

Transmission - 6.2L V8

Special Tool(s) / General Equipment

	307-346 (T97T-7902-A) Retainer, Torque Converter TKIT-1998-LM (NavigatoR) TKIT-1997-F/FLM/LT
Flat Headed Screw Driver	
Transmission Jack	
Tire Lever	

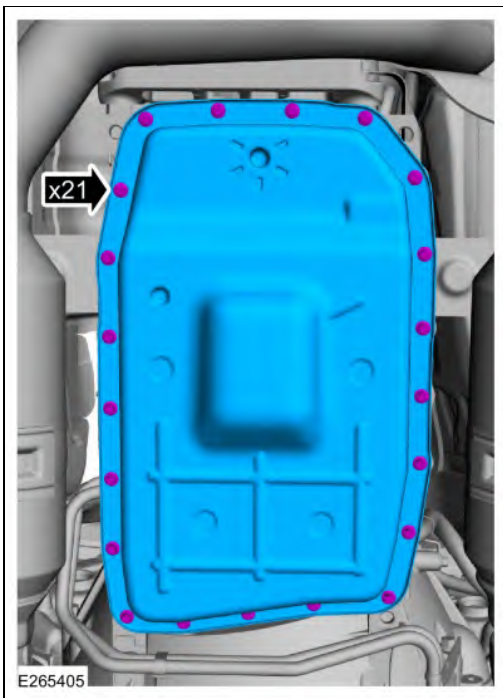
Materials

Name	Specification
Motorcraft® Multi-Purpose Grease Spray XL-5-A	ESB-M1C93-B
Motorcraft® MERCON® LV Automatic Transmission Fluid XT-10-QLVC	WSS-M2C938-A MERCON® LV,

Removal

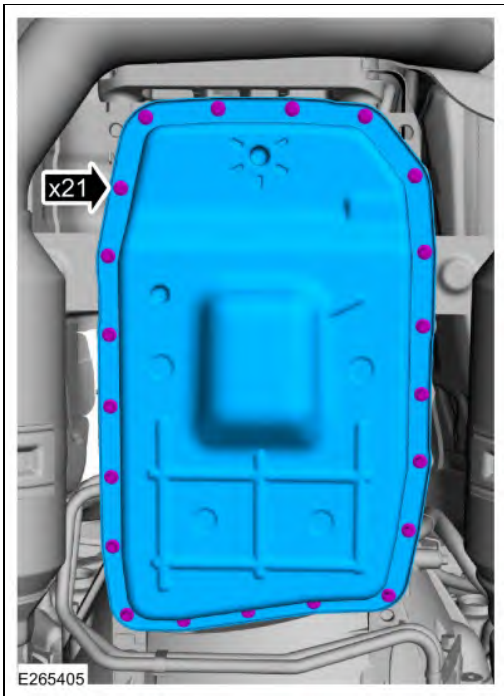
All vehicles

1. With the vehicle in NEUTRAL, position it on a hoist.
Refer to: Jacking and Lifting - Overview (100-02 Jacking and Lifting, Description and Operation).
2. Remove the starter motor.
Refer to: Starter Motor (303-06A Starting System - 6.2L V8, Removal and Installation).
3. **NOTE:** If transmission disassembly or installation of a new transmission is necessary, drain the transmission fluid.
Remove the bolts and the transmission fluid pan and allow the transmission fluid to drain.

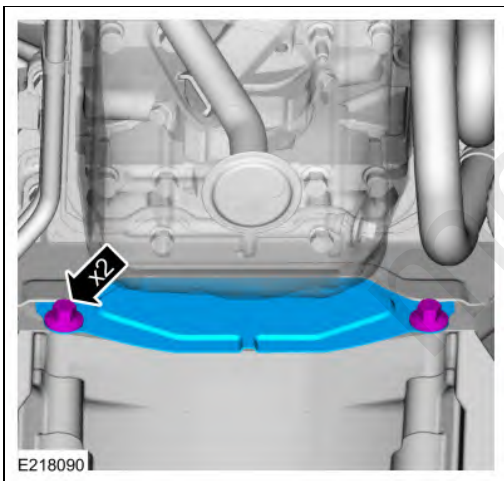


4. **NOTE:** *It is not necessary to torque transmission fluid pan bolts at this time.*

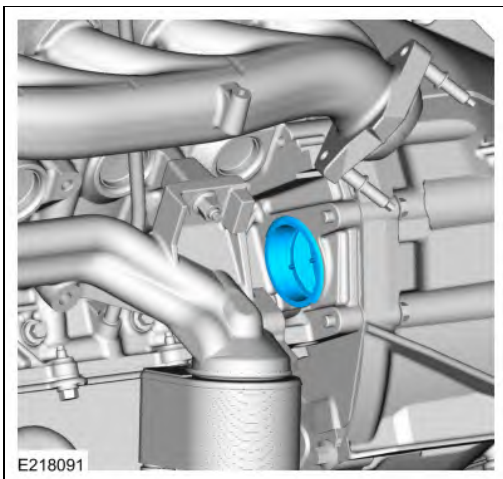
Install the transmission fluid pan and the bolts.



5. Remove the bolts and the flexplate inspection cover.

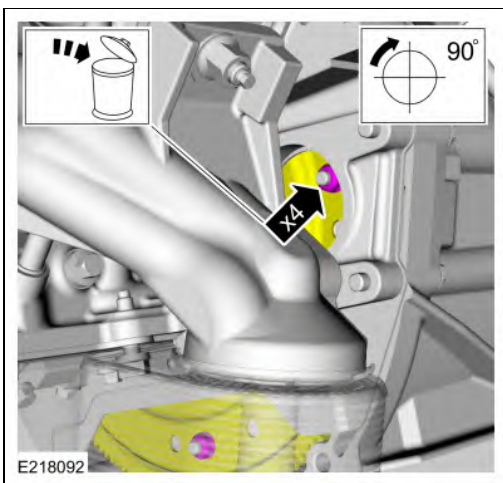


6. Remove the rubber torque converter nut access cover.



7. **NOTE:** Only rotate the crankshaft in a clockwise direction.

Remove and discard the torque converter nuts (W714689).



8. Remove the exhaust Y-Pipe.

Refer to: Dual Catalytic Converter Y-Pipe (309-00A Exhaust System - 6.2L V8, Removal and Installation).

Rear Wheel Drive (RWD) vehicles

9.

1. Index-mark the driveshaft flange to the transmission flange to maintain alignment during installation.
2. Remove and discard the driveshaft flange to transmission flange bolts (N811880).
3. **NOTICE:** The driveshaft flange fits tightly on the flange pilot. Never hammer on the driveshaft or any of its components to disconnect the driveshaft flange from the flange pilot. Pry only in the area shown with a tool, to disconnect the driveshaft flange from the flange pilot or damage to the driveshaft flange can occur.

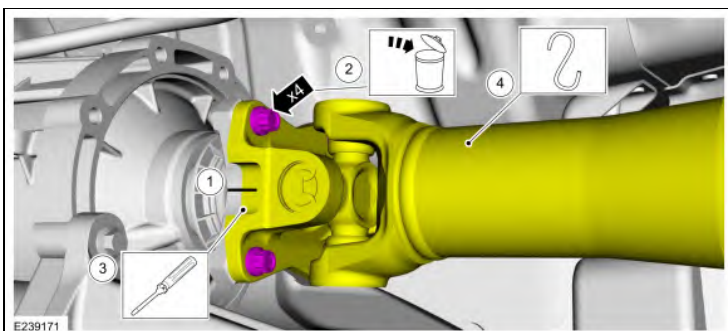
NOTE: The driveshaft flange to transmission flange is a tight fit. It may be necessary to remove the center bearing bolts before the driveshaft flange will separate from the transmission flange.

Using a large flat headed screwdriver or tire lever, separate the driveshaft flange from the transmission flange.

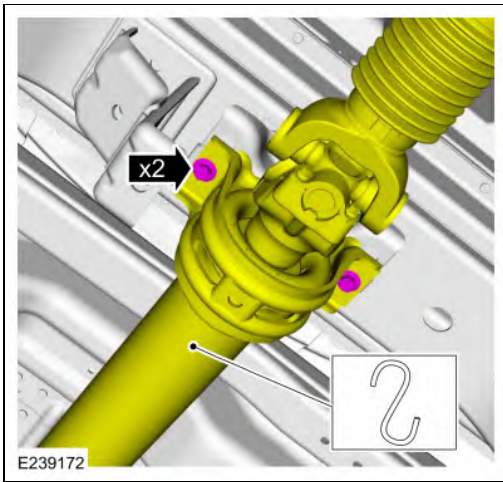
Use the General Equipment: Flat Headed Screw Driver

Use the General Equipment: Tire Lever

4. Support the driveshaft.



10. Remove the driveshaft center bearing bolts and position aside the driveshaft.

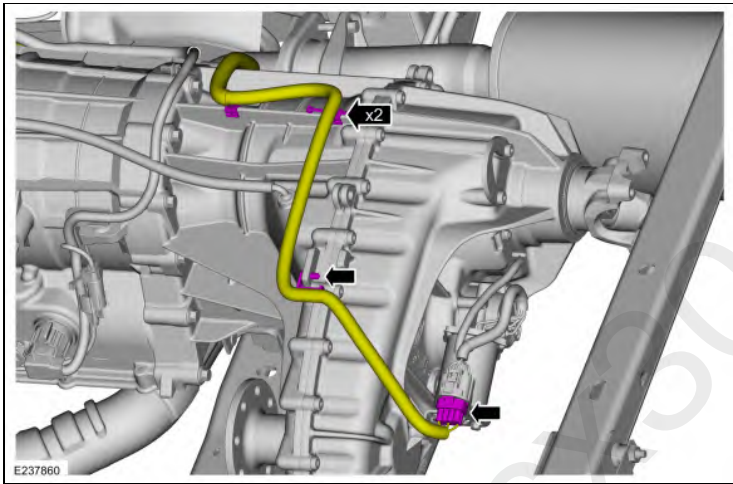


Four-Wheel Drive (4WD) vehicles

11. Remove the front and rear driveshafts.
Refer to: Front Driveshaft (205-01 Driveshaft, Removal and Installation).
Refer to: Rear Driveshaft (205-01 Driveshaft, Removal and Installation).

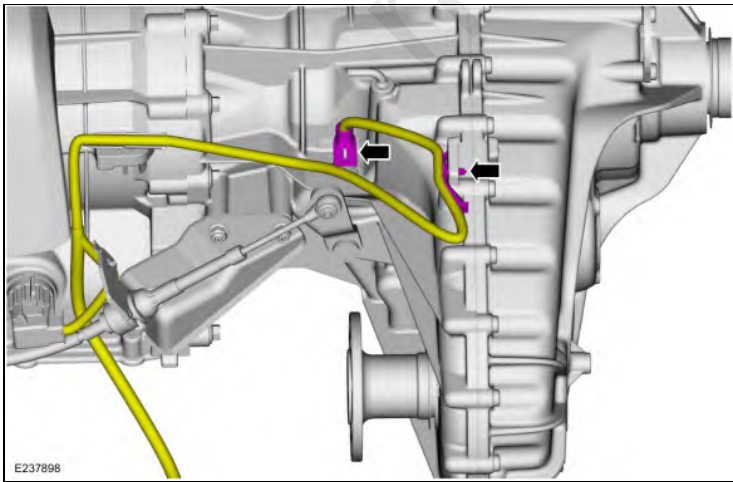
Vehicles equipped with electronic shift on the fly transfer case

12. Disconnect the shift motor electrical connector and detach the harness retainer clips and pushpin from the transfer case.

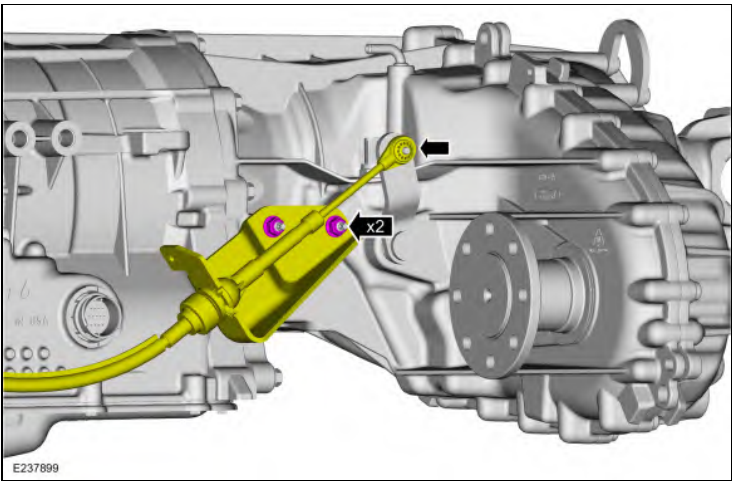


Vehicles equipped with manual shift transfer case

13. Disconnect the manual shift indicator harness connector and pushpin.

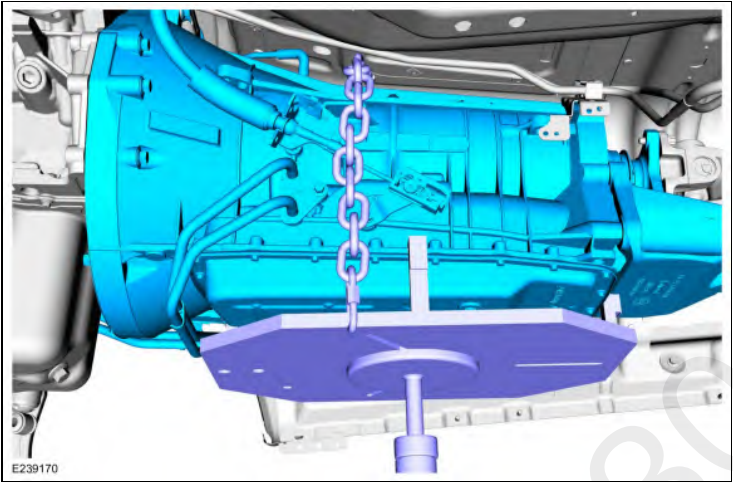


14. Remove manual shift lever cable bracket nuts and position the manual shift lever cable aside.

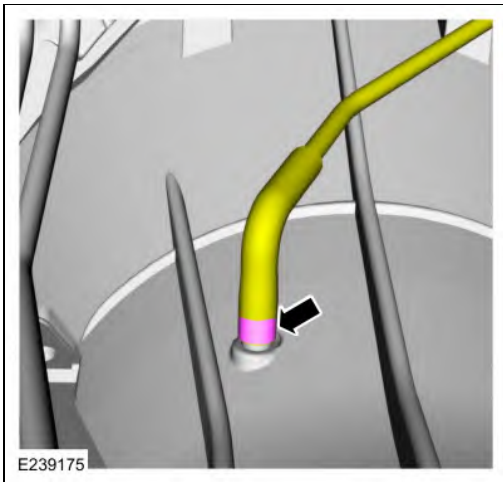


All vehicles

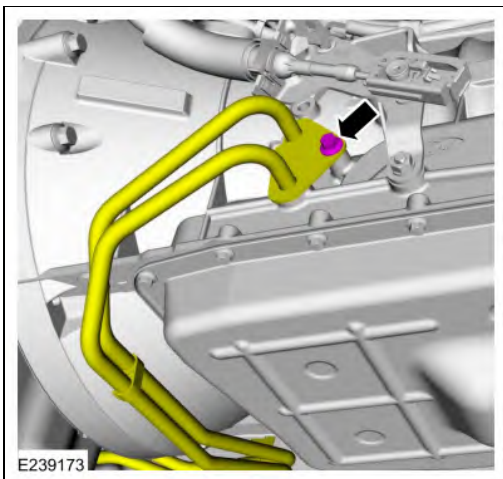
15. Using a high-lift transmission jack and safety chain support the transmission.
Use the General Equipment: Transmission Jack



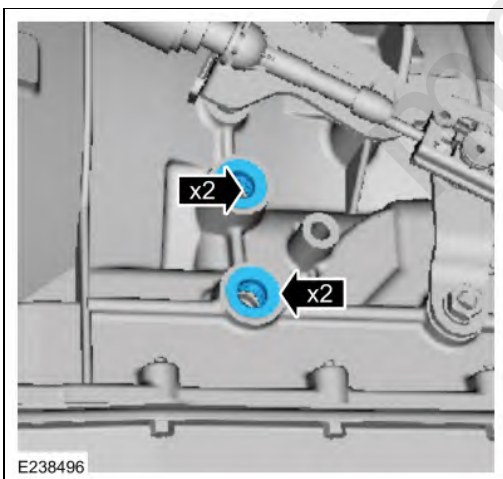
16. Remove the transmission support crossmember.
Refer to: Transmission Support Crossmember (502-02 Full Frame and Body Mounting, Removal and Installation).
17. Disconnect the transmission vent tube.



