

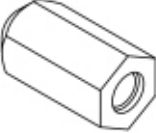


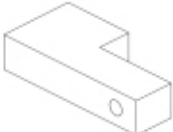




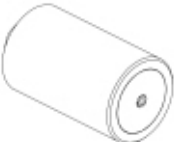


205-02 Rear Drive Axle/Differential - Vehicles With: Dana M220
Removal and Installation

2019 Ranger
Procedure revision date: 11/27/2018

Drive Pinion

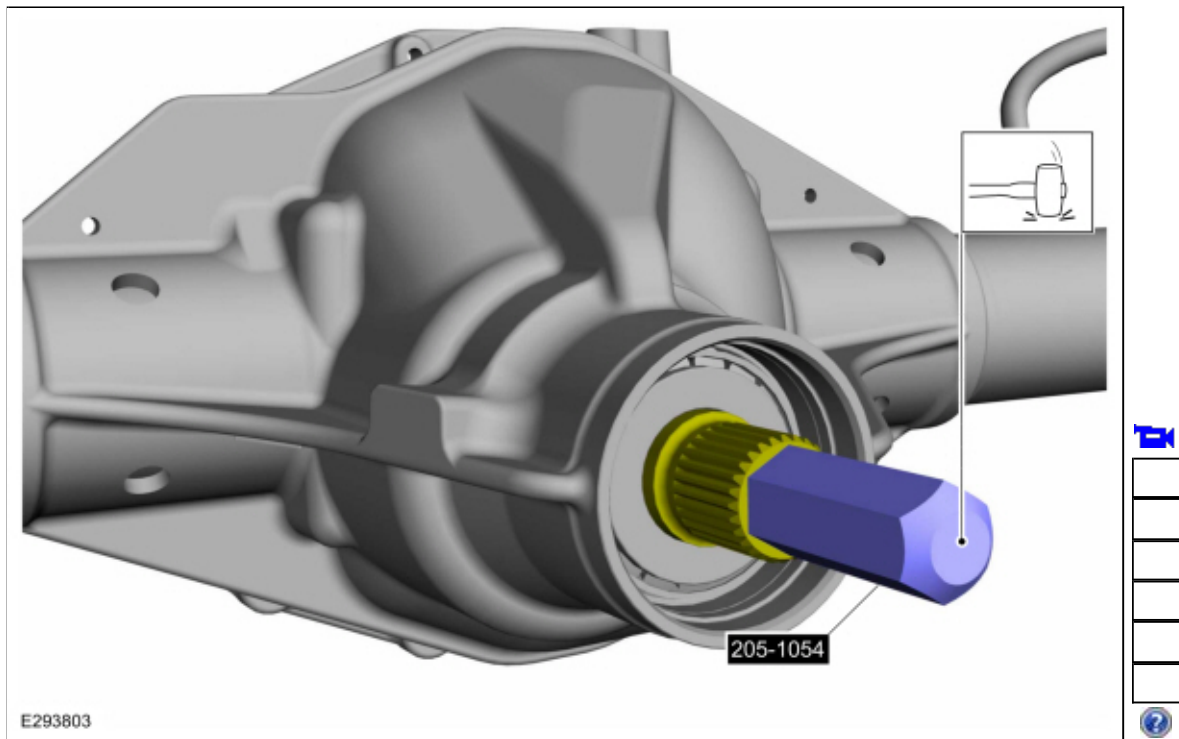
Special Tool(s) / General Equipment

 E234294	205-098 (T75T-1176-A) Drawbar, Rear Axle
 E232975	205-1024 Installer, Outer Pinion Bearing Cup
 E294703	205-1054 Protector, Pinion Thread
 E294705	205-1059 Gauge Tube
 E294706	205-1060 Bearing, Dummy Pinion
 E234299	205-110 (T76P-4020-A10) Gauge Block
 E133913	205-153 (T80T-4000-W) Handle

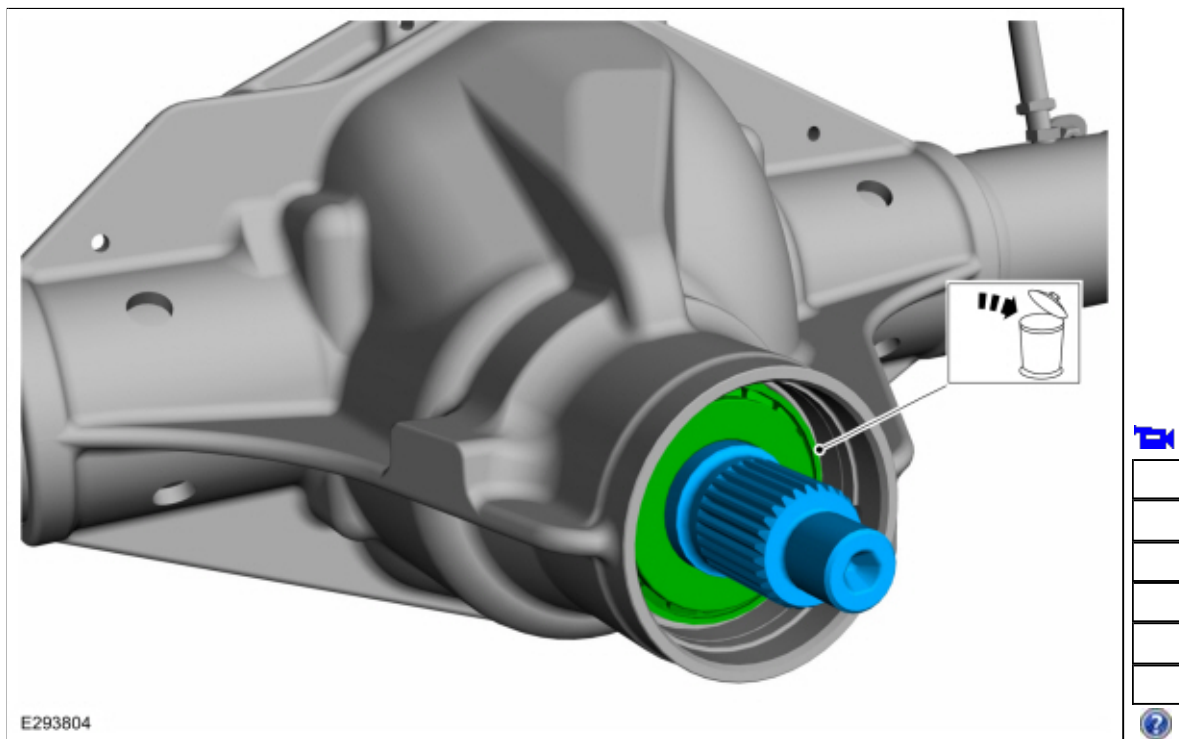
	205-157 (T80T-4020-F40) Adapter for 205-S156
 E238613	205-281 (T88T-4020-B) Depth Gauge/Aligner, Drive Pinion (Handle) TKIT-1988-FLM TKIT-1988-F
 E238649	205-480 Installer, Drive Pinion Inner Bearing Cup TKIT-2000AP-FLM/LM TKIT-2002-F/FM
 E180811	205-488 Installer, Drive Pinion Bearing TKIT-1999S-FLM/LT
Hydraulic Press	
Punch	
Copper Hammer	
Bearing Separator	

Removal

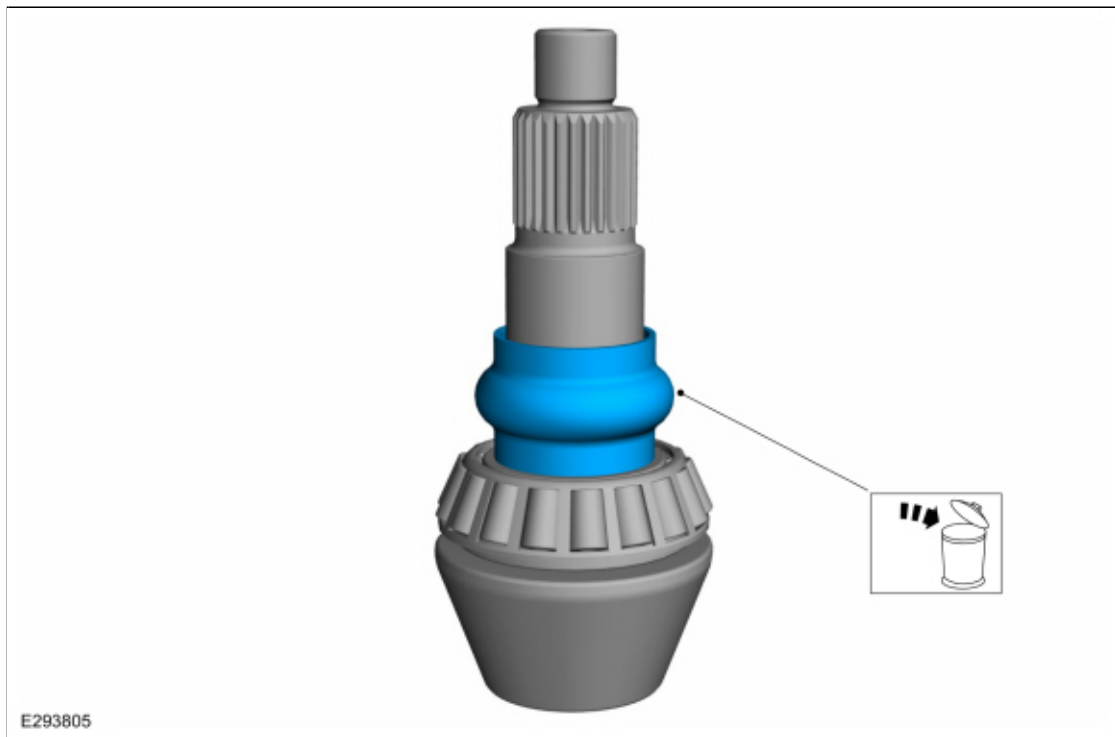
1. Remove the differential carrier.
Refer to: [Differential Carrier](#) (205-02 Rear Drive Axle/Differential - Vehicles With: Dana M220, Removal and Installation).
2. Remove the drive pinion seal.
Refer to: [Drive Pinion Seal](#) (205-02 Rear Drive Axle/Differential - Vehicles With: Dana M220, Removal and Installation).
3. Using the special tool and a soft face mallet, tap drive pinion free of the of the drive pinion outer bearing.
Use Special Service Tool: [205-1054 Protector, Pinion Thread](#).
Use the General Equipment: Copper Hammer



