CERTAIN 2015-2017 TRANSIT VEHICLES EQUIPPED WITH A DRIVESHAFT FLEXIBLE COUPLING — DRIVESHAFT FLEXIBLE COUPLING REPAIR

NEW! OVERVIEW

In the affected vehicles, the driveshaft flexible coupling may crack with increasing mileage, resulting in driveline noise and vibration. Continued driving with a cracked flexible coupling may cause separation of the driveshaft, resulting in a loss of motive power while driving, or unintended vehicle movement in park without the parking brake applied. In addition, separation of the driveshaft can result in secondary damage to surrounding components, including brake and fuel lines. A driveshaft separation may increase the risk of injury or crash. *Before demonstrating or delivering any new in-stock vehicles involved in this recall, dealers are to install an enhanced driveshaft flexible coupling.*

SERVICE PROCEDURES

Recommended Tool List:

3/8" Drive Ratchet (Power and Hand Tool)
3/8" Drive 10mm, 13mm, and 15mm Shallow Sockets
3/8" Drive Deep Socket
3/8" Drive 12mm,12-Point Shallow Socket
3/8" Drive Extension 12 in (305 mm)
1/2" Drive Ratchet (Power and Hand Tool)
1/2" Drive 18mm and 21mm Shallow Sockets
1/2" Drive Extension 12 in (305 mm)
3/8" and 1/2" Drive Torque Wrench
21mm Wrench
Rubber Hammer
Hammer
Screwdriver Flat Head
Chisel
Mini-Ductor™ induction heating tool, or equivalent
3-Jaw Puller

NEW! DETERMINE THE APPROPRIATE PERMANENT REPAIR SERVICE PROCEDURE

1. *Is the vehicle equipped with a 3.7L engine and single rear wheels (SRW), and were parts previously ordered to repair this vehicle?*

   - Yes - Perform the Driveshaft Front Section Replacement Procedure on Page 8.
   - No - Perform the Enhanced Driveshaft Flexible Coupling Installation Procedures on Page 2.

***NOTE**: All vehicles can be repaired using enhanced driveshaft flexible couplings. However, dealers should continue to use parts previously ordered through the SSSC to repair affected 3.7L SRW vehicles.*

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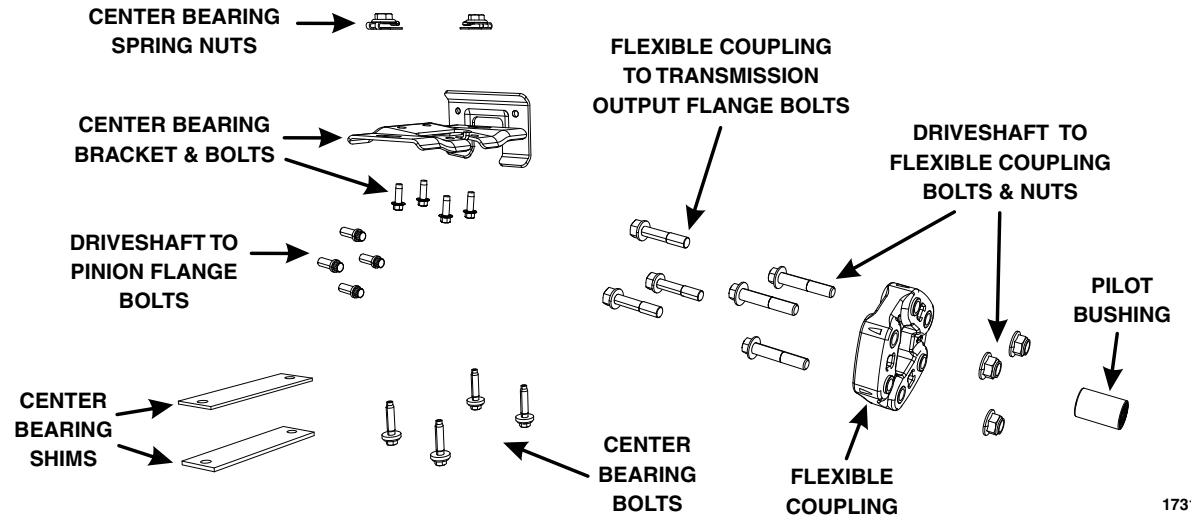
ENHANCED DRIVESHAFT FLEXIBLE COUPLING INSTALLATION



ENHANCED DRIVESHAFT FLEXIBLE COUPLING KIT CONTENTS

FIGURE 1

1. Remove the driveshaft and the driveshaft flexible coupling. Please follow the Driveshaft Removal and Installation Workshop Manual (WSM) procedure in Section 205-01.

    - To assist with the removal of the driveshaft flexible coupling-to-transmission output flange bolts, the use of a Mini-Ductor™ induction heating tool, or equivalent, is recommended.
    - The blue paint marking on the *new* driveshaft flexible coupling must be installed facing the transmission output flange or premature failure of the flexible coupling will occur. See Figure 2.

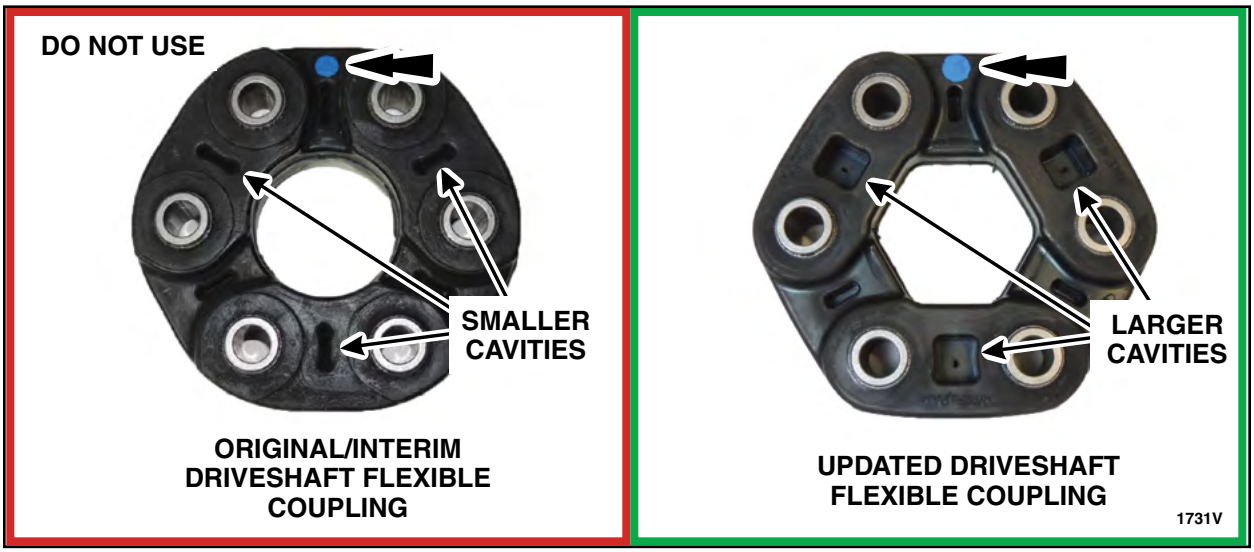


FIGURE 2

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2. Using a hammer and chisel with a sharp edge, remove and discard the driveshaft pilot bushing. See Figure 3.

