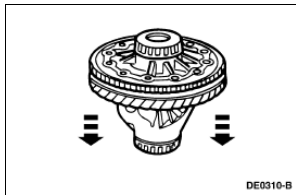


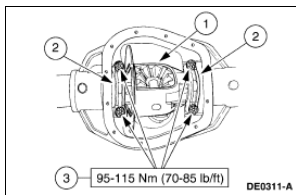
NOTE: The anti-lock speed sensor ring cannot be reused once removed.

Insert a punch in the bolt holes. Drive off the ring gear and, if necessary, the anti-lock speed sensor ring.



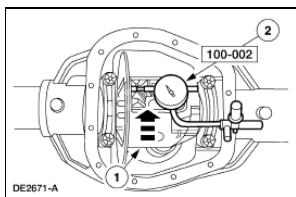
10. Install the differential case.

1. Position the differential case assembly, including bearing clips and shims, in the carrier.
2. Install the differential bearing caps.
3. Install the differential bearing cap bolts.



11. Position the special tools.

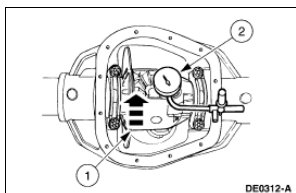
1. Rotate the differential case to make sure the differential bearings are correctly seated.
2. Position the special tools.



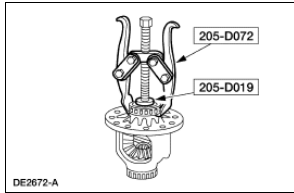
12. **NOTE:** If runout is within specification, install a new ring gear and pinion. If runout exceeds specification, the ring gear is true and the concern is due to either a damaged differential case or differential bearings. Inspect the differential bearings. If the differential bearings are not damaged, replace both the differential case and the differential bearings.

Measure the differential case runout without the ring gear.

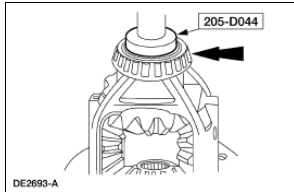
1. Rotate the differential case.
2. Check and note the differential case runout.



13. Remove the differential case from the rear axle housing, and remove the differential bearings using the special tools.

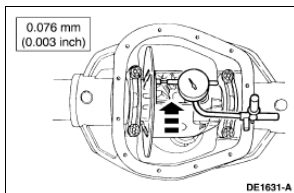


14. Using the special tool, install the new differential bearings on the differential case.



15. Measure the differential case runout without the ring gear.

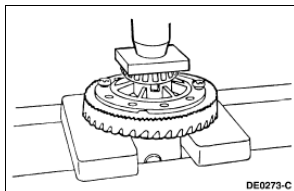
- Check the case runout again with the new differential bearings. If the runout is now within the specification shown, use the new differential bearings for assembly. If the runout is still excessive, the differential case is damaged and must be replaced.



Installation

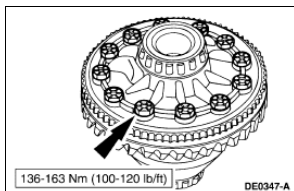
All vehicles

1. Press the ring gear and, if removed, a new anti-lock speed sensor on the differential case.

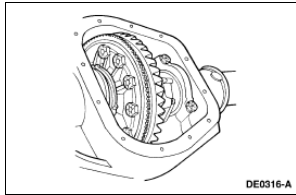


2. Install the ring gear bolts.

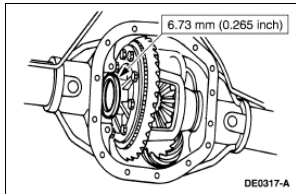
- Apply stud and bearing mount to the ring gear bolts.



3. With the pinion depth set and the pinion installed, place the differential case in the rear axle housing.



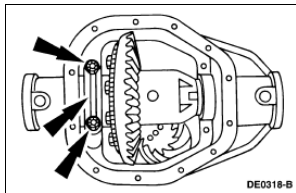
4. Install a shim on the left side.



