


REMOVAL

TRANSMISSION - FOUR WHEEL DRIVE (4WD)

Special Tools

Illustration	Tool Name	Tool Number
	Retainer, Torque Converter	307-346 (T97T-7902-A)

REMOVAL

1. Disconnect the battery ground cable. For additional information, refer to **BATTERY, MOUNTING AND CABLES** .
2. Remove the fill plug fluid level indicator assembly located on the passenger side front portion of the transmission case. Removal of the plug will relieve any vacuum that might have built up in the transmission. This will allow the fluid pan to be easily removed when the bolts are removed.

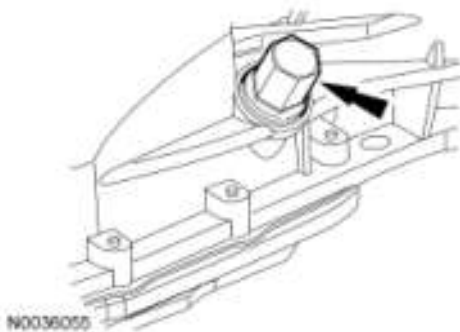


Fig. 108: Locating Fluid Fill Plug
Courtesy of FORD MOTOR CO.

NOTE: If transmission disassembly or installation of a new transmission is necessary, the transmission fluid will need to be drained.

3. Remove the transmission fluid pan and allow the fluid to drain.

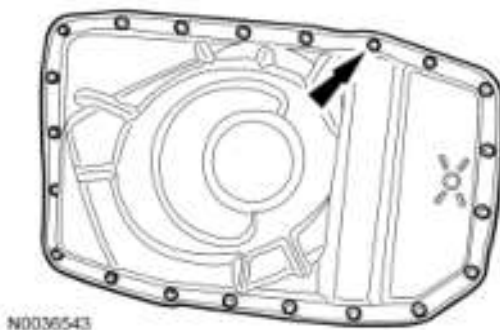


Fig. 109: Locating Transmission Fluid Pan Bolts
Courtesy of FORD MOTOR CO.

4. Install the fluid pan and tighten the bolts in a crisscross pattern.
 - Tighten to 14 Nm (10 lb-ft).

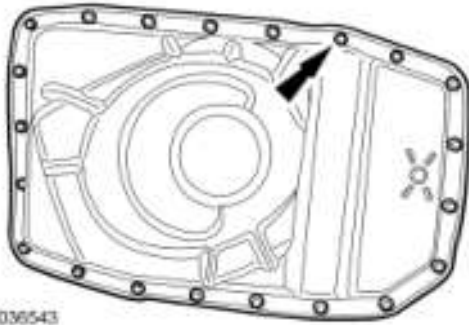


Fig. 110: Locating Transmission Fluid Pan Bolts
Courtesy of FORD MOTOR CO.

5. Remove the transfer case. For additional information, refer to TRANSFER CASE .

WARNING: Secure the assembly to the jack. Avoid any obstructions while lowering and raising the jack. Contact with obstructions may cause the assembly to fall off the jack, which may result in serious personal injury.

6. Position a suitable transmission jack to the transmission. Securely strap the transmission to the jack.
7. Remove the LH exhaust heat shield bolt.



Fig. 111: Locating LH Heat Shield Bolt
Courtesy of FORD MOTOR CO.

8. If equipped, remove the RH exhaust heat shield.

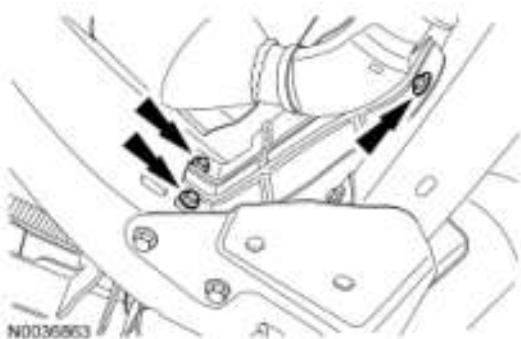


Fig. 112: Locating RH Exhaust Heat Shield Bolts
Courtesy of FORD MOTOR CO.

9. Remove the 4 RH side crossmember bolts and the nut.

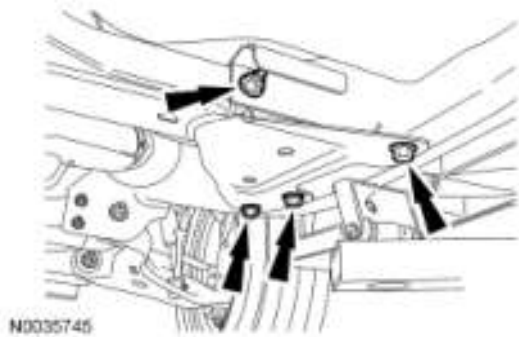


Fig. 113: Locating RH Side Crossmember Bolts And Nut
Courtesy of FORD MOTOR CO.

10. Remove the 4 LH side crossmember bolts and the nut.

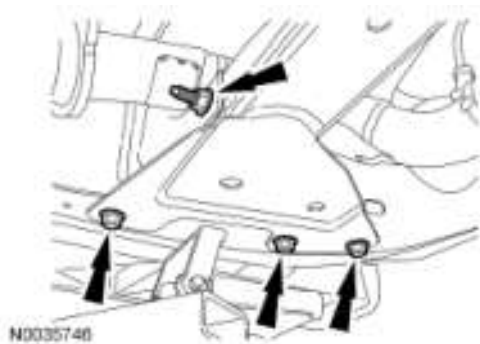


Fig. 114: Locating LH Side Crossmember Bolts And Nut
Courtesy of FORD MOTOR CO.

