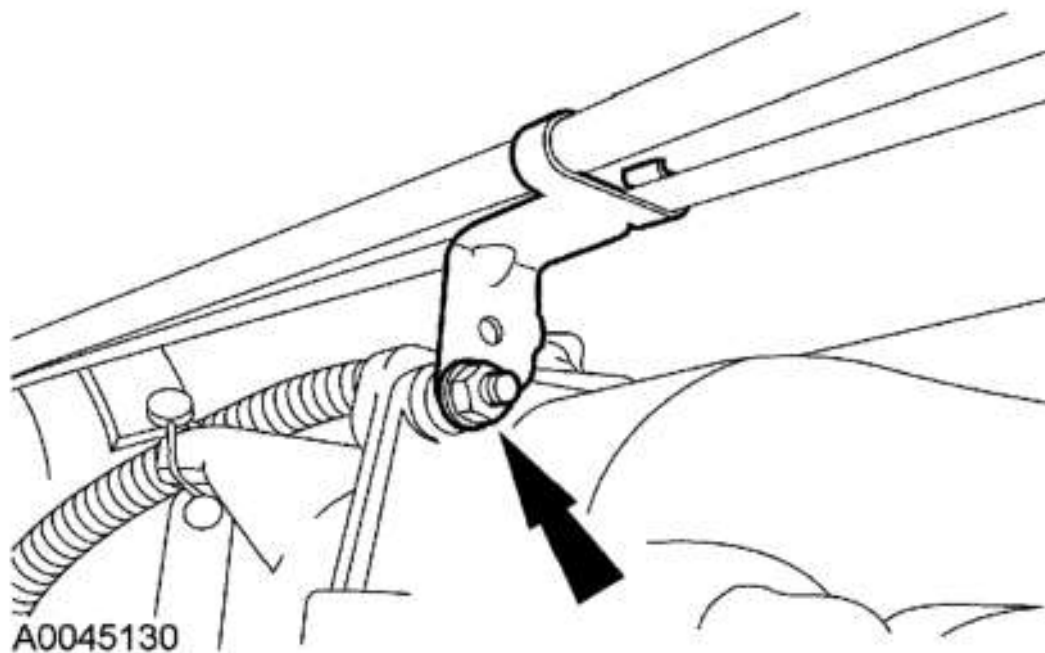


Fig. 219: Removing Nut And Fuel Line Bracket

Courtesy of FORD MOTOR CO.

9. Disconnect the shift cable end and remove the shift cable bracket.

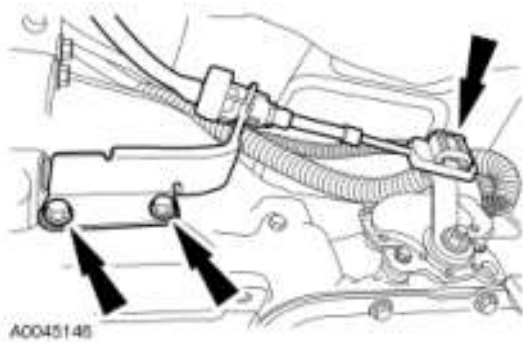


Fig. 220: Identifying Shift Cable End And Shift Cable Bracket
Courtesy of FORD MOTOR CO.

10. Remove the flexplate inspection cover.

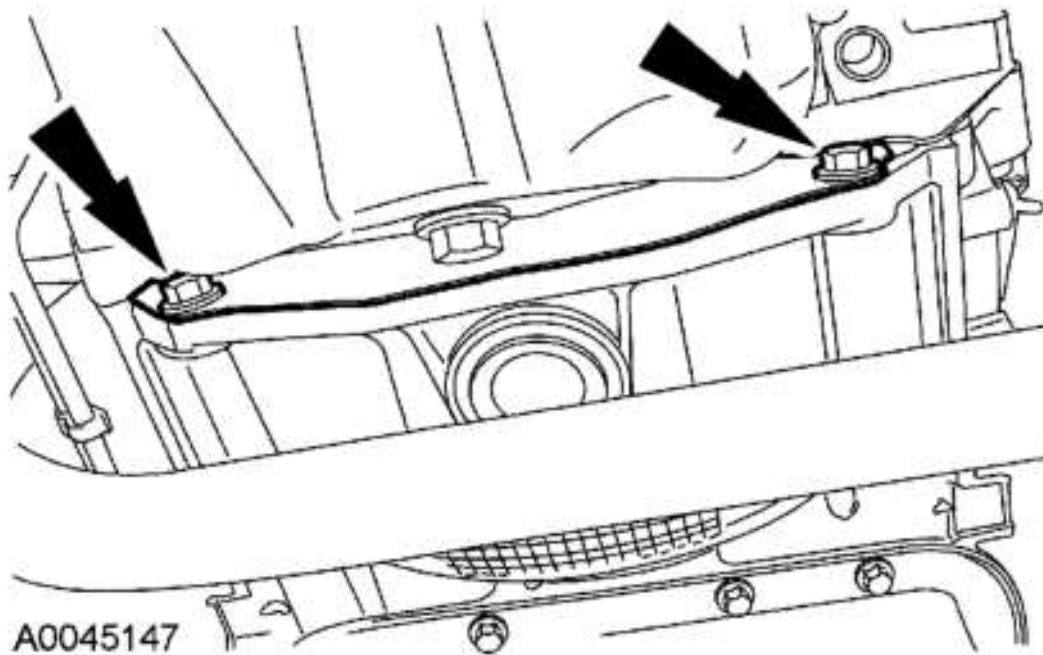


Fig. 221: Removing Flexplate Inspection Cover
Courtesy of FORD MOTOR CO.

11. Remove the rubber access plug.

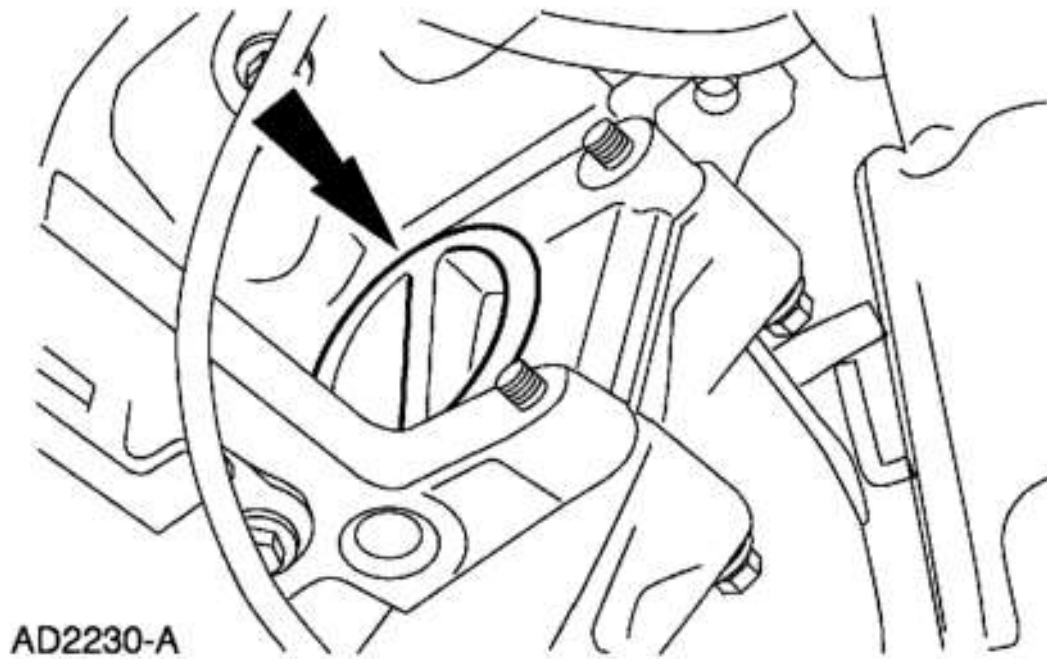


Fig. 222: Removing Rubber Access Plug
Courtesy of FORD MOTOR CO.

12. Remove and discard the 4 flexplate-to-torque converter nuts.

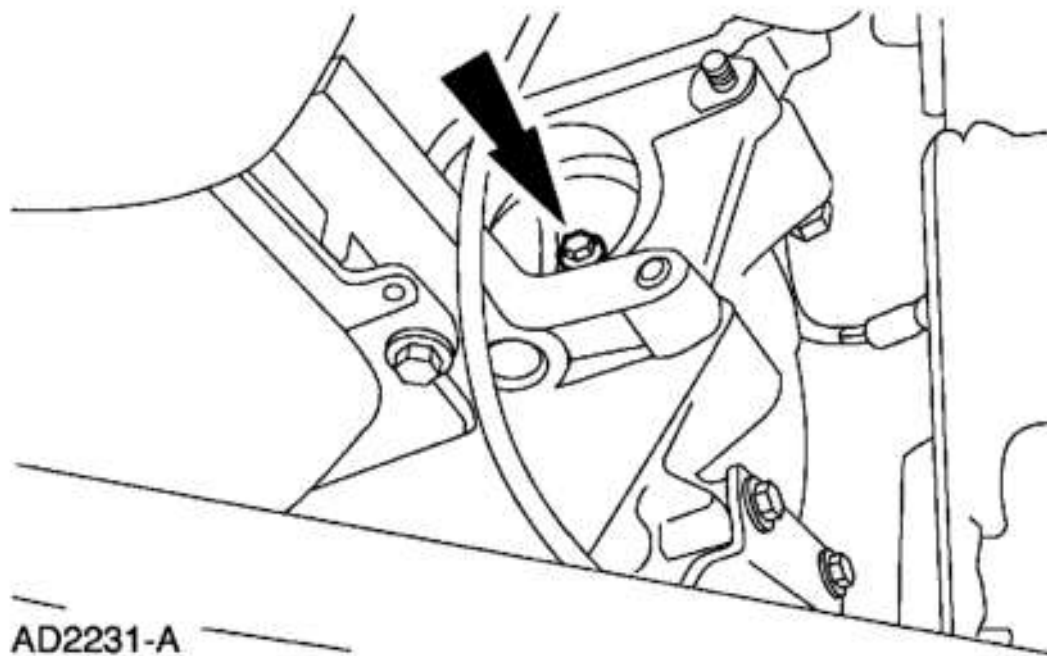


Fig. 223: Removing Flexplate-To-Torque Converter Nuts
Courtesy of FORD MOTOR CO.

