

2008 Ford Mustang
2008 DRIVELINE/AXLES Driveshaft - Mustang

2008 DRIVELINE/AXLES

Driveshaft - Mustang

SPECIFICATIONS

Material

Item	Specification	Fill Capacity
Premium Long-Life Grease XG-1-C or XG-1-K (US); CXG-1-C (Canada)	ESA-M1C75-B	-
Threadlock and Sealer TA-25	WSK-M2G351-A5	-

TORQUE SPECIFICATIONS

Description	Nm	lb-ft
Center bearing bolts	48	35
Driveshaft constant velocity (CV) joint bolts	55	41
Driveshaft flange bolts	103	76

DESCRIPTION AND OPERATION

DRIVESHAFT

NOTE: All driveshaft assemblies are balanced. If undercoating the vehicle, protect the driveshaft to prevent overspray of any undercoating material.

The driveshaft have the following features:

- A 1-piece driveshaft assembly consists of 2 driveshaft centering socket yokes, 2 single-cardan U-joints, a driveshaft slip yoke, a driveshaft slip yoke boot, 2 driveshaft slip yoke boot clamps and a welded tube assembly.
- The splined driveshaft slip yoke permits the driveshaft to move forward and rearward during drivetrain movement and during driveshaft removal and installation.
- A 2-piece drive shaft consists of a driveshaft centering socket yoke, a single-cardon U-joint, a center bearing and 2 constant velocity (CV) joints.
- CV joints are not repairable

A driveshaft is a tubular shaft or shafts used to transfer engine torque from the transmission output shaft to the differential in the axle housing. The driveshaft must be able to rotate smoothly through a range of acceptable angles and lengths occurring during normal driving conditions. The single-cardan U-joints permit the change in driveshaft angularity with the slip yoke providing the allowing the variance in length. The CV equipped driveshaft control angle and length changes through the CV joints and use a center support bearing for driveshaft stability.

UNIVERSAL JOINTS

The U-joints consist of:

- A single spider (cross)
- Lubed-for-life design and require no periodic lubrication
- Nylon thrust washers, located at each base of the bearing cup, which control end play, position the needle bearing and improve grease movement
- Grease seals located at the opening of each bearing cup to retain the grease for the bearing lubrication
- Thirty-two needle roller bearings in each bearing cup to allow smooth trunnion transition
- Bearing cups that retain the needle bearings and locate the spider on the centerline of the shaft bore to control shaft runout and balance

U-joints are serviced as assemblies only and the components of U-joint kits should not be interchanged.

DIAGNOSTIC TESTS

DRIVESHAFT

Refer to DRIVELINE SYSTEM - GENERAL INFORMATION article.

