


IN-VEHICLE REPAIR: TRANSMISSI...**IN-VEHICLE REPAIR: TRANSMISSION FLUID DRAIN AND REFILL (AUTOMATIC TRANSAXLE/TRANSMISSION)**Procedure SGML ID:
N159036SECTION 307-01: Automatic
Transaxle/Transmission
IN-VEHICLE REPAIR2001 F-Super Duty 250-550/Excursion/F-53 Motorhome Chassis
Workshop Manual
Procedure revision date: 06/21/2000**Transmission Fluid Drain and Refill**

Special Tool(s)

 ST2654-A	Automatic Transmission Flush and Fill Machine 211-00018
	Automatic Transmission Flush and Fill Machine 199-00010 or equivalent

Material

Item	Specification
Motorcraft MERCON® Multi-Purpose (ATF) Transmission Fluid XT-2-QDX	MERCON®

Draining

⚠ CAUTION: Always refer to the instructions supplied with the flush and fill machine.

NOTE: Draining fluid from the transmission by removing only the fluid pan is acceptable for vehicles that do not have a torque converter drain plug, and for normal or severe duty fluid maintenance.

NOTE: A new procedure for draining and adding transmission fluid, using a suitable transmission flush and fill machine, has been added. The following procedure has different methods for draining and refilling the listed vehicle types:

- All vehicles using a suitable flush and fill machine.
- Vehicles equipped with a fluid pan and torque converter drain plug.
- Vehicles not equipped with a fluid pan or a torque converter drain plug.
- Vehicles equipped with a torque converter drain plug and without a fluid pan drain plug.

Use the method that is applicable to your vehicle.

All vehicles using a suitable flush and fill machine

1. Raise the vehicle on a hoist. For additional information, refer to [Section 100-02](#).
2. Use a suitable flush and fill machine to change the fluid.
3. When connecting the flush and fill machine, connect the machine to the fluid cooler tube after the fluid cooler on the cooler return line. This will help remove any foreign material trapped in the fluid coolers.

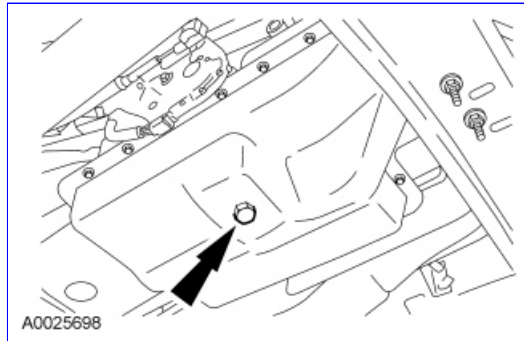
Refill

4. Use only clean automatic transmission fluid.
5. Once the fluid exchange has been completed, disconnect the flush and fill machine. Reconnect any disconnected fluid cooler tubes.
6. Lower the vehicle. For additional information, refer to [Section 100-02](#).
7. With the engine running and the transmission at normal operating temperature 66-77°C (150-170°F), check and adjust the transmission fluid level, and check for any leaks. If fluid is needed, add fluid in increments of 0.24-liter (0.5-pint) until the correct level is achieved (fluid should be in the cross-hatched area of the fluid level indicator).

