

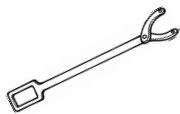
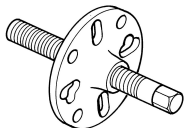
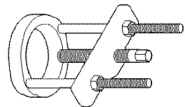


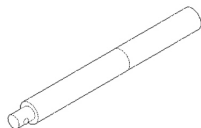
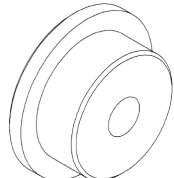
03 - Differential and Driveline/Front Axle - M210/GEAR, Ring and Pinion/Removal and Installation

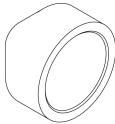
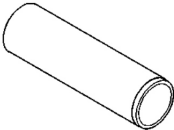

REMOVAL AND INSTALLATION

+ **Labor Operations:** Click to display a list of Labor Operations associated with this procedure

- **Special Tools:** Click to hide the list of tools used in this procedure

[Click here to launch the form to order any tools you need.](#)

	<p style="text-align: center;">C-3281 - Holder, Flange</p> <p style="text-align: center;">Originally Shipped In Kit Number(s) <i>9202, 9202A-CAN, 9202CC, 9299, 9299CC, 9299CC, 9300A-CAN.</i></p>
	<p style="text-align: center;">C-452 - Puller, Companion Flange</p>
	<p style="text-align: center;">C-293-PA - Puller, Press</p> <p style="text-align: center;">Originally Shipped In Kit Number(s) <i>8418, 8837, C-293-M.</i></p>
	<p style="text-align: center;">C-293-47 - Block Set, Puller</p> <p style="text-align: center;">Originally Shipped In Kit Number(s) <i>9975, C-293-M, DD-914-CLT-L.</i></p>
	<p style="text-align: center;">D-111 - Installer, Bearing Cup</p> <p style="text-align: center;">Originally Shipped In Kit Number(s) <i>9925, 9926.</i></p>
	<p style="text-align: center;">C-4171 - Driver Handle, Universal</p> <p style="text-align: center;">Originally Shipped In Kit Number(s) <i>9202, 9202A-CAN, 9202CC, 9299, 9299CC, 9299CC, 9300A-CAN.</i></p>
	<p style="text-align: center;">8960 - Installer, Bearing Cup</p> <p style="text-align: center;">Originally Shipped In Kit Number(s) <i>8887, 8887CC.</i></p>
	<p style="text-align: center;">9684 - Installer, Seal</p> <p style="text-align: center;">Originally Shipped In Kit Number(s) <i>9656.</i></p>