13. Remove the plastic starter motor electrical connector cap.

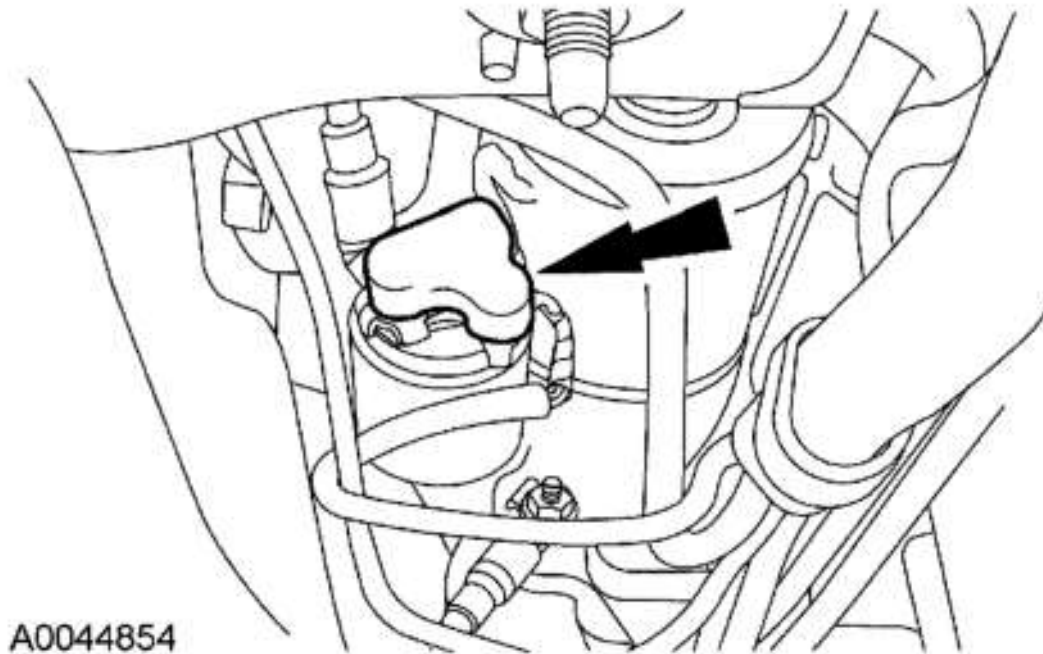


Fig. 224: Removing Plastic Starter Motor Electrical Connector Cap
Courtesy of FORD MOTOR CO.

14. Remove the starter motor electrical connectors and the ground wire.

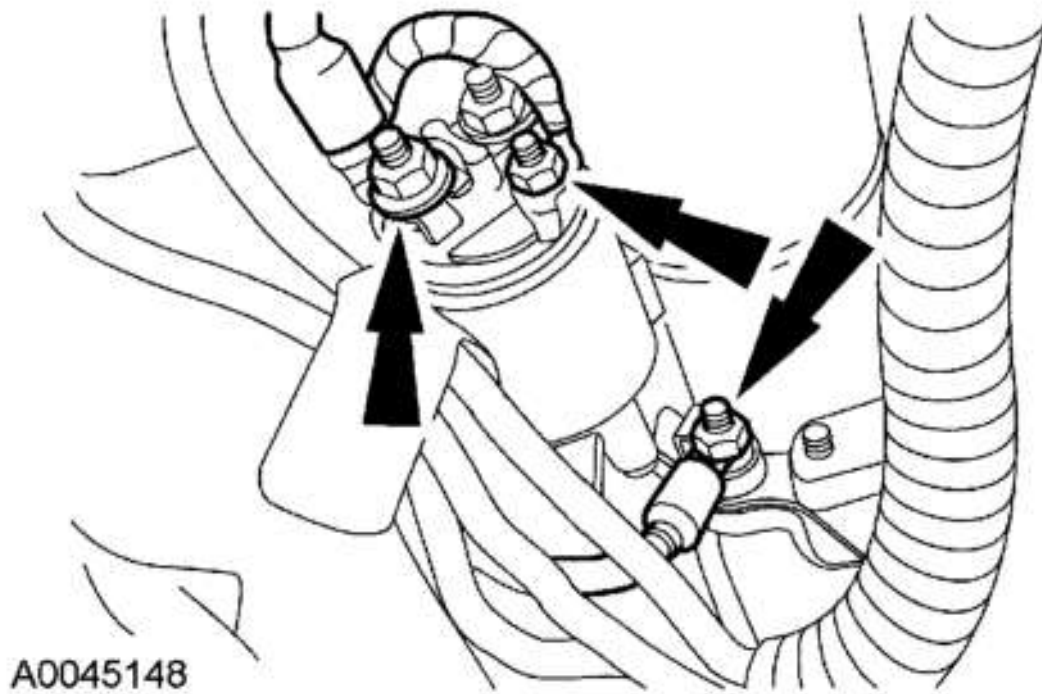


Fig. 225: Removing Starter Motor Electrical Connectors
Courtesy of FORD MOTOR CO.

15. Remove the 3 bolts and the starter motor.

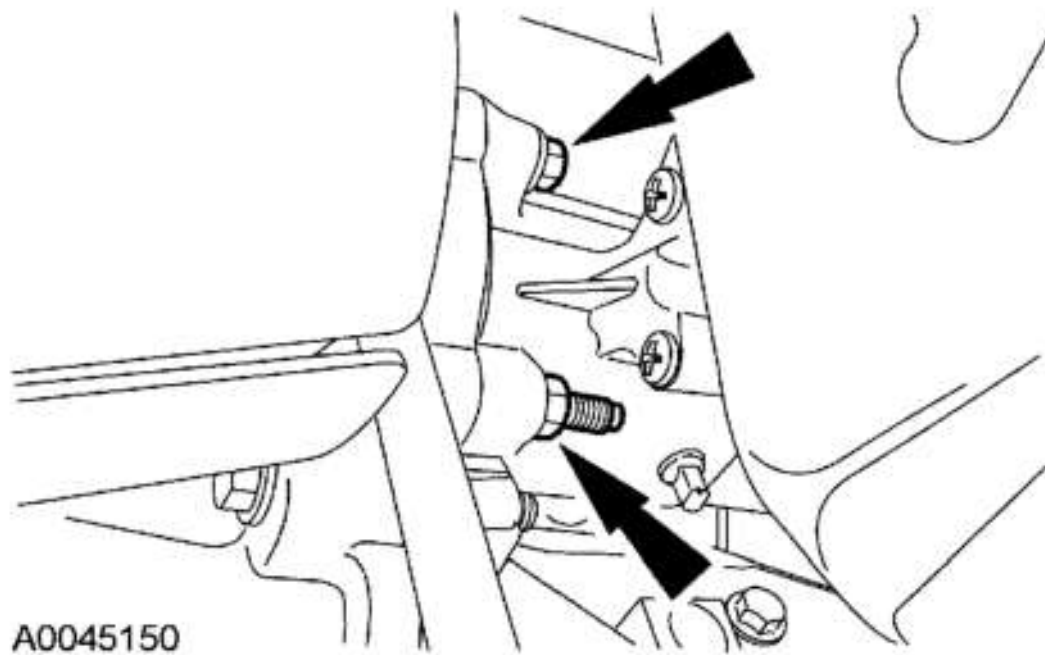


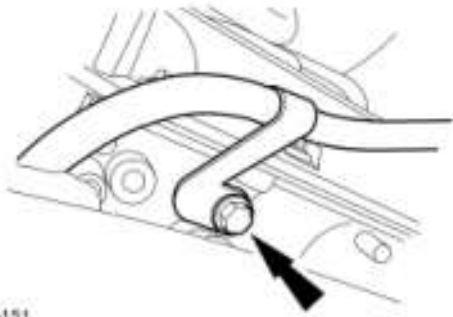
Fig. 226: Removing Starter Motor
 Courtesy of FORD MOTOR CO.

16. Disconnect the transmission cooler lines and position them aside.



Fig. 227: Disconnecting Transmission Cooler Lines
 Courtesy of FORD MOTOR CO.

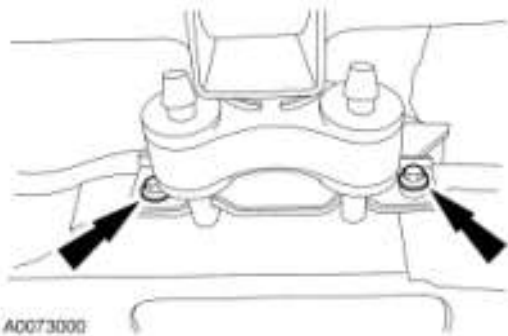
17. Remove the bolt from the RH cylinder head for the transmission filler tube and position the filler tube aside.



A0045151

Fig. 228: Removing Bolt From RH Cylinder Head
Courtesy of FORD MOTOR CO.

18. Remove the 2 bolts for the exhaust hanger.



A0073000

Fig. 229: Removing Exhaust Hanger
Courtesy of FORD MOTOR CO.

19. Remove the RH exhaust shield bolt.



A0045152

Fig. 230: Identifying RH Exhaust Shield Bolt
Courtesy of FORD MOTOR CO.

20. Remove the LH exhaust shield bolt.

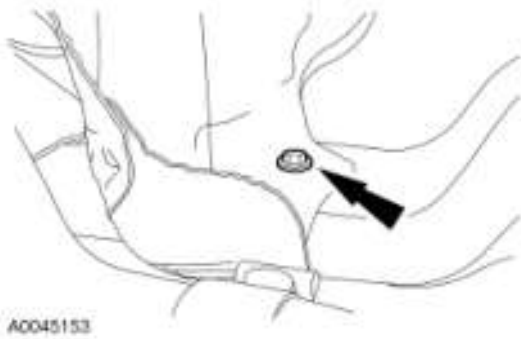


Fig. 231: Identifying LH Exhaust Shield Bolt
Courtesy of FORD MOTOR CO.