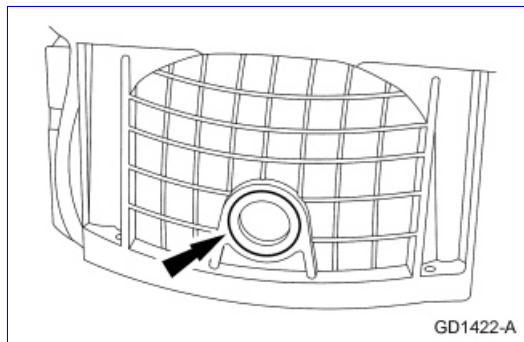
Draining

Vehicles equipped with a fluid pan and torque converter drain plug

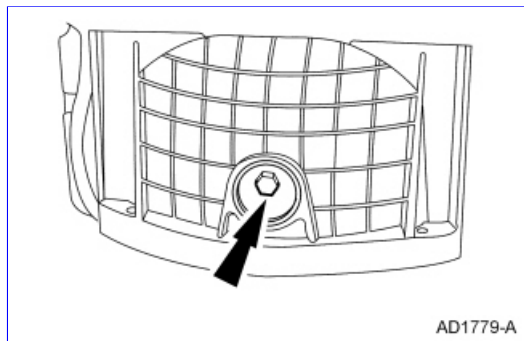
1. Raise the vehicle on a hoist. For additional information, refer to [Section 100-02](#).
2. Remove the drain plug and allow the fluid to drain.



3. Remove the torque converter drain plug cover.

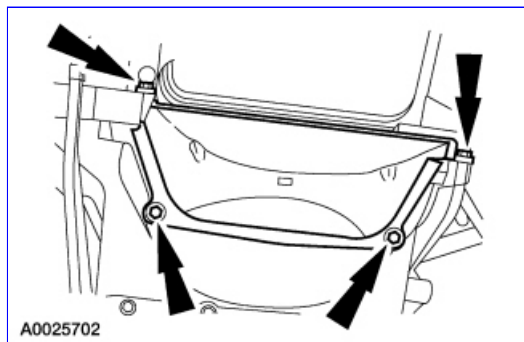


4. Remove the torque converter drain plug and discard.

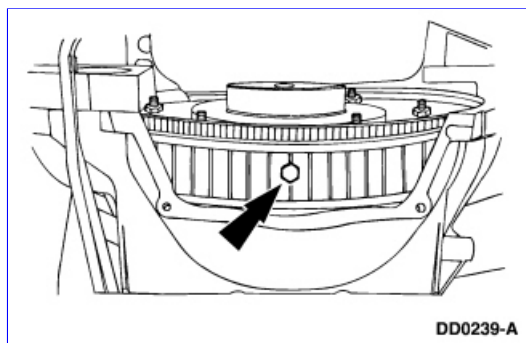


7.3L Diesel

5. Remove the bolts and the flexplate inspection cover.



6. Remove the torque converter drain plug and discard.



All vehicles

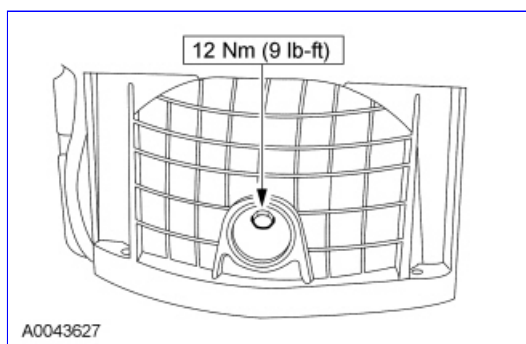
7. Allow the fluid to drain.
- 8.

NOTE: If equipped with a radiator in-tank transmission fluid cooler the cooler will need to be flushed.

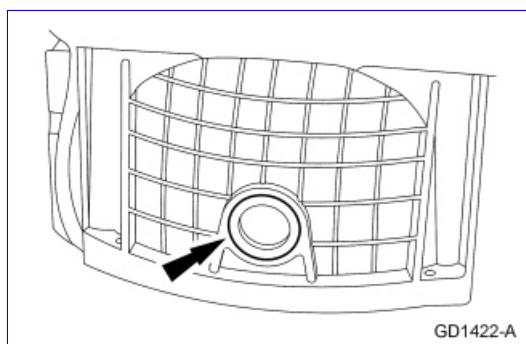
Only flush the cooler tubes, in-tank fluid cooler and the bypass valve if carrying out a transmission overhaul. Vehicles equipped with auxiliary OTA coolers cannot be flushed completely. Only new coolers should be installed. For additional information, refer to [Transmission Fluid Cooler - Backflushing and Cleaning](#) in this section.