REMOVAL AND INSTALLATION

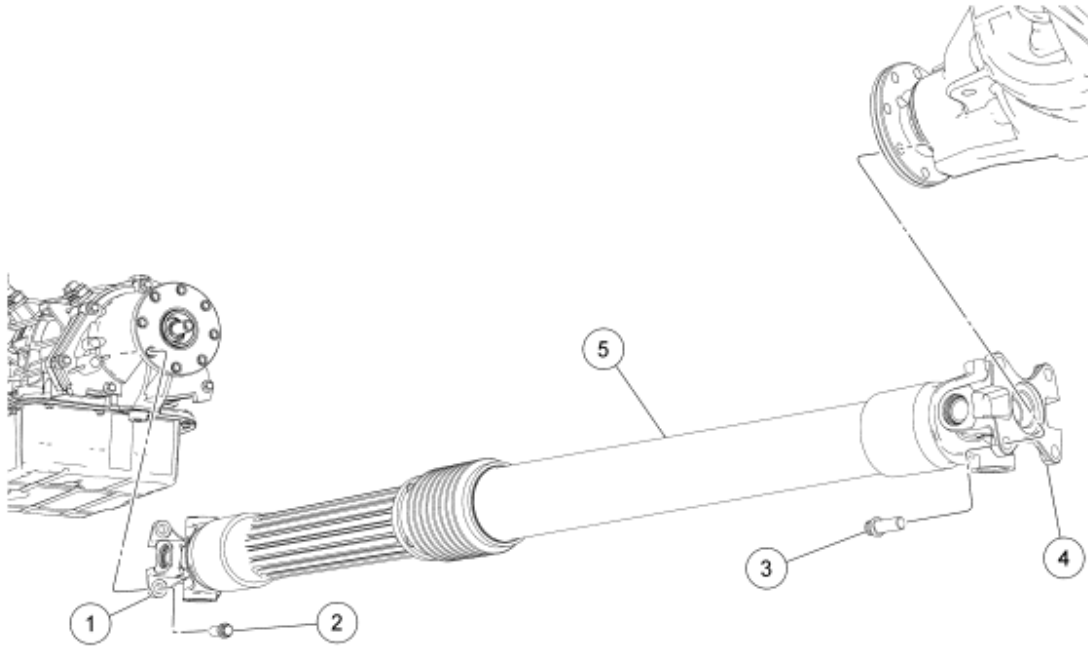
DRIVESHAFT - 4.0L

Material

Item	Specification
Threadlock and Sealer TA-25	WSK-M2G351-A5

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Fig. 1: Exploded View Of Driveshaft - 4.0L
Courtesy of FORD MOTOR CO.

Item	Part Number	Description
1	-	Front driveshaft flange (part of 4602)
2	-	Front driveshaft flange bolt (4 required)
3	-	Rear driveshaft flange bolt (4 required)
4	-	Rear driveshaft flange (part of 4602)
5	-	Driveshaft

REMOVAL AND INSTALLATION

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING AND LIFTING** article.
2. Index-mark the driveshaft to maintain alignment during installation.

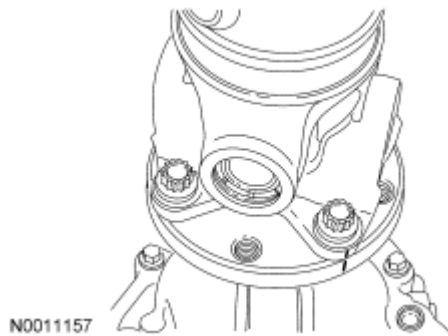


Fig. 2: Locating Index-Mark On Driveshaft
Courtesy of FORD MOTOR CO.

3. Remove and discard the 8 driveshaft flange bolts.
 - To install, tighten to 103 Nm (76 lb-ft).

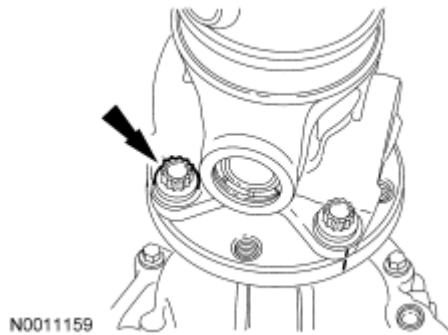


Fig. 3: Locating Driveshaft Flange Bolts
Courtesy of FORD MOTOR CO.

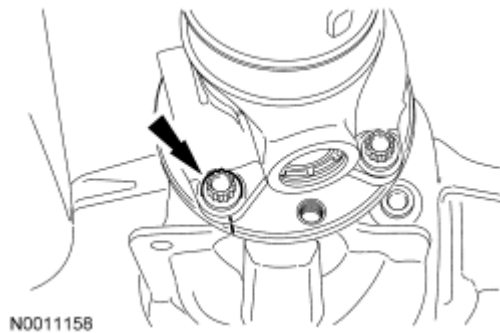


Fig. 4: Locating Driveshaft Flange Bolts
Courtesy of FORD MOTOR CO.

NOTE: The driveshaft flanges fit tightly on the flange pilots. Never hammer on the driveshaft or any of its components to disconnect the driveshaft flanges from the flange pilots. Pry only in the area shown with a suitable tool, to disconnect the driveshaft flanges from the flange pilots.

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4. Using a suitable tool as shown, disconnect the driveshaft flanges from the flange pilots and remove the driveshaft.