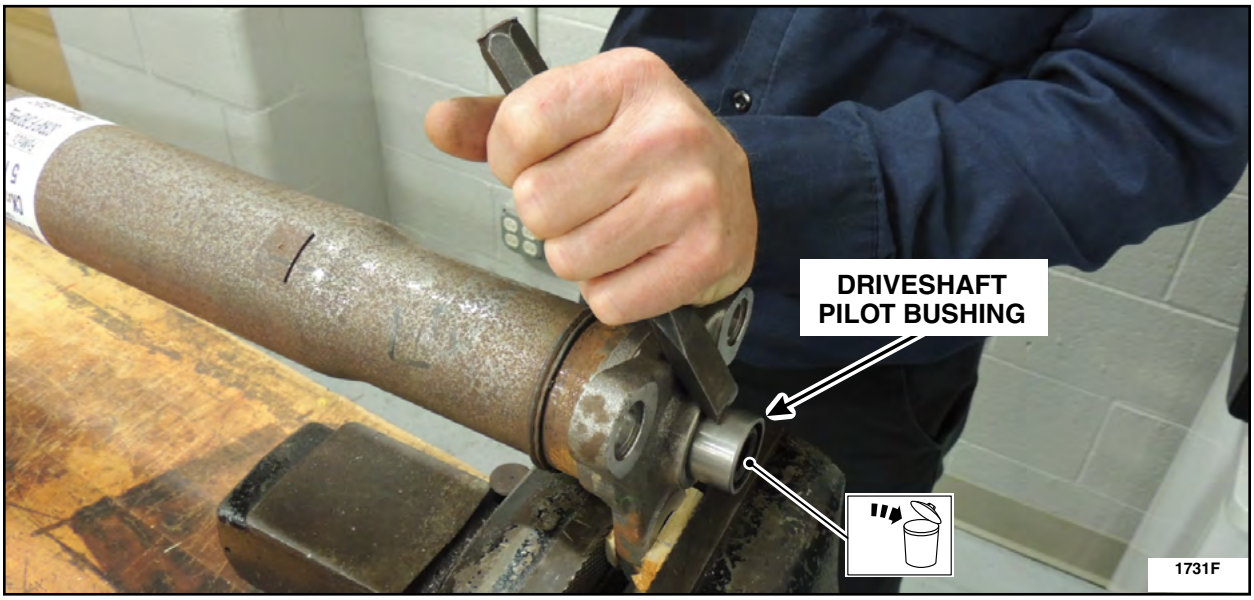

FIGURE 3

3. **NOTE**: Prior to installation of the *new* driveshaft pilot bushing, make sure the rubber seal end of the bushing is facing outward and the capped end is pressed into the driveshaft. See Figure 4.

   Using a 3-jaw puller and a suitable flat piece of metal, press in the *new* pilot bushing until the depth mark on the pilot bushing has been reached. See Figures 4 and 5.

