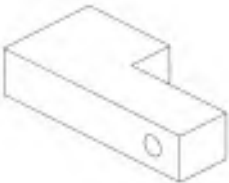
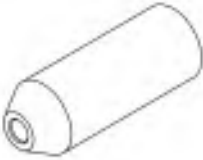
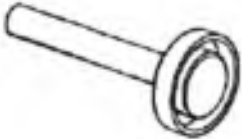


Differential Ring Gear and Pinion

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.

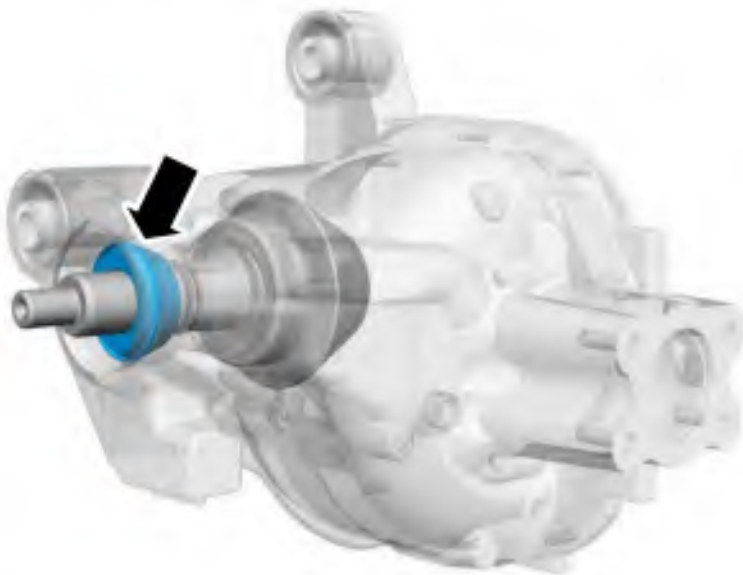
Refer to: [Drive Pinion Flange and Seal](#) (205-03 Front Drive Axle/Differential, Removal and Installation).

4. Remove the outer drive pinion oil slinger.



E194187

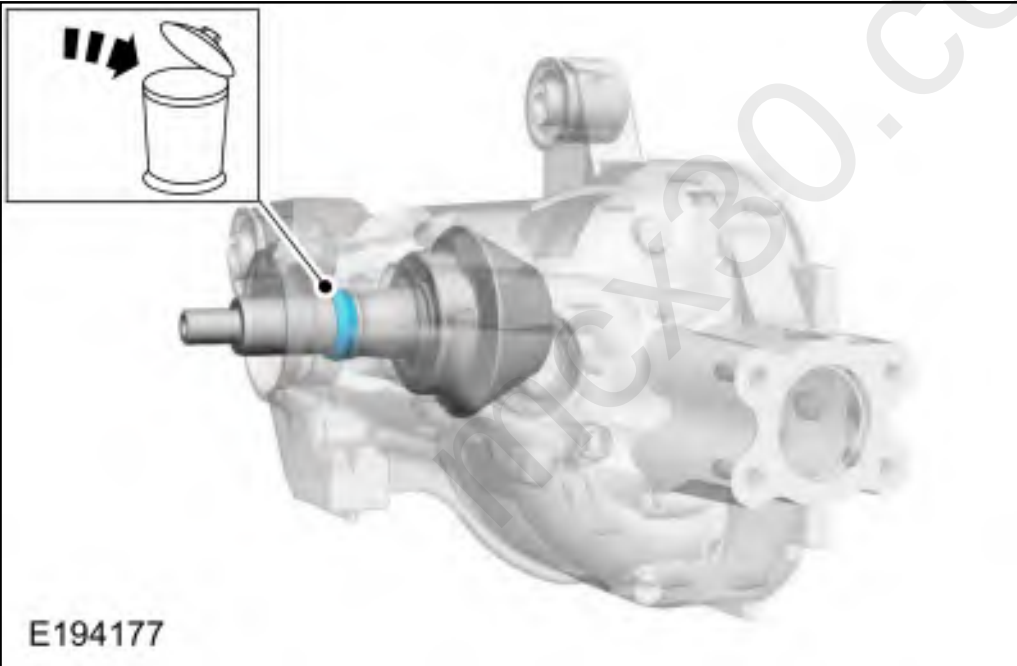
5. Remove the outer drive pinion bearing.



E194188



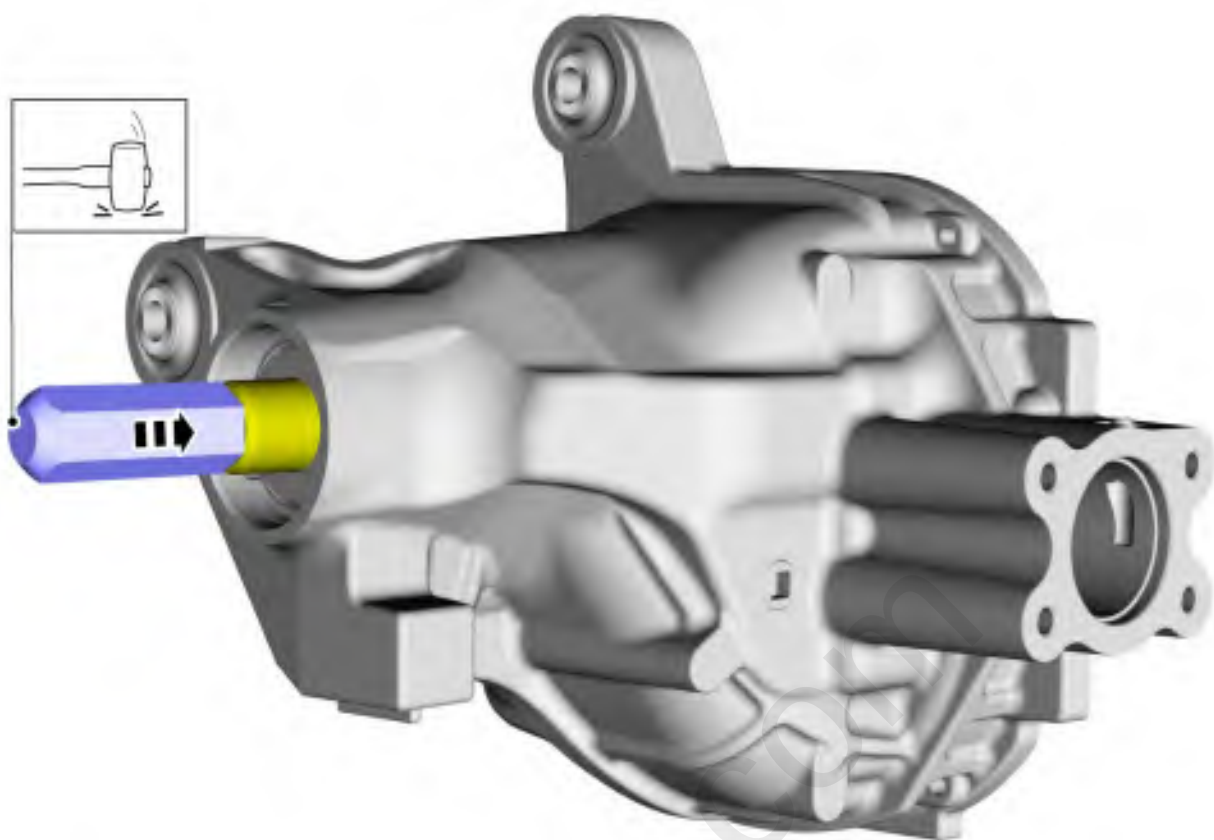
6. Remove and discard the drive pinion collapsible spacer.



E194177

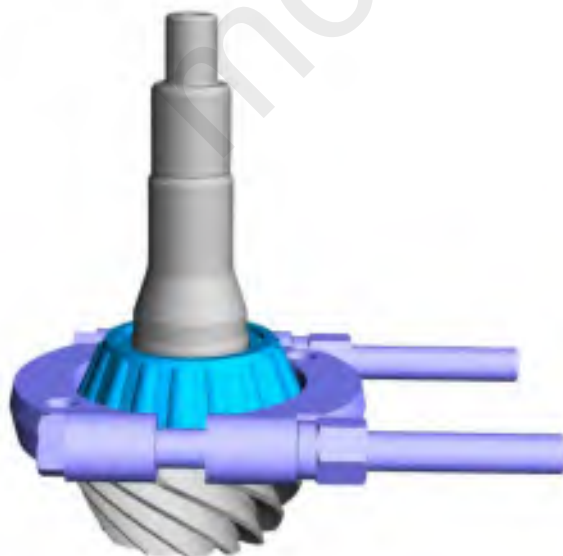


7. Using the special tool and a soft hammer, remove the pinion gear.
Use Special Service Tool: 205-460 Protector, Drive Pinion Thread.
Use the General Equipment: Copper Hammer