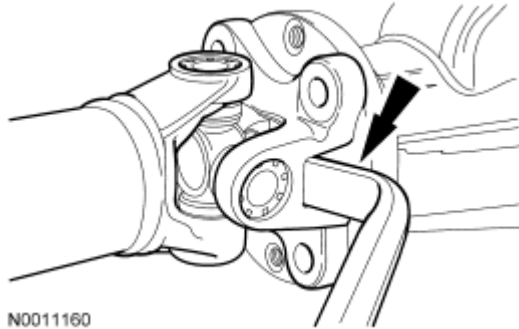


Fig. 5: Disconnecting Driveshaft Flange From The Transmission Flange Pilot
Courtesy of FORD MOTOR CO.

NOTE: The driveshaft flanges fit tightly on the pinion flange pilots. To make sure that the driveshaft flanges seat squarely on the pinion flange pilots, tighten the driveshaft flange bolts evenly in a cross pattern.

NOTE: If new driveshaft flange bolts are not available, coat the threads of the original driveshaft flange bolts with threadlock and sealer.

5. To install, reverse the removal procedure.
 - Install new fasteners.

DRIVESHAFT - 4.6L AND 5.4L

Material

Item	Specification
Threadlock and Sealer TA-25	WSK-M2G351-A5

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2008 DRIVELINE/AXLES Driveshaft - Mustang

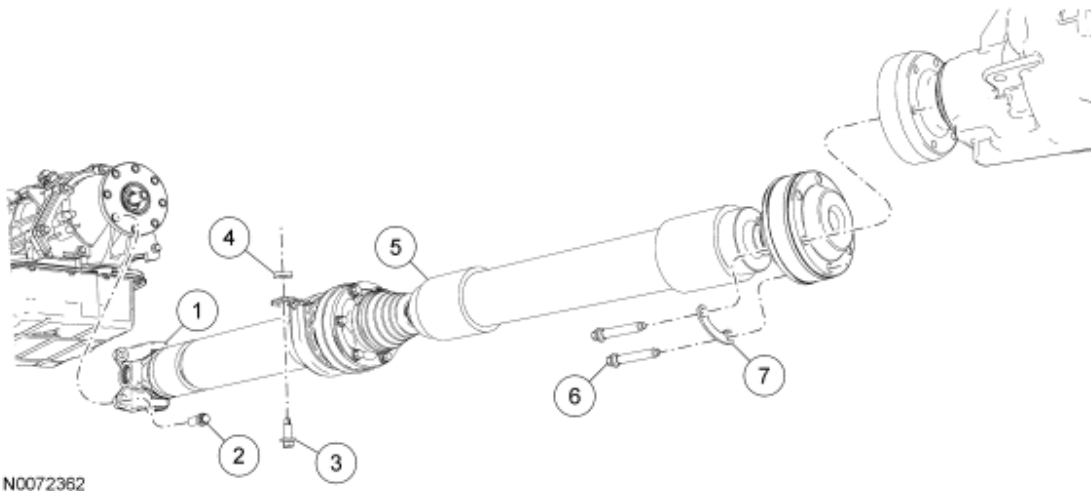


Fig. 6: Exploded View Of Driveshaft - 4.6L & 5.4L
Courtesy of FORD MOTOR CO.

Item	Part Number	Description
1	-	Driveshaft flange (part of 4K145)
2	N800594-S100	Driveshaft flange bolt (4 required)
3	N506434-S439	Center bearing bolt (2 required)
4	W710432-S300	Spacer (2 required)
5	4K145	Driveshaft assembly
6	W708259	Constant velocity (CV) joint bolt (6 required)
7	4682	CV joint washer (3 required)

REMOVAL AND INSTALLATION

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING AND LIFTING** article.
2. Index-mark the driveshaft to maintain alignment during installation.

