HALF SHAFT - REAR

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DESCRIPTION

The inner joints of both half shaft assemblies are cross-groove joints. The outer joints of both assemblies are Rzeppa Joints. The cross-groove joints are true constant velocity (CV) joint assemblies, which allow for the changes in half shaft length through the jounce and rebound travel of the rear suspension.

The inner cross-groove joint of both half shafts is splined into the rear differential assembly and retained by a snap ring. The outer CV joint has a stub shaft that is splined into the wheel hub and retained by a steel hub nut.

DIAGNOSIS AND TESTING - HALF SHAFT

VEHICLE INSPECTION

1. Check for grease in the vicinity of the inboard cross-groove joint and outboard CV joint; this is a sign of inner or outer joint seal boot or seal boot clamp damage.

NOISE AND/OR VIBRATION IN TURNS

A clicking noise and/or a vibration in turns could be caused by one of the following conditions:

- Damaged outer CV or inner cross-groove joint seal boot or seal boot clamps. This will result in the loss and/or contamination of the joint grease, resulting in inadequate lubrication of the joint.
- Noise may also be caused by another component of the vehicle coming in contact with the half shafts.

CLUNKING NOISE DURING ACCELERATION

This noise may be a result of one of the following conditions:

- A torn seal boot on the inner or outer joint of the half shaft assembly.
- A loose or missing clamp on the inner or outer joint of the half shaft assembly.
- A damaged or worn half shaft CV joint.

SHUDDER OR VIBRATION DURING ACCELERATION

This problem could be a result of:

- A worn or damaged half shaft inner cross-groove joint.
- Improper wheel alignment. (Refer to 2 - SUSPENSION/WHEEL ALIGNMENT - STANDARD PROCEDURE)

VIBRATION AT HIGHWAY SPEEDS

This problem could be a result of:

- Foreign material (mud, etc.) packed on the backside of the wheel(s).
- Out of balance tires or wheels. (Refer to 22 - TIRES/WHEELS - STANDARD PROCEDURE)
- Improper tire and/or wheel runout. (Refer to 22 - TIRES/WHEELS - DIAGNOSIS AND TESTING)

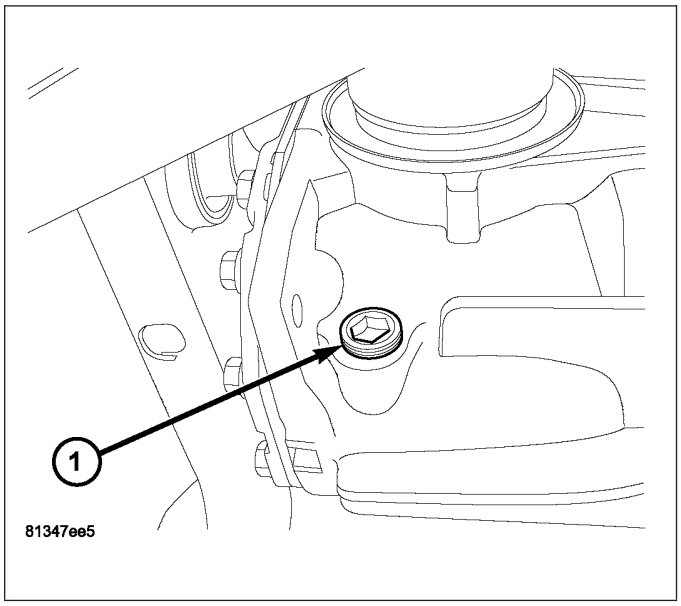
REMOVAL

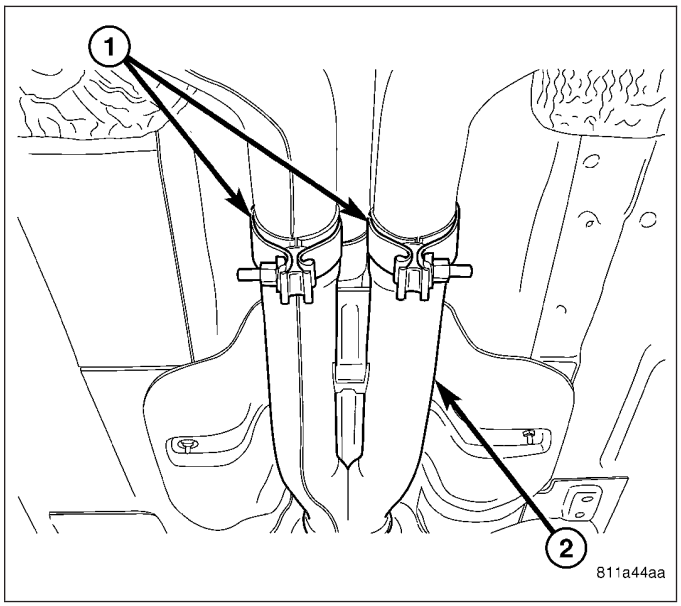
Note: This procedure requires the compression of the rear suspension to ride height. A drive-on hoist should be used. If a drive-on hoist is not used, screw-style under-hoist jack stands are required to compress the rear suspension, facilitating rear halfshaft removal.

