



NUMBER: 03-002-06

GROUP: Axle and Propshafts

DATE: August 31, 2006

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SUBJECT:

Front Hub/Half Shaft Click/Pop Sound

OVERVIEW:

This bulletin involves installing a rubber gasket to the face of the half shaft that mounts to the hub bearing.

MODELS:

2004 - ****2006**** (CS) Pacifica

NOTE: **Every time the front half shafts are serviced, the rubber gasket must be replaced.******

SYMPTOM/CONDITION:

Vehicle may exhibit a popping/clicking/snapping/ticking sound from the front hub/half shaft area during acceleration after Drive to Reverse or Reverse to Driving shifts. The sound may also be present while turning and accelerating from a stop.

DIAGNOSIS:

In order to determine if the popping/clicking/snapping/ticking sound is coming from the front hub/half shaft interface, perform the following procedure:

1. Remove the cotter pin, nut lock, and wave washer from the end of both front half shafts.
2. With the vehicle's brakes applied to keep the hub from turning, loosen both half shaft nuts to zero torque.
3. With the service brake applied, shift the vehicle from Drive to Reverse and Reverse to Drive. Once the transmission is engaged in gear, raise the engine speed to 1800 rpm.
4. If the sound is not present, perform the Repair Procedure. If the sound is still present, ****DO NOT replace the half shafts or hub bearings,**** the source of the sound is elsewhere. Further diagnosis is required.



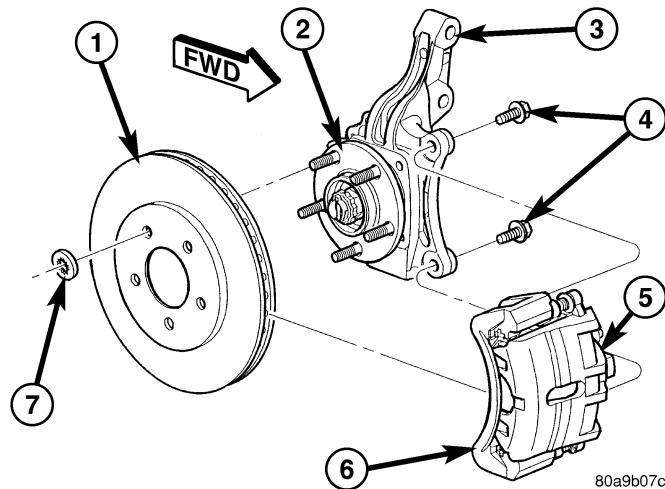
Stick with the Specialists™

PARTS REQUIRED:

Qty.	Part No.	Description
2	**04809863AB**	Gasket, Axle

REPAIR PROCEDURE:

1. Raise the vehicle.
2. Remove the half shaft nut.
3. Remove the wheel and tire assembly from the vehicle. **Refer to the detailed service information available in TechCONNECT under: Service Info > 22-Tires/Wheels > Removal.**
4. Remove the two front disc brake caliper adapter mounting bolts (Fig. 1).

**Fig. 1 Front Brake Mounting**

- 1 - BRAKE ROTOR
- 2 - HUB AND BEARING
- 3 - STEERING KNUCKLE
- 4 - ADAPTER MOUNTING BOLTS
- 5 - BRAKE CALIPER
- 6 - ADAPTER
- 7 - CLIP

5. Remove the disc brake caliper assembly from the steering knuckle. The caliper assembly is removed by first rotating the top of the caliper assembly away from the steering knuckle and then removing the bottom of the assembly out from under the machined abutment on the steering knuckle.
6. Support the disc brake caliper assembly by using a wire hook and suspending it from the strut assembly (Fig. 2).

NOTE: Do not allow the brake caliper assembly to hang by the brake flex hose.

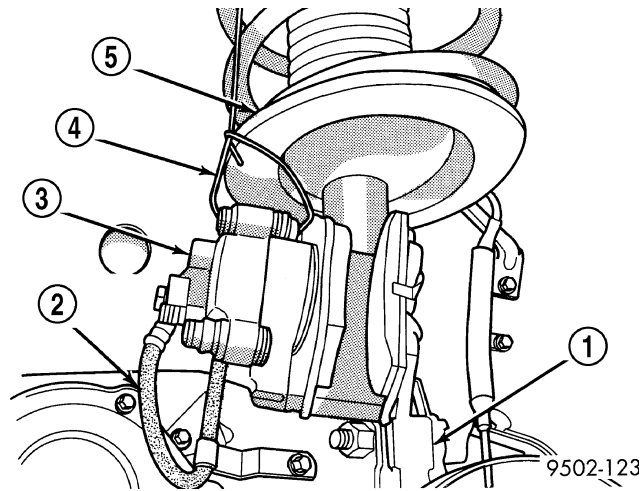


Fig. 2 Properly Supported Disc Brake Caliper - Typical

- 1 - STEERING KNUCKLE
- 2 - BRAKE FLEX HOSE
- 3 - CALIPER ASSEMBLY
- 4 - WIRE HANGER
- 5 - STRUT ASSEMBLY

7. Remove the brake rotor from the hub and bearing assembly.

CAUTION: The steering knuckle to strut assembly attaching bolts are serrated and must not be turned during removal. Remove the nuts while holding bolts stationary in the steering knuckle.

