Hub and Rotor Assembly Replacement

Removal Procedure

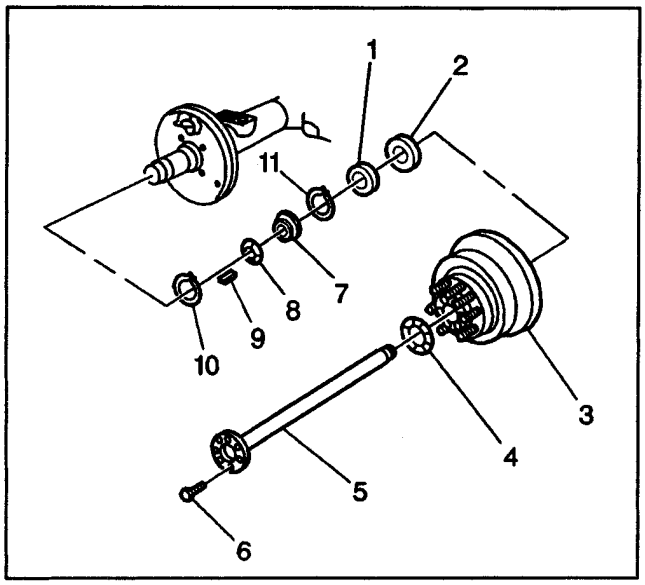
Tools Required

- *J 8092* Wheel Bearing Nut Wrench
- *Wheel Bearing Nut Wrench J 42855* Wheel Bearing Nut Wrench

1. Raise the vehicle until the wheel is free to rotate.
2. Remove the wheel and tire assembly. Refer to *Tire and Wheel Removal and Installation.*
3. Remove the axle shaft. Refer to *Axle Shaft Replacement (All Models).*
4. Remove the outer locknut.
5. Remove the lockwasher (if equipped).
6. Remove the adjusting nut (using the *J 2222-C* for American Axle equipped vehicles, or *Wheel Bearing Nut Wrench J 42855* for Dana Axle equipped vehicles).
7. Remove the washer (if equipped).
8. Remove the hub and rotor.
9. Inspect for any worn or damaged parts. Replace the parts as necessary.

Installation Procedure

1. Install the hub and rotor assembly on the axle tube.
   - Be sure the bearings and the oil seal are positioned properly.
   - Apply a light coat of high melting point EP bearing lubricant to the contact surgaces and the outside of the axle tube.
2. Install the washer (if equipped).
3. Place the tang in the keyway (if equipped).
4. Install the adjusting nut (using the J 2222-C for American Axle equipped vehicles, or J 42855 for Dana Axle equipped vehicles).
5. Adjust the bearing preload. Refer to *Wheel Bearing Adjustment (Disc Brakes).*
6. Install the lockwasher (if equipped).
7. Bend the tang of the washer (if equipped) to the flat of the adjusting nut.
8. Install the outer locknut.
9. Install the axle shaft. Refer to *Axle Shaft Replacement (All Models).*
10. Install the wheel and tire assembly. Refer to *Tire and Wheel Removal and Installation.*
11. Lower the vehicle.



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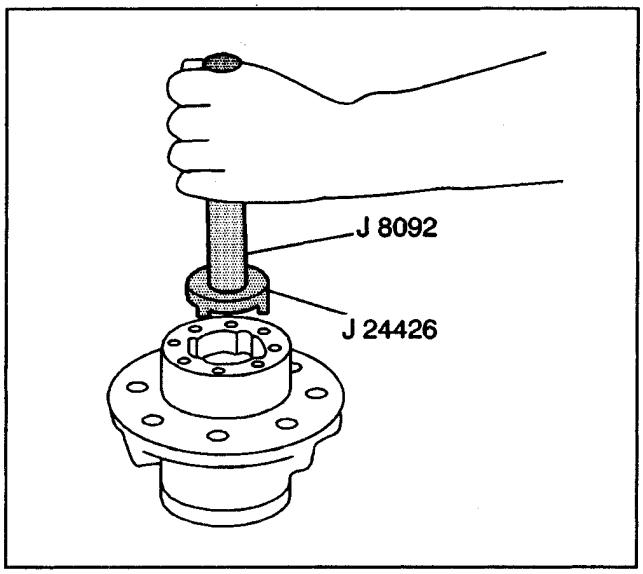