NOTE: LH shown, RH similar.

11. Disconnect the RH and LH heated oxygen sensors (HO2S) and the catalyst monitor sensor electrical connectors.

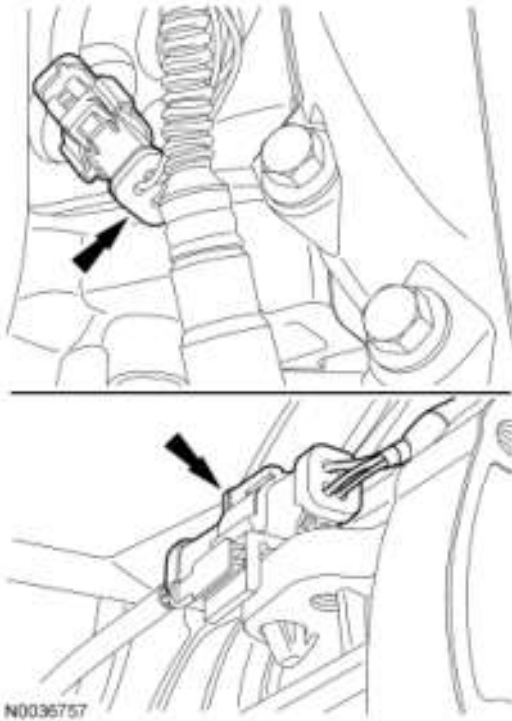


Fig. 115: Locating Heated Oxygen Sensors (HO2S) And Catalyst Monitor Sensor (CMS) Electrical Connectors
Courtesy of FORD MOTOR CO.

NOTE: LH shown, RH similar.

12. Remove and discard the RH and LH exhaust flange nuts.



Fig. 116: Locating RH And LH Exhaust Flange Nuts

Courtesy of FORD MOTOR CO.

13. Remove the dual converter Y-pipe bolts, discard the nuts and remove the dual converter Y-pipe.

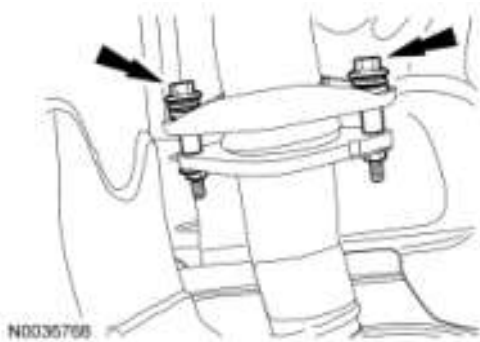


Fig. 117: Locating Dual Converter Y-Pipe Bolts
Courtesy of FORD MOTOR CO.

14. Remove the fuel line bracket bolt from the bracket. Position the bracket and lines aside.

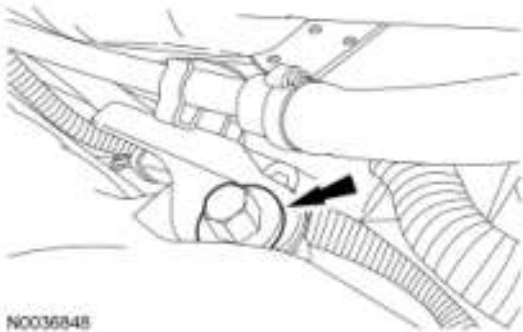


Fig. 118: Locating Fuel Line Bracket Bolt
Courtesy of FORD MOTOR CO.

15. Disconnect the selector lever cable end and remove the selector lever cable bracket bolts. Position the cable and bracket aside.

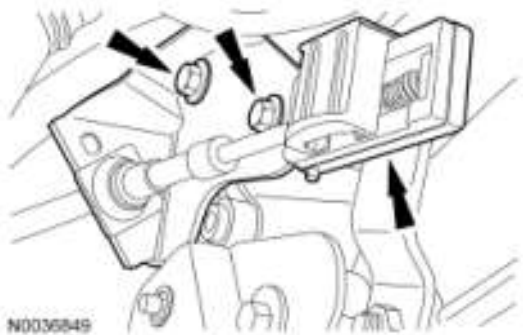
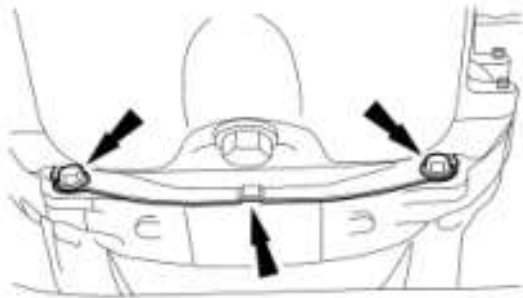


Fig. 119: Locating Selector Lever Bracket And Bolts
Courtesy of FORD MOTOR CO.

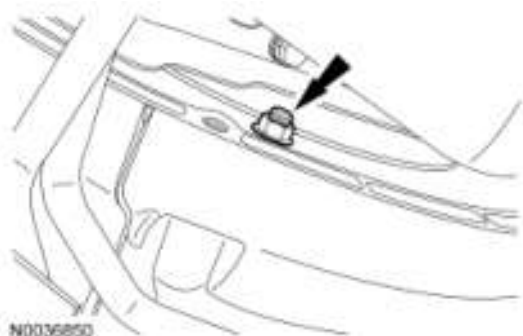
16. Remove the flexplate inspection cover bolts and the inspection cover.



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Fig. 120: Locating Flexplate Inspection Cover Bolts
Courtesy of FORD MOTOR CO.

