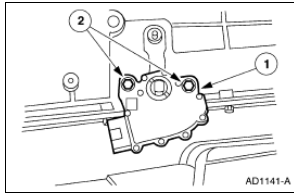


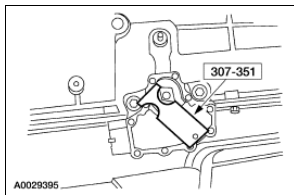
### Installation

1. Install the digital transmission range (TR) sensor.
  1. Install digital transmission range (TR) sensor.
  2. Loosely install the bolts.

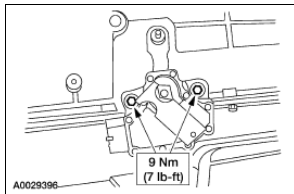


2. **NOTE:** Make sure that the manual control lever is in the neutral position.

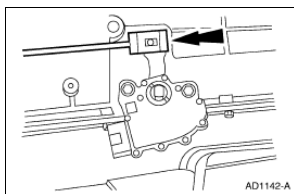
Using the special tool, align the digital TR sensor. The tool is designed to fit snug.



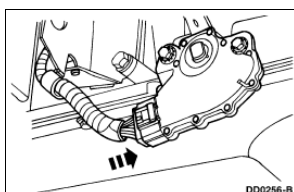
3. Tighten the bolts.



4. Reconnect the shift cable at the manual control lever.



5. Reconnect the connector.



6. Lower the vehicle.
  7. Reconnect the battery ground cable.
-

## IN-VEHICLE REPAIR

**Intermediate Servo**

## Material

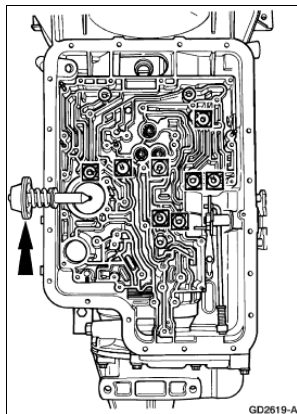
Item	Specification
Motorcraft MERCON® Multi-Purpose (ATF) Transmission Fluid XT-2-QDX	MERCON®

**Removal**

1. Remove the main control valve body. For additional information, refer to Main Control Valve Body, Accumulator Body, Solenoid Body in this section.
2. **⚠ WARNING:** The intermediate servo is under spring pressure, care should be taken when removing it. It could cause bodily harm.

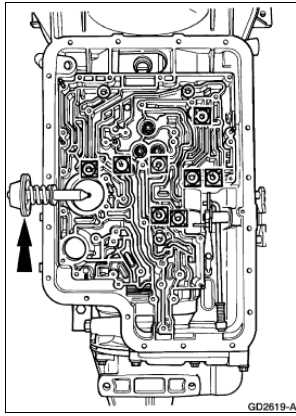
**NOTE:** Gently tap on the servo cover with a rubber mallet to compress and allow servo assembly to pop up.

Remove the intermediate servo.

**Installation**

1. **NOTE:** Lubricate the servo seal with clean automatic transmission fluid.

Install the intermediate band servo.



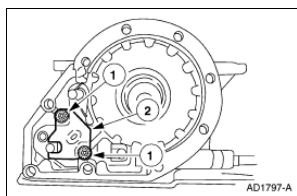
2. Install the main control valve body.
-

## IN-VEHICLE REPAIR

**Park System****Removal**

**NOTE:** For internal park mechanism service, refer to Manual Control Lever Shaft and Seal in this section.

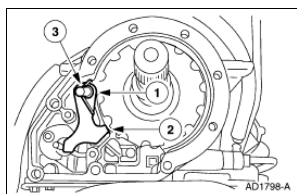
1. Remove the extension housing and the extension housing gasket. For additional information, refer to Extension Housing Gasket F-Super Duty or Extension Housing Gasket Excursion in this section.
2. Remove the parking rod guide plate.
  1. Remove the bolts.
  2. Remove the parking rod guide plate.



