



**NUMBER:** 19-002-04 REV. A

**GROUP:** Steering

**DATE:** August 27, 2004

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**SUBJECT:**

Steering Column Click Sound

**OVERVIEW:**

This bulletin involves aligning the steering column or removing the steering column and installing a new steering column shaft, revised wedge, **\*\*revised spring\*\*** and seating the lower bearing.

**MODELS:**

2000 - 2004 (PL) Neon

**NOTE: This bulletin applies to vehicles built prior to November 16, 2003 (MDH 1116XX).**

**SYMPTOM/CONDITION:**

A click sound is heard when the steering wheel is turned.

**PARTS REQUIRED:**

Qty.	Part No.	Description
1	<b>**05159136AB**</b> Kit consists of: <b>**05057088AA</b> (3) 04664130 06503985 06506112AA 05057229AA 04690570	Kit, Lower Steering Column Click Repair Kit consists of: Spring, Lower Preload** Retainer Roll Pin Screw Shaft With O-ring Wedge
AR (1)	04690507AB	Bearing, Upper
AR (1)	04690344AB	Bearing, Lower



**Stick with the Specialists™**

**SPECIAL TOOLS/EQUIPMENT REQUIRED:**

NPN	Steering Wheel Puller
NPN	90° Snap Ring Pliers
6831-A	Roll Pin Remover/Installer
DRBIII®	Scan Tool

**DIAGNOSIS/REPAIR PROCEDURE:**

**NOTE: Refer to the appropriate service manual or service information on TechCONNECT for removal and installation procedures.**

1. Turn the steering wheel and listen for a click sound. If the click sound is heard, remove the steering column shrouds.
2. Turn the steering wheel, listen to hear if the click sound remains.
3. If the click sound is eliminated determine the source interference with the steering column shrouds and correct, the repair is then complete.

**WARNING:When an undeployed airbag is to be removed from the steering wheel, disconnect and isolate the battery ground cable. Allow the system capacitor to discharge for two minutes, then begin airbag removal.**

**NOTE: Be sure to center the steering wheel and have the front tires and wheels straight ahead before removing the steering wheel and disconnecting the lower coupling. Access to the steering column shaft coupler screw is easier if the steering wheel is turned so the screw head is pointing straight down.**

4. If a click sound is heard, remove the steering wheel and disconnect the intermediate shaft to steering gear (lower) coupling.

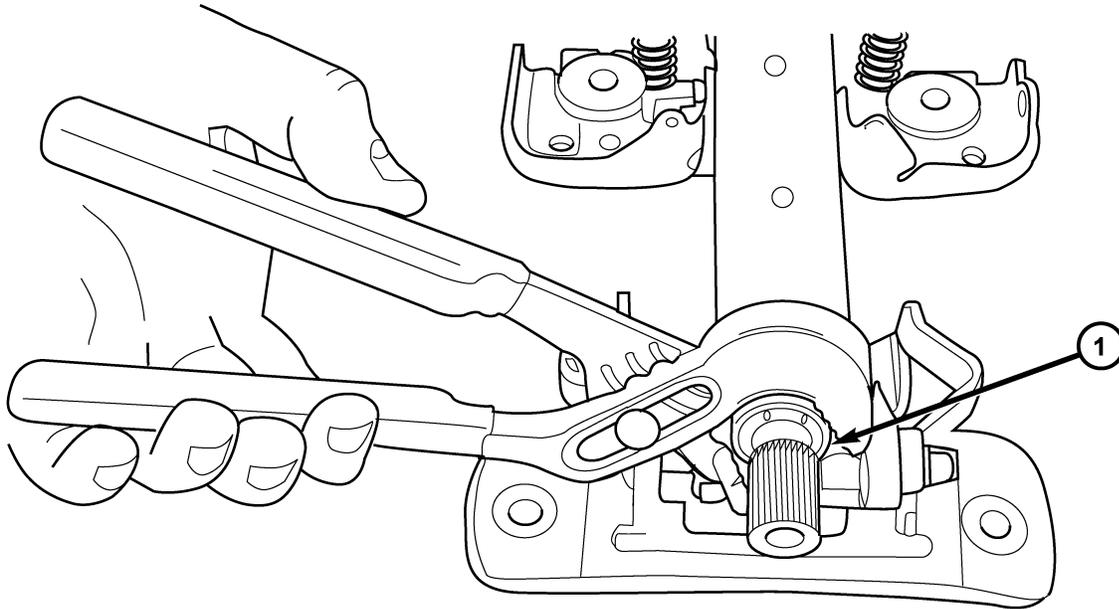
**NOTE: Turn the steering shaft no more than one revolution in either direction from center. Keep track of the centered position.**

5. Turn the steering shaft, listen to see if the click sound remains.
6. If the click sound is eliminated reattach the lower coupling and install the steering wheel, being sure the clockspring/steering wheel travel is centered. Torque the coupling pinch bolt to 29 Nm (21 ft. lbs.) and torque the steering wheel bolt to 54 Nm (40 ft. lbs.).
7. Turn the steering wheel; listen to hear if the click sound remains.
8. If the click sound returns, loosen the lower coupling pinch bolt and the four steering column mounting bracket nuts.