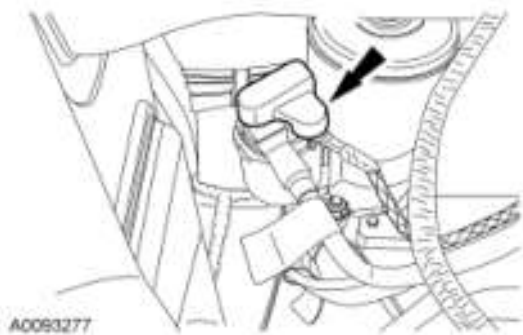
17. Remove and discard the 4 flexplate-to-torque converter nuts.



N0036850

Fig. 121: Locating Flexplate-To-Torque Converter Nuts
Courtesy of FORD MOTOR CO.

18. Remove the plastic starter motor electrical connector cap.



A0093277

Fig. 122: Locating Plastic Starter Motor Electrical Connector Cap
Courtesy of FORD MOTOR CO.

19. Remove the starter motor electrical connectors.

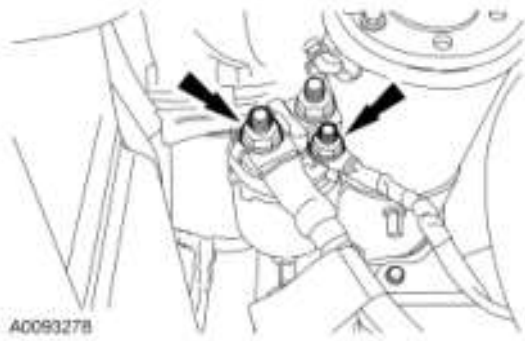


Fig. 123: Locating Starter Motor Electrical Connectors
Courtesy of FORD MOTOR CO.

20. Remove the ground wire from the stud.

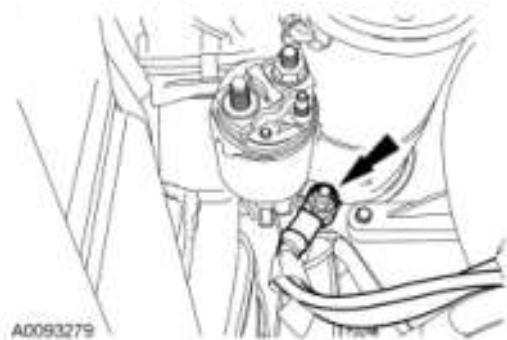


Fig. 124: Locating Ground Wire Stud
Courtesy of FORD MOTOR CO.

21. Remove the 3 starter motor bolts and the starter motor.

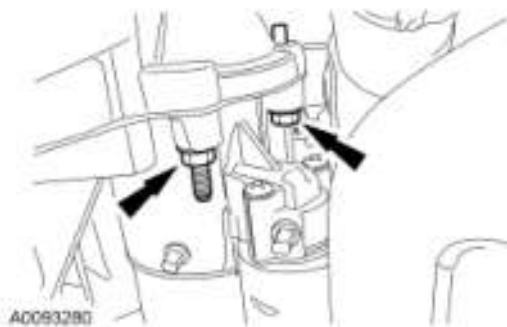


Fig. 125: Locating Starter Motor And Bolts
Courtesy of FORD MOTOR CO.

22. Remove the transmission cooler tube bracket bolt.

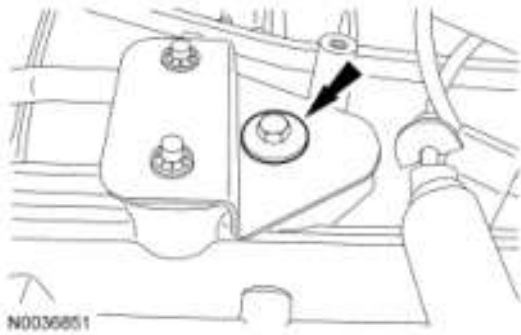


Fig. 126: Locating Transmission Cooler Tube Bracket Bolt
Courtesy of FORD MOTOR CO.

23. Disconnect the oil level sensor electrical connector.

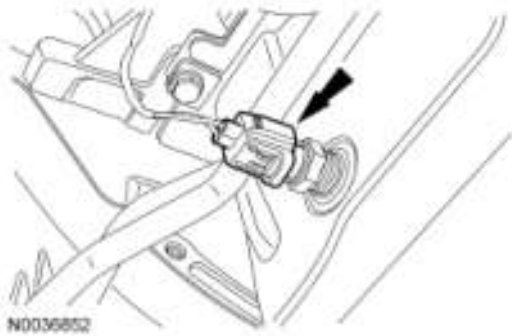


Fig. 127: Locating Oil Level Sensor Electrical Connector
Courtesy of FORD MOTOR CO.

24. Remove the transmission fluid cooler tube bracket nut and position the bracket and lines aside.

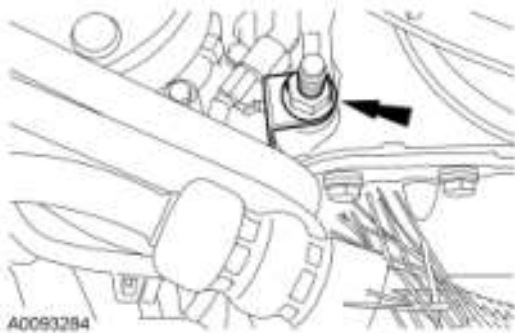


Fig. 128: Identifying Transmission Fluid Cooler Tube Bracket Nut
Courtesy of FORD MOTOR CO.