3. **NOTE:** If the installation of a new park gear is required, refer to Output Shaft Check in this section.

Remove the park pawl shaft.

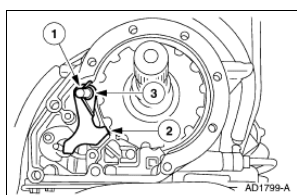
1. Remove the park pawl return spring.
2. Remove the park pawl.
3. Remove the park pawl shaft.

**Installation**

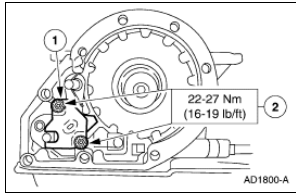
1. **NOTE:** If the installation of a new park gear is required, refer to Output Shaft Check in this section.

Install the park pawl shaft.

1. Install the park pawl shaft.
2. Install the park pawl.
3. Install the park pawl return spring.



2. Install the parking rod guide plate.
  1. Install the parking rod guide plate.
  2. Install the bolts.



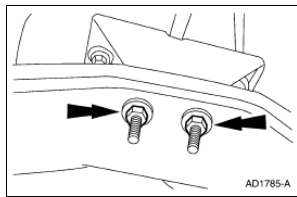
3. Install the extension housing gasket and the extension housing.
-

## IN-VEHICLE REPAIR

**Transmission Insulator and Retainer****Removal**

**NOTE:** 4x2 shown, 4x4 similar.

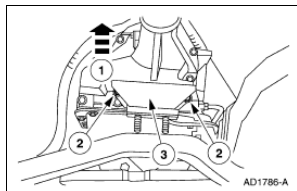
1. Raise the vehicle on a hoist. For additional information, refer to Section 100-02 .
2. Remove the nuts.



3. Install a suitable high-lift transmission jack.
4. **⚠ CAUTION: Be sure not to raise the back of the transmission too high. If it makes contact with the underbody, damage to the TSS and OSS sensors will occur.**

Remove the rear transmission mount.

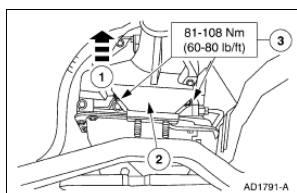
1. Raise the transmission up off the rear crossmember support.
2. Remove the bolts.
3. Remove the rear transmission mount.

**Installation**

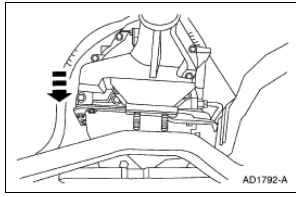
1. **⚠ CAUTION: Be sure not to raise the back of the transmission too high. If it makes contact with the underbody, damage to the TSS and OSS sensors will occur.**

Install the rear transmission mount.

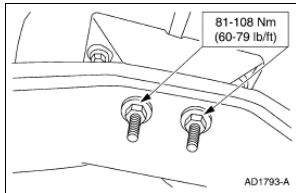
1. Raise the transmission up.
2. Install the rear transmission mount.
3. Install the bolts.



2. Lower the transmission on to the rear crossmember support.



3. Install the nuts.



4. Remove the high-lift transmission jack.

5. Remove the supports and lower the vehicle.


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## REMOVAL

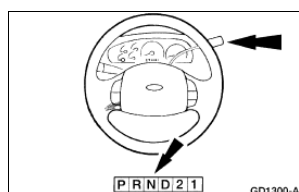
**Transmission**

## Special Tool(s)

	Retainer, Torque Converter 307-346 (T97T-7902-A)
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**Removal****All vehicles**

1. Place the transmission range selector lever in the NEUTRAL position.



2. **NOTE:** All gasoline vehicles will have new adaptive shift strategies. Whenever the vehicle's battery has been disconnected for any type of service or repair, the strategy parameters that are stored in the keep alive memory (KAM) will be lost. The strategy will start to relearn once the battery is reconnected and the vehicle is driven. This is a temporary condition and will return to normal operating condition once the powertrain control module (PCM) relearns all the parameters from the driving conditions. There is no set time frame for this process. If a concern is present during downshifts or converter clutch apply, it is not the fault of the shift strategy and will require diagnosis as outlined in the workshop manual.

