IMPORTANT!

Included in this packet:

- Installation Instructions
- Transmission Core Return Procedures

For technical help call 800-392-7946

Visit us on the Web at www.fordparts.com

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Core Return Guidelines

For Remanufactured Engines & Transmissions

FORD ENGINES & TRANSMISSIONS, CYLINDER HEAD & CRANKSHAFT KITS

The Genuine Ford program is a one-for-one (same vehicle application) exchange program.

“No-Risk” Core Return Policy

1. Core must be returned in original dunnage.

2. All cores are to be drained of all fluids (oil and coolant) prior to being inserted into the original dunnage!

3. Core must be fully assembled and as complete as the replacing engine or transmission (i.e., must include cylinder block, cylinder head(s), crankshaft, camshaft, main caps, etc.). Transmissions must include torque converter.

Quality Remanufactured Parts

Powertrain Assistance Center
800-392-7946

For information about other quality parts for Ford, Lincoln and Mercury vehicles,

Visit us on the web at www.fordparts.com

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**ORIGINAL (CORE) UNIT SHIPPING GUIDELINES**

**Attention:** The shipping container must be used to return the original transmission being removed from the vehicle.

- Fully drain fluid from transmission pan and torque converter.
- Ensure that all components to be transferred have been removed from the original unit and installed on the replacement unit.
- Verify dowel pins are removed from the original unit and reinstalled in the engine block.
- Transfer all shipping caps and plugs from the replacement unit to the original unit.
- Ensure the returned transmission is completely reassembled.
- Install the torque converter shipping strap.

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**GENERAL REMOVAL/INSTALLATION GUIDELINES**

- Verify that the replacement unit is the correct unit for the vehicle. Refer to the Remanufactured Engines and Transmissions Catalog or Fordparts.com to ensure that the replacement transmission part number is correct prior to removal of the original unit.
- Follow the appropriate Workshop Manual for exact procedures and specifications required to remove and replace the transmission assembly.
- Perform all mandatory procedures identified on this sheet.
- Prior to the installation of the transmission, lightly lubricate the torque converter pilot that fits into the engine crankcase bore with multipurpose grease, specification #ESB-M1C93-B or equivalent.
- The replacement transmission is filled with transmission fluid. After installation, ensure the fluid is at the proper level. For complete fluid level checking procedures, refer to the appropriate Workshop Manual. If required, use fluid type identified on tag attached to the replacement transmission.

**NOTE:** When checking the transmission fluid level, use a scan tool to verify that the transmission fluid temperature is between 85°C and 93°C (185°F-200°F). Do not overfill the transmission.

- The Powertrain Control Module (PCM) must be updated using the new Solenoid Body Strategy Data File and Solenoid Body ID. Failure to update the PCM can cause erratic transaxle operation. Use the scan tool to obtain the Solenoid Body Strategy Data File (www.motorcraft.com) and download it to the PCM. Follow the procedure in the Service Manual Section 307–01 — Diagnosis and Testing — Solenoid Body Strategy.
- Verify that the PCM is programmed to the latest available calibration. Use a scan tool to update the PCM calibrations.
- Use a scan tool to check for Diagnostic Trouble Codes (DTCs) stored by the PCM. Perform diagnostic and/or repair procedures as outlined in the Workshop Manual to correct these codes prior to returning the vehicle to the customer.
TRANSMISSION FLUID COOLER BACKFLUSHING AND CLEANING

**Mandatory**

**CAUTION:** Failure to properly flush cooler and lines will cause transmission failure!

**CAUTION:** On vehicles equipped with an in-line cooler bypass valve, the bypass valve **MUST BE REPLACED** whenever the transmission is replaced.

**NOTE:** For complete flushing instructions, refer to the appropriate Workshop Manual.

**NOTE:** The REAR transmission case fitting receives the cooler return line (the fluid coming out of the cooler and returning to the transmission).

Thoroughly backflush the transmission cooler and lines using Rotunda tool 222-00007 (or equivalent) with a Ford-approved transmission fluid as the flush agent. The Rotunda flushing unit is highly recommended as it has a flow meter, maintains fluid at 140°F, pulsates during cleaning, and air purges before and after flushing, which is crucial for maximum effectiveness. Any substitute flushing tool considered must have these features to ensure success.

**NOTE:** Monitor flow meter to ensure sufficient flow is present. Refer to the appropriate Workshop Manual.

TECHNICAL SERVICE BULLETIN AND HELPFUL HINTS INFORMATION

**Early and Repeat Transmission Failures/Erratic Shift Operation**

**Potential Causes:**

- Failure to complete proper diagnosis and verification of repair prior to and after transmission replacement — failure may have been caused by components external to the transmission.
- Inspect the wiring harness plug to determine if the old solenoid body receptacle seal is stuck to it. If so, the vehicle wiring harness will not fully seat into the remanufactured transmission’s solenoid body receptacle. Remove the old seal and reseat to correct.
- Ensure that the transmission cooler/s, cooler lines and cooler hoses are not blocked, restricted, leaking or damaged. See the appropriate Workshop Manual.
- Incomplete or incorrect transmission cooler system flushing procedures followed.
- PCM is not at latest calibration level.
- Vehicle wiring harness damaged or chafed — closely inspect the harness for any damaged areas, particularly on modified/fleet vehicles. Correct any concerns of damage, corrosion or routing and ensure there are no DTCs using the correct scan tool.
- Ensure that the harness plug has no damaged pins, cracks or corrosion — correct as necessary.
- Engine performance issues can adversely affect transmission operation — be sure to correct any drivability concerns and/or codes during course of repair.

DRIVE CYCLE PROCEDURE

**Mandatory**

The following procedure will allow the PCM to learn adaptive transmission pressure control for optimal shift quality. Complete the steps listed below:

**NOTE:** Clear Keep Alive Memory (KAM) before performing drive cycle. Use a scan tool.

**NOTE:** The engine and transaxle must be at normal operating temperature.

1. With the engine running and the brake applied, move the selector lever through the gears in the following order, pausing in each gear for 4 seconds: N, R, N, D, R, N. Repeat this pattern 2 times. If any engagements feel soft or harsh, repeat this procedure.
2. Drive the vehicle and accelerate at a moderate throttle so that the upshifts occur at 2000 rpm up to 50 mph (80 km/h) and brake lightly to a stop. Repeat this pattern 2 times.
3. Drive the vehicle and accelerate at a moderate throttle so that the upshifts occur at 3000 rpm up to 50 mph (80 km/h) and brake lightly to a stop. Repeat this pattern 2 times.
4. With the engine running and the brake applied, move the selector lever through the gears in the following order, pausing in each gear for 4 seconds: N, R, N, D, R, D, N. Repeat this pattern 2 times.
5. From a stop, accelerate to 25 mph, and then release the throttle. Keeping the throttle closed, pull the selector lever into the “L” position and coast down to 10 mph. Repeat the pattern 2 times.

GENERAL INFORMATION

Additional dealer sources of information include fmcdealer.com and the Professional Technician Society (PTS) website. Informational sources include the Remanufactured Engines and Transmissions Catalog or Fordparts.com. PTS includes information on TSB, Service Tools and Workshop Manuals.

TRANSMISSION ADJUSTMENT REQUIREMENT

**Mandatory**

**WARNING:** Adjust and check the transmission shift linkage as outlined in the appropriate Workshop Manual. Adjustment must be done in Drive.