Note: Halfshaft inner and outer boots are not serviceable separately. Boot replacement requires entire shaft assembly replacement.

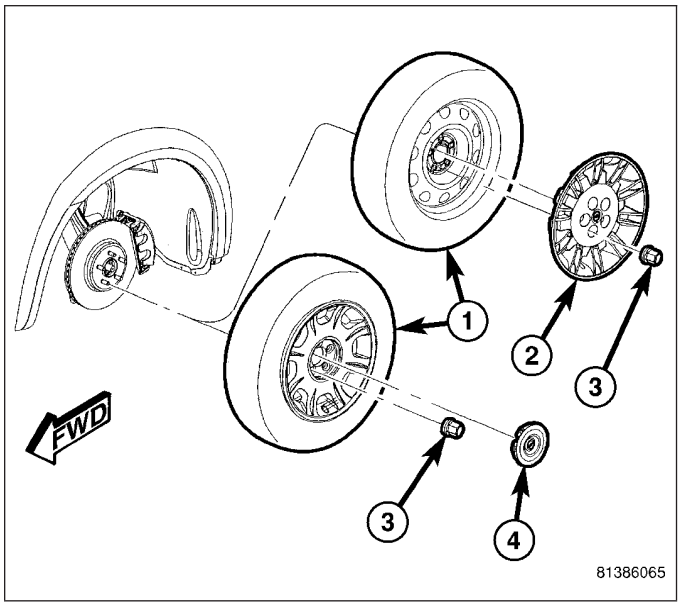
CAUTION: Never grasp halfshaft assembly by the inner or outer boots. Doing so may cause the boot to pucker or crease, reducing the service life of the boot and joint. Avoid over angulating or stroking the C/V joints when handling the halfshaft.

1. With vehicle in neutral, position and raise vehicle on hoist.
2. Using 14mm hex, remove axle drain plug (1) and drain rear axle fluid into container suitable for fluid reuse.
3. Install drain plug (1) and torque to:
   - 198 Axle: 60 N·m (44 ft. lbs.)
   - 210 Axle: 50 N·m (37 ft. lbs.)
4. Remove rear exhaust system (2) on V8-equipped models.

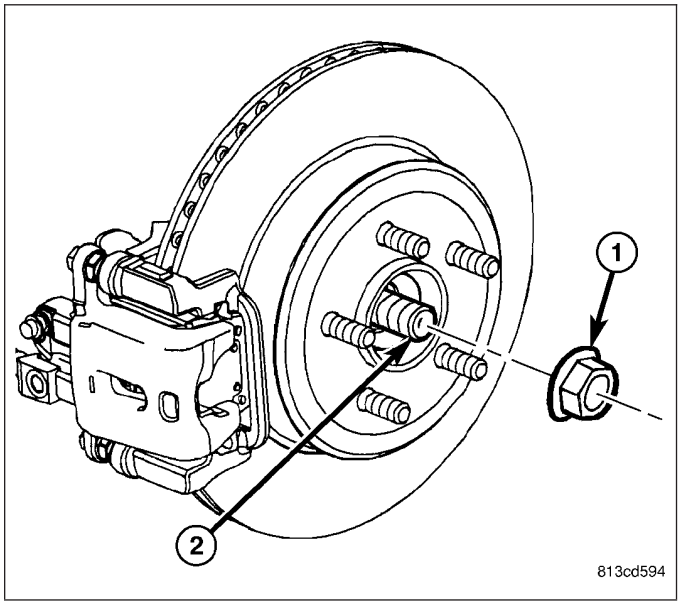




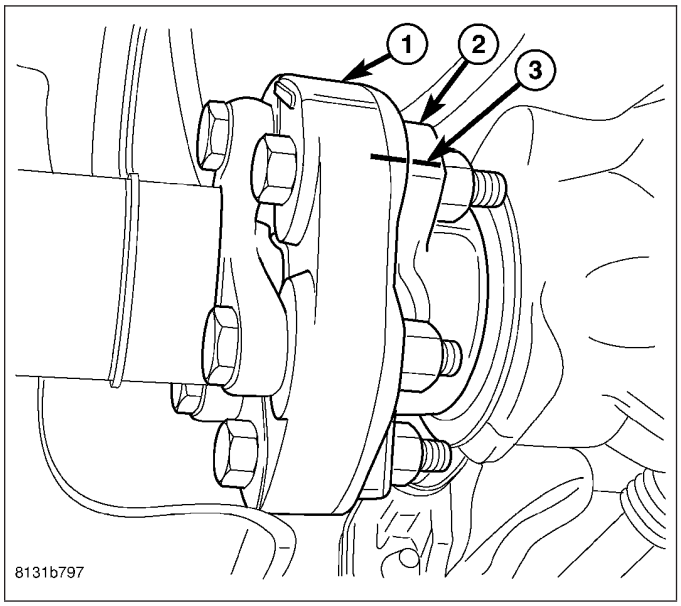
5. Remove wheel/tire assembly (1) from sides that shaft is to be removed.