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Bearing Cup Replacement (Drum)

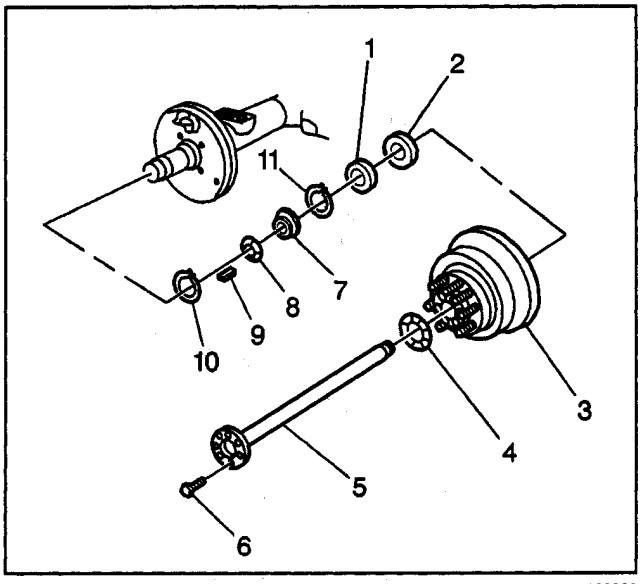
Removal Procedure

Tools Required

- *J 8092* Driver Handle
- *J 8608* Pinion Bearing Cup Installer
- *J 24426* Outer Bearing Cup Installer
- *J 24427* Inner Wheel Bearing Cup Installer
- *J 39114-A* Axle Shaft Seal Installer

1. Raise the vehicle until the wheels are free to rotate.
2. Remove the axle shaft (5). Refer to *Axle Shaft Replacement (All Models).*
3. Remove the hub and drum. Refer to *Hub and Drum Assembly Replacement (All Models).*
4. Remove the oil seal (2).
5. Use a drift to remove the inner bearing and the cup (1).
6. Use snap ring pliers to remove the retaining ring (11).
7. Remove the outer bearing ring using *J 24426* and *J 8092.*

8. Drive the bearing and the cup (14) from the hub (3).
9. Clean the old oil sealing compound from the oil seal bore in the hub.
10. Clean the bearing assemblies in a solvent using a stiff brush in order to remove the old lubricant.
    - Dry the bearings with compressed air.
    - Do not spin the bearings.
11. Clean the lubricant from the axle housing and from the inside of the hub.
12. Remove the gasket material from the hub and the axle shaft.
13. Inspect the bearings for wear, chipped edges or other damage.
14. Check for flat or rough spots on the rollers.
15. Inspect the cups for pits and cracks.
16. Replace parts as necessary.



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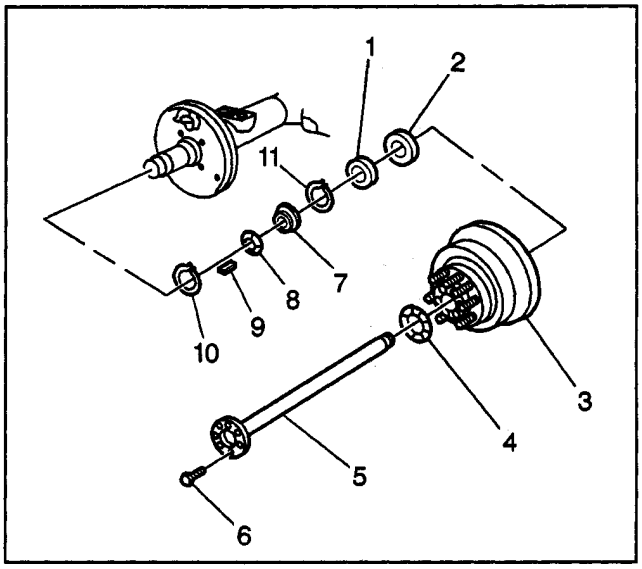
Installation Procedure

1. Install the outer bearing cup (7) into the hub (3).

Important: Install the *J 8608* upside down on the *J 8092* so that the chamfer does not contact the bearing cup.