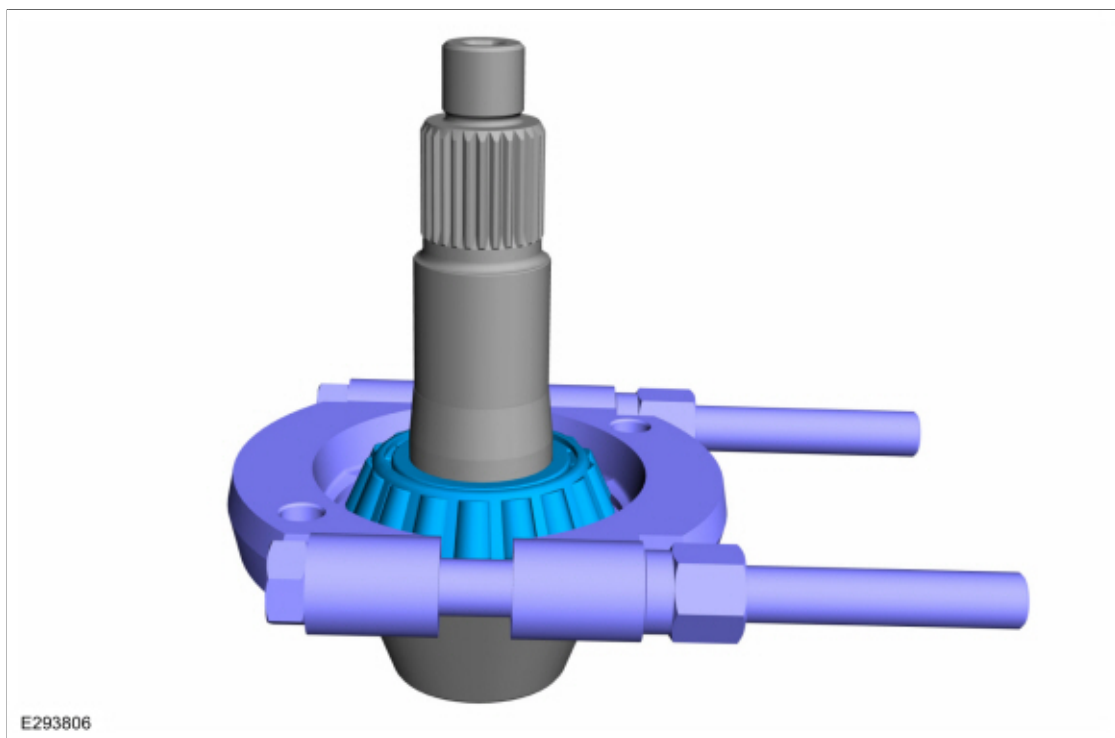
4. Remove the drive pinion. Remove and discard the drive pinion outer bearing.



5. Remove and discard the drive pinion collapsible spacer.

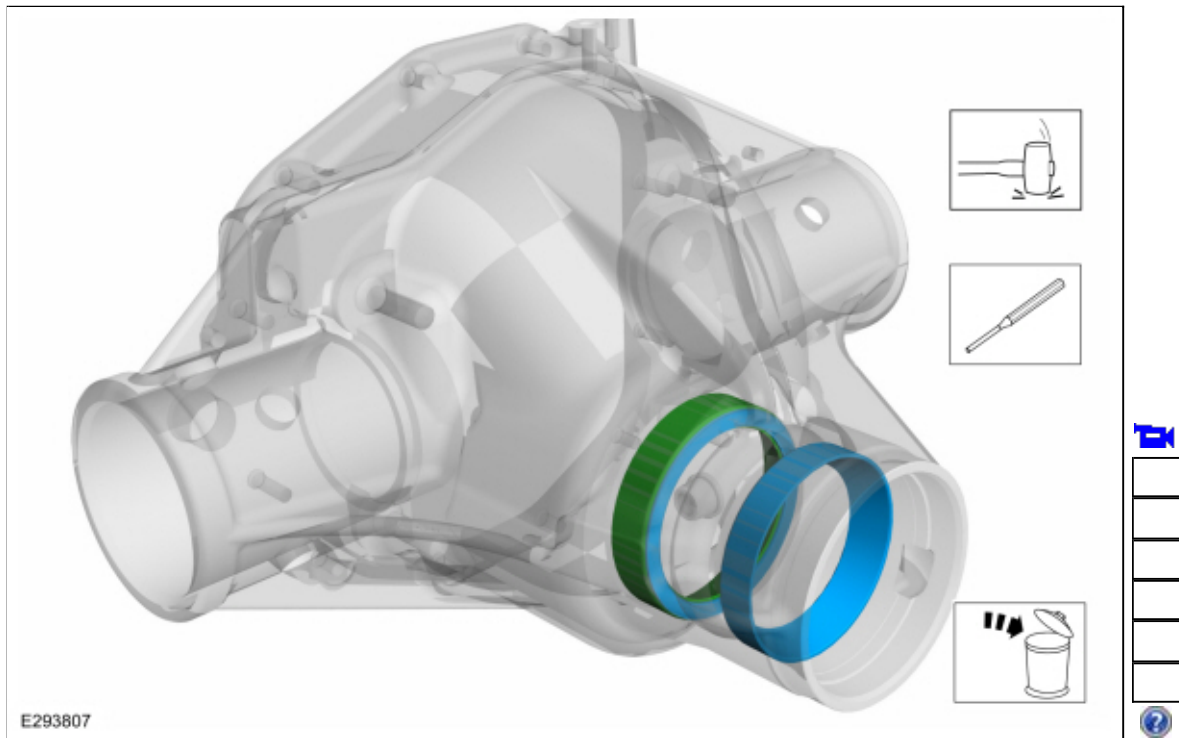


6. Using the general equipments, remove and discard the inner drive pinion bearing.
 Use the General Equipment: Bearing Separator
 Use the General Equipment: Hydraulic Press



7. Using the general equipment, remove and discard the drive pinion inner and outer bearing cup and drive pinion depth shim.
 Use the General Equipment: Punch