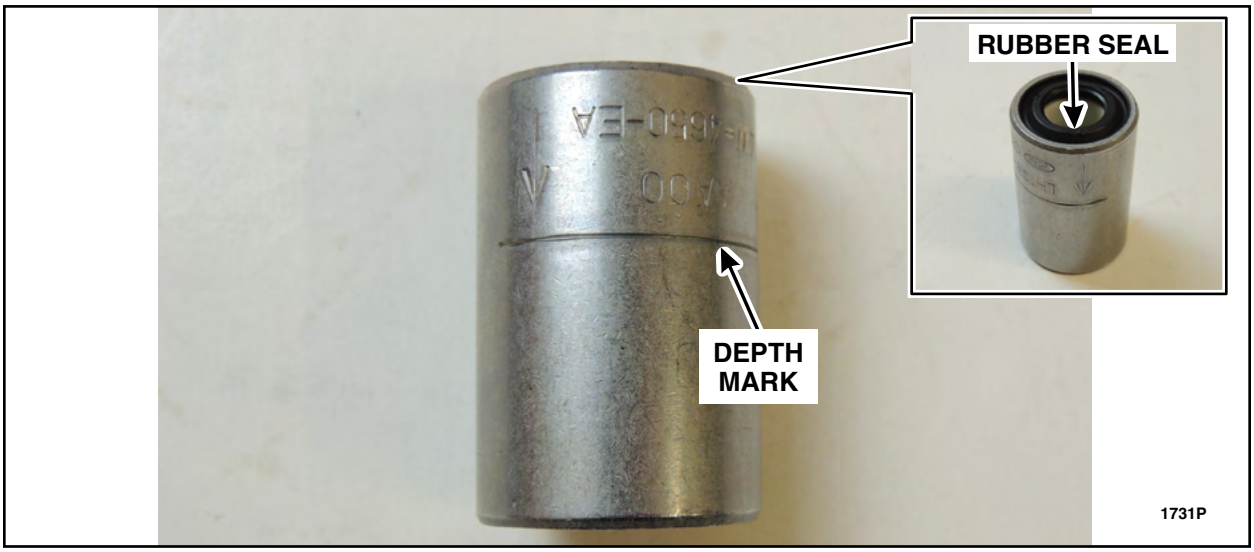

FIGURE 4

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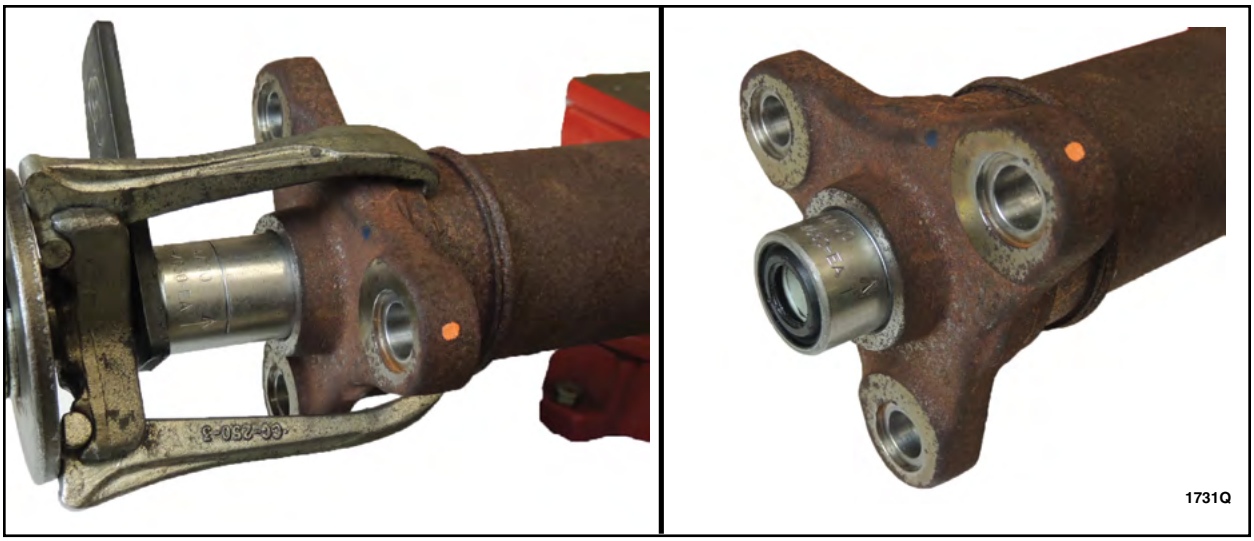

FIGURE 5

4. Remove and discard the four center bearing bracket retaining bolts and the center bearing bracket. See Figure 6.

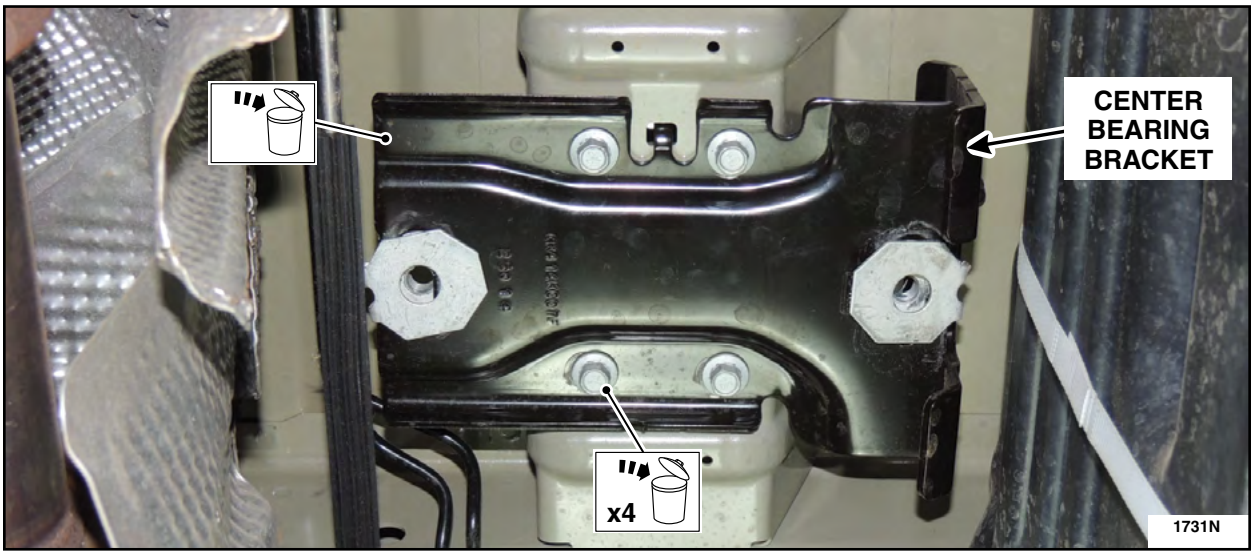

FIGURE 6

5. Install the *new* center bearing bracket spring nuts onto the *new* center bearing bracket.

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6. Install the *new* center bearing bracket using four *new* retaining bolts. See Figure 7.

   - Tighten bolts to 18 lb.ft (25 Nm).

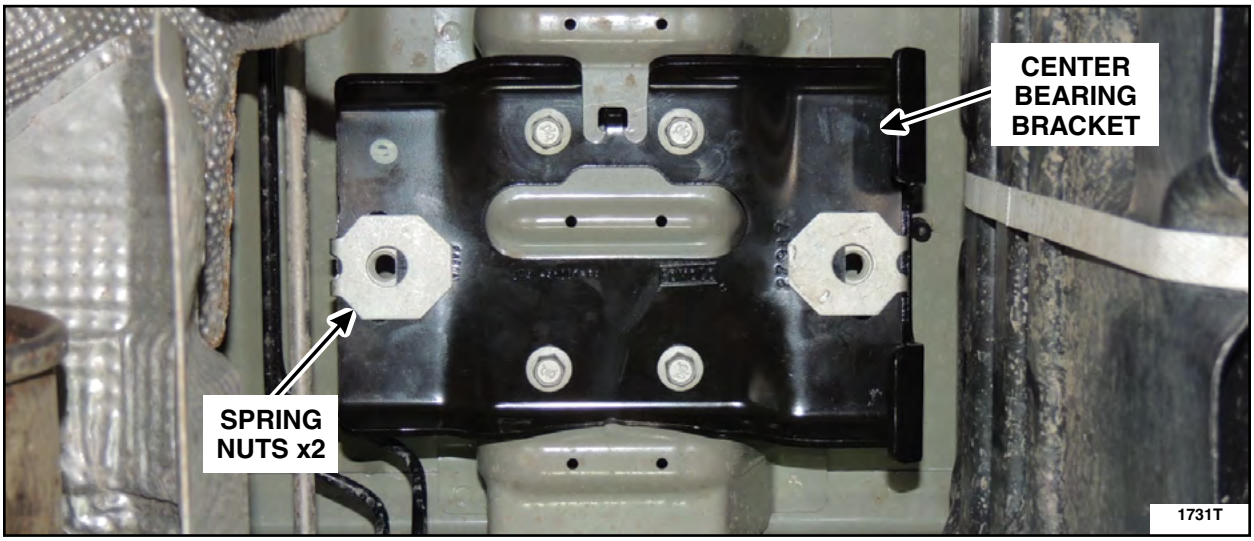

FIGURE 7

7. Install the driveshaft flexible coupling shield. See Figure 8.

   a. Remove the upper RH transmission bracket stud nut and discard.
   b. Install the shield onto the transmission rear housing and bracket.
   c. Install a *new* RH and LH transmission bracket stud nut (LH nut is installed over existing nut), and *new* transmission rear housing bolts to secure the shield.