9. Jiggle the steering column and then tighten lower coupling pinch bolt. Torque the coupling pinch bolt to 29 Nm (21 ft. lbs.) Tighten the 2 lower steering column assembly mounting nuts to hold the steering column in place. Be sure both break-away capsules are still fully seated in the slots of the upper steering column mounting bracket and the mounting studs are centered fore-and-aft in the plastic capsules. Then equally tighten both steering column mounting nuts, until upper steering column mounting bracket is seated against support bracket. Tighten the 4 steering column bracket to support bracket nuts to 17 Nm (150 in. lbs.).
10. Turn the steering wheel; listen to hear if the click sound remains. If the click sound is eliminated, replace the lower coupling pinch bolt, p/n 06506112AA, torque the coupling pinch bolt to 29 Nm (21 ft. lbs.), then the repair is complete.
11. If the click sound remains, remove the clock spring. To avoid damaging the clock spring:
  - a. The clock spring is positioned to the lock housing by two snap latch features at 12:00 and 6:00 o'clock positions. Lift the top latch up slightly while guiding it over the lock housing. This will prevent the latch from being broken.
  - b. Care should be taken regarding centering of the steering wheel and clock spring with respect to the front wheels; follow the service manual clock spring centering procedure. Turning the steering wheel when the column is disconnected from the steering gear can damage the clock spring.
  - c. When using the steering wheel puller, hand tighten the puller bolts (no more than five revolutions) and avoid contact between the bolts and the top of the clock spring.
  - d. When removing the airbag inflator connectors, squeeze the sides of the connector, to release it, while pulling it out of the airbag.
12. Disconnect the lower coupling.
13. Turn the steering shaft; listen to hear if the click sound remains. If the sound is eliminated determine the source interference with the clockspring and correct, the repair is then complete.
14. If the click sound remains, remove the steering column from the vehicle.

**NOTE: The ignition key must be turned to the run position to remove the shifter/ignition interlock cable from the key lock housing.**

15. Remove the two screws attaching the multifunction switch and separate the switch from the steering column.
16. Remove the steering column intermediate shaft from the steering column shaft. Install Remover/Installer, Special Tool 6831-A, through center of roll pin in intermediate shaft's universal joint and install knurled nut. While holding hex on end threaded rod, tighten the nut on threaded rod of Remover/Installer. This will pull the roll pin out of the intermediate shaft's universal joint. Using a screwdriver inserted between the shaft's universal joint and the steering column lower mounting bracket, gently pry intermediate shaft off steering column shaft.
17. Remove the spring retainer by squeezing the outside diameter with pliers and sliding it off the end of the steering column shaft, refer to (Fig. 1).



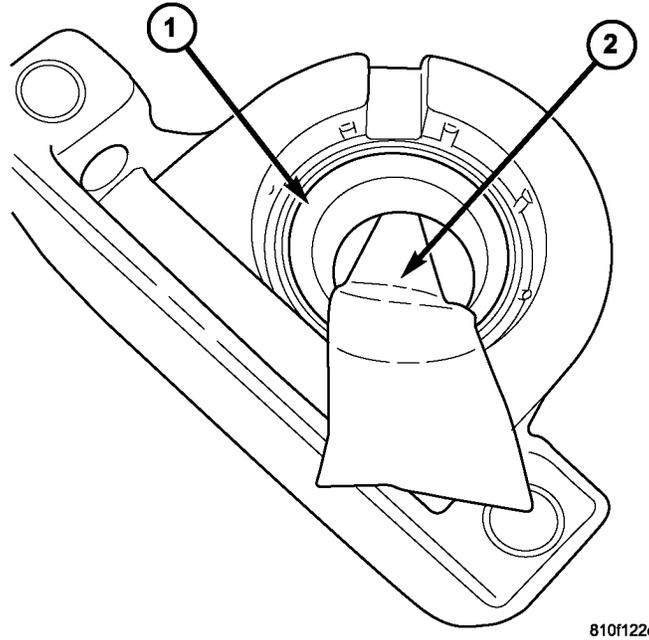
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**Fig. 1 SPRING RETAINER REMOVAL**

1 - SQUEEZE THE OUTSIDE DIAMETER OF RETAINER TO REMOVE

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18. Remove the spring, wedge and steering column shaft .
19. Inspect the upper and lower steering column bearings, if damaged replace them/it as necessary, p/n 04690507AB upper bearing, p/n 04690344AB lower bearing (with notch).
20. Stand the steering column on end so the outer race of the upper bearing is supported on a 1 1/16 in. socket. Using a 7/8" deep well socket or other suitable tool placed against the lower bearing outer race tap the bearing downward several times with a brass hammer until the bearing is fully seated. Use a 0.005" feeler gauge to make sure no clearance exists between the lower casting and the outer race of the lower bearing. Refer to (Fig. 2)

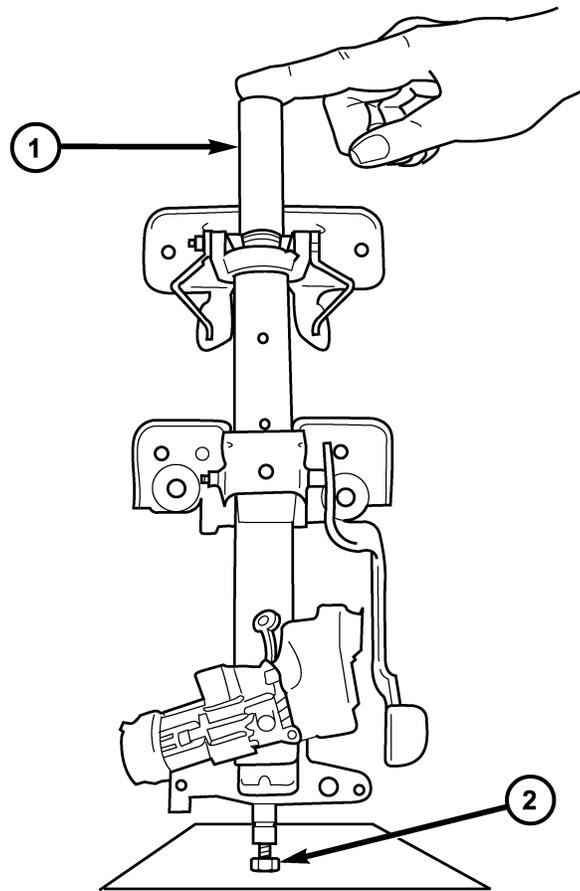


**Fig. 2 CHECK THAT BEARING IS FULLY SEATED**

1 - BEARING

2 - 0.005 IN. FEELER GAUGE

- 
21. Install the revised steering column shaft p/n 05057229AA, revised wedge, p/n 04690570, and **\*\*revised preload spring, p/n 05057088AA\*\***.
  22. Thread the steering wheel bolt into the steering column shaft.
  23. Stand the column assembly on the head of the steering wheel bolt, insure the surface is flat. Refer to [\(Fig. 3\)](#).



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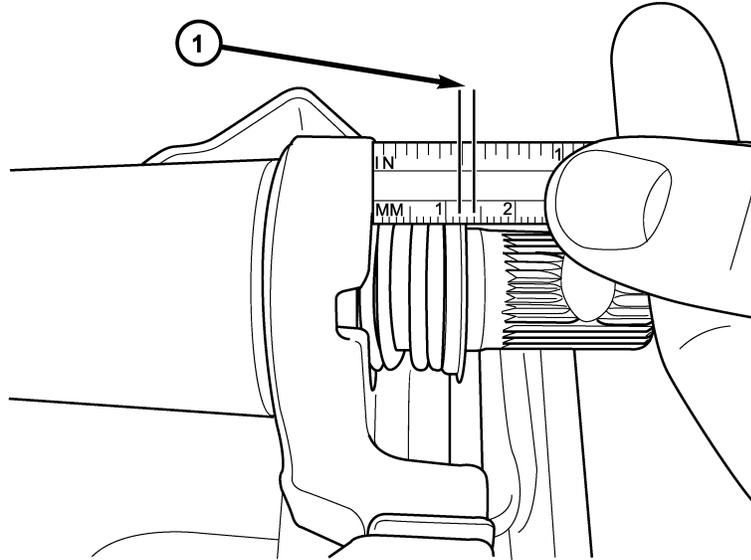
**Fig. 3 STAND STEERING COLUMN ON END**

1 - 7/8 IN. DEEP WELL SOCKET

2 - INSURE SURFACE IS FLAT

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24. Install a new retainer, p/n 04664130, onto the steering column shaft by using a 7/8" deep well socket and small hammer to tap the retainer into place so the installed distance between the lower housing and the outside face of the retainer is 12-14 mm (15/32-17/32 in.). If the retainer is installed to distance less than 12 mm (15/32 in.) remove the retainer and install a new retainer, repeat as necessary until the installed distance is 12-14 mm (15/32-17/32 in.). Refer to (Fig. 4).

**NOTE: If the installed dimension is less than 12mm a binding condition may result. If the installed dimension is greater than 14mm a loose condition may result.**



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**Fig. 4 INSTALLATION DISTANCE**

1 - INSTALLED DISTANCE BETWEEN THE LOWER HOUSING AND THE OUTSIDE FACE OF THE RETAINER MUST BE 12-14 mm (15/32-17/32 in.)

- 25. Verify the click sound has been corrected. If a sound is still present further diagnosis is required.
- 26. Using the procedures outlined in the appropriate service information, install the steering column and intermediate shaft assembly into the vehicle.

**POLICY:**

Reimbursable within the provisions of the warranty.

**TIME ALLOWANCE:**

Labor Operation No:	Description	Amount
19-34-05-96	Align/Reposition Steering Column/Components	0.7 Hrs.
19-34-05-97	Seat Lower Steering Column Bearing (Includes Align/Reposition Steering Column/Components)	1.3 Hrs.

**FAILURE CODE:**

68	Noisy
P8	New Part