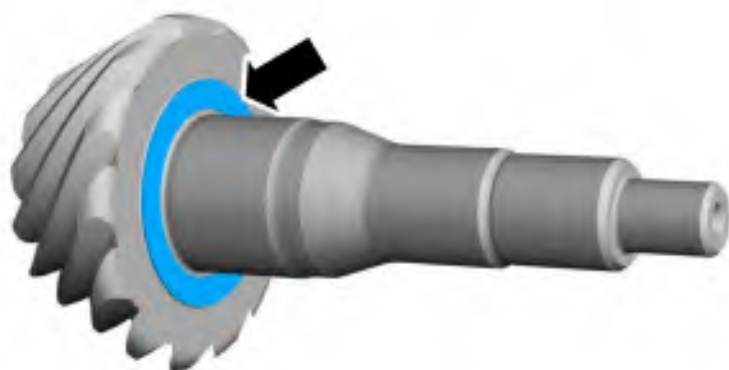
E194176

8. Remove the inner drive pinion bearing.



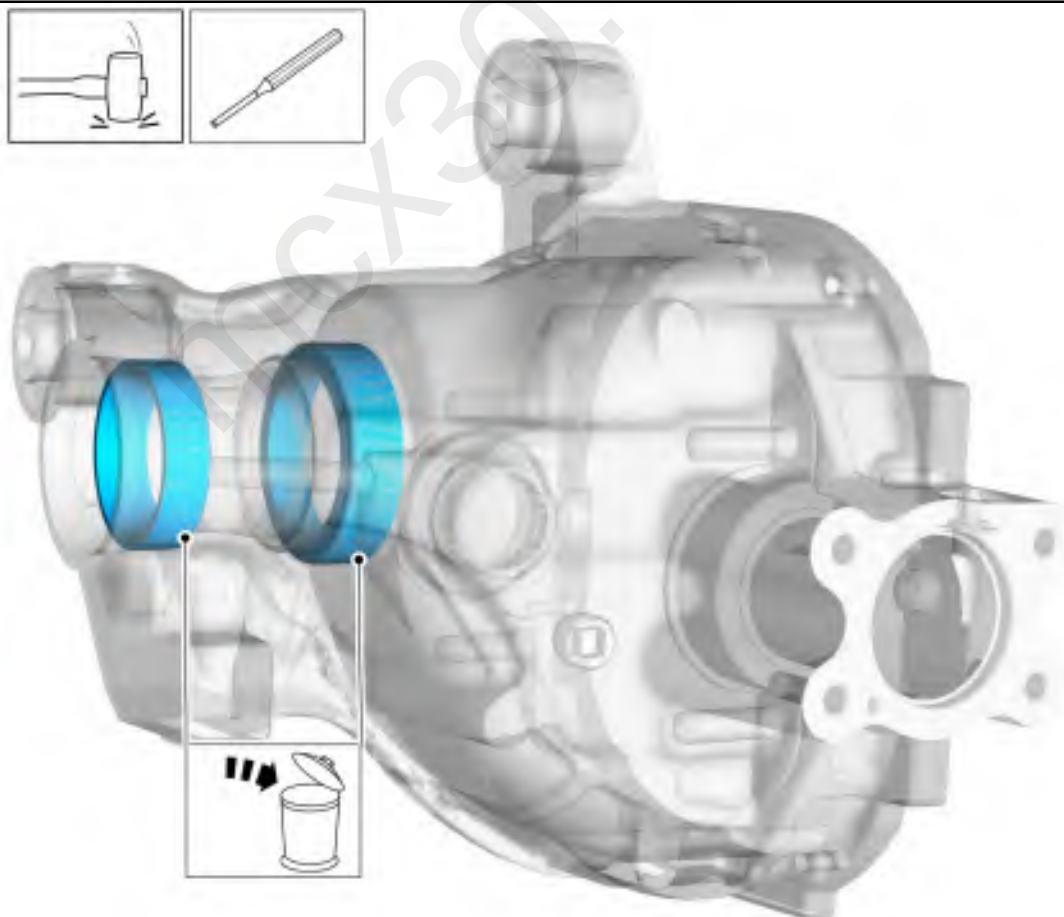
E181945

9. Remove the inner drive pinion bearing adjustment shim.



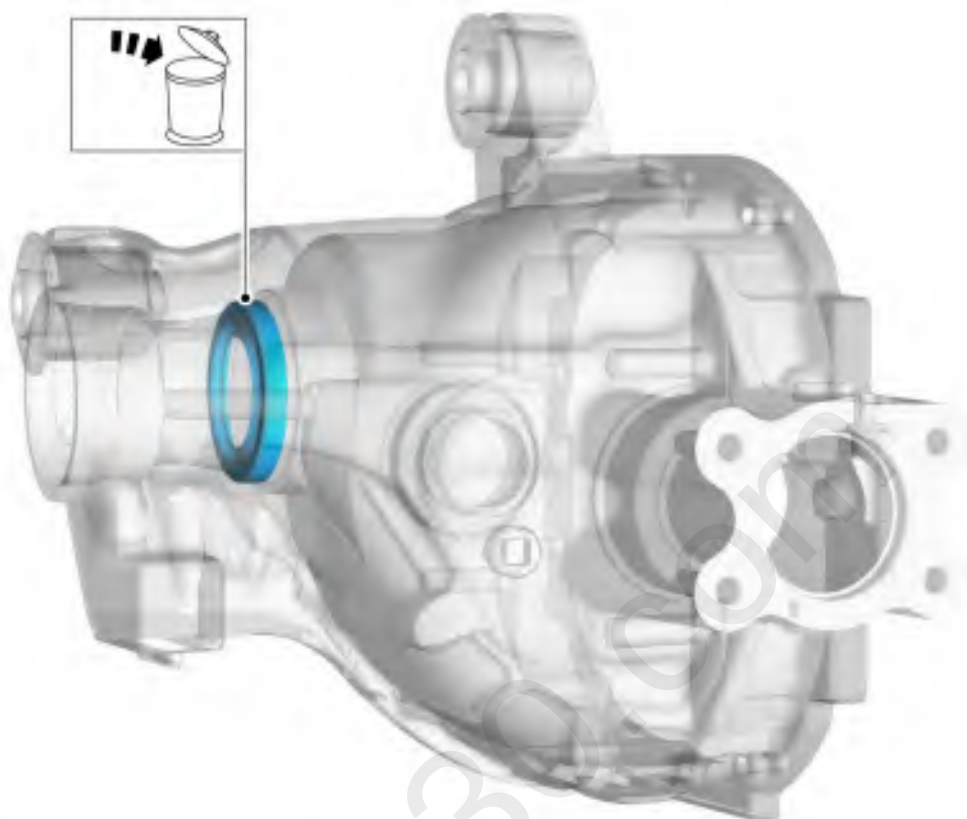
E181946

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

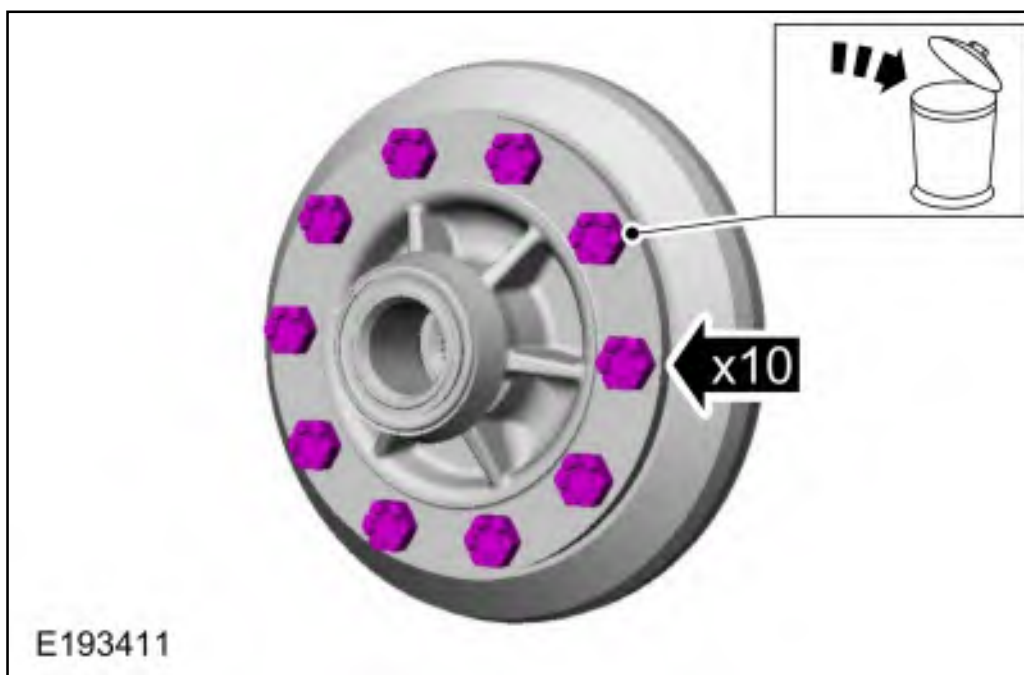
11. If necessary.
Remove and discard the drive pinion oil baffle.



E194179

12. Remove and discard the differential ring gear bolts.





13. **NOTICE:** Care should be taken not to damage the differential ring gear bolt hole threads.

Using the general equipment, separate the ring gear from the differential case.

