



# Service Bulletin

## PRELIMINARY INFORMATION

**Subject:** Groan, Squeak or Rubbing Type Noise When Turning Steering Wheel

**Models:** 2010-2016 Buick LaCrosse  
2012-2017 Buick Regal, Verano  
2012-2015 Chevrolet Cruze, Volt  
2013-2016 Chevrolet Malibu Limited (VIN 1)  
2014-2017 Chevrolet Impala

**Attention:** This PI also applies to any of the above models that may be Export from North America vehicles.

*This PI has been revised to add the 2017 Model Year for Regal, Verano and Impala. Please discard PI0659E.*

### Condition/Concern (Impala)





Some customers may comment on a rubber squeak type noise when turning the steering wheel. This condition may be caused by the seal for the intermediate shaft, located at the front of dash, rubbing on the rotating intermediate steering shaft. Refer to the pictures above.

### **Condition/Concern (Malibu)**





Some customers may comment on a rubber squeak type noise when turning the steering wheel. This condition may be caused by the seal for the intermediate shaft, located at the front of dash, rubbing on the rotating intermediate steering shaft. Refer to the pictures above.

The EPS wire harness bracket may also be contacting the steering column seal.

### **Condition/Concern (LaCrosse, Regal, Verano, Cruze, Volt)**

Some customers may comment on a rubber squeak type noise when turning the steering wheel.

This may be caused by the EPS wire harness bracket contacting the steering column seal.

### **Recommendation/Instructions (Impala)**

Technicians should inspect the steering column seal for proper installation by repositioning the inner intermediate steering shaft boot assembly to gain access. Inspect the seal at the front of the dash where the intermediate steering shaft passes through from the steering gear. Ensure that the seal is centered in the opening and around the intermediate steering shaft as shown above. If the seal is out of position, replace the steering column seal following the steps below.



1. Remove the intermediate steering shaft lower bolt. Refer to *Intermediate Steering Shaft Replacement* in SI.
2. Remove the inner intermediate steering shaft boot assembly.
3. Raise and support the vehicle.
4. Support the powertrain.
5. Remove the front exhaust pipe. Refer to *Exhaust Front Pipe Replacement* in SI.
6. Remove the front and rear transmission mount through bolts.
7. Remove the front transmission mount.
8. Remove the driver side steering gear mounting bolt and discard.
9. Remove the electronic power steering harness bolts (if equipped).
10. Disconnect the left and right steering knuckle bolts and discard.

11. Remove the rear cradle bolts.
12. Loosen the front cradle bolts just enough to get clearance of the steering shaft.
13. Lower the rear of the cradle and remove the outer steering column seal.
14. Install the outer steering column seal.
15. Raise the rear cradle and install the rear cradle bolts.
16. Tighten the front cradle bolts. Refer to SI for torque specifications.
17. Install the left and right steering knuckle bolts. Refer to SI for torque specifications.
18. Install the electronic power steering harness bolts (if equipped).
19. Install the driver side steering gear mounting bolt. Refer to SI for torque specifications.
20. Install the front transmission mount. Refer to SI for torque specifications.
21. Install the front and rear transmission mount through bolts. Refer to SI for torque specifications.
22. Install the front exhaust pipe. Refer to SI for torque specifications.
23. Remove the support from the powertrain.
24. Lower the vehicle.



25. Install the inner intermediate steering shaft boot assembly. Ensure that the boot is properly positioned so that it lays flat against the floor. Make sure that the boot does not get tucked under the floor mat at any location.
26. Install the intermediate steering shaft lower bolt. Refer to SI for torque specifications.
27. Adjust the front toe. Refer to Wheel Alignment - Steering Wheel Angle and/or Front Toe Adjustment in SI.

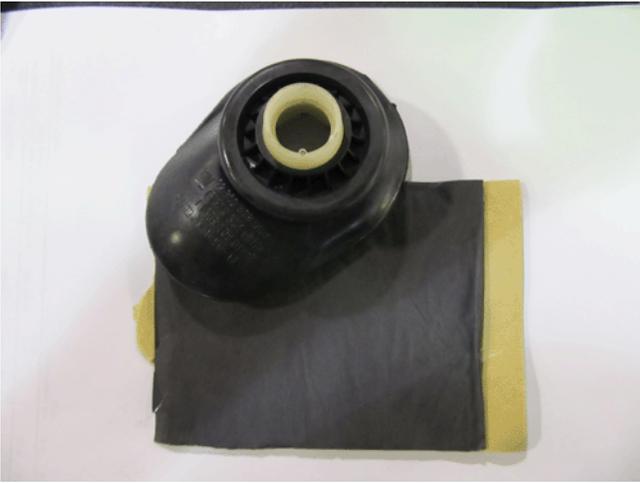
### **Recommendation/Instructions (Malibu)**

Technicians should inspect the steering column seal for proper installation by repositioning the inner intermediate steering shaft boot assembly to gain access. Inspect the seal at the front of the dash where the intermediate steering shaft passes through from the steering gear. Ensure that the seal is centered in the opening and around the intermediate steering shaft as shown above. If the seal is out of position, replace the steering column seal following the steps below.