      - Tighten nuts to 23 lb.ft (31 Nm).
      - Tighten bolts to 47 lb.ft (64 Nm).

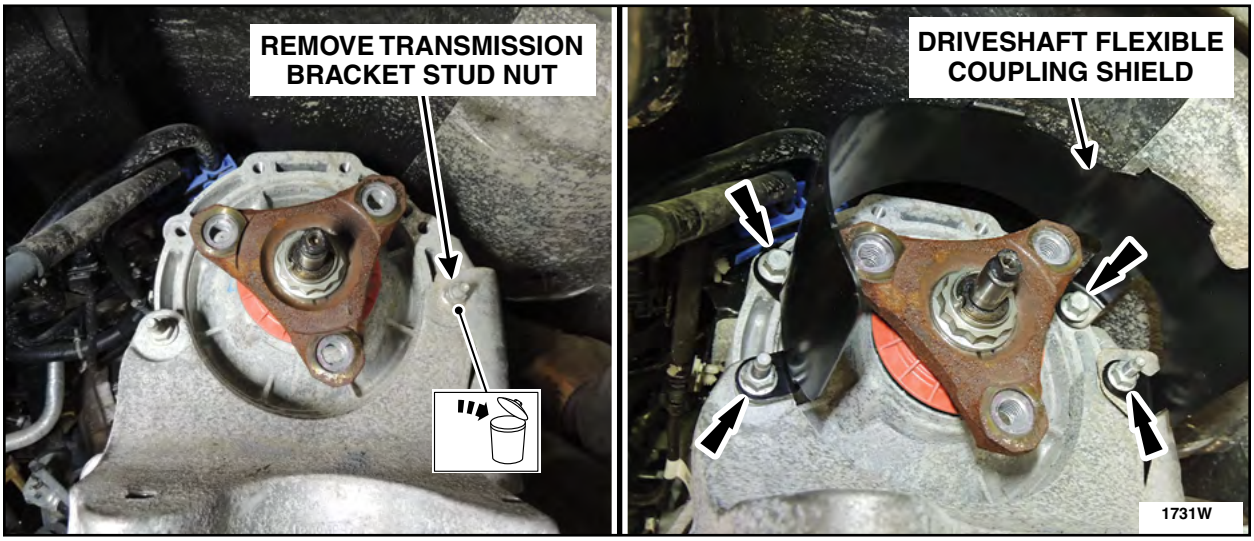

FIGURE 8

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8. Lubricate the transmission output shaft and driveshaft bushing using a small amount of Motorcraft® XG-1-E1 Premium Long Life Grease or equivalent. See Figure 9.

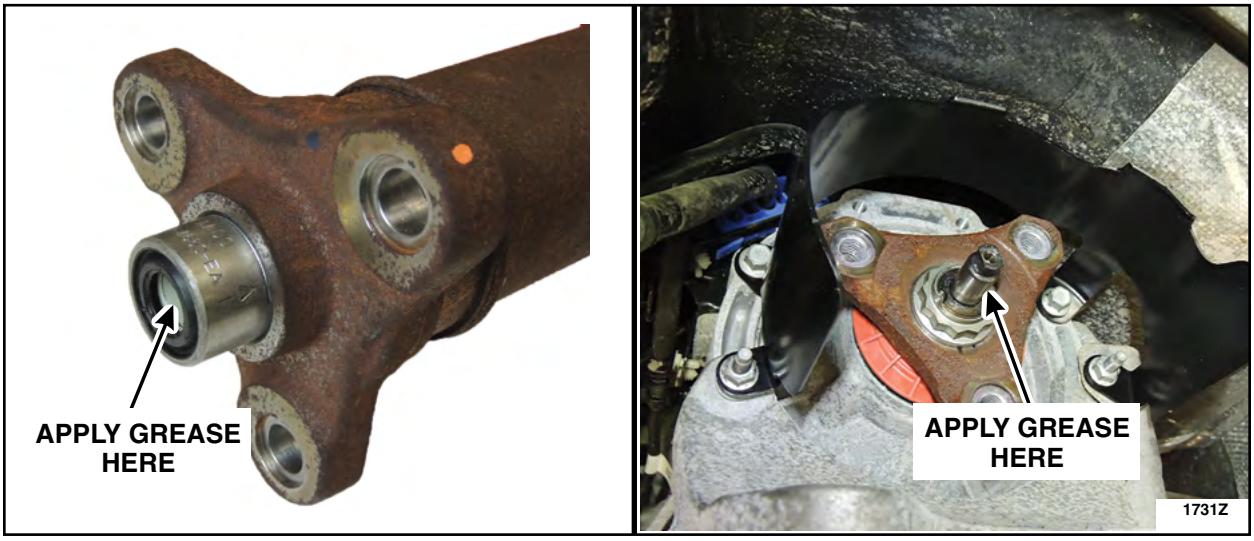

FIGURE 9

9. Install the *new* driveshaft flexible coupling and reinstall the driveshaft with the appropriate center bearing shim according to the chart below. Please follow the Driveshaft Removal and Installation WSM procedure in Section 205-01. See Figures 10 and 11.

NOTE: When installing the driveshaft safety strap bolts, the bolts must be threaded in by hand as far as possible before using hand or power tools.