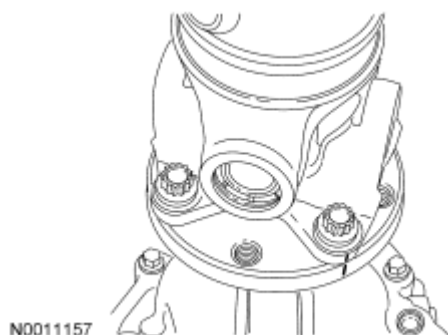


Fig. 7: Locating Index-Mark On Driveshaft
Courtesy of FORD MOTOR CO.

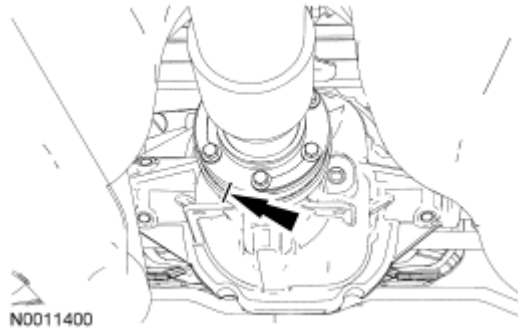


Fig. 8: Locating Index-Mark On Pinion Flange
Courtesy of FORD MOTOR CO.

3. Remove and discard the 6 constant velocity (CV) joint bolts and CV joint washers, then disconnect the CV joint from the pinion flange.
 - To install, tighten the new bolts to 55 Nm (41 lb-ft).

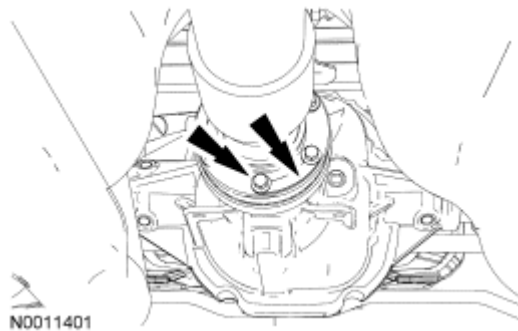


Fig. 9: Locating CV Joint To Pinion Flange
Courtesy of FORD MOTOR CO.

4. Remove and discard the 4 driveshaft flange bolts.
 - To install, tighten the new bolts to 103 Nm (76 lb-ft).

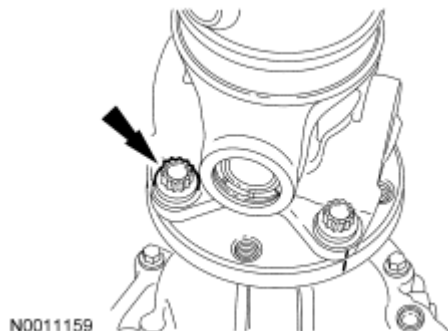


Fig. 10: Locating Driveshaft Flange Bolts
Courtesy of FORD MOTOR CO.

CAUTION: The driveshaft flanges fit tightly on the transmission flange pilot. Never hammer on the driveshaft or any of its components to disconnect the driveshaft flange from the transmission flange pilot. Pry only in the area shown, with a suitable tool, to disconnect the driveshaft flange from the transmission flange pilot.

5. Using a suitable tool as shown, disconnect the driveshaft flange from the transmission flange pilot.

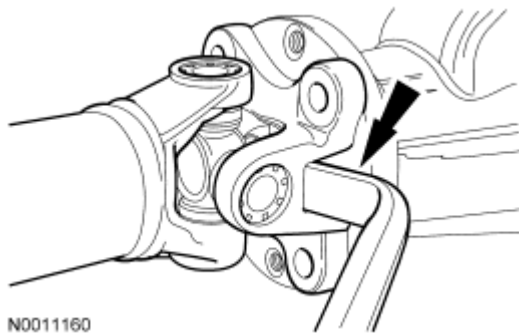


Fig. 11: Disconnecting Driveshaft Flange From The Transmission Flange Pilot
Courtesy of FORD MOTOR CO.

6. Remove and discard the 2 center bearing bolts and spacers, then remove the driveshaft.
- Install the new center bearing bolts finger tight until after the front and rear flanges are tightened to specifications.
 - To install, tighten the bolts to 48 Nm (35 lb-ft).

