

A T T E N T I O N

YOUR WARRANTY DEPENDS ON YOUR ADHERENCE TO THESE GUIDELINES

5R55S & 5R55W Ford Automatic Transmission

INSTALLATION GUIDE

PRE-INSTALLATION

This is an electronically-controlled transmission with a complex shift adapt system. The following information is VERY IMPORTANT to understand and perform correctly. Failure to do so may cause damage to your new transmission and/or be the main cause of transmission performance problems.

Prior to the installation of the replacement transmission, scan vehicle for engine and transmission codes, record all codes, and resolve all engine codes prior to transmission replacement.

Inspect the transmission wiring harness for damaged wires or connectors. Verify proper function of the entire electrical system including the battery, alternator, mass air flow sensor, throttle position sensor, and, most importantly, the vehicle grounds.

Completely clean, hot flush, and flow test the entire transmission cooling system. If the cooling system is damaged, plugged, or glycol/water contaminated, it must be replaced. Failure to do so is the leading cause of transmission failure after replacement.

CHECKLIST

- Compare the replacement transmission and torque converter to the original before installation
- Scan vehicle computer, record and resolve all codes before removing transmission
- Hot flush or replace the transmission cooler and lines
- Inspect flex plate closely for cracks or damage
- Inspect crank pilot bearing for wear and apply grease to aid with installation
- Verify both dowel pins are present, clean, and in good condition
- Verify torque converter is properly and completely installed
- Check torque converter bolts for proper length
- Inspect mounts, carrier bearing, driveshaft, yoke, and U-joints
- The PRNDL (Neutral Safety Switch) is required to be swapped from core. Verify PRNDL is free of defect prior to installing in your replacement transmission
- Fill transmission with supplied synthetic or OEM approved fluid

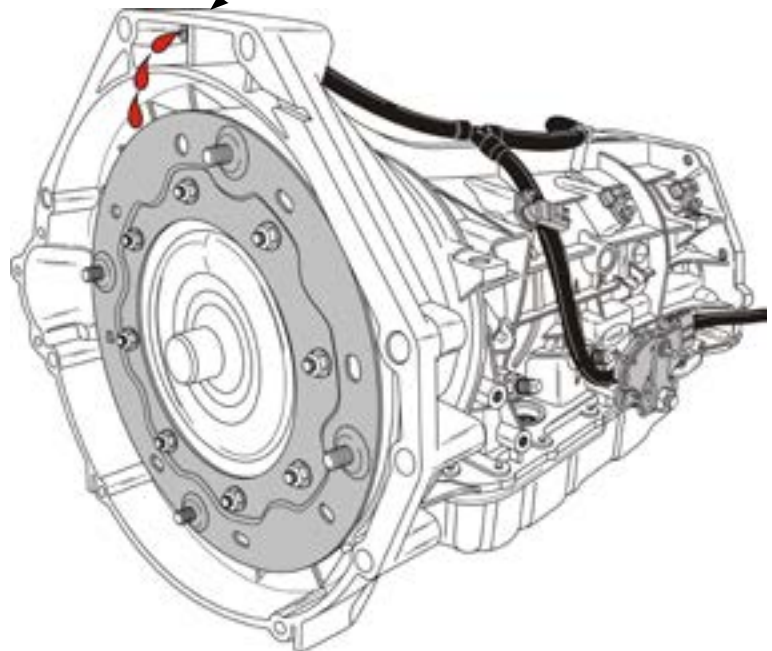
FLUID CHECK PROCEDURE

Due to the lack of a fill tube and dipstick, fluid fill and level check procedures can be time consuming and possibly confusing. It also requires the ability to pump fluid into the transmission from a fill/check level plug located in the bottom pan.

THE NUMBER ONE CAUSE FOR FLUID LEAKS FROM THE CONVERTER HOUSING IS OVERFILLING THE TRANSMISSION.

An overfilled transmission will cause fluid to be pushed out the vent making it appear that the transmission is leaking from the converter housing (see figure below). It is important that the transmission is filled to its proper level for the transmission to function correctly.