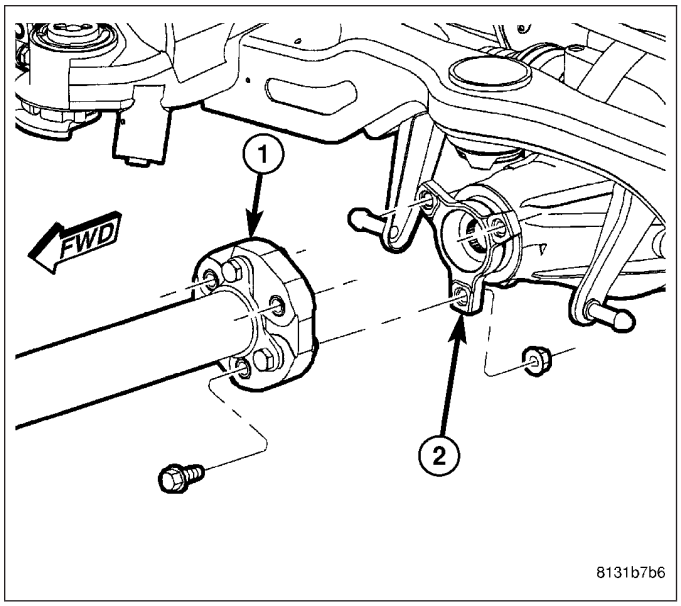
6. Remove wheel hub nut. (1)



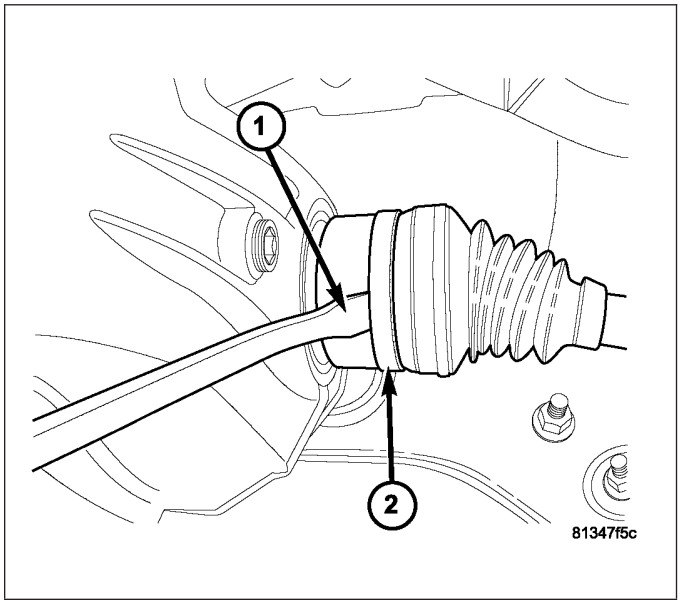
7. Apply alignment index marks (3) to the propeller shaft rubber coupler (1) and axle flange (2).



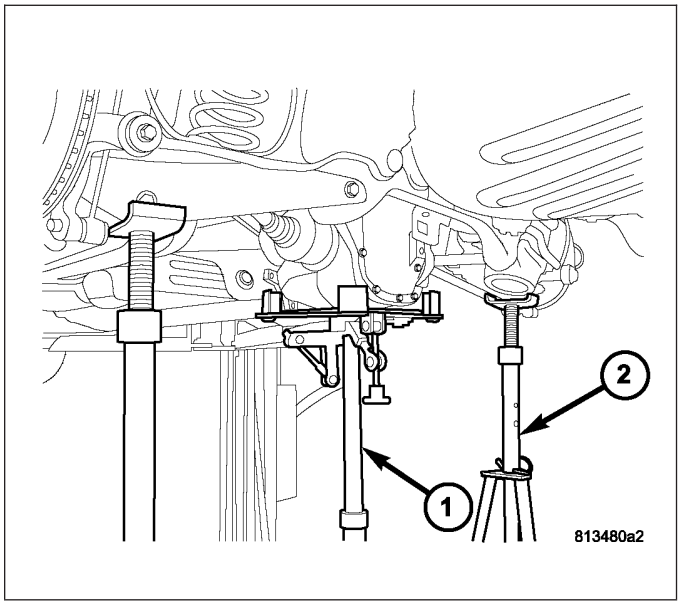
8. Remove three (3) propeller shaft coupler-to-axle flange bolt/nuts.



