Service Bulletin

File in Section: 02 - Steering
Bulletin No.: 07-02-32-002N
Date: September, 2013

INFORMATION

Subject: **Hydraulic Power Steering System Leak – Required Diagnostic Actions**

Models: **2005-2014 GM Cars and Trucks Equipped with Hydraulic Steering**

This bulletin has been revised to add the 2014 model year and to change the tool required to remove the steering line fitting seals. Please discard Corporate Bulletin Number 07-02-32-002M.

Condition

Some customers may comment on a fluid leak under the front of the vehicle. Upon further investigation, the technician may find fluid leaking from the power steering system. Please use the following information to assist in diagnosis.

Diagnostic Information

Important: All potential leaks should be completely cleaned and identified before attempting to repair or replace any power steering components.

1. Start diagnosis by inspecting the fluid level in the power steering reservoir. If the fluid level is NOT low, a careful analysis of the condition is necessary as it may involve a different type of fluid leak.
2. Visually inspect the components where the fluid has accumulated.
3. Before the component is replaced, inspect fittings and connections for proper torque.
4. Clean the area around connections, joints and seals with engine degreaser.
5. Add fluorescent dye (such as Kent Moore GE 28431-6) to the power steering fluid.
6. Start the vehicle and allow the power steering system to reach normal operating temperatures.
7. Turn the steering wheel to the stops in each direction while bumping the steering wheel against the stops 3-4 times. This will build maximum steering system pressure and help identify the source of the leak if present.

Caution: DO NOT hold the steering wheel against the stops as this will damage the power steering pump.

8. Determine the source of the leak.
9. When returning the part to the Warranty Parts Center (WPC), mark the component with the location of the leak using a paint marker, paint or tape to highlight the location of the leak.
10. If a repeatable leak is found, refer to the following tables to determine the proper corrective action needed.

Repairable Leaks

Source of Leak	Correction
Pressure feed and return hoses/lines	Replace seals*, hose or line set
Power steering pump	Reseal or replace pump if necessary
Cylinder gear/rack lines	Replace O-ring seals or rack lines

***Steering Line Fitting Seals**

Some vehicles are equipped with a “duck-bill“ style seal that is pierced by the power steering line during installation to the gear at vehicle assembly. Vehicles that are equipped with this type seal are:

– 2010-2014 Buick LaCrosse
– 2011-2014 Buick Regal
– 2007-2014 Cadillac Escalade
– 2013–2014 Cadillac XTS
– 2005-2014 Chevrolet Malibu
– 2007-2013 Chevrolet Avalanche, Silverado
– 2007-2014 Chevrolet Suburban, Tahoe
– 2007-2013 GMC Sierra
– 2007-2014 GMC Yukon, Yukon XL, Yukon Denali, Yukon Denali XL
– 2006-2010 Pontiac G6
– 2007-2009 Saturn AURA

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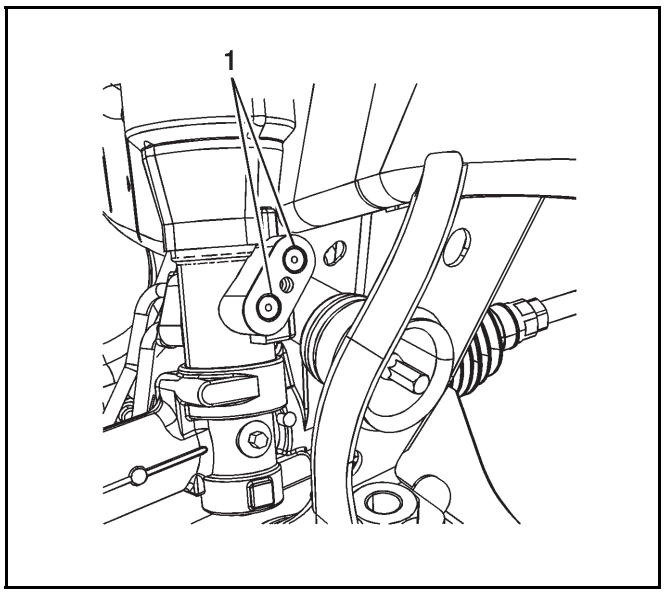

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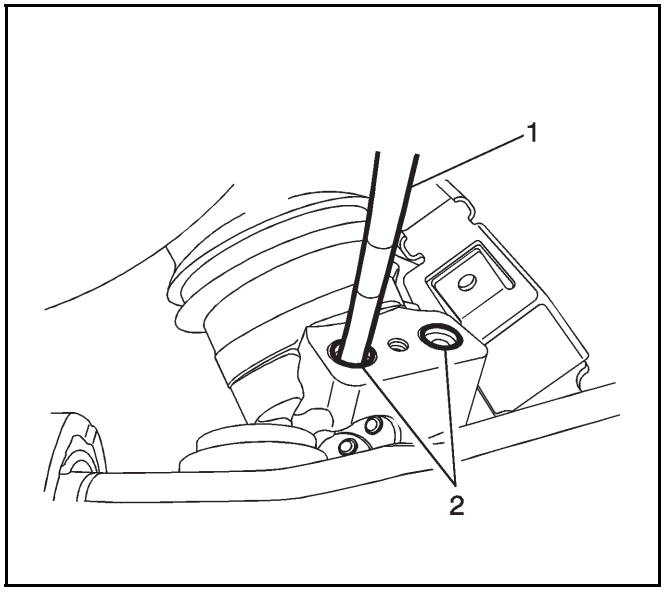

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Important: Only insert J-42640 just far enough in to the duck bill seal to get behind the duck bill seal's steel ring. Then using the tool pry against steel ring to remove the seal. Do not insert the tool too far into the duck bill seal and pry against the housing bore. Prying against the housing bore could scratch the housing bore and require steering gear replacement.

These seals are replaceable and any leak at the line to gear connection on these vehicles should be first addressed with a seal replacement. Use a J-42640 Steering Column Anti-rotation Pin (1) to remove the seals (2) and then install the new seals by hand and connect the power steering inlet and outlet line. This will seat the seals into the steering gear housing.

Non- Repairable Leaks

Source of Leak	Correction
Porosity leak in the gear/ rack housing	Replace steering gear/rack
Leak from tie rod boots	
Pinion seal	
Repeatable leak at steering gear adjuster plug*	See note below

***If fluid is observed at the adjuster plug during the initial visual inspection, then refer to the following:**

- Seepage at the adjuster plug may not necessarily indicate an active leak.
- You can distinguish seepage from an active leak by removing the left tie rod boot clamp and inspecting for the presence of fluid at the inner tie rod.
- If no fluid is found in the left tie rod boot, replace the boot clamp and clean the seepage (likely manufacturing residue) from the rack. No further action is needed.
- If fluid is found in the left tie rod boot, replace the gear assembly.

Warranty Information

For vehicles repaired under warranty please refer to the Labor Time Guide and claim the applicable Labor Operation for the repaired or replaced component. Failure to return the replaced part with the location of the leak clearly marked or if there is no evidence of dye being used to identify the source of the leak may result in a debit of the entire warranty claim.

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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