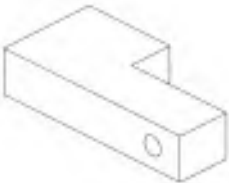
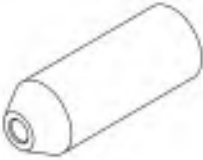
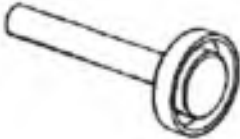


Differential Bearings

Special Tool(s) / General Equipment

 E234280	205-005 (T53T-4621-C) Installer, Drive Pinion Bearing Cone
 E234283	205-010 (T57L-4221-A2) Installer, Differential Side Bearing
 E234288	205-024 (T67P-4616-A) Installer, Drive Pinion Bearing Cup
 E234297	205-105 (T76P-4020-A3) Adapter for 205-S127
 E234298	205-109 (T76P-4020-A9) Adapter for 205-S127

 E234299	205-110 (T76P-4020-A10) Gauge Block
 E169393	205-111 (T76P-4020-A11) Handle
 E234302	205-129 (T79P-4020-A18) Disc, Guage
 E238622	205-336 (T93P-4020-A) Gauge Tube, Drive Pinion TKIT-1993-FLM TKIT-1993-LM TKIT-1996-F/FM
 E238648	205-460 Protector, Drive Pinion Thread TKIT-1999A-F/LT TKIT-1999A-FM/FLM TKIT-1999A-LM
	205-D044 (D81T-4221-A) Installer, Differential Carrier Bearing
	205-D061 (D83T-4205-C2) Step Plate
Dial Indicator	
Three Leg Puller	

Hydraulic Press
Punch
Copper Hammer
Caliper Gauge

Removal

1. Remove the axle assembly.

Refer to: [Axle Assembly](#) (205-03 Front Drive Axle/Differential, Removal and Installation).

2. Remove the differential carrier.

Refer to: [Differential Carrier](#) (205-03 Front Drive Axle/Differential, Removal and Installation).

3. Remove the drive pinion flange and seal.

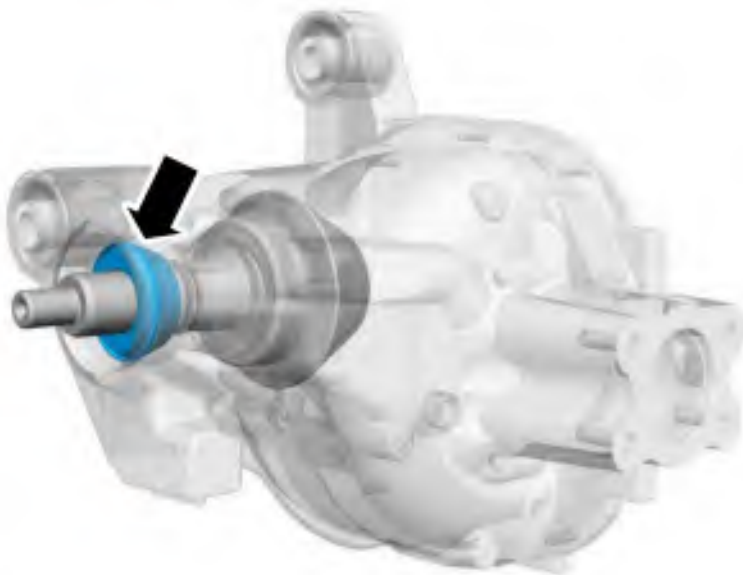
Refer to: [Drive Pinion Flange and Seal](#) (205-03 Front Drive Axle/Differential, Removal and Installation).

4. Remove the outer drive pinion oil slinger.



E194187

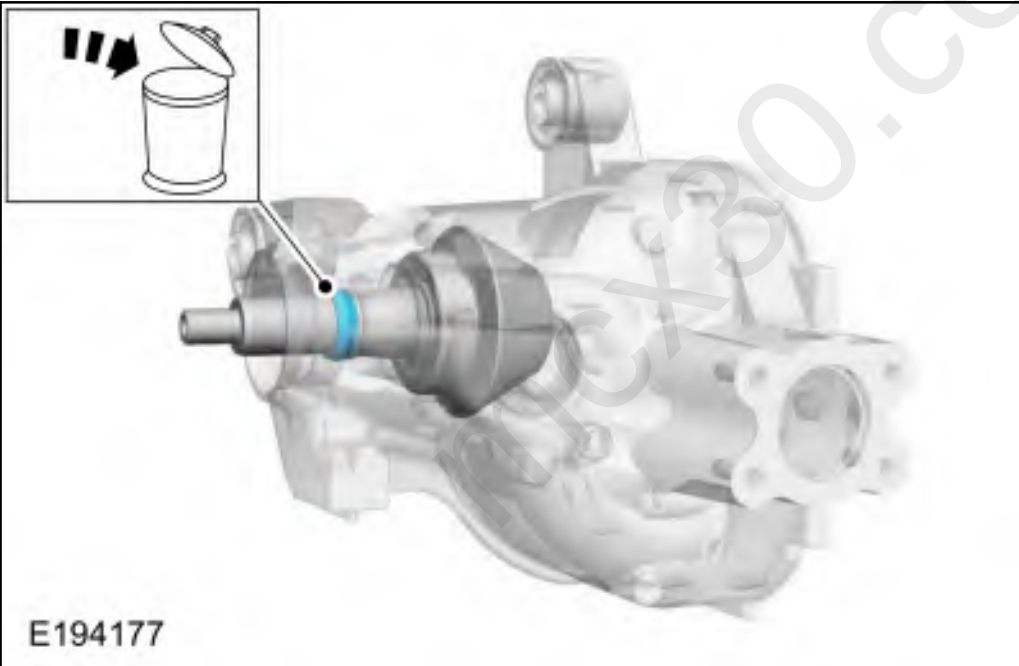
5. Remove the outer drive pinion bearing.



E194188



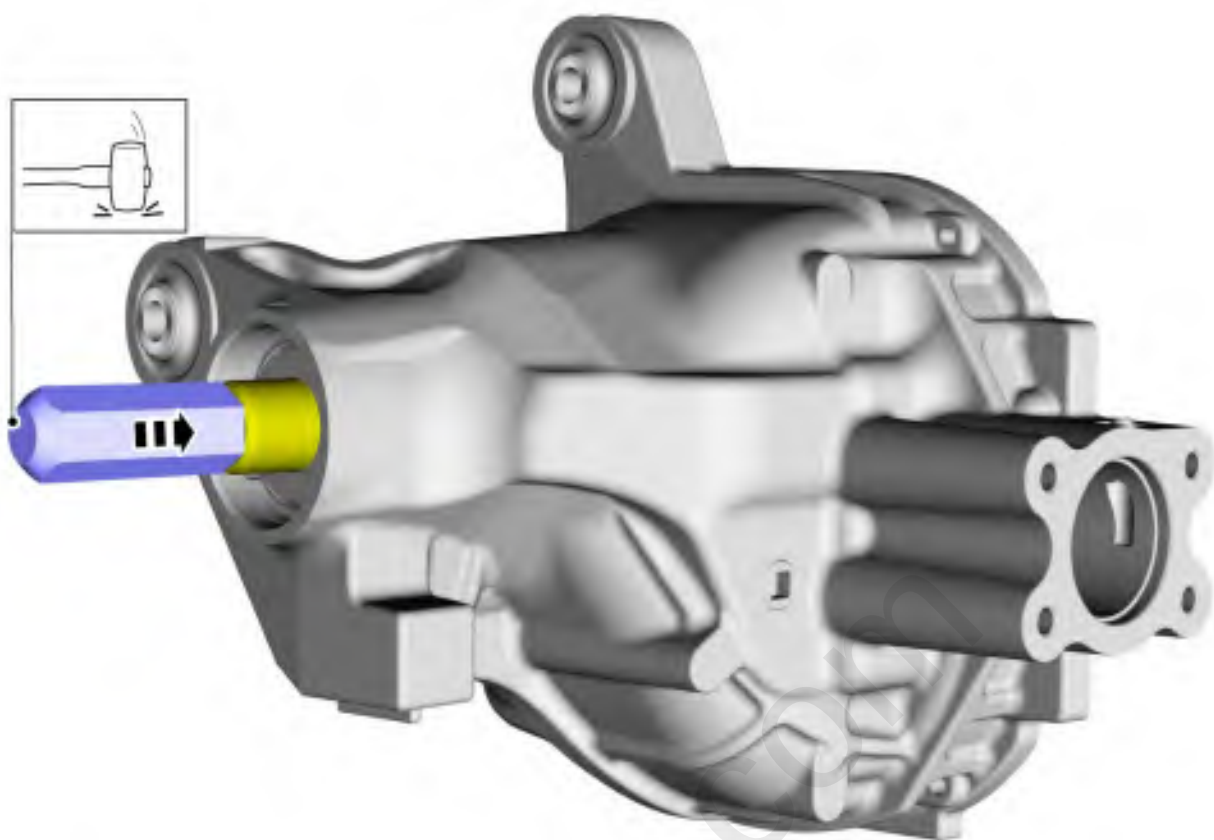
6. Remove and discard the drive pinion collapsible spacer.



E194177

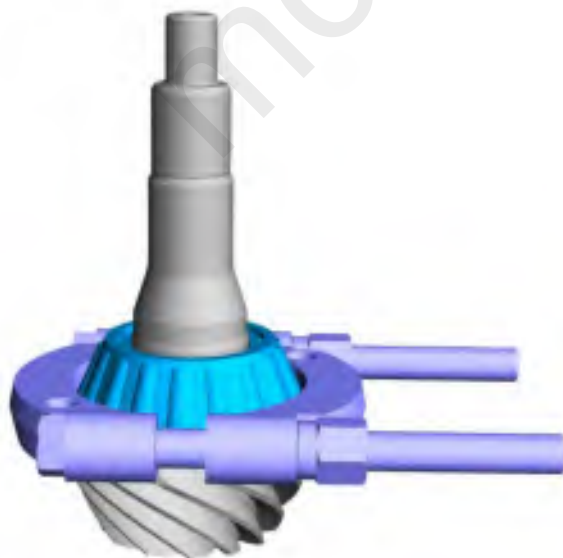


7. Using the special tool and a soft hammer, remove the pinion gear.
Use Special Service Tool: 205-460 Protector, Drive Pinion Thread.
Use the General Equipment: Copper Hammer



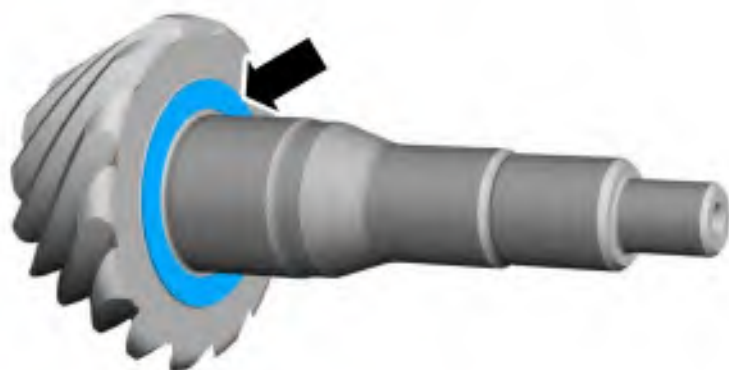
E194176

8. Remove the inner drive pinion bearing.



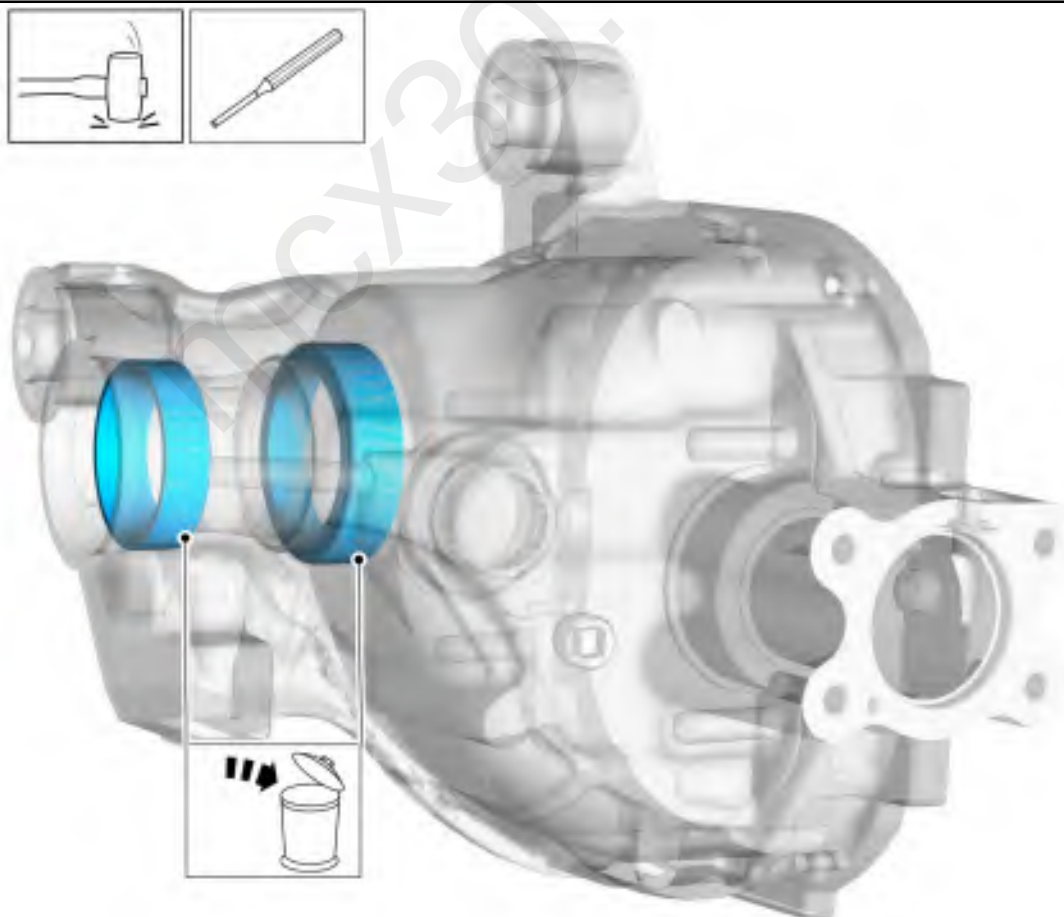
E181945

9. Remove the inner drive pinion bearing adjustment shim.



E181946

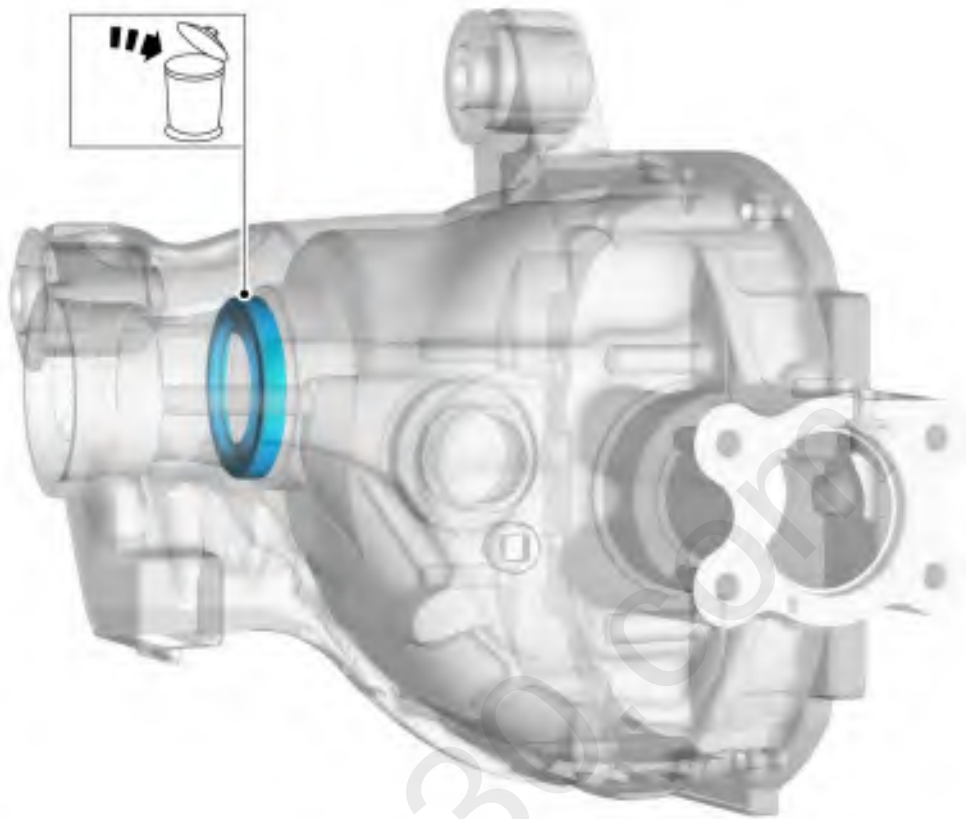
10. Using the general equipment, remove and discard the drive pinion inner and outer bearing cups.
 Use the General Equipment: Copper Hammer
 Use the General Equipment: Punch



E194178

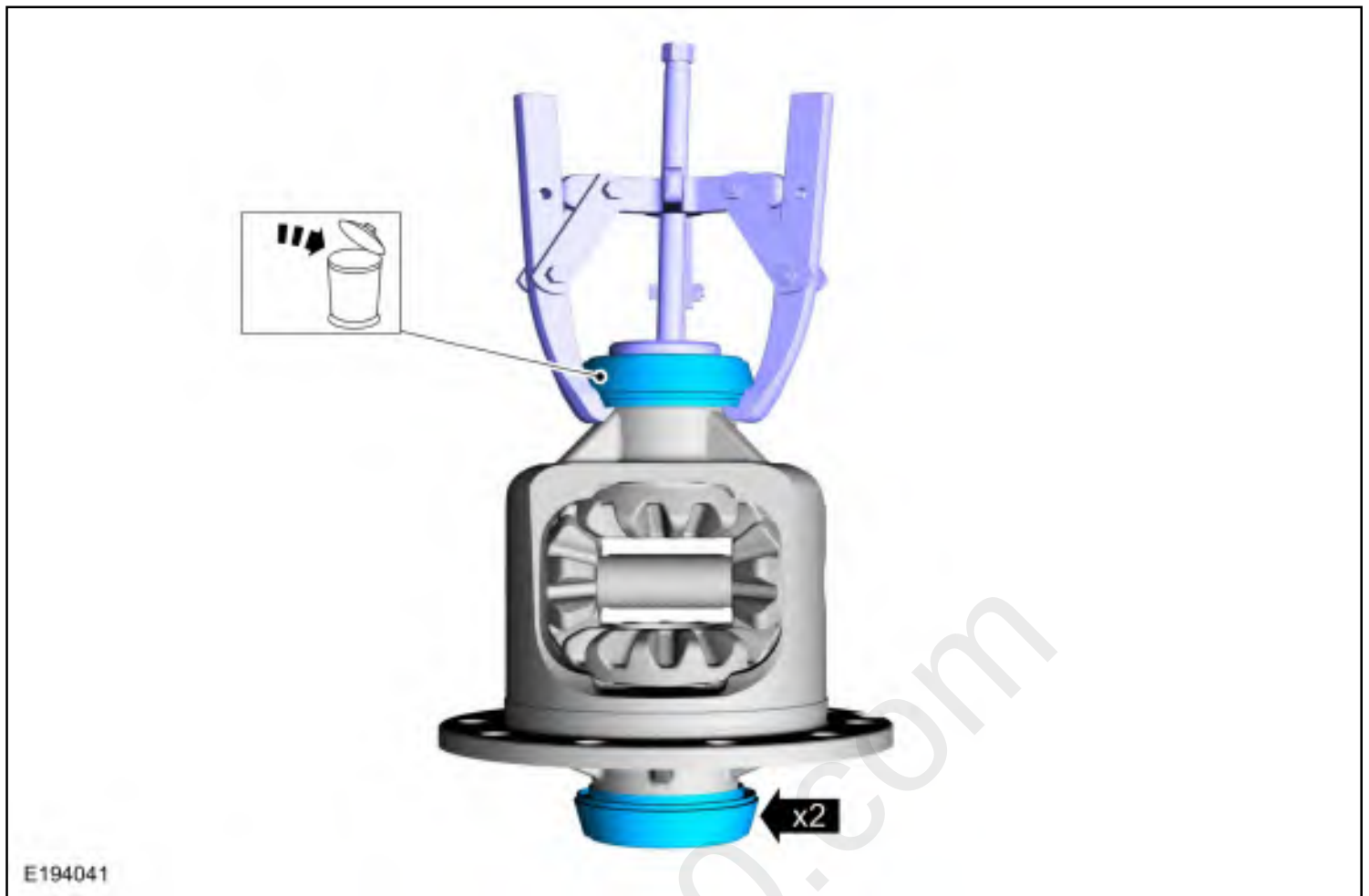
11. If necessary.

Remove and discard the drive pinion oil baffle.



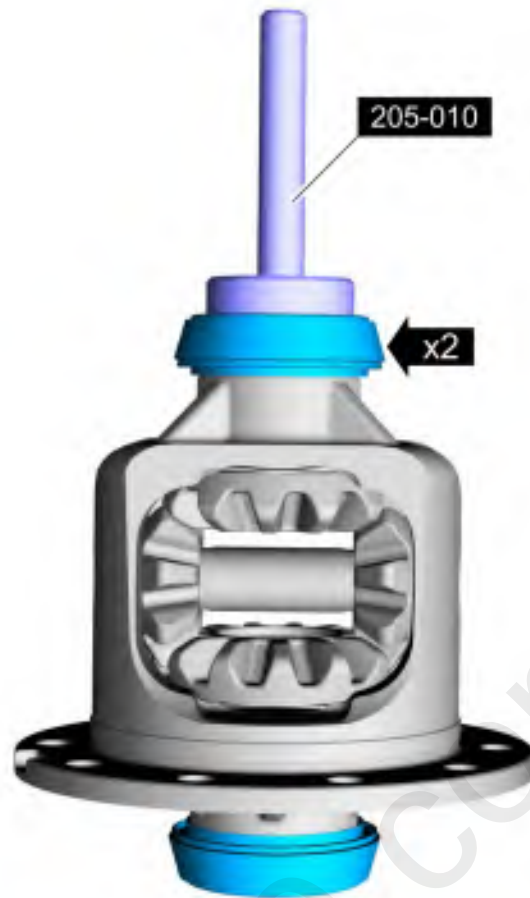
E194179

12. Using the general equipment and the special tool, remove and discard the differential bearings.
Use Special Service Tool: 205-D061 (D83T-4205-C2) Step Plate.
Use the General Equipment: Three Leg Puller



Installation

1. Using the special tools, install the new differential bearings.
Use Special Service Tool: 205-010 (T57L-4221-A2) Installer, Differential Side Bearing.

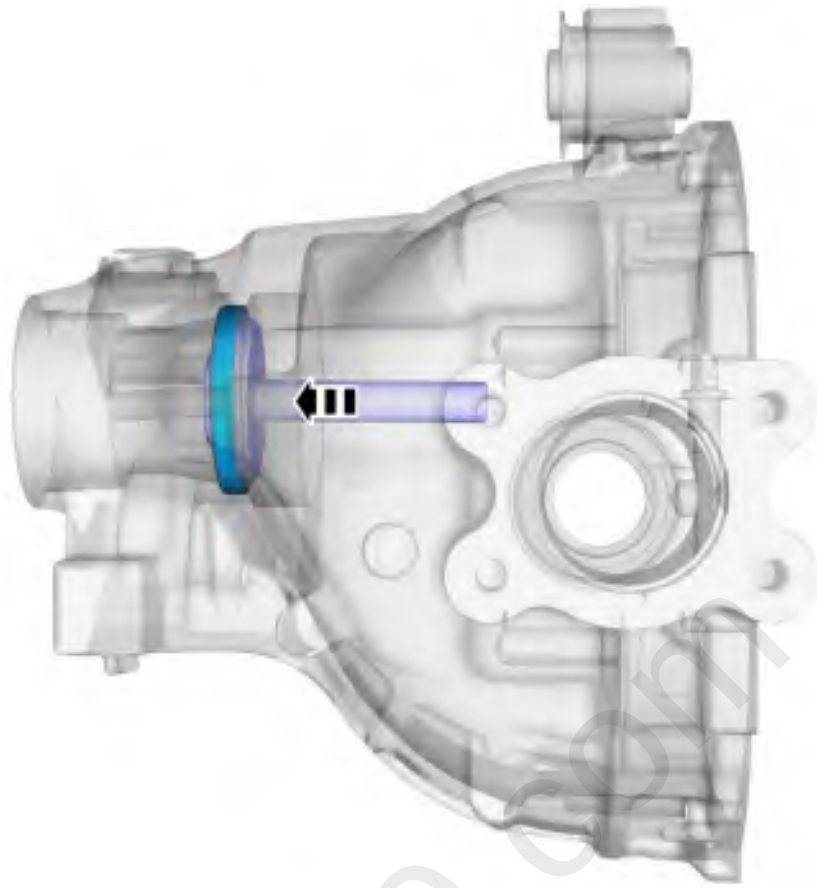


E237630

2. If removed.

Using the special tool, install the new drive pinion oil baffle.

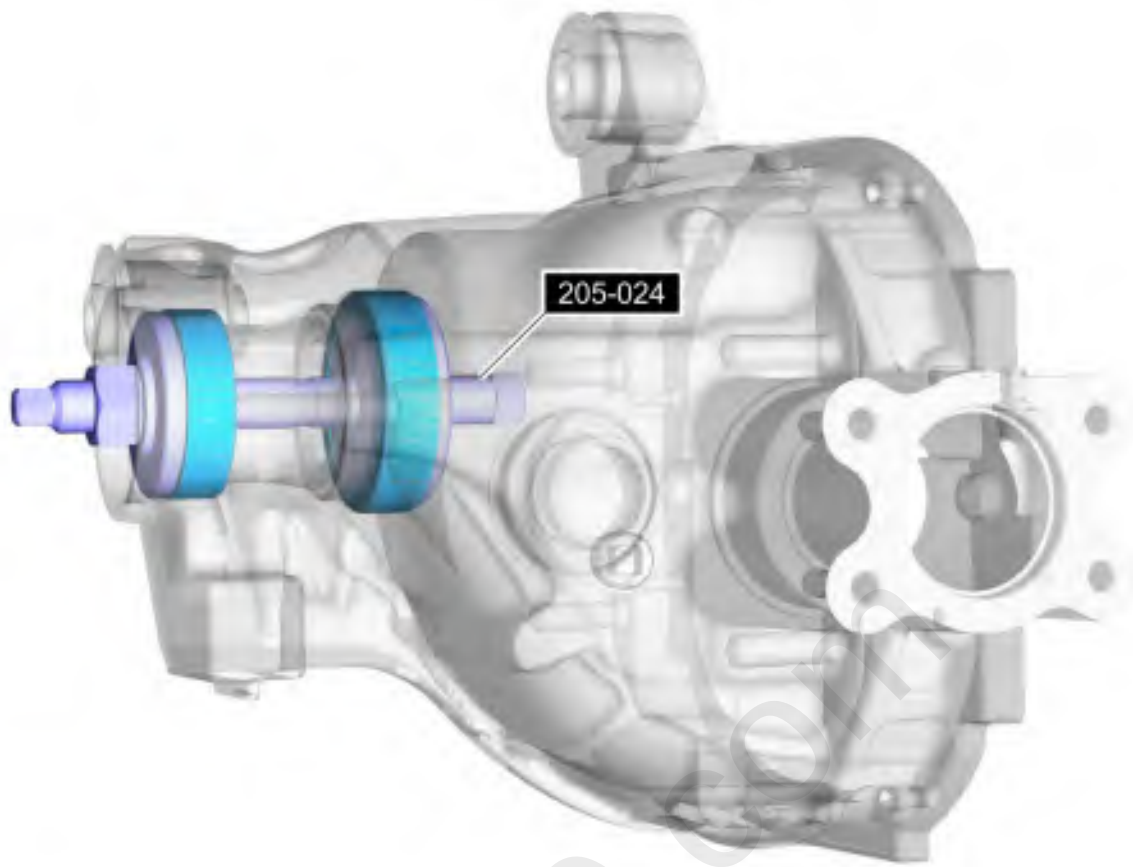
Use Special Service Tool: 205-D044 (D81T-4221-A) Installer, Differential Carrier Bearing.



E194180



3. Using the special tools, install the new drive pinion inner and outer bearing cups.
Use Special Service Tool: 205-024 (T67P-4616-A) Installer, Drive Pinion Bearing Cup.



E194181

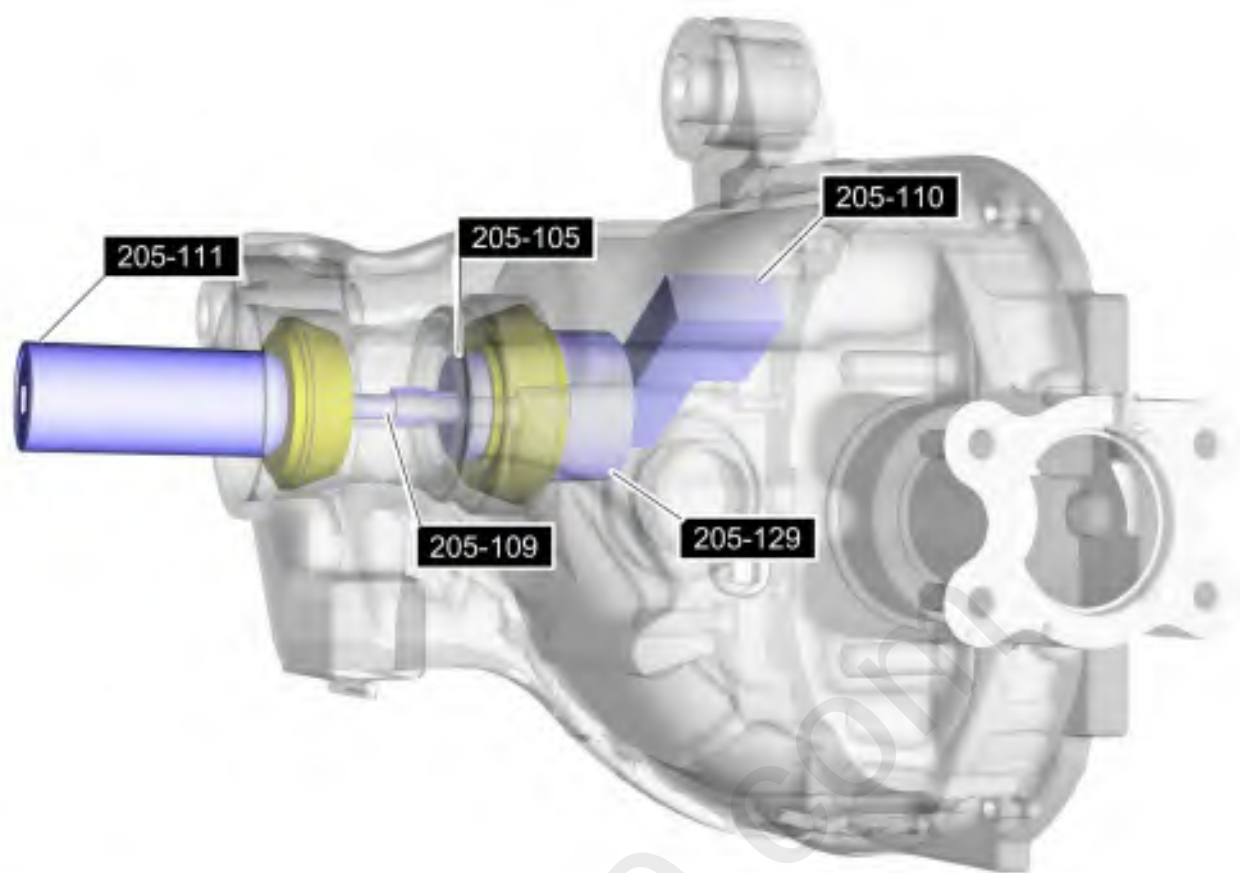
4. **NOTICE:** Use the same drive pinion bearings and the drive pinion bearing adjustment shim from the drive pinion bearing adjustment shim selection procedure for final assembly or damage to the component may occur.

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.

Assemble the special tools using the new inner and outer drive pinion bearings.

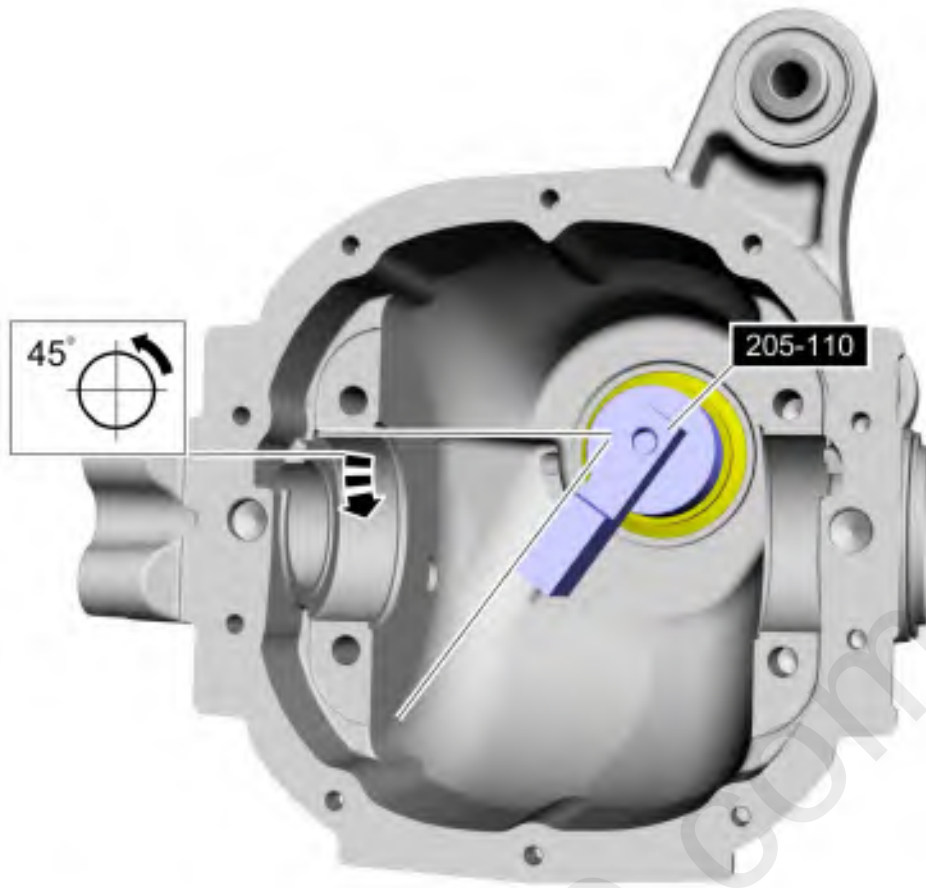
Use Special Service Tool: 205-105 (T76P-4020-A3) Adapter for 205-S127. , 205-109 (T76P-4020-A9) Adapter for 205-S127. , 205-110 (T76P-4020-A10) Gauge Block. , 205-111 (T76P-4020-A11) Handle. , 205-129 (T79P-4020-A18) Disc, Gauge.

Torque: 19 lb.in (2.2 Nm)



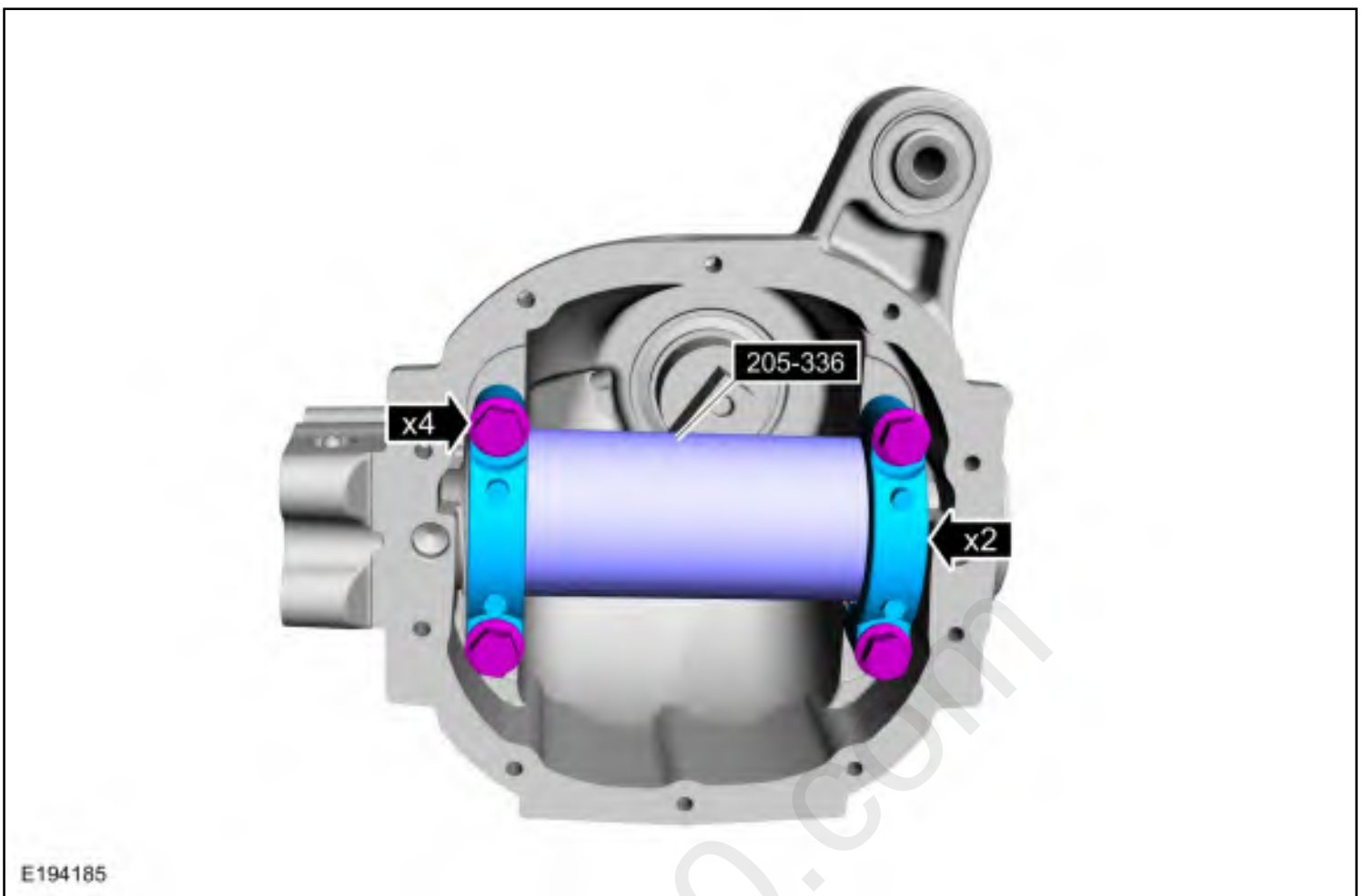
E194182

5. Rotate the special tools several half turns to ensure correct seating of the drive pinion bearings.
Use Special Service Tool: 205-110 (T76P-4020-A10) Gauge Block.



E194184

6. Install the special tool, the differential bearing caps and the differential bearing cap bolts.
Torque: 77 lb.ft (105 Nm)

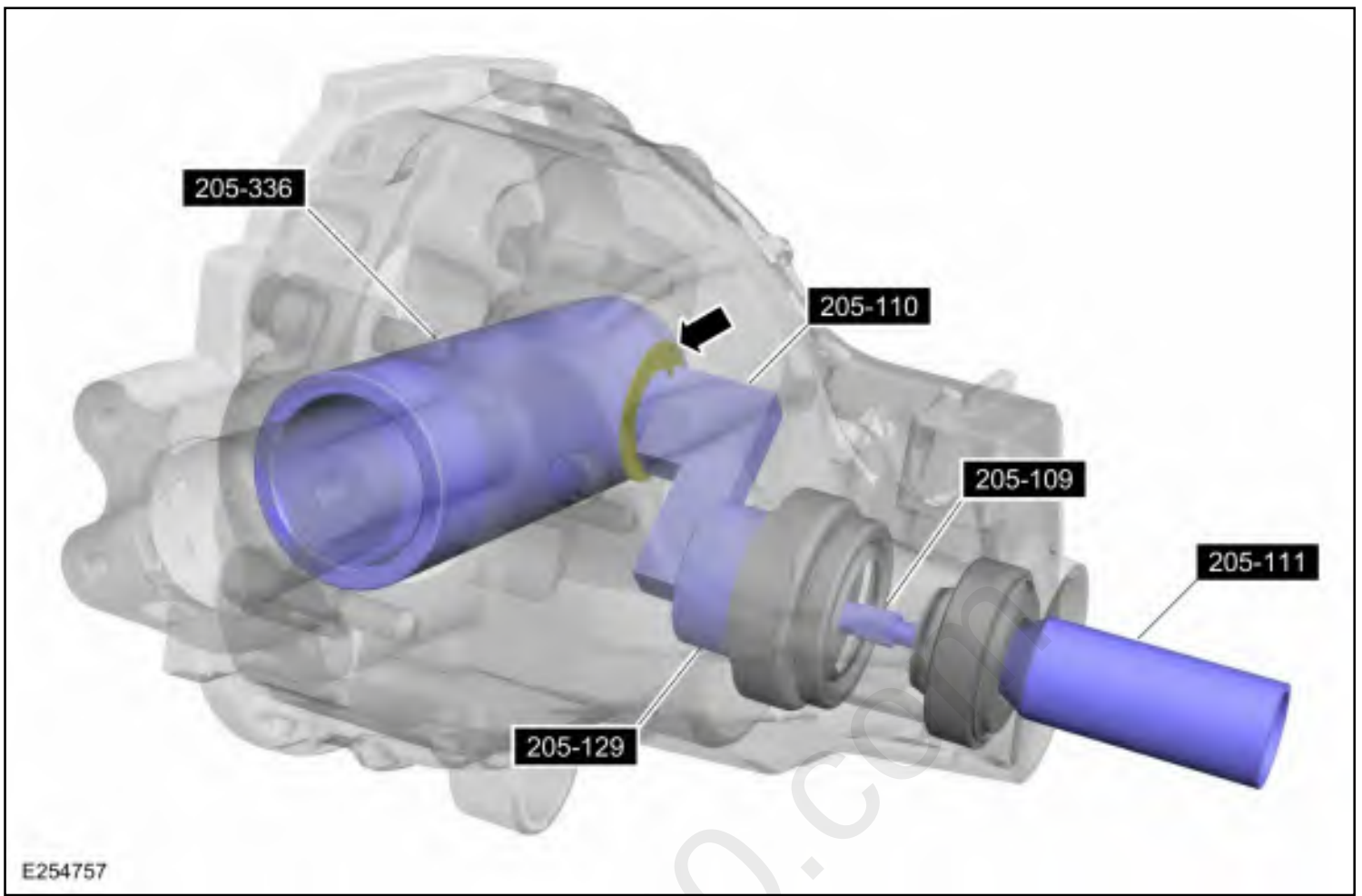


7. **NOTE:** Drive pinion bearing adjustment shims must be flat and clean.

NOTE: A slight drag should be felt for correct drive pinion bearing adjustment shim selection. Do not attempt to force the drive pinion bearing adjustment shim between the gauge block and the gauge tube. This will minimize selection of a drive pinion bearing adjustment shim thicker than required, which results in a deep tooth contact in final assembly of integral axle assemblies.

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

- After the correct drive pinion bearing adjustment shim thickness has been determined, remove all of the Adapters.
Use Special Service Tool: 205-109 (T76P-4020-A9) Adapter for 205-S127. , 205-110 (T76P-4020-A10) Gauge Block. , 205-111 (T76P-4020-A11) Handle. , 205-129 (T79P-4020-A18) Disc, Gauge. , 205-336 (T93P-4020-A) Gauge Tube, Drive Pinion.



8. Notice the (+) or (-) etching on the pinion, and adjust the new shim thickness to compensate for the difference of these 2 figures.
- For example, a pinion etched with $m+8$ (+3) requires 0.08 mm (0.003 in) less shimming than a pinion etched "0". This means to increase the mounting distance by the amount etched in the pinion, subtract 0.08 mm (0.003 in) from the drive pinion position shim selected for installation. A pinion etched $m-8$ (-3), requires 0.08 mm (0.003 in) more shimming than a pinion etched "0". In this instance, add 0.08 mm (0.003 in) to the drive pinion position shim selected for installation to decrease the pinion mounting distance by the amount etched in the pinion.

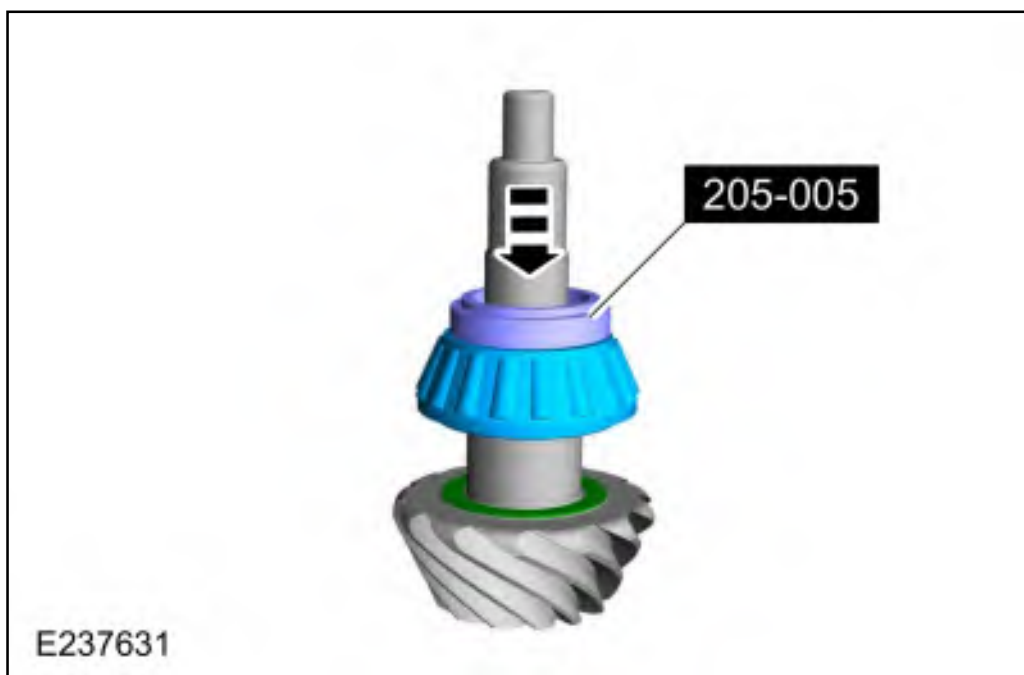


9. **NOTE:** *The same drive pinion bearing from the previous steps must be used.*

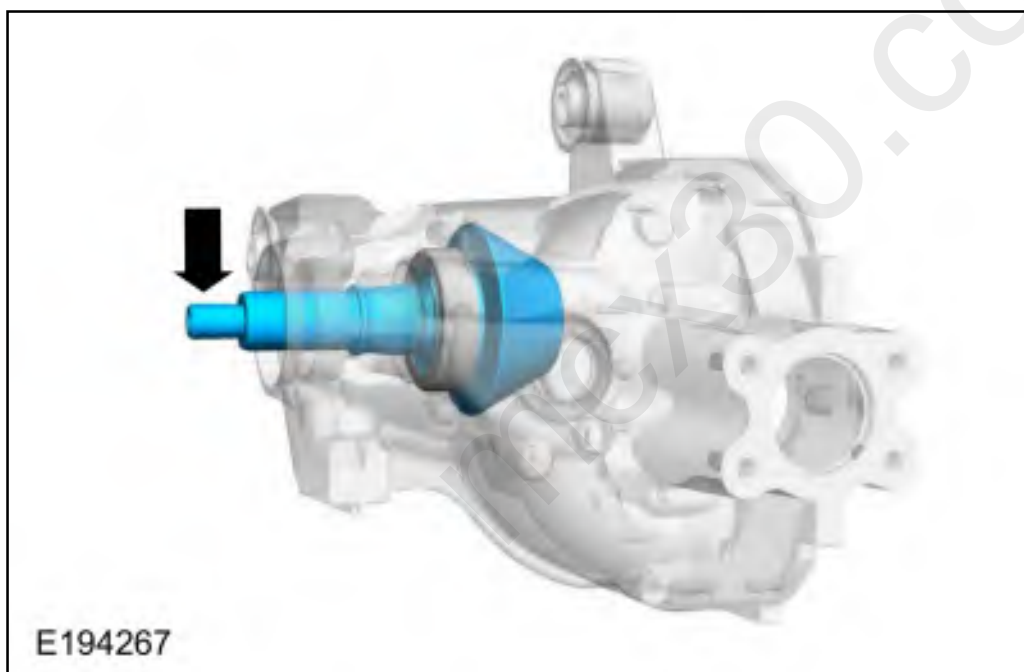
Install the drive pinion bearing and the selected drive pinion bearing adjustment shim until they are firmly seated on the drive pinion.

Use Special Service Tool: 205-005 (T53T-4621-C) Installer, Drive Pinion Bearing Cone.

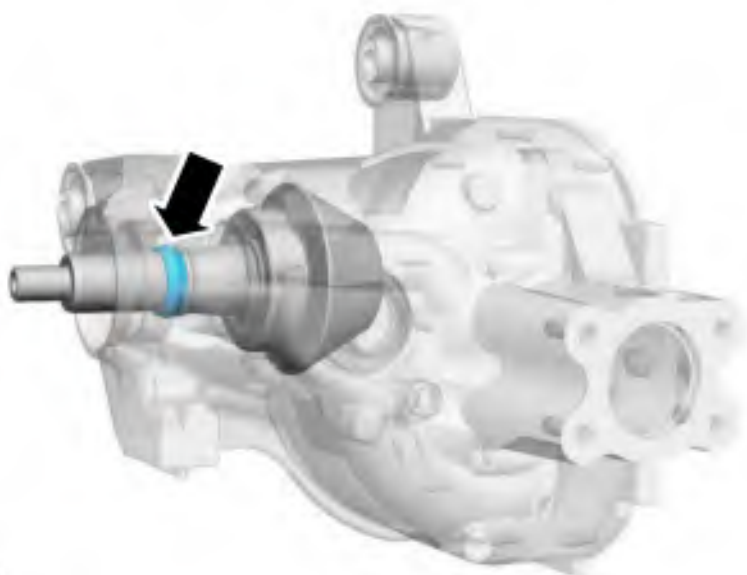
Use the General Equipment: Hydraulic Press



10. Install the pinion gear.



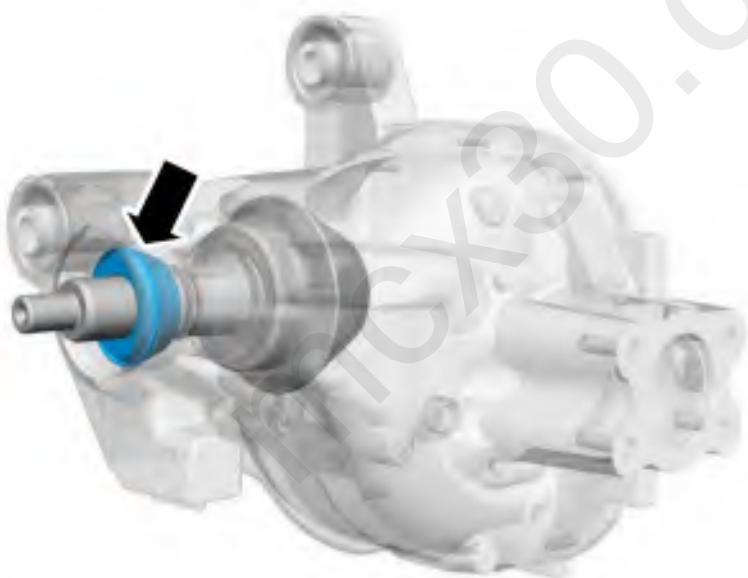
11. Install the new drive pinion collapsible spacer.



E194189



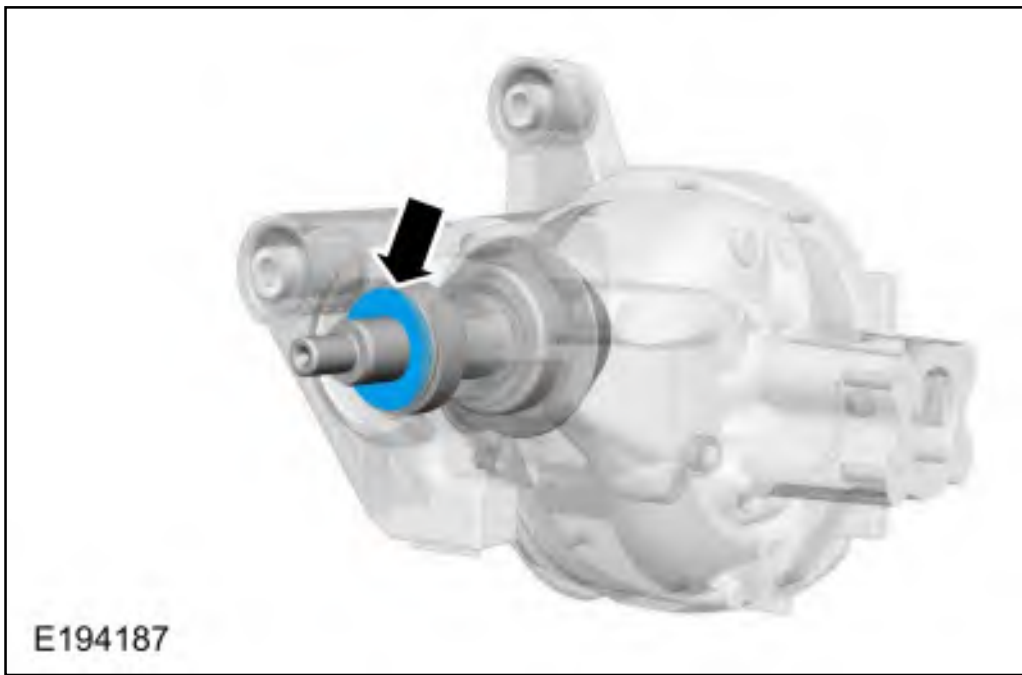
12. Install the outer drive pinion bearing.



E194188



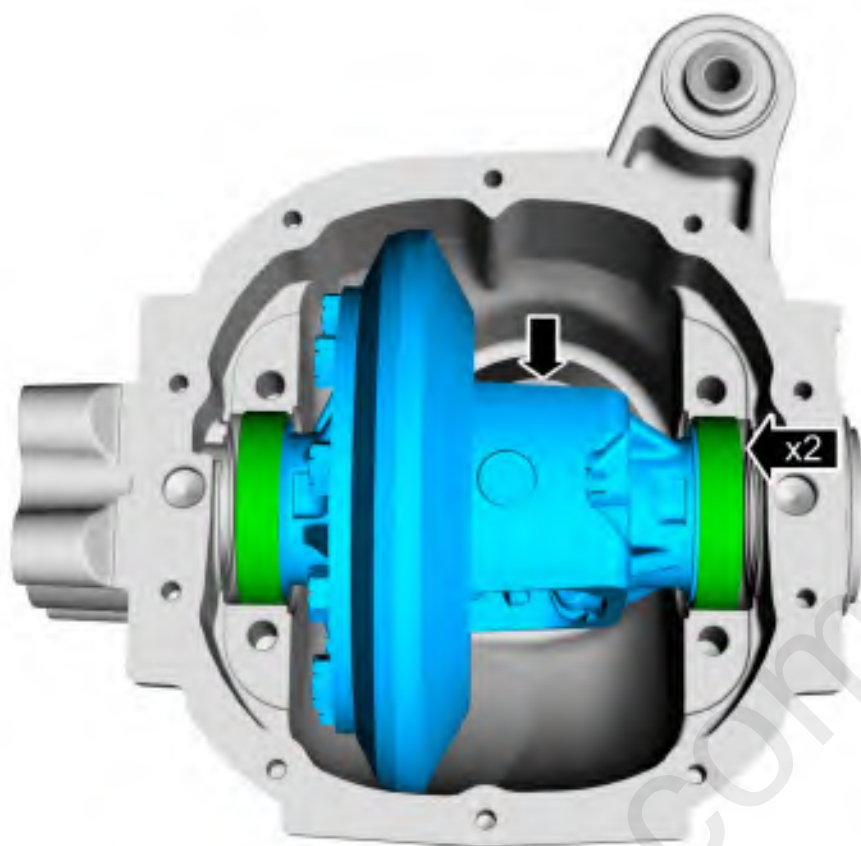
13. Install the outer drive pinion oil slinger.



14. Install the drive pinion flange and seal.

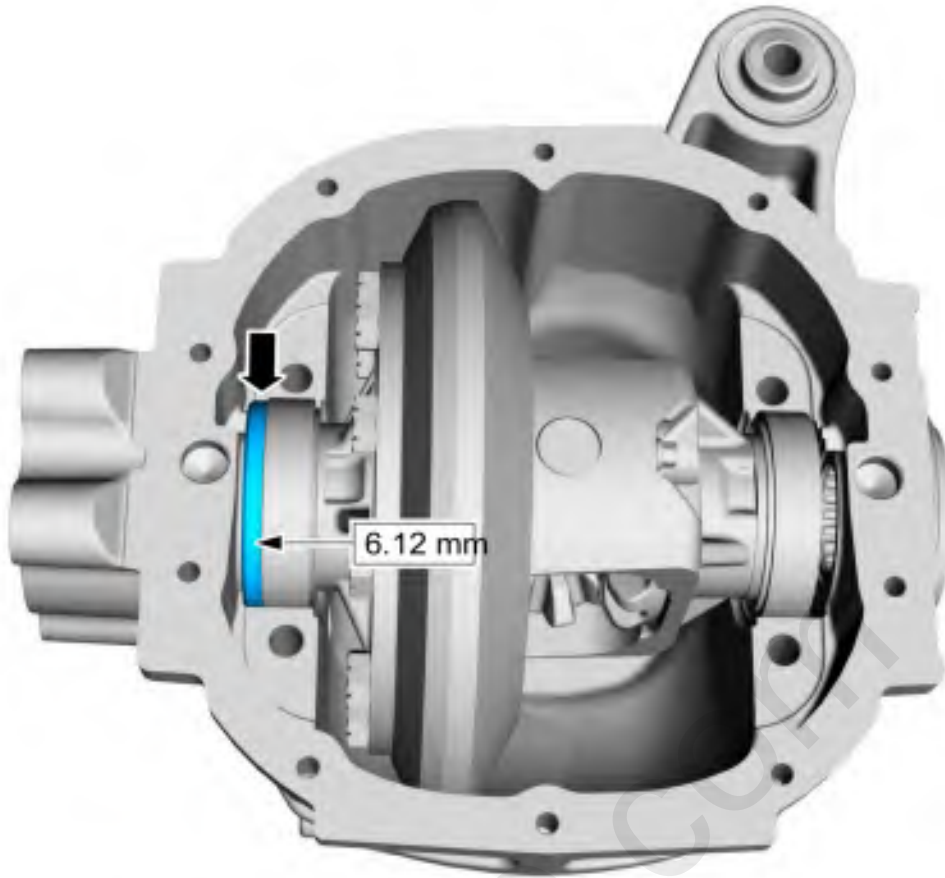
Refer to: [Drive Pinion Flange and Seal](#) (205-03 Front Drive Axle/Differential, Removal and Installation).

15. Install the differential carrier and the differential carrier bearing cups as a assembly.



E194284

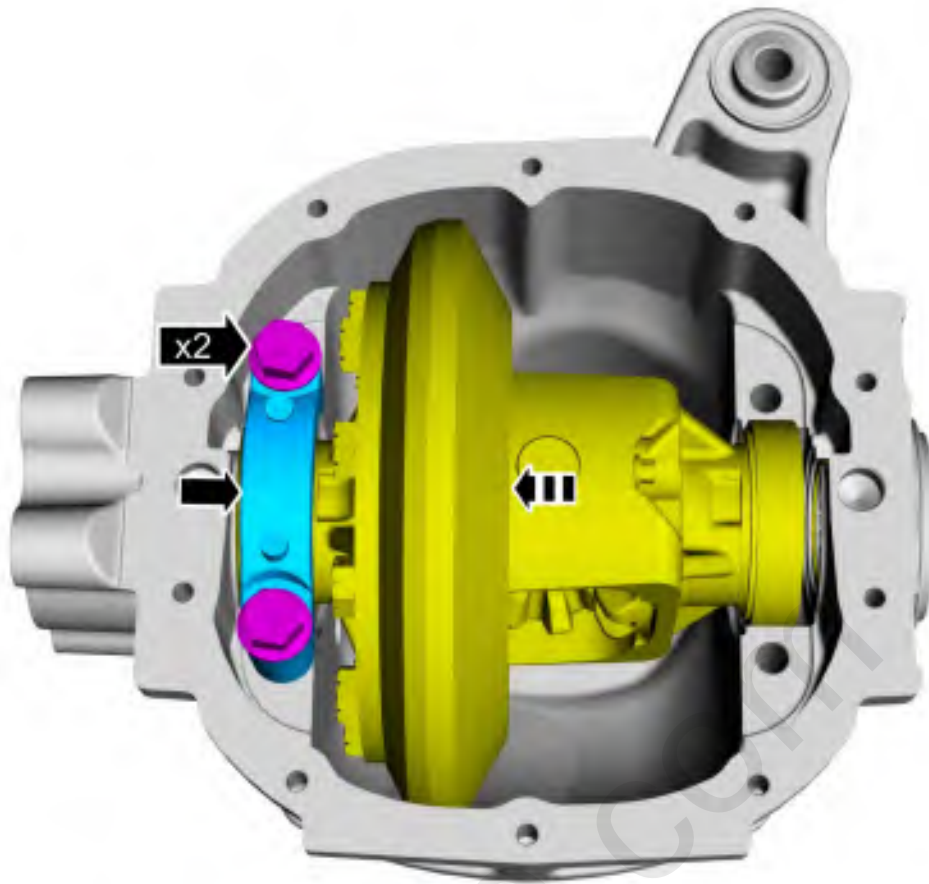
16. Install a 6.12 mm (0.241 in) differential bearing shim on the LH side of the differential bearing.



E194285

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

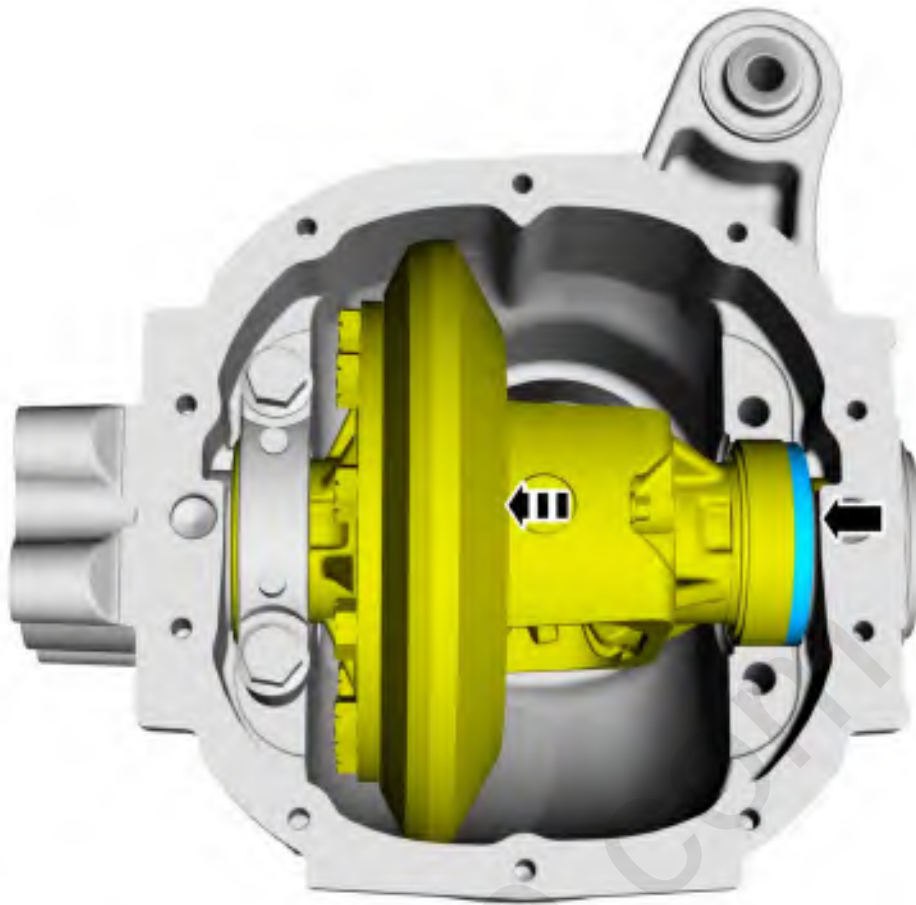
Install the LH differential bearing cap and loosely install the differential bearing cap bolts.



E194286

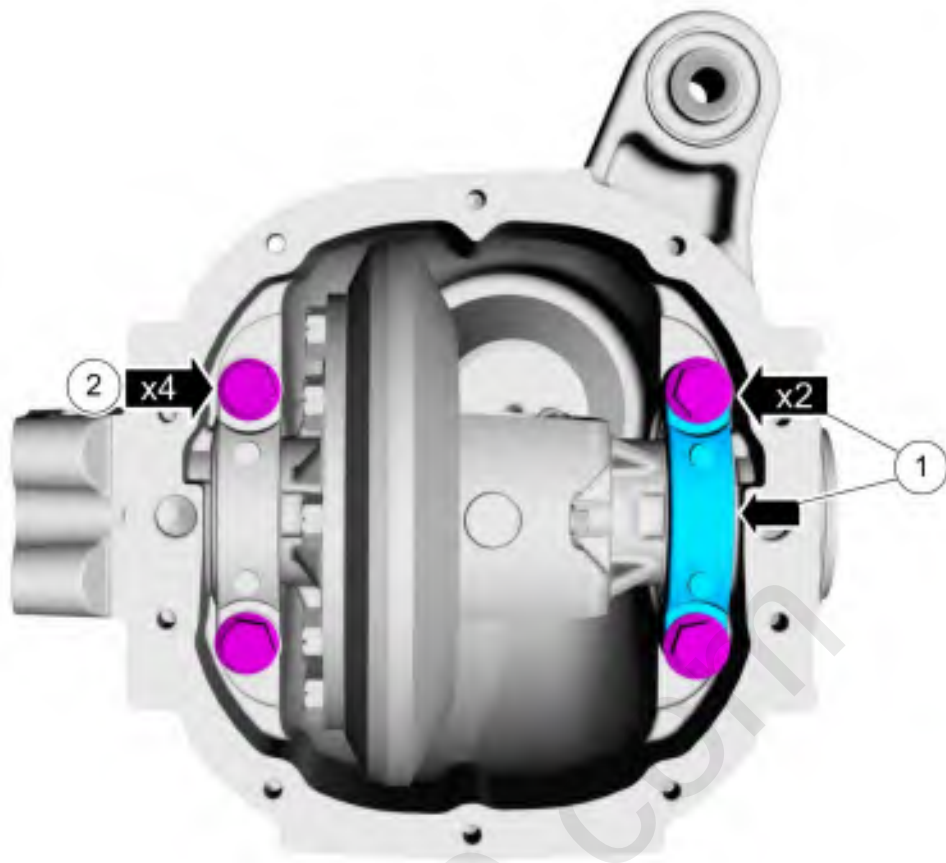
18. **NOTE:** Apply pressure toward the left side to make sure the left differential bearing cap is seated.