18. Remove the transmission fluid cooler tube bracket bolt and position aside the transmission fluid cooler tubes.

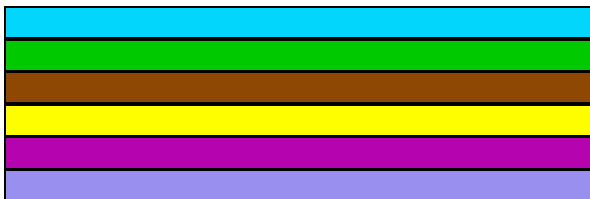
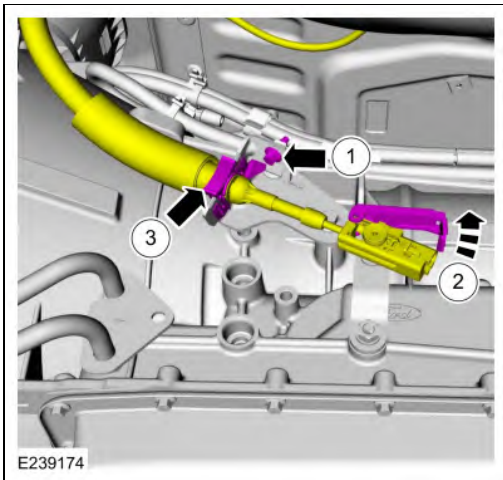


19. Inspect the transmission to be sure the transmission fluid tube seals and backing rings were removed with the transmission fluid tubes and are not stuck in the transmission. If the transmission fluid tube seals or backing rings are stuck in the transmission, remove the seals and backing rings.



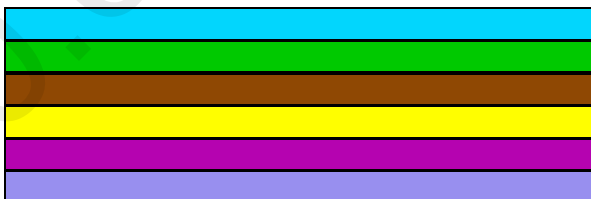
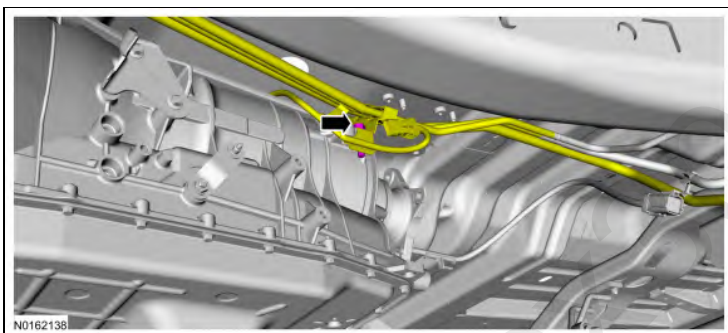
20. **NOTICE:** To prevent selector lever cable damage, do not apply force to the selector lever cable between the manual control lever and the selector lever cable bracket.

1. Remove the selector lever cable bolt.
2. Move the locking tab up and disconnect the selector lever cable end from the manual control lever.
3. Disconnect the selector lever cable from the bracket and position aside.



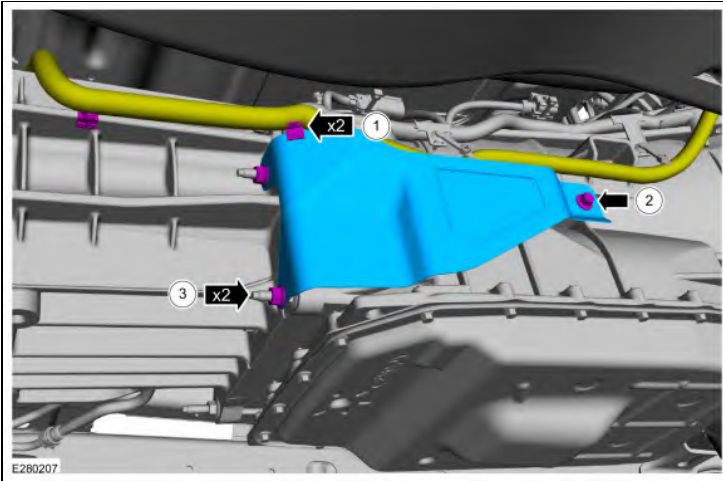
21. **NOTE:** *RWD shown, 4WD similar.*

Remove the fuel line bracket bolt.

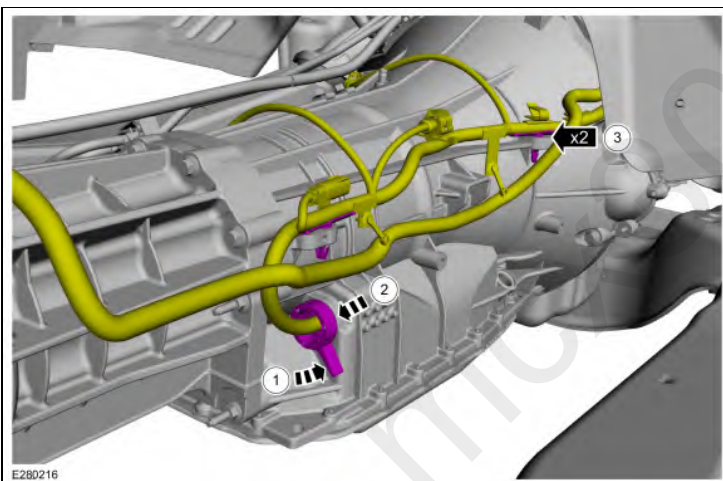


22.

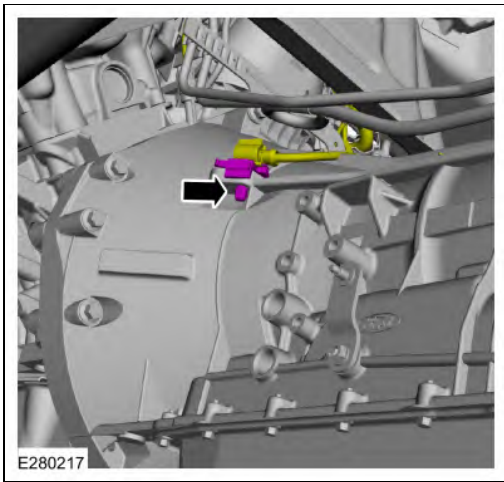
1. Detach the retainers and position the wiring harness aside.
2. Remove the heat shield bolt.
3. Remove the nuts and the heat shield.



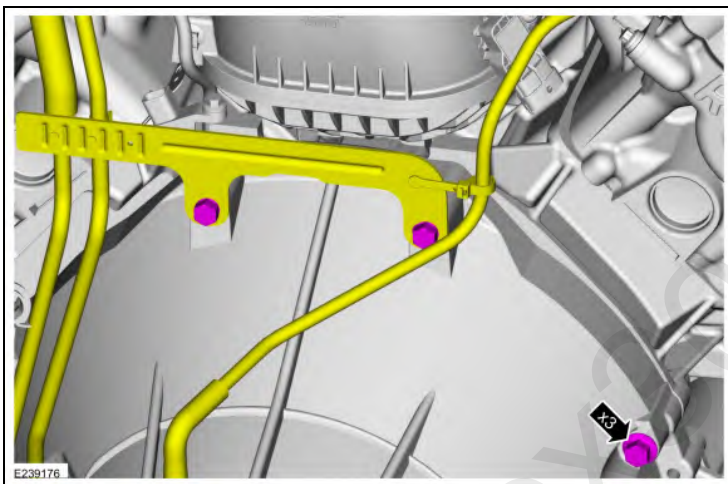
- 23.
1. Rotate the transmission electrical connector counterclockwise.
 2. Pull the transmission electrical connector out to disconnect.
 3. Detach the retainers and position the wiring harness aside.



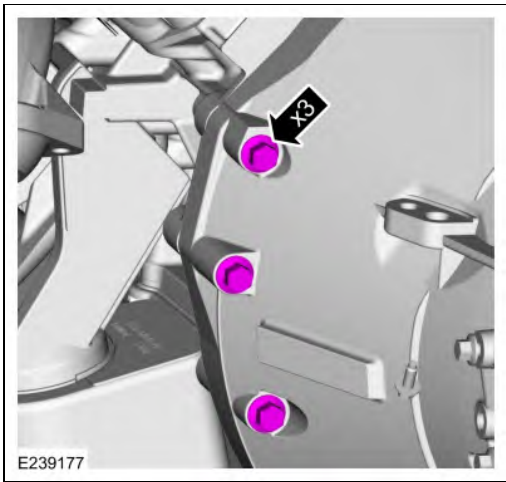
24. Detach the LH retainer and position the wiring harness aside.



