

[Back To Article](#)

5R55S/5R55N/5R55W TRANSMISSIONS - SHIFT CONCERNS, LOSS OF 2ND, 3RD AND 5TH GEAR, INCORRECT RATIO DTC'S - PROCEDURE TO INSPECT AND REPAIR SERVO PIN BORE WEAR

TECHNICAL SERVICE BULLETIN

Reference Number(s): 09-12-12, Date of Issue: June 29, 2009

FORD: 2002-2005 Thunderbird; 2005-2009 Mustang; 2002-2009 Explorer; 2007-2009 Explorer Sport Trac

LINCOLN: 2002-2006 Lincoln LS; 2003-2005 Aviator

MERCURY: 2002-2009 Mountaineer

ISSUE

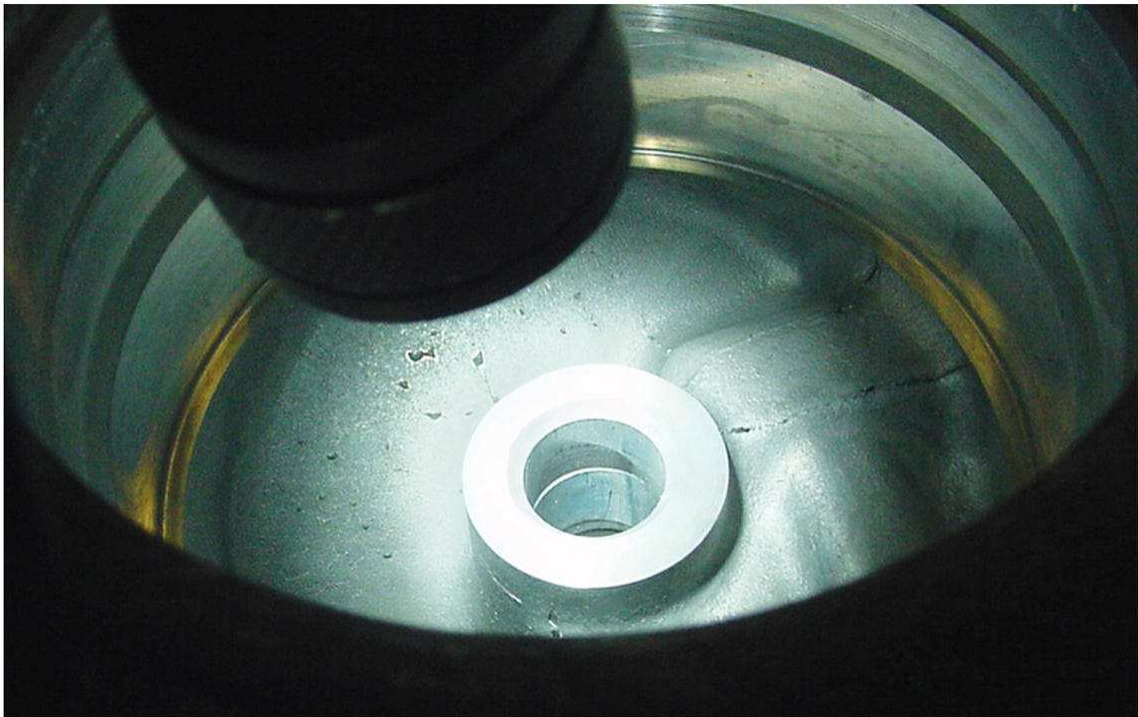
Some 2002-2009 Explorer, Mountaineer, 2007-2009 Explorer Sport Trac, 2002-2006 Lincoln LS, 2005-2009 Mustang, 2002-2005 Thunderbird and 2003-2005 Aviator vehicles equipped with a 5R55S, 5R55W, and 5R55N transmission may experience shifting concerns. A loss of 2nd, 3rd and 5th gear, may have overdrive band or intermediate band failures due to servo pin case bore wear causing reduced apply pressure.

ACTION

Follow the Service Procedure steps to correct the condition.

SERVICE PROCEDURE

For transmissions that have been determined to require an overhaul or rebuild and the overdrive band or intermediate band have excessive wear or burned/damaged band friction material, the cause maybe excessive servo pin case bore wear generally found on higher mileage vehicles, usually accompanied with incorrect ratio diagnostic trouble codes (DTCs), condition becomes worse when hot. ([Fig. 1](#))



G00484272

Fig. 1: Servo Pin Case Bore

In our instructions, when we refer to the overdrive bore, we are talking about the smaller bore located closest to the bell housing. When we refer to the intermediate bore, we are talking about the larger bore located next to the line pressure tap.