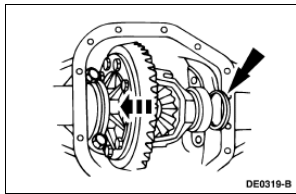
5. **⚠ CAUTION:** Mark the position of the bearing caps as arrows may not be visible. The bearing caps must be installed in their identical locations and positions.

NOTE: Apply pressure toward the left side to make sure the left bearing cap is seated.

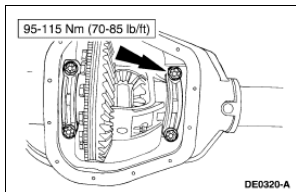
Install the left bearing cap, and loosely install the bearing cap bolts.



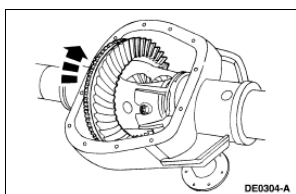
6. Install progressively larger shims on the right side until the largest shim selected can be assembled by hand.



7. Install the right side bearing cap, and tighten the bolts.

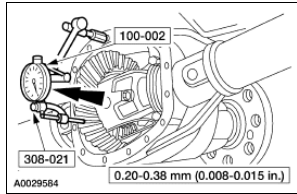


8. Rotate the differential case to make sure it rotates freely.



Measuring for backlash

9. Using the special tool, measure ring gear backlash.
 - If the backlash is within specification, refer to Backlash within specification in this procedure. The specification shown is the full allowable range. For the preferred range, refer to Specifications in this section.
 - If a zero backlash condition occurs, refer to Zero backlash in this procedure.
 - If the backlash is not within specification, refer to Backlash not within specification in this procedure.



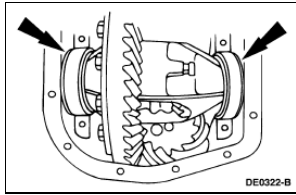
Zero backlash

10. If a zero backlash condition occurs, add a 0.50-mm (0.020-inch) shim to the RH side and subtract 0.50 mm (0.020 inch) from the LH side to allow backlash indication. Check backlash. Repeat Step 9.

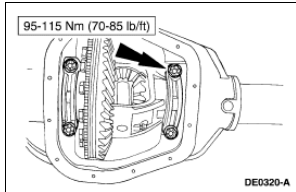
Backlash Change Required		Thickness Change Required	
mm	Inch	mm	Inch
0.025	0.001	0.050	0.002
0.050	0.002	0.050	0.002
0.076	0.003	0.101	0.004
0.101	0.004	0.152	0.006
0.127	0.005	0.152	0.006
0.152	0.006	0.203	0.008
0.177	0.007	0.254	0.010
0.203	0.008	0.254	0.010
0.228	0.009	0.304	0.012
0.254	0.010	0.355	0.014
0.279	0.011	0.355	0.014
0.304	0.012	0.406	0.016
0.330	0.013	0.457	0.018
0.335	0.014	0.457	0.018
0.381	0.015	0.508	0.020

Backlash not within specification

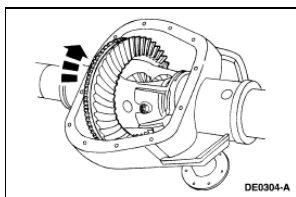
11. To increase or decrease backlash, remove the bearing caps, and install a thicker shim and a thinner shim as shown.
 - If backlash is not within specification, correct by increasing the thickness of one differential bearing shim and decreasing the thickness on the other differential bearing shim by the same amount.



12. Install the bearing caps and bearing cap bolts.

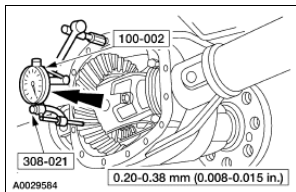


13. Rotate the differential several times to make sure the differential bearings are properly seated.



14. Using the special tool, recheck the backlash.

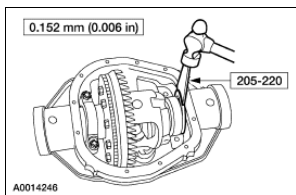
- If backlash is within specification, refer to Backlash within specification in this procedure.
- If backlash is not within specification, refer to Backlash not within specification in this procedure.
- The specification shown is the full allowable range. For the preferred range, refer to Specifications in this section.