Use the General Equipment: Copper Hammer

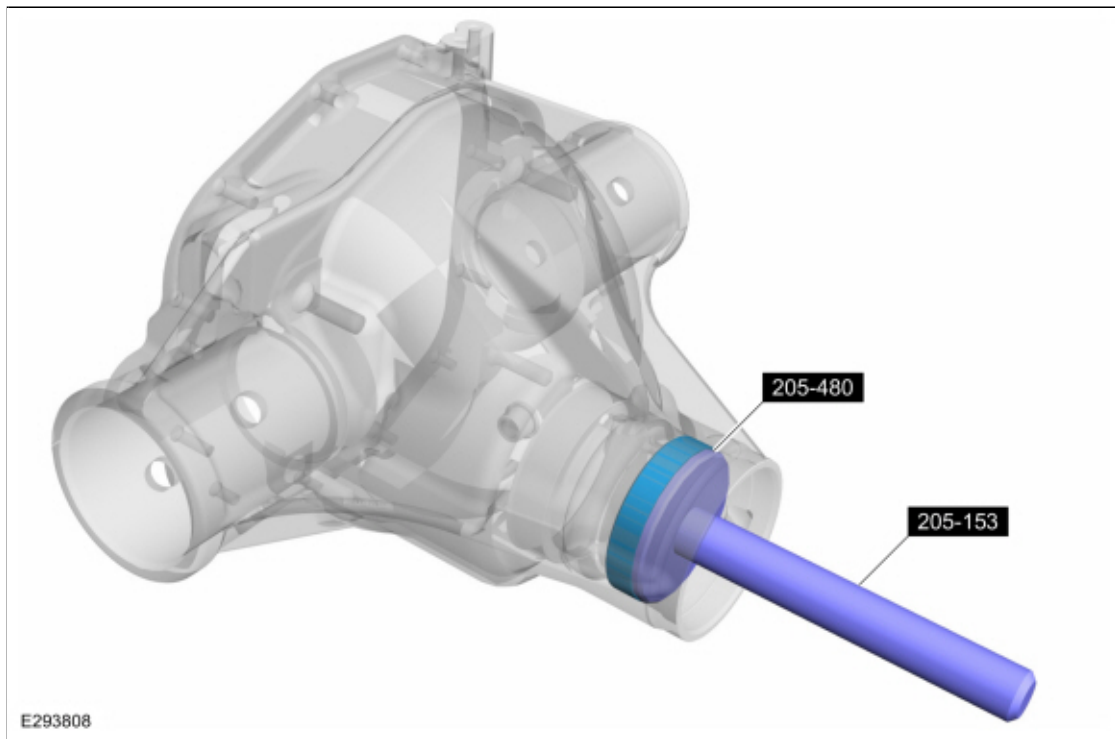


Installation

1. **NOTE:** Make sure the drive pinion bearing cup is seated correctly or damage to the components may occur.

Using the special tools, install the new outer drive pinion bearing cup.

Use Special Service Tool: [205-480 Installer, Drive Pinion Inner Bearing Cup.](#) , [205-153 \(T80T-4000-W\) Handle.](#)



2. **NOTE:** Lubricate the drive pinion bearing cones with rear axle oil.

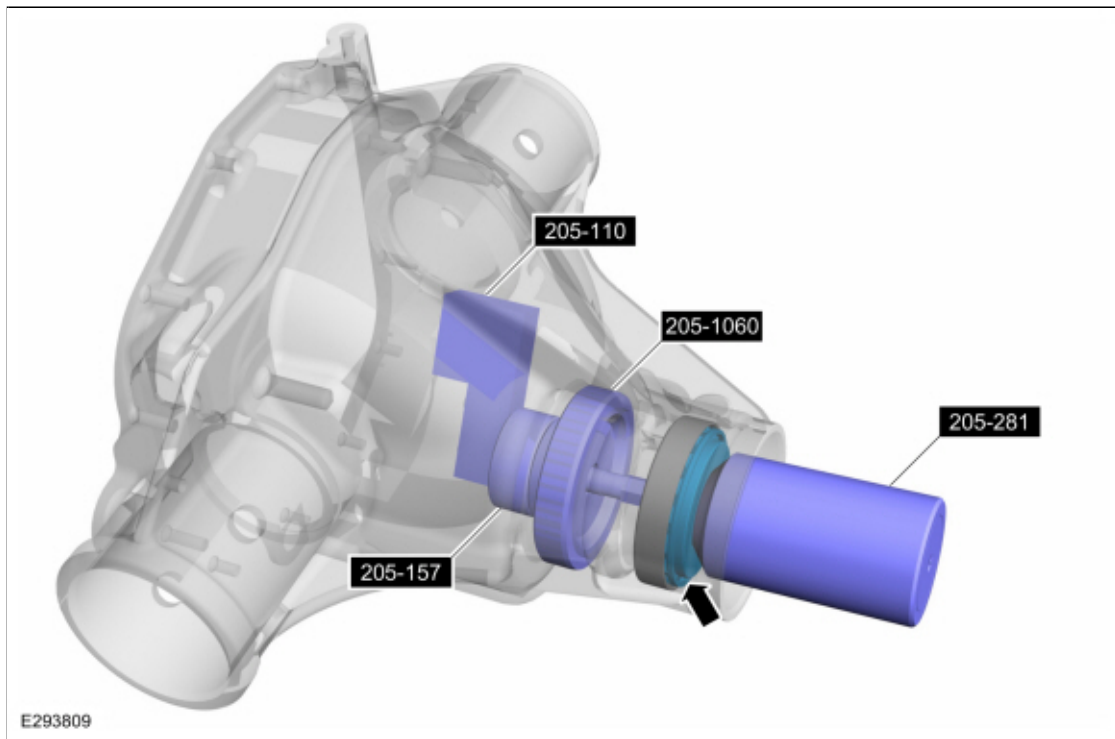
NOTE: The conical nut of the special has a left-hand thread.

NOTE: Only tighten finger tight at this stage.

Assemble the pinion depth special tools and the new outer bearing in the differential housing.

Use Special Service Tool: [205-281 \(T88T-4020-B\) Depth Gauge/Aligner, Drive Pinion \(Handle\)](#), [205-157 \(T80T-4020-F40\) Adapter for 205-S156](#), [205-110 \(T76P-4020-A10\) Gauge Block](#), [205-1060 Bearing, Dummy Pinion](#).





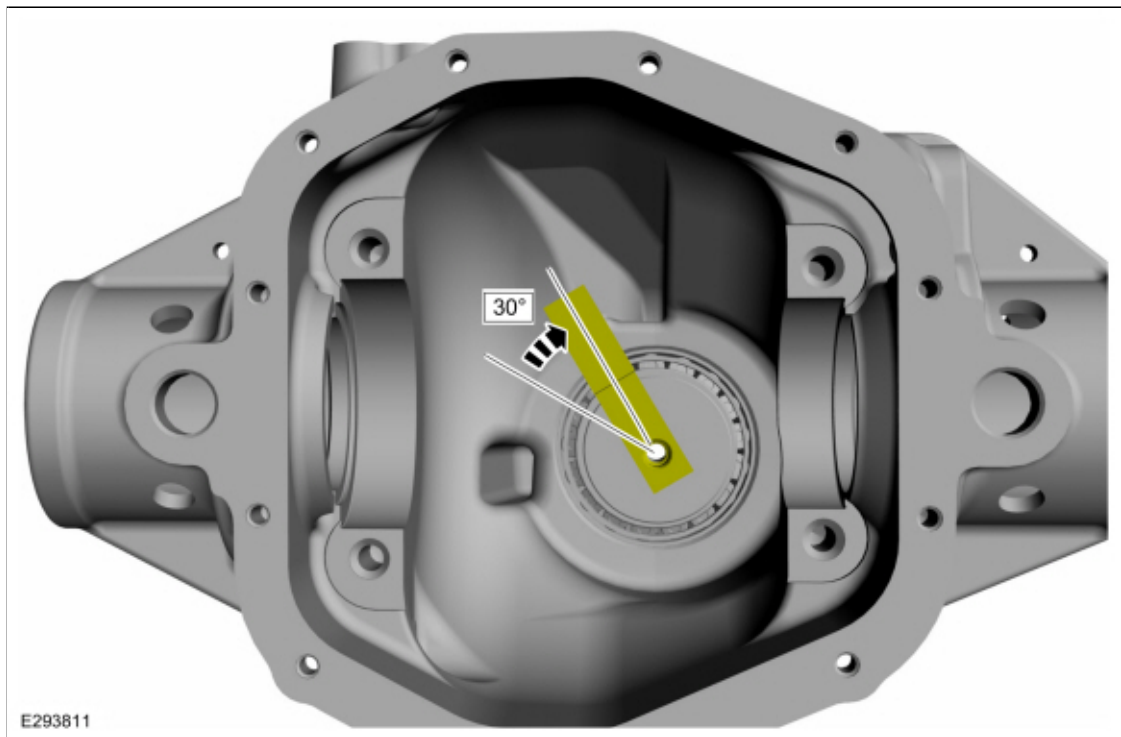
3.

- Tighten special tools and check for clear rotation.
Use Special Service Tool: [205-110 \(T76P-4020-A10\) Gauge Block](#).
- **NOTE:** *This step duplicates final drive pinion bearing preload*

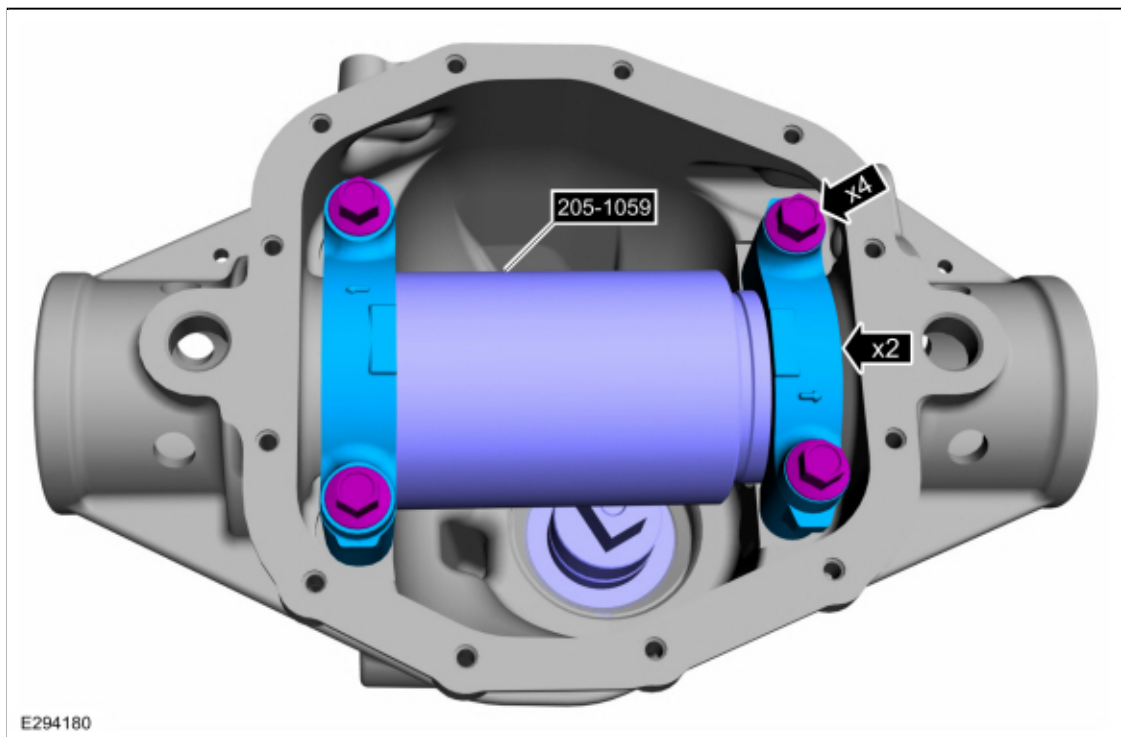
Tighten the special tool to the specified torque.
Torque: 18 lb.in (2 Nm)

- Slowly rotate and record the rotational torque readings.





4. Position the special tool. Install the differential bearing caps and bolts. Use Special Service Tool: [205-1059 Gauge Tube](#).

