ATTENTION

YOUR WARRANTY DEPENDS ON YOUR ADHERENCE TO THESE GUIDELINES

5R55S & 5R55W
Ford Automatic Transmission

INSTALLATION GUIDE

READ THIS ENTIRE DOCUMENT BEFORE BEGINNING TRANSMISSION INSTALLATION

CONTENTS

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 is damaged, plugged, or glycol/water contaminated, it must be replaced. Failure to do so is the leading cause of transmission failure after replacement.

FLUID CHECK PROCEDURE

Due to its lack of dipstick, checking the fluid level on vehicles equipped with this transmission can be very time-consuming and confusing. There is a simple way to fill the transmission before it is installed in your vehicle.

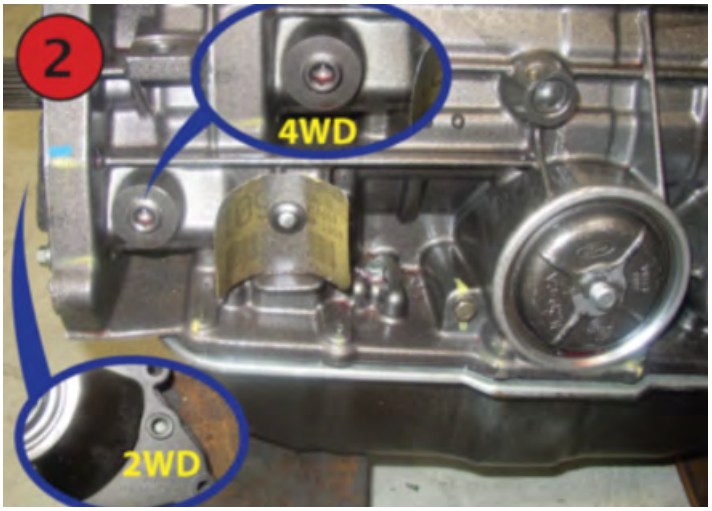
Once the transmission is on the jack and ready for installation, fill it using the following procedure. Use only the supplied synthetic or OEM approved fluid.

STEP 1

Install a funnel into the center speed sensor hole on top of the transmission.

Pour in 8 quarts of ATF.

Install speed sensors.



STEP 2

Install the transmission in the vehicle.

Remove the 5/16” hex plug (if equipped, this is the fill plug).

Attach a scan tool, start the vehicle and run the engine until the TFT sensor reading is at least 80 degrees F.

Move the gearshift lever through each gear range, stopping for 5 seconds in each and returning to the park position.

Verify the transmission is in the park position and raise the vehicle on a lift keeping the vehicle level.

STEP 3

Remove the T30 torx plug from the center of the drain plug.

DO NOT REMOVE THE 7/8” DRAIN PLUG.

STEP 4

If no fluid comes out of the hole, fluid will need to be added. Fill fluid through the fill plug (if equipped) or use special tool 307-437.

If fluid does come out of the hole, allow the fluid to drain until it comes to a drip.

Once fluid comes to a drip the fluid is at the correct level, reinstall the T30 torx plug and proceed to the drive cycle test procedure.

TEST DRIVE CYCLE PROCEDURE

The transmission drive cycle test must be followed exactly. Transmission failure must occur four times consecutively for shift error DTC code to be set, and five times consecutively for continuous torque converter clutch code set.

Perform a KAM (Keep Alive Memory) Reset. A scan tool will be required to perform this procedure.

1. Record and then erase Quick Test codes.
2. Warm engine to normal operating temperature.
3. Make sure transmission fluid level is correct.
4. With transmission in D position, moderately accelerate from stop to 50 mph (80 km/h). This allows the transmission to shift into 5th gear. Hold speed and throttle open and steady for a minimum of 15 seconds.
5. 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.
6. Brake to a stop and remain stopped for a minimum of 20 seconds.
7. Repeat steps 4 through 6 at least 5 times.
8. Carry out Quick Test and record continuous DTCs.
9. Install vehicle back on a hoist and reconfirm the transmission fluid level.
10. Verify that there are no leaks present.

It is now safe to release the vehicle.

CHECKLIST

- Compare replacement transmission and torque converter 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
- Inspect and install PRNDL Neutral Safety Switch
- Fill transmission with supplied synthetic or OEM approved fluid

TROUBLESHOOTING GUIDE

Vent Tube Replacement

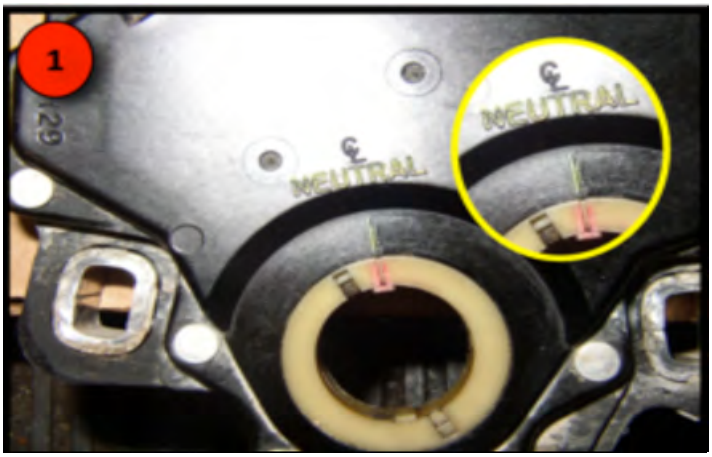
You will have to remove the external vent assembly from the original transmission and install it on the replacement transmission.

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
   * For 5R55N units: OEM# 4W4Z-7034-AB

8-Lug Torque Converter Alignment

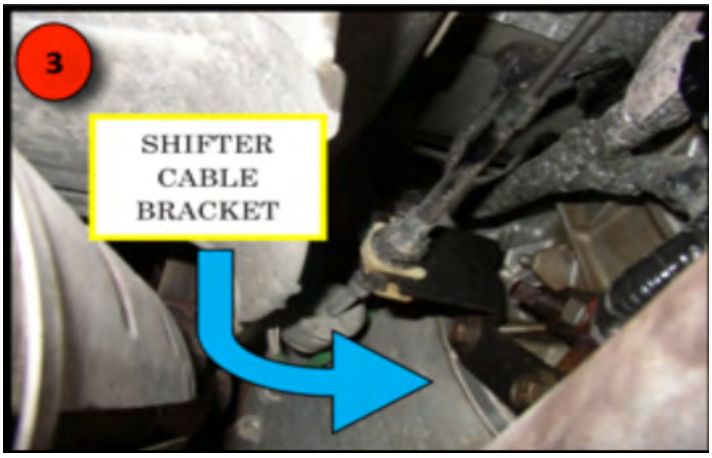
Some 5R55 units use an 8-lug torque converter. In order to properly align the flex plate adapter, you will need to use a specific tool. Failure to properly align the flex plate adapter can result in vibration, leaks, or failure of the torque converter, pump, and bushings.

5R55 S/W Harsh Engagement Into Reverse



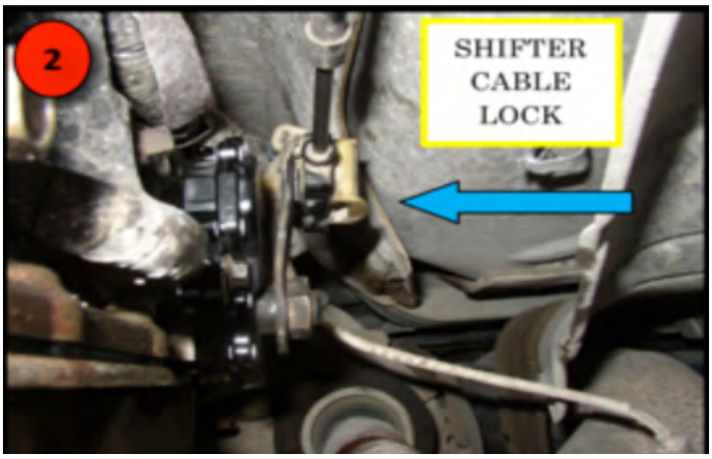
STEP 1

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 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 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.

STEP 4

If the 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.