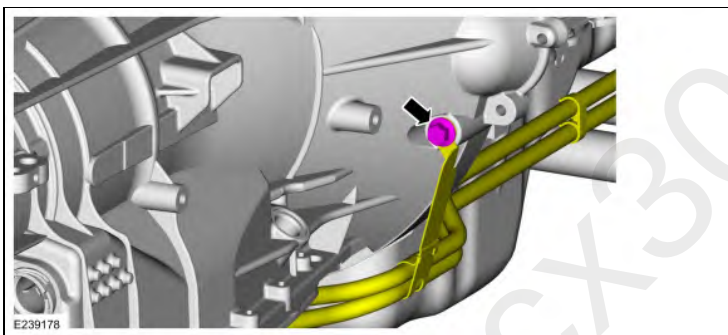
25. Remove the top bellhousing bolts and position aside the fuel lines mounting bracket.



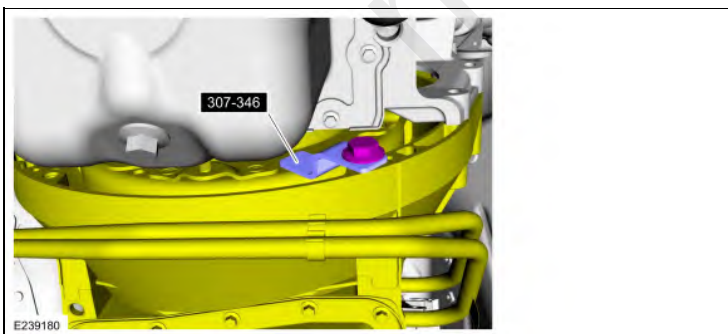
26. Remove the LH bellhousing bolts.



27. Remove the transmission fluid cooler tube mounting bracket bolt and position aside the transmission fluid cooler tubes.

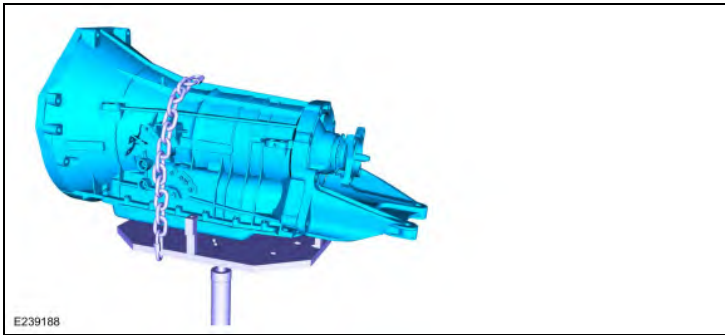


28. Slide the transmission back enough to install the special tool.
Use Special Service Tool: 307-346 (T97T-7902-A) Retainer, Torque Converter.

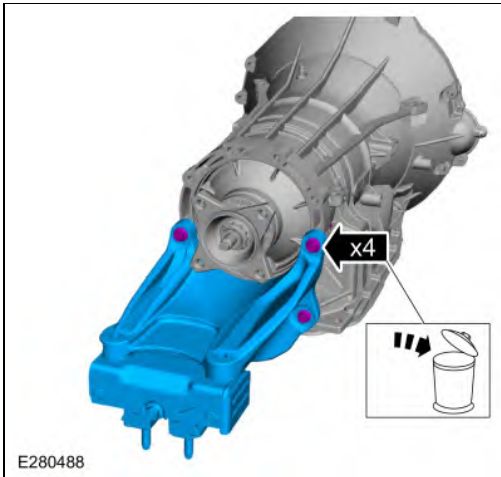


Rear Wheel Drive (RWD) vehicles

29. Using the high-lift transmission jack, remove the transmission from the vehicle.
Use the General Equipment: Transmission Jack

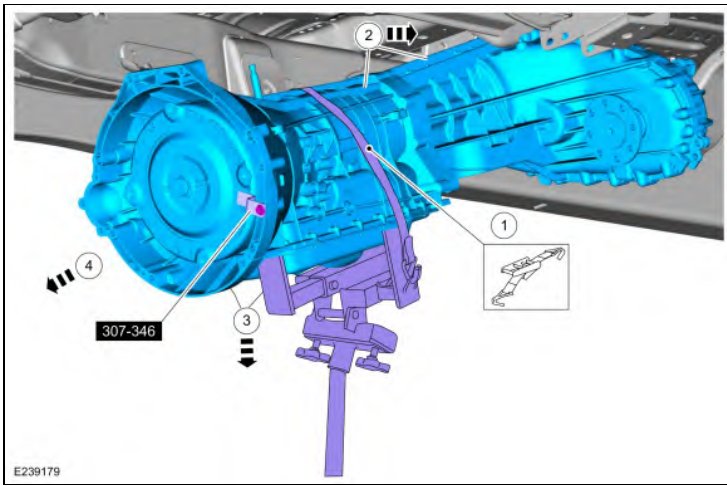


30. If the transmission is to be overhauled or if installing a new or re-manufactured transmission, remove and discard the bolts (N605804) and remove the bracket.



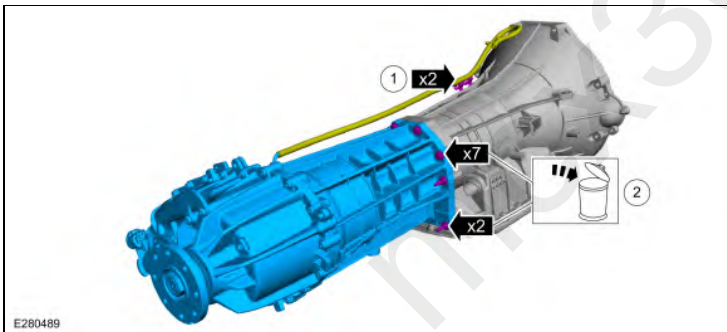
Four-Wheel Drive (4WD) vehicles

- 31.
1. Make sure the transmission is securely fastened to the transmission jack.
Use the General Equipment: Transmission Jack
 2. Slide the transmission towards the rear of the vehicle.
 3. Tilt the front of the transmission down.
 4. Remove the transmission from the vehicle.



32.

1. If the transmission is to be overhauled or if installing a new or re-manufactured transmission, disconnect the vent hose retainers.
2. Remove and discard the bolts (N605804) and separate the transfer case from the transmission.



All vehicles

33. If installing a new or re-manufactured transmission, remove the bolts and bracket. Discard the bolts (W715131).



Installation

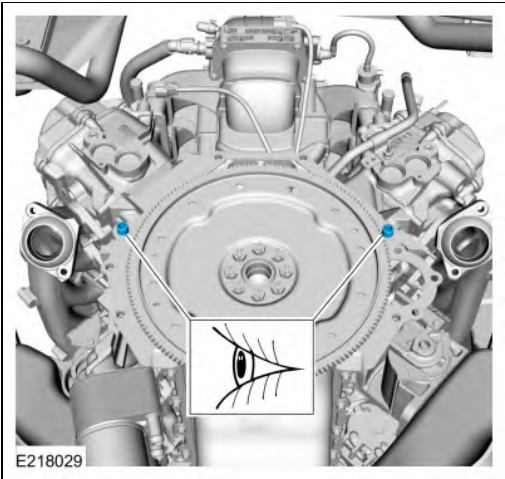
All vehicles

1. If removed.
Install the bracket and the new bolts.
Torque: 22 lb.ft (30 Nm)

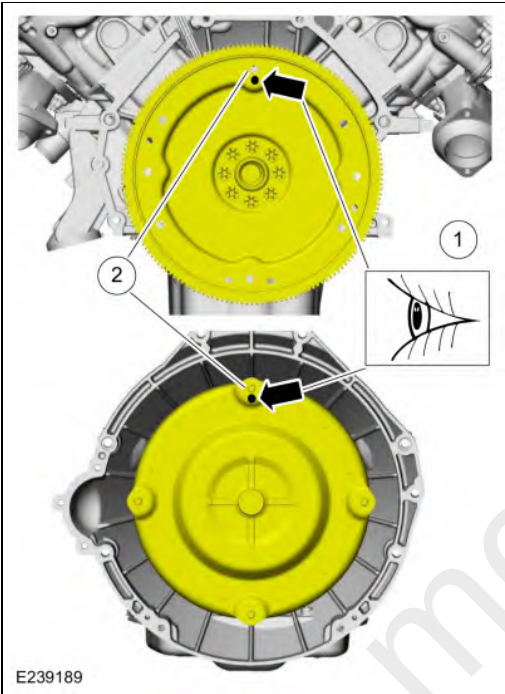


3. NOTICE: If the transmission is not positioned on the dowel pins, damage to the transmission may occur.

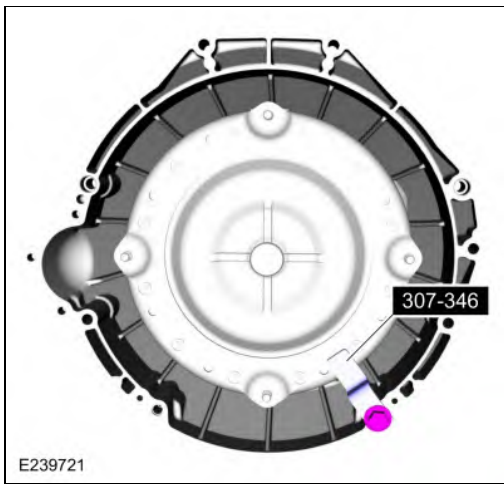
If the dowel pins were pulled out of the engine block during removal, install new dowel pins in the engine block.