25. Remove the catalyst monitor sensor electrical connector from the LH side of the transmission.

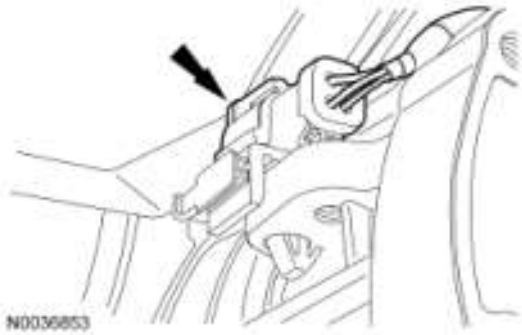


Fig. 129: Locating Catalyst Monitor Sensor (CMS) Electrical Connector
Courtesy of FORD MOTOR CO.

26. Disconnect the wiring harness from the top of the transmission.



Fig. 130: Locating Wire Harness From Top Of Transmission
Courtesy of FORD MOTOR CO.

CAUTION: Do not pull on the wire harness to disconnect the connector or damage to the connector will occur.

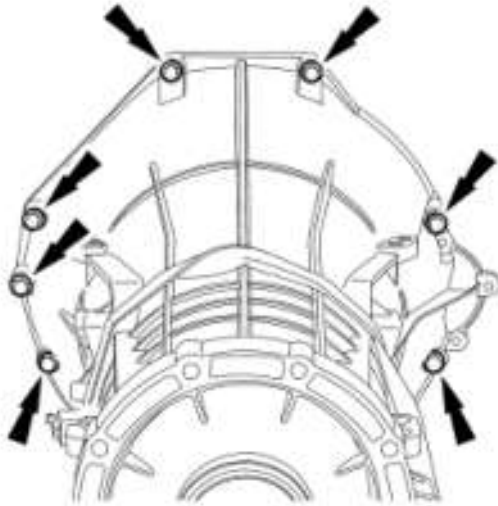
27. Disconnect the main transmission electrical harness by twisting the outer shell and pulling back on the connector.



Fig. 131: Locating Main Transmission Electrical Harness
Courtesy of FORD MOTOR CO.

NOTE: The top 2 transmission-to-engine bolts need to be removed prior to removing the rest of the bolts.

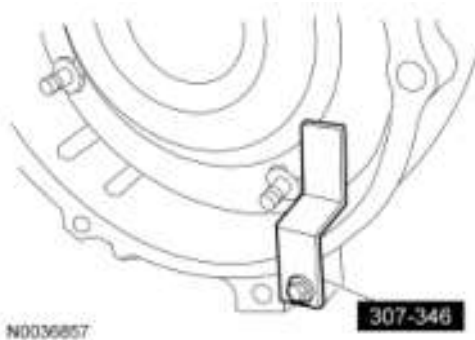
28. Remove the 7 transmission-to-engine bolts.



N0036855

Fig. 132: Locating Transmission-To-Engine Bolts
Courtesy of FORD MOTOR CO.

29. Slide the transmission back enough to install the special tool.



N0036857

Fig. 133: Sliding Transmission Back Enough To Install Special Tool (307-346)
Courtesy of FORD MOTOR CO.

30. Remove the transmission from the vehicle.

31. If the transmission is to be overhauled or if installing a new transmission, carry out transmission fluid cooler backflushing and cleaning. For additional information, refer to **Transmission Fluid Cooler Backflushing and Cleaning**.

TRANSMISSION - REAR WHEEL DRIVE (RWD)

Special Tools

Illustration	Tool Name	Tool Number



Retainer, Torque Converter

307-346 (T97T-7902-A)

REMOVAL

1. Disconnect the battery ground cable. For additional information, refer to **BATTERY, MOUNTING AND CABLES**.
2. Remove the driveshaft. For additional information, refer to **DRIVESHAFT**.
3. Remove the fill plug fluid level indicator assembly located on the passenger side front portion of the transmission case. Removal of the plug will relieve any vacuum that might have built up in the transmission. This will allow the fluid pan to be easily removed when the bolts are removed.

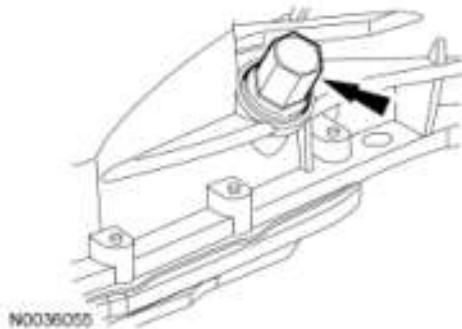


Fig. 134: Locating Fluid Fill Plug
Courtesy of FORD MOTOR CO.

NOTE: If transmission disassembly or installation of a new transmission is necessary, the transmission fluid will need to be drained.

4. Remove the transmission fluid pan and allow the fluid to drain.

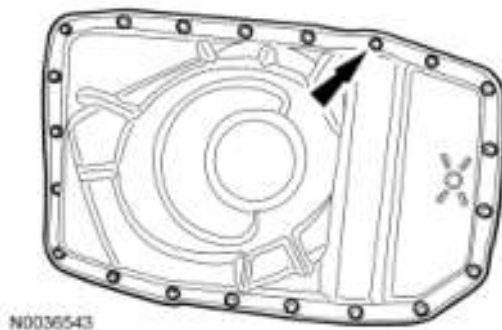


Fig. 135: Locating Transmission Fluid Pan Bolts
Courtesy of FORD MOTOR CO.