Technicians should also inspect the EPS wire harness bracket if equipped and make sure that the bracket is not contacting the steering column seal. If contact is observed, manually adjust the EPS bracket to obtain an 8-12 mm (0.31-0.47 in) clearance from the steering column seal.



1. Remove the intermediate steering shaft lower bolt. Refer to *Intermediate Steering Shaft Replacement* in SI.
2. Remove the inner intermediate steering shaft boot assembly.
3. Raise and support the vehicle.
4. Support the powertrain.
5. Remove the front exhaust pipe. Refer to *Exhaust Front Pipe Replacement* in SI.
6. Remove the front and rear transmission mount through bolts.
7. Remove the front transmission mount.
8. Remove the driver side steering gear mounting bolt and discard.
9. Remove the electronic power steering harness bolts (if equipped).
10. Disconnect the left and right steering knuckle bolts and discard.
11. Remove the rear cradle bolts.
12. Loosen the front cradle bolts just enough to get clearance of the steering shaft.
13. Lower the rear of the cradle and remove the outer steering column seal.
14. Install the outer steering column seal.
15. Raise the rear cradle and install the rear cradle bolts.
16. Tighten the front cradle bolts. Refer to SI for torque specifications.
17. Install the left and right steering knuckle bolts. Refer to SI for torque specifications.
18. Install the electronic power steering harness bolts (if equipped).
19. Install the driver side steering gear mounting bolt. Refer to SI for torque specifications.
20. Install the front transmission mount. Refer to SI for torque specifications.
21. Install the front and rear transmission mount through bolts. Refer to SI for torque specifications.
22. Install the front exhaust pipe. Refer to SI for torque specifications.
23. Remove the support from the powertrain.
24. Lower the vehicle.



25. For 2013 Malibu only, using the inner steering column seal as a template, trace an outline on the edge of the barrier material 4in (101.6 mm) x 3.5 in (88.9 mm) as shown above.



26. For 2013 Malibu only, cut the material and install next to the intermediate shaft making sure not to contact the intermediate shaft.



27. Install the inner intermediate steering shaft boot assembly. Ensure that the boot is properly positioned so that it lays flat against the floor. Make sure that the boot does not get tucked under the floor mat at any location.
28. Install the intermediate steering shaft lower bolt. Refer to SI for torque specifications.
29. Adjust the front toe. Refer to *Wheel Alignment - Steering Wheel Angle and/or Front Toe Adjustment* in SI.

**Recommendation/Instructions (LaCrosse, Malibu, Regal, Verano, Cruze, Volt)**



Technicians should inspect the EPS wire harness bracket and make sure that the bracket is not contacting the steering column seal. If contact is observed, manually adjust the EPS bracket to obtain an 8-12 mm (0.31-0.47 in) clearance from the steering column seal.

### Parts Information

Part Number	Description
22968805	SEAL, STRG COL (NV7)
22968806	SEAL, STRG COL (NJ1)
23106608	SEAL, STRG COL (NJ2)
13253472	BOLT, S/GR
11518632	BOLT, S/KNU (2)
20972702	GASKET, EXH FRT PIPE (RPO LCV, LKW)
13293994	GASKET, EXH FRT PIPE (RPO LUK, LAF, LEA)
13267274* *Quantity 2 for LFX, LLT, LF1	GASKET, EXH FRT PIPE (RPOs LFX, LLT, LF1)
12609878 (Groove Ring Style)	GASKET, CTLTC CONV (RPO LTG)
22741875 (Triangular Shaped)	GASKET, CTLTC CONV (RPO LTG)
22816982	GASKET, EXH MUFF (RPO LCV, LTG, LHU, EXC Y3E)
13229872	GASKET, EXH MUFF (RPO LUK, LAF, LEA)
20907464	GASKET, EXH MUFF (RPO LLT, LF1, LFX, LKW)



22936409	GASKET, EXH MUFF (LHU, Y3E)
11515174** (Malibu Only)	BARRIER-SND
<p>*Quantity 2 for LFX, LLT, LF1</p> <p>**There is enough material to do approximately 6 vehicles. Store remaining material for future use. (For Malibu Only)</p>	

## Warranty Information

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
7480058*	Inspect Steering Column Seal (Hydraulic Power Steering Only)	0.2 hr
Add	Replace Steering Column Seal	1.1 hrs
Add	Install Barrier (Malibu Only)	0.2 hr
7480088*	Adjust Electronic Power Steering Wire Harness Bracket (Electronic Power Steering Only)	0.2 hr
*This is a unique Labor Operation for Bulletin use only.		

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do a job properly and safely. If a condition is described, DO NOT assume that the bulletin applies to your vehicle, or that your vehicle will have that condition. See your GM dealer for information on whether your vehicle may benefit from the information.



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