

## Differential Assembly: Customer Interest Drivetrain - Limited Slip Differential Chatter

TSB 06-4-4

03/06/06

LIMITED SLIP AXLE CHATTER, SHUDDER, BINDING  
SENSATION, OR VIBRATION DURING LOW SPEED  
TURNING MANEUVERS

### FORD:

2002-2004 Mustang, Explorer  
2003-2004 Expedition  
2004 F-150

### LINCOLN:

2003 Navigator

### MERCURY:

2002-2004 Mountaineer

This article supersedes TSB 06-02-16 to update the Service Procedure.

### ISSUE

Some 2003-2004 Expedition, 2003 Navigator, 2004 F-150 vehicles equipped with a 9.75" or 8.8" limited slip rear axle, and 2002-2004 Explorer 4dr, Mountaineer, and Mustang vehicles equipped with 8.8" limited slip rear axle may exhibit a chatter shudder, a binding sensation, or a vibration during low speed turns. On 4X4 vehicles, the sensation may appear to be originating from the front axle or the steering gear.

### ACTION

First verify the condition. On 4X4 trucks ensure that the vehicle is in 2WD, to isolate the rear axle. On all vehicles, turn the wheel fully right (or fully left) and then accelerate the vehicle. If the condition is verified to be in the rear axle, replace the limited slip clutch pack.

### SERVICE PROCEDURE

### CAUTION

INSTRUCT THE CUSTOMER NOT TO TOW WITH THE VEHICLE FOR 500 MILES (805 KM) AFTER THIS REPAIR, TO ALLOW THE AXLE TO BREAK-IN PROPERLY.

Order and install the appropriate clutch pack, follow the instructions detailed in the Workshop Manual.

^ 6L1Z-4947-A (9.75" limited slip)

^ F5AZ-4947-BA (8.8" limited slip)

### NOTE

INSTALLING A CLUTCH PACK INTO AN INDEPENDENT REAR SUSPENSION (IRS) AXLE IS DIFFERENT FROM INSTALLING A CLUTCH PACK INTO A SOLID-BEAM AXLE. BE SURE TO FOLLOW THE APPROPRIATE WORKSHOP MANUAL PROCEDURE.

### INSTALLATION TIPS

^ Be sure to install NEW circlips and halfshaft/wheel end nuts on IRS rear axle (not included in the service kit)

^ Soak the new clutch packs in Additive Friction Modifier (XL-3) for fifteen (15) minutes prior to installation

^ For IRS axles, the half shaft seals need to be replaced. Expedition and Explorer/Mountaineer applications should use seal kit part number SL1Z-4A109-A. Removal of the half shaft excluder seal 1L2Z-1N013 may be required, if equipped, to facilitate re-assembly

^ Refill axles with 4 oz. Additive Friction Modifier (XL-3) and the necessary amount of Rear Axle Lubricant (XY-75W140-QL), regardless of the axle lubricant system originally used in the axle. Fill to capacity recommended in the Workshop Manual

### NOTE

AXLE FLUID REQUIREMENTS HAVE BEEN CHANGED. ALL VEHICLES BEING REPAIRED BY THIS TSB MUST HAVE REAR AXLE LUBE XY-75W140-QL INSTALLED, IN PLACE OF XY75W90-QFEHP. AS PART OF THIS REPAIR, CHECK AND REPLACE IF

NECESSARY THE CURRENT XY-75W90-Q"FEHP" METAL TAG, WITH A NEW 75W140 TAG (F3TZ-4121-AA).

ADDITIONALLY, REMOVE THE MULTI-COLORED LABEL WHICH IS LOCATED ON THE RIGHT SIDE, AXLE TUBE, OR BLOCK OUT ANY/ALL "FEHP" OR "75W90" REFERENCES ON THE LABEL.