NOTE: Make sure that the transmission is securely fastened to the transmission jack.

21. Position a suitable high-lift transmission jack under the transmission.
22. Remove the rear crossmember bolts.

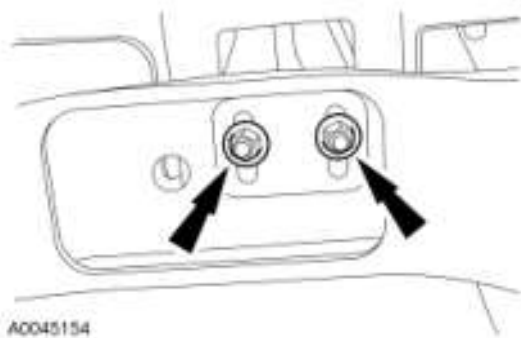


Fig. 232: Removing Rear Crossmember Bolts
Courtesy of FORD MOTOR CO.

23. Remove the rear transmission retainer nuts and remove the crossmember.

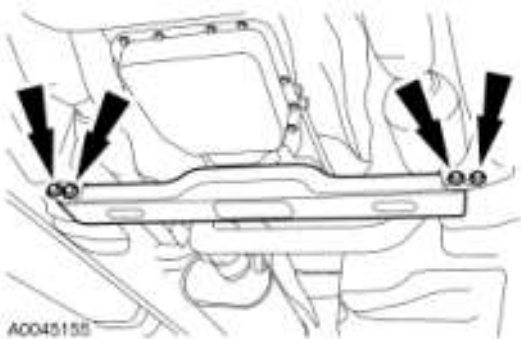


Fig. 233: removing Rear Transmission Retainer Nuts & Crossmember
Courtesy of FORD MOTOR CO.

24. Remove the rear transmission support.

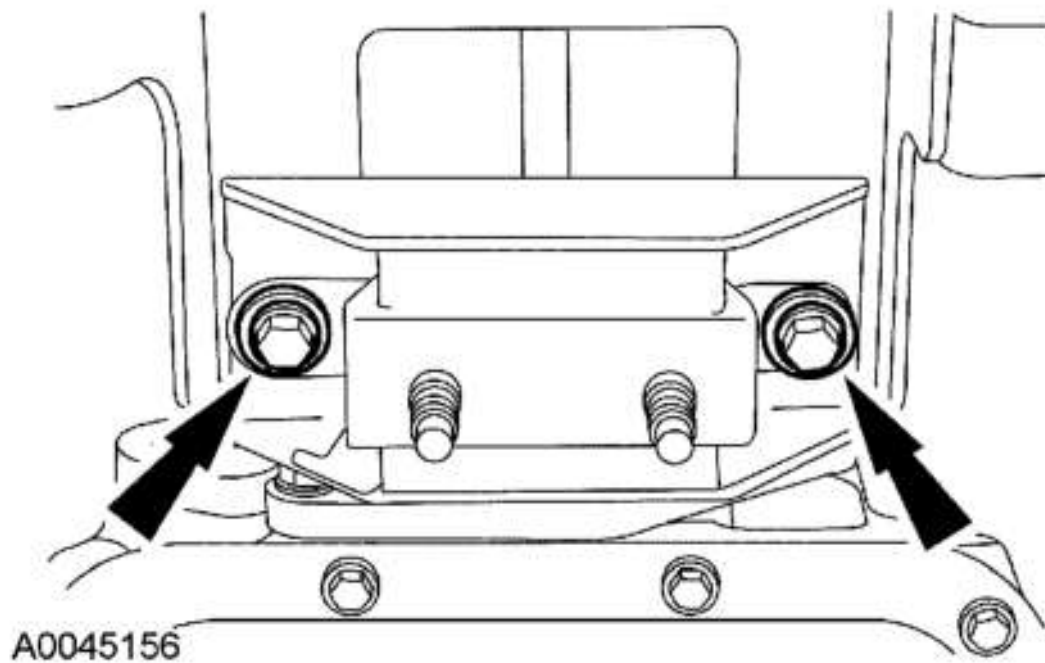


Fig. 234: Locating Rear Transmission Support
Courtesy of FORD MOTOR CO.

25. Disconnect the transmission electrical connectors.
 1. Disconnect the digital transmission range (TR) sensor.
 2. Disconnect the output shaft speed (OSS) sensor.
 3. Disconnect the turbine shaft speed (TSS) sensor.

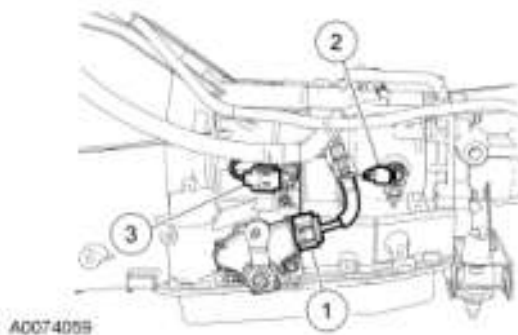
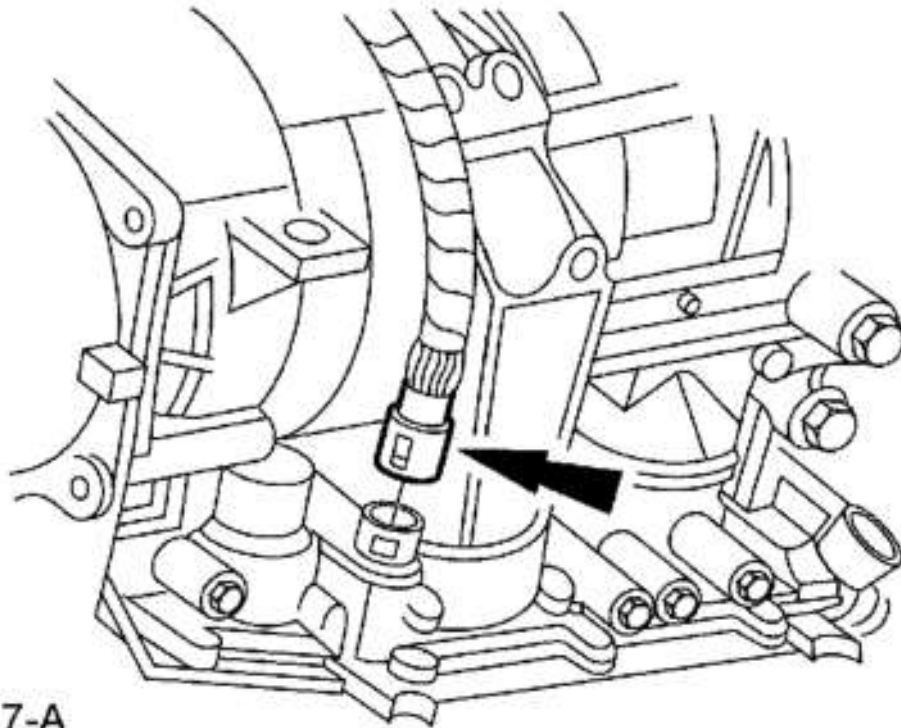


Fig. 235: Disconnecting Transmission Electrical Connectors
Courtesy of FORD MOTOR CO.

26. Disconnect the solenoid body assembly electrical connector.



GD1717-A

Fig. 236: Disconnecting Solenoid Body Assembly Electrical Connector
Courtesy of FORD MOTOR CO.

- NOTE:** If the transmission fluid has not been drained, position a drain pan and install a suitable plug into the transmission.
- NOTE:** Note the length and the location of the bolts during removal.

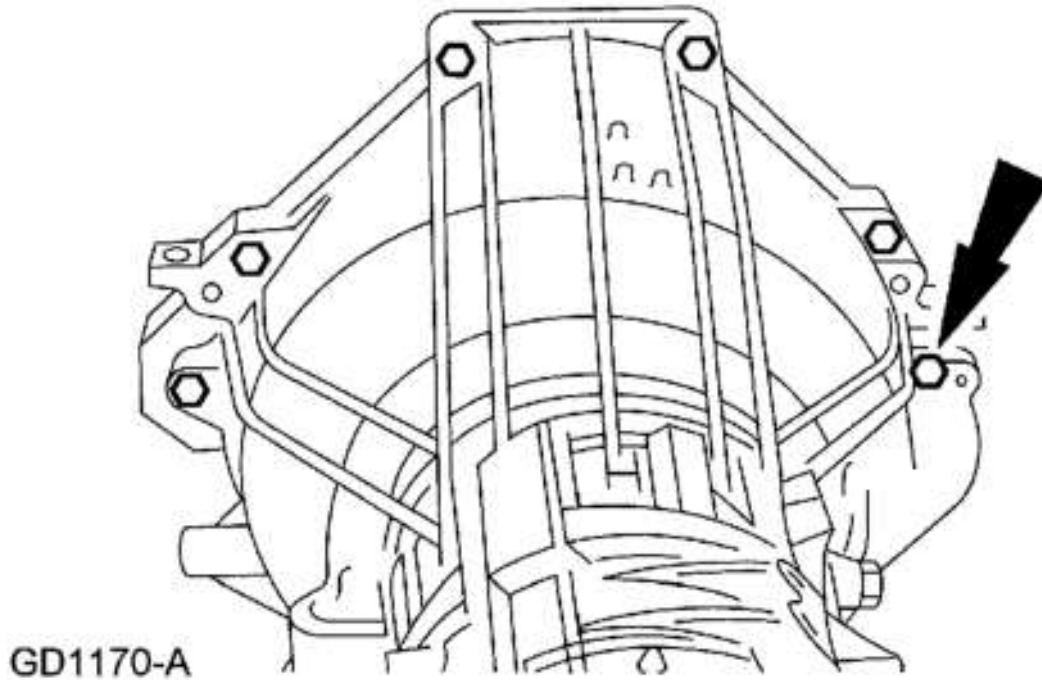


Fig. 237: Removing Transmission-To-Engine Bolts
Courtesy of FORD MOTOR CO.

