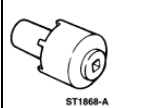


Hub

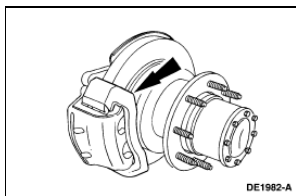
Special Tool(s)

 <p>ST1868-A</p>	<p>Socket, Wheel Hub Nut (F-350 only) 205-282 (T88T-4252-A)</p>
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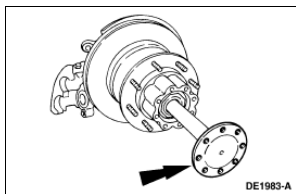
Removal

All vehicles

1. Remove the tire and wheel assembly. For additional information, refer to [Section 204-04](#) .
2. Remove the anchor plate. For additional information, refer to [Section 206-04](#) .



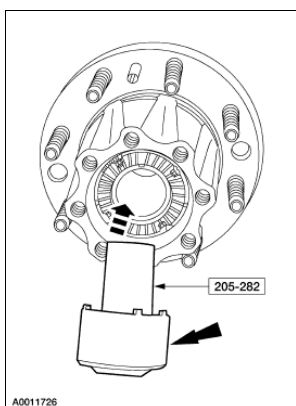
3. Remove the axle shaft (4234). For additional information, refer to [Axle Shaft](#) in this section.



F-350

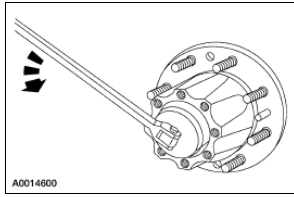
4. **NOTE:** Make sure that the drive tangs on the special tool engage the four slots of the hub nut.

Using the special tool, remove the hub nut (1124).



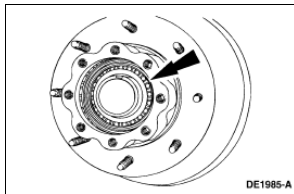
F-450 and F-550

5. Using a suitable socket, remove the hub nut (1A124).



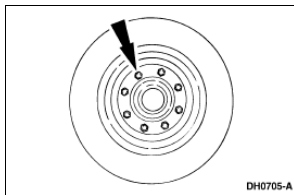
All vehicles

6. Remove the outer rear wheel bearing (1240).



7. Remove the rear hub and brake disc assembly.

8. Remove the bolts and separate the rear hub (1109) from the rear brake disc (2C026).



9. Inspect the rear hub for the following:
 - Cracks and damage around the bolt holes.
 - Oversized holes.

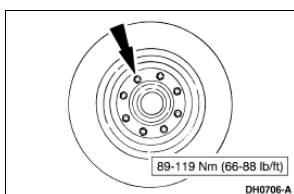
Installation

1. **⚠ WARNING:** Install a new rear hub seal (1175) after removing the rear hub from the axle. A damaged or worn seal can permit bearing lubricant to reach the brake linings, resulting in ineffective brake operation. Failure to follow these instructions may result in personal injury.

⚠ CAUTION: Clean and remove any dirt or foreign material in the rear hub bolt holes.

Install a new rear hub seal. For additional information, refer to [Bearings, Cups and Seals](#) in this section.

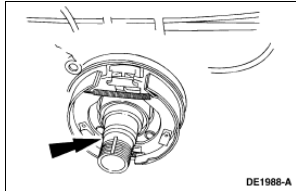
2. Position the rear brake disc on the rear hub and install the bolts.



3. **⚠ CAUTION:** Thoroughly clean the spindle. Wrap the spindle threads with electrician's tape to prevent damage while installing the rear hub and brake disc assembly.

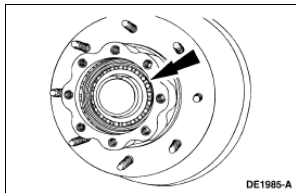
⚠ CAUTION: Lightly coat the spindle and pack each rear wheel bearing with Premium Long-Life Grease XG-1-C or equivalent meeting Ford specification ESA-M1C75-B.

Prepare the spindle for rear hub installation.