Use the General Equipment: Punch

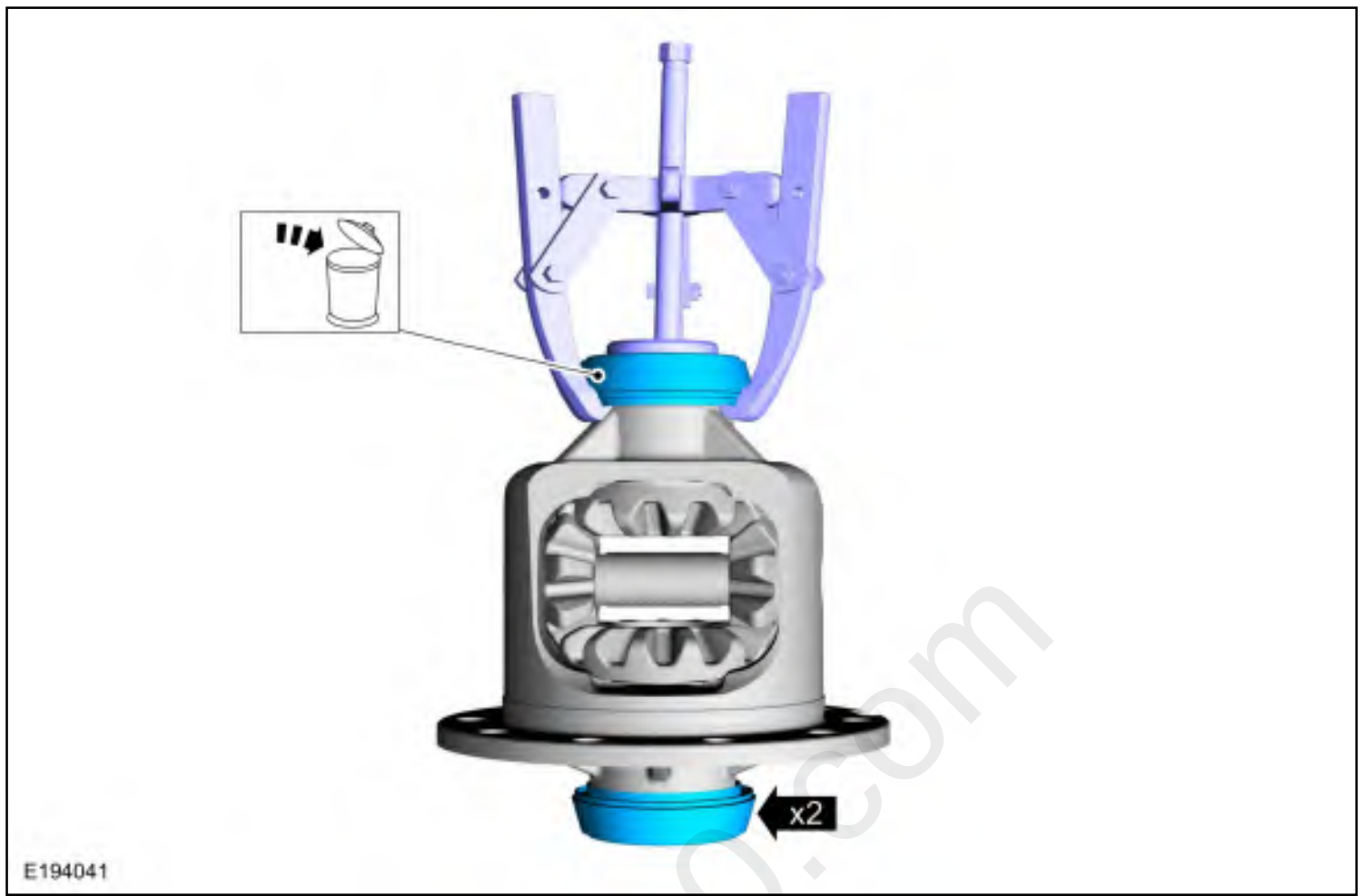
Use the General Equipment: Copper Hammer



14. Using the general equipment and the special tool, remove and discard the differential bearings.

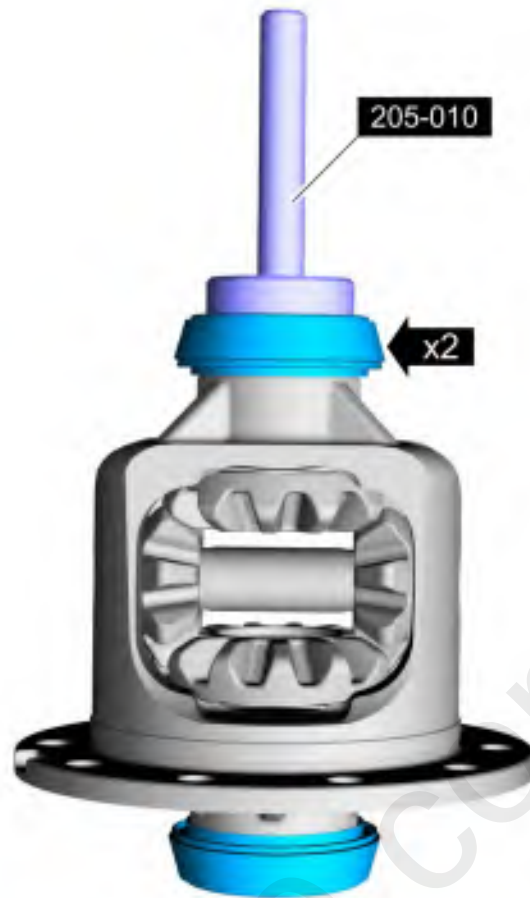
Use Special Service Tool: 205-D061 (D83T-4205-C2) Step Plate.

Use the General Equipment: Three Leg Puller



Installation

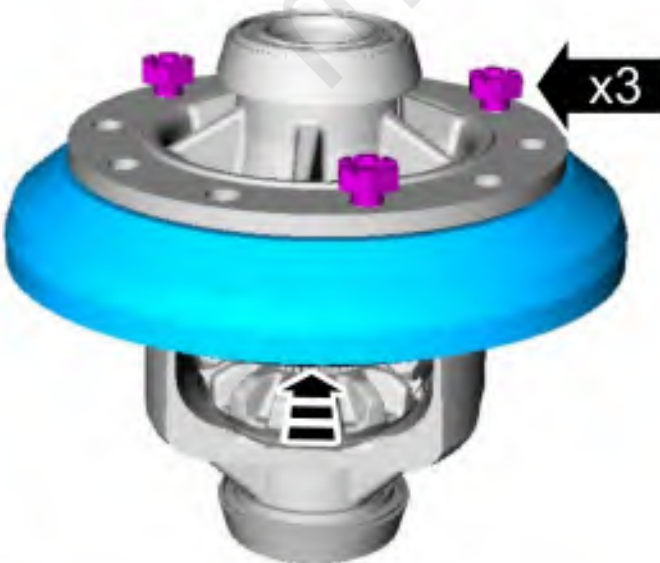
1. Using the special tools, install the new differential bearings.
Use Special Service Tool: 205-010 (T57L-4221-A2) Installer, Differential Side Bearing.



E237630



2. Install the ring gear onto the differential carrier. Align the ring gear using 3 new bolts. Using the general equipment: press the ring gear into place.
Use the General Equipment: Hydraulic Press

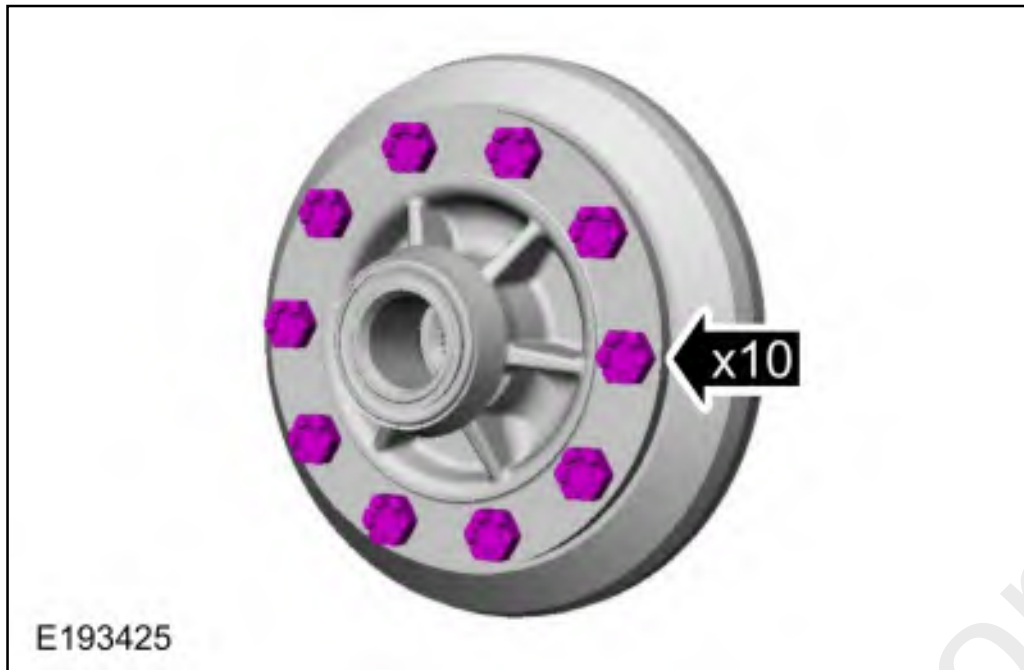


E193424



3. Install the remaining new ring gear bolts.

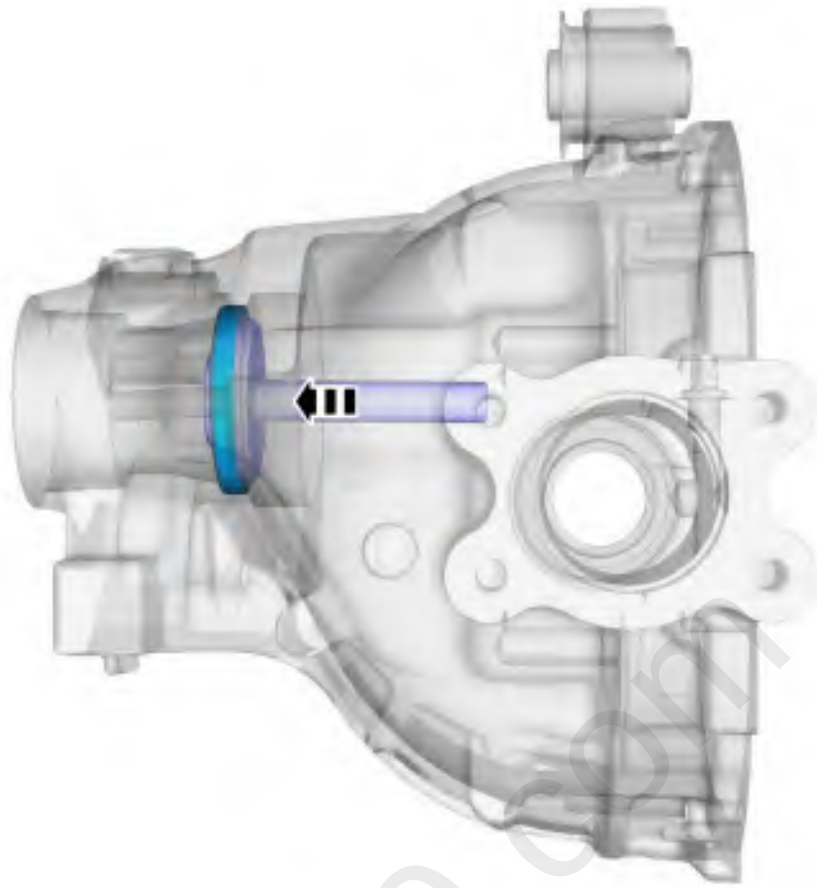
Torque: 94 lb.ft (128 Nm)



4. If removed.

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

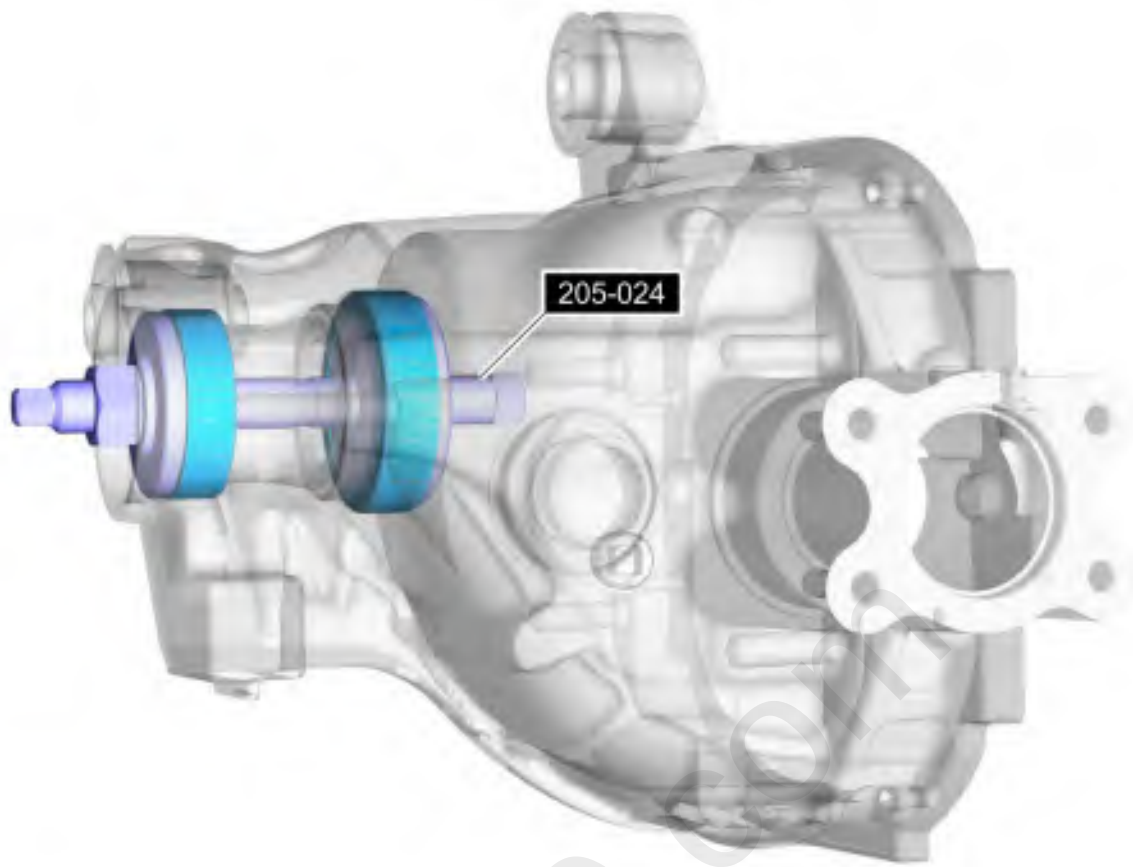
Use Special Service Tool: 205-D044 (D81T-4221-A) Installer, Differential Carrier Bearing.



E194180



5. 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

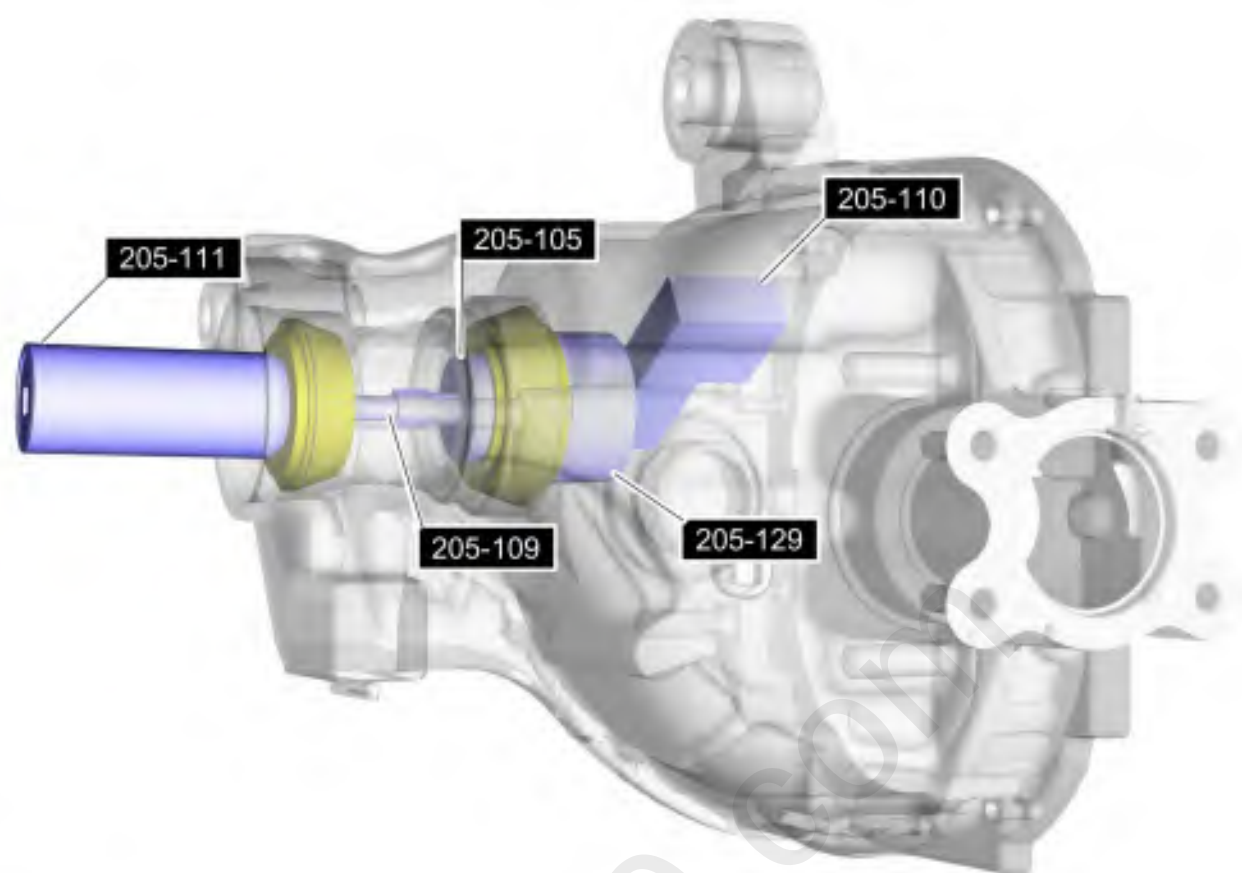
6. **NOTICE:** Use the same drive pinion bearings and the drive pinion bearing adjustment shim from the drive pinion bearing adjustment shim selection procedure for final assembly or damage to the component may occur.

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.

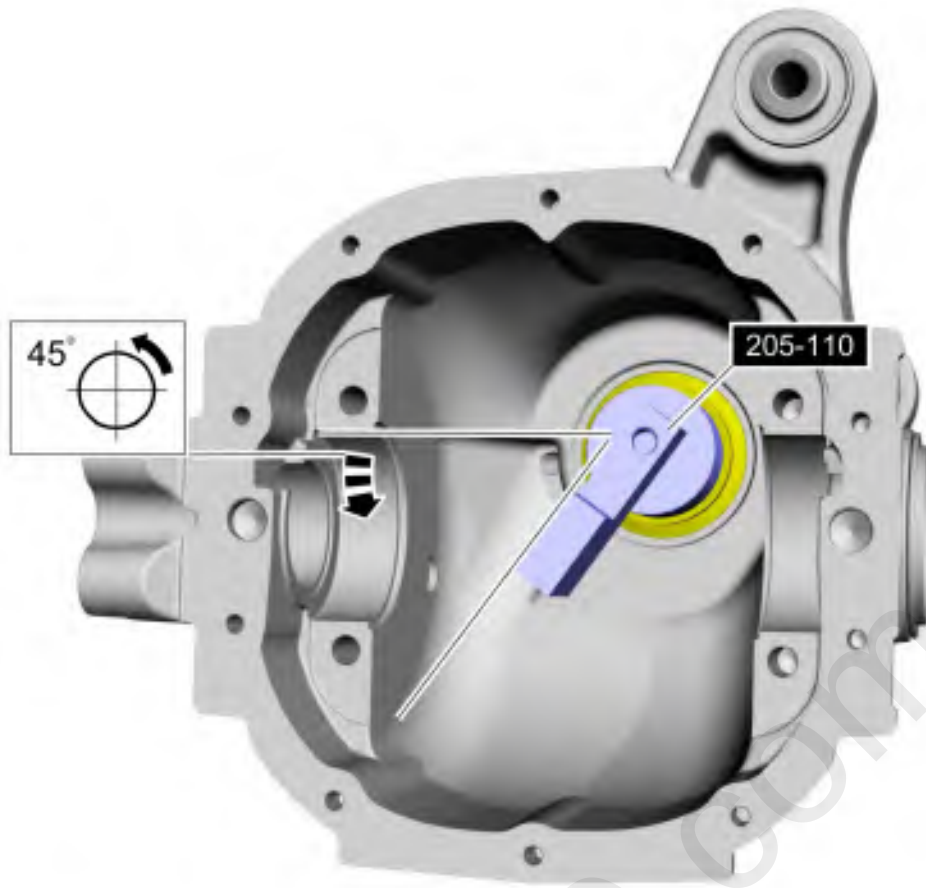
Use Special Service Tool: 205-105 (T76P-4020-A3) Adapter for 205-S127. , 205-109 (T76P-4020-A9) Adapter for 205-S127. , 205-110 (T76P-4020-A10) Gauge Block. , 205-111 (T76P-4020-A11) Handle. , 205-129 (T79P-4020-A18) Disc, Gauge.

Torque: 19 lb.in (2.2 Nm)



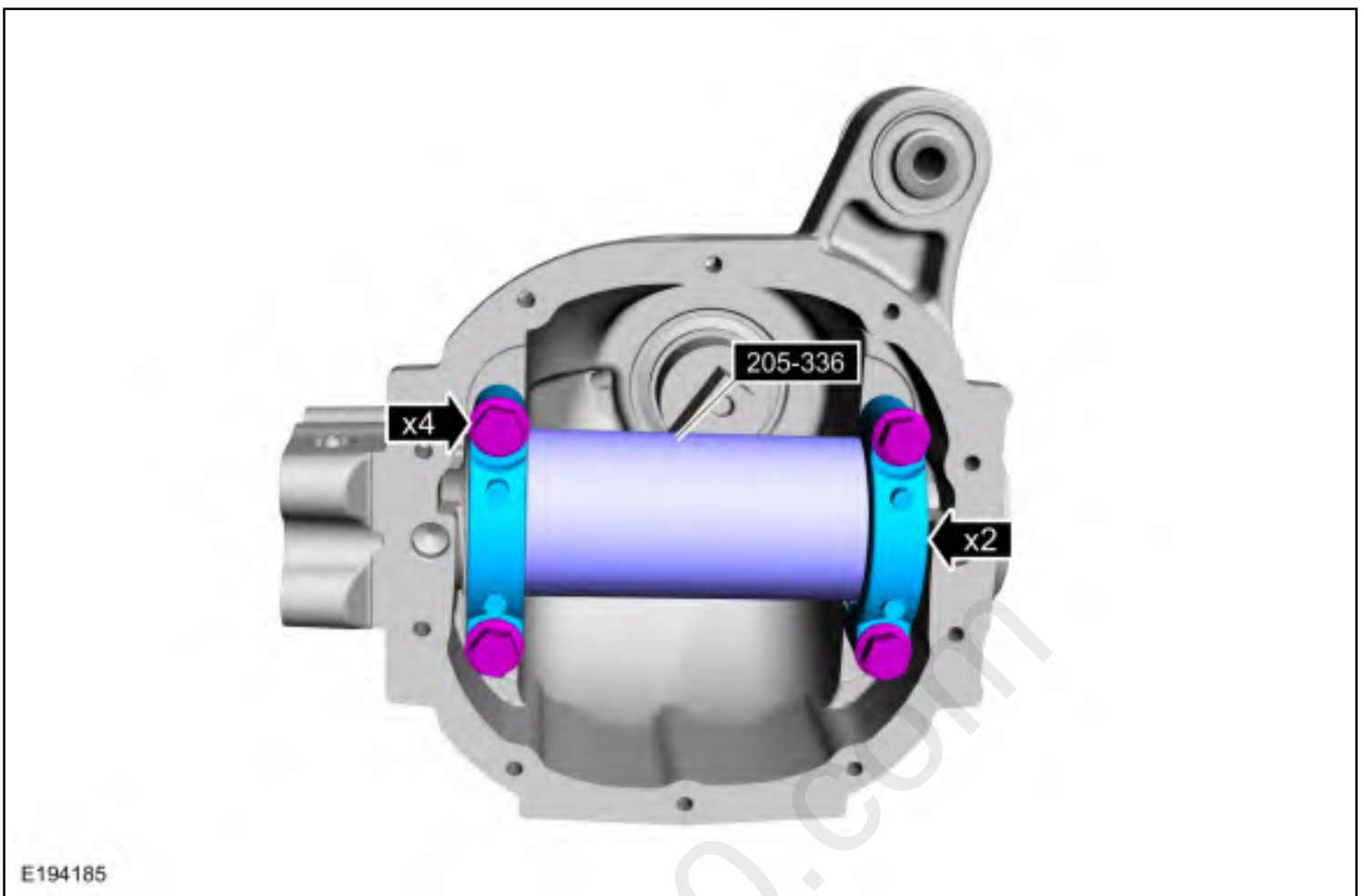
E194182

7. 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

8. Install the special tool, the differential bearing caps and the differential bearing cap bolts.
Use Special Service Tool: 205-336 (T93P-4020-A) Gauge Tube, Drive Pinion.
Torque: 77 lb.ft (105 Nm)



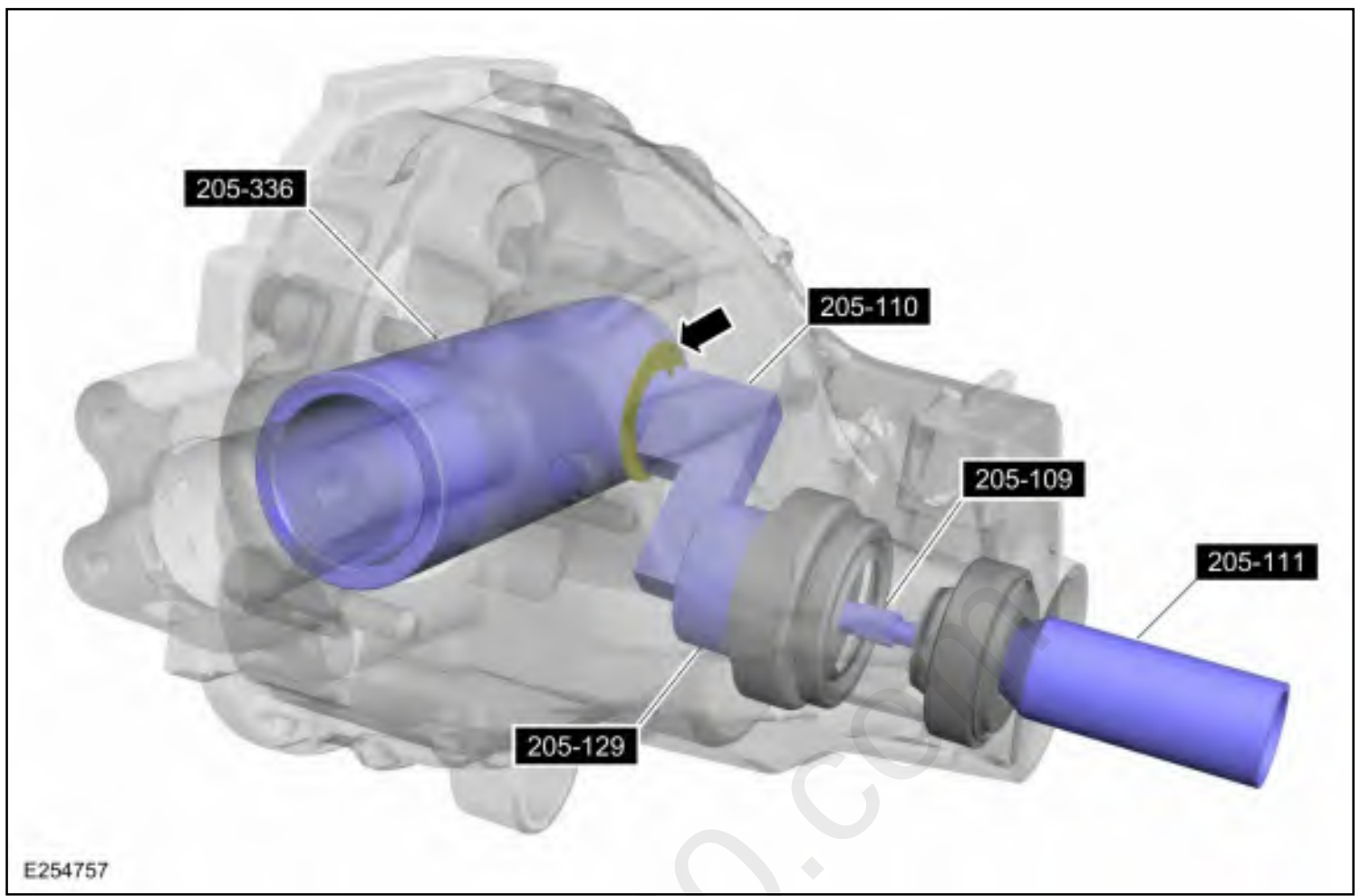
9. **NOTE:** Drive pinion bearing adjustment shims must be flat and clean.

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: 205-111 (T76P-4020-A11) Handle. , 205-109 (T76P-4020-A9) Adapter for 205-S127. , 205-110 (T76P-4020-A10) Gauge Block. , 205-129 (T79P-4020-A18) Disc, Gauge. , 205-336 (T93P-4020-A) Gauge Tube, Drive Pinion.

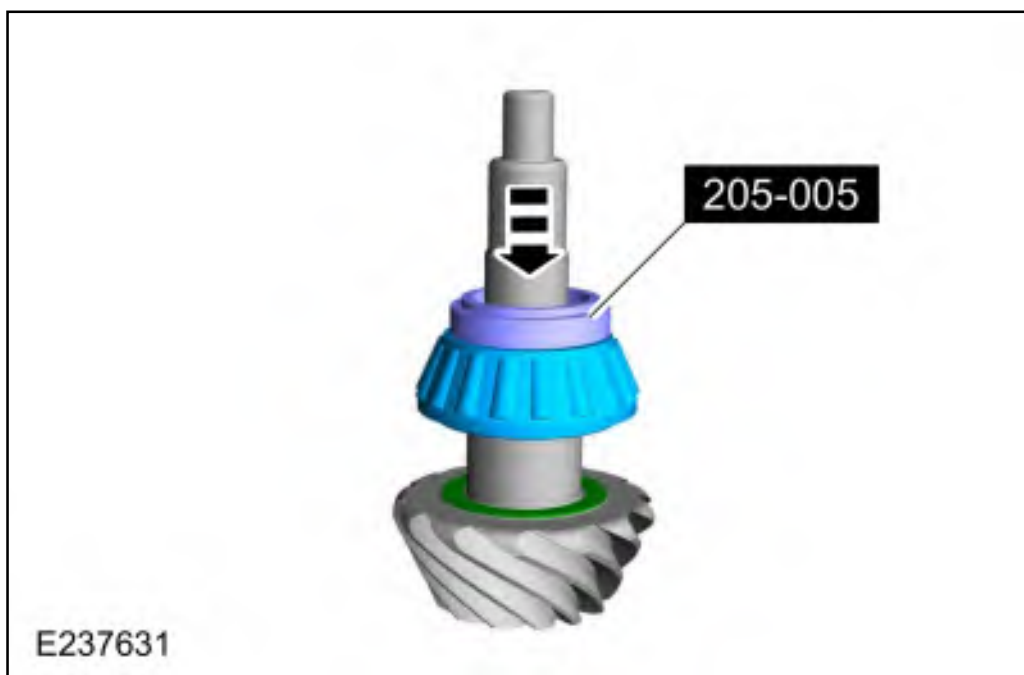


10. **NOTE:** *The same drive pinion bearing from the previous steps must be used.*

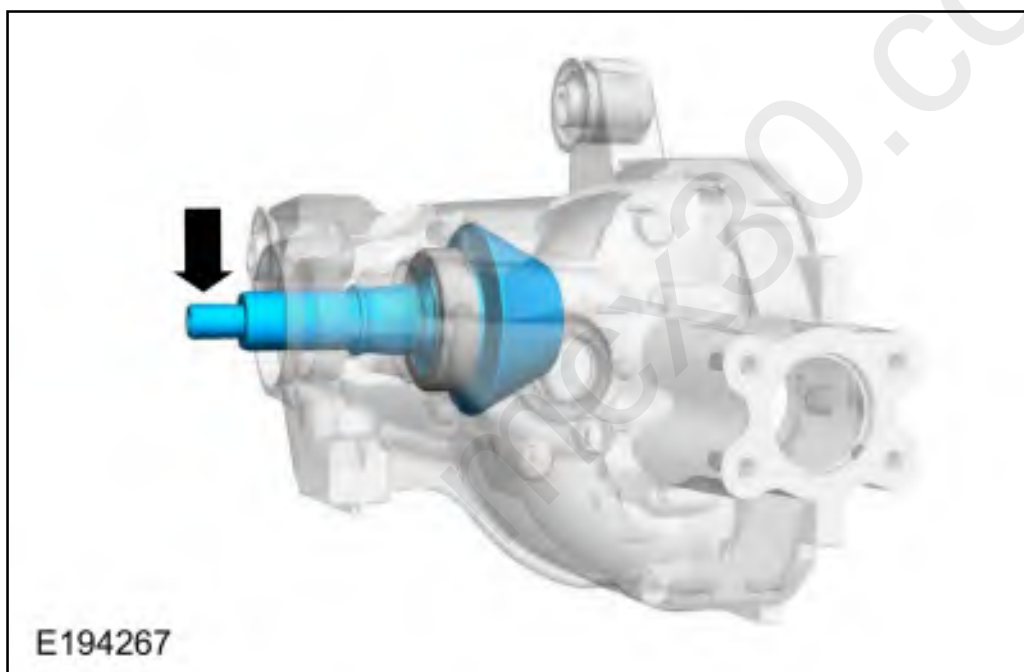
Install the drive pinion bearing and the selected drive pinion bearing adjustment shim until they are firmly seated on the drive pinion.

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

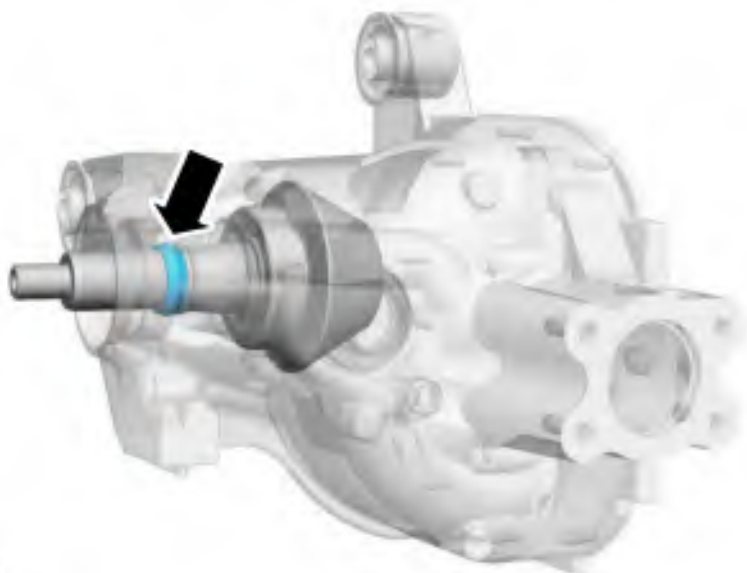
Use the General Equipment: Hydraulic Press



11. Install the pinion gear.



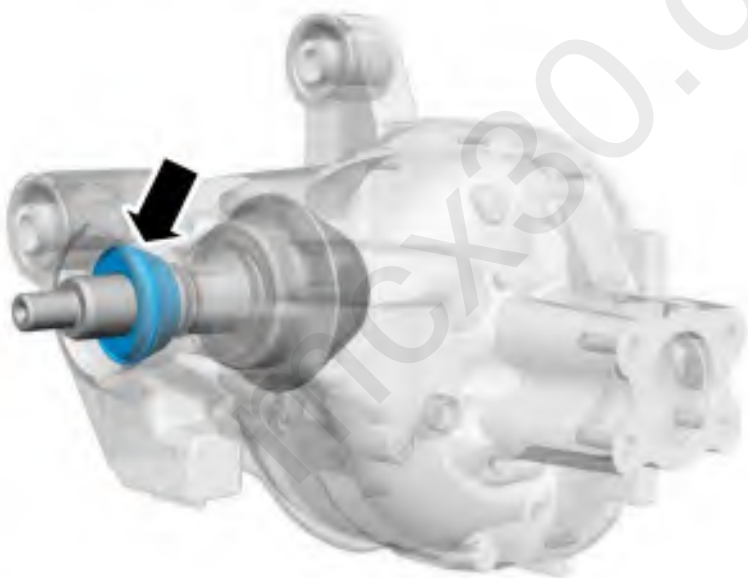
12. Install the new drive pinion collapsible spacer.



E194189



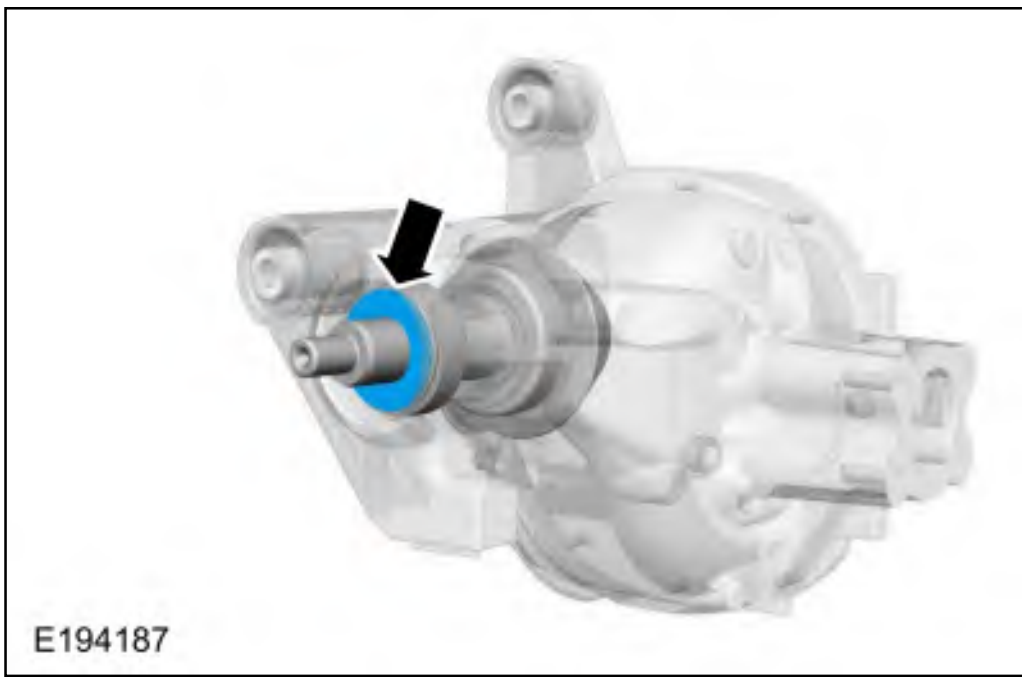
13. Install the outer drive pinion bearing.



E194188



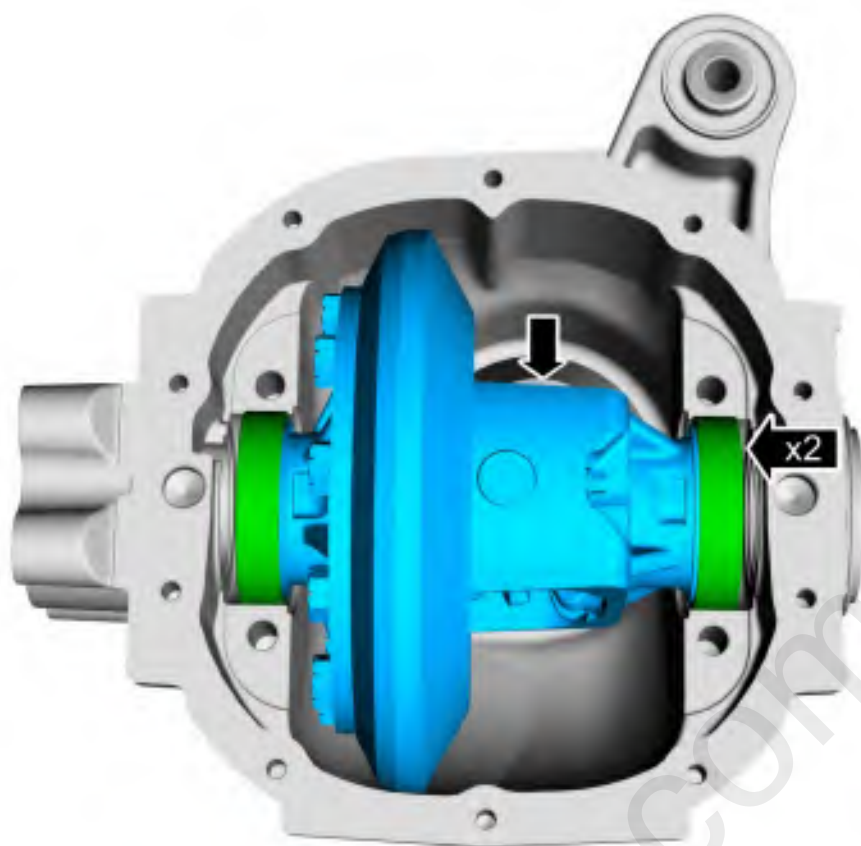
14. Install the outer drive pinion oil slinger.



15. Install the drive pinion flange and seal.

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

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



E194284

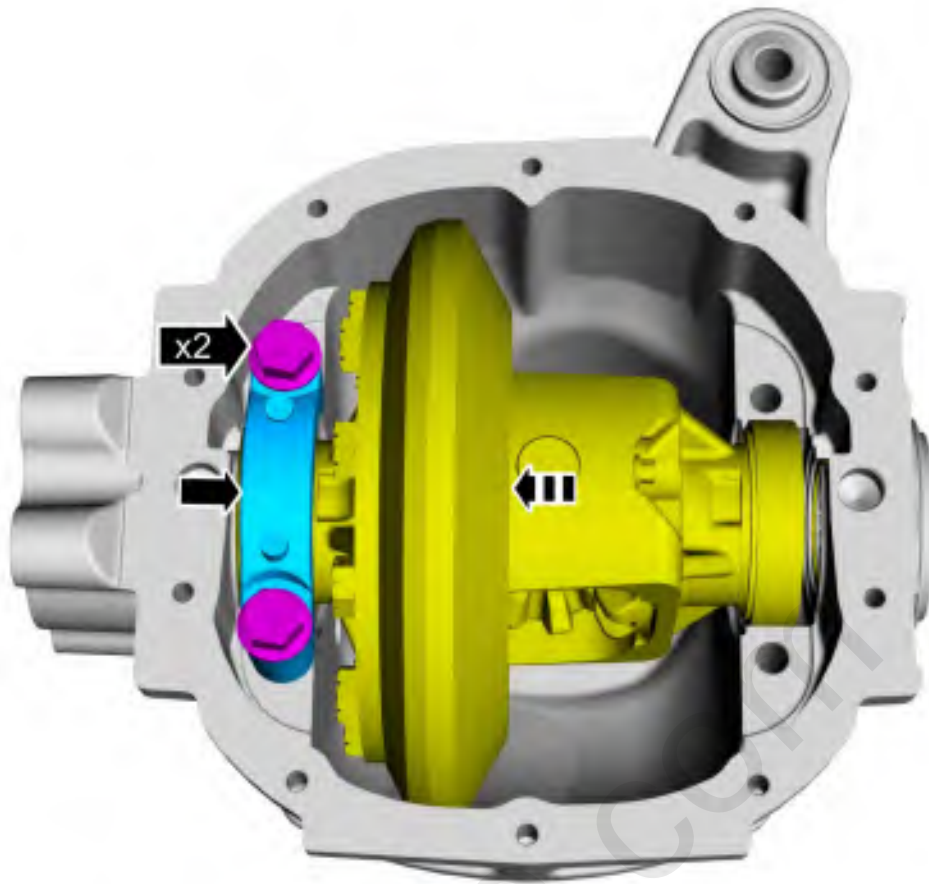
17. Install a 6.12 mm (0.241 in) differential bearing shim on the LH side of the differential bearing.