5. Install the fluid pan and tighten the bolts in a crisscross pattern.
 - Tighten to 14 Nm (10 lb-ft).

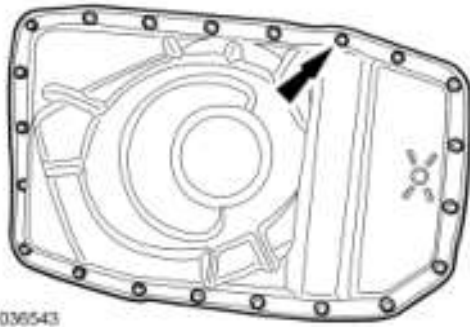


Fig. 136: Locating Transmission Fluid Pan Bolts
Courtesy of FORD MOTOR CO.

6. Remove the fuel line bracket bolt from the bracket and position the bracket and lines aside.

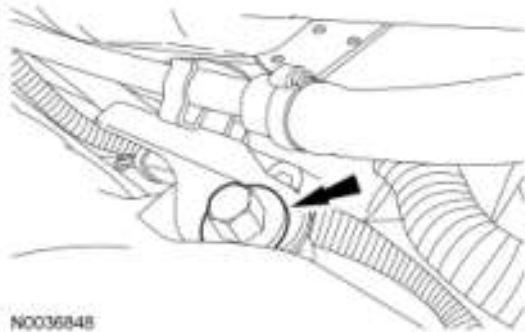


Fig. 137: Locating Fuel Line Bracket Bolt
Courtesy of FORD MOTOR CO.

7. Disconnect the selector lever cable end and remove the selector lever bracket bolts and position the cable and bracket aside.

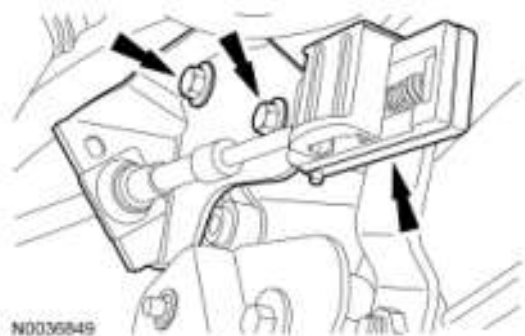
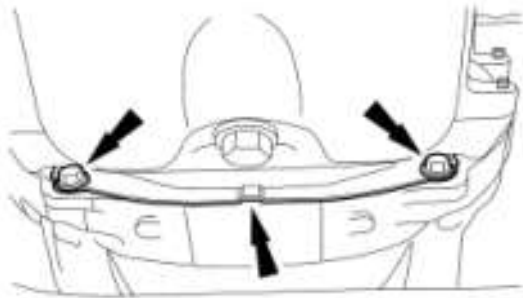


Fig. 138: Locating Selector Lever Bracket And Bolts
Courtesy of FORD MOTOR CO.

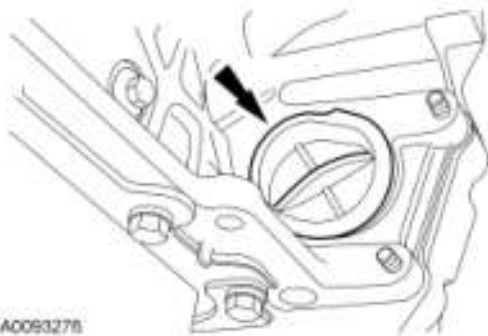
8. Remove the flexplate inspection cover bolts and the inspection cover.



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Fig. 139: Locating Flexplate Inspection Cover Bolts
Courtesy of FORD MOTOR CO.

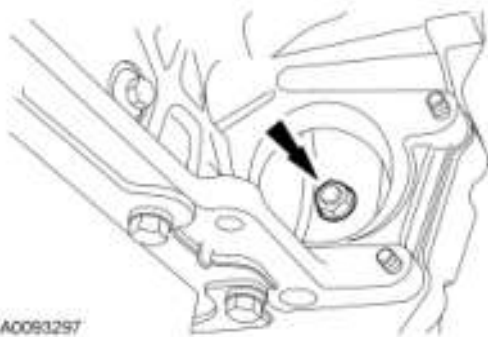
9. Remove the rubber torque converter nut access plug.



A0093276

Fig. 140: Locating Rubber Torque Converter Nut Access Plug
Courtesy of FORD MOTOR CO.

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



A0093297

Fig. 141: Locating Flexplate-To-Torque Converter Nuts
Courtesy of FORD MOTOR CO.

11. Remove the plastic starter motor electrical connector cap.

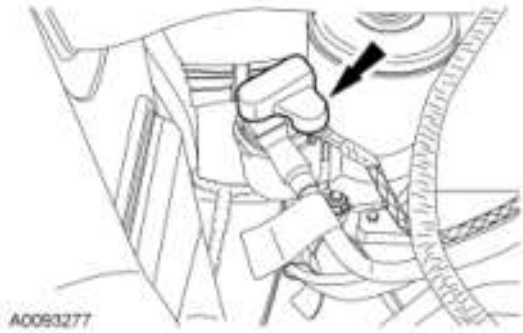


Fig. 142: Locating Plastic Starter Motor Electrical Connector Cap
Courtesy of FORD MOTOR CO.