2. Drive the outer bearing cup (7) into the hub (3) using the *J 8608* and the *J 8092*.
3. Drive the outer bearing cup (7) beyond the retaining ring groove.
4. Install the retaining ring (11) in the groove.
5. Drive the outer bearing cup (7) onto the retaining ring (11) using the *J 24426*.



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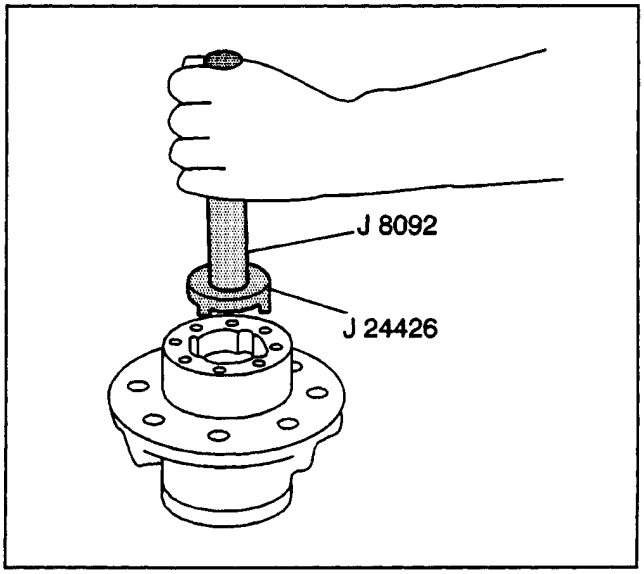
6. Install the inner bearing cup using the *J 24427* and the *J 8092*.



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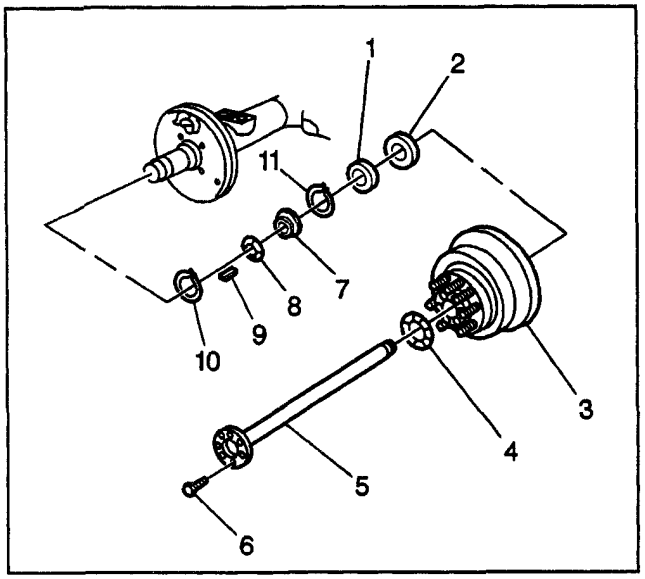

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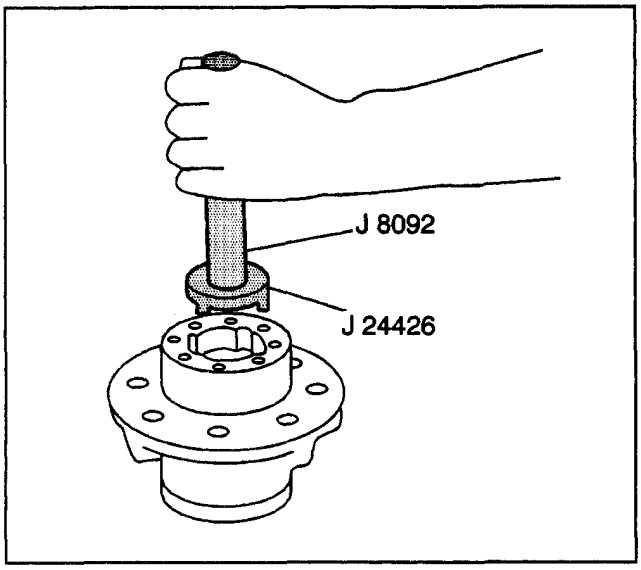
7. Drive the inner bearing cup (1) until it is seated against the hub shoulder.
8. Install the inner bearing.
9. Install a new oil seal (2) using the *J 8092* and the *J 39114-A*.
10. Install the hub and drum assembly (3). Refer to *Hub and Drum Assembly Replacement (All Models)*.
11. Install the wheel bearing adjusting nut (8).
12. Adjust the bearing preload. Refer to *Wheel Bearing Adjustment (Drum Brakes)*.
13. Install the axle shaft (5). Refer to *Axle Shaft Replacement (All Models)*.
14. Lower the vehicle.



