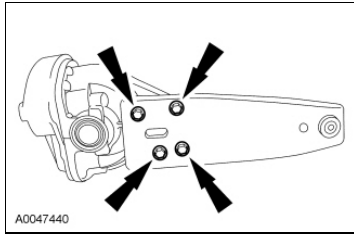


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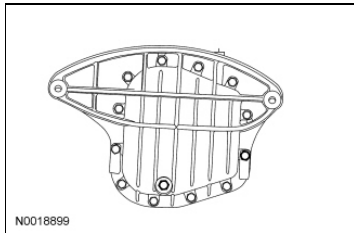
Item	Part Number	Description
1	W720586	Differential housing cover bolt (12 required)
2	4033	Differential housing cover
3	—	Differential bearing cap bolts (part of 4010) (4 required)
4	—	Differential bearing caps (part of 4010) (2 required)
5	4067	Differential bearing shims
6	4222	Differential bearing cups
7	4221	Differential bearings
8	4216	Differential ring gear bolt (12 required)
9	4204	Differential assembly
10	—	Differential ring gear (part of 4209)
11	—	Differential pinion gear (part of 4209)
12	4266	Drive pinion collapsible spacer
13	4663	Drive pinion bearing adjustment shim
14	4630	Inner drive pinion bearing
15	4670	Inner drive pinion bearing cup
16	4010	Differential housing
17	4616	Outer drive pinion bearing cup
18	4621	Outer drive pinion bearing
19	4670	Drive pinion oil slinger
20	4676	Drive pinion oil seal
21	4851	Drive pinion flange
22	4320	Drive pinion nut

### Removal

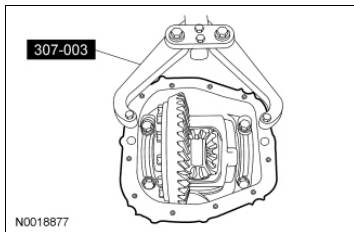
1. Remove the rear axle assembly. For additional information, refer to [Axle Assembly](#) in this section.
2. Remove the 4 bolts retaining the torque arm to the rear axle housing.



3. Remove and discard the 12 bolts and the differential housing cover.
  - Drain the lubricant.

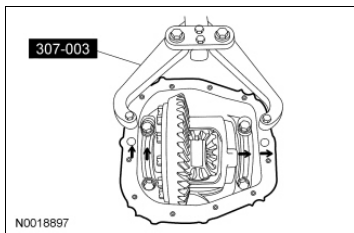


4. Using the Transmission Holding Fixture, mount the differential housing to a work bench.



5. **NOTICE:** Mark the position and location of the differential bearing caps as the arrows may not be visible. Always install the differential bearing caps in their original locations and positions or damage to the component may occur.

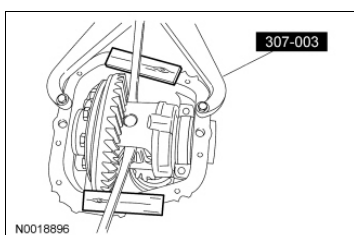
Remove the 4 bolts and the 2 differential bearing caps.



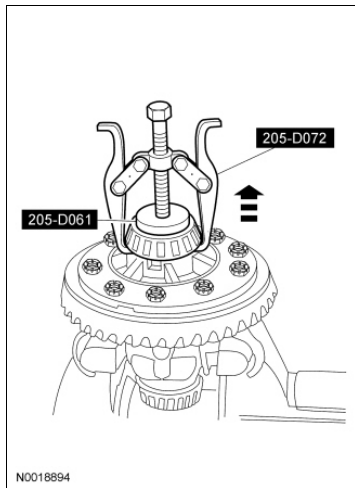
6. **NOTE:** Use wood blocks to avoid damaging the differential housing.

**NOTE:** Tag the bearing caps and shims for location as removed.

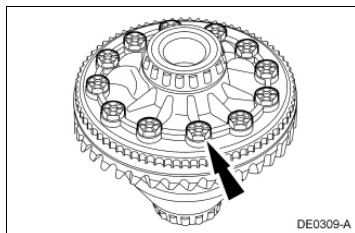
Position wood blocks at the top and bottom of the differential assembly and pry the differential assembly and the differential bearing shims out of the differential housing.



7. Using the 2 Jaw Puller and Step Plate, remove the differential bearing.
  - Repeat for the other side.

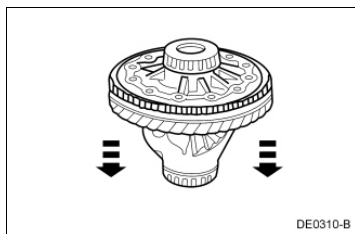


8. Remove and discard the 12 ring gear bolts.

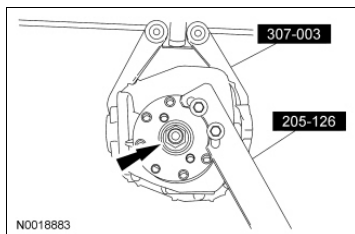


9. **NOTICE:** Be careful not to damage the ring gear bolt hole threads.

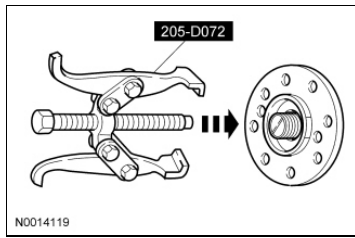
Insert a punch in the ring gear bolt holes and drive the differential ring gear off.



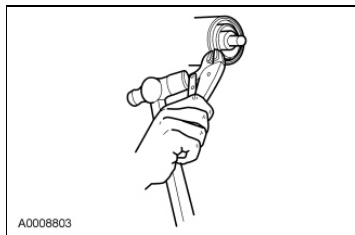
10. Using the Drive Pinion Flange Holding Fixture, hold the pinion flange to remove and discard the pinion nut.



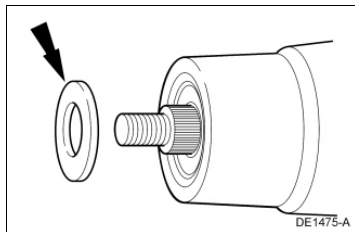
11. Using the 2 Jaw Puller, remove the pinion flange.



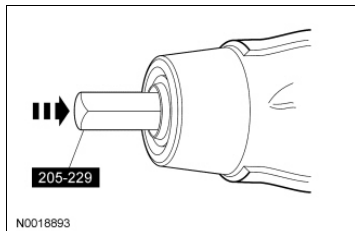
12. Use a screwdriver to force up the metal flange of the drive pinion oil seal. Install gripping pliers and strike with a hammer to remove the drive pinion oil seal.



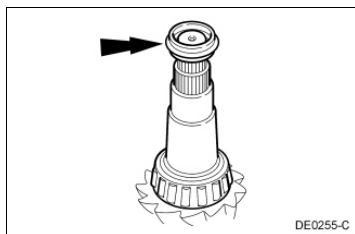
13. Remove the drive pinion oil seal deflector, drive pinion oil seal slinger and the outer pinion bearing.



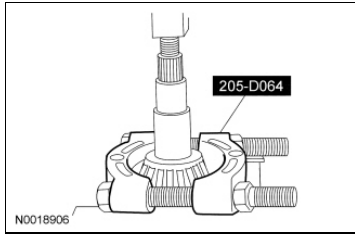
14. Using the Drive Pinion Thread Protector and a soft-faced hammer, remove the differential pinion gear from the differential housing.



15. Remove and discard the drive pinion collapsible spacer.

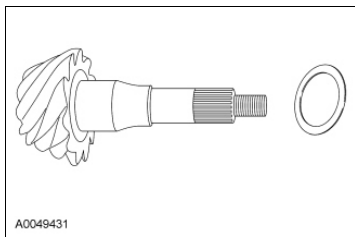


16. Using the Bearing Puller and a suitable shop press, remove and discard the inner drive pinion bearing.

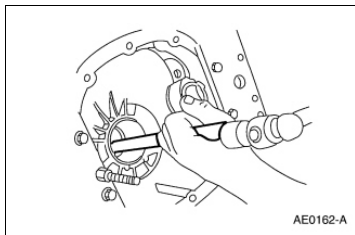


17. **NOTE:** Using a micrometer, measure the drive pinion bearing adjustment shim thickness. Use this measurement as a reference to compare to the shim gauge reading taken prior to installing the pinion bearing.

Remove the drive pinion bearing adjustment shim.

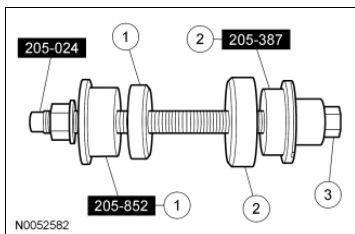


18. Using a brass drift and a hammer, remove any damaged differential drive pinion bearing cups from the differential housing. Tap alternately on each side of the cup to prevent it from cocking in the bore.

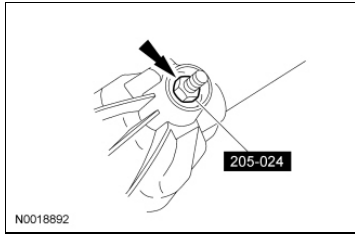


## Installation

1. Position the Drive Pinion Bearing Cup Installer, Rear Axle Pinion Bearing Cup Installers and the inner and outer drive pinion bearing cups in their respective bores.
  1. Place the Rear Axle Pinion Bearing Cup Installer on the outer drive pinion bearing cup.
  2. Place the Rear Axle Pinion Bearing Cup Installer on the inner drive pinion bearing cup.
  3. Install the Drive Pinion Bearing Cup Installer.

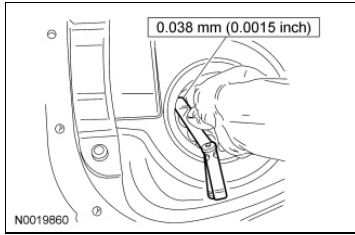


2. Tighten the Drive Pinion Bearing Cup Installer to fully seat the differential drive pinion bearing.



3. **NOTE:** If a feeler gauge of the specification shown can be inserted between a cup and the bottom of its bore at any point around the cup, the cup is not correctly seated.

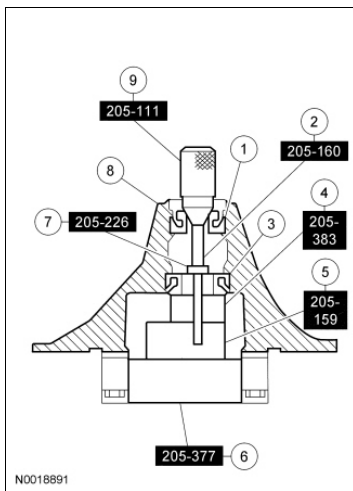
Make sure the differential pinion bearing cups are correctly seated.



4. **NOTICE:** Use the same drive pinion bearings and the drive pinion bearing adjustment shim from the drive pinion bearing adjustment shim selection procedure for final assembly or damage to the component may occur.

**NOTE:** Install new drive pinion bearings without any additional lubricant since the anti-rust oil provides adequate lubricant without upsetting the drive pinion bearing preload settings.

Install the new drive pinion bearings and Drive Pinion Depth Gauge/Aligner, Drive Pinion Gauge Tube, Drive Pinion Depth Gauge/Aligner and Adapters as shown.



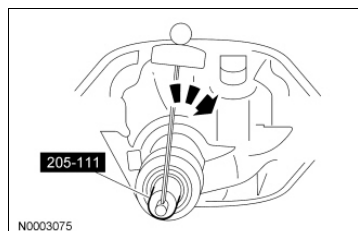
Item	Part Number	Description
1	4621	Outer pinion bearing
2	205-160	Adapter for 205-S127
3	4630	Inner pinion bearing
4	205-383	Depth Gauge/Aligner, Drive Pinion
5	205-159	Adapter for 205-S127
6	205-377	Drive Pinion Gauge Tube
7	205-226	Depth Gauge/Aligner, Drive Pinion

8	4010	Rear axle housing outer (front) pinion bearing
9	205-111	Adapter for 205-S127

5. **NOTE:** This step duplicates drive pinion bearing preload.

Tighten the Adapter to the specified rotational torque.

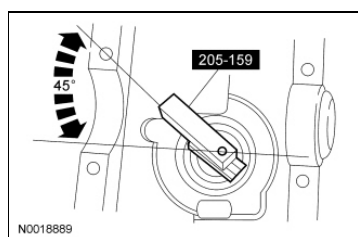
- Tighten to 2.2 Nm (20 lb-in) rotational torque.



6. **NOTE:** Position the Adapter so it does not contact the housing.

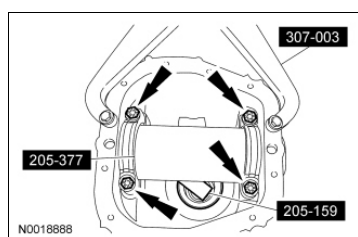
**NOTE:** Offset the Adapter to obtain an accurate reading.

Rotate the Adapter several half turns to seat the drive pinion bearings and position the Adapter as shown.



7. Install the Drive Pinion Gauge Tube, the 2 bearing caps and the 4 bolts.

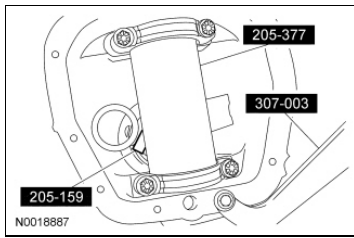
- Tighten to 105 Nm (77 lb-ft).



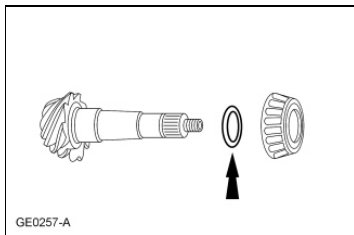
8. **NOTE:** Drive pinion bearing adjustment shims must be flat and clean.

**NOTE:** A slight drag should be felt for correct shim selection. Do not attempt to force the pinion shim between the Adapter and the Gauge Tube. This will minimize selection of a pinion shim thicker than required, which results in a deep tooth contact in the final assembly of integral rear axle assemblies.

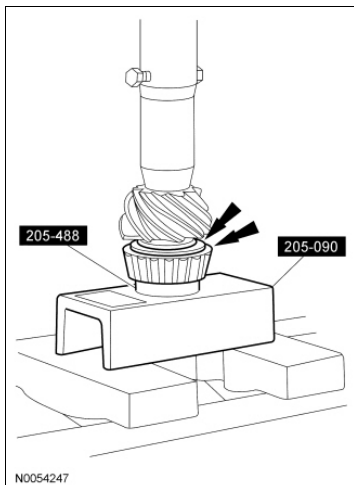
Use a drive pinion bearing adjustment shim as a gauge for shim selection.



9. Position the drive pinion bearing adjustment shim and the inner pinion bearing on the drive pinion gear stem.

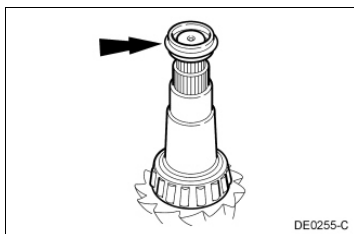


10. Using the Bearing/Oil Seal Plate and Drive Pinion Bearing Cone Installer and a suitable press, firmly seat the drive pinion bearing adjustment shim and inner pinion bearing on the drive pinion gear stem.



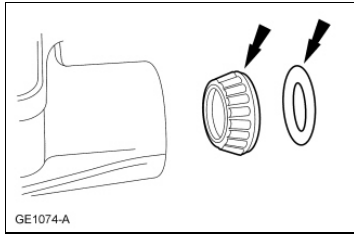
11. **NOTE:** Make sure the splines on the drive pinion gear stem are free of burrs. If burrs are evident, remove them using a fine crocus cloth.

Place a new differential drive pinion collapsible spacer on the drive pinion gear stem against the pinion stem shoulder.



12. Install the outer pinion bearing and the drive pinion oil seal slinger.

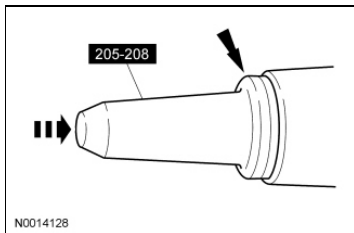




13. **NOTICE:** Installation without the correct tool can result in early seal failure. If the rear axle drive pinion seal becomes cocked during installation, remove it and install a new one.

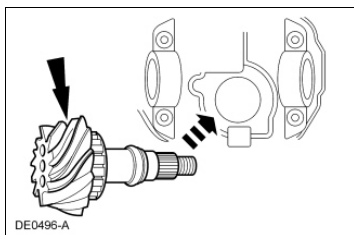
**NOTE:** Coat the lips of the rear axle drive pinion seal with grease.

Place the drive pinion oil seal on the Drive Pinion Oil Seal Installer and drive the seal into place.



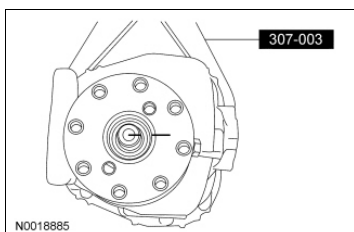
14. **NOTE:** Lubricate the pinion flange splines with rear axle lubricant.

Install the drive pinion gear with the differential drive pinion collapsible spacer in the differential housing.



15. **NOTE:** Disregard the scribe marks if a new pinion flange is being installed.

Align the pinion flange with the drive pinion shaft.



16. With the drive pinion in the axle housing, install the pinion flange using the Drive Pinion Flange Installer.