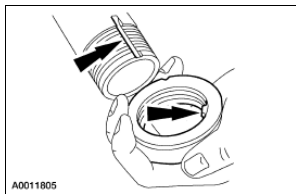


4. Slide the rear hub and brake disc assembly over the axle housing spindle.
- Remove the electrician's tape.

5. Install the outer rear wheel bearing.



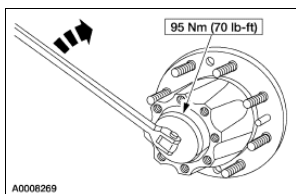
6. Start the hub nut making sure that the tab aligns correctly in the keyway prior to thread engagement.



7. **NOTE:** The following hub nut tightening sequence will prevent side-to-side end play of the hub and brake disc assembly.

NOTE: Apply inward pressure to the socket to separate the ratcheting components of the hub nut.

To adjust the bearings, tighten the nut to specification.

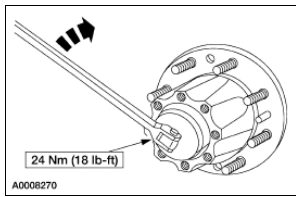


8. Back off the nut 90 degrees.

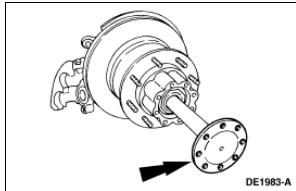
9. Tighten the nut to specification.

- To verify that there is no side-to-side end play, attach a magnetically mounted dial indicator to the spindle end and place the dial indicator tip on the outboard surface of the hub. Check for side-to-side end play.

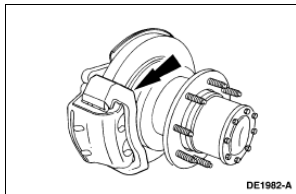
- Final bearing adjustment has zero end play. The maximum torque to rotate the hub is 2.3 Nm (20 lb-in) when end play is zero.



10. Install the axle shaft (4234). For additional information, refer to [Axle Shaft](#) in this section.



11. Install the anchor plate. For additional information, refer to [Section 206-04](#) .



12. Install the tire and wheel assembly. For additional information, refer to [Section 204-04](#) .
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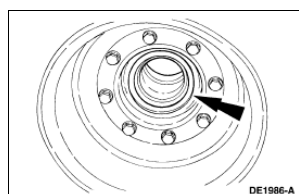
Bearings, Cups and Seals

Special Tool(s)

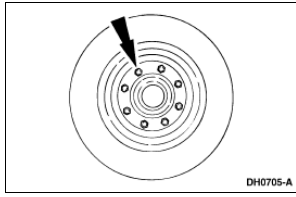
 ST1255-A	Adapter for 303-224 (Handle) 205-153 (T80T-4000-W)
 ST1869-A	Drawbar, Rear Axle 205-098 (T75T-1176-A) (Dana 80)
 ST2245-A	Installer, Wheel Hub Inner Bearing Cup 205-442 (Dana S135)
 ST2245-A	Installer, Wheel Hub Outer Bearing Cup 205-444 (Dana S135)
 ST2246-A	Installer, Wheel Hub Inner Oil Seal 205-445 (Dana S135)
 ST1870-A	Installer, Rear Wheel Hub Bearing Cup 205-278 (T88T-1175-C) (Dana 80)
 ST2244-A	Remover, Wheel Hub Inner Bearing Cup 205-441 (Dana S135)
 ST2244-A	Remover, Wheel Hub Outer Bearing Cup 205-443 (Dana S135)
 ST1872-A	Remover, Rear Wheel Hub Bearing Cup 205-275 (T88T-1175-A) (Dana 80)
 ST1871-A	Remover, Rear Wheel Hub Bearing Cup 205-277 (T88T-1175-B) (Dana 80)

Removal

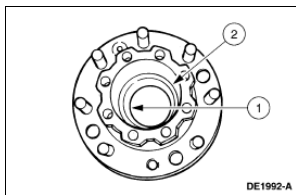
1. Remove the rear hub and brake disc assembly. For additional information, refer to Hub in this section.
2. Remove the rear hub seal (1175) and the inner rear wheel bearing (1244). Discard the rear hub seal.



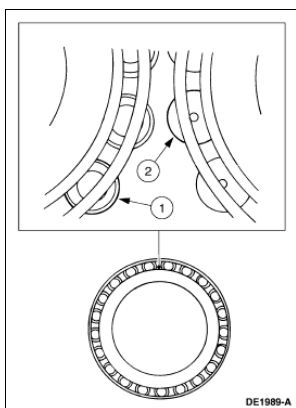
3. If not done previously, remove the bolts and separate the rear hub (1109) from the brake disc.