The customer needs to be notified that they may experience slightly different upshifts (either soft or firm) and that this is a temporary condition and will eventually return to normal operating condition.

Disconnect the battery ground cable. For additional information, refer to [Section 414-01](#) .

**4x4 vehicles**

3. Remove the transfer case assembly. For additional information, refer to [Section 308-07B](#) .

**4x2 vehicles**

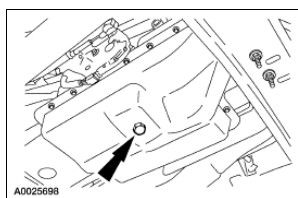
4. Remove the driveshaft. For additional information, refer to [Section 205-01](#) .

**All vehicles**

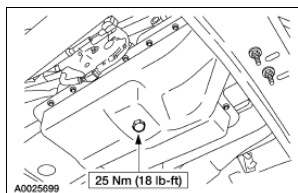
5. If transmission disassembly is required, drain the transmission fluid.

**Vehicles equipped with a fluid pan drain plug**

6. Remove the drain plug and allow the fluid to drain.



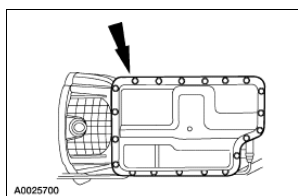
7. Install the drain plug.



**Vehicles not equipped with a fluid pan drain plug**

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

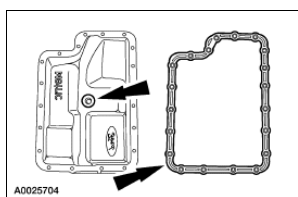
Remove the transmission fluid pan and gasket.



9. **NOTE:** The transmission pan gasket is reusable unless damaged.

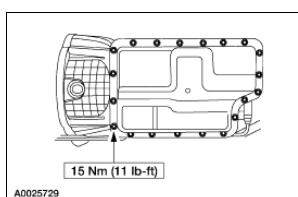
**NOTE:** Apply a light coat of petroleum jelly to hold the gasket to the fluid pan.

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



10. **⚠ CAUTION:** Mixing the 4x2 and the 4x4 style transmission fluid filters and transmission pan assembly components can cause transmission damage.

Install the correct pan with gasket for this application. Alternately tighten the bolts.



11. **⚠ CAUTION:** Make sure securing straps or the transmission jack adapter do not touch the cooler bypass valve (CBV). Do not use the CBV as a handle. Damage to the CBV can cause a

leak.

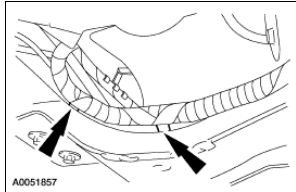
Install a suitable transmission jack and support the transmission.

#### 4x4 vehicles

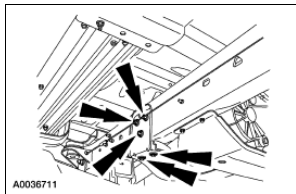
12. Remove the jack stand after installing a suitable transmission jack.

#### 4x2 Excursion

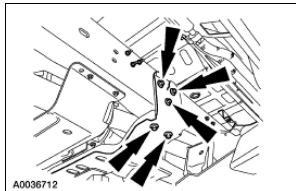
13. Disconnect the wire loom from the crossmember.



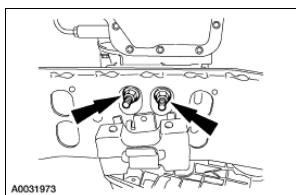
14. Remove the crossmember bolts.



15. Remove the crossmember bolts.



16. Remove the transmission mount nuts and the crossmember.



#### F-Super Duty and 4x2 vehicles

17. Remove the RH crossmember nuts.