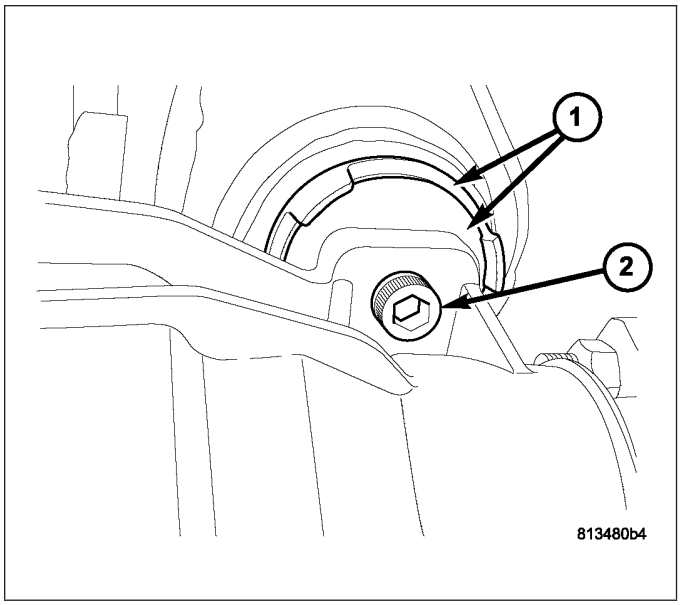
9. Using suitable screwdriver (1), partially disengage halfshaft(s) (2) from axle assembly.



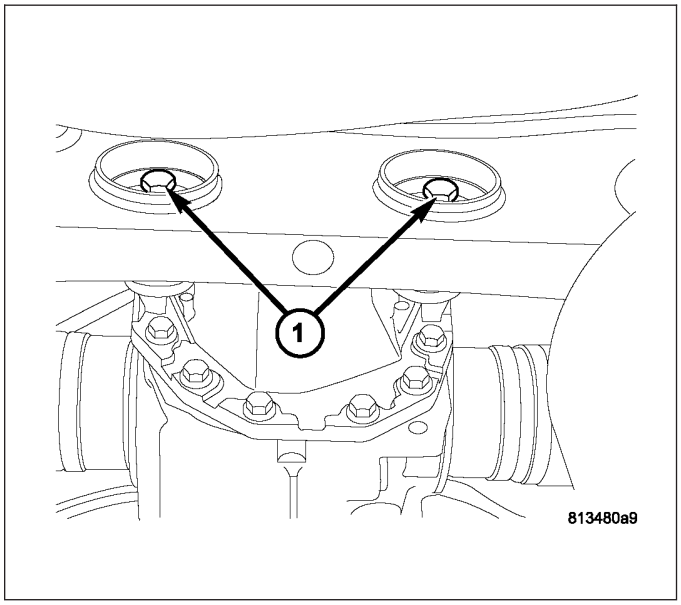
10. If a drive-on hoist is used, position transmission jack(1) to rear axle assembly. If a drive-on hoist is not used, compress rear suspension using screw-style under-hoist jack stands (2), then position transmission jack to rear axle assembly.



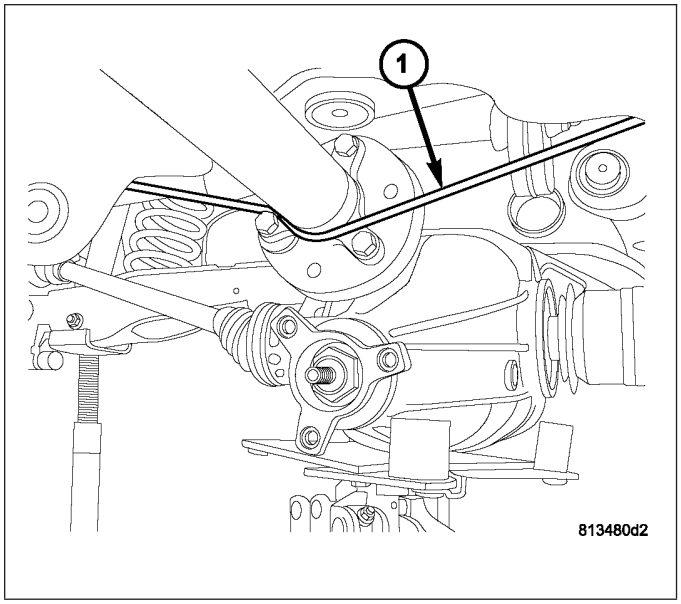
11. Remove rear axle forward mount isolator (1) bolt/nut (2).