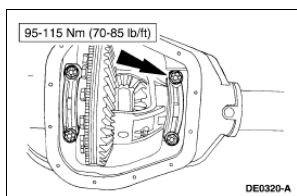
Backlash within specification

15. Remove the bearing caps and bolts.

- To establish differential bearing preload, increase both left and right shim sizes by the specification shown in the illustration.
- Using the special tool, ensure the differential bearing shims are fully seated and the assembly turns freely.

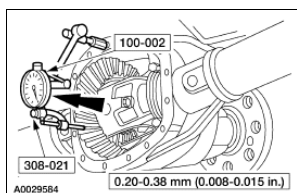


16. Install the bearing caps and bearing cap bolts.



17. Using the special tool, verify the backlash.

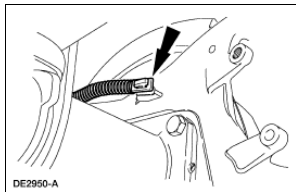
- The specification shown is the full allowable range. For the preferred range, refer to Specifications in this section.
- For additional adjustments, refer to Section 205-00 .



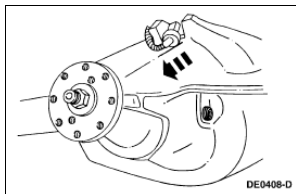
18. Install the axle shafts. For additional information, refer to Axle Shaft Disc Brake and Axle Shaft Drum Brake in this section.

Axle Housing**Removal and Installation**

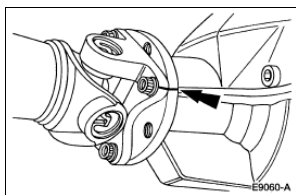
1. Remove the brake lines from all retaining clips on the axle housing.
2. Remove the axle shafts. For additional information, refer to Axle Shaft Disc Brake or Axle Shaft Drum Brake in this section.
 - Do not disconnect the brake lines from the brake calipers/drum backing plates.
 - Position the brake calipers/drum backing plates aside.
3. Remove the parking brake cables.
 - Remove the parking brake cables from all retaining clips on the axle housing.



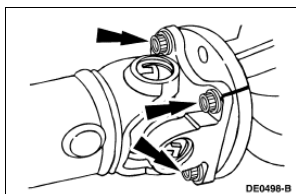
4. Disconnect the rear brake anti-lock sensor electrical connector.



5. Mark the driveshaft flange and the rear axle pinion flange for correct alignment during the installation.

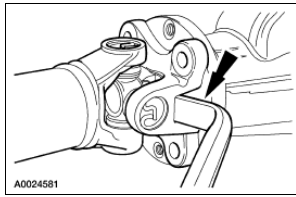


6. Remove the four driveshaft bolts.

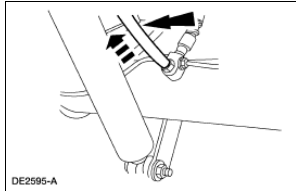


7. **⚠ CAUTION:** The driveshaft centering socket yoke fits tightly on the rear axle pinion flange pilot. Never hammer on the driveshaft or any of its components to disconnect the yoke from the flange. Pry only in the area shown with a suitable tool to disconnect the yoke from the flange.

Using a suitable tool as shown, disconnect the driveshaft centering socket yoke from the rear axle pinion flange.

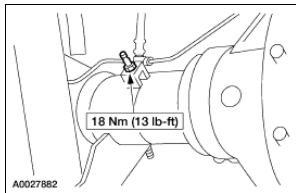


8. Disconnect the rear axle brake hose.

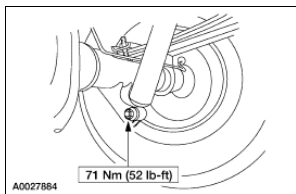


9. **NOTE:** Do not disconnect the brake lines.

Remove the brake hose junction block retaining bolt.

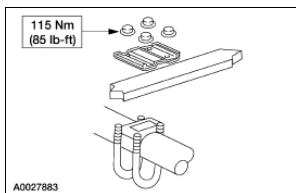


10. Remove the lower shock absorber nuts and bolts (one on each side).



11. Remove the rear axle U-bolt assembly.

- Remove the rear spring plate nuts.
- Remove the two rear spring plate U-bolts.
- Remove the rear spring plate.
- Repeat the procedure for the other side.