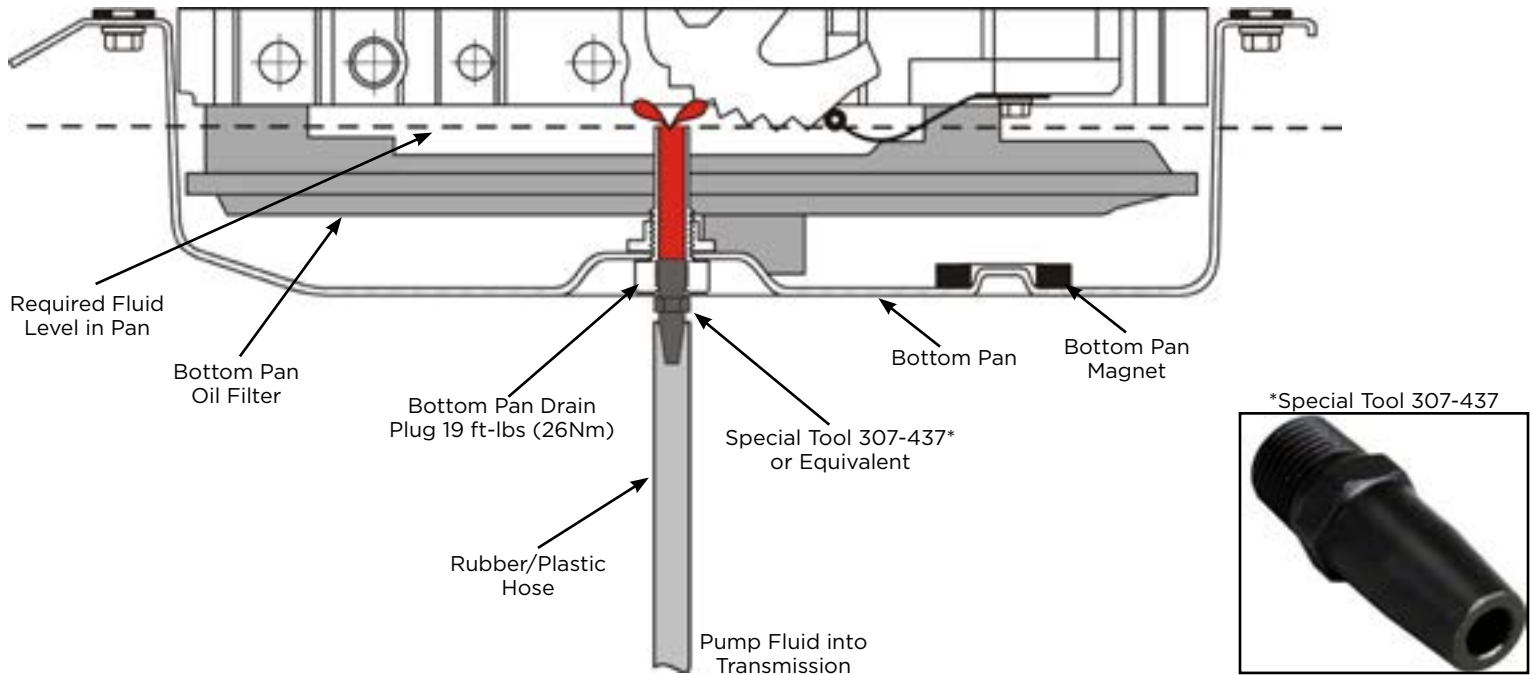
TECH TIP: Lay a bead of silicone across the top of the converter housing to prevent AC condensation from filling the vent pocket which will put water into the transmission.