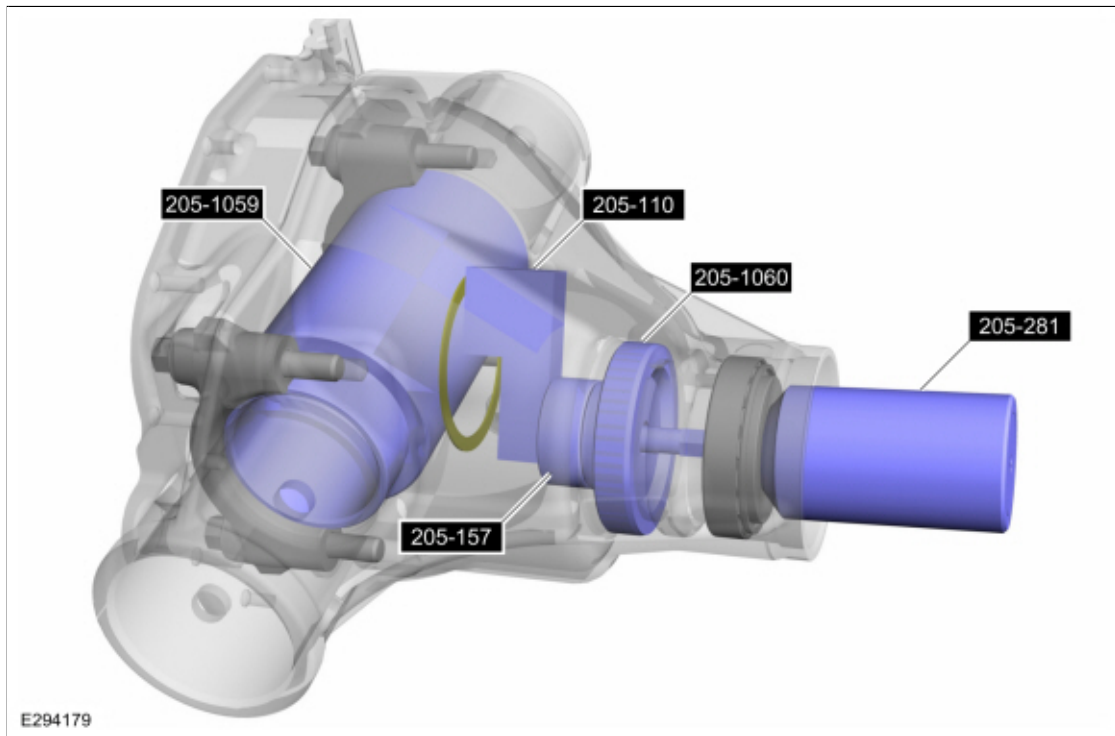


5. **NOTE:** Drive pinion bearing adjustment shims must be flat and clean.

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 the final assembly of integral axle assemblies.

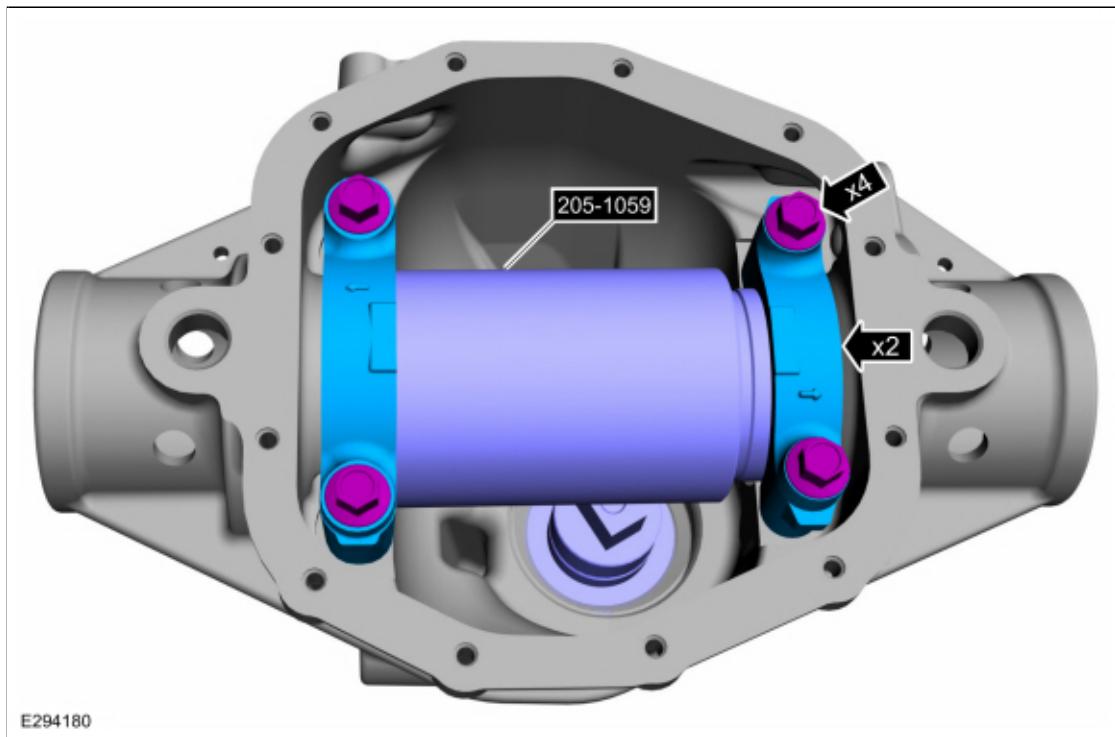
Use a drive pinion bearing adjustment shim as a gauge for drive pinion bearing adjustment shim selection. Use Special Service Tool: [205-281 \(T88T-4020-B\) Depth Gauge/Aligner, Drive Pinion \(Handle\)](#), [205-157 \(T80T-4020-F40\) Adapter for 205-S156](#), [205-110 \(T76P-4020-A10\) Gauge Block](#), [205-1059 Gauge Tube](#), [205-1060 Bearing, Dummy Pinion](#).