12. Remove the starter motor electrical connectors.

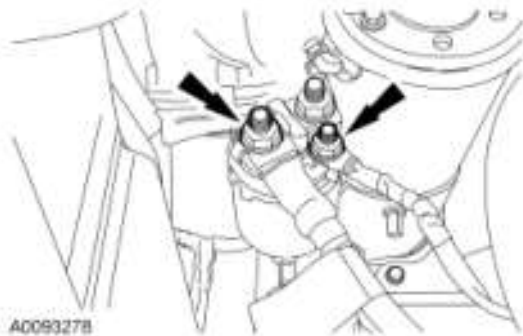


Fig. 143: Locating Starter Motor Electrical Connectors
Courtesy of FORD MOTOR CO.

13. Remove the ground wire from the stud.

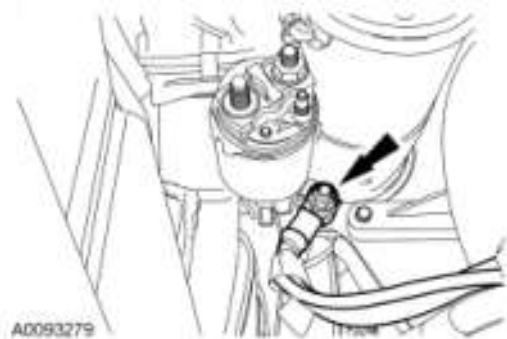


Fig. 144: Locating Ground Wire Stud
Courtesy of FORD MOTOR CO.

14. Remove the starter motor bolts and the starter motor.

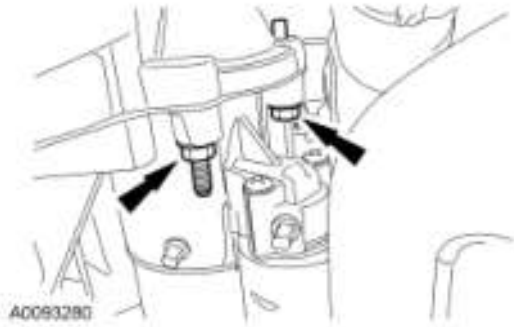


Fig. 145: Locating Starter Motor And Bolts
Courtesy of FORD MOTOR CO.

15. Remove the transmission cooler tube bracket bolt.

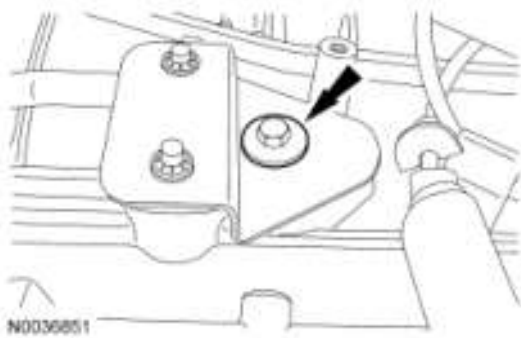


Fig. 146: Locating Transmission Cooler Tube Bracket Bolt
Courtesy of FORD MOTOR CO.

16. Disconnect the engine oil level sensor electrical connector.

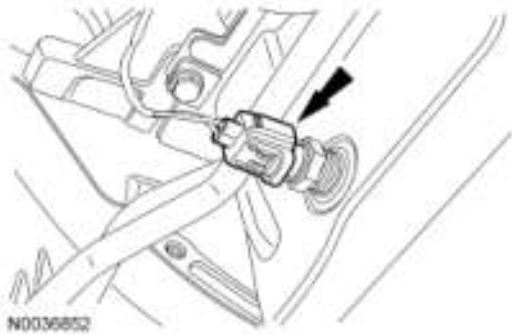


Fig. 147: Locating Oil Level Sensor Electrical Connector
Courtesy of FORD MOTOR CO.

17. Remove the transmission fluid cooler tube bracket nut and position the bracket and tubes aside.

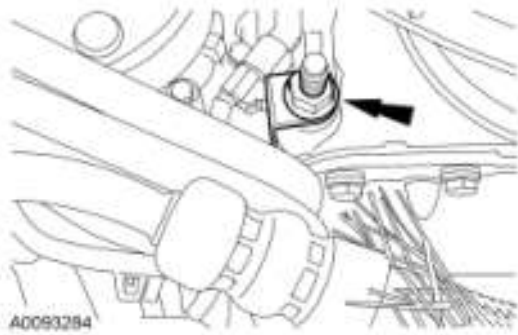


Fig. 148: Identifying Transmission Fluid Cooler Tube Bracket Nut
Courtesy of FORD MOTOR CO.

18. Remove the LH exhaust heat shield bolt.

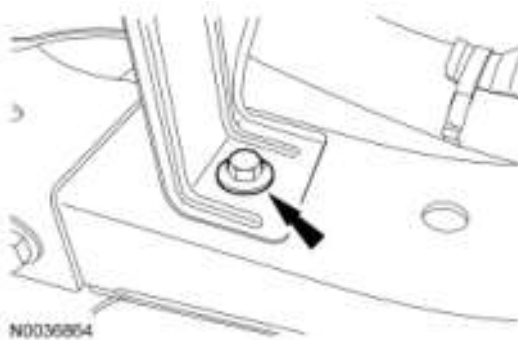


Fig. 149: Locating LH Exhaust Heat Shield Bolt
Courtesy of FORD MOTOR CO.

19. If equipped, remove the RH exhaust heat shield.

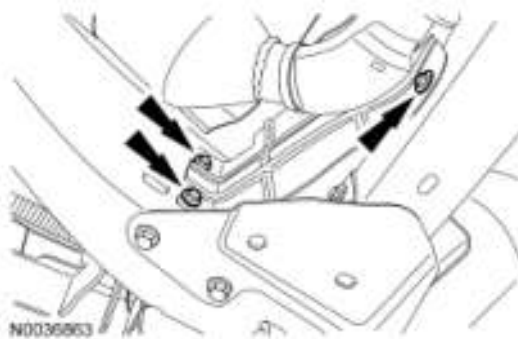


Fig. 150: Locating RH Exhaust Heat Shield Bolts
Courtesy of FORD MOTOR CO.