Refill

9. After the torque converter has drained, install a new drain plug.

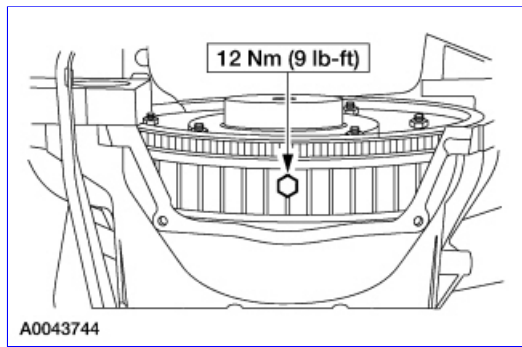


10. Install the torque converter drain plug cover.

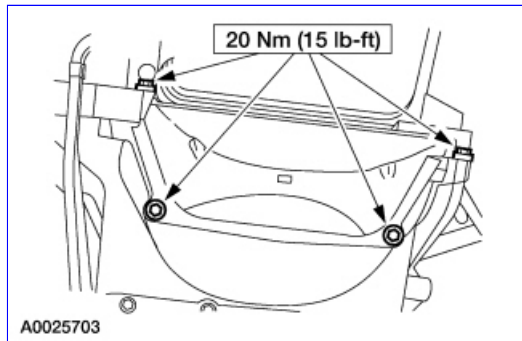


7.3L Diesel

11. Install a new torque converter drain plug.

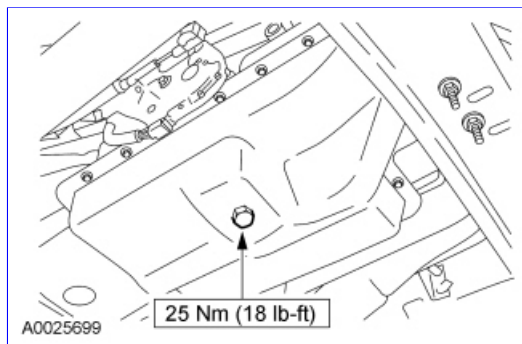


12. Install the flexplate inspection cover.



All vehicles

13. Install the drain plug.



14. Lower the vehicle. For additional information, refer to [Section 100-02](#).

15.

⚠ CAUTION: The use of any other transmission fluid than specified can result in the transmission failing to operate in a normal manner or transmission failure.

Fill the transmission.

- Add 6.2 liters (6.5 qts) of clean automatic transmission fluid to the transmission through the fluid filler tube.

16. Start the engine. Move the transmission range selector lever through all the gear ranges, checking for engagements.

17. With the engine running and the transmission at normal operating temperature 66-77°C (150-170°F), check and adjust the transmission fluid level, and check for any leaks. If fluid is needed, add fluid in increments of 0.24-liter (0.5-pint) until the correct level is achieved (fluid should be in the cross-hatched area of the fluid level indicator).

Draining

Vehicles not equipped with a fluid pan or a torque converter drain plug

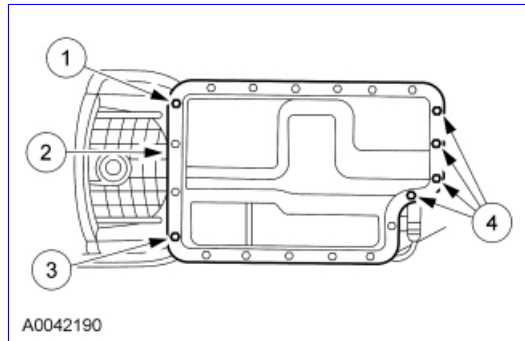
1. Raise the vehicle on a hoist. For additional information, refer to [Section 100-02](#).

2.

NOTE: Do not discard the fluid pan gasket unless damaged. This is a reusable gasket.

