

<b>ADDRESSEES</b>	: Owners and operators of Van Hool vehicles ABC Customer Care and Parts Source
<b>VEHICLE TYPE</b>	: Vehicles with Allison WTB500 transmission
<b>CONFIGURATION GROUP</b>	: 06.10 Transmission
<b>BULLETIN TYPE</b>	: Service information
<b>DATE</b>	: December 20 <sup>th</sup> , 2017
<b>SUBJECT</b>	: <b>Transmission routine inspections on leaks</b>
<b>TERMS &amp; CONDITIONS</b>	: This service bulletin does not entitle to any reimbursement.

### INTRODUCTION:

It has come to the attention of Van Hool that the Allison WTB500 transmission may NOT have been thoroughly inspected and maintained as required. It is expected that the transmission be visually inspected as part of the routine preventive maintenance inspection program described in the Van Hool maintenance manual.

Van Hool considers routine maintenance to include the visual inspection of components for abnormal and/or normal wear, corrosion, cracks, broken or missing brackets, lose or missing clamps, chaffed wires, leaking seals and gaskets, just to mention a few items. Not properly inspecting these components can lead to consequential damage or failure.

Van Hool has issued this bulletin to advise customers of specific areas to include in their routine inspections for the Allison WTB500 transmission:

- **Filler tube/dipstick tube mounting.** If broken or loose brackets are found it is necessary to tighten or replace the bracket. Loose or broken brackets can cause unnecessary vibration. This will cause abnormal wear on the seal at the base of the transmission filler tube and can damage components causing them to crack or separate.
- **Seal at base of transmission dipstick tube.** If damage or leaking seals are found, it is necessary to replace the seal.

Van Hool would like to reinforce this requirement with all owners/users to ensure that vehicles are being inspected for leaks on a frequent basis.

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## EQUIPMENT CONDITION:

- Vehicle above inspection pit
- Parking brake applied and engine shut down
- Switch off all systems and turn off the battery master switch
- When working in the engine compartment, turn the starter motor inhibitor switch in the engine compartment to the “starter motor disabled” position.
- Install a “DO NOT OPERATE” tag on the instrument panel
- Engine cooled down
- **Read the entire procedure before starting to work.**



## **WARNING!**

Observe safe shop practices at all times.

## INSPECTION PROCEDURE:

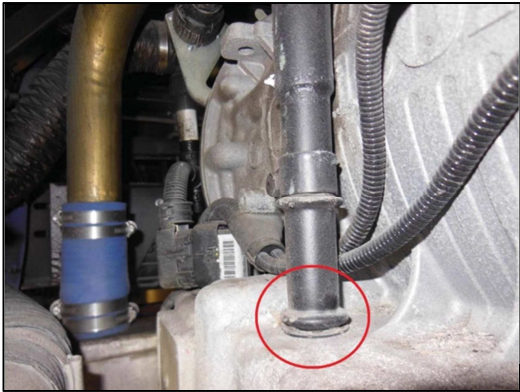
Step	Action
1	Inspect the area where the fill tube passes into the transmission.
2	Look for transmission fluid leaks around the grommet and inspect the grommet for cracking or stretching.
3	Verify the fill tube does NOT enter the transmission at an angle and the transmission fill tube is evenly, and fully, pressed into the transmission grommet. Figure 1 illustrates the transmission fill tube and grommet connection to be inspected. 
4	Referencing the adjustment procedure below, determine if the fill tube is under preload. If the fill tube is preloaded, the grommet is pinched which may lead to a premature failure.
5	If transmission fluid leaks are found, the grommet is worn out, the fill tube may not be straight into the transmission, the grommet is not fully inserted into the transmission, the fill tube is not fully inserted into the grommet, or the fill tube is under preload; then replacement of the transmission grommet is <b>required</b> . Modification to the fill tube may also be required to allow the tube to be properly orientated when clamped in place.

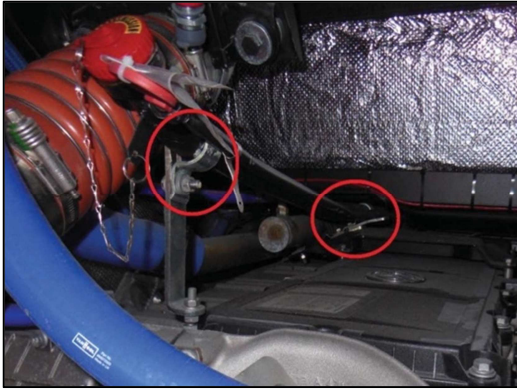
Figure 1

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## **LOCATION OF FILL TUBE MOUNTING CLAMPS:**

There is a total of 4 clamps along the transmission fill tube that must be loosened in order to test if the tube is under preloaded stress.

- Looking through the engine bay hatch, the first two clamps can be seen on top of the engine. Refer to Figures 2 and 3 for clamp locations.