WARNING: Secure the assembly to the jack. Avoid any obstructions while lowering and raising the jack. Contact with obstructions may cause the assembly to fall off the jack, which may result in serious personal injury.

NOTE: Make sure that the transmission jack makes contact on the outer ribs of the fluid pan.

20. Position a suitable high-lift transmission jack under the transmission.
21. Remove the 8 rear crossmember bolts.



Fig. 151: Locating Rear Crossmember Bolts
Courtesy of FORD MOTOR CO.

22. Remove the 2 rear crossmember nuts and the crossmember.

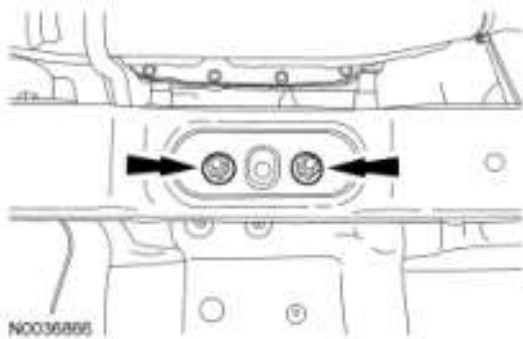


Fig. 152: Locating Rear Crossmember Nuts And Crossmember
Courtesy of FORD MOTOR CO.

23. Remove the 2 transmission insulator bolts and the transmission insulator.

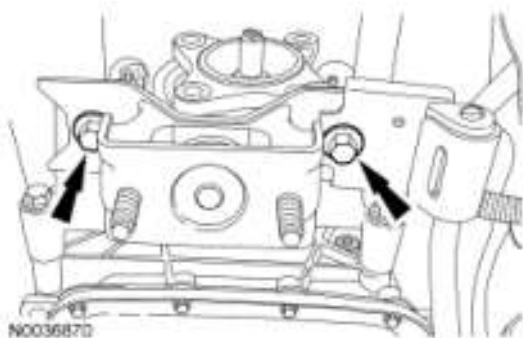


Fig. 153: Locating Transmission Insulator Bolts
Courtesy of FORD MOTOR CO.

NOTE: LH shown, RH similar.

24. Disconnect the RH and LH heated oxygen sensors (HO2S) and the catalyst monitor sensor electrical connectors.

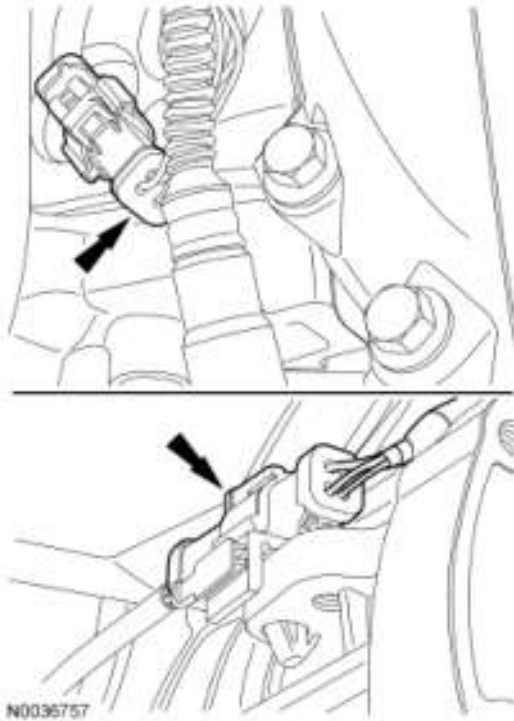


Fig. 154: Locating Heated Oxygen Sensors (HO2S) And Catalyst Monitor Sensor (CMS) Electrical Connectors
Courtesy of FORD MOTOR CO.

NOTE: LH shown, RH similar.

25. Remove and discard the RH and LH exhaust flange nuts.

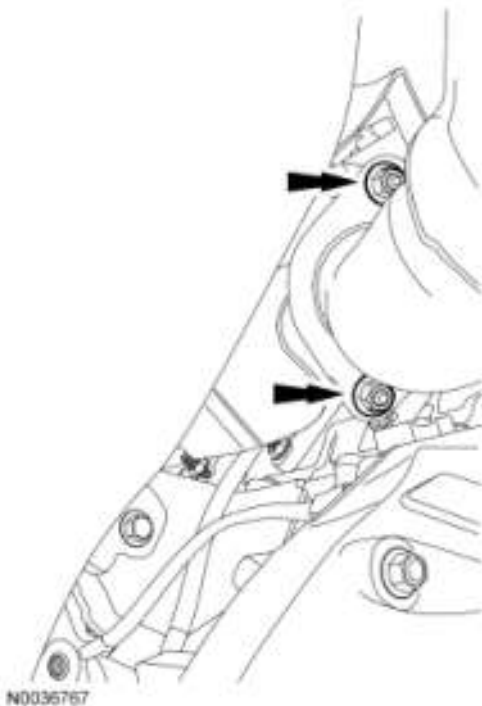


Fig. 155: Locating RH And LH Exhaust Flange Nuts

Courtesy of FORD MOTOR CO.