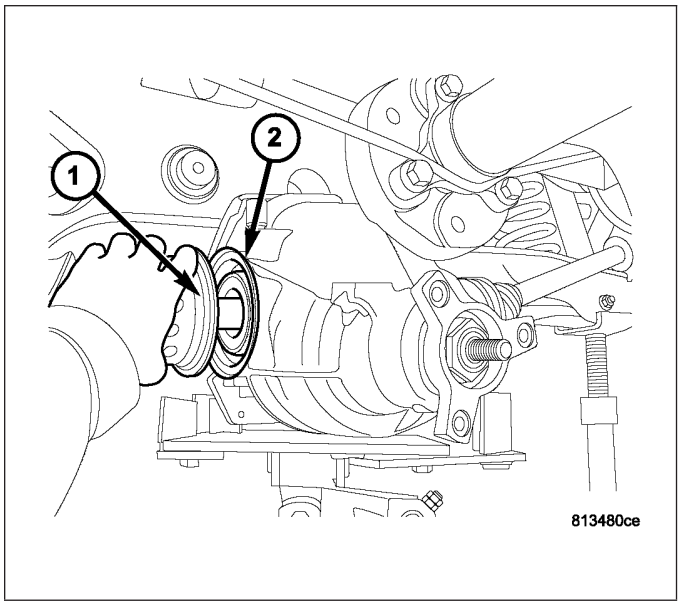
12. Remove two rear axle-to-crossmember bolts (1).



13. Carefully lower rear axle. While lowering axle, separate propeller shaft from axle and support with suitable rope or wire (1).



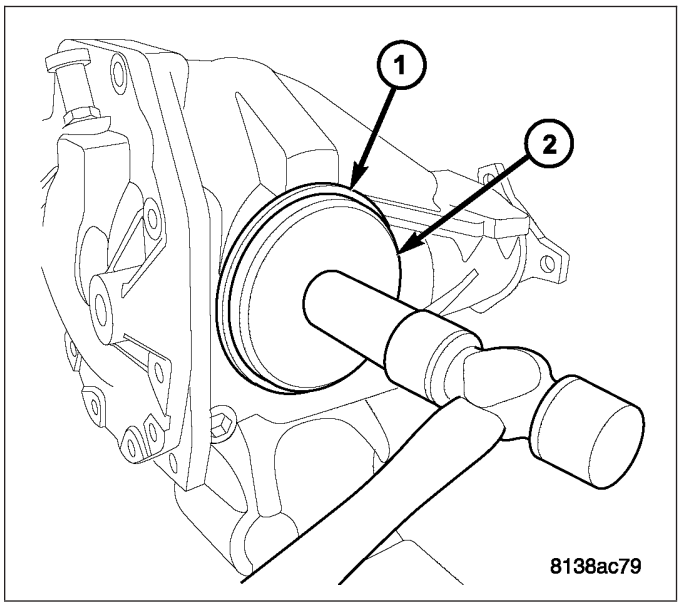
14. Lower axle just enough to remove halfshafts one at a time. Shift axle assembly in one direction, compressing one halfshaft while removing the other (1). Use caution to protect axle seal and journal.
15. Remove halfshaft from hub. Repeat on other side if necessary.



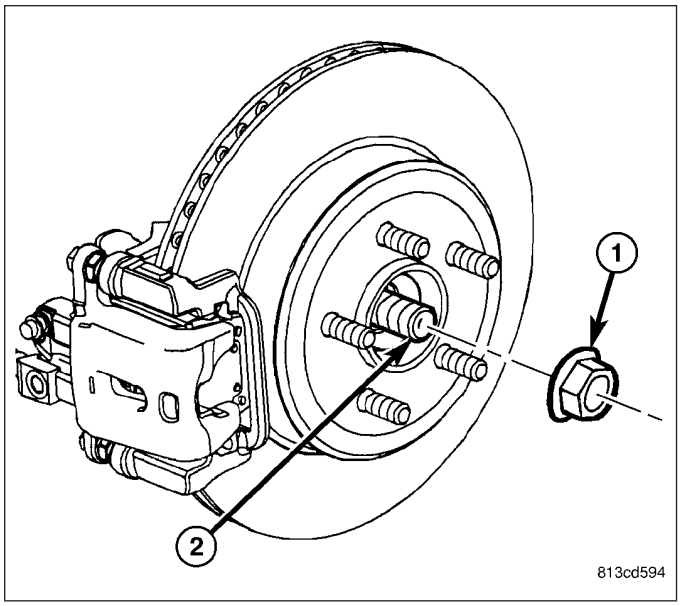
16. Remove axle seals using suitable screwdriver.