PART NUMBER	PART NAME
6L1Z-4947-A	9.75" Axle Clutch Kit
F5AZ-4947-BA	8.8" Axle Clutch Kit
5L1Z-4A109-A	Axle Seal
XY-75W140-QL	Rear Axle Lubricant
XL-3	Additive Friction Modifier
W710084-S439	Nut (Wheel End)
2L1Z-4B422-CA	Circlips (for 9.75")
1L2Z-4B422-BA	Circlips (for 8.8")
F3TZ-4121-AA	Metal Tag - 75W140

Parts Block

WARRANTY STATUS: Eligible Under Provisions Of New Vehicle Limited Warranty Coverage

OPERATION	DESCRIPTION	TIME
060404A	2003-2004 Expedition Without Air Suspension: Replace Clutch Pack (Includes Time For Road Test To Verify Concern, Replace Rear Clutch Pack, And Re-Road Test) (Do Not Use With 4010A 4010D, 4010D1, 4010D4, 4010D5, 4010D6, 4010D12, 4010D13, 4033A, 4200B,4205A, 4205A4, 4205A5, 4205A6, 4205A8, 4205A12, 4205A13 4205A14 4234A, 4139A, 4139A2, 052303, 051505, 4602A)	4.5 Hrs.
060404B	2003-2004 Expedition, 2003 Navigator With Air Suspension: Replace Clutch Pack (Includes Time For Road Test To Verify Concern, Replace Rear Clutch Pack, And Re-Road Test) (Do Not Use With 4010A, 4010D, 4010D1, 4010D4, 4010D5, 4010D6, 4010D12, 4010D13, 4033A, 4200B, 4205A, 4205A4, 4205A5, 4205A6, 4205A8, 4205A12, 4205A13, 4205A14, 4234A, 4139A, 4139A2, 052303, 051505, 4602A)	4.7 Hrs.
060404C	2002-2004 Explorer, Mountaineer: Replace Clutch Pack (Includes Time For Road Test To Verify Concern, Replace	4.9 Hrs.

Rear Clutch Pack, And Re-Road Test) (Do Not Use With 4010A, 4010D, 4010D1, 4010D4, 4010D5, 4010D6, 4010D12, 4010D13, 4033A, 4200B,4205A, 4205A4, 4205A5, 4205A6, 4205A8, 4205A12, 4205A13, 4205A14, 4234A, 4139A, 4139A2, 052303, 051505, 4602A)

060404D 2004 F-150: Replace Clutch Pack (Includes Time For Road Test To Verify Concern, Replace Rear Clutch Pack, And Re-Road Test) (Do Not Use With 4010A, 4010D, 4010D1, 4010D4, 4010D5, 4010D6, 4010D12, 4010D13, 4033A, 4200B,4205A, 4205A4, 4205A5, 4205A6, 4205A8, 4205A12, 4205A13, 4205A14, 4234A, 4139A, 4139A2, 052303, 051505, 4602A) 3.2 Hrs.

060404E 2002-2004 Mustang: Replace Clutch Pack (Includes Time For Road Test To Verity Concern, Replace Rear Clutch Pack, And Re-Road Test) (Do Not Use With 4010A, 4010D, 4010D1, 4010D4, 4010D5, 4010D6, 4010D12, 4010D13, 4033A, 4200B, 4205A, 4205A4, 4205A5, 4205A6, 4205A8, 4205A12, 4205A13, 4205A14, 4234A, 4139A, 4139A2, 052303, 051505, 4602A) 3.1 Hrs.

060404F 2002-2004 Mustang Cobra: Replace Clutch Pack (Includes Time For Road Test To Verify Concern, Replace Rear Clutch Pack, And Re-Road Test) (Do Not Use With 4010A, 4010D, 4010D1, 4010D4, 4010D5, 4010D6, 4010D12, 4010D13, 4033A, 4200B, 4205A, 4205A4, 4205A5, 4205A6, 4205A8, 4205A12, 4205A13, 4205A14, 4234A, 4139A, 4139A2, 052303, 051505, 4602A) 5.9 Hrs.

## DEALER CODING

BASIC PART NO.

4947

CONDITION

CODE

D4

**NOTE:** The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle.