

**\*\* SOLUTION \*\***

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Title **Volvo Chassis - Equipped With An Automated Manual Transmission Model D or F ( I-Shift, AMT-D, AMT-F ) - Transmission Oil Leakage From Transmission Input Shaft Seal Or Output Shaft Seal - US10 And Newer Emissions, Common Model Years 2010 And Newer**

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**Volvo Models**

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**Volvo Model** VNL , VNM , VNR , VNX , VAH , VHD

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**Emission Standard**

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Emission Standard US10 , US10+OBD13 , US14+OBD13 , US14+OBD15 , US14+OBD16 , US17+OBD16 , US17+OBD18

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**Engine family**

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Engine family 11L Engine , 13L Engine , 16L Engine

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**Transmission**

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Transmission AMT-D , AMT-F

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**\*\* SOLUTION \*\***

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**Cause** Accumulation of debris in the left side vent ports of the transmission main case (corrosion, road salt, dirt, etc) may result in oil leaks present at the transmission input and output shaft seals.

The vent ports allow air exhausted from the shift solenoids and pistons to exit the main case. It also allows for equalization of internal and external pressures, as heat generated from operation will cause pressure in the case to increase. **For the AMT-F this is the only vent for the TECU and gearcase.**

Blockage of these ports allows pressure to build to a point that it forces oil past the input and output shaft seals. In extreme cases, the pressure buildup can be high enough that operation can be affected. Excessive internal pressure caused by blocked vents may result in slow or sluggish gear shifts.

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**Solution****When diagnosing and repairing a shaft seal leak:**

**1.** Check the vent ports on the upper left side of the the main gearbox housing for any sort of blockage or obstruction.



Clogged vent ports

2. Clean out any debris that is observed during the inspection. (see inspection and cleaning below)
3. Check the transmission oil level in the gearbox.
  - **If the lube level is excessively low:** Proceed to the next section.
  - **If the lube level is at an acceptable level:** Fill the transmission oil to the correct level and check operation.

**For excessively low transmission oil levels, or customer report of noise from the transmission:**

1. The transmission will need to be inspected for internal damage. Removal may be required for proper inspection.

**Inspection and cleaning**

Due to the location of the vent ports it is very difficult, in most applications, to see the vents. An inspection mirror and flashlight can be used to see if there is a buildup of roadsalt or other debris in the ports.

If the ports are clogging then use a small screwdriver or similar tool to break up the deposits in the ports.

Clean and remove the upper oil fill plug from the main case on the right side of the gearbox.

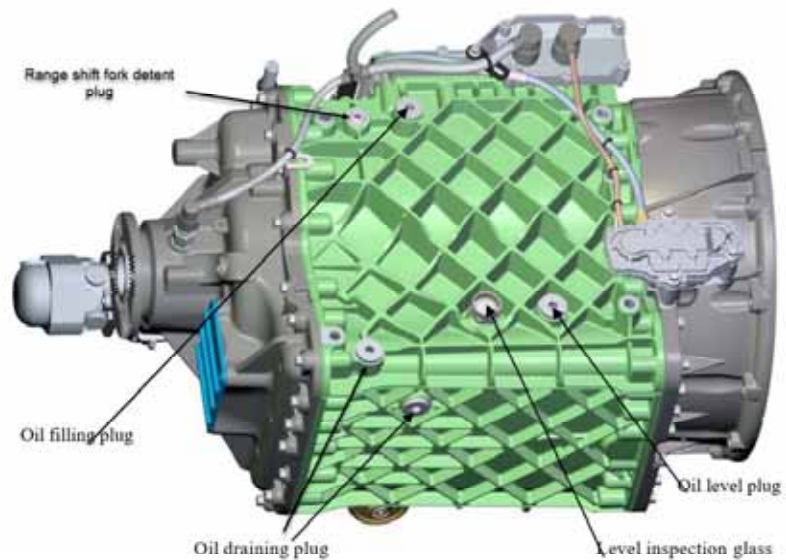


Figure 29. Position of oil plugs and level inspection glass

Wrap a clean rag around an air nozzle and blow air into the case. Use proper eye protection. A complete seal is not needed. All you want to do is create enough pressure to force the debris from the vents on the left side of the case.

NA\_Sister solutions [K21250579](#)

Solution visibility **Dealer distribution**

**Function(s)/component(s) affected**

Function affected Input Shaft , Output Shaft , Lubrication

**Function Group**

Function Group 43 gearbox

**Customer effect**

Main customer effect fluid

Noise whine

Fluid problem leak , level incorrect

Fluid implicated Transmission Oil

Visual appearance leaking

**Conditions**

Vehicle operating mode when driving

Frequency of occurrence of problem random

Location of problem underneath cab

**Administration**

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