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Bearing Cup Replacement (Disc)

Removal Procedure

Tools Required

- *J 8092* Drive Handle
- *J 8608* Outer Pinion Bearing Cup Installer
- *J 24426* Outer Wheel Bearing Cup Installer
- *J 24427* Inner Wheel Cup Bearing Installer
- *J 39114-A* Axle Shaft Seal Installer

1. Raise the vehicle until the wheels are free to rotate.
2. Remove the axle shaft. Refer to *Axle Shaft Replacement (All Models)*.
3. Remove the hub and rotor assembly. Refer to or *Hub and Rotor Assembly Replacement*.
4. Remove the inner bearing and the oil seal.
   - Lay the drum on a flat surface using a shop towel in order to catch the bearing and the seal.
   - Use a drift to remove the bearing cup and the seal.
5. Remove the retaining ring using snap ring pliers.
6. Remove the outer bearing using the *J 8092* with the *J 24426*.
7. Drive the bearing and the cup from the hub.
8. Clean the old sealing compound from the oil seal bore in the hub.
9. Clean the bearing assemblies in a solvent using a stiff brush to remove the old lubricant.
10. Dry the bearings with compressed air. Do not spin the bearings.
11. Clean the lubricant from the axle tube and from inside the hub.
12. Clean the gasket material, if used, from the hub and the axle shaft.

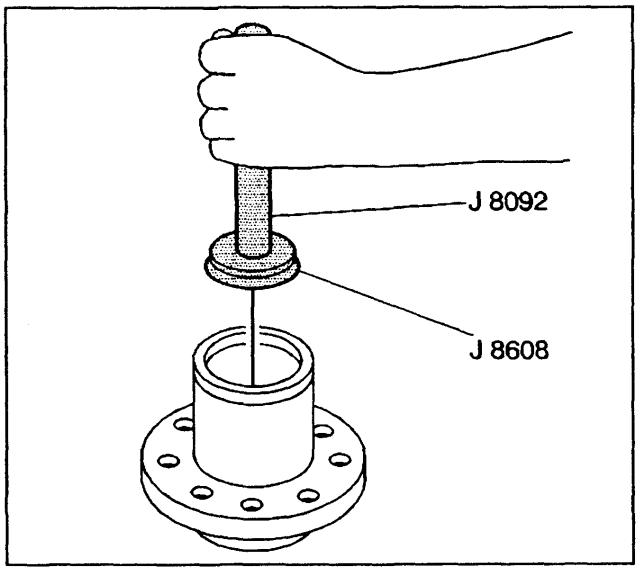
13. Inspect the bearings for any wear, chipped edges or other damage. Refer to *Noise Diagnosis (Wheel Bearing).*
14. Check for any flat or rough spots on the rollers.
15. Check the cups for any pits or cracks.
16. Replace and discard the old oil seal.
17. Pack the inner and the outer bearing with wheel bearing lubricant P/N 1051344. Refer to *Fluid and Lubricant Recommendations.*

Installation Procedure

1. Install the outer bearing cup into the hub.

Important: Install the *J 8608* upside down on the *J 8092* so that the chamfer does not contact the bearing cup.

2. Drive the outer bearing cup into the hub using the *J 8608* and the *J 8092.* Drive the cup beyond the retaining ring groove.
3. Install the retaining ring into the groove.



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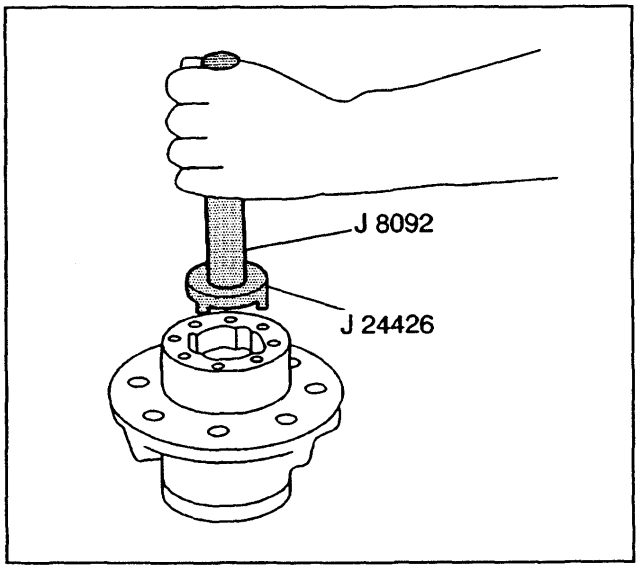
4. Drive the cup back onto the retaining ring using the *J 24426* with the *J 8092.*