- 8. If the vehicle is equipped with eccentric bolts attaching the steering knuckle to the strut assembly, proceed to next step. If not, proceed to [Step #10](#).
- 9. Mark the head of the eccentric bolt and the strut, so that the bolt can be installed in the same position later.
- 10. Remove the steering knuckle-to-strut attachment bolts from the steering knuckle ([Fig. 3](#)).

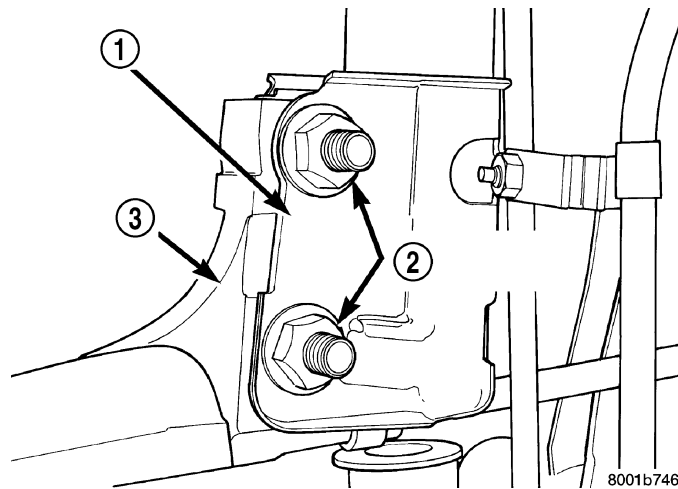


Fig. 3 Strut To Steering Knuckle Attaching Bolts

- 1 - STRUT CLEVIS BRACKET
- 2 - NUTS AND BOLTS
- 3 - STEERING KNUCKLE

11. Pull the steering knuckle from the strut clevis bracket.

NOTE: Care must be taken not to separate the inner C/V joint during this operation. Do not allow half shaft to hang by inner C/V joint after removing outer C/V joint from the hub/bearing assembly in steering knuckle, the outboard end of the half shaft must be supported.

12. Pull the steering knuckle assembly down and away from the outer C/V joint while pulling the C/V joint out of the hub bearing.

13. Support the outer end of the half shaft assembly.

NOTE: If Service Bulletin (SB) 03-001-03 was performed previously, clean the anti-seize compound from the C/V joint surface prior to installing the rubber gasket.

NOTE: **The rubber gasket is to be installed as is. The gasket should not be cut in any way.**

14. **Clean the CV joint surface and splines. Slide the gasket, p/n 04809863AB, over the C/V joint splines with the gasket against the C/V joint surface, item 2, (Fig. 4).**

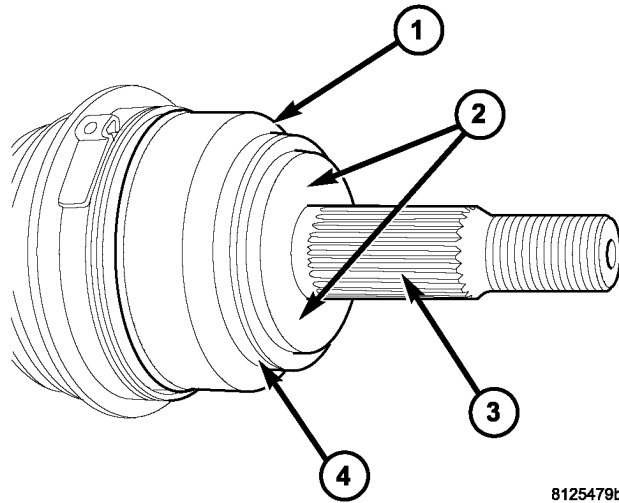


Fig. 4 OUTER C/V JOINT

- 1 - OUTER C/V JOINT
- 2 - **GASKET MATES TO THIS SURFACE ON THE CV JOINT**
- 3 - SPLINES
- 4 - OIL SEAL SEALING SURFACE.

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15. Clean all debris and moisture out of steering knuckle, in the area where outer CV joint will be installed into steering knuckle.
 16. Ensure that the front of the outer CV joint and the face of the hub and bearing are free of debris and moisture before installing the outer CV joint into the hub and bearing assembly.
 17. Slide the half shaft back into the front hub and bearing assembly.

CAUTION: The steering knuckle to strut assembly attaching bolts are serrated and must not be turned during installation. Install nuts while holding bolts stationary in the steering knuckle.