26. Remove the 2 dual converter Y-pipe bolts, discard the nuts and remove the dual converter Y-pipe.

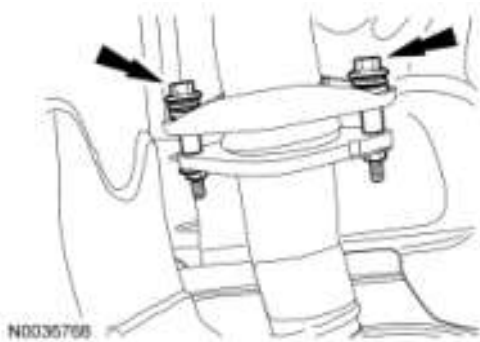


Fig. 156: Locating Dual Converter Y-Pipe Bolts
Courtesy of FORD MOTOR CO.

27. Remove the catalyst monitor sensor electrical connector from the LH side of the transmission.

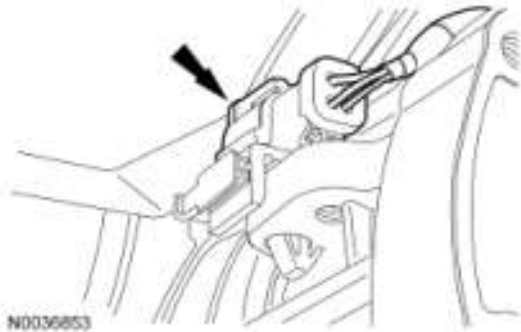


Fig. 157: Locating Catalyst Monitor Sensor (CMS) Electrical Connector
Courtesy of FORD MOTOR CO.

28. Disconnect the wire harness from the top of the transmission.



Fig. 158: Locating Wire Harness From Top Of Transmission
Courtesy of FORD MOTOR CO.

CAUTION: Do not pull on the wire harness to disconnect the connector or damage to the connector will occur.

29. Disconnect the main transmission electrical harness by twisting the outer shell and pulling back on the

connector.

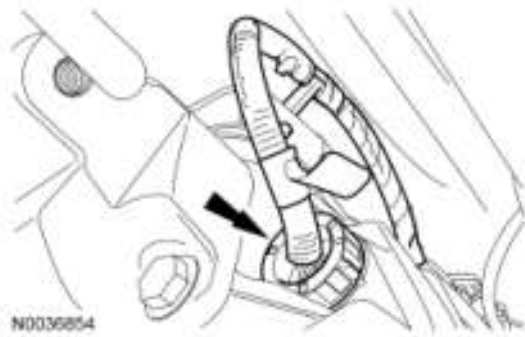


Fig. 159: Locating Main Transmission Electrical Harness
Courtesy of FORD MOTOR CO.

NOTE: The top 2 transmission-to-engine bolts need to be removed prior to removing the rest of the bolts.

30. Remove the 7 transmission-to-engine bolts.

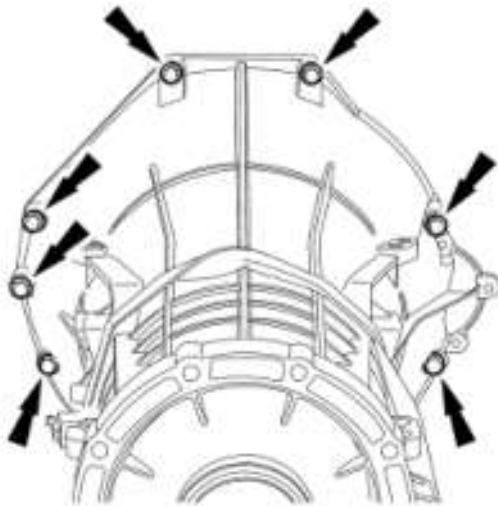


Fig. 160: Locating Transmission-To-Engine Bolts
Courtesy of FORD MOTOR CO.

31. Slide the transmission back far enough to install the special tool.

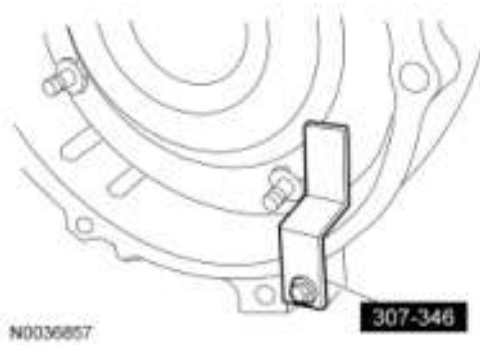


Fig. 161: Sliding Transmission Back Far Enough To Install Special Tool (307-346)
Courtesy of FORD MOTOR CO.

32. Remove the transmission from the vehicle.
33. Remove the 4 transmission mount bracket bolts and the transmission mount bracket.

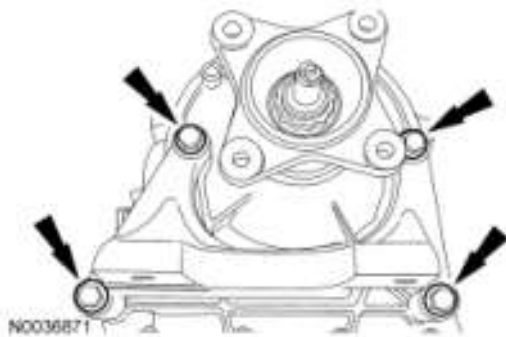


Fig. 162: Locating Transmission Mount Bracket Bolts
Courtesy of FORD MOTOR CO.

34. If the transmission is to be overhauled or if installing a new transmission, carry out transmission fluid cooler backflushing and cleaning. For additional information, refer to **Transmission Fluid Cooler Backflushing and Cleaning**.