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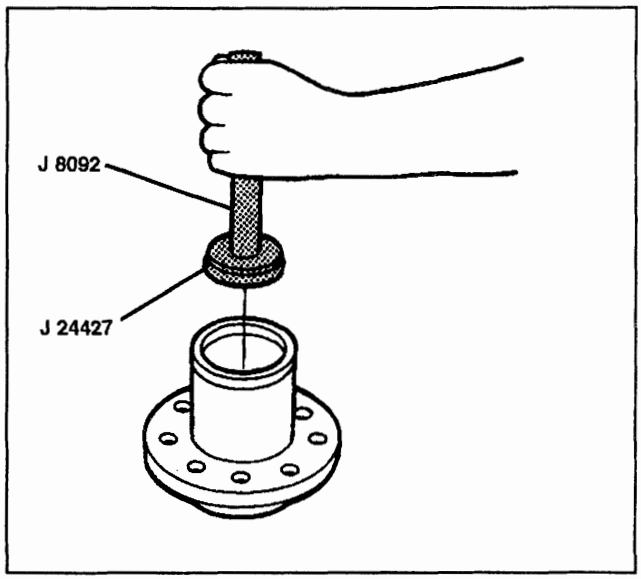

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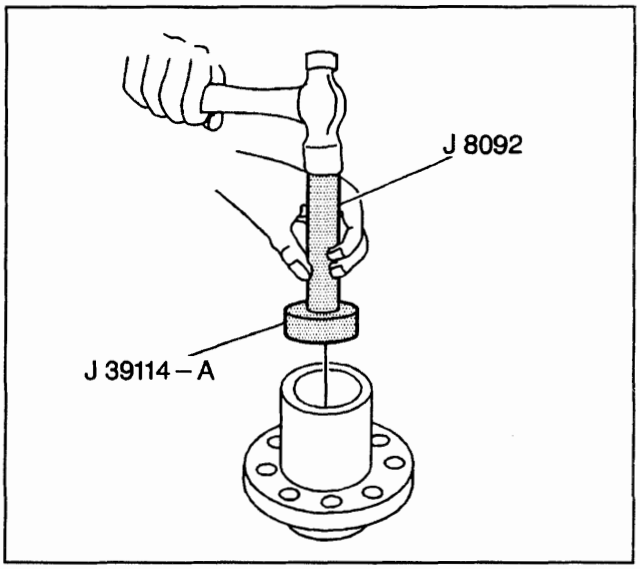
5. Install the inner bearing cup using the *J 24426* and the *J 8092* until the cup is seated against the hub shoulder.
6. Install the inner bearing.
7. Install the outer bearing.



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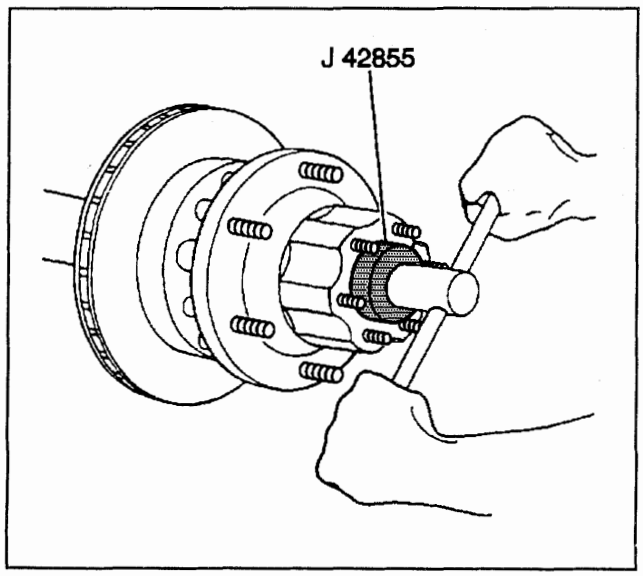
8. Install the new oil seal using the *J 8092* and the *J 39114-A*.
9. Install the hub and drum or the hub and rotor. Refer to *Hub and Rotor Assembly Replacement*.
10. Install the outer bearing.
11. Adjust the bearing preload. Refer to *Wheel Bearing Adjustment (Disc Brakes)*.
12. Install the axle shaft. Refer to *Axle Shaft Replacement (All Models)*.
13. Lower the vehicle.



