

# #05-07-30-031: 4L60-E Automatic Transmission/Torque Converter Clutch (TCC) Shudder, Water in Transmission (Repair Transmission and Replace Transmission Filler Tube, Level Indicator and Seal) - (Nov 11, 2005)

**Subject:** 4L60-E Automatic Transmission/Torque Converter Clutch (TCC) Shudder, Water in Transmission (Repair Transmission and Replace Transmission Filler Tube, Level Indicator and Seal)



**Models:** 2004-2005 Buick Rainier  
2003-2005 Chevrolet TrailBlazer Models  
2003-2005 GMC Envoy Models  
2003-2004 Oldsmobile Bravada  
2005 Saab 9-7X  
with 4.2L In-Line 6 Cylinder Engine (VIN S -- RPO LL8)

## Condition

Some customers may comment on a shudder condition at approximately 64-80 km/h (40-50 mph) when the TCC engages.

## Cause

This condition may be caused by water in the automatic transmission fluid (ATF). Water may enter the transmission by dripping from the cowl area onto the handle of the transmission fluid level indicator.

## **Indications of water in the ATF may include:**

- Visible rust on the transmission fluid level indicator.
- Visible water in the oil pan.
- A milky white substance inside the pan area.
- Spacer plate gaskets that appear to be glued to the spacer plate, valve body or case.
- Rust on internal transmission iron/steel components.

## **Important:**

**For vehicles suspected of having a leaking transmission oil cooler that would cause contamination of the transmission fluid with coolant, the following check should be performed before deciding to replace the radiator.**

- Remove the surge tank cap and examine the coolant for signs of contamination with transmission fluid (the coolant will have a milky, not clear appearance).
- If the coolant has a normal, clear appearance, the radiator should not be replaced.
- The cooler can also be tested by following the Coolant System Leak Test procedure (SI Document ID# 877442). Do NOT replace a radiator without verifying that the transmission oil cooler is leaking.

## Correction

First, repair the transmission and second, replace the transmission fill tube, seal and level indicator to prevent repeat water contamination of the ATF.

## **Transmission Repair**

1. Remove the transmission. Refer to the appropriate SI procedure.
2. Disassemble and inspect the transmission. Refer to Unit Repair Automatic Transmission - 4L60-E/4L65-E.

## **Important:**

**If water or coolant is found in the transmission, the following components MUST be replaced.**

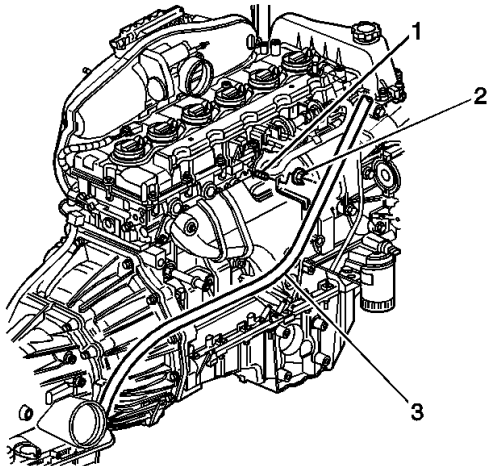
- Replace all of the rubber type seals.
- Replace all of the composition-faced clutch plate assemblies including the band.
- Replace all of the nylon parts (Thrust Washers).
- Replace the torque converter.
- Thoroughly clean and rebuild the transmission, using new gaskets and oil filter.
- Flush and flow check the transmission oil cooler using J 45096. Refer to Corporate Bulletin Number 02-07-30-052C or newer - Automatic Transmission Oil Cooler Flush and Flow Test Essential Tool J 45096 TransFlow .

**Replace the Transmission Fluid Filler Tube, Seal and Fluid Level Indicator WITH the transmission REMOVED from vehicle.**

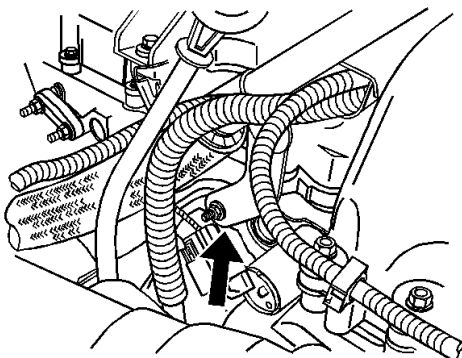
1. Remove the transmission fluid filler tube from the transmission.
2. Replace the transmission fill tube seal, P/N 1259475.
3. Replace the transmission fill tube, P/N 15000220, following the appropriate SI Document for Transmission Installation.
4. Replace the transmission fluid level indicator, P/N 15069769 when appropriate during the transmission installation.