- 4.
- 1. Inspect the torque converter stud and flexplate for paint marks.
 - 2. Align the torque converter stud and flexplate hole near the paint marks to the 12 o'clock position.



5. Install the special tool.
- Use Special Service Tool: 307-346 (T97T-7902-A) Retainer, Torque Converter.



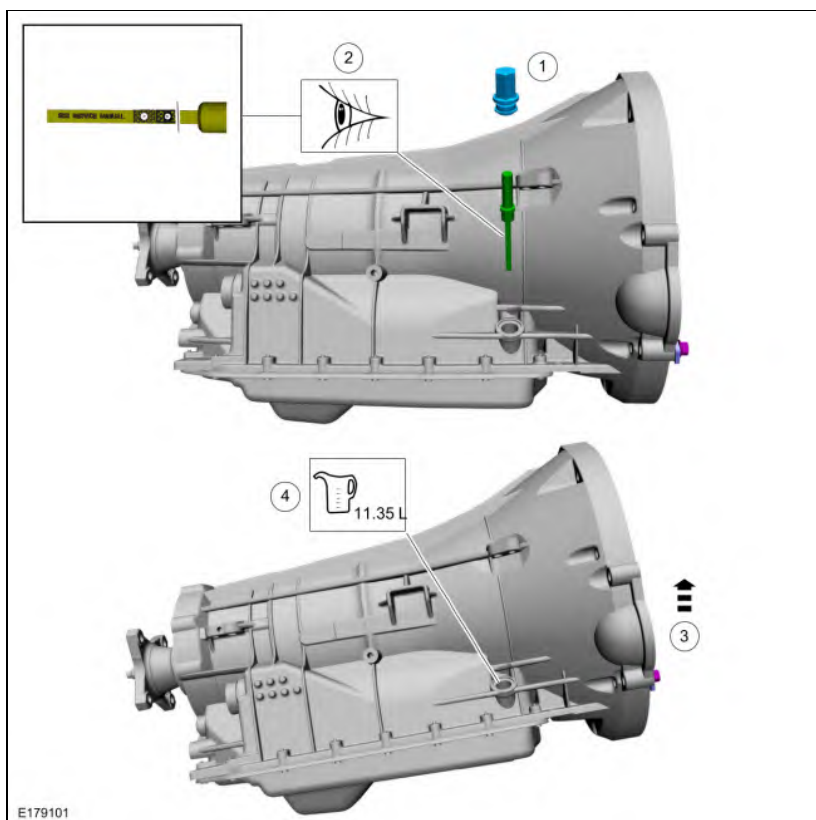
6. **NOTE:** If transmission is being replaced, remove the transmission fluid fill plug and verify that the transmission is filled with transmission fluid.

NOTE: If transmission was disassembled, add transmission fluid to the transmission.

NOTE: Rear Wheel Drive (RWD) shown, Four-Wheel Drive (4WD) similar.

1. Remove the transmission fluid fill plug transmission fluid level indicator assembly.
2. Verify transmission is filled with transmission fluid.
3. Slightly tilt the transmission rearward.
4. If the transmission was disassembled, add 11.35L (12 qt) of transmission fluid to the transmission through the transmission fluid fill hole.
Material: Motorcraft® MERCON® LV Automatic Transmission Fluid / XT-10-QLVC (WSS-M2C938-A) (MERCON® LV,)

mcx30.com

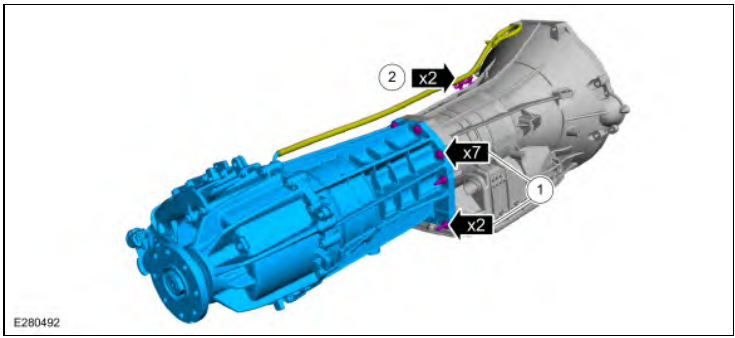


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Four-Wheel Drive (4WD) vehicles

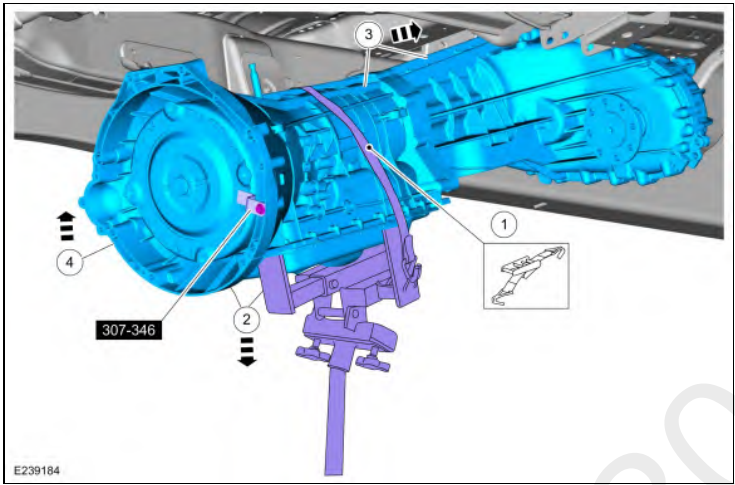
7.
 1. If removed, install the transfer case and the new bolts. Tighten the bolts evenly in a star pattern.
Torque: 41 lb.ft (55 Nm)
 2. Connect the vent hose retainers.



8. **NOTICE:** Secure the transmission to the transmission jack with a safety strap.

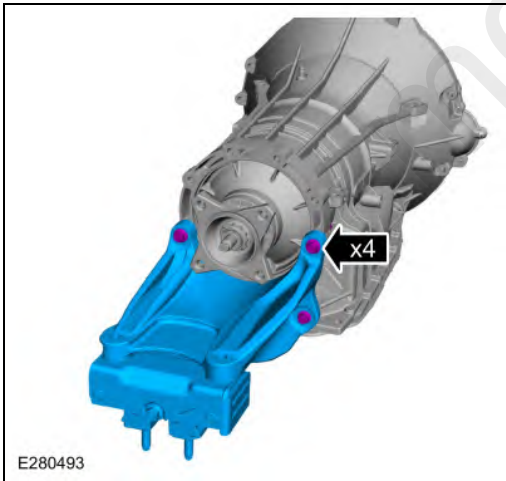
NOTE: Make sure the transmission jack makes contact on the outer ribs of the transmission fluid pan.

1. Make sure the transmission is securely fastened to the transmission jack.
Use the General Equipment: Transmission Jack
2. Tilt the front of the transmission down.
3. Slide the transmission towards the rear of the vehicle.
4. Raise the front of the transmission into a horizontal position.