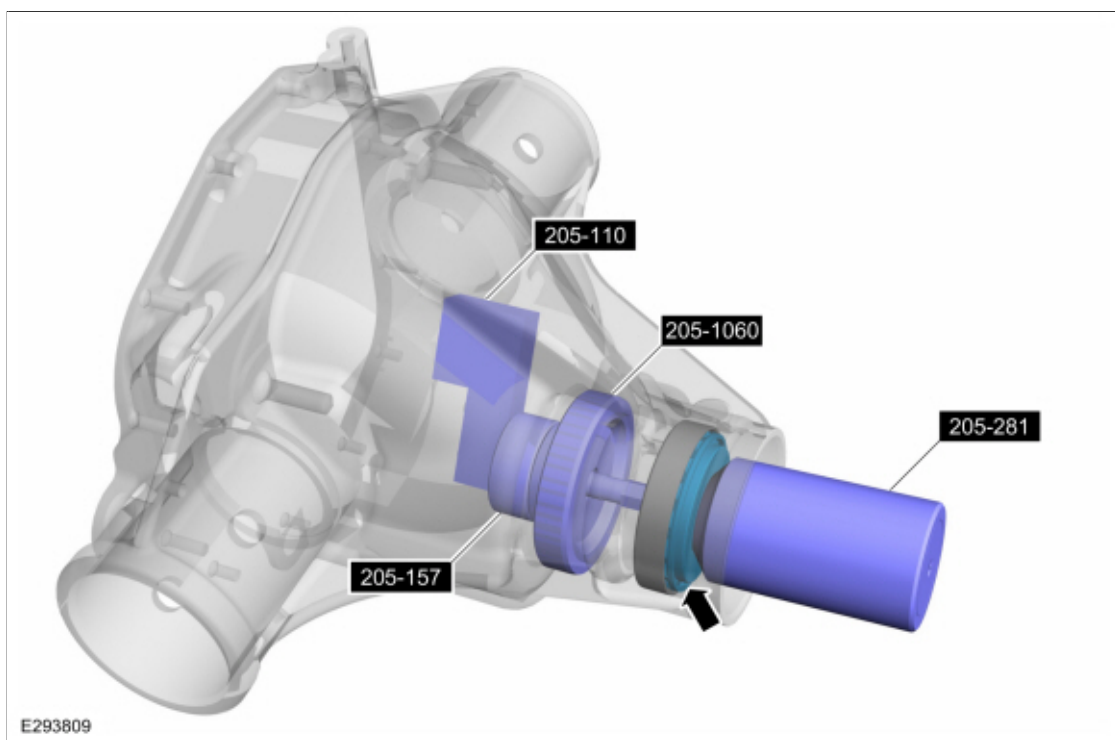
6. **NOTE:** *The differential bearing caps need to stay in the correct orientation for installation.*

Remove the differential bearing cap bolts and differential bearing caps, remove the special tool. Use Special Service Tool: [205-1059 Gauge Tube](#).



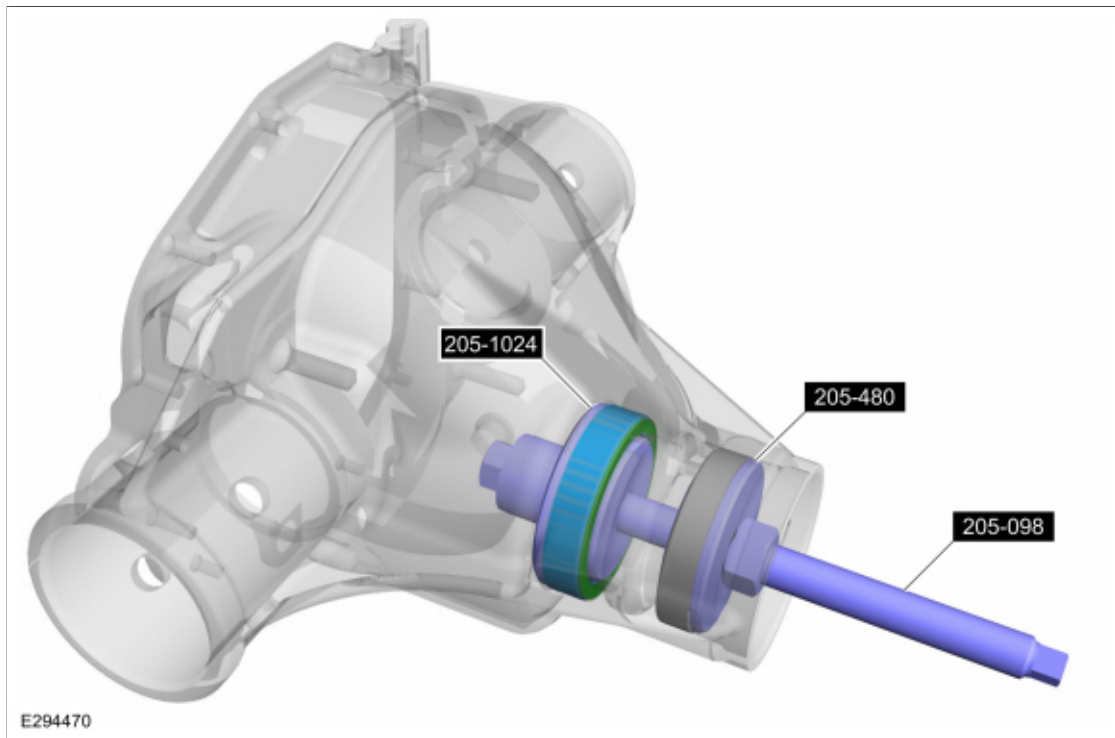


7. Remove the special tools and the outer pinion bearing.
 Use Special Service Tool: [205-281 \(T88T-4020-B\) Depth Gauge/Aligner, Drive Pinion \(Handle\)](#), [205-157 \(T80T-4020-F40\) Adapter for 205-S156](#), [205-110 \(T76P-4020-A10\) Gauge Block](#), [205-1060 Bearing, Dummy Pinion](#).