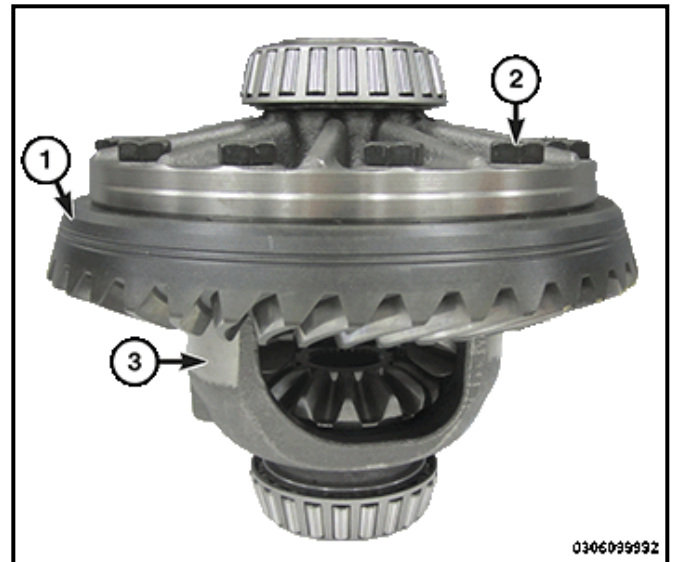
	
	C-3095-A - Installer, Bearing
	2054200030 - Installer, Pinion Flange

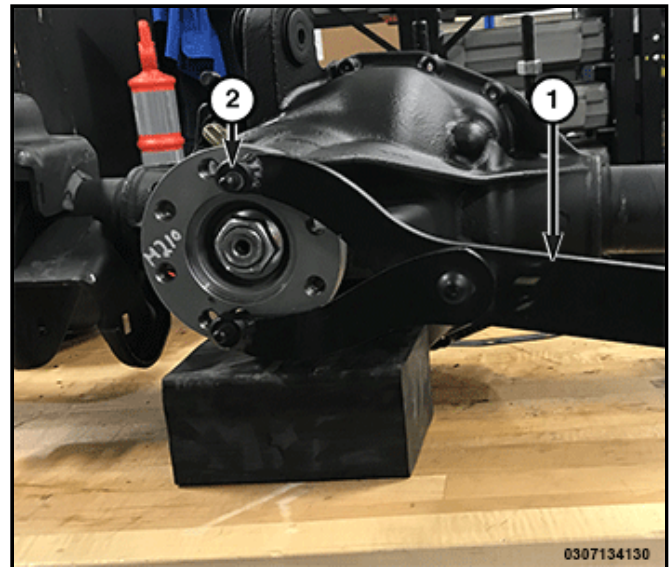
REMOVAL

NOTE:

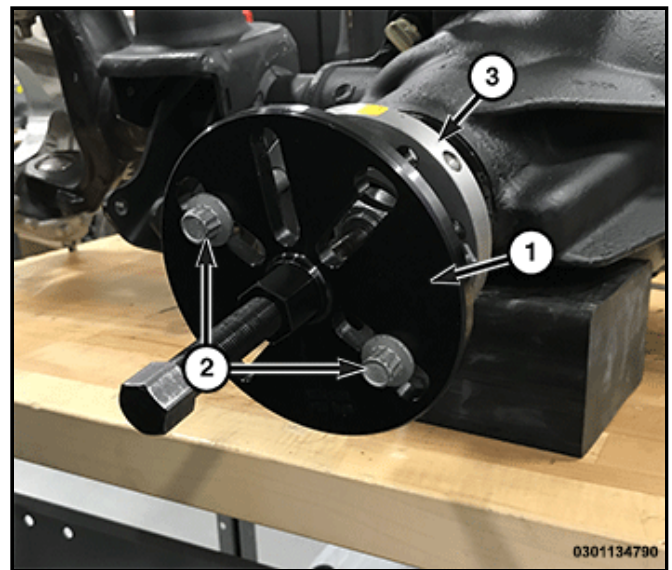
The ring and pinion gears are serviced as a matched set. Never replace one gear without replacing the other gear.

1. Remove the differential case from the differential housing (Refer to 03 - Differential and Driveline/Front Axle/CASE ASSEMBLY, Differential, TRU-LOK/Removal and Installation) .
2. If equipped, remove the TRU-LOK actuator (Refer to 03 - Differential and Driveline/Front Axle/ACTUATOR, Axle Locker/Removal and Installation) .
3. Remove the ring gear bolts (2) and remove the ring gear (1) from the differential case (3).
4. Remove the TRU-LOK indicator switch from the differential housing (Refer to 03 - Differential and Driveline/Front Axle/SWITCH, Axle Lock/Removal and Installation) .
5. Hold the pinion flange (2) using the C-3281 (1) and remove the pinion nut.