INSTALLATION

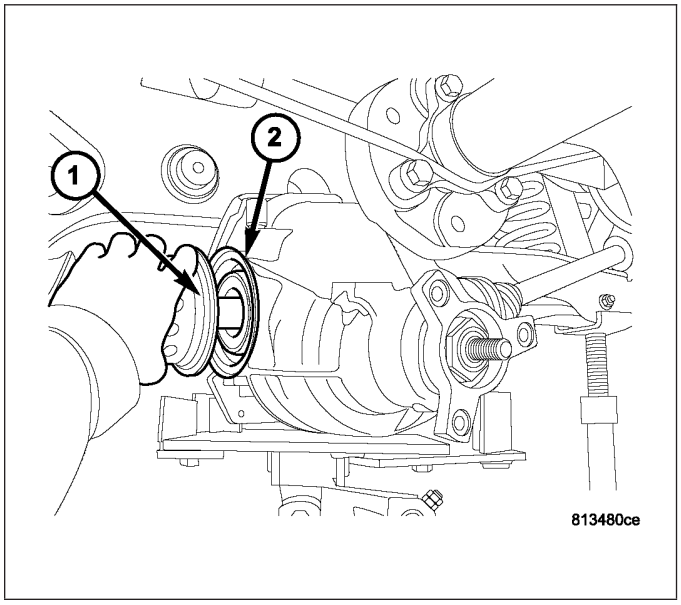
1. Install new axle seal(s) (1) using Tool 9223 (2).



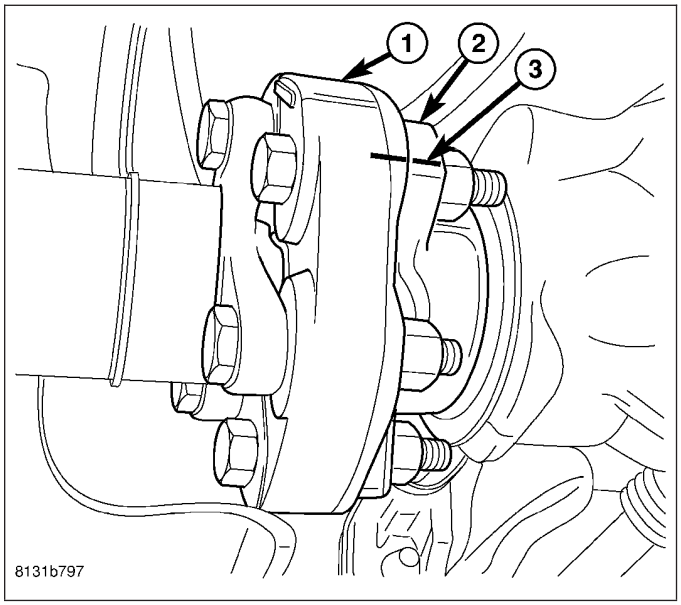
2. Install halfshaft (2) to wheel hub/knuckle assembly and start hub nut (1) by hand.



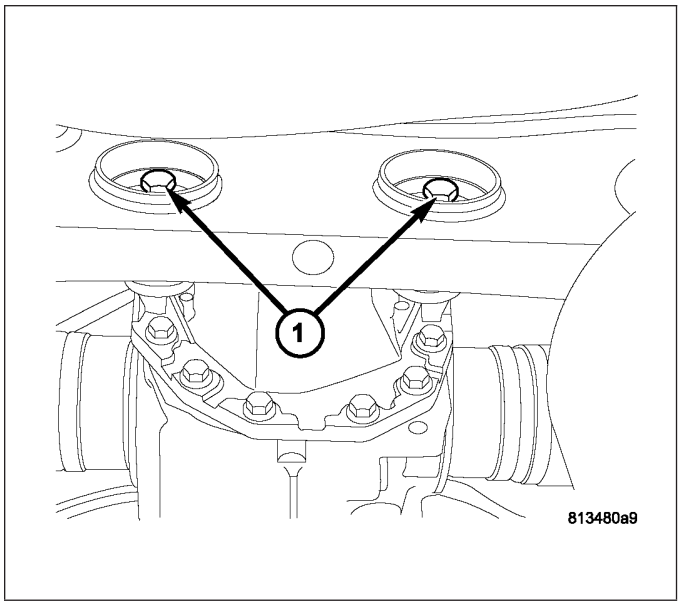
3. Using new circlip(s), install halfshaft (1) to rear axle assembly. Use care not to damage axle seals(2). Verify proper installation by pulling outward on joint by hand.



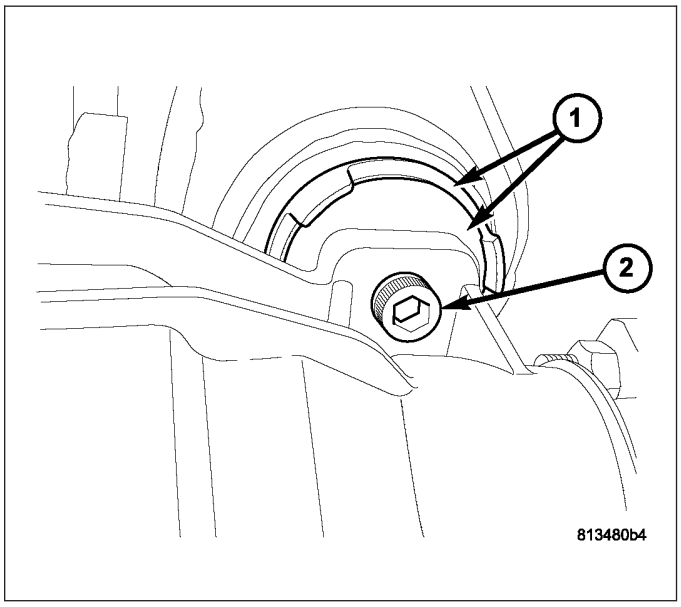
4. Raise rear axle assembly into position. Align propeller shaft index marks (3) and start propeller shaft coupler-to-axle bolt/nuts by hand.