Inspect and repair the worn-damaged transmission case servo pin bore utilizing the Rotunda Tool 5RW Master Kit part number NRL5RW servo pin bore repair system (1-800-768-8632 ☎ option 6).

1. Install the drill jig into the case by setting the jig into the case servo bore. Retain the jig in the case with the servo's snap-ring. ([Fig. 2](#))



G00484273

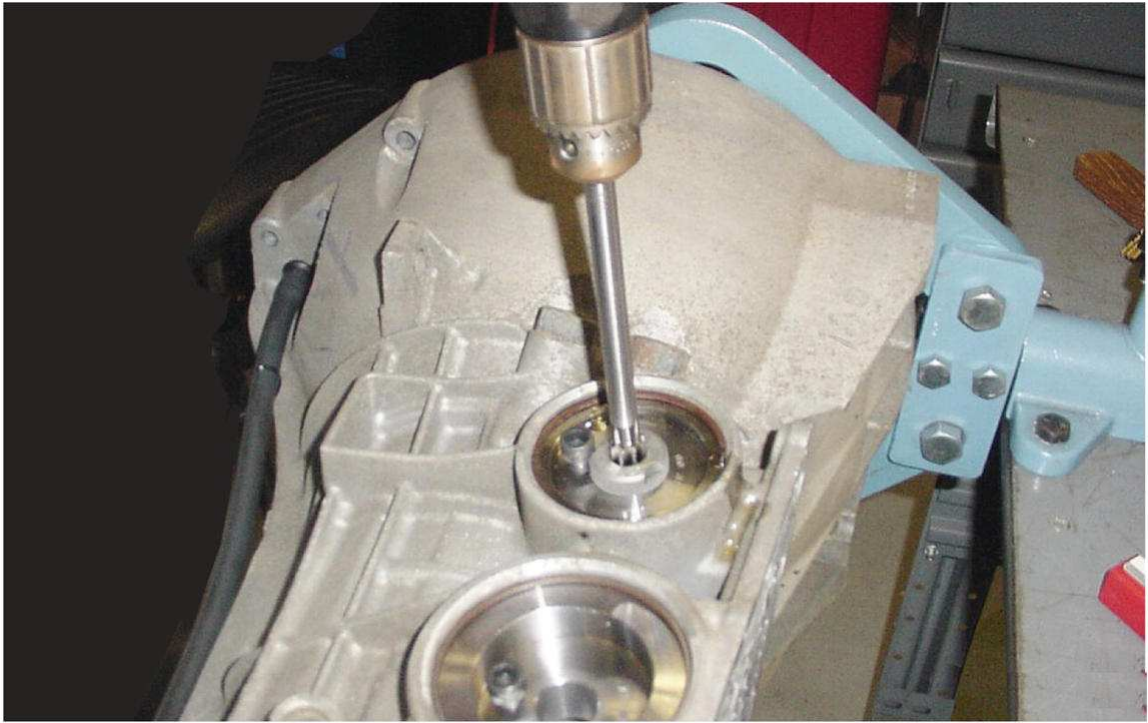
Fig. 2: Drill Jig Installation

2. Drop the 9/16" guide into the jig. It doesn't matter which one of the lands on the guide you use, as long as one of the lands is under the 3/8" Allen screw.

NOTE: CUTTING OIL MUST BE USED FOR LUBRICATION. THE USE OF SUBSTITUTES, PARTICULARLY ATF, MAY RESULT IN AN OVER-SIZED BORE.

