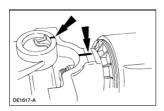
#### Driveshaft Rear, Three-Piece

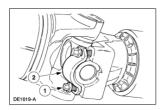
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#### Removal

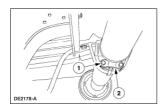
- 1. Raise and support the vehicle. For additional information, refer to Section 100-02.
- 2. Index-mark the driveshaft at the axle flange.



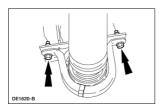
- 3. Disconnect the driveshaft from the axle flange.
  - 1. Remove and discard the bolts.
  - 2. Remove and discard the U-joint retainers.
  - Using mechanics wire, support the driveshaft.



- 4. Disconnect the driveshaft from the coupling shaft.
  - 1. Remove and discard the bolts.
  - 2. Remove and discard the U-joint retainers.
  - Using mechanics wire, support the driveshaft.



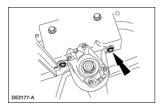
5. Remove the center bearing support bolts.



- 6. Remove the rear driveshaft assembly.
- 7. Remove and discard the bolts.



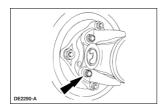
8. Remove the center bearing support bolts.



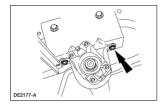
- 9. Remove the front driveshaft.
- 10. Clean grease deposits, dirt and rust from the following:
  - The driveshaft yoke areas.
  - All driveshaft components.
  - Wipe the bearing and rubber insulator of the driveshaft center bearing. Do not immerse in solvent.
- 11. Inspect the following:
  - The universal joint slip yoke boot for rips or holes. Install a new boot if necessary.
  - The driveshaft center bearing support for wear or rough action. If roughness or wear is evident, install a new driveshaft center bearing support.
  - The center bearing rubber insulator for evidence of hardening, cracking or deterioration. Install a new insulator if necessary.

#### Installation

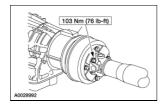
- 1. Connect the front driveshaft to the transmission. Install the new bolts.
  - Hand-tighten only; do not tighten at this time.



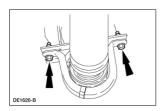
- 2. Position the center support bearing and install the bolts.
  - Hand-tighten only; do not tighten at this time.



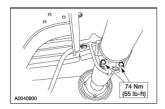
3. Tighten the driveshaft to parking brake drum bolts and the driveshaft center bearing bolts.



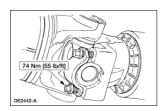
- 4. Position the rear driveshaft assembly and install the center support bearing bolts.
  - Hand-tighten only; do not tighten at this time.



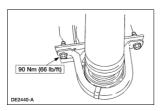
5. Connect the rear driveshaft assembly to the front driveshaft. Install the new retainers and bolts.



6. Connect the rear driveshaft assembly to the rear axle. Install the new retainers and bolts.



7. Tighten the driveshaft center support bearing bolts.



2004 Motorhome Chassis Workshop Manual Procedure revision date: 06/25/2003

#### **Driveshaft Center Bearing**

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#### Material

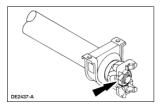
Item	Specification
Premium Long Life Grease XG-1-C	ESA-M1C75-B

# **Disassembly and Assembly**

1. **A** CAUTION: Do not clamp the driveshaft in the jaws of a vice or a similar holding fixture.

Place the driveshaft on a suitable workbench.

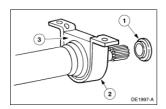
2. On reverse slip driveshafts, while using a suitable flange holding tool to prevent shaft rotation, remove the flange retaining nut.



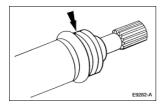
3. On reverse slip driveshafts, remove the flange.



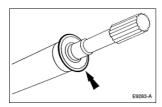
- 4. Remove the rubber insulator surrounding the bearing.
  - 1. Remove the driveshaft center bearing retainer.
  - 2. Remove the driveshaft center bearing bracket.
  - 3. Remove the rubber insulator.



5. Using a suitable press, remove the bearing from the driveshaft.



6. Using a suitable press, remove the dust slinger.



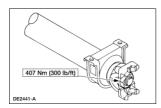
7. **NOTE:** Clean grease deposits, dirt and rust from the stub shaft.

**NOTE:** Inspect the stub shaft splines for nicks, gouges, or burrs. Remove with a file or emery cloth.

**NOTE:** The driveshaft center bearing bracket must be installed with the deep flange rearward.

To assemble, reverse the disassembly procedure.