27. Remove the seven transmission-to-engine bolts.

WARNING: The torque converter is heavy and can result in injury if it falls out of the transmission. Secure the torque converter in the transmission.

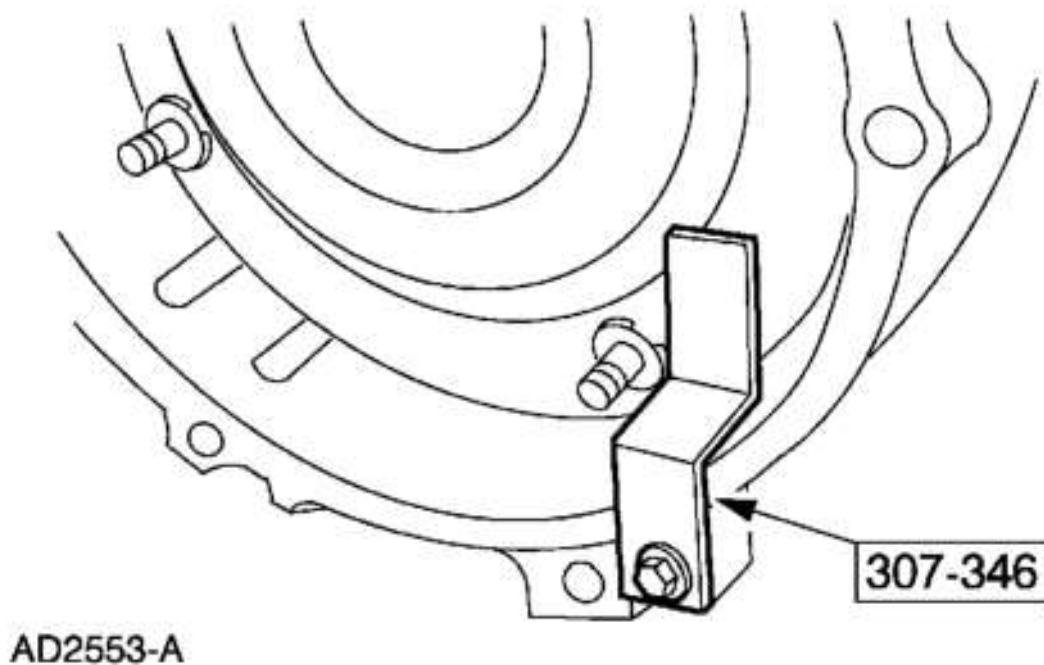


Fig. 238: Installing Special Tool
Courtesy of FORD MOTOR CO.

28. Leaving the transmission in a horizontal position, slide it back far enough to install the special tool. Install the special tool.

CAUTION: To remove the transmission from the vehicle, it will be necessary to put the transmission into a nose-down position to clear the flexplate and the exhaust system.

NOTE: Make sure that the special tool is in place and the transmission is securely fastened to the transmission jack before tilting the transmission.

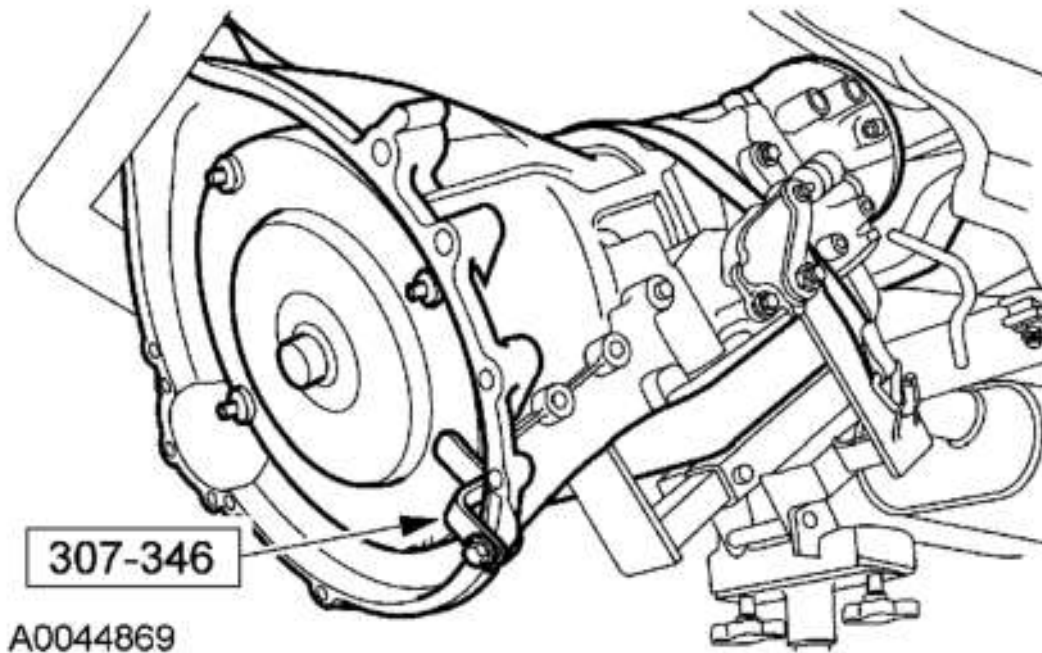
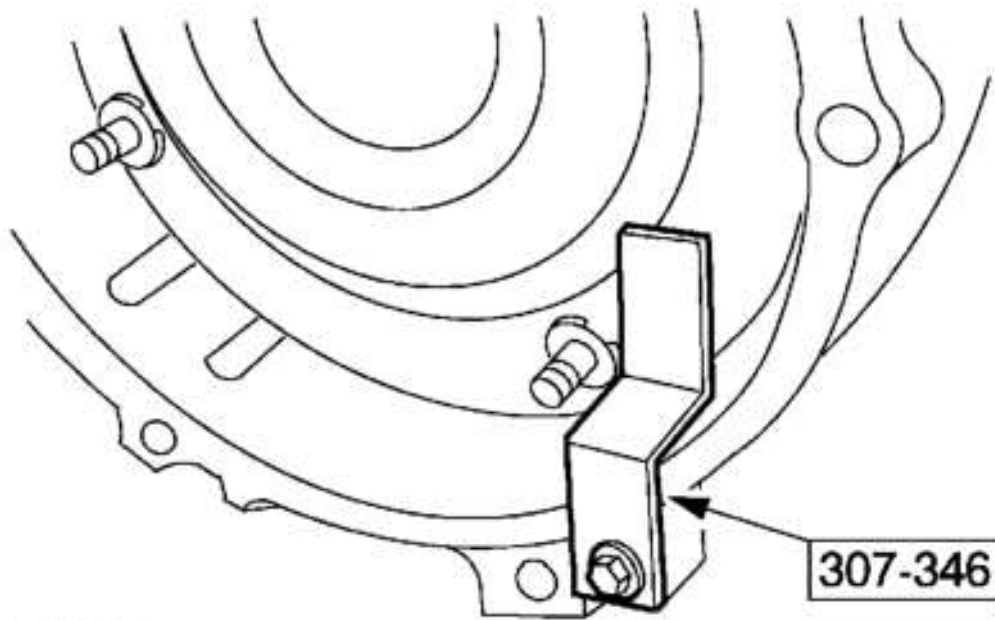


Fig. 239: Lowering Transmission From Vehicle
Courtesy of FORD MOTOR CO.

29. Lower the transmission from the vehicle.
30. If the transmission is to be overhauled or if installing a new transmission, carry out transmission backflushing and cleaning. Carry out transmission fluid cooler backflushing and cleaning. For additional information, refer to **TRANSMISSION FLUID COOLER - BACKFLUSHING AND CLEANING.**
31. Remove the special tool.



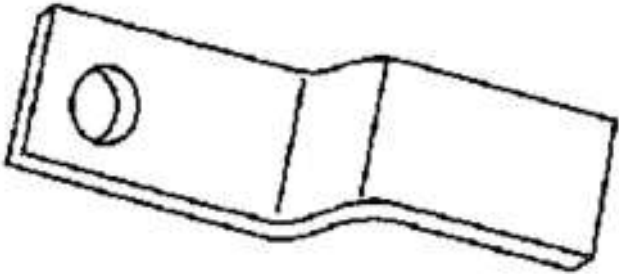
AD2553-A

Fig. 240: Removing Special Tool
 Courtesy of FORD MOTOR CO.

TRANSMISSION - 4X4

Special Tool(s)

SPECIAL TOOL(S) SPECIFICATIONS

 <p style="text-align: center;">ST1636-A</p>	<p>Retainer, Torque Converter 307-346 (T97T-7902-A)</p>
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Removal

1. Disconnect the battery ground cable. For additional information, refer to **BATTERY, MOUNTING AND CABLES** .
2. Remove the transfer case. For additional information, refer to **TRANSFER CASE - AUTOMATIC SHIFT** .

NOTE: Drain the transmission fluid if the transmission is disassembled, or installation of a new transmission is necessary.

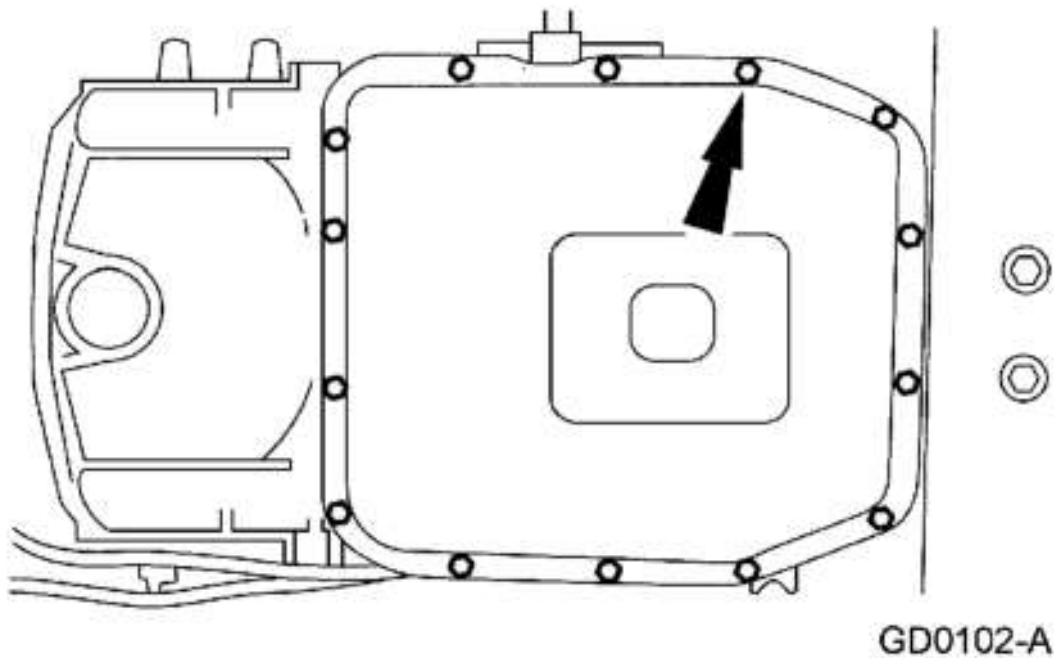


Fig. 241: Loosening Transmission Fluid Pan Bolts
Courtesy of FORD MOTOR CO.