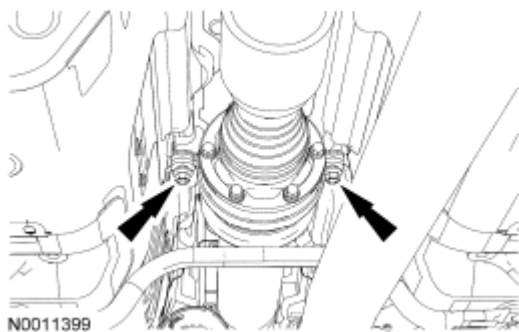


Fig. 12: Identifying Center Bearing Bolts
Courtesy of FORD MOTOR CO.

NOTE: The driveshaft flanges fit tightly on the transmission output flange pilot. To make sure that the driveshaft flange seat squarely on the transmission output flange, tighten the driveshaft flange bolts evenly in a cross pattern.

NOTE: If new driveshaft flange bolts are not available, coat the threads of the original driveshaft flange bolts with threadlock and sealer.

NOTE: **Tighten the CV joint bolts evenly in a star pattern.**

7. To install, reverse the removal procedure.
- Install new fasteners.

DISASSEMBLY AND ASSEMBLY

DRIVESHAFT UNIVERSAL JOINT - SNAP RING TYPE

Special Tools

Illustration	Tool Name	Tool Number
 ST1112-A	Installer/Remover, C-Frame and Screw	205-086 (T74P-4635-C)

Material

Item	Specification
Premium Long-Life Grease XG-1-C or XG-1-K (US); CXG-1-C (Canada)	ESA-M1C75-B

DISASSEMBLY

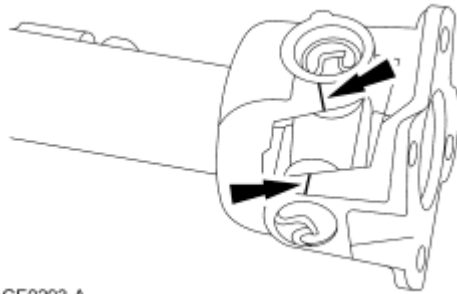
1. Remove the driveshaft. For additional information, refer to **Driveshaft - 4.0L** or **Driveshaft - 4.6L and 5.4L**.

CAUTION: Do not, under any circumstance, clamp the driveshaft assembly in the jaws of a vise or similar holding fixture. Denting or localized fracturing may result, causing driveshaft failure during vehicle operation.

2. Place the driveshaft on a suitable workbench. Do not damage the tube.

NOTE: **If the components are not marked and therefore installed incorrectly, driveshaft imbalance can occur.**

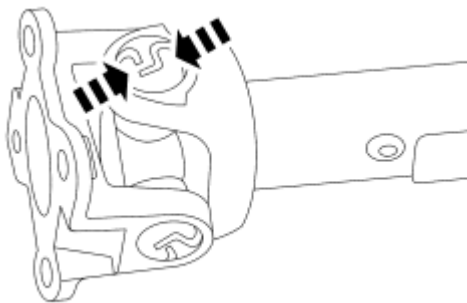
3. Index-mark the driveshaft components.



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Fig. 13: Driveshaft Components Index-Marks
Courtesy of FORD MOTOR CO.

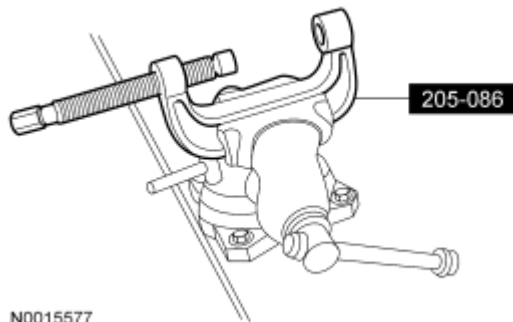
4. Remove and discard all 4 of the snap rings.



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Fig. 14: Snap Rings
Courtesy of FORD MOTOR CO.