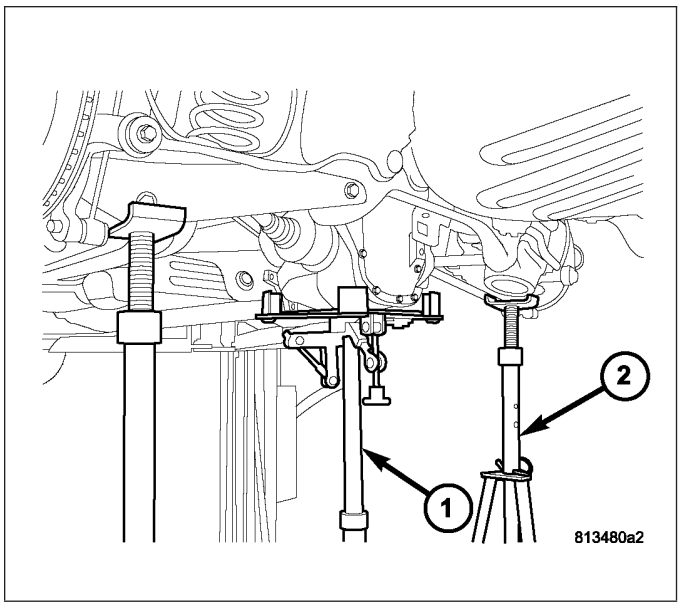
5. Install two rear axle-to-crossmember bolts (1) and torque to 220 N·m (162 ft. lbs.).



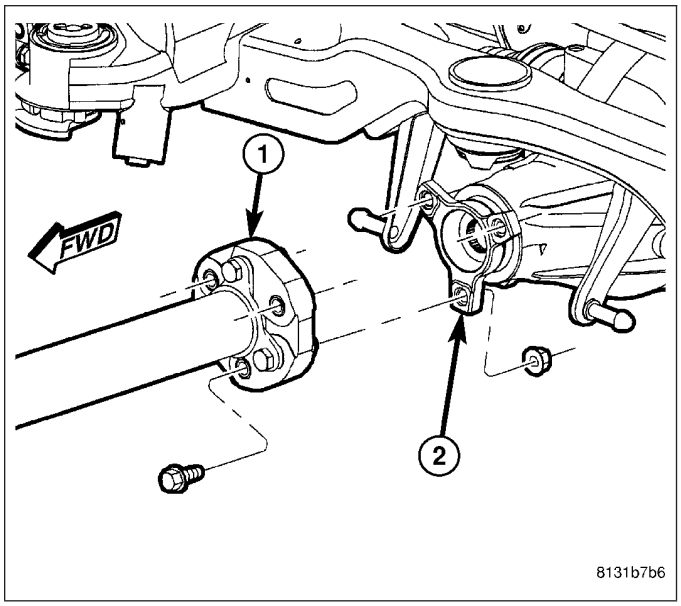
6. Install rear axle front mount isolator (1) as shown and torque bolt/nut to 65 N·m (48 ft. lbs.).



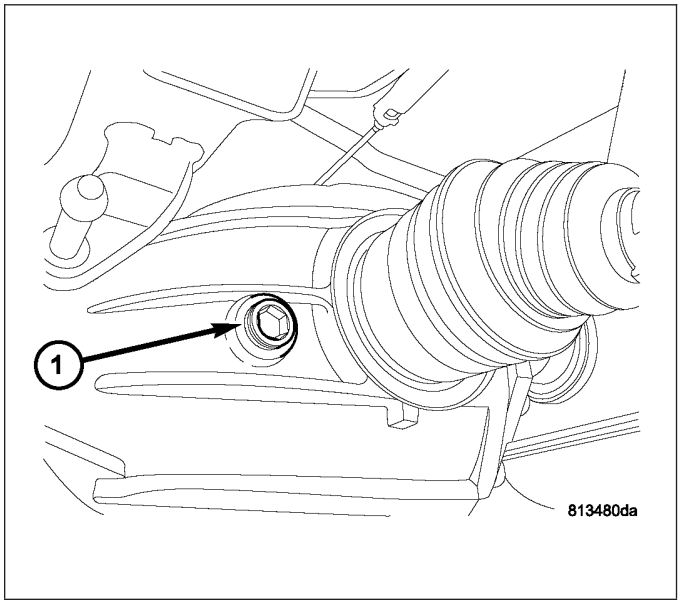
7. Again verify halfshaft inner joints are fully engaged to axle assembly.
8. Remove transmission jack (1).
9. If used, remove screw-type under-hoist jack stands (2).