3. Loosen the transmission fluid pan bolts and allow the fluid to drain.
4. After the fluid has drained, remove the transmission fluid pan and drain the remaining fluid from the pan.

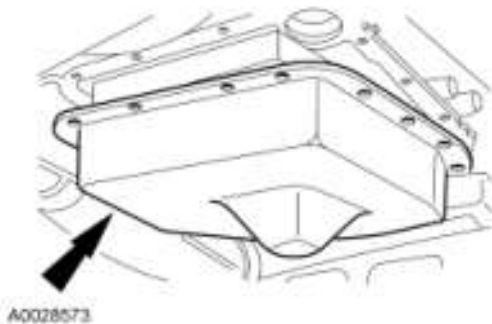
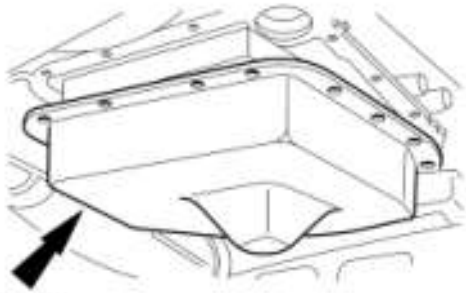


Fig. 242: Removing Fluid Pan
Courtesy of FORD MOTOR CO.

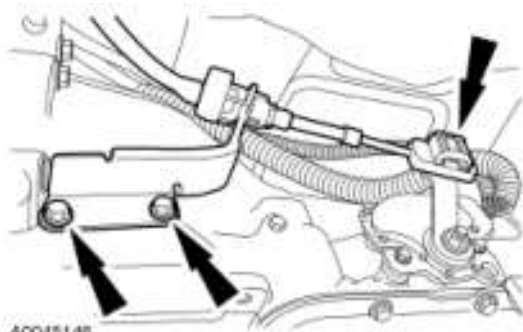
NOTE: It is not necessary to torque the transmission fluid pan bolts in this step.



A0028573

Fig. 243: Installing Transmission Fluid Pan
Courtesy of FORD MOTOR CO.

5. Install the transmission fluid pan.
6. Disconnect the shift cable end and remove the shift cable bracket.



A0045148

Fig. 244: Disconnecting Shift Cable End & Removing Shift Cable Bracket
Courtesy of FORD MOTOR CO.

7. Remove the flexplate inspection cover.

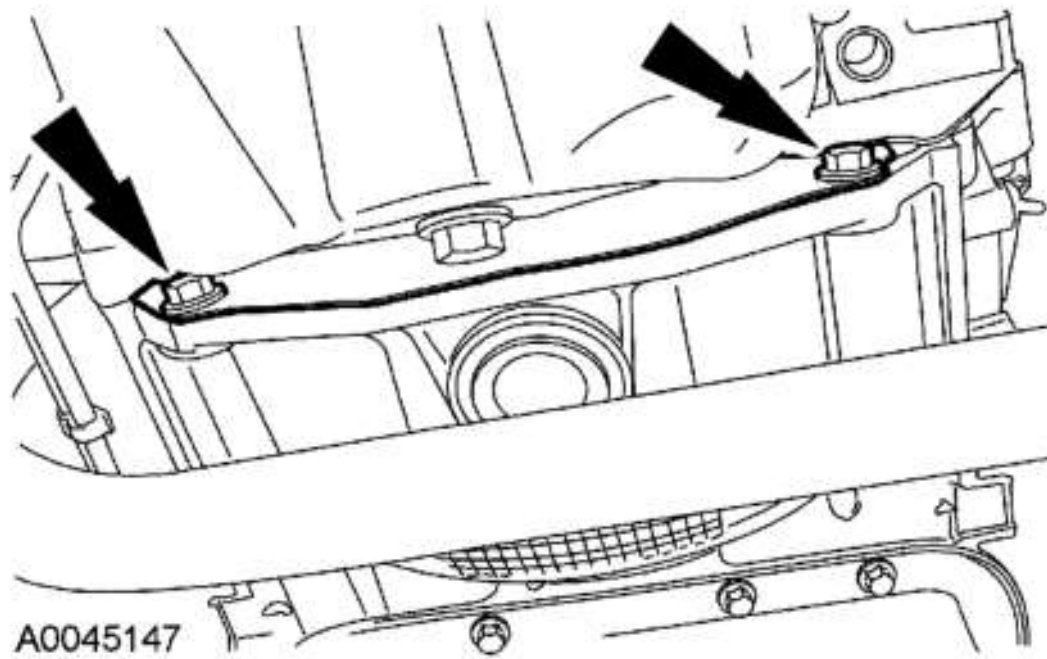


Fig. 245: Removing Flexplate Inspection Cover
Courtesy of FORD MOTOR CO.

8. Remove the rubber access plug.

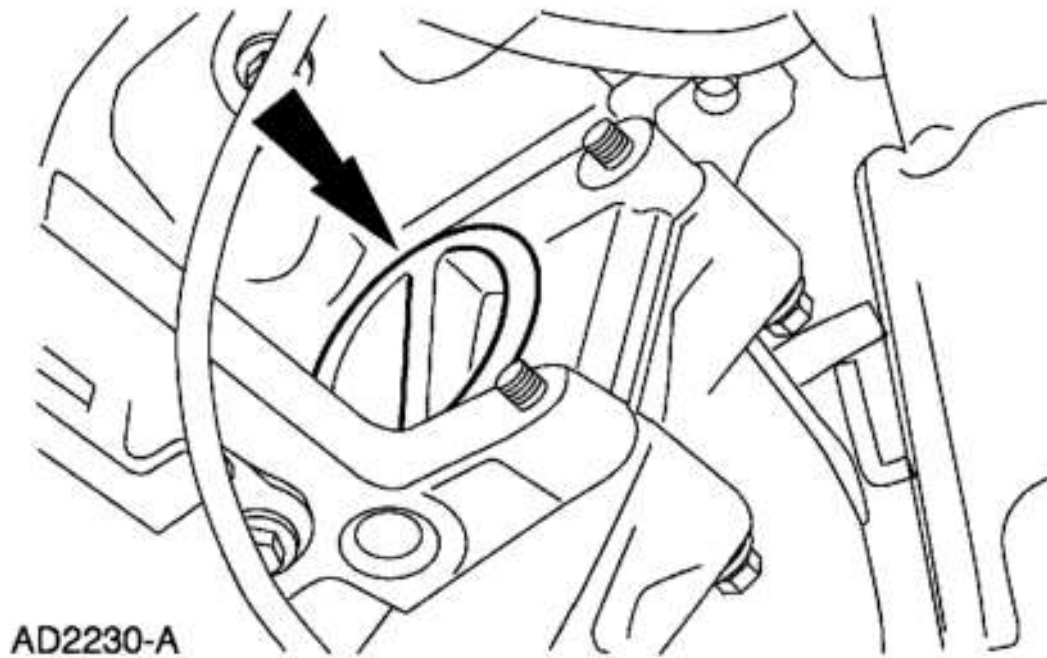


Fig. 246: Identifying Rubber Access Plug
Courtesy of FORD MOTOR CO.

9. Remove and discard the 4 flexplate-to-torque converter nuts.

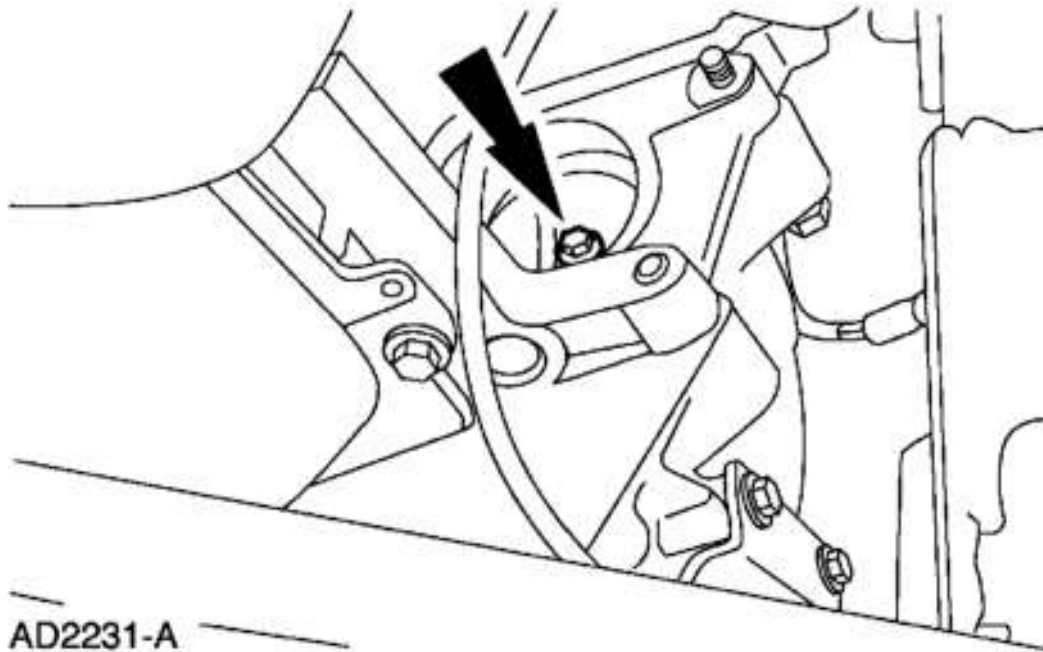


Fig. 247: Removing Flexplate-To-Torque Converter Nuts
Courtesy of FORD MOTOR CO.