5. Place the special tool in a vise.



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Fig. 15: Pressing Out Bearing Cup Using Special Tool (205-086)
Courtesy of FORD MOTOR CO.

NOTE: If necessary, use a pair of pliers to remove a bearing cup that fails to press out all the way.

6. Remove the bearing cups and the driveshaft slip yoke.

1. Position the driveshaft flange yoke in the special tool.
2. Press out a bearing cup.
3. Rotate the driveshaft flange yoke 180 degrees.
4. Press on the U-joint spider to remove the remaining bearing cup.
5. Remove the driveshaft flange yoke.

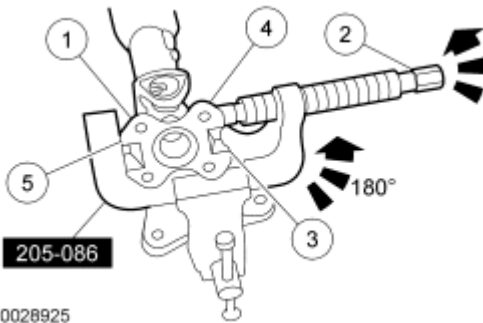


Fig. 16: Removing Bearing Cups & Flange
Courtesy of FORD MOTOR CO.

7. Repeat steps to remove the remaining bearing cups and the U-joint spider from the driveshaft yoke.

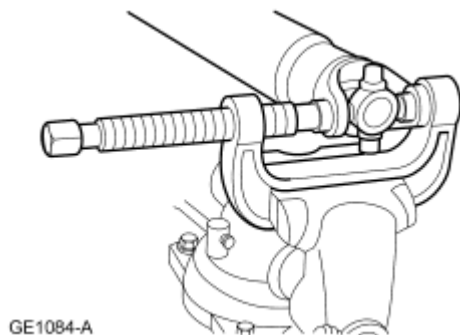


Fig. 17: Bearing Cups And U-Joint Spider
Courtesy of FORD MOTOR CO.

NOTE: **Inspect the bearing cup bores and retaining ring grooves. Remove any rust or other surface irregularities.**

8. Inspect the bearing cup bores of the driveshaft slip yoke and driveshaft yoke. Make sure that the bearing cup bores are clean and smooth.

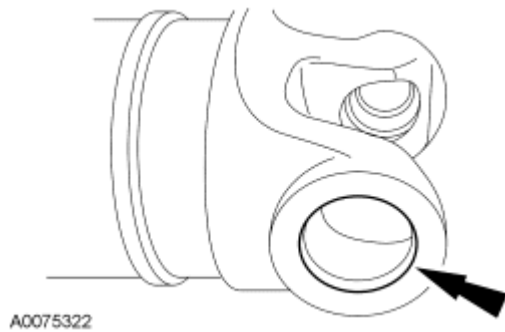


Fig. 18: Inspecting Bearing Cup Bores And Retaining Ring Grooves
Courtesy of FORD MOTOR CO.

ASSEMBLY

NOTE: Install the U-joint kits as complete assemblies only. Do not mix components from other U-joint kits.

NOTE: Lubricate the driveshaft slip yoke and driveshaft yoke bearing cup bores with grease before installing the bearing cups.

1. Install a new U-joint spider and bearing cup.
 1. Start a new bearing cup in the driveshaft yoke.
 - Check the needle bearings for correct positioning.
 2. Position the new U-joint spider in the driveshaft yoke.
 3. Press the bearing cup to just below the snap ring groove.