Rear Wheel Drive (RWD) vehicles

9. If removed, install the bracket and the new bolts.
Torque: 41 lb.ft (55 Nm)

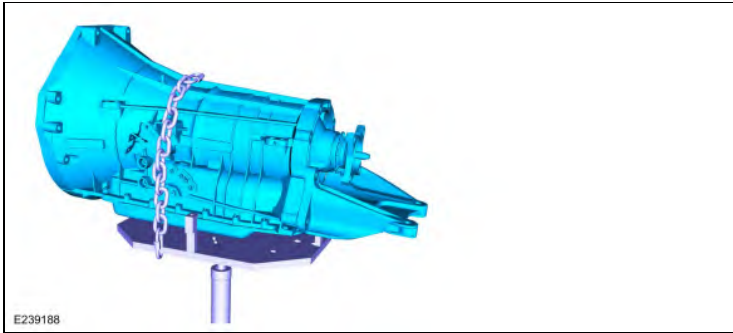


10. **NOTICE:** Secure the transmission to the transmission jack with a safety strap.

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

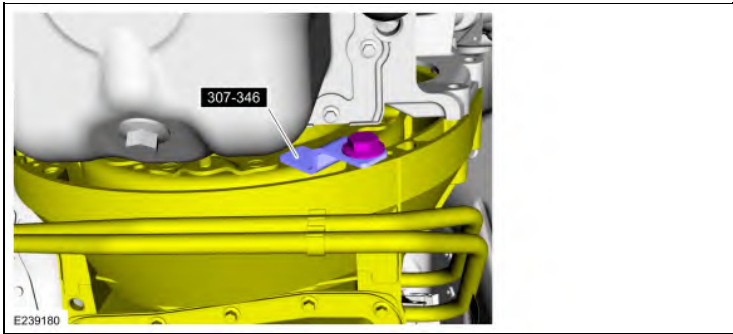
Using a high-lift transmission jack, position the transmission in the vehicle.

Use the General Equipment: Transmission Jack

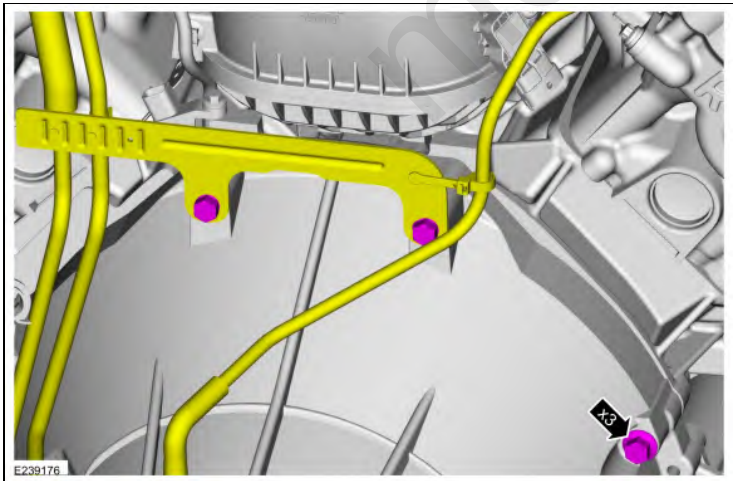


All vehicles

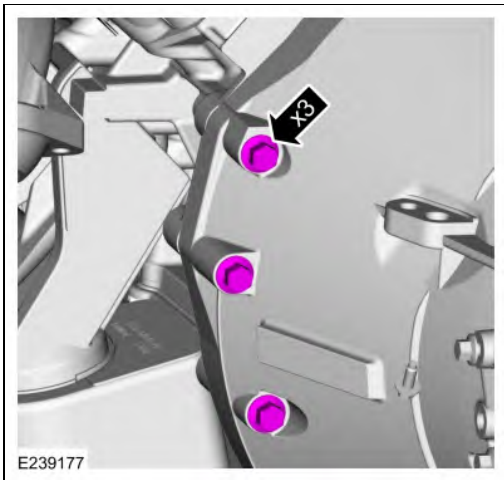
11. Remove the special tool.
Use Special Service Tool: 307-346 (T97T-7902-A) Retainer, Torque Converter.



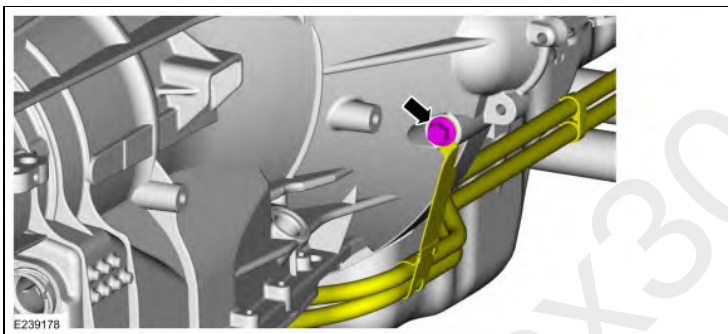
12. **NOTE:** Make sure the torque converter is fully seated in the transmission before aligning the transmission to the engine.
- NOTE:** With the transmission in a horizontal position, move it toward the engine and position it on the dowel pins.
- Position the bracket and install the top bellhousing bolts.
Torque: 35 lb.ft (48 Nm)



13. Install the LH bellhousing bolts.
Torque: 35 lb.ft (48 Nm)

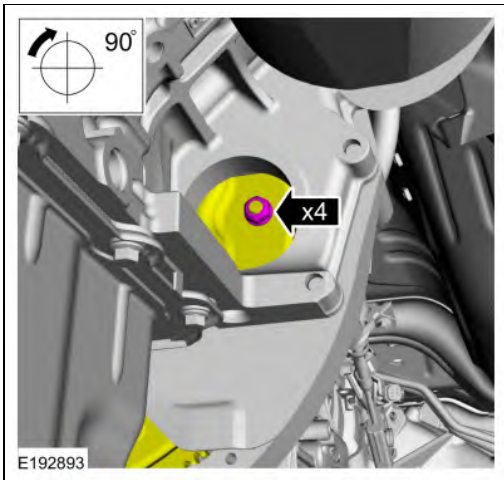


14. Install the transmission fluid cooler tube bracket and tighten the bolt.
Torque: 35 lb.ft (48 Nm)

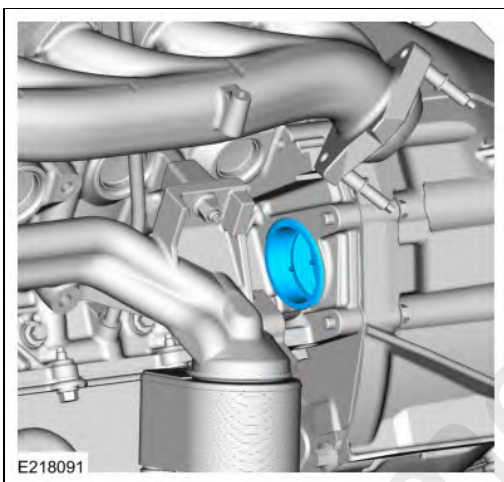


15. **NOTE:** Using the crankshaft pulley bolt, turn the engine clockwise.

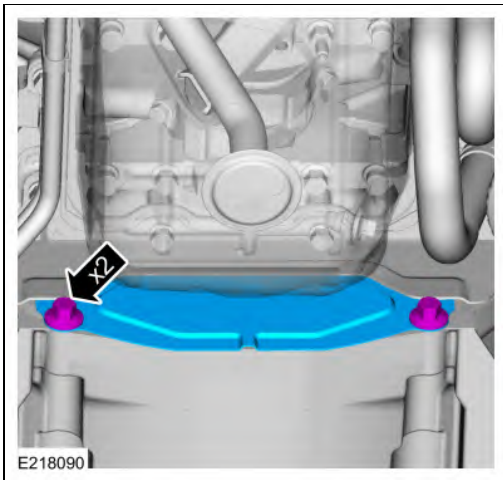
Install the new torque converter nuts.
Torque: 30 lb.ft (40 Nm)