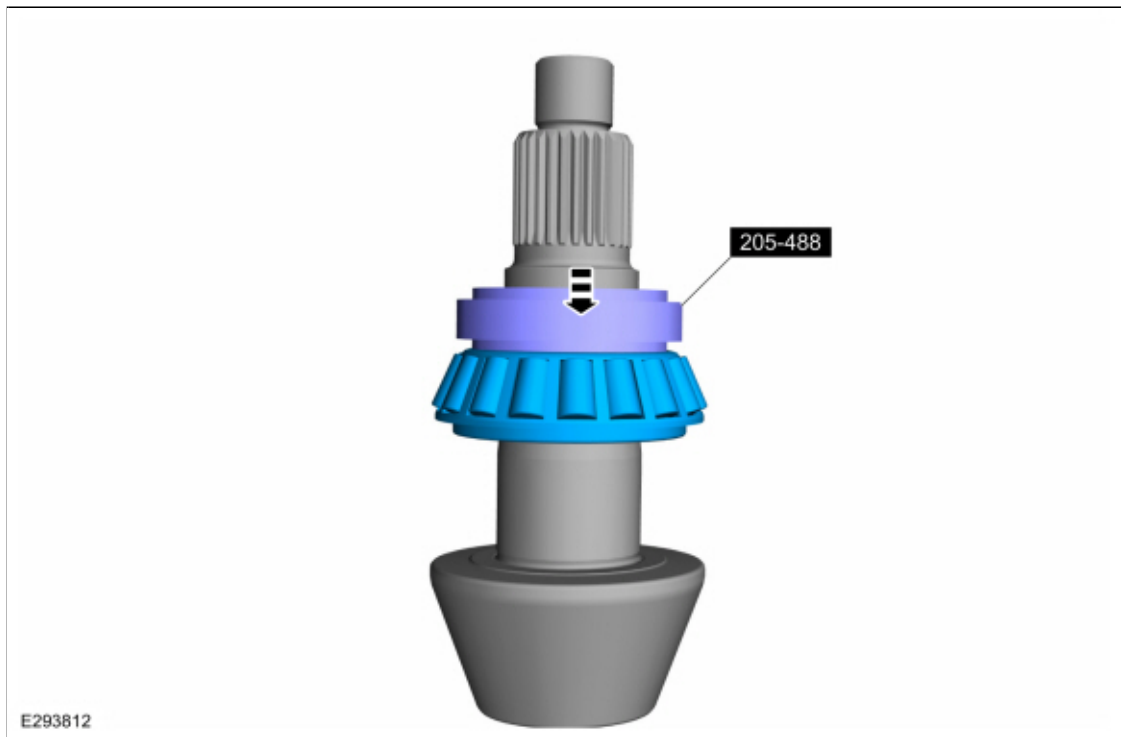
8. **NOTE:** Make sure the drive pinion bearing cup is seated correctly or damage to the components may occur.

Using the special tools, install the selected pinion depth shim and the new inner drive pinion bearing cup. Use Special Service Tool: [205-480 Installer, Drive Pinion Inner Bearing Cup](#) , [205-1024 Installer, Outer Pinion Bearing Cup](#) , [205-098 \(T75T-1176-A\) Drawbar, Rear Axle](#).

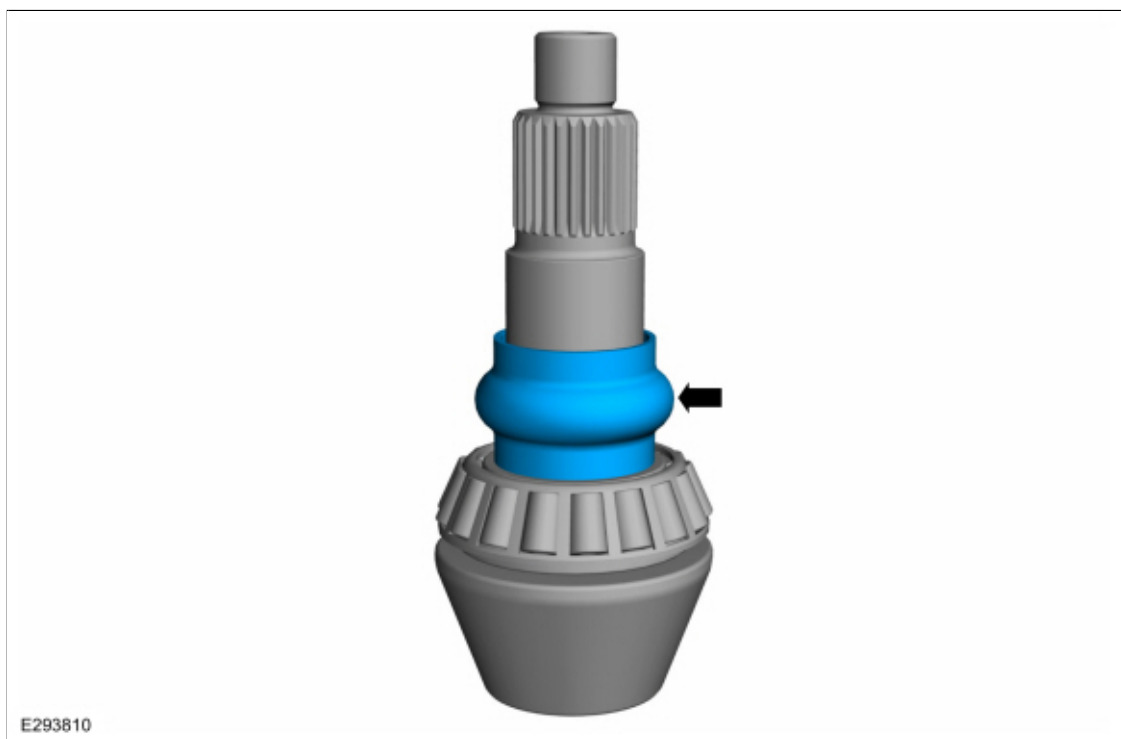


9. Using general special tool, install the drive pinion inner bearing and selected drive pinion bearing adjustment shim until they are firmly seated on the drive pinion. Use Special Service Tool: [205-488 Installer, Drive Pinion Bearing](#). Use the General Equipment: Hydraulic Press





10. Install the new drive pinion collapsible spacer.



11. Install the differential carrier.
Refer to: [Differential Carrier](#) (205-02 Rear Drive Axle/Differential - Vehicles With: Dana M220, Removal and Installation).

12. Install the drive pinion seal.

Refer to: [Drive Pinion Seal](#) (205-02 Rear Drive Axle/Differential - Vehicles With: Dana M220, Removal and Installation).

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