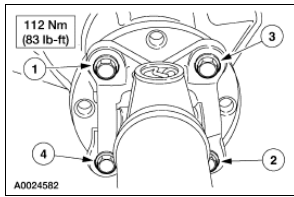


12. Lower the axle from the vehicle.

13. **⚠ CAUTION:** The driveshaft centering socket yoke fits tightly on the rear axle pinion flange pilot. Make sure that the yoke seats squarely on the flange, tighten the bolts evenly in a cross pattern as shown.


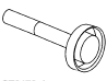

To install, reverse the removal procedure.

- For brake caliper/backing plate torques, Refer to the appropriate section in Group 206 for the procedure.



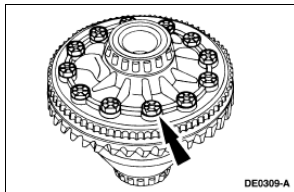
Differential Case and Ring Gear Conventional

Special Tool(s)

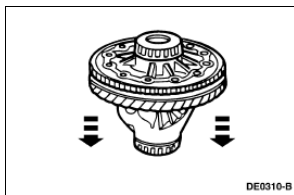
 ST2026-A	2-Jaw Puller 205-D072 (D97L-4221-A) or equivalent
 ST2473-A	Installer, Differential Carrier Bering 205-D044 (D81T-4221-A) or equivalent
 ST1543-A	Step Plate 205-D019 (D80L-630-8) or equivalent

Disassembly

1. Remove the differential case (4204). For additional information, refer to Differential Case in this section.
2. Remove the ring gear bolts.

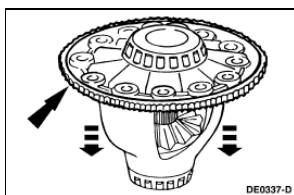


3. Insert a punch in the bolt holes and drive the ring gear off.

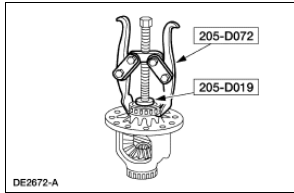


4. **NOTE:** The anti-lock speed sensor ring cannot be reused once removed.

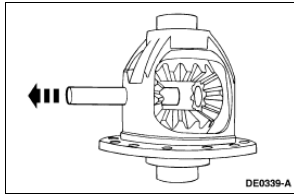
Remove the anti-lock speed sensor ring.



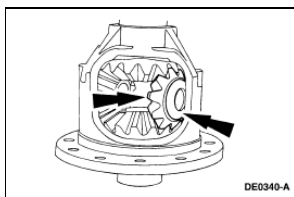
5. If required, remove the differential bearings (4221) with the special tools.



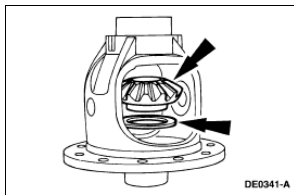
6. Remove the differential pinion shaft lock bolt and the differential pinion shaft (4211).



7. Rotate and remove the differential pinion gears and differential pinion thrust washers.

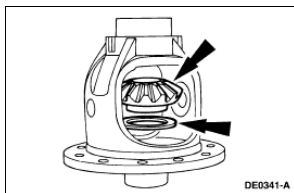


8. Remove the differential side gears (4236) and the differential side gear thrust washers (4228).

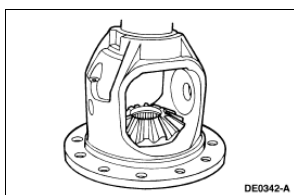


Assembly

1. Position the differential side gear thrust washers on the differential side gears.
 - Use SAE 75W-140 High Performance Rear Axle Lubricant F1TZ-19580-B or equivalent meeting Ford specification WSL-M2C192-A to lubricate the differential side gear thrust washers and the differential side gear journals.



2. Position the differential side gears.



3. Assemble the differential pinion thrust washers (4230) and the differential pinion gears (4215).