Remove the transmission fluid pan and gasket.

1. Loosen, but do not remove the bolts.
2. Remove the front and side bolts.
3. Lower the front of the fluid pan and allow the fluid to drain.
4. Remove the remaining fluid pan bolts and the fluid pan.



3. Do not remove or install a new fluid filter.

4. **NOTE:** If equipped with a radiator in-tank transmission fluid cooler the cooler will need to be flushed.

Only flush the cooler tubes, in-tank fluid coolers and the bypass valve if carrying out a transmission overhaul. Vehicles equipped with auxiliary OTA coolers cannot be flushed completely. Only new coolers should be installed. For additional information, refer to [Transmission Fluid Cooler - Backflushing and Cleaning](#) in this section.

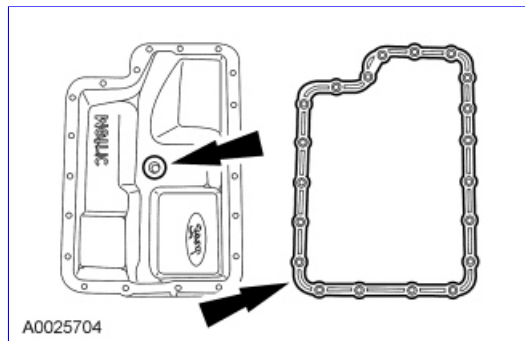
Refill

5.

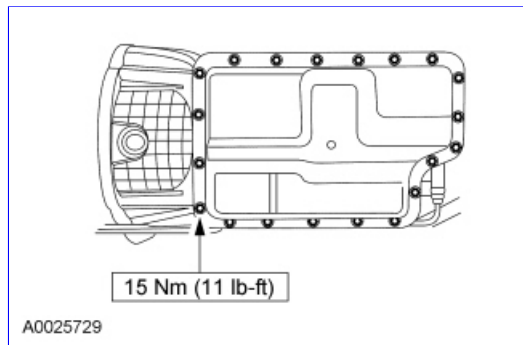
NOTE: Do not discard the gasket unless damaged. This is a reusable gasket.

NOTE: Apply a light coat of petroleum jelly to hold the gasket to the fluid pan.

Position the gasket onto the clean fluid pan. Make sure the magnet is positioned over the dimple in the fluid pan.



6. Install the pan with the gasket. Alternately tighten the bolts.



7. Lower the vehicle. For additional information, refer to [Section 100-02](#).

8. **⚠ CAUTION: The use of any other transmission fluid than specified can result in the transmission failing to operate in a normal manner or transmission failure.**

Fill the transmission.

- Add 6.2 liters (6.5 qts) of clean automatic transmission fluid to the transmission through the fluid filler tube.

9. Start the engine. Move the transmission range selector lever through all the gear ranges, checking for engagements.

10. With the engine running and the transmission at normal operating temperature 66-77°C (150-170°F), check and adjust the transmission fluid level, and check for any leaks. If fluid is needed, add fluid in increments of 0.24-liter (0.5-pint) until the correct level is achieved (fluid should be in the cross-hatched area of the fluid level indicator).

Draining

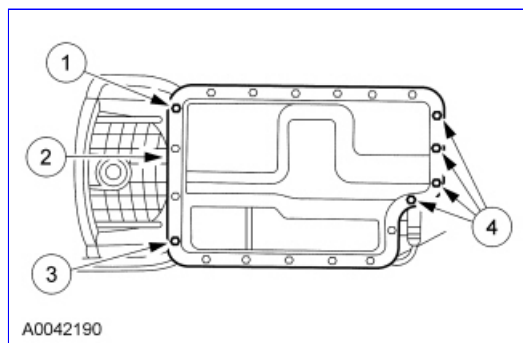
Vehicles equipped with a torque converter drain plug and without a fluid pan drain plug