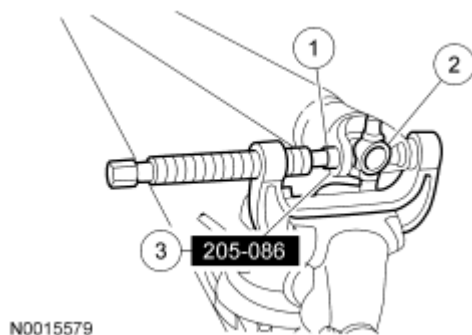
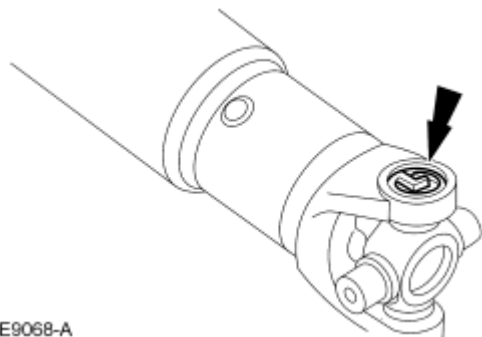


Fig. 19: Identifying U-Joint Spider And Bearing Cup
Courtesy of FORD MOTOR CO.

NOTE: Never mix yellow and black snap rings on opposing sides.

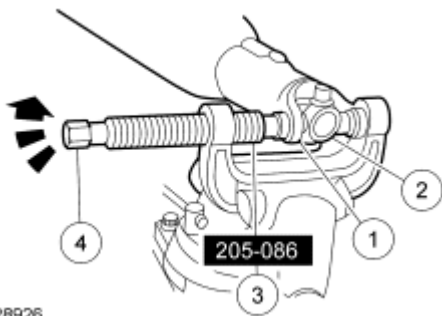
2. Remove the shaft from the special tool and install a new yellow snap ring.



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Fig. 20: Universal Joint Cap Snap Rings
Courtesy of FORD MOTOR CO.

3. Repeat steps to install the new bearing cup and snap ring on the opposite side of the driveshaft yoke.
 - If the yellow snap ring will not seat in the snap ring groove, install the black snap rings.
4. Install the driveshaft flange yoke and new bearing cup.
 1. Align the index marks made during disassembly and install the driveshaft flange yoke on the U-joint spider.
 2. Start a new bearing cup in the driveshaft slip yoke.
 - Check the needle bearings for correct positioning.
 3. Position the assembly in the special tool.
 4. Press the bearing cup to just below the snap ring groove.



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Fig. 21: Installing Bearing Cup Using Special Tool
Courtesy of FORD MOTOR CO.

5. Remove the driveshaft from the special tool and install a new yellow snap ring.

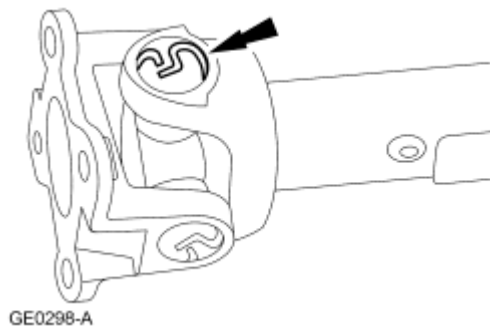


Fig. 22: Snap Rings

Courtesy of FORD MOTOR CO.

NOTE: Never mix yellow and black snap rings on opposing sides.

6. Repeat steps to install the new bearing cup and snap ring on the opposite side of the driveshaft slip yoke.
 - If the yellow snap ring will not seat in the snap ring groove, install the black snap rings.

CAUTION: Do not strike the bearings or component damage may occur.

7. A sharp rap on the driveshaft yoke with a brass or plastic hammer will seat the bearing cups.
8. Rotate the driveshaft yoke to make sure the U-joints are free to rotate easily, without binding, before installing the driveshaft.

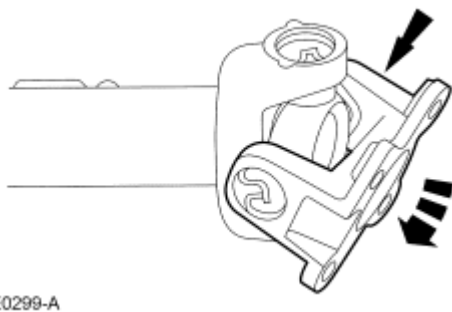


Fig. 23: Checking U-Joint For Freedom Of Movement

Courtesy of FORD MOTOR CO.

9. Install the driveshaft. For additional information, refer to **Driveshaft - 4.0L** or **Driveshaft - 4.6L and 5.4L**.