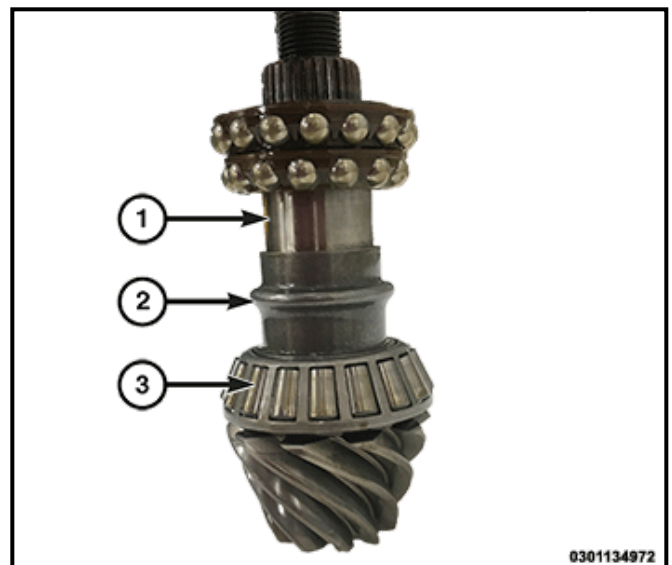


6. Remove the pinion flange (3) using the C-452 (1).

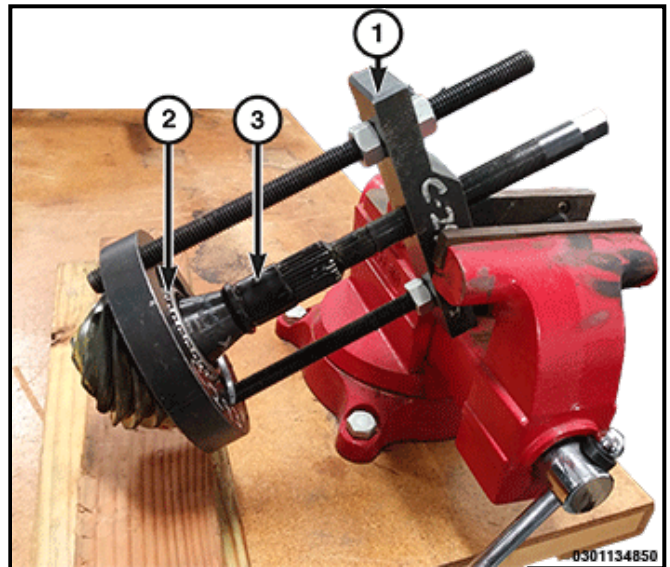


7. Remove the pinion gear from the axle housing with dead blow hammer.

8. Remove the collapsible spacer (2) from the pinion gear shaft (1).

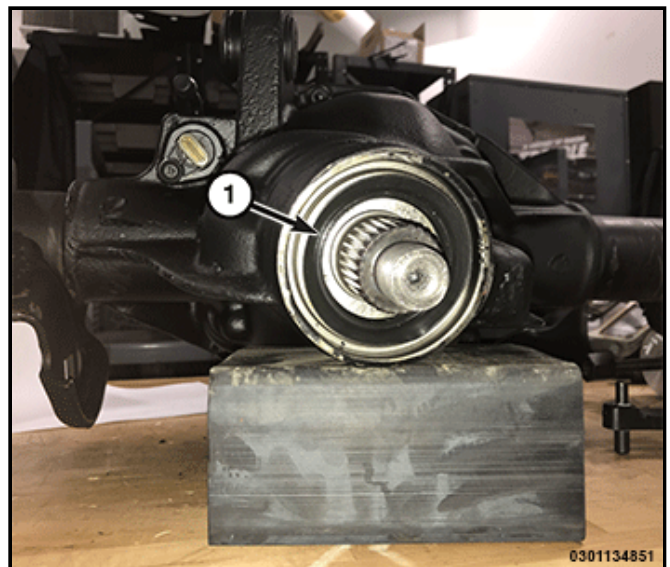


9. Remove the rear pinion bearing (2) from the pinion shaft (3) using the C-293-PA (1) and C-293-47 .



10. Remove the pinion seal (1).

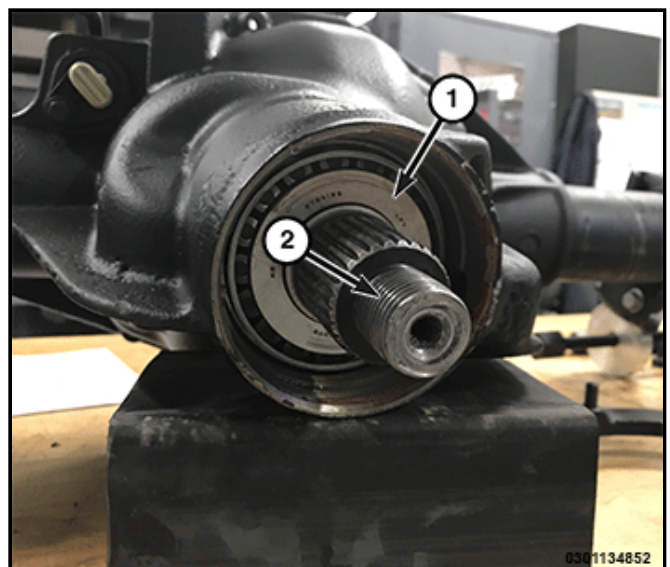