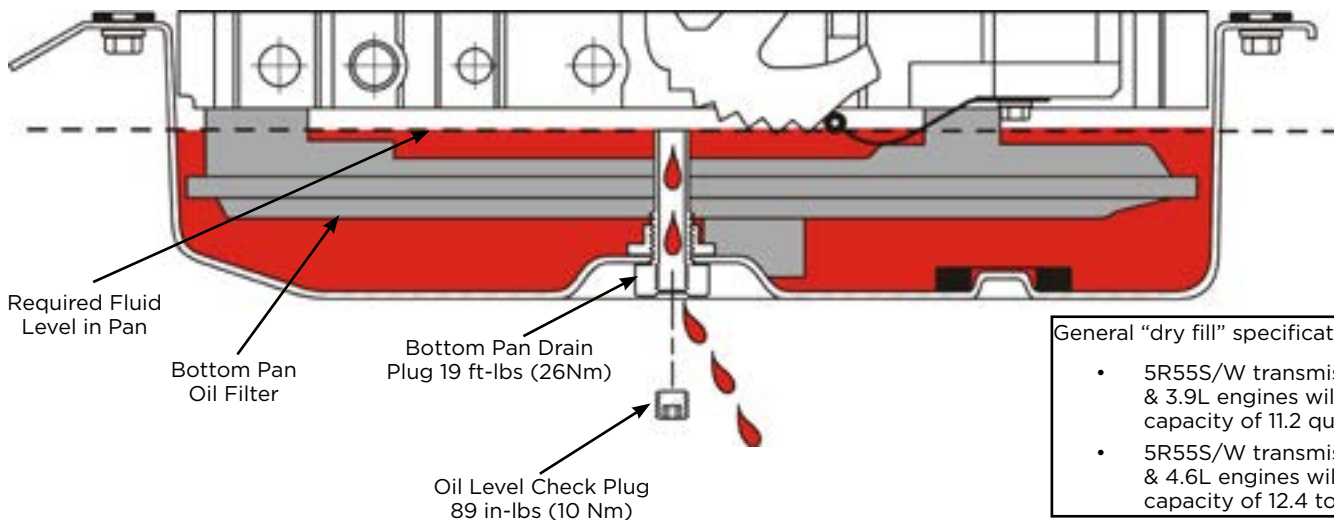
*An overfilled transmission will leak from the converter housing. Fluid will be pushed out of the vent as pictured above in red.

FLUID FILL PROCEDURE

1. Thoroughly flush and clean the cooling system.
2. With the torque converter correctly installed, place the transmission onto the jack.
3. Install the transmission into the vehicle being careful not to allow the converter to come out of the pump. **Do NOT rotate the engine counterclockwise when installing the torque converter nuts. Damage may occur to the engine.**
4. Remove the T30 torx fill/level check plug from the center of the drain plug (as seen below) and install Ford's 307-437 special tool or equivalent.



5. Attach a hose to the special tool and pump 8 quarts of synthetic fluid or Mercon® V fluid into the transmission.
6. Install a scan tool to view transmission fluid temperature and start the engine.
7. Pump 2 additional quarts of fluid and let the engine idle (at approximately 650 RPM's) bringing the temperature up to 80°F - 120°F (27°C - 49°C).
8. With the brakes applied, move the gearshift lever through each gear range stopping for 5 seconds in each. Then return the gearshift lever to the park position.
9. Be aware that this transmission comes with approximately 1 to 2 quarts of transmission fluid in it. Once 10 quarts have been pumped into the transmission, begin to check the fluid level.
10. While the engine is at idle in the Park position, carefully remove the "hot" special tool or equivalent from the center of the drain plug. If no fluid comes out, add fluid until it comes out of the hole. If fluid does come out of the hole, let it drain until there is a steady, translucent spaghetti stream of fluid or a rapid drip. Quickly and carefully install the T30 torx fill/check level plug and tighten to 89 in-lbs (10Nm).



General "dry fill" specifications

- 5R55S/W transmissions behind 3.0L & 3.9L engines will have a dry fill capacity of 11.2 quarts.
- 5R55S/W transmissions behind 4.0L & 4.6L engines will have a dry fill capacity of 12.4 to 12.7 quarts.

TEST DRIVE CYCLE PROCEDURE

1. Record and then erase quick test codes.
2. Perform a KAM (Keep Alive Memory) reset. A scan tool will be required to perform this procedure.
3. Warm engine to normal operating temperature.
4. Make sure transmission fluid level is correct
5. With transmission in D position, moderately accelerate from stop to 50 mph. This allows the transmission to shift into 5th gear. Hold speed and throttle open and steady for a minimum of 15 seconds.
6. With the transmission in 5th gear and maintaining a steady speed and throttle opening, lightly apply and release brake to operate brake lights. Then hold speed and throttle steady for a minimum of 5 seconds.
7. Brake to a stop and remain stopped for a minimum of 20 seconds.
8. Repeat steps 5 through 7 at least 5 times.
9. Carry out quick test, record and correct any continuous DTCs.
10. Install vehicle back on a hoist and reconfirm the transmission fluid level is correct.
11. Verify that there are no leaks present.

TROUBLESHOOTING GUIDE

Vent Tube Replacement

You will have to remove the external vent assembly from the original transmission and install it on the replacement transmission.

1. Remove the front by squeezing the inner tabs.
2. Remove the middle fitting, if present, by using a pair of locking pliers to twist the fitting while pulling out.
3. Remove the rear fitting by squeezing and twisting the tabs. Be careful to not bend the fitting to the side.
4. Install tube assembly by inserting the rear fitting, middle fitting, and front fitting, in that order.
5. If a replacement is needed, use the following part numbers:
 - For 5R55S and 5R55W units: OEM# 6L2Z-7034-CA

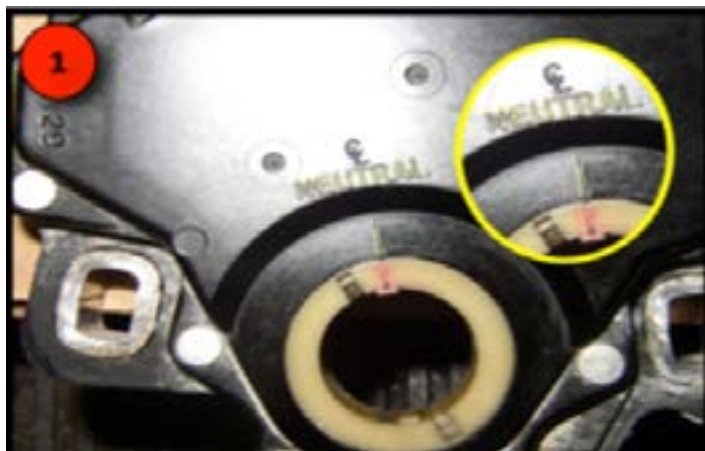
8-Lug Torque Converter Alignment

Some 5R55 units use an 8-lug torque converter. In order to properly align the flex plate adapter, you will need to use a specific tool. Failure to properly align the flex plate adapter can result in vibration, leaks, or failure of the torque converter, pump, and bushings.

5R55 S/W Harsh Engagement Into Reverse

STEP 1

Make sure the alignment marks are aligned. If the adjustment is even slightly off, the computer will read a reverse signal and boost line pressure before the manual valve is moved into the reverse position.



STEP 2

Verify the shifter linkage is lined up properly through each range. If not, place the shifter in the manual low position on the column. Pop the shifter cable off the manual arm on the transmission. With a pick, pull the lock tab toward the outside to release the lock and slide the tab up. Move the lock and center it onto the manual arm ball. Snap the lock onto the ball and slide the lock tab down. Move the shifter handle into the neutral position and verify alignment.



*(steps 3 and 4 on next page)

STEP 3

If alignment cannot be achieved, verify that the shifter cable bracket is not bent or out of position. Check the witness marks where the bolts go through the bracket and line the bracket up to that.



STEP 4

If alignment still cannot be achieved, inspection of the column itself may be needed. There should be no slop felt while moving the shifter handle. If there is, either the shifter cable is stretched or the shifter mechanism is worn out. At this time, you cannot purchase any of the shifter mechanism parts separately; you have to buy a column kit.