SHIM	WHEEL BASE	ENGINE	SRW/DRW
3.8MM SHIM JK41-4A209-BA	129"	3.5L	SRW
5MM SHIM JK41-4A209-AA	148"	3.5L	ALL
		3.7L	
NO SHIM	All Others		

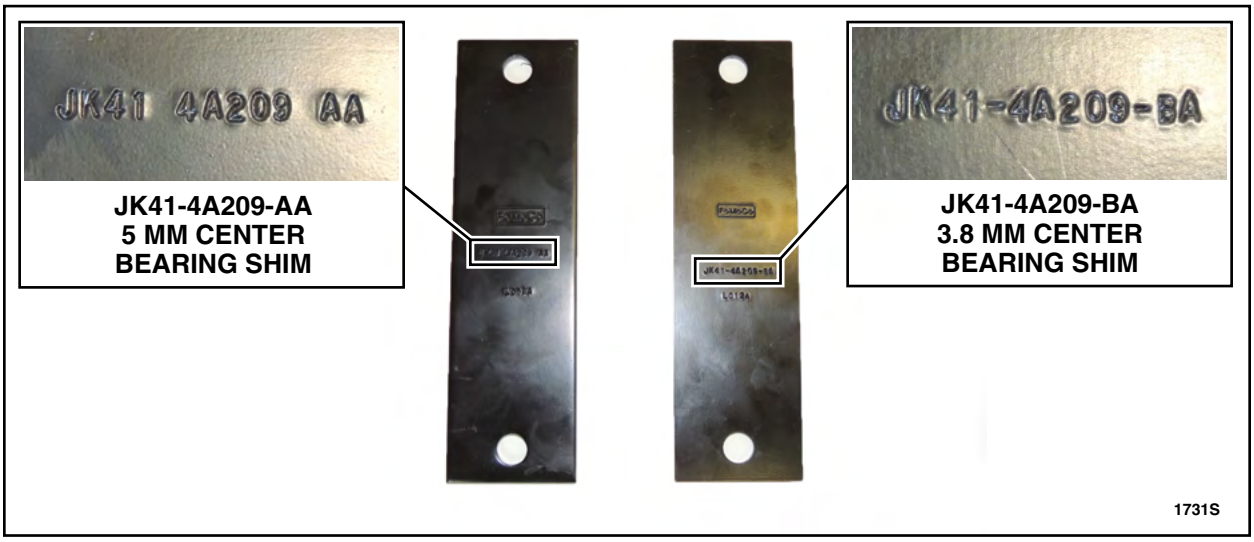

FIGURE 10

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FIGURE 11

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DRIVESHAFT FRONT SECTION REPLACEMENT

Match the vehicle's configuration to the list of wheelbase configurations below to determine the appropriate Permanent Repair Service Procedures.

NOTE: Vehicle wheelbase can be found:

- On the vehicle window sticker, which can be viewed from the OASIS pull down menu on PTS, or the window sticker link in HVBOM
- On the Vehicle Certification Label
- By clicking the Additional Information link on OASIS, and scrolling through the Build Information

129/130 WHEELBASE VEHICLES

- 3.7L engine and Single Rear Wheels (SRW).....Permanent Repair Service Procedures A, B, C, & E
- All Others - Replace Driveshaft Flexible Coupling (Page 2)

138 WHEELBASE VEHICLES

- 3.7L engine and Single Rear Wheels (SRW).....Permanent Repair Service Procedures A, & C
- All Others - Replace Driveshaft Flexible Coupling (Page 2)

148 WHEELBASE VEHICLES

- 3.7L engine and Single Rear Wheels (SRW).....Permanent Repair Service Procedures A, D, & E
- All Others - Replace Driveshaft Flexible Coupling (Page 2)

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PERMANENT REPAIR SERVICE PROCEDURES

A. Transmission Output Shaft Flange Replacement

1. Remove the Driveshaft. Please follow the WSM procedures in Section 205-01.

2. Using a 1/2" drive, 34mm, 12-point deep socket, remove and discard the 3-bolt transmission output shaft flange retaining nut and flange. (See Figure 12):

   NOTICE: The output shaft flange retaining nut has been staked to prevent it from coming loose. Prior to removing the nut, remove the stake to prevent damage to the output shaft.

   a. Remove the output shaft flange retaining nut stakes.
   b. Place the vehicle in the PARK position and remove and discard the output shaft flange retaining nut.
   c. Remove and discard the 3-bolt transmission output shaft flange.

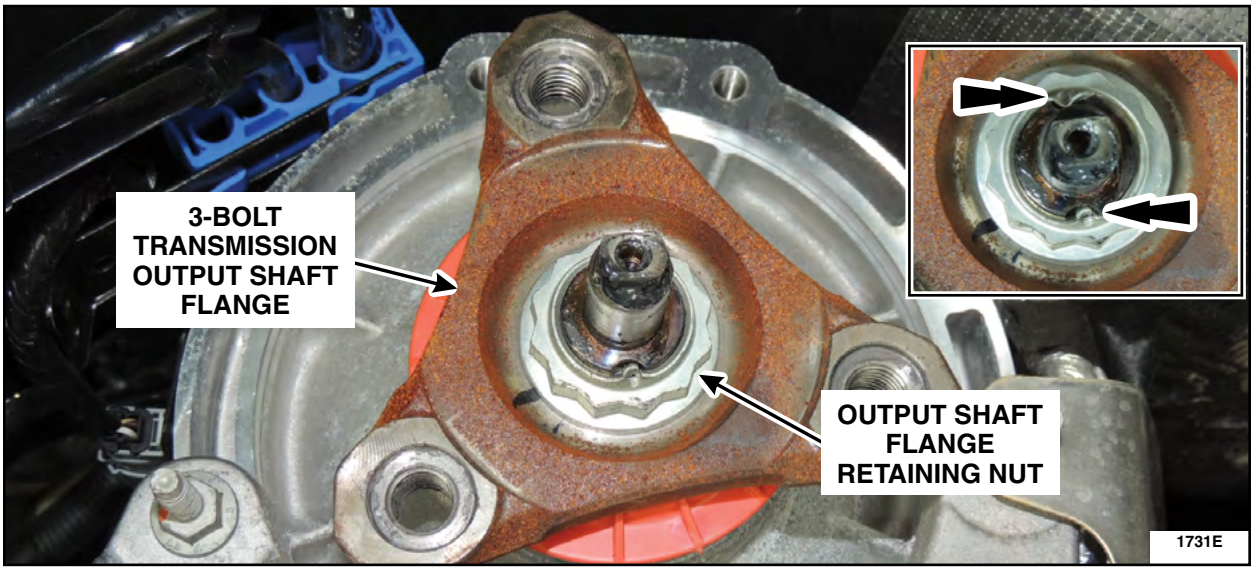

FIGURE 12

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3. Using a 1/2" drive, 34mm, 12-point deep socket, install a *new* 4-bolt transmission output shaft flange and retaining nut. (See Figures 13 and 14):

   NOTICE: The output shaft flange retaining must be staked to prevent it from coming loose.

   a. Install a *new* 4-bolt transmission output shaft flange.
   b. Install a *new* output shaft flange retaining nut.
      - Tighten nut to 59 lb.ft (80 Nm).
   c. Stake the output shaft flange retaining nut.

