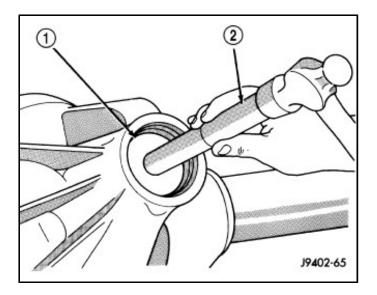
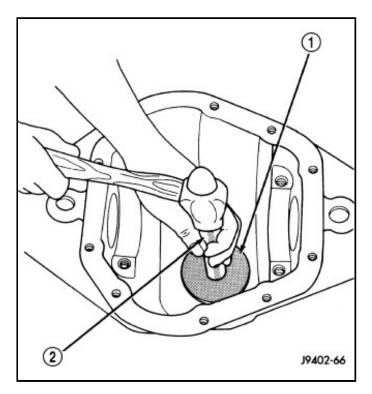
03 - Differential and Driveline/Rear Axle - 11 1/2 AA/GEAR, Ring and Pinion/Installation

INSTALLATION

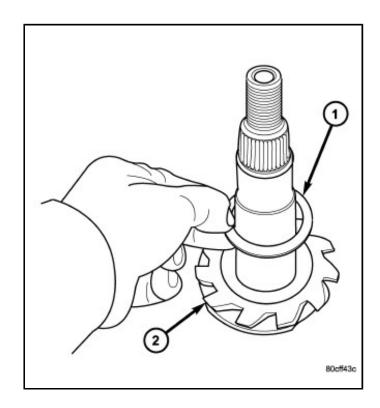
1. Install new front pinion bearing cup with Installer 8960 (1) and Handle C-4171 (2).



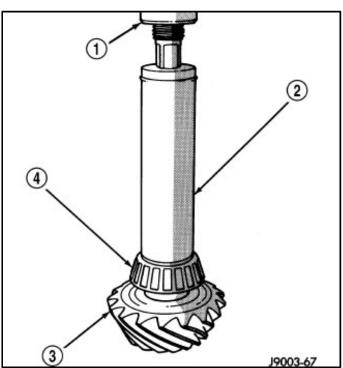
2. If the rear bearing cup O.D. is 4.125", use 8968 and C-4171 to install a new bearing cup. If the rear bearing cup O.D. is 4.375", use 10062A and C-4171 to install a new bearing cup.



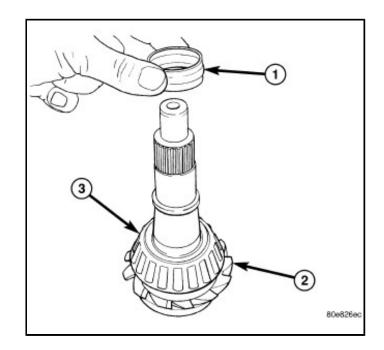
3. Install pinion depth shim (1) on the pinion gear shaft (2).



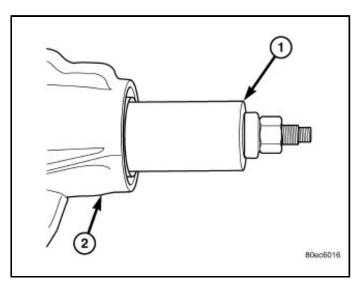
4. Install rear pinion bearing (4) with Installer D-389 (1) and a press (1).



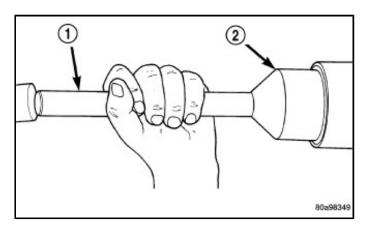
- 5. Install **new** collapsible spacer (1) on the pinion (2).
- 6. Lubricate pinion and bearings.



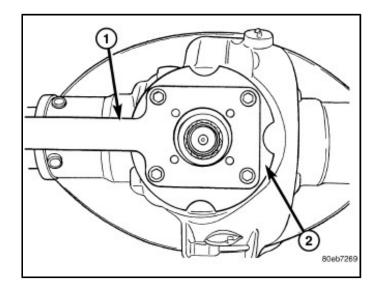
7. Install pinion into the housing (2) and place front pinion bearing onto the pinion shaft. Draw the pinion shaft into the front bearing with Installer 8981 (1).



8. Install **new** pinion seal with Installer 8896 (2) and Handle C-4171 (1).



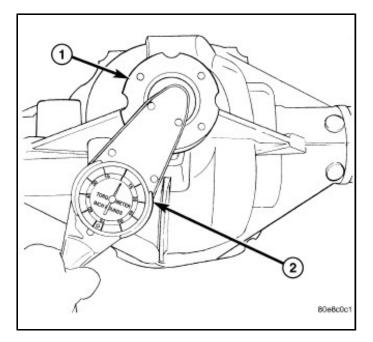
- 9. Apply a light coat of teflon sealant to the pinion flange splines.
- 10. Hold pinion and lightly tap the pinion flange (2) onto the pinion, until a few threads are showing.
- 11. Install pinion flange washer and **new** pinion nut.
- 12. Hold pinion flange (2) with Flange Wrench 8979 (1) and tighten pinion nut until pinion end play is eliminated.



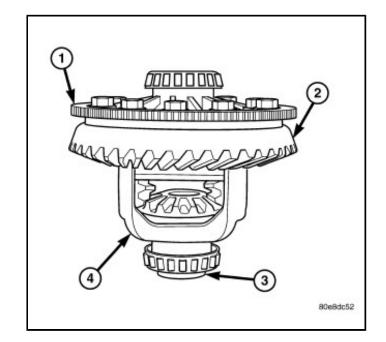
- 13. Rotate pinion several times to seat pinion bearings.
- 14. Measure Pinion Torque To Rotate (1) with an inch pound torque wrench (2). Tighten pinion nut in 6.8 N⋅m (5 ft. lbs.) increments until pinion torque to rotate is achieved.

Pinion Torque To Rotate is:

- **New Pinion Bearings:** 1.7 2.8 N·m (15 25 in. lbs.)
- **Original Pinion Bearings:** 1.1 2.2 N·m (10 20 in. lbs.)
- 15. Rotate pinion several times then verify pinion rotating torque again.



- 16. Position the ring gear (2) on differential case (4) and start two **new** ring gear bolts.
- 17. Install the rest of the **new** ring gear bolts and tighten them alternately to seat the ring gear.
- 18. Torque ring gear bolts to 237 N·m (175 ft. lbs.).



- 19. If exciter ring was removed, position differential assembly on differential Plug 8965 and place exciter ring (1) on the differential case.
- 20. Install the exciter ring on the differential case evenly with a hammer and brass punch (2). Drive the ring down until it is seated against the ring gear (2).
- 21. Install differential in housing.
- 22. Measure Total Torque To Rotate (TTTR) with an inch pound torque wrench.

Total Torque To Rotate is:

• **New Bearings:** 3.4 - 5.6 N·m (30 - 50 in. lbs.)

• **Original Bearings:** 2.8 - 5.1 N·m (25 - 45 in. lbs.)

NOTE: If TTTR is to high, back off

adjusters evenly on both sides slightly and check TTTR again. If TTTR is to low, tighten adjusters evenly on both sides slightly and check TTTR again.

23. Verify ring gear backlash and gear contact pattern.