**Replace the Transmission Fluid Filler Tube, Seal and Fluid Level Indicator with the transmission in the vehicle.**

1. Remove the air cleaner outlet duct. Refer to Air Cleaner Element Replacement (SI Document ID# 1364496).
2. Remove the transmission fluid level indicator from the filler tube.



3. Remove the filler tube nut (2) located on the right side of the engine.
4. Remove the filler tube from the vehicle.

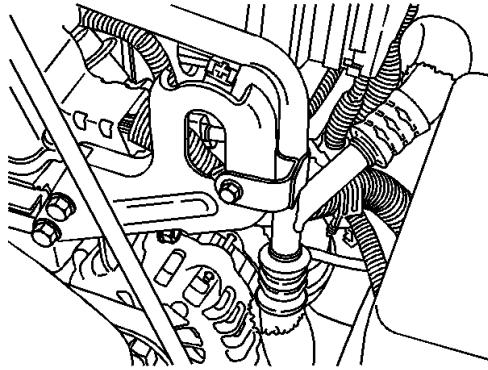


**Tip**

It is necessary to remove the two A/C line (suction line / low side of muffler hose) retainers and reposition

the A/C line to allow proper clearance for installation of the new transmission fluid fill tube.

5. Remove the A/C line at the oil level indicator tube bracket nut.



6. Remove the A/C bracket bolt from the engine lift hook.
7. Reposition the A/C line upward.
8. Install the new transmission filler tube, P/N 15000220, into position but NOT into the transmission at this time.
9. Raise the vehicle. Refer to Lifting and Jacking the Vehicle in General Information (SI Document ID# 744862).
10. Remove the two bolts securing the transmission heat shield to the transmission.
11. Remove the transmission heat shield from the transmission.
12. Remove the old filler tube seal from the transmission case.
13. Install a new seal, P/N 1259475 into the transmission case.
14. Position the new transmission filler tube into the transmission seal.
15. Install the transmission heat shield to the transmission.
16. Install the two bolts securing the transmission heat shield to the transmission.

**Tighten**

Tighten the bolts to 17 N·m (13 lb ft).

17. Lower the vehicle.
18. Install the nut securing the filler tube to the stud.

**Tighten**

Tighten the nut to 10 N·m (89 lb in).

19. Reposition the A/C line into place.
20. Install the A/C line bracket to the oil level indicator tube stud and secure the bracket with the nut.
21. Install the A/C line bracket to the engine lift bracket and secure the A/C bracket with the bolt.

**Tighten**

- Tighten the A/C line bracket nut to 7 N·m (62 lb in).
- Tighten the A/C bracket bolt to 10 N·m (89 lb in).

22. Reinstall the air cleaner outlet duct. Refer to Air Cleaner Element Replacement (SI Document ID# 1364496).
23. Install the new fluid level indicator, P/N 15069769.
24. Check the transmission fluid level. Refer to Transmission Fluid Checking Procedure (SI Document ID# 1497801).

**Parts Information**

Part Number	Description	Qty
15069769	Indicator, Transmission Fluid Level	1
15000220	Tube, Transmission Fluid Fill	1
1259475	Seal, Transmission Filler Tube	1

**Warranty Information (excluding Saab U.S. Models)**

For vehicles repaired under warranty, use:

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Labor Operation	Description	Labor Time
K6140	Tube and/or Seal Transmission Filler - Replace	0.5 hr

### Warranty Information (Saab U.S. Models)

For vehicles repaired under warranty, use:

Labor Operation	Description	Failed Object	Fault/Reason Code	Location Code	Warranty Type	Repair/Action Code	Labor Time
4407101	Replace Pipe Engine Code S	44071	47	0	01	01	Use published labor operation time

#### Important:

- This labor time ONLY applies to vehicles repaired WITHOUT the transmission removed from the vehicle.
- NO additional labor time is required for installation of the fill tube while the transmission is removed from the vehicle for repair.

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