3. Ream out the bore using the 9/16" reamer, applying ample lubrication.

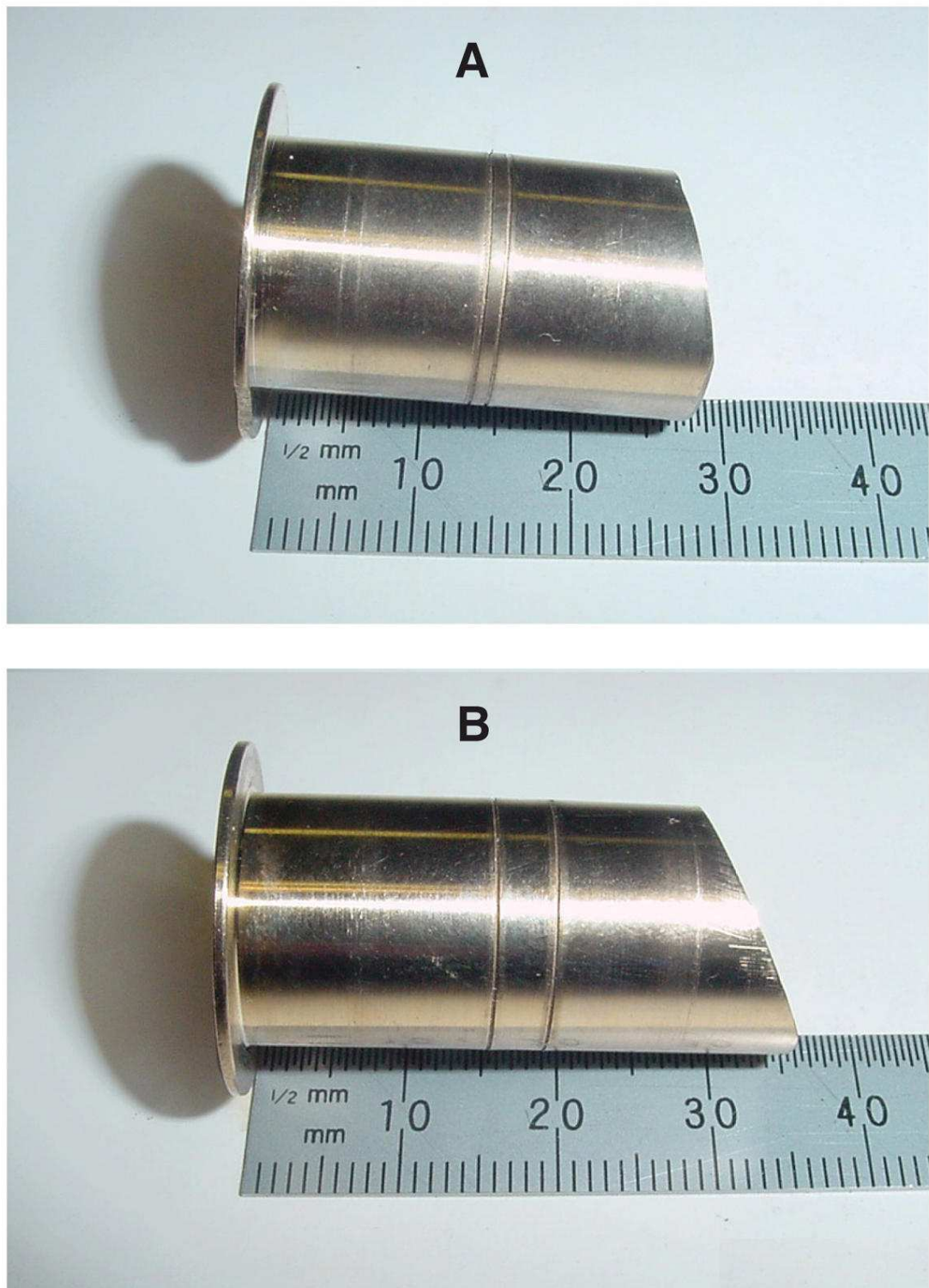
NOTE: DO NOT REAM ABOVE 500 RPM. ([Fig. 3](#))



G00484274

Fig. 3: Reaming Servo Pin Case Bore

4. Replace the 9/16" reamer guide with the 5/8" guide, and the 9/16" reamer with the 5/8" reamer.
5. Ream the bore out using the 5/8" reamer with ample lubrication. Take care not to either push too hard on the reamer or turn the reamer faster than 500 RPM when reaming. Either one can overly enlarge the bore, causing a loose bushing.
6. Clean the case before proceeding to Step 7. This kit utilizes two different bushings.
 - a. The shorter bushing is for the intermediate servo and is identified by a flat ground in the bushing's hat. ([Fig. 4A](#))
 - b. Overdrive servo bushing. ([Fig. 4B](#))