• Lubricate the stub shaft spline with grease.



# Driveshaft Universal Joint Single Cardan, Flange Yoke

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### Special Tool(s)



Installer/Remover, C Frame and Screw 205-086 (T74P-4635-C)

#### Disassembly

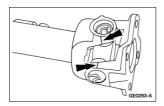
#### **Initial disassembly**

1. A CAUTION: Do not, under any circumstance, clamp the driveshaft in the jaws of a vise or similar holding fixture. Denting or localizing fracture can result, causing driveshaft failure during vehicle operation.

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

2. **NOTE:** If components are not marked and installed incorrectly, driveline imbalance can occur.

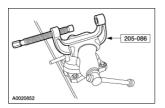
Index-mark the driveshaft components.



3. Remove and discard all four of the snap rings.



4. Clamp the special tool in a vise.

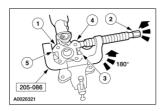


#### Bearing cup removal

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

Remove the bearing cups and the flange.

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



### Final disassembly

6. Repeat Bearing cup removal in this procedure to remove the remaining bearing cups and the spider from the driveshaft.



7. Clean the yoke area at the end of the driveshaft.

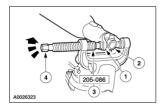
#### **Assembly**

# Bearing cup installation

1. **NOTE:** Install the Universal Joint Kits as complete assemblies only. Do not mix components from other kits.

Install a new spider and bearing cups.

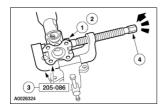
- 1. Start a new bearing cup in the driveshaft yoke.
  - ♦ Check the needle bearings for correct positioning.
- 2. Position the new spider in the driveshaft yoke.
- 3. Position the driveshaft yoke in the special tool.
- 4. Press the bearing cup to just below the snap ring groove.
  - Repeat to install the new bearing cup on the opposite side of the driveshaft yoke.



### Flange installation

- 2. Inspect the flange. Install a new flange, if necessary.
- 3. Install the new bearing cups and the flange.
  - 1. Start a new bearing cup in the flange.

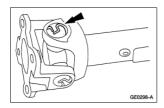
- ♦ Check the needle bearings for correct positioning.
- 2. Position the flange on the spider.
- 3. Position the assembly in the special tool.
- 4. Press the bearing cup to just below the snap ring groove.
  - Repeat to install the new bearing cup on the opposite side of the flange.



### Final assembly

4. **NOTE:** Use the yellow snap rings supplied in the kit to assemble the universal joint (U-joint). If difficulty is encountered with the yellow snap rings, install the black snap rings.

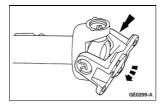
Remove the driveshaft from the special tool, and install the four new snap rings.



5. **A** CAUTION: Do not strike the bearings.

Check the U-joint for freedom of movement.

• If binding, strike the yoke with a brass or plastic hammer.



SECTION 205-02A: Rear Drive Axle/Differential Dana 80

2004 Motorhome Chassis Workshop

Manual

Procedure revision date: 06/25/2003

**SPECIFICATIONS** 

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# **General Specifications**

Item	Specification	
Lubricants and Sealants		
SAE 75W-140 High Performance Synthetic Rear Axle Lubricant XY-75W140-QL	WSL-M2C192-A	
Premium Long-Life Grease XG-1-C or -K	ESA-M1C75-B	
Silicone Rubber F7AZ-19554-CA	ESB-M4G92-A	
Threadlock® and Sealer E0AZ-19554-AA	WSK-M2G351-A5	
Lubricant Fill Level Checks		
Approximate Capacities	4.0 liters (8.5 pint)	
Backlash Specifications		
Backlash between differential ring gear and pinion	0.13-0.20 mm (0.005-0.008 in)	
Backlash maximum variation between checkpoints	0.05 mm (0.002 in)	
Rotational Torques		
Pinion bearing preload (with new bearings)	2.26-4.53 Nm (20-40 lb-in)	
Total (pinion plus differential) preload with new bearings	Add 0.7-0.9 Nm (6-8 lb-in)	
Clearance Specifications		
Maximum spread of rear axle	0.25 mm (0.010 in)	

# **Torque Specifications**

Description	Nm	lb-ft
Pinion shaft lock nut	637	470
Driveshaft bolts to parking brake drum	150	111
Differential bearing cap bolts	108	80
Ring gear bolts grade 9	298	220
Oil filler plug 1/4-inch recess drive	34	25
Differential housing cover bolts	61	45
Sensor (ABS) bolt	40	30