10. Remove the plastic starter motor electrical connector cap.

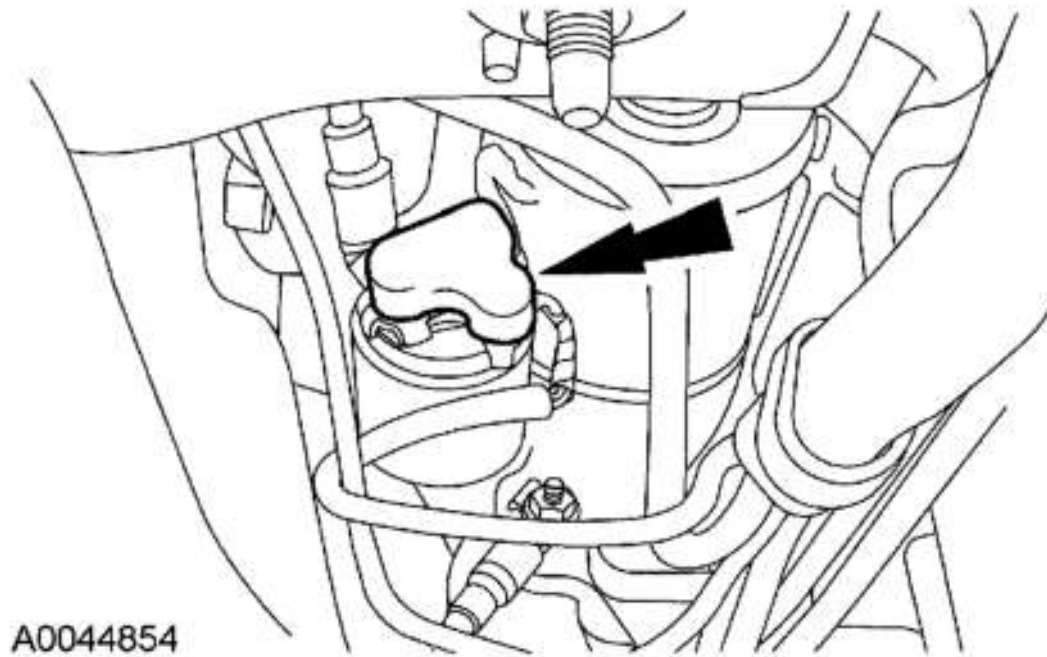


Fig. 248: Removing Electrical Connector Cap
Courtesy of FORD MOTOR CO.

11. Remove the starter motor electrical connectors and the ground wire.

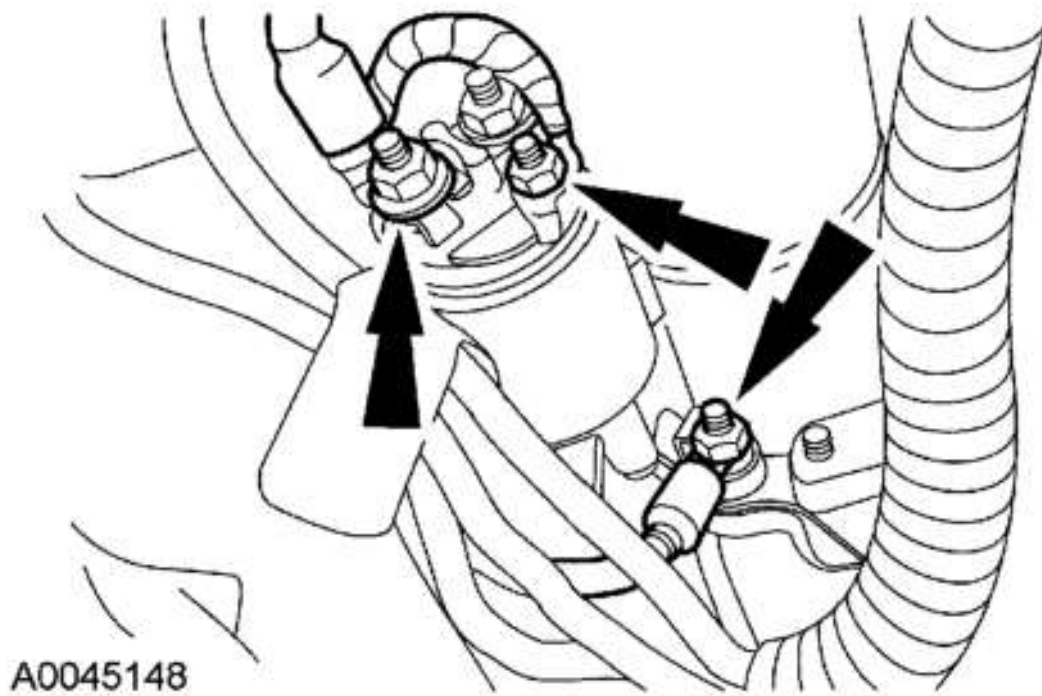


Fig. 249: Removing Starter Motor Electrical Connectors
Courtesy of FORD MOTOR CO.

12. Remove the 3 bolts and the starter motor.

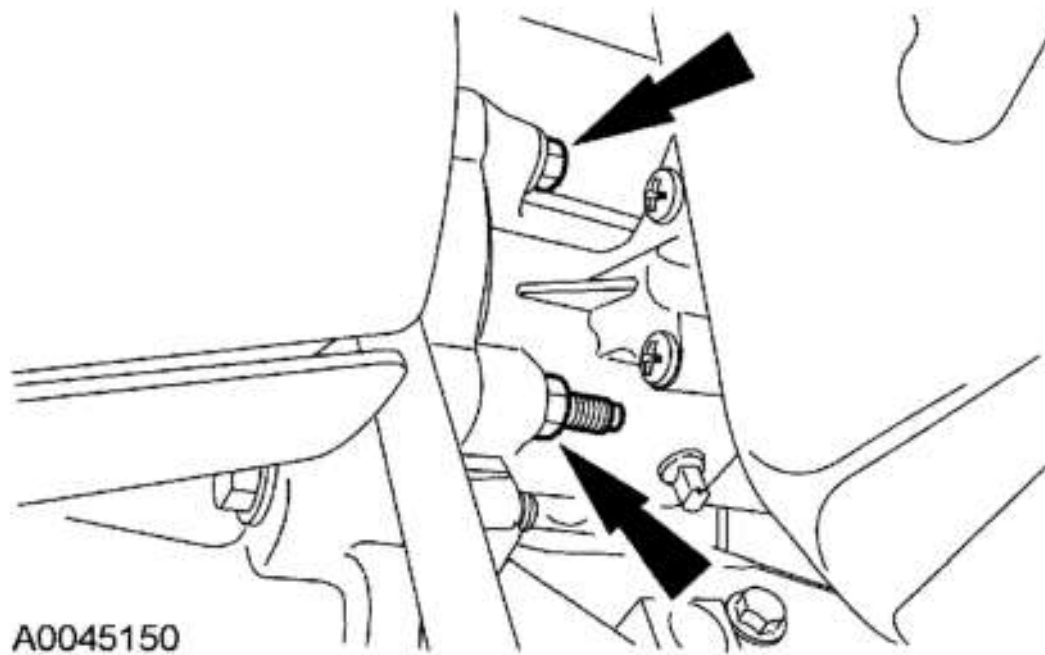


Fig. 250: Removing Bolts And Starter Motor
Courtesy of FORD MOTOR CO.

13. Disconnect the transmission cooler lines and position them aside.



Fig. 251: Disconnecting Transmission Cooler Lines
Courtesy of FORD MOTOR CO.

14. Remove the bolt from the RH cylinder head for the transmission filler tube and position the filler tube aside.

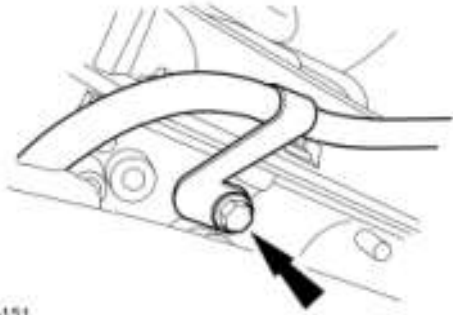


Fig. 252: Removing Bolt From RH Cylinder Head
Courtesy of FORD MOTOR CO.

15. Remove the 2 bolts for the exhaust hanger.

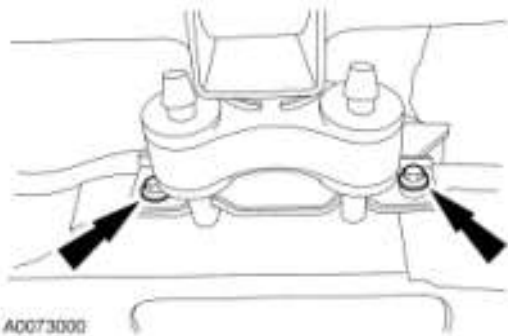


Fig. 253: Removing Exhaust Hanger
Courtesy of FORD MOTOR CO.

16. Remove the RH exhaust shield bolt.



Fig. 254: Removing RH Exhaust Shield Bolt
Courtesy of FORD MOTOR CO.

17. Remove the LH exhaust shield bolt.

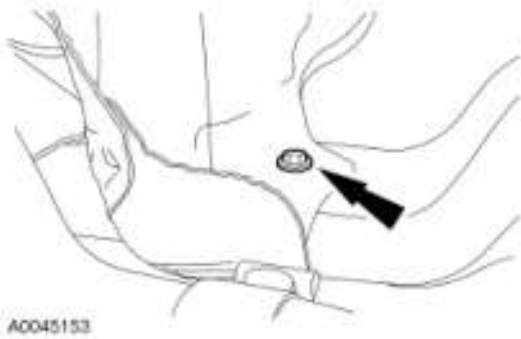


Fig. 255: Removing LH Exhaust Shield Bolt
Courtesy of FORD MOTOR CO.