1. Raise the vehicle on a hoist. For additional information, refer to [Section 100-02](#).
- 2.

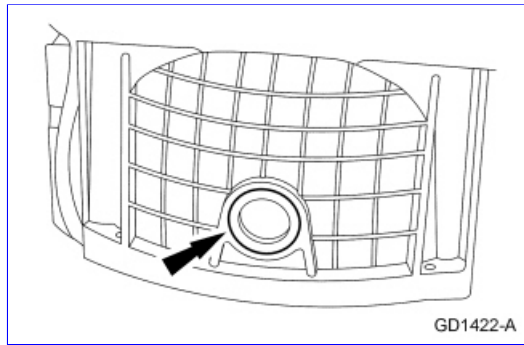
NOTE: Do not discard the fluid pan gasket unless damaged. This is a reusable gasket.

Remove the transmission fluid pan and gasket.

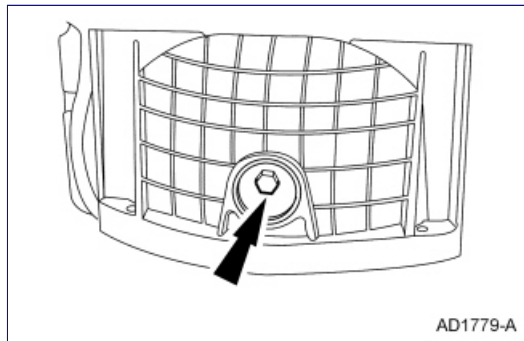
1. Loosen, but do not remove the bolts.
2. Remove the front and side bolts.
3. Lower the front of the fluid pan and allow the fluid to drain.
4. Remove the remaining fluid pan bolts and the fluid pan.



3. Do not remove or install a new fluid filter.
4. Remove the torque converter drain plug cover.

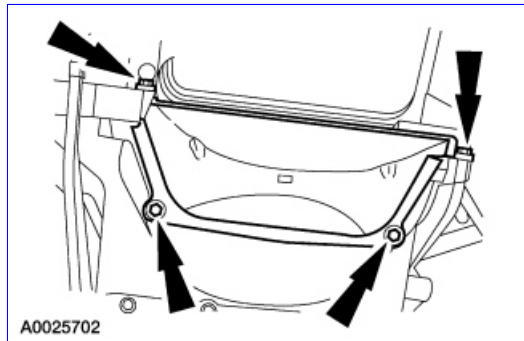


5. Remove the torque converter drain plug and discard.

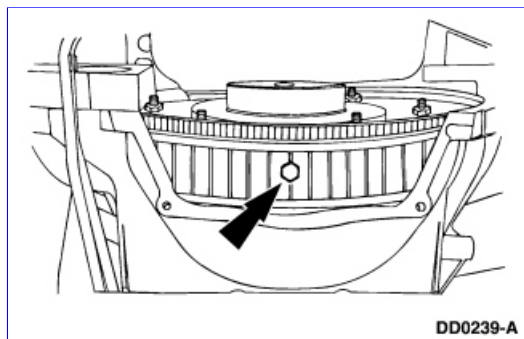


7.3L Diesel

6. Remove the bolts and the flexplate inspection cover.



7. Remove the torque converter drain plug and discard.



All vehicles

8. Allow the fluid to drain.

9.

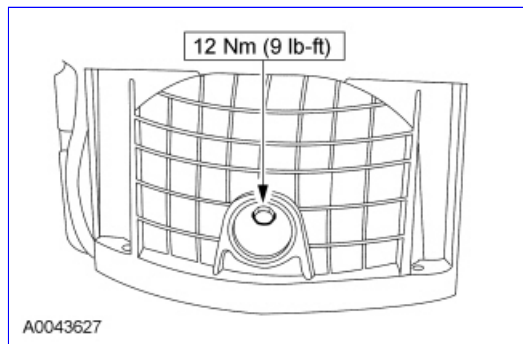
NOTE: If equipped with a radiator in-tank transmission fluid cooler the cooler will need to be flushed.