E194285

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

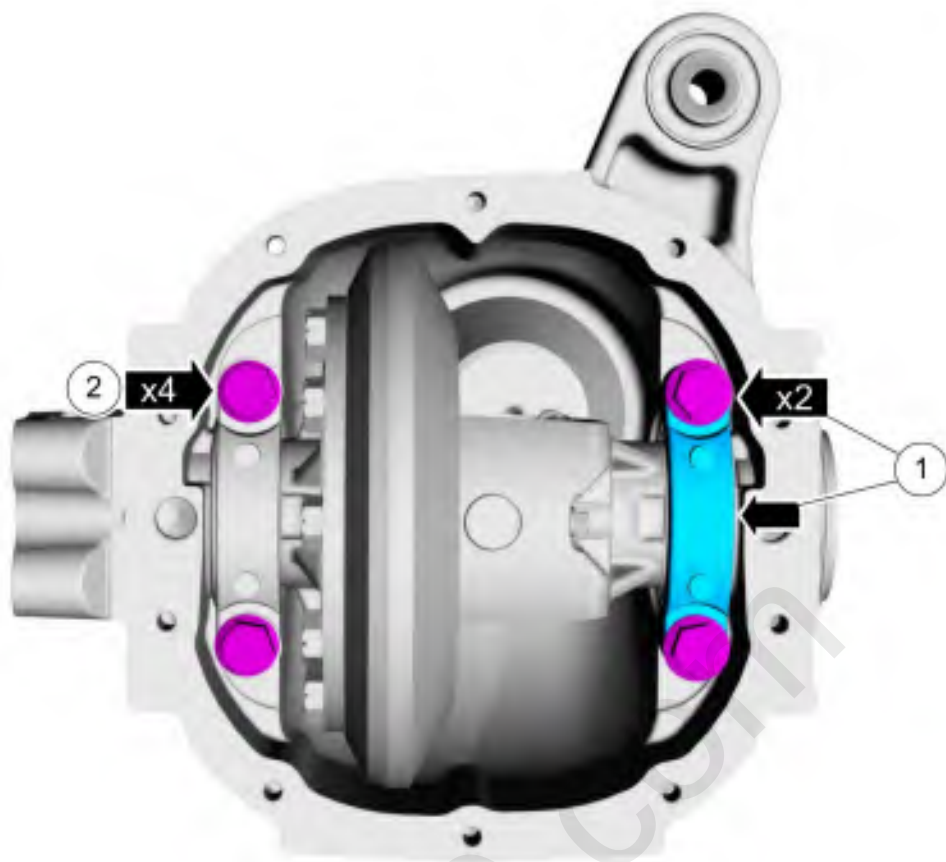
Install the left differential bearing cap and loosely install the differential bearing cap bolts.



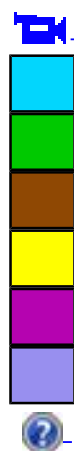
E194286

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

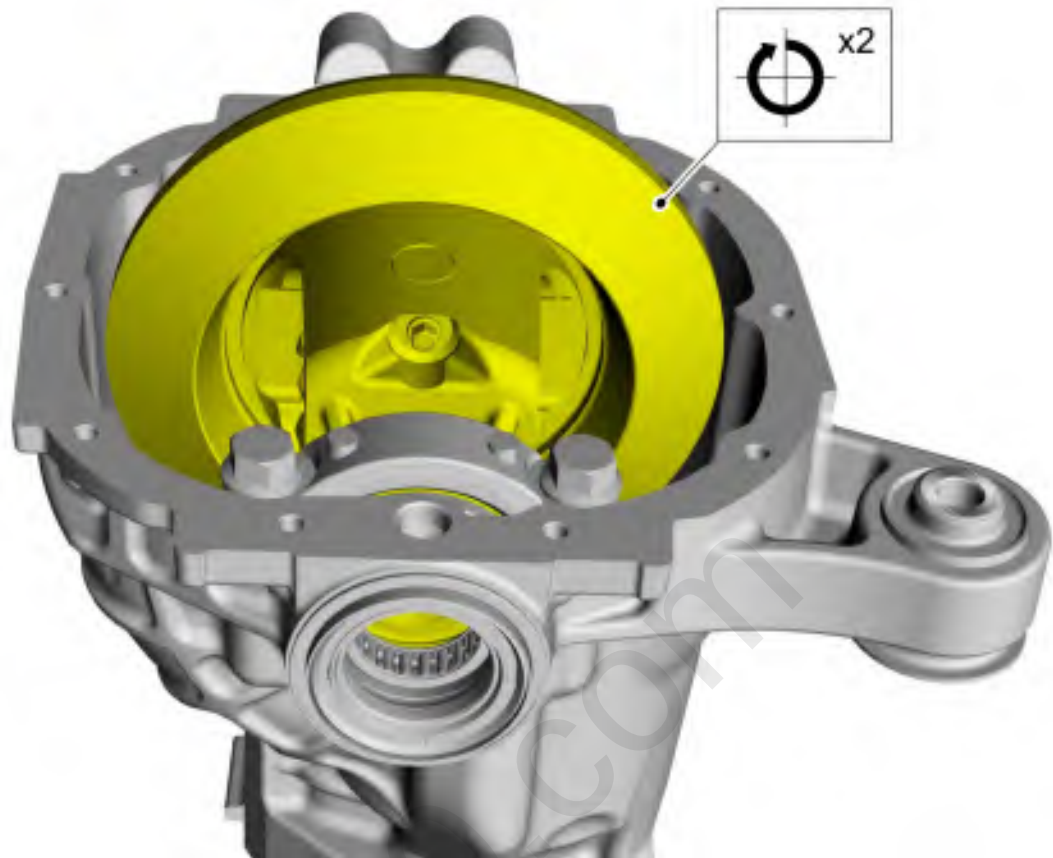
Install progressively thicker differential bearing shims on the right side until the thickest differential bearing shim can be inserted by hand.



E194288



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



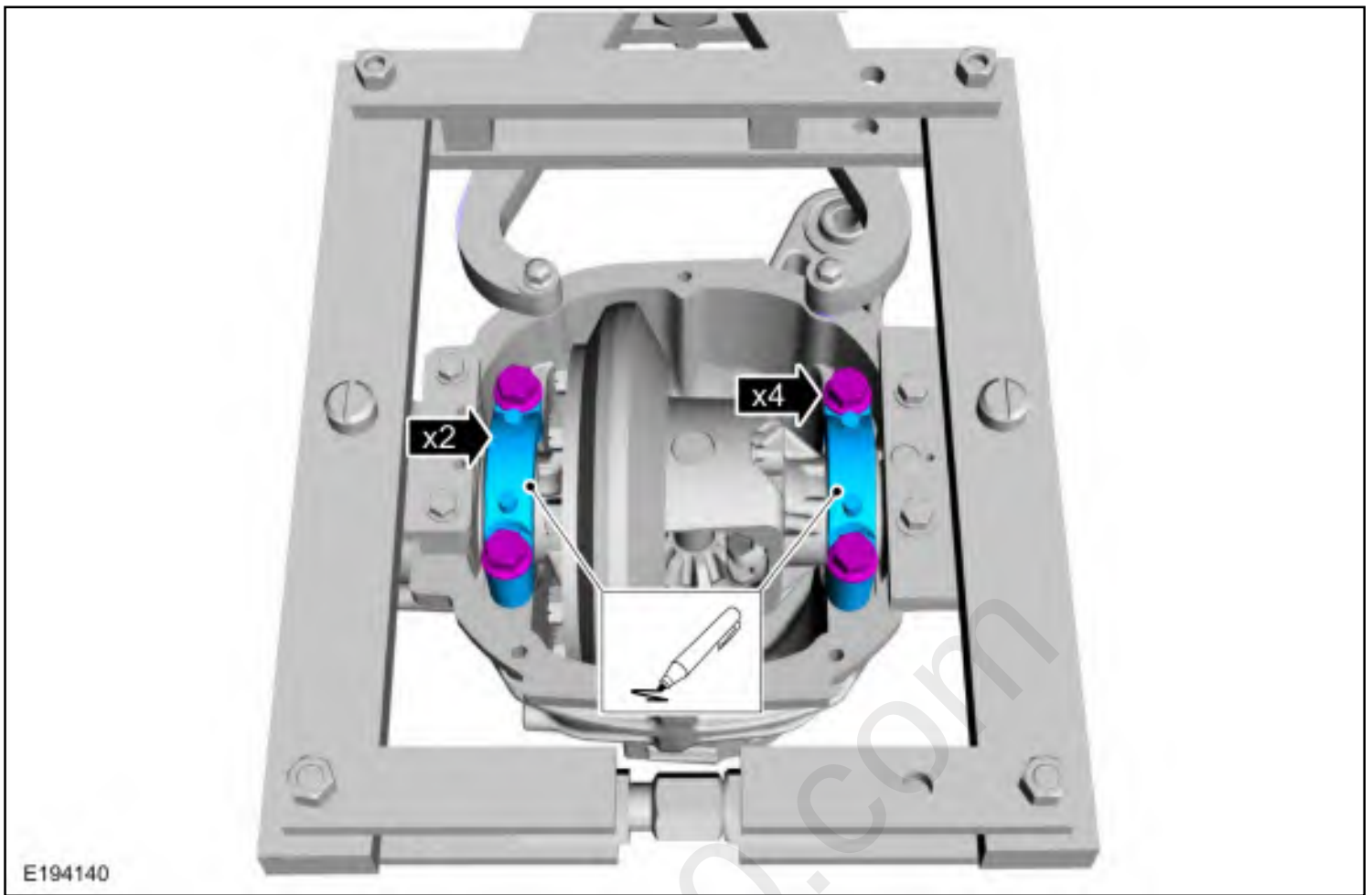
E194289

22. 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



23. **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

25. Verify a acceptable pattern check.

Refer to: [Front Drive Axle](#) (205-03 Front Drive Axle/Differential, Diagnosis and Testing).

26. Install the differential carrier.

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

27. Install the axle assembly.

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