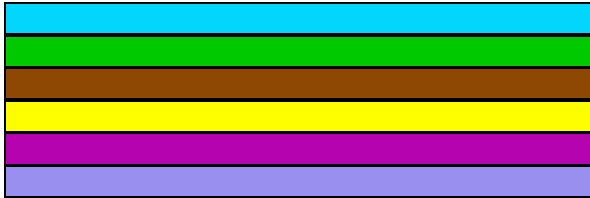


16. Install the rubber torque converter nut access cover.

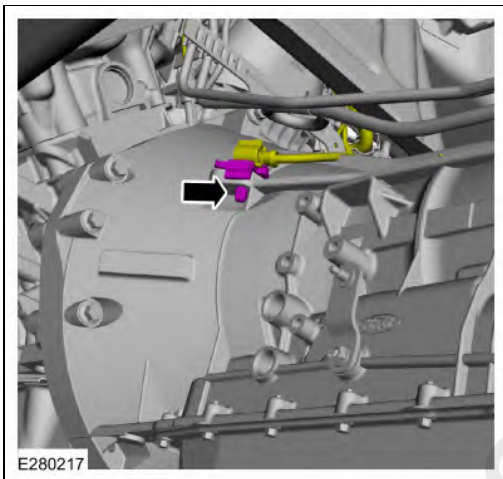


17. Install the flexplate inspection cover and the bolts.
Torque: 26 lb.ft (35 Nm)



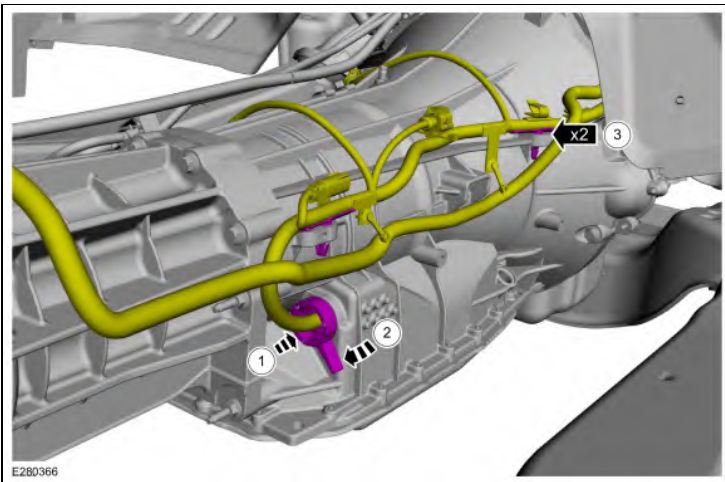


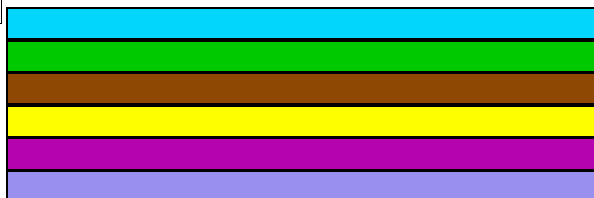
18. Attach the LH wiring harness retainer.



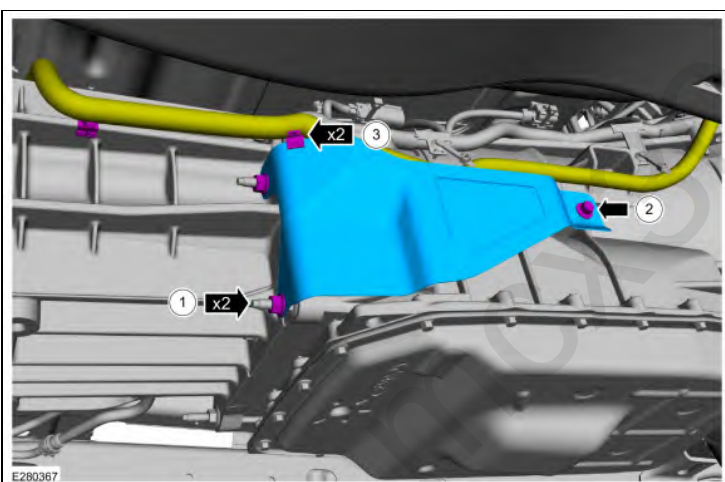


- 19.
1. Push the transmission electrical connector in to connect.
 2. Rotate the transmission electrical connector clockwise.
 3. Attach the wiring harness retainers.



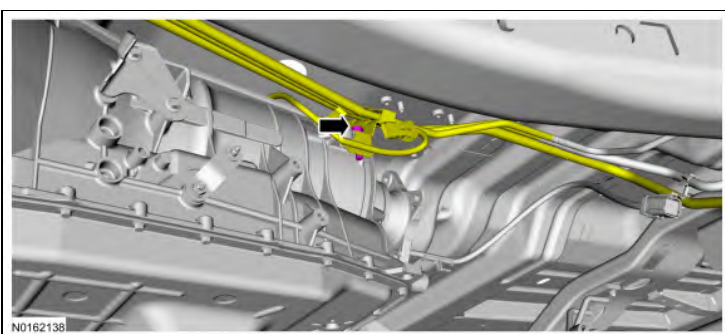


- 20.
1. Install the heat shield and the nuts.
Torque: 18 lb.ft (25 Nm)
 2. Install the heat shield bolt.
Torque: 18 lb.ft (25 Nm)
 3. Attach the wiring harness retainers.





21. Position the fuel line bracket and install the bolt.
Torque: 30 lb.ft (40 Nm)





22. **NOTE:** When installing the selector lever cable end, make sure that the selector lever cable end is correctly installed onto the manual control lever. Pull back on the selector lever cable to make sure the selector lever cable end is securely installed onto the manual control lever.

NOTE: Apply pressure to the selector lever cable end while connecting it to the manual control lever to make sure the selector lever has not moved out of the DRIVE

position.

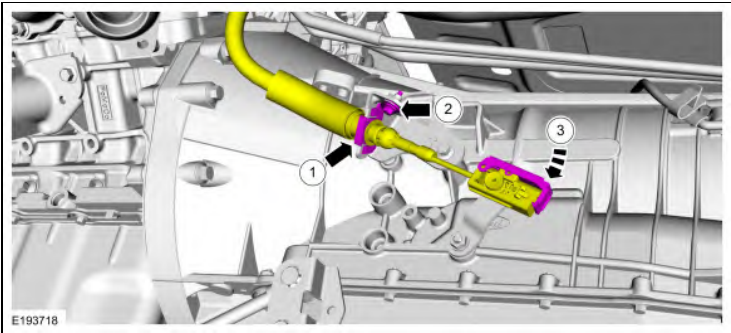
Connect the selector lever cable to the manual control lever.

- 1. Connect the selector lever cable to the bracket.
- 2. Install the selector lever cable bolt.

Torque: 62 lb.in (7 Nm)

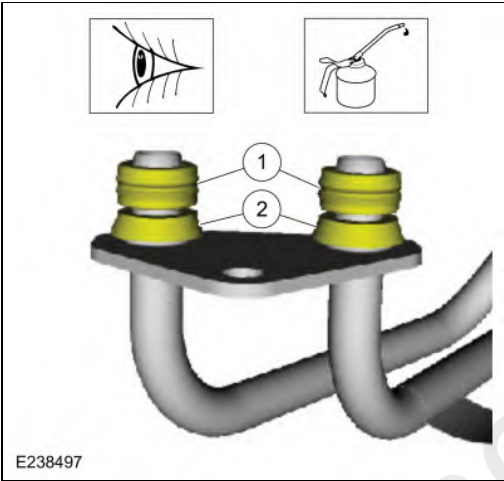
- 3. **NOTE:** Listen for a audible click when sliding the locking tab down.

Connect the selector lever cable end to the manual control lever and slide the locking tab down.

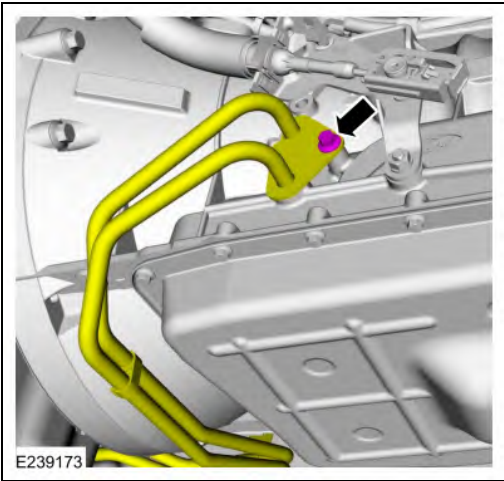


- 23. Inspect the transmission fluid tube backing rings and seals for damage and install new backing rings or seals if necessary.