NOTE: Differential housing shown with pinion gear installed, pinion gear will have been removed prior to this step.



11. Remove the front pinion bearing (1).

NOTE: Differential housing shown with pinion gear installed, pinion gear will have been removed prior to this step.

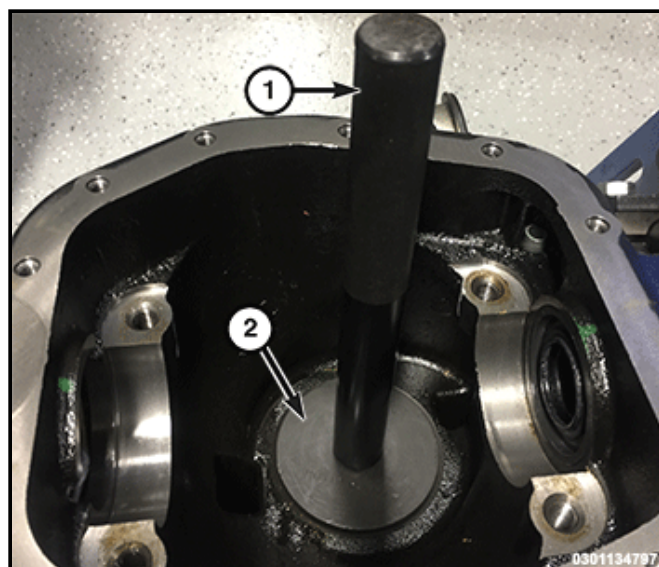
12. Remove the front pinion bearing cup using a hammer and a brass drift.
13. Remove the rear pinion bearing cup using a hammer and a brass drift.
14. Remove the selectable washer from under the rear bearing cup.