Install progressively thicker differential bearing shims on the right side until the thickest differential bearing shim can be inserted by hand.



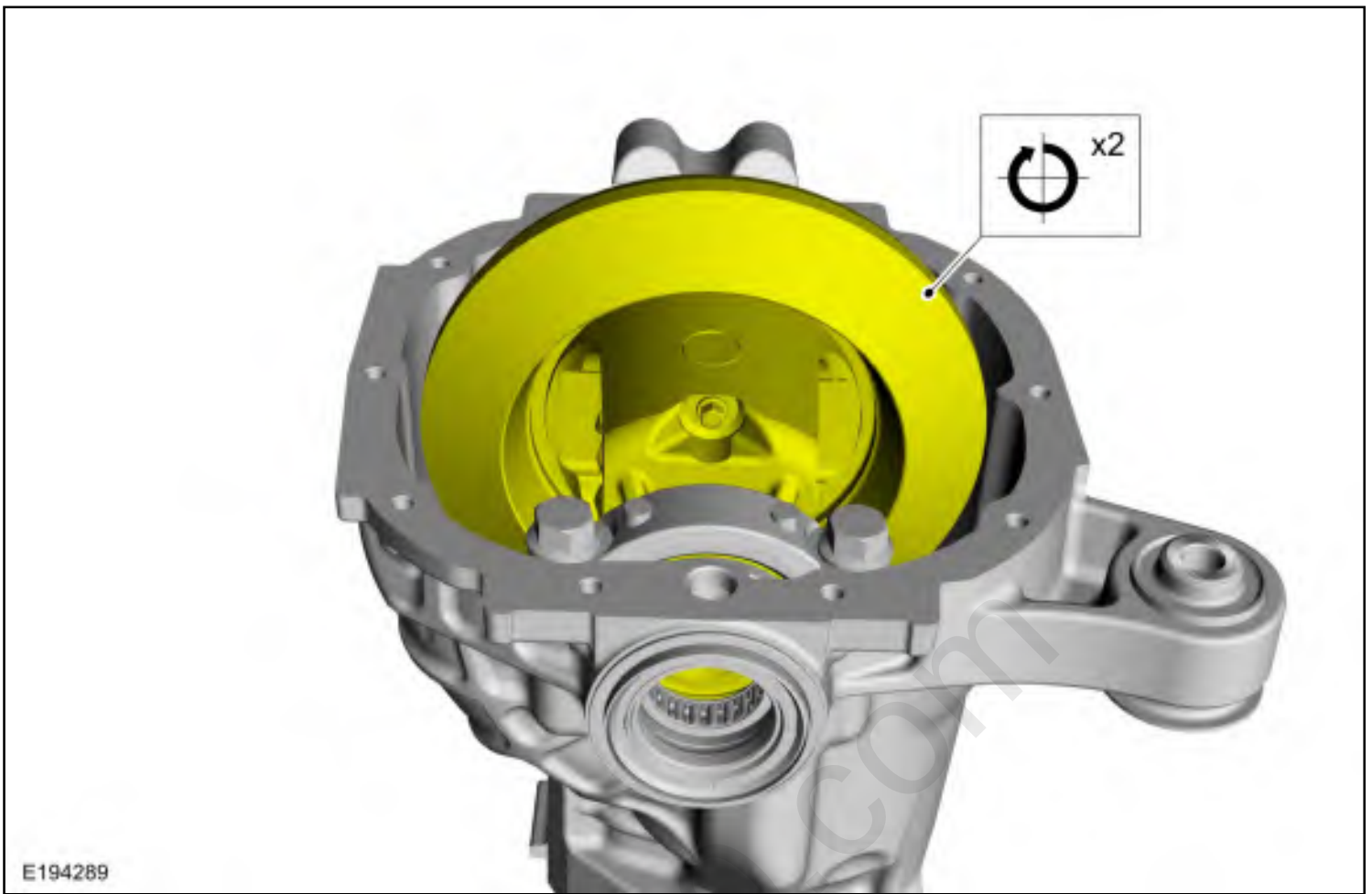
E194287

1. Install the RH differential bearing cap and bolts.
2. Tighten the differential bearing cap bolts.
Torque: 77 lb.ft (105 Nm)



E194288

20. Rotate the differential carrier to make sure it turns freely.

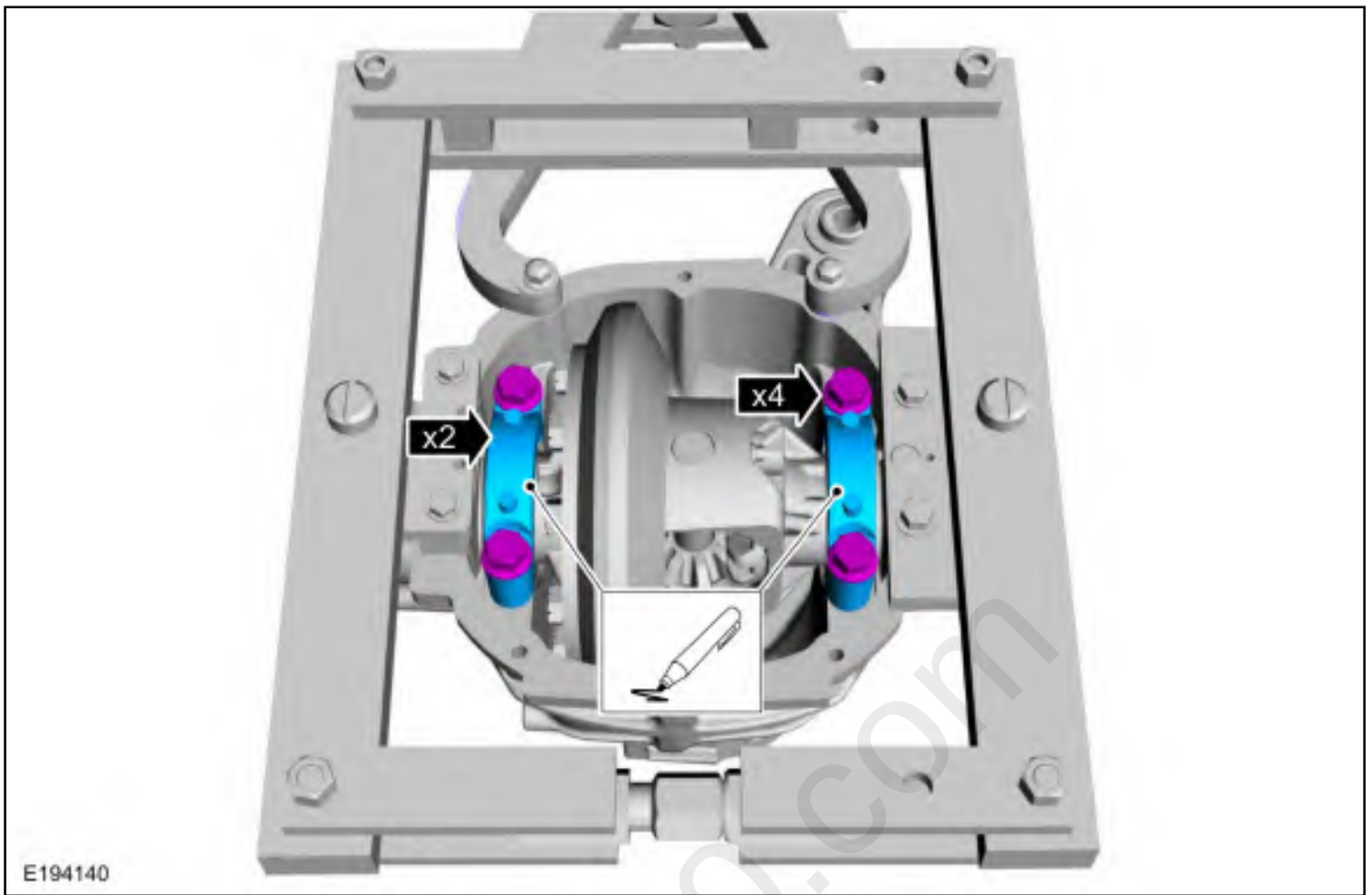


21. Using the dial indicator, measure the differential ring gear backlash at 4 equally spaced points.
- To correct for high or low backlash, increase the thickness of one differential bearing shim and decrease the thickness of the other differential bearing shim by the same amount. Refer to the following tables when adjusting the backlash.
Refer to: [Specifications](#) (205-03 Front Drive Axle/Differential, Specifications).
Use the General Equipment: Dial Indicator



22. **NOTE:** Mark the differential bearing caps Top or Bottom and LH or RH appropriately before removing them. Always install the differential bearing caps in their original positions or damage to the component may occur.

Remove the differential cap bolts and the differential caps.



1. Measure the thickness of the selected right and left bearing shims.
Use the General Equipment: Caliper Gauge
2. To establish differential bearing preload, increase both the left and right differential bearing shim thickness by 0.203 mm (0.008 in).



E194325

24. Install the differential carrier.

Refer to: [Differential Carrier](#) (205-03 Front Drive Axle/Differential, Removal and Installation).

25. Install the axle assembly.

Refer to: [Axle Assembly](#) (205-03 Front Drive Axle/Differential, Removal and Installation).