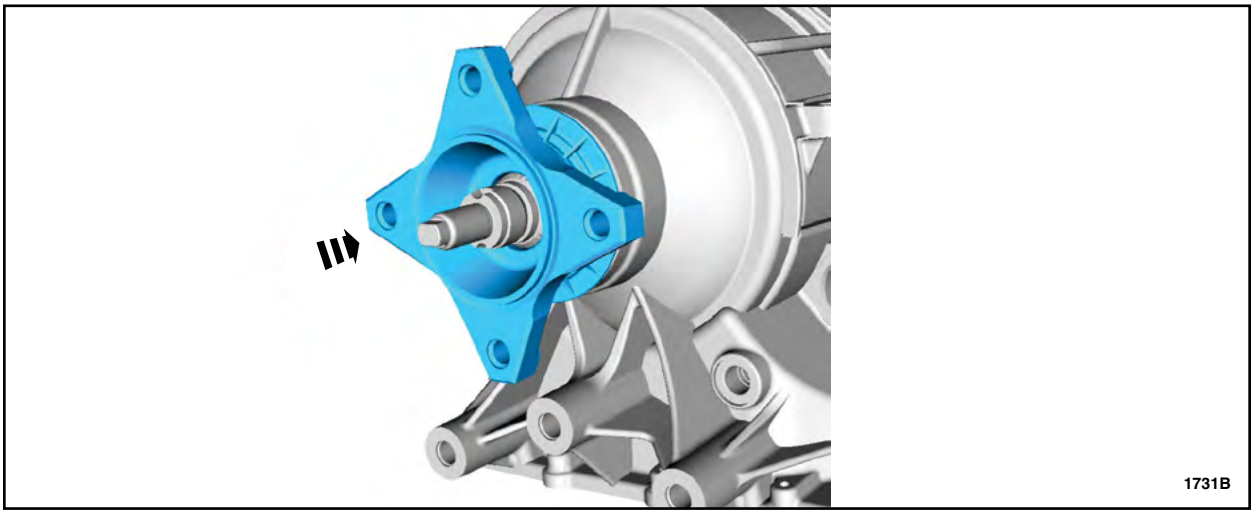

FIGURE 13

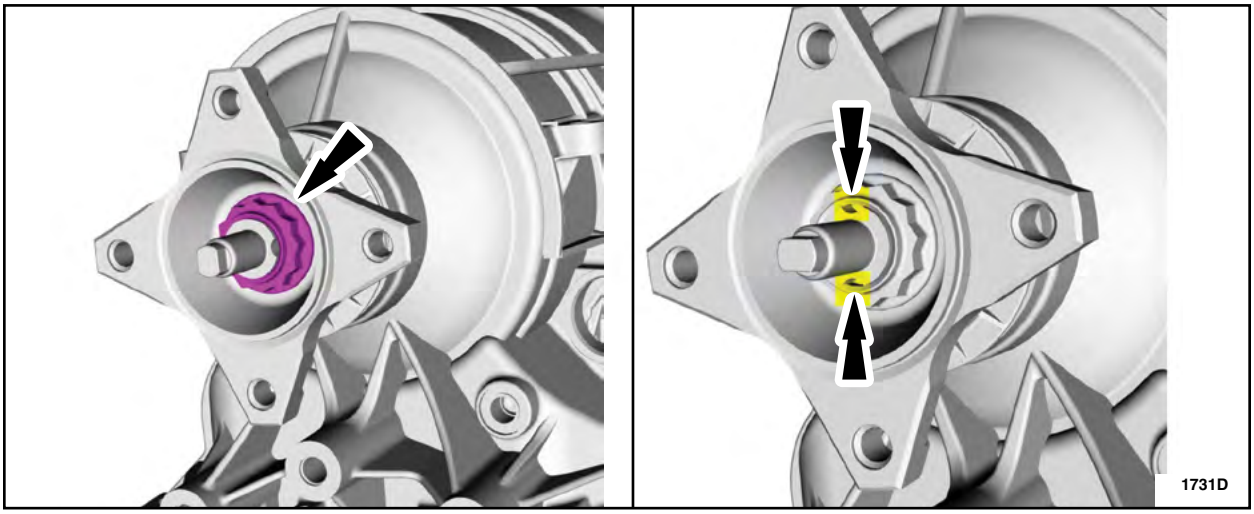

FIGURE 14

4. Proceed to the next required Permanent Repair Service Procedure.

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B. Lower Profile Center Bearing Bracket Removal and Installation

NOTE: Lower profile center bearing bracket kit includes a *new* bracket, four retaining bolts, and the two spring nuts for the procedure below.

1. Remove and discard the four center bearing bracket retaining bolts and the center bearing bracket. See Figure 15.

NOTE: Original center bearing bracket shown, *new* bracket is similar.