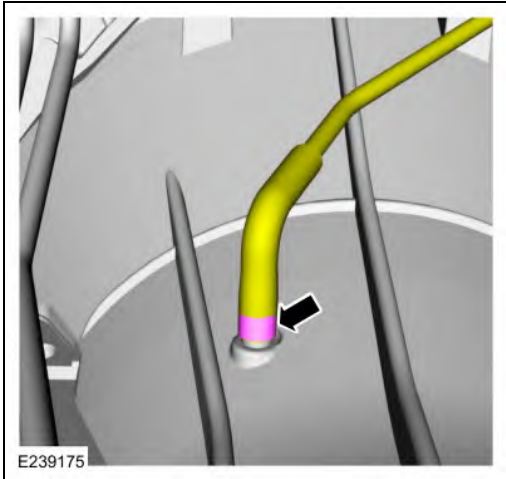
- 1. Seal (7D285)
Material: Motorcraft® MERCON® LV Automatic Transmission Fluid / XT-10-QLVC (WSS-M2C938-A) (MERCON® LV,)
- 2. Backing ring (7J324)



- 24. Install the transmission fluid cooler tubes and the transmission fluid cooler tube bracket bolt.
- Torque: 22 lb.ft (30 Nm)



25. Connect the transmission vent tube.



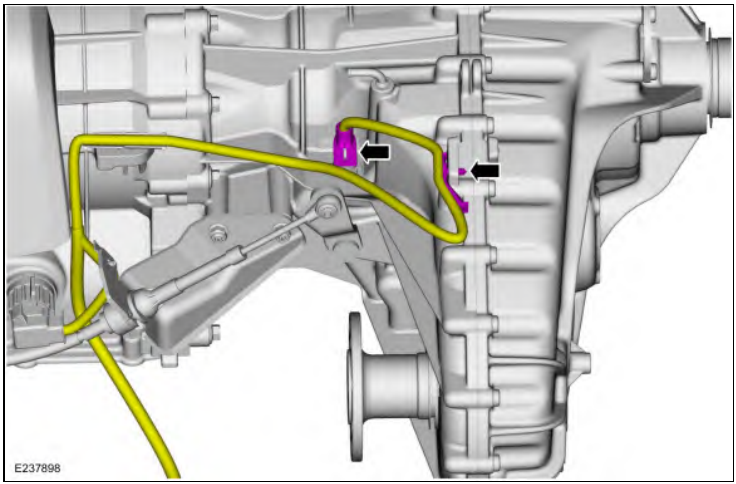
26. Install the transmission support crossmember.
Refer to: Transmission Support Crossmember (502-02 Full Frame and Body Mounting, Removal and Installation).

Four-Wheel Drive (4WD)

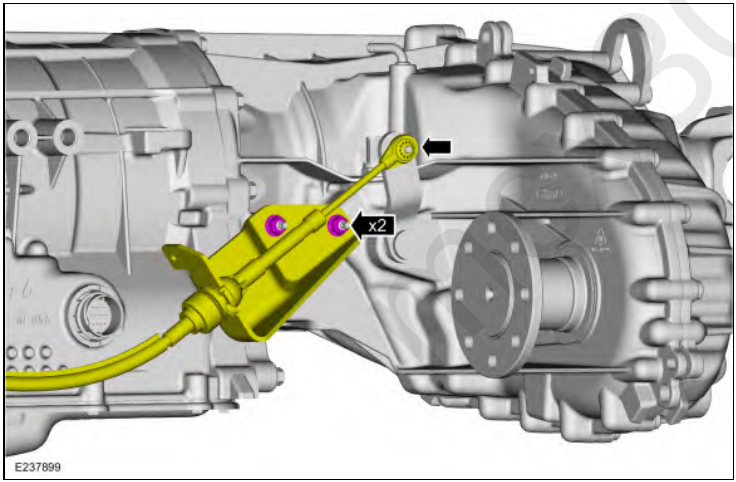
27. Install the front and rear driveshafts.
Refer to: Front Driveshaft (205-01 Driveshaft, Removal and Installation).
Refer to: Rear Driveshaft (205-01 Driveshaft, Removal and Installation).
28. Check the transfer case fluid level.
Refer to: Transfer Case Draining and Filling (308-07B Transfer Case, General Procedures).

Vehicles equipped with manual shift transfer case

29. Connect the manual shift indicator harness connector and pushpin.

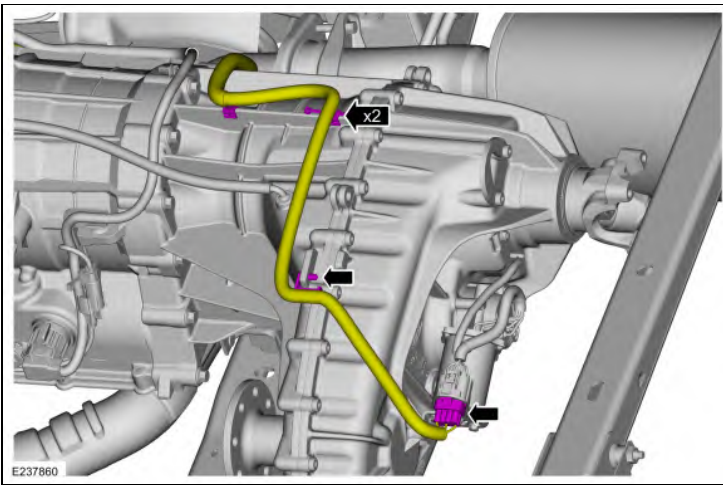


30. Install the manual shift lever cable bracket nuts and connect the manual shift lever cable.
Torque: 21 lb.ft (28 Nm)



Vehicles equipped with electronic shift on the fly transfer case

31. Connect the shift motor electrical connector and attach the harness retainer clips and pushpin to the transfer case.

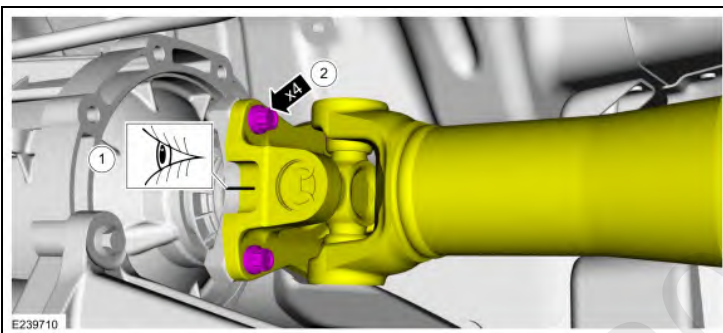


Rear Wheel Drive (RWD)

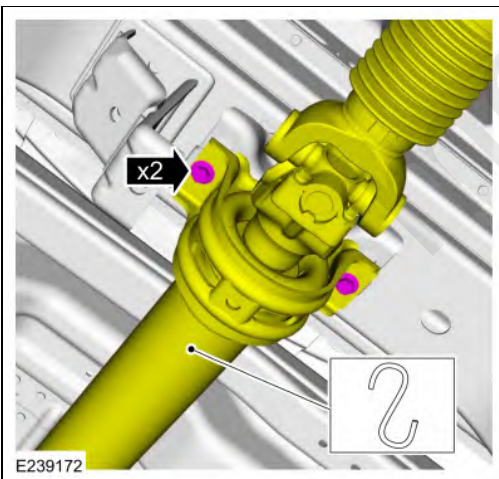
32. **NOTICE:** The driveshaft flange fits tightly on the pinion flange pilots. To make sure that the driveshaft flanges seat squarely on the pinion flange pilots, tighten the driveshaft flange bolts evenly in a cross pattern or damage to the flanges can occur.

1. Align the driveshaft flange yoke index mark made during removal.
2. Install the new bolts.

Torque: 76 lb.ft (103 Nm)



33. Install the new center bearing mounting bolts.
Torque: 52 lb.ft (70 Nm)



All vehicles

34. Install the exhaust Y-Pipe.
Refer to: Dual Catalytic Converter Y-Pipe (309-00A Exhaust System - 6.2L V8, Removal and Installation).
35. Install the starter motor.
Refer to: Starter Motor (303-06A Starting System - 6.2L V8, Removal and Installation).
36. Verify that the selector lever cable is correctly adjusted.
Refer to: Selector Lever Cable Adjustment - 6-Speed Automatic Transmission â€“ 6R100 (307-05A Automatic Transmission External Controls - 6-Speed Automatic Transmission â€“ 6R100, General Procedures).
37. After completing the repairs, perform the Misfire Monitor Neutral Profile Correction procedure using a diagnostic scan tool.
38. If a new transmission or a new main control was installed, the solenoid body strategy must be updated.
Refer to: Transmission Strategy Download (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, General Procedures).

39. If the transmission was overhauled, the adaptive drive cycle must be updated.

Refer to: Adaptive Learning Drive Cycle (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission 6R100, General Procedures).

40. While driving the vehicle, use the scan tool to verify that the TFT has reached a temperature of 93°C (200°F) to 99°C (210°F). This will circulate the transmission fluid through the torque converter and the transmission fluid cooling system, eliminating any trapped air in the transmission fluid cooling system.

41. Check the transmission fluid level.

Refer to: Transmission Fluid Level Check (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission 6R100, General Procedures).

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