G00484275

Fig. 4: Intermediate Servo And Overdrive Servo Bushings

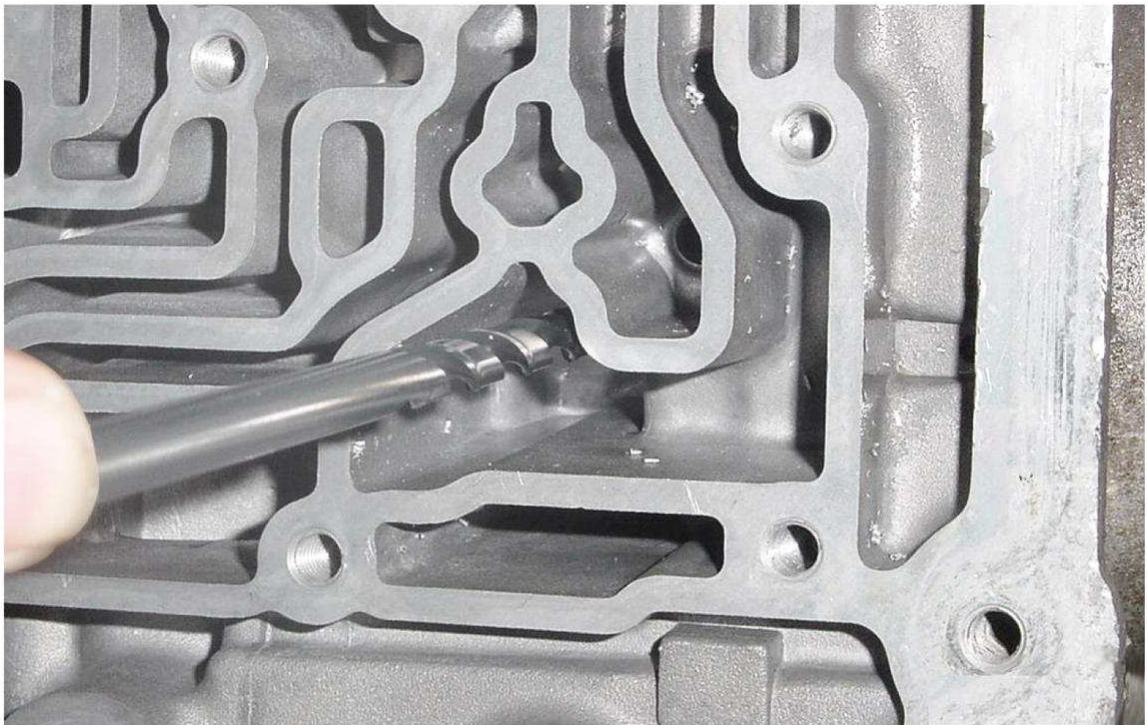
- c. Both bushings are chamfered and need to be installed with the recessed edge up (away from the valve body).
7. Apply Loctite® 680 Retaining Compound or equivalent to the outside of the bushing and drive the bushing in by hitting the driver until the bushing bottoms. ([Fig. 5](#)) The 5RW kit uses a smaller diameter installation tool identified by a groove cut in the handle.



G00484276

Fig. 5: Installing Bushing

8. After installing the bushing, using a 15/64" bit, drill a hole in the side of the bushing by following the servo apply holes in the case 5R55S case shown.
 - a. Overdrive servo. (**Fig. 6**)



G00484277

Fig. 6: Overdrive Servo Apply Hole

b. Intermediate servo. ([Fig. 7](#))



G00484278

Fig. 7: Intermediate Servo Apply Hole

NOTE: **FAILURE TO PERFORM CROSS DRILL STEP IN THE NEW BUSHING WILL RESULT IN A NO SHIFT CONDITION.**

9. Insert the provided sizing pin into the bore. It maybe necessary to start the pin in the bushing with a rubber mallet. Once the pin is inside the bushing, use a punch to drive the pin all the way through the bushing. Repeat as necessary. ([Fig. 8](#))



G00484279

Fig. 8: Sizing Pin Inserted Into Bore

Correctly installed bushings will be flush inside of case. (**Fig. 9**)



G00484280

Fig. 9: Bushings Flush Inside Of Case

The 9/16" and 5/8" reamers require typical maintenance and cleaning of aluminum build up on the cutting edges to help provide optimum bushing installation and increased tool life.

After bushing installation, thoroughly wash the case before rebuilding transmission.

WARRANTY INFORMATION

WARRANTY STATUS: Information Only.

Copyright 2015 Mitchell Repair Information Company, LLC. All Rights Reserved.

Article GUID: B00343070