**Figure 2: Location of upper two clamps on Detroit Diesel engine**



**Figure 3: Location of upper two clamps on Cummins engine**

- The other two mounting clamps must be accessed from under the coach. The third clamp is located near the top of the engine, but on the back side (above the transmission). Figures 4 and 5 illustrate the location of the third clamp. It can be found by looking up past the transmission and following the fill tube towards the top of the engine.



**Figure 4: Location of third clamp on Detroit Diesel engine**



**Figure 5: Location of third clamp on Cummins engine**

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- The final clamp is located near the base of the fill tube. It is located 2" above the grommet and is bolted to the side of the transmission. Figure 6 and Figure 7 illustrate the location of the fourth mounting clamp for the fill tube.



**Figure 6: Location of fourth clamp on Detroit Diesel engine**



**Figure 7: Location of fourth clamp on Cummins engine**

### **ADJUSTMENT PROCEDURE:**

*NOTE: To ensure the transmission fill tube is not under preload while it is clamped in place, all of the mounting clamps must be loosened.*

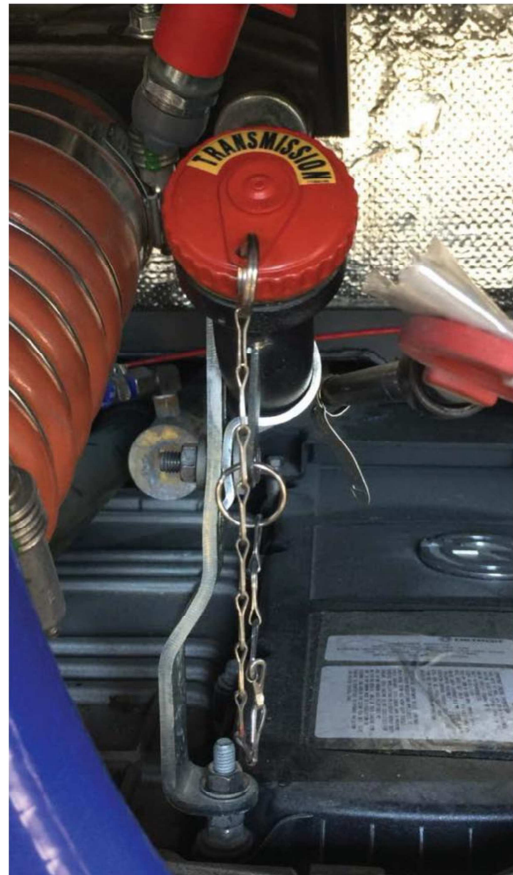
- With all the clamps loose, verify the tube does not need to be forced down to clear the top of the engine compartment.
- The fill tube should lay on all the mounting supports and not require any force to secure it.
- If the fill tube does require force to be secured properly, then it must be removed and modified. Refer to Figure 8 for a tube requiring modification.
- If modification to the pipe is required, replacement of the grommet must also be performed while it is removed.

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**Figure 8: Fill tube requiring modifications**



**Figure 9: Modified fill tube**

### **BEFORE REMOVING FILL TUBE:**

Clean the area around the transmission fill tube before removing the fill tube, making sure no foreign material is in the area of the grommet.

### **INSTALLATION PROCEDURE:**

Step	Action
1	Install the fill tube grommet into the transmission housing.
2	Carefully position and insert the fill tube into the seal.
3	Align the fill tube with the mounting supports and clamp locations.
4	Install and loosely secure the 4 clamps while ensuring proper clearance with the top of the engine compartment. Do not force the tube down while tightening the clamps. Tighten the clamp bolts to a torque of 24 to 29 Nm (18 to 21 ft.lbf).

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**HELP DESK:**

If there are any questions, please call ABC Customer Care & Parts Source toll-free for guidance on 1-877-427-7278. Listen for the prompts for warranty and select that option.

**DISCLAIMER:**

The procedures contained herein are not exclusive. Van Hool cannot possibly know, evaluate, or advise the transportation industry of all conceivable ways in which a procedure may be undertaken or of the possible consequences of each such procedure. Other procedures may be as good, or better, depending upon the particular circumstances involved. Each carrier who uses the procedures herein must first satisfy itself thoroughly that neither the safety of its employees or agents, nor the safety or usefulness of any products, will be jeopardized by any procedure selected.

**INFORMATION HANDLING:**

Important supplements and modifications of technical information not yet included in the manual are communicated by means of Service Bulletins.

**VAN HOOL CUSTOMER PORTAL:**

Consult the Van Hool customer portal for the latest service documentation. Beside the maintenance manual, you will also find the operating manual and the spare parts catalogue of your vehicle on the customer portal. The customer portal is accessible through [www.vanhool.be](http://www.vanhool.be), and only with a code (password) from Van Hool. If you do not have a password yet, request it by using the link on the Van Hool website.