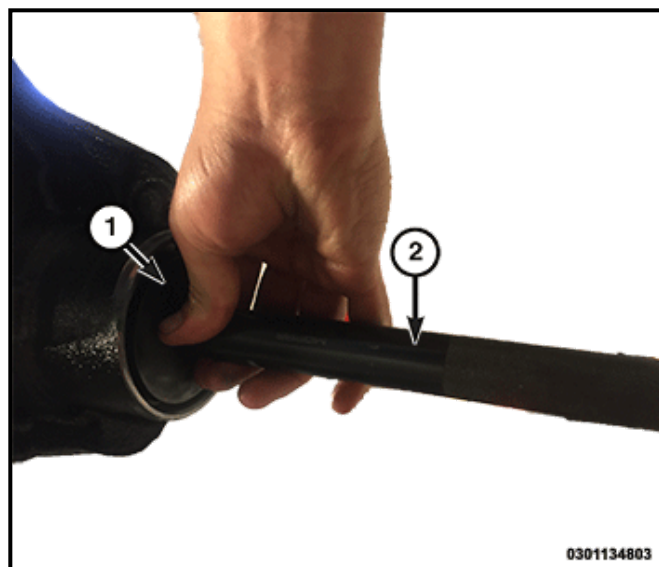
INSTALLATION

1. Install the selectable washer in the differential housing before installing the rear pinion bearing cup.

2. Install the rear pinion bearing cup using the Installer, Bearing Cup D-111 (2) and the C-4171 (1).

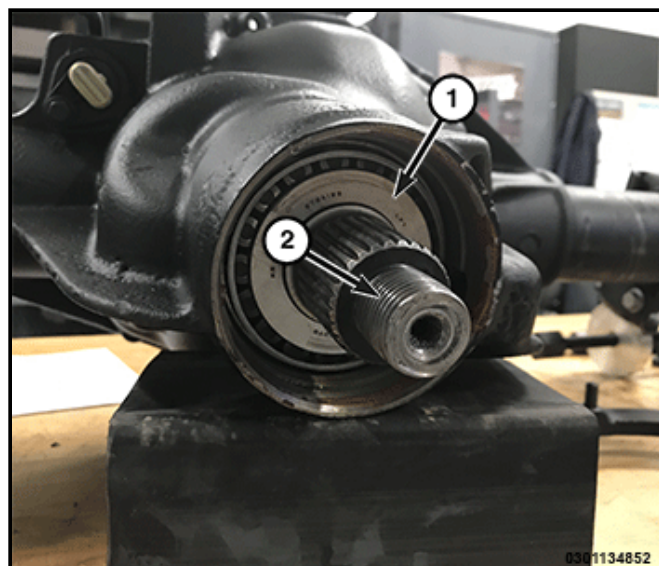


3. Install the front pinion bearing cup using the Installer, Bearing Cup 8960 (1) and the C-4171 (2).

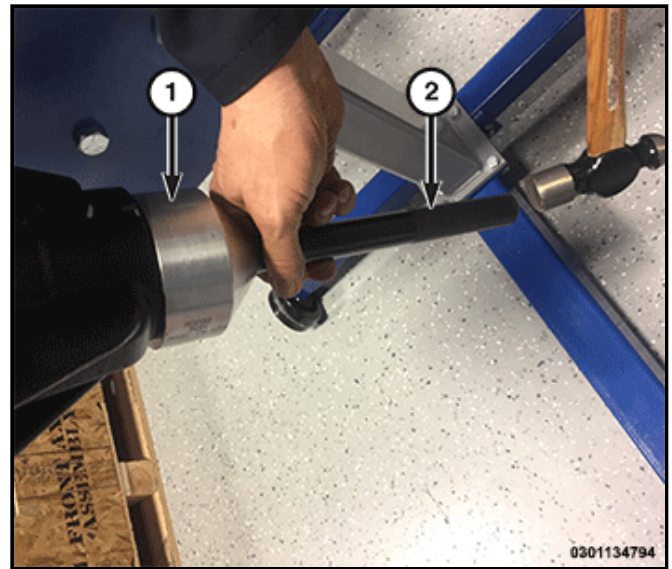


4. Install the pinion front bearing (1).

