10R80 INSTALLATION GUIDE

10R80P4

PRE-INSTALLATION CHECKS

- Remove and inspect the flex plate for cracks.
- If transmission is a 4x4 you must replace input seal on transfer case.
- Clean the Mass Air Flow (MAF) sensor.
- The cooler in the radiator and/or external cooler must be flushed with a hot flush machine for a minimum of 1 hour. Flush in both directions. If the cooler cannot be flush, it must be replaced.
- This is a fully electronic unit, you must verify the integrity of the electrical system. Check battery voltage, terminals and grounds.
- The wiring harness that plugs into the transmission must be clean and fit tight. Use dielectric grease on the connector.

- Many late model vehicles are equipped with an Auxiliary Battery, any vehicles that require disconnection from battery power must also make sure that Auxiliary power is also disconnected from the system.
- **Manufacturer Instructions:** Always refer to your specific vehicle's service manual for the exact location of the auxiliary battery and disconnection procedures. These vary widely between manufacturers.
- **Safety:** Auxiliary batteries often power the safety features of the vehicle. Disconnecting them before working on the vehicle prevents accidental activation of those systems or electronics, reducing the risk of injury or damage.

NOTE: This unit is shipped to you pre-filled with approximately 13 qts. This WILL NOT account for the transmission vehicle cooling system. You must verify proper fluid level by using the Fluid Fill and Check Procedure detailed below. **Only use the supplied transmission fluid.**

FLUID & FILL CHECK PROCEDURE

WARNING: Exercise extreme caution anytime fluid check/fill procedure is used due to the hot temperature of the fluid, transmission fill plug and nearby components.

This unit calls for Mercon ULV. It's specially formulated for use in these units. Failure to use the correct fluid will lead to shift quality concerns and unit failure. Always ensure that the level of the fluid is correct by using the following procedure:

- Connect the diagnostic scan tool and position the vehicle on a hoist.
- Place the transmission selector in each gear position with the engine running, holding approximately 6 seconds in each range.
- Place the transmission selector in Park.
- Remove the transmission fluid fill plug and remove the transmission fluid level indicator from the plug.
- Check the transmission fluid level using the transmission fluid level indicator.
- **Transmission fluid level indicator with letters A & B:**
- The correct transmission fluid level is at the center of the "B" area on the transmission fluid level indicator when the transmission fluid temperature is between 96°C – 101°C (206°F – 215°F).

- **Transmission fluid level indicator with numbers 1 through 6:**
- The correct transmission fluid level is between 4 and 5 on the transmission fluid level indicator when the transmission fluid temperature is between 96°C – 101°C (206°F – 215°F).

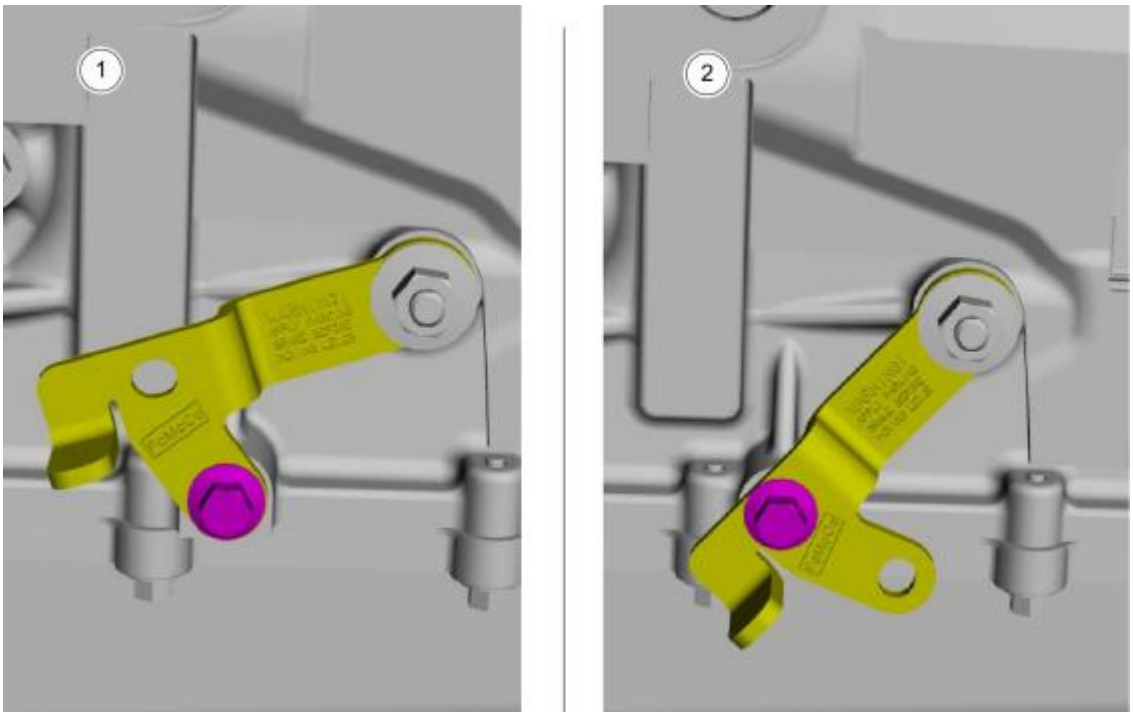
- Do not overfill the transmission.
- The dip stick should be torqued to 20 lb. ft. (27 Nm).