Only flush the cooler tubes, in-tank fluid coolers and the bypass valve if carrying out a transmission overhaul. Vehicles equipped with auxiliary OTA coolers cannot be flushed completely. Only new coolers should be installed.

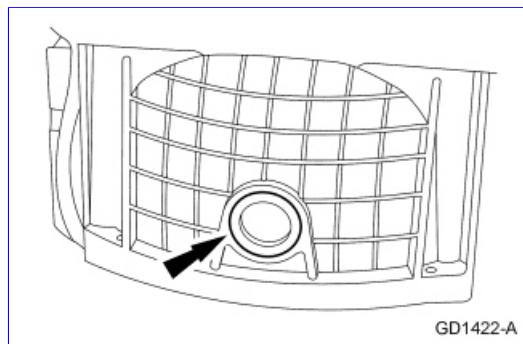
For additional information, refer to [Transmission Fluid Cooler - Backflushing and Cleaning](#) in this section.

Refill

10. After the torque converter has drained, install a new drain plug.

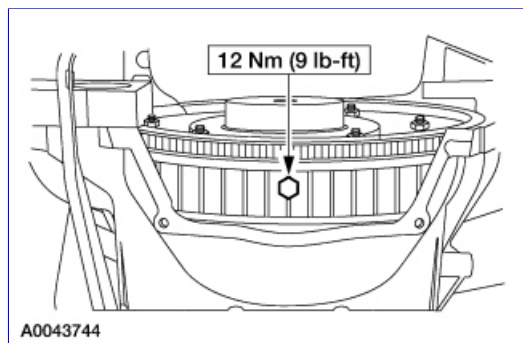


11. Install the torque converter drain plug cover.

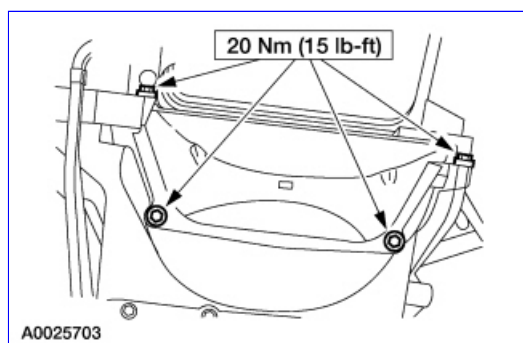


7.3L Diesel

12. Install a new torque converter drain plug.

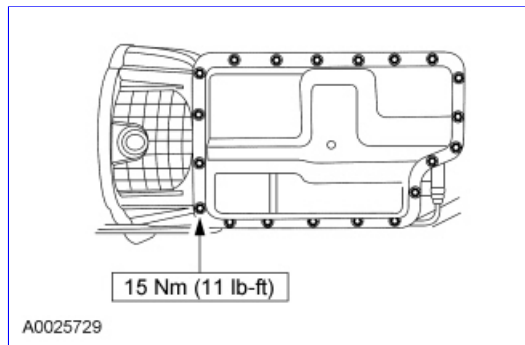


13. Install the flexplate inspection cover.



All vehicles

14. Install the pan with the gasket. Alternately tighten the bolts.



15. Lower the vehicle. For additional information, refer to [Section 100-02](#).

16.

⚠ CAUTION: The use of any other transmission fluid than specified can result in the transmission failing to operate in a normal manner or transmission failure.

Fill the transmission.

- Add 6.2 liters (6.5 qts) of clean automatic transmission fluid to the transmission through the fluid filler tube.
17. Start the engine. Move the transmission range selector lever through all the gear ranges, checking for engagements.
18. With the engine running and the transmission at normal operating temperature 66-77°C (150-170°F), check and adjust the transmission fluid level, and check for any leaks. If fluid is needed, add fluid in increments of 0.24-liter (0.5-pint) until the correct level is achieved (fluid should be in the cross-hatched area of the fluid level indicator).

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