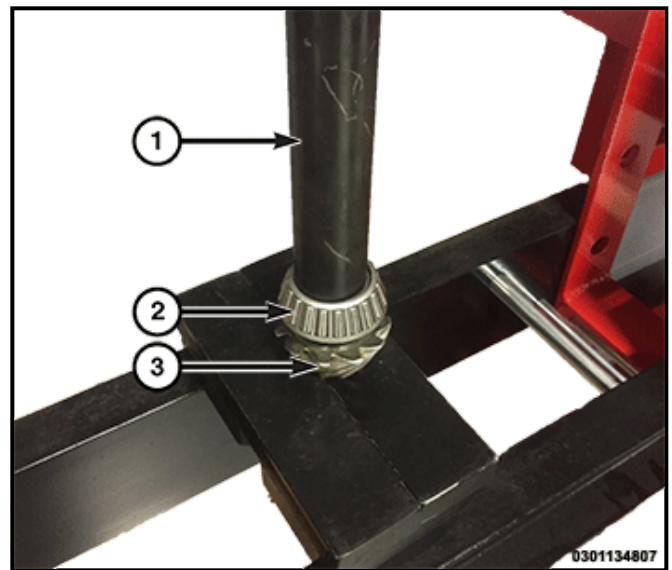
NOTE: Differential housing shown with pinion gear installed, pinion gear will have been removed prior to this step.



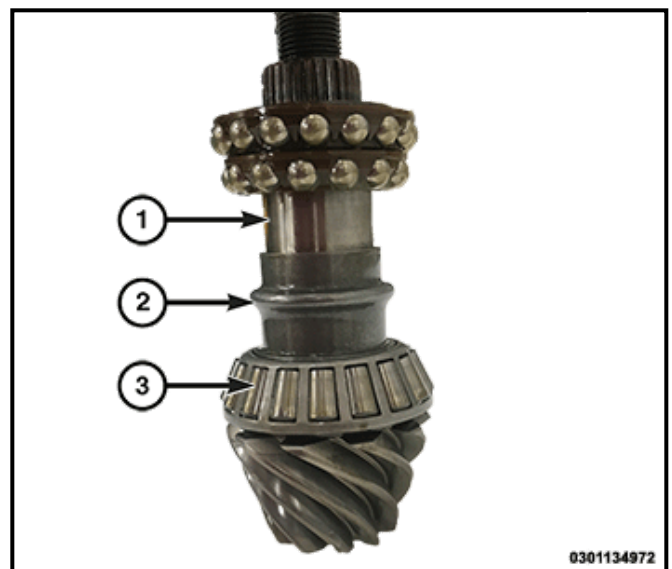
5. Apply a light coating of gear lubricant on the pinion seal lip. Install the pinion seal using the Installer, Seal 9684 (1) and the C-4171 (2).



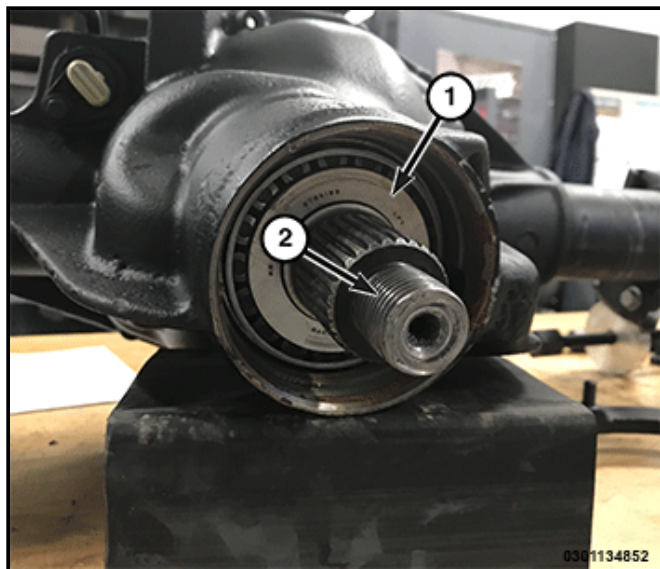
6. Install the rear pinion bearing (2) on the pinion gear (3) using the Installer, Bearing C-3095-A (1) and a press.