4. Clean all the old grease and axle lubricant out of the rear hub.
5. Remove the inner and outer bearing cups.
 1. For model 80, use special tools 205-277 and 205-153 to remove the inner bearing cup. For model S135, use special tools 205-441 and 205-151 to remove the inner bearing cup.
 2. For model 80, use special tools 205-275 and 205-153 to remove the outer bearing cup. For model S135, use special tools 205-443 and 205-153 to remove the outer bearing cup.



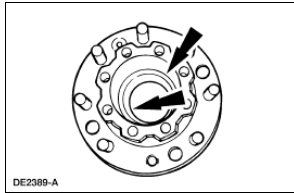
6. Clean the following components:
 - The rear axle housing spindle
 - All the old grease and axle lubricant from the rear hub
 - The rear wheel bearings and cups
7. Inspect the bearing races and rollers for pitting, galling or erratic wear patterns. Check the rollers for end wear. Discard the bearings, if necessary.
 1. A typical new bearing roller
 2. A worn bearing roller



Installation

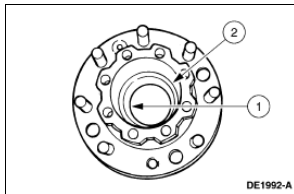
Model 80

1. Using the special tools 205-098 and 205-278, install the inner and outer bearing cups.
 - Check if a 0.038-mm (0.0015-inch) feeler gauge can be inserted between the cups and the rear hub at any point around each cup. Reseat the bearing cups, if necessary.



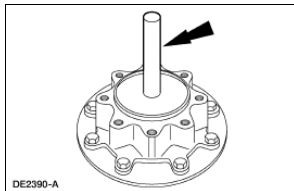
Model S135

2. Install the inner and outer bearing cups.
 1. Use special tools 205-442 and 205-153 to install the inner bearing cups.
 2. Use special tools 205-444 and 205-153 to install the outer bearing cups.
 - Check if a 0.038-mm (0.0015-inch) feeler gauge can be inserted between the cups and the rear hub at any point around each cup. Reseat the bearing cups, if necessary.

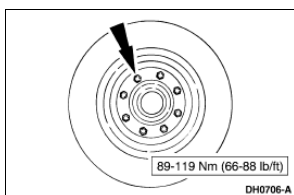


All axles

3. Install the inner rear wheel bearing in the rear hub.
4. Install a new rear hub seal.
 - For model 80, use a suitable seal installer.
 - For model S135, use special tools 205-445 and 205-153.



5. Position the rear brake disc on the rear hub and install the bolts.



6. Install the rear hub and brake disc assembly. For additional information, refer to [Hub](#) in this section.

2001 F-Super Duty/Excursion/Motorhome Chassis Workshop Manual

SECTION 205-02D: Rear Drive Axle/Differential 2001 F-Super Duty/Excursion/Motorhome Chassis
 Ford 10.50-Inch Ring Gear Workshop Manual
 SPECIFICATIONS

General Specifications

Item	Specification
SAE 75W-140 High Performance Rear Axle Lubricant F1TZ-19580-B	WSL-M2C192-A
Additive Friction Modifier C8AZ-19B546-A	EST-M2C118-A
Premium Long-Life Grease XG-1-C	ESA-M1C75-B
Sealant	
Clear Silicone Rubber D6AZ-19562-AA	ESB-M4G92-A
Threadlock and Sealer EOAZ-19554-AA	WSK-M2G351-A5
Adhesive	
Stud and Bearing Mount EOAZ-19554-BA	WSK-M2G349-A1
Clearance, Tolerance and Adjustments	
Maximum Back Face Ring Gear Runout mm (Inch)	0.102 (0.004)
Differential Case Maximum Runout	0.076 (0.003)
Backlash Between Ring Gear and Pinion Teeth	0.203-0.381 (0.008-0.015) maximum 0.305-0.381 (0.012-0.015) preferred
Ring Gear Maximum Backlash Variation Between Teeth	0.102 (0.004)
Pinion Flange Maximum Radial Runout in Assembly	0.305 (0.012 T.I.R.)
RABS Sensor Air Gap	0.127-1.143 (0.005-0.045)