NOTE: Make sure that the transmission is securely fastened to the transmission jack.

18. Position a suitable high-lift transmission jack under the transmission.
19. Remove the rear crossmember bolts.

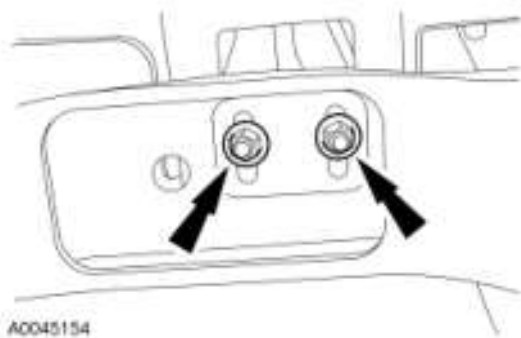


Fig. 256: Removing Rear Crossmember Bolts
Courtesy of FORD MOTOR CO.

20. Remove the rear transmission retainer nuts and remove the crossmember.

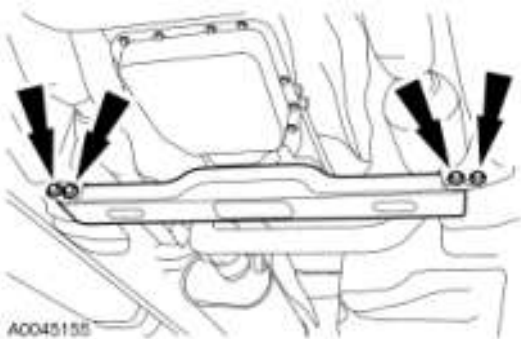


Fig. 257: Removing Rear Transmission Retainer Nuts & Crossmember
Courtesy of FORD MOTOR CO.

21. Remove the rear transmission support.

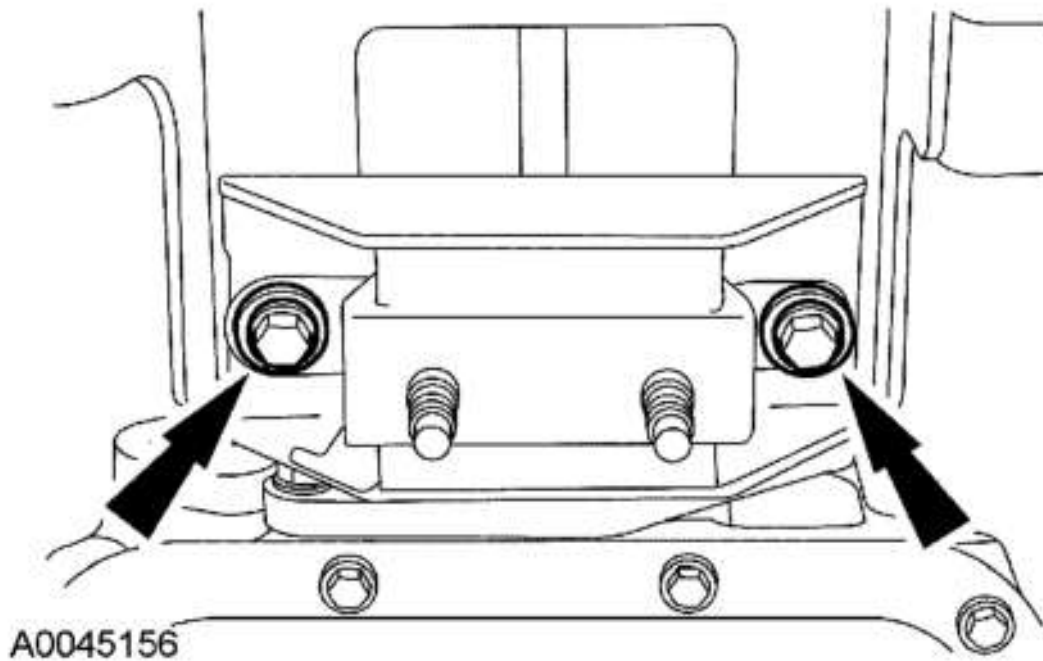


Fig. 258: Removing Rear Transmission Support
Courtesy of FORD MOTOR CO.

22. Disconnect the transmission electrical connectors.
 1. Disconnect the digital transmission range (TR) sensor.
 2. Disconnect the output shaft speed (OSS) sensor.
 3. Disconnect the turbine shaft speed (TSS) sensor.

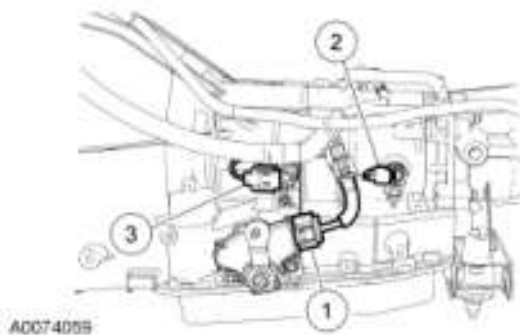


Fig. 259: Disconnecting Transmission Electrical Connectors
Courtesy of FORD MOTOR CO.

23. Disconnect the solenoid body assembly electrical connector.

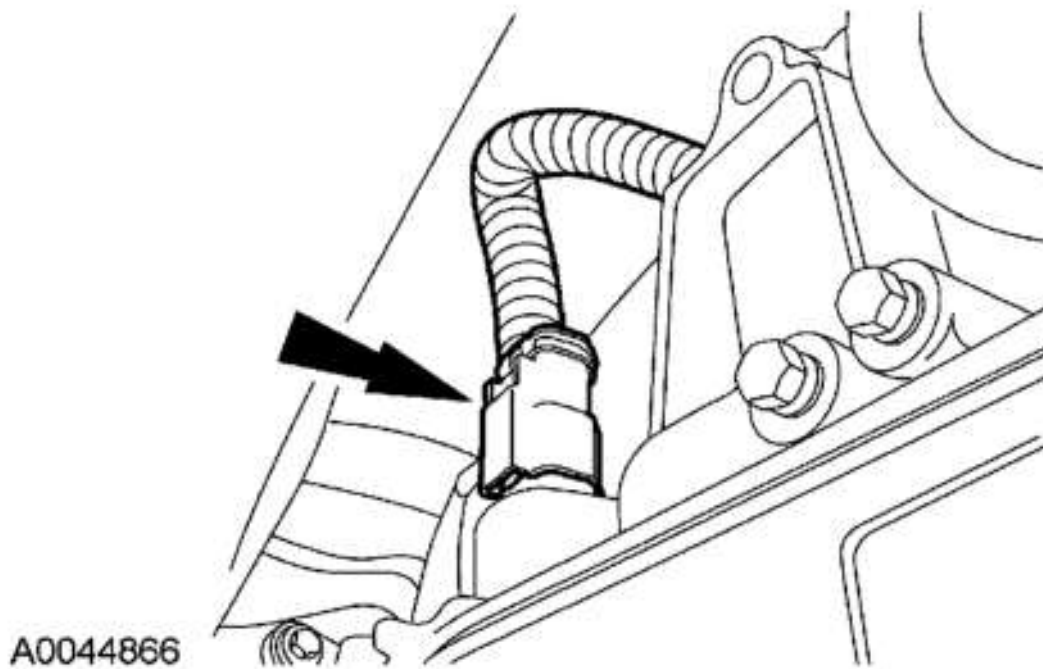


Fig. 260: Disconnecting Solenoid Body Assembly Electrical Connector
Courtesy of FORD MOTOR CO.

NOTE: Note the length and the location of the bolts during removal.

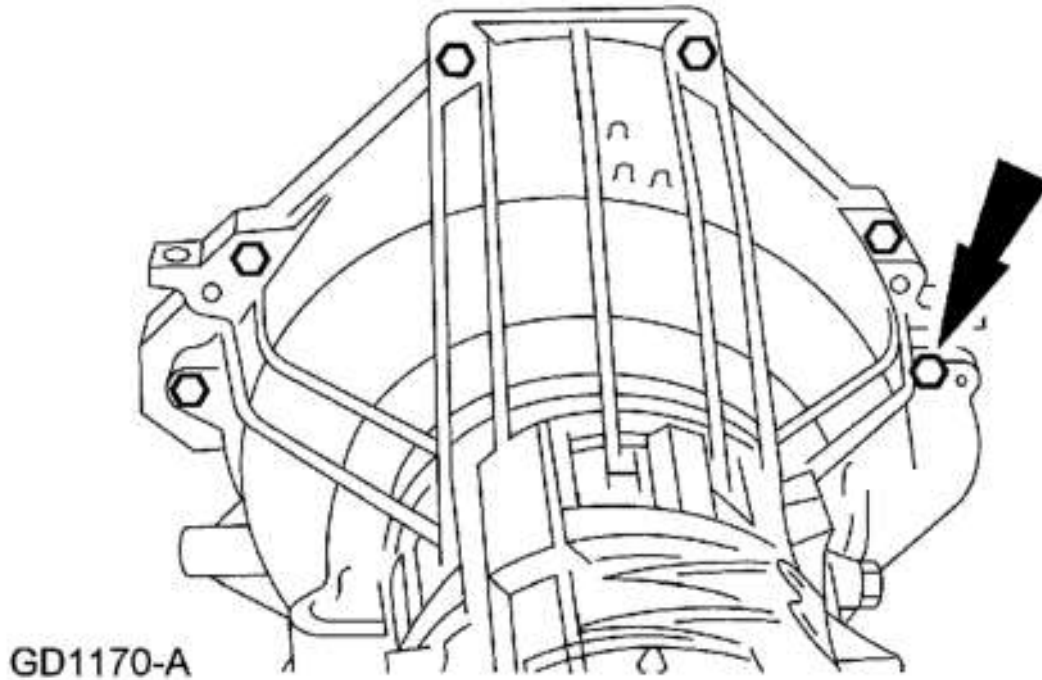


Fig. 261: Removing Transmission-To-Engine Bolts
Courtesy of FORD MOTOR CO.