PARK OVERRIDE LEVER OPERATION

WARNING:

- Before transmission installation, verify the lever is secured to case with bolt in the lower lever slot (figure 1). This is for normal vehicle operation of the park locking system.
- If vehicle needs to be towed or service needed that would require manual release of park, apply parking brake first anytime vehicle is on the ground. Remove bolt and place lever in lower position and secure it with bolt through upper slot (figure 2).
- Bolt torque is 177 inch lbs.

Only release park brake in this position if ready to tow or vehicle is on a hoist.



PROGRAMMING & DRIVE LEARN PROCEDURE

THERE ARE TWO IMPORTANT STEPS TO COMPLETE THE INSTALLATION.

IMPORTANT! You must make sure your PCM is programmed to the correct 13 digit solenoid body strategy and 12 digit solenoid body identification. Connect scan tool, select powertrain, transmission and solenoid body identification and strategy data file. Compare the solenoid body identification and solenoid body strategy to the identification tag on left side of transmission case.

The 13 digit solenoid body strategy number consists of only numbers. If either the solenoid body identification or solenoid body strategy on the scanner do not match the service tag numbers on the transmission a solenoid body strategy data download is required

Notice: Failure to match solenoid body strategy and solenoid body identification numbers will cause damage to the transmission and cause drivability concerns

If you are not equipped to download solenoid body identification and strategy data file, the vehicle must be towed to a dealership for this procedure.

Programming Sequence

You must verify that your ECM/TCM software has the latest updates by using either FJDS/IDS or FDRS. Software updates can be found at www.motorcraftservice.com. Update the FJDS/IDS or FDRS software prior to attempting any programming.

Follow these steps:

1) Update Calibration (if update available)
2) Program Solenoid Strategy & ID numbers supplied with unit.
3) Reset KAM (Keep Alive Memory)
4) Clear Transmission Adapts
5) Resume Transmission Adapts
6) Misfire Monitor Neutral Profile Correction procedure (Required whenever transmission is removed)

Note: Failure to perform the reprogram procedure can cause the "Wrench" light to illuminate and cause drivability and shift concerns.

"Drive" Learn Procedure

Perform this procedure before condemning the transmission for removal if you suspect that prior repairs were performed that may have affected the transmission operation. This procedure must be performed if the transmission was rebuilt or replaced, the TCM was replaced or reprogrammed, major engine work was performed, or air/fuel management adaptive values were reset. The Adaptive Learning Drive Cycle is performed on a level road as follows:

1) Record then clear DTC's.
2) Clear adaptive tables. It is required for overhaul replacement and when the solenoid body has been replaced.
3) Drive the vehicle until the engine and transmission reach normal operating temperature (AT LEAST 170 Degrees F).
4) Accelerate from a stop with light throttle (15%), ensuring that upshifts 1st through 8th occur at engine speeds between 1300-1600 rpm.
5) Continue to accelerate (may apply slightly more throttle after 7-8 upshift at 32-38 mph (51-61 km/h) until you achieve 55 mph (88 km/h) and the 8-9 and 9-10 shifts complete.
6) Brake gently to a complete stop and hold the foot brake for five (5) seconds.
7) Shift the transmission to Neutral. Wait 1 second.
8) Shift the transmission to Reverse. Wait 2 seconds.
9) Shift the transmission to Neutral. Wait 1 second.
10) Shift the transmission to Drive. Wait 2 seconds.
11) Repeat Steps 3 through 9 six (6) additional times.
12) After the final step, place the vehicle in park and cycle the ignition key off. Wait 3-5 minutes before driving to ensure enough time for the coding to be written to the module.

TSB 22-2339- Some vehicles equipped with 10R80 automatic transmission may exhibit an illuminated malfunction indicator lamp (MIL) with diagnostic trouble code (DTC) P163E stored in the powertrain module (PCM) or the transmission control module (TCM) after replacing the main control valve body. This may be due to software incompatibility between the replacement main control valve body solenoid strategy file and the PCM/TCM software. To correct this condition, follow the Service Procedure to enter only the 13-digit solenoid body strategy when downloading transmission strategy.

1) Using the latest version of the appropriate Ford scan tool, clear DTC's.
2) Perform the Transmission Strategy Download procedure entering only the 13-digit solenoid body strategy when prompted to enter transmission characterization information. Entering the 12-digit solenoid body identification will produce a DTC P163E. Refer to Workshop manual (WSM), Section 307-01.

NOTE: Advise the customer that this vehicle is equipped with an adaptive transmission shift strategy which allows the vehicle's computer to learn the transmission's unique parameters and improve shift quality. When the adaptive strategy is reset, the computer will begin a relearning process. This relearning process may result in firmer than normal upshifts and downshifts for several days.

Info for Installer – Not Front Office

Installer: Scan QR Code for Install Highlights & Common Mistakes