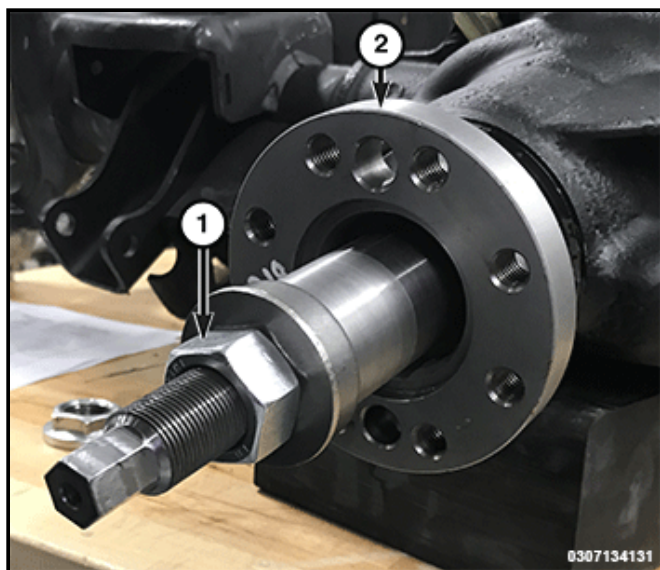
7. Install a **NEW** collapsible spacer (2) on the pinion gear shaft (1).



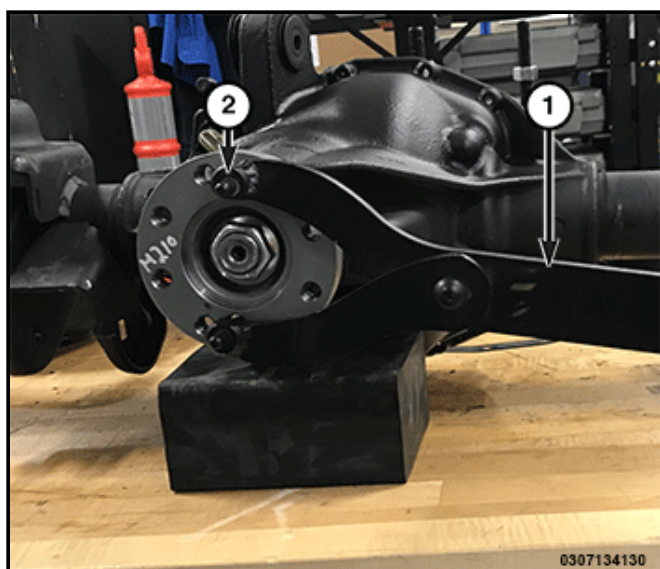
8. Install the pinion gear (2) through the axle housing and front pinion bearing (1).



9. Install the pinion flange (2) using the Installer, Pinion Flange 2054200030 (1).



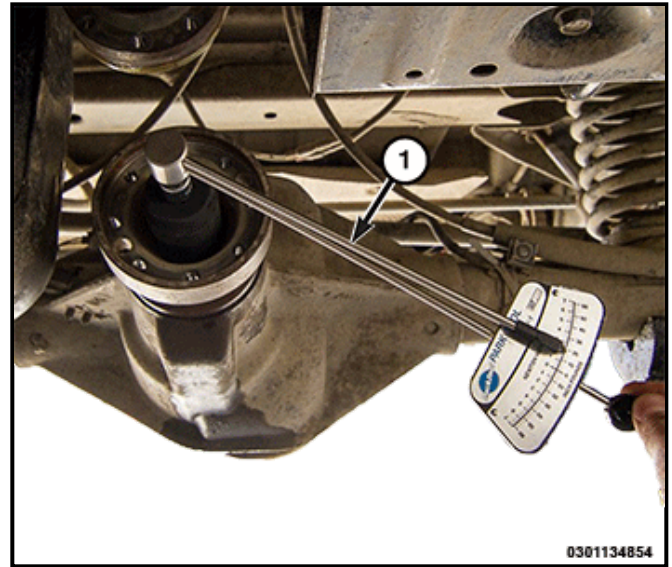
10. Install a **NEW** pinion flange nut on the pinion gear. Hold the pinion flange (2) using the C-3281 (1) and tighten nut to the proper (Torque Specifications) .