CAUTION: If the vehicle being serviced is equipped with eccentric strut assembly attaching bolts, the eccentric bolt must be installed in the bottom (slotted) hole on the strut clevis bracket ([Fig. 5](#)).

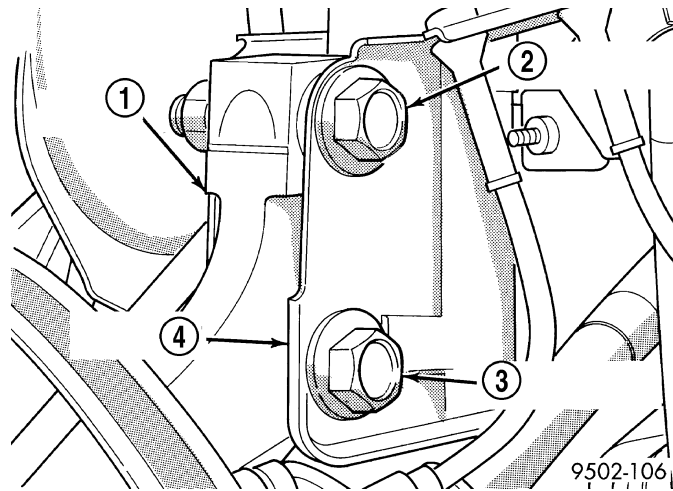


Fig. 5 Correctly Installed Eccentric Attaching Bolt

- 1 - STEERING KNUCKLE
- 2 - FLANGED BOLT IN TOP HOLE
- 3 - CAM BOLT IN BOTTOM HOLE
- 4 - STRUT CLEVIS BRACKET

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18. Install the steering knuckle in the clevis bracket of the strut assembly. Install the strut to steering knuckle attaching bolts. If the eccentric bolt and strut was marked in step 9, align the marks. Tighten both bolts to a torque of 88 N·m (65 ft. lbs.) plus an additional 1/4 turn.
 19. Install the brake rotor on the hub and bearing assembly.
 20. Install the disc brake caliper assembly on the steering knuckle. The caliper is installed by first sliding the bottom of the caliper assembly under the abutment on the steering knuckle, and then rotating the top of the caliper against the top abutment.
 21. Install the disc brake caliper adapter mounting bolts (Fig. 1). Tighten the disc brake caliper adapter mounting bolts to 169 N·m (125 ft. lbs.).
 22. Clean all foreign matter from the threads of the outer CV joint. Install the washer and half shaft nut on half shaft and securely tighten the nut (the nut will be torqued later).
 23. Install the front wheel and tire assembly. Install and tighten the wheel mounting stud nuts in proper sequence until all the nuts are torqued to half the required specification. Then repeat the tightening sequence to the full specified torque of 135 N·m (100 ft. lbs.).
 24. Repeat Step #2 through Step #23 on the other side of the vehicle.
 25. When Steps 2 through 24 have been completed on both sides of the vehicle, lower the vehicle.
 26. With the vehicle's brakes applied to keep hub from turning, tighten the hub nut to a torque of 244 N·m (180 ft. lbs.).
 27. Install the spring wave washer on the end of the half shaft.
 28. Install the hub nut lock, and a **new** cotter pin. Wrap the cotter pin prongs tightly around the hub nut lock as shown in (Fig. 6).

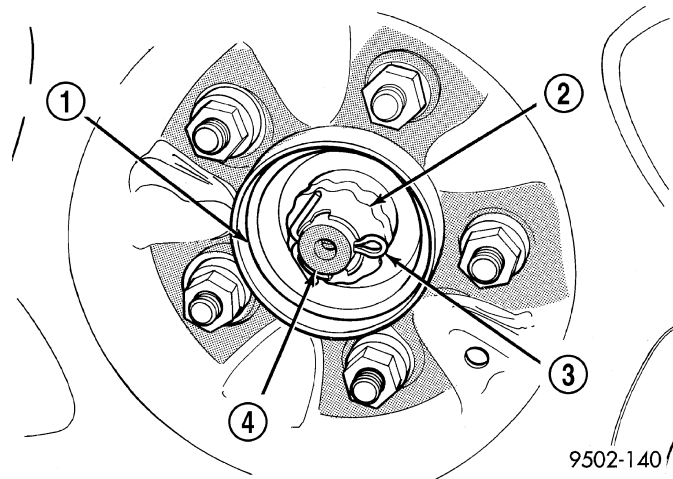


Fig. 6 Half Shaft Retaining Nut

- 1 - HUB/BEARING
- 2 - NUT LOCK
- 3 - COTTER PIN
- 4 - STUB AXLE

29. Repeat [Step #26](#) through [Step #28](#) on the other side of the vehicle.

POLICY:

Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	Description	Amount
02-13-05-91	Gasket, Front Drive Shaft - Install Both Sides **(B)**	0.9 Hrs.

FAILURE CODE:

68	Noisy
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