24. Remove the seven transmission-to-engine bolts.

WARNING: The torque converter is heavy and can result in injury if it falls out of the transmission. Secure the torque converter in the transmission.

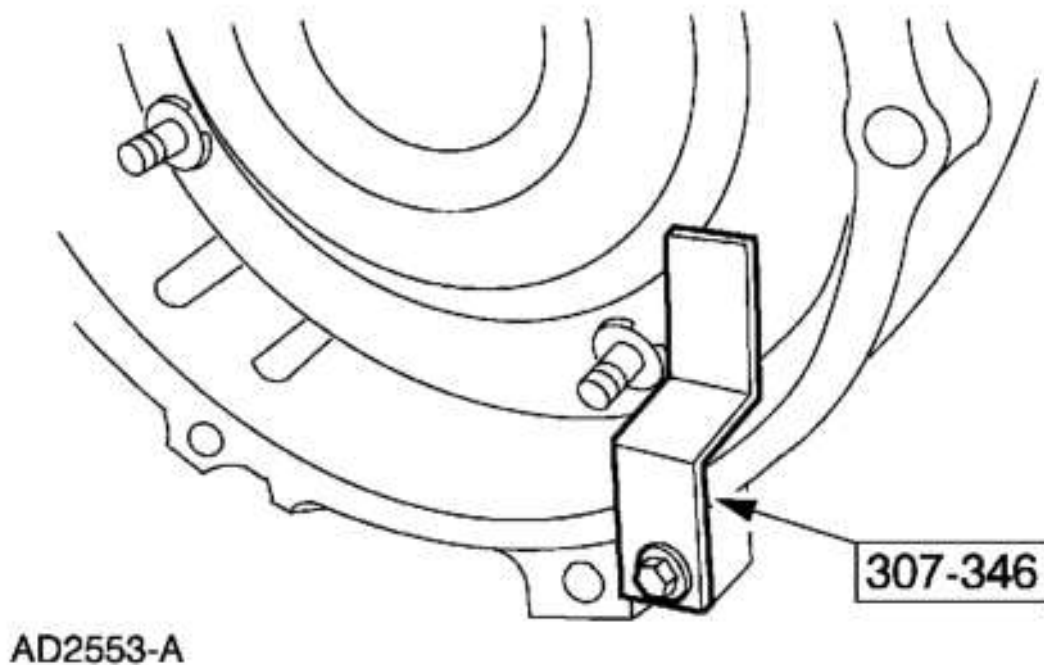


Fig. 262: Installing Special Tool
Courtesy of FORD MOTOR CO.

25. Leaving the transmission in a horizontal position, slide it back far enough to install the special tool. Install the special tool.

CAUTION: To remove the transmission from the vehicle, it will be necessary to put the transmission into a nose-down position to clear the flexplate and the exhaust system.

NOTE: Make sure that the special tool is in place and the transmission is securely fastened to the transmission jack before tilting the transmission.

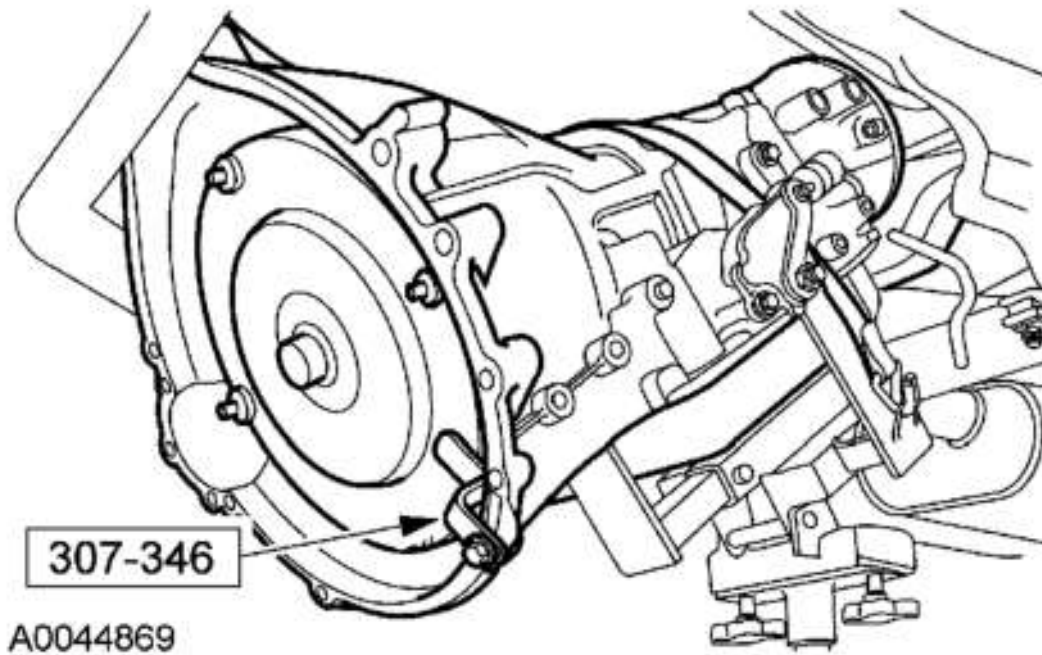
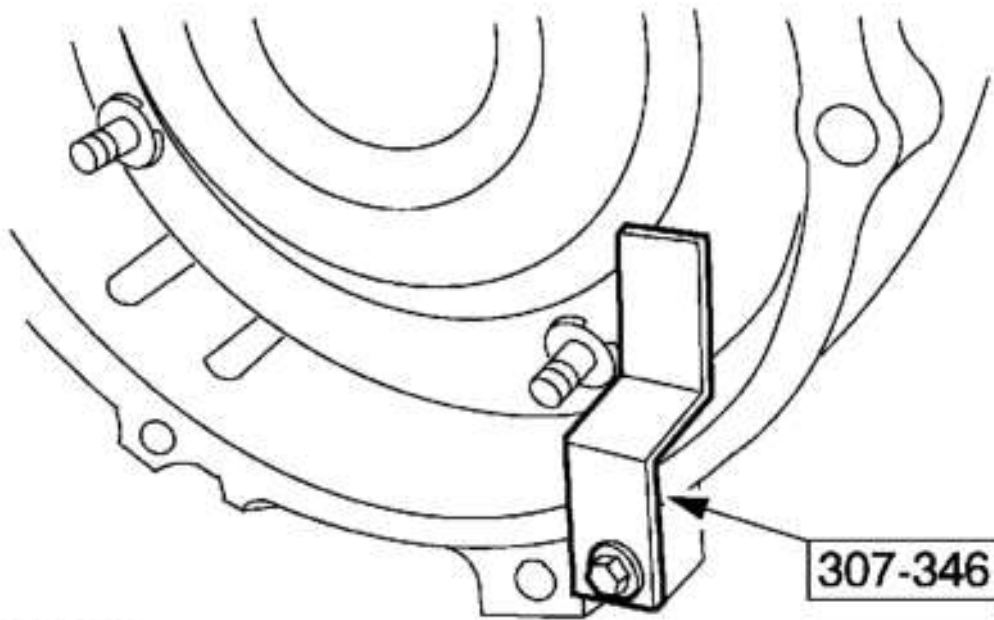


Fig. 263: Removing Transmission
Courtesy of FORD MOTOR CO.

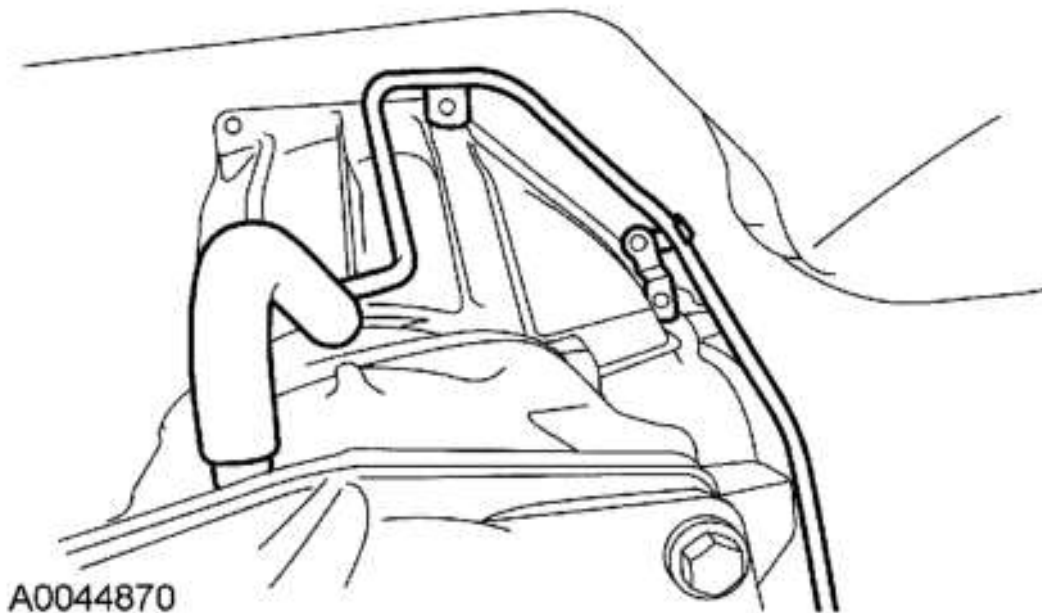
26. Lower the transmission from the vehicle.
27. Once the transmission is clear of the vehicle the transmission fluid cooler and cooler tubes should be cleaned. Carry out transmission fluid cooler backflushing and cleaning. For additional information, refer to **TRANSMISSION FLUID COOLER - BACKFLUSHING AND CLEANING.**
28. Remove the special tool.



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Fig. 264: Removing Special Tool
Courtesy of FORD MOTOR CO.

29. Remove the vent tube.



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Fig. 265: Removing Vent Tube

Courtesy of FORD MOTOR CO.