

# Pinion Depth Adjustment

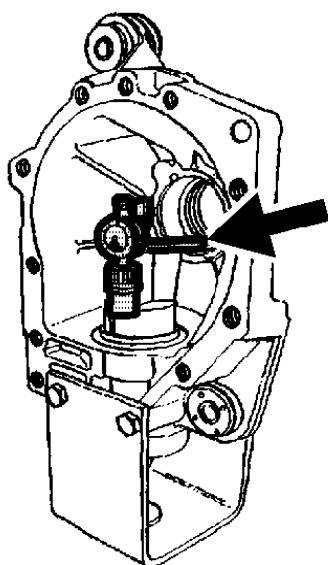
## Tools Required

- [J 33838](#) Pinion Setting Gage
- [J 29763](#) Static Time Gage

## Important

Make sure all of the tools, the pinion bearings, and the pinion bearing cups are clean before proceeding.

1. Lubricate the pinion bearings with axle lubricant. Refer to [Fluid and Lubricant Recommendations](#) in Maintenance and Lubrication.
2. Install the pinion bearings and hold them in place.



3. Install the [J 33838](#) and [J 29763](#) as shown.

## Notice

Use the correct fastener in the correct location. Replacement fasteners must be the correct part number for that application. Fasteners requiring replacement or fasteners requiring the use of thread locking compound or sealant are identified in the service procedure. Do not use paints, lubricants, or corrosion inhibitors on fasteners or fastener joint surfaces unless specified. These coatings affect fastener torque and joint clamping force and may damage the fastener. Use the correct tightening sequence and specifications when installing fasteners in order to avoid damage to parts and systems.

4. While holding the [J 33838](#) stationary, install an inch-pound torque wrench on the nut of the [J 33838](#).

## Tighten

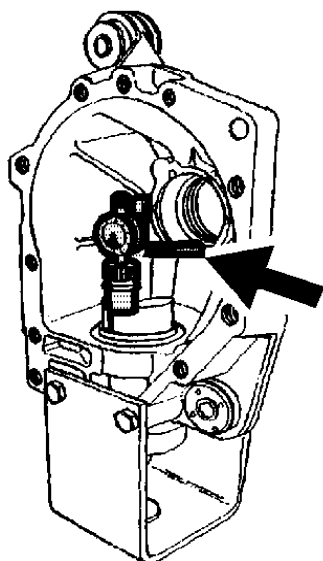
Tighten the nut until a rotating torque of 1.0-1.7 N·m (10-15 lb in) is obtained.

5. Rotate the assembly several times in both directions in order to seat the pinion bearings.
6. Check the rotating torque of the assembly. If the torque is less than 1.0 N·m (10 lb in), tighten the nut.

### **Tighten**

Tighten the nut until a rotating torque of 1.0-1.7 N·m (10-15 lb in) is obtained.

7. Adjust the [J 29763](#) to the differential bearing bore by doing the following:
  - A. Loosen the lock nut on the [J 29763](#) .
  - B. Place the contact pad of the [J 29763](#) on the differential side bearing bore.
  - C. With the contact pad of the [J 29763](#) touching the differential side bearing bore, push down on the [J 29763](#) until the needle of the [J 29763](#) has turned 3/4 of a turn clockwise.
  - D. Tighten the lock nut of the [J 29763](#) .
8. Rotate the [J 33838](#) back and forth until the needle of the [J 29763](#) indicates the lowest point in the differential side bearing bore.
9. At the lowest point of deflection, move the housing of the [J 29763](#) until the needle indicates zero.
10. Move the [J 33838](#) back and forth again to verify the zero setting. Adjust the housing of the [J 29763](#) as necessary to set the needle to zero.



11. After the zero setting is obtained and verified, grasp the [J 33838](#) by the flats and move the [J 33838](#) out of the differential side bearing bore.
12. The value indicated on the [J 29763](#) is the thickness of the shim needed in order to set the depth of the pinion.
13. Select the shim that indicates the proper thickness. Measure the shim with a micrometer in order to verify that the thickness is correct.
14. Remove the pinion depth setting tools.
15. Remove the pinion bearings.
16. Install the pinion shim between the pinion and the inner pinion bearing. Refer to [Differential Carrier Assembly - Assemble](#) .