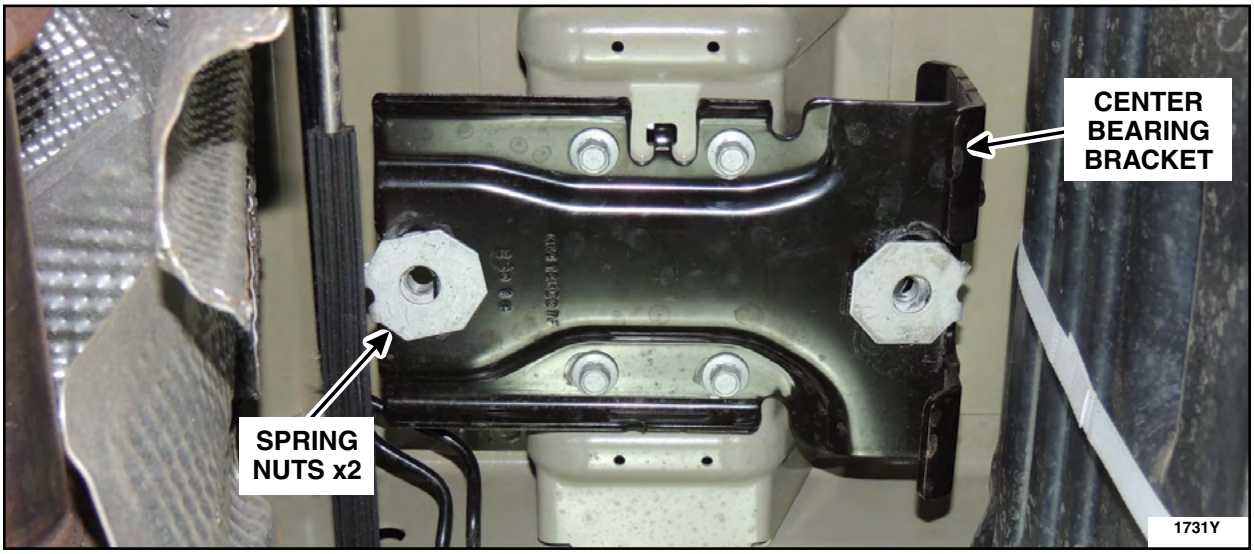

FIGURE 15

2. Install the center bearing bracket spring nuts onto the *new* center bearing bracket.
3. Install the *new* center bearing bracket using four *new* retaining bolts. See Figure 15.
    - Tighten bolts to 18 lb.ft (25 Nm).
4. Proceed to the next required Permanent Repair Service Procedure.

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C. Driveshaft Front Section Replacement On a 2-Piece Equipped Driveshaft

1. Separate the driveshaft front and rear sections at the driveshaft slip yoke. See Figure 16.

   a. Cut and discard both dust boot Oetiker® clamps.
   b. Separate the driveshaft front and rear sections.
   c. Remove and discard the dust boot.

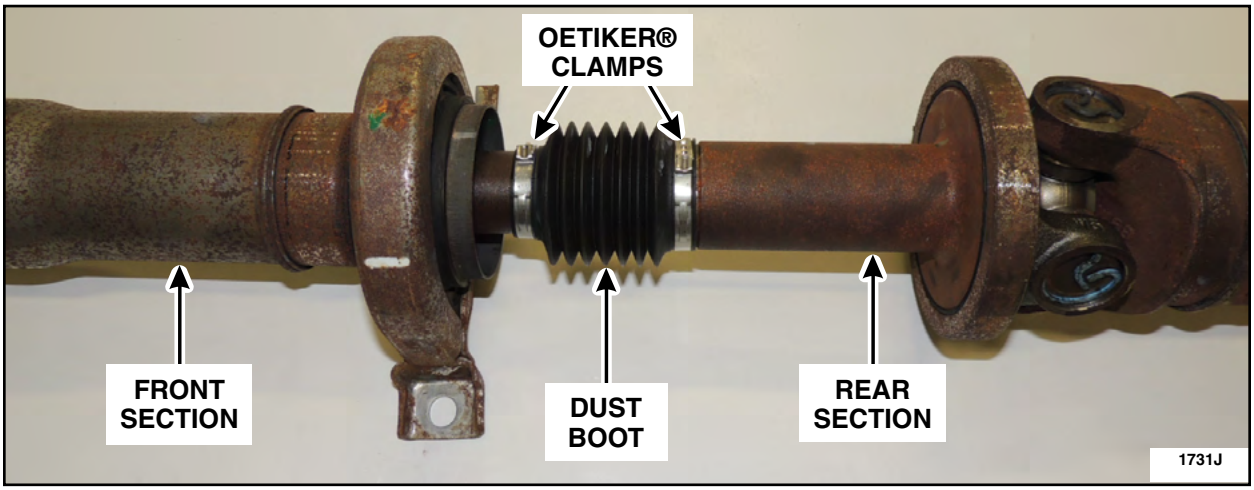

FIGURE 16

2. Install a *new* driveshaft front section onto the rear section. See Figures 16 and 17.

   a. Slide a *new* slip yoke dust boot over the driveshaft rear section.
   b. Lubricate the front section splines using 10-20 grams (0.35 - 0.7 oz) of Motorcraft® XG-8 Driveshaft Slip Yoke PTFE Lubricant.
   c. Attach the driveshaft front and rear sections. Make sure the front and rear driveshaft spline keys are aligned when mating the two sections together.
   d. Make sure the slip yoke dust boot is properly aligned over each driveshaft section and tighten the dust boot Oetiker® clamps.

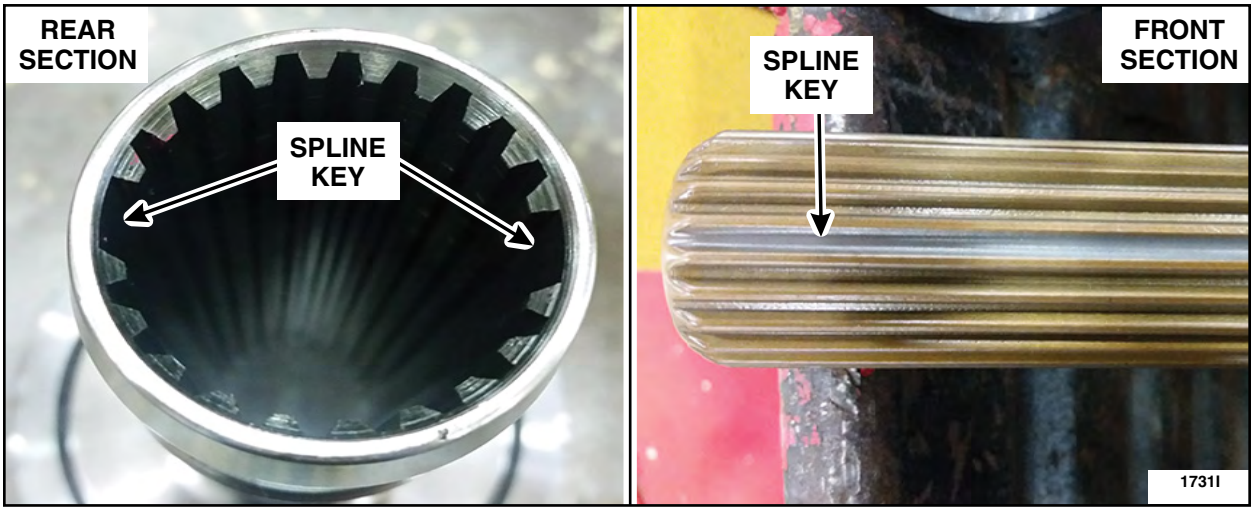

FIGURE 17

3. Install the driveshaft assembly. Please follow the WSM procedures in Section 205-01.

4. Proceed to the next required Permanent Repair Service Procedure.

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D. Driveshaft Front Section Replacement On a 3-Piece Equipped Driveshaft

1. Remove and discard the four snap rings and center u-joint to separate the front driveshaft section from the center section. Please follow the Universal Joint Kit Installation Instructions. See Figure 18.