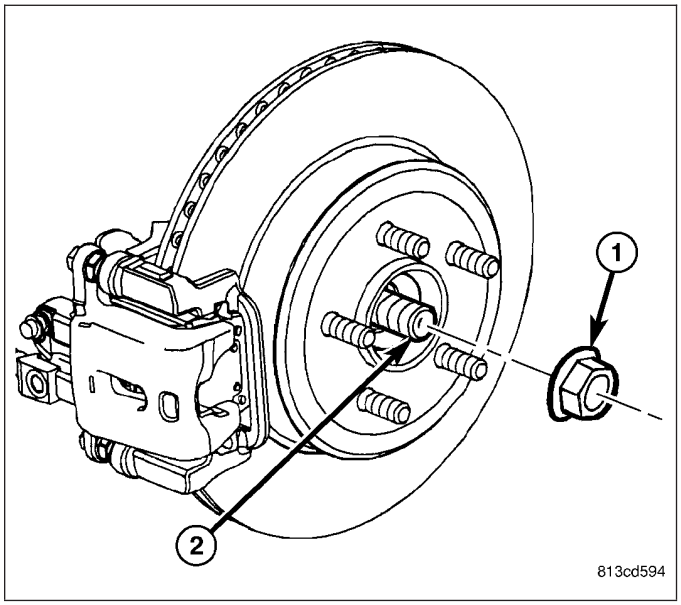
10. Torque propeller shaft coupler-to-axle flange bolt/nuts to 58 N·m (43 ft. lbs.).



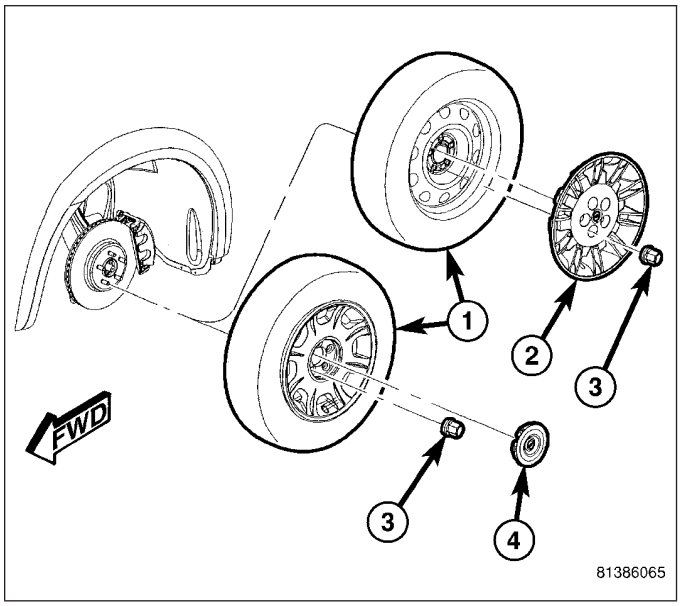
11. Using a 14mm hex, remove rear axle fill plug (1). Fill axle with 1.4L (1.5 qts.) of Mopar® 75W-140 Synthetic Gear & Axle Lubricant. Install fill plug and torque to 60 N·m (44 ft. lbs.).



12. Lower vehicle. Torque halfshaft hub nut (1) to 213 N·m (157 ft. lbs.). Install wheel center cap.



13. Install wheel/tire assembly (1) and torque lug nuts to 150 N·m (110 ft. lbs.).

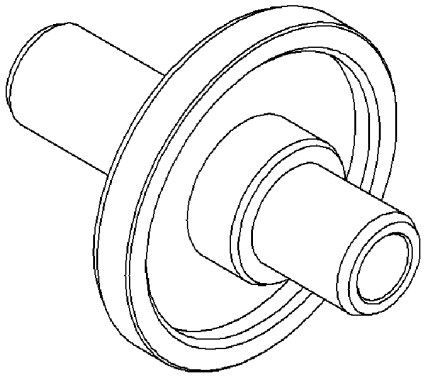


SPECIFICATIONS - TORQUE

TORQUE SPECIFICATIONS

DESCRIPTION	N·m	Ft. Lbs.	In. Lbs.
Bolt, Axle Housing-to-Crossmember	220	162	—
Bolt/Nut, Axle Front Isolator	65	48	—
Nut, Axle Hub	213	157	—

SPECIAL TOOLS



Installer, 9223