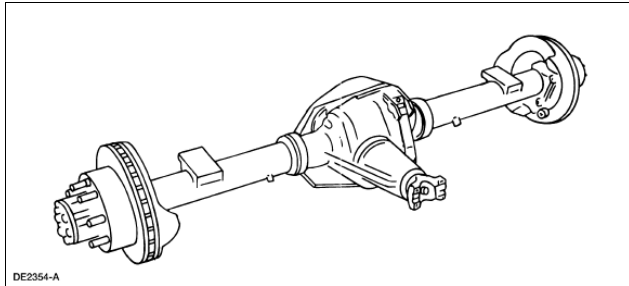
Torque Specifications

Description	Nm	Lb/Ft	Lb/In
Differential Bearing Cap Bolt	119	88	
Differential Pinion Shaft Lock Bolt	30	23	
Oil Filler Plug	20-40	15-30	
Rear Axle Housing Vent	11-24	8-18	
Rear Brake Hose	15-20	12-15	
Axle Housing Cover Bolts	38-52	29-39	
Rear Spring Plate Nuts	251	186	
Ring Gear Bolts	136-163	101-120	
Shock Absorber Bolts	63	47	
Traction-Lok® Clutch Gauge Nut	7		62
Pinion Bearing Preload (Used Pinion Bearing)	0.9-1.5		8-14
Pinion Bearing Preload (New Pinion Bearing)	1.8-3.3		16-29
Driver Handle	2.2		20
Initial Minimum Breakaway Torque (Traction-Lok®)	27	20	
Brake Junction Block Retainer Nut	18	14	

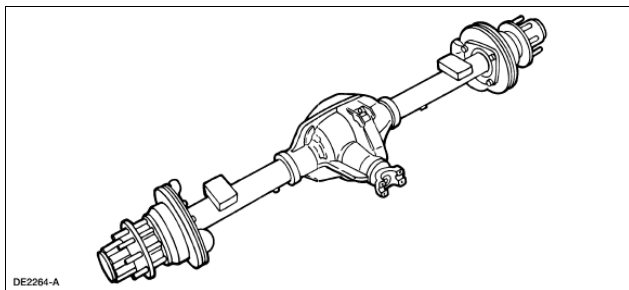
2-Piece Differential Case Half Retaining Bolts	122	90	
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Rear Drive Axle and Differential

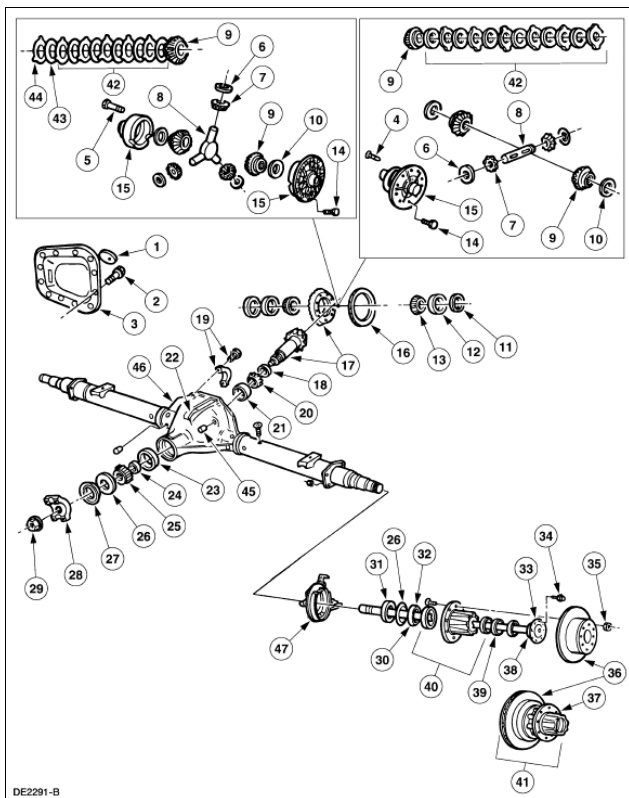
Ford 10.50-Inch Axle, Single Rear Wheel



Ford 10.50-Inch Axle, Dual Rear Wheel



Rear Axle 10.50-Inch Ring Gear, Traction-Lok®



Item	Part Number	Description
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