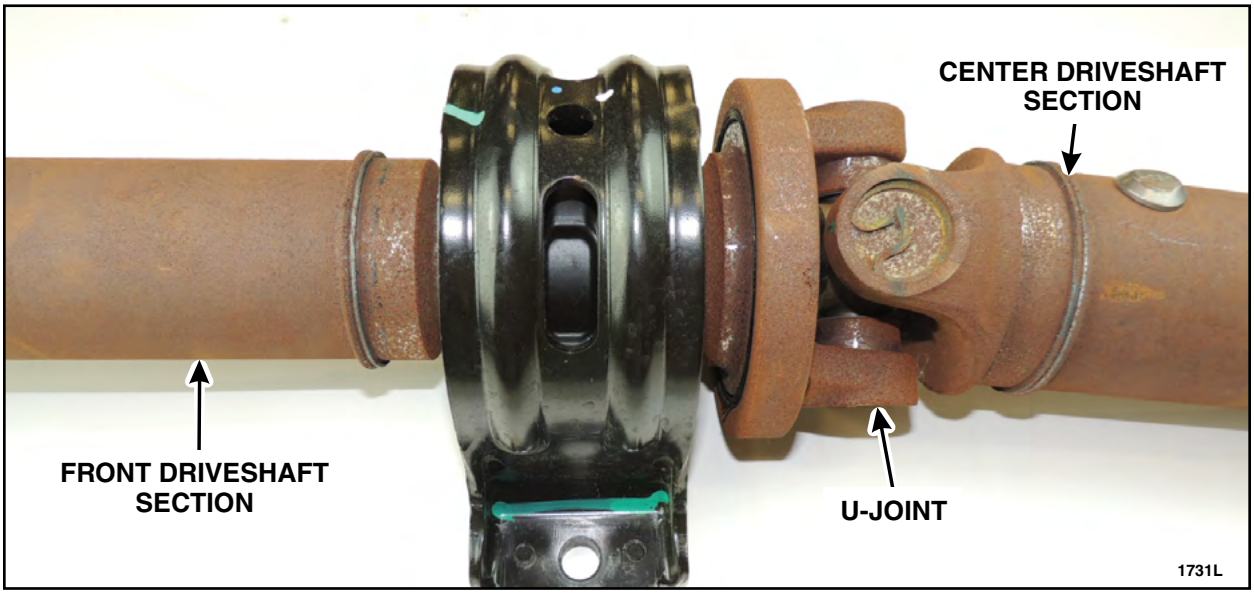

FIGURE 18

2. Install a *new* center u-joint and snap rings to attach the front driveshaft section to the center section. Please follow the Universal Joint Kit Installation Instructions.

3. Is the vehicle equipped with a 3.7L gas engine with single rear wheels, and does the Special Service Support Center (SSSC) VIN-specific part order contact response indicate a 4A209 base part number front center bearing shim is required for the vehicle?

   NOTE: If the SSSC part order contact response is not available, refer to the Parts Ordering Information in Attachment II for the 148 wheelbase units for more detail.

   No - Install the driveshaft assembly. Please follow the WSM procedures in Section 205-01. Proceed to the next required Permanent Repair Service Procedure.
   Yes - Proceed to Step 4.

4. Install the driveshaft and the 5mm center bearing shim between the front driveshaft center bearing and the center bearing support bracket. Please follow the WSM procedures in Section 205-01.

5. Proceed to the next required Permanent Repair Service Procedure.

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E. Pinion Nose Damper Replacement or Installation

1. If a pinion nose damper is present, remove and discard the three bolts and the original pinion nose damper located on the RH side of the rear axle center housing. See Figure 19.

2. Install a *new* pinion nose damper and tighten the three bolts. See Figure 19.

    - Tighten bolts to 46 lb.ft (62 Nm).

NOTE: Original pinion nose damper is shown. *New* pinion nose damper may appear similar to the original (if equipped), but the dampening characteristics have been changed.

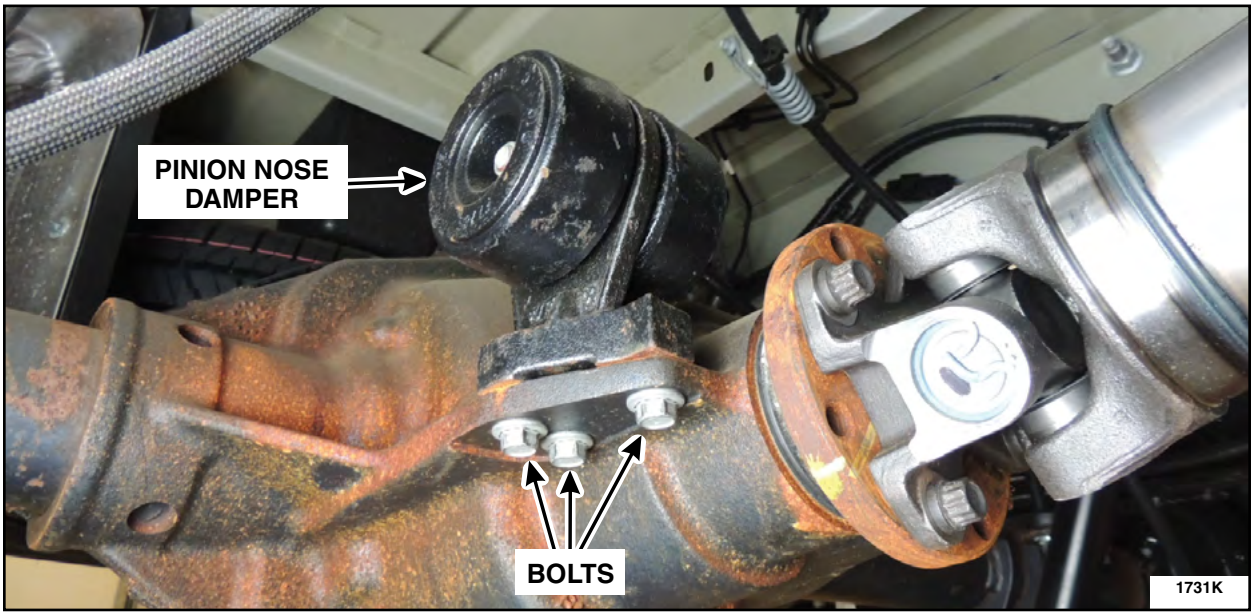

FIGURE 19

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