11. Measure Pinion Torque To Rotate (PTTR) after each 6.8 N·m (5 ft. lbs.) increment with an inch pound torque

wrench (1). PTTR is:

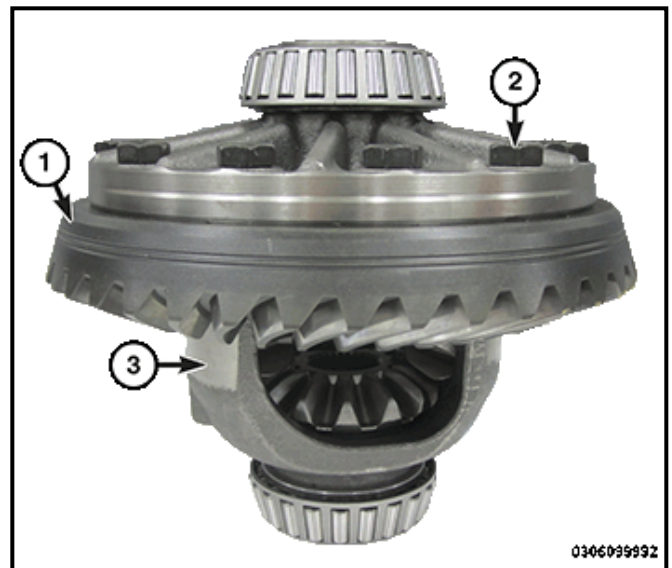
- **New Bearings:** 1.57 - 2.92 N·m (14 - 26 in. lbs.)



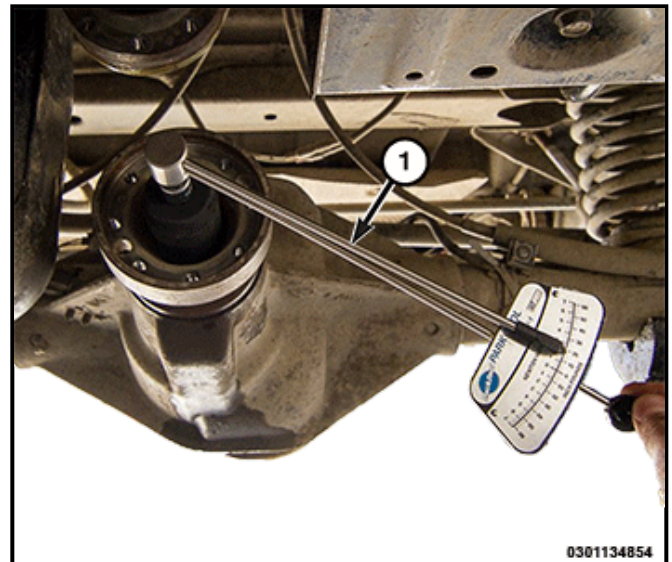
12. Install the ring gear (1) with **NEW** ring gear bolts (2) and alternately tighten to the proper (Torque Specifications) .

CAUTION:

Never reuse the ring gear bolts. Failure to follow these instruction may result in damage.



13. Install the Tru-Lok indicator switch into the differential housing (Refer to 03 - Differential and Driveline/Front Axle/SWITCH, Axle Lock/Removal and Installation) .
14. Install the differential case into the axle housing (Refer to 03 - Differential and Driveline/Front Axle/CASE ASSEMBLY, Differential, TRU-LOK/Removal and Installation) .
15. Measure differential Total Torque To Rotate (TTTR) with an inch pound torque wrench (1) before installing the axle shaft. This will verify differential bearing preload. Total Torque To Rotate is: Pinion Torque To Rotate plus 0.45 - 0.95 N·m (4 - 8 in lbs.).



16. Fill the differential with the proper fluid (Refer to 04 - Vehicle Quick Reference/Capacities and Recommended Fluids/Specifications) .