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Wheel Bearing Adjustment (Disc Brakes)

Diagnostic Procedure

1. Make sure the brakes are fully released and do not drag.
2. Pull or push the tire at the top back and forth in order to check the wheel bearing play.
   - Use a pry bar under the tire as an alternative.
   - If the wheel bearing adjustment is correct, movement of the brake drum in relation to the brake backing plate will be barely noticeable.
   - If the movement of the brake drum in relation to the brake backing plate is excessive, adjust the bearings.

Removal Procedure

Tools Required

- *J 2222-C* Wheel Bearing Nut Wrench
- *Wheel Bearing Nut Wrench J 42855* Wheel Bearing Nut Wrench

1. Raise the vehicle until the wheel is free to spin.
2. Remove the axle shaft. Refer to *Axle Shaft Replacement (All Models).*
3. Remove the outer locknut.
4. Disengage the lock washer from the adjusting nut.
5. Remove the lock washer.
6. Adjust the adjusting nut.
   6.1. Make sure the bearing cones are seated and in contact with the spindle shoulder.

Notice: Refer to *Fastener Notice* in Cautions and Notices.

   6.2. Tighten the adjusting nut (using *J 2222-C* for American Axle equipped vehicles, or *Wheel Bearing Nut Wrench J 42855* for Dana Axle equipped vehicles) while rotating the hub assembly.

   Tighten

   Tighten the adjusting nut to 68 N·m (50 lb ft).

   6.3. Back off the adjusting nut. Retighten the adjusting nut while rotating the hub.

   Tighten

   Tighten the adjusting nut to 47 N·m (35 lb ft).

   6.4. Back off the adjusting nut 135–150 degrees.

Installation Procedure

1. Install the lock washer.
2. Bend one tang of the lock washer a minimum of 30 degrees over a flat of the adjusting nut.

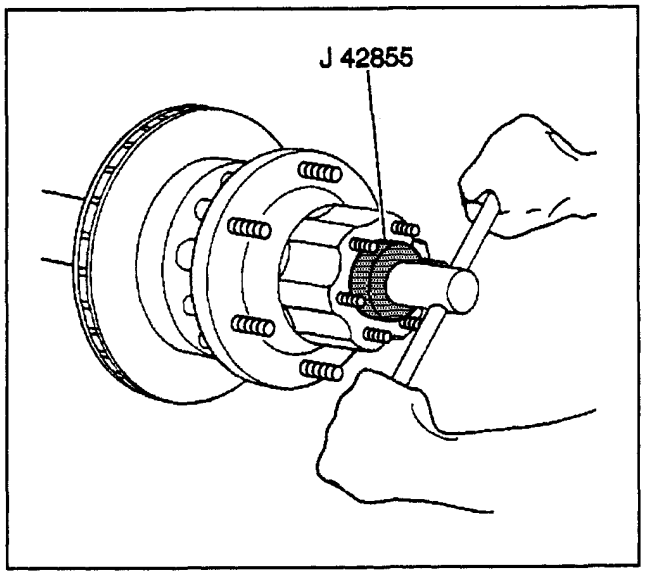
Notice: Refer to *Fastener Notice* in Cautions and Notices.

3. Install the outer locknut

   Tighten

   Tighten the outer locknut to 88 N·m (65 lb ft).

4. Set the bearing adjustment to 0.025–0.25 mm (0.001–0.01 in).
5. Bend one tang of the lock washer a minimum of 60 degrees over a flat of the outer locknut.
6. Apply the wheel bearing grease into the bearings.
7. Install the axle shaft. Refer to *Axle Shaft Replacement (All Models).*
8. Lower the vehicle.



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