

|                       |                                                                  |
|-----------------------|------------------------------------------------------------------|
| <b>ADDRESSEES</b>     | : ABC Customer Care and Parts Source                             |
| <b>VEHICLE MODEL</b>  | : AG300 First transit                                            |
| <b>MANUAL CHAPTER</b> | : 2.30 Drive train – Exhaust system                              |
| <b>DOCUMENT TYPE</b>  | : <b>Corrective</b>                                              |
| <b>DATE</b>           | : September 24 <sup>th</sup> , 2020                              |
| <b>SUBJECT</b>        | : <b>Optimization of Diesel Exhaust Fluid (DEF) installation</b> |

## APPLICATION

This work procedure applies to the following AG300 vehicle:

| Vehicle model | Construction number |
|---------------|---------------------|
| AG300         | 62924               |

## INTRODUCTION:

This procedure has been released to assist in successfully way to optimize the Diesel Exhaust Fluid (DEF) installation.

## COMPONENTS:

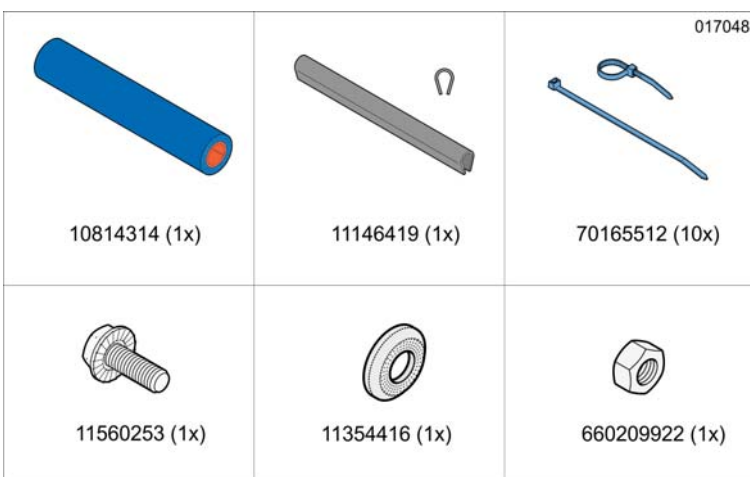
| Components of retrofit kit VH11742008                                                |                                           |            |
|--------------------------------------------------------------------------------------|-------------------------------------------|------------|
|  |                                           |            |
| <b>VH reference</b>                                                                  | <b>Description</b>                        | <b>Qty</b> |
| 10814314                                                                             | Silicone hose; length 24 inch (60 cm)     | 1          |
| 11146419                                                                             | Clamping profile; length 39 inch (100 cm) | 1          |
| 701655127                                                                            | Cable tie                                 | 10         |
| 11560253                                                                             | Self-locking screw M6                     | 1          |
| 11354416                                                                             | Serrated conical spring washer            | 1          |
| 660209922                                                                            | Nut M6x1                                  | 1          |

Figure 1

*Continued on next page.*

## **JOB QUALIFICATION:**

The task has to be carried out by an automotive technician.

## **JOB TIME:**

1.5 hours

## **JOB CODE:**

O21319N

## **PREPARATIONS:**

- Park the vehicle over a flat inspection pit, with the front wheels in the straight-ahead position. Apply the parking brake. Stop the engine. Switch off all systems and turn off the battery isolation switch on the dashboard.
- Install a "DO NOT OPERATE" warning message on the steering wheel.
- Put chocks in front of and behind the wheels.
- **Read the entire procedure before starting to work.**



## **WARNING!**

Observe safe shop practices at all times.

## **PROCEDURE:**

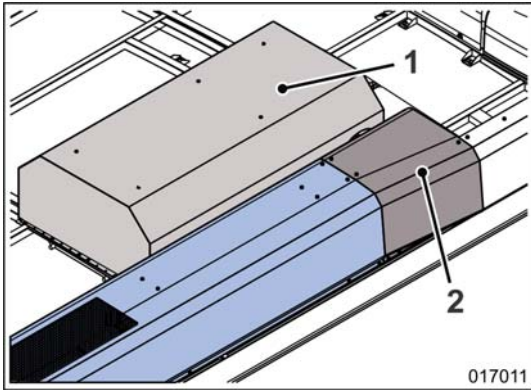
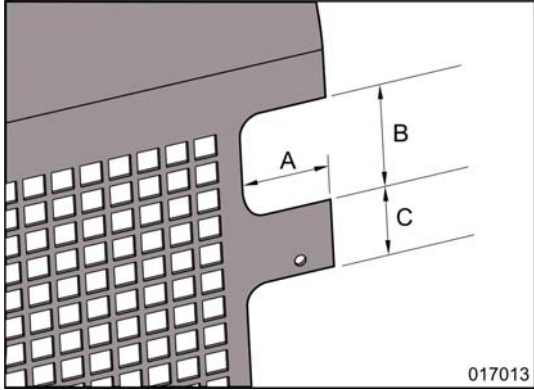
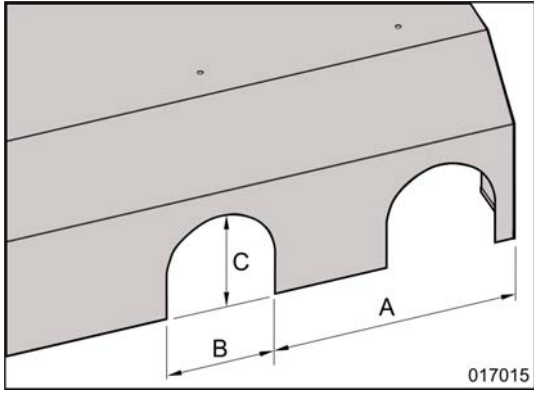
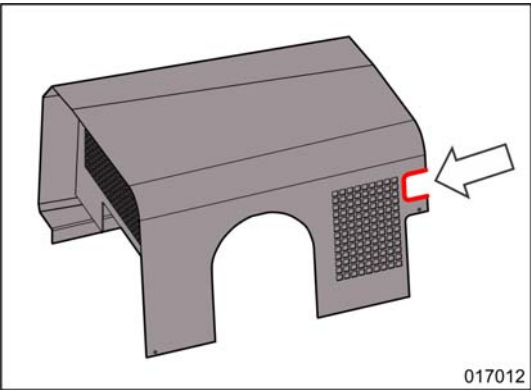
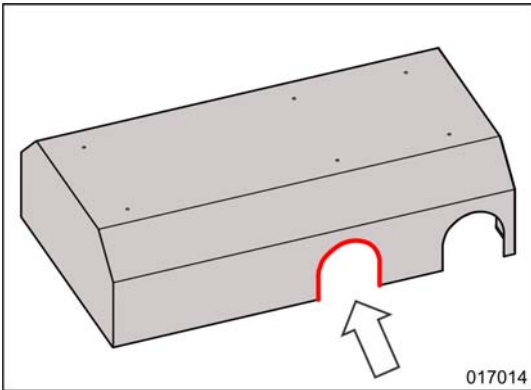
| Step | Action                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p><b>On the roof:</b> remove cover plates (1) and (2). Keep the fasteners apart for later reuse.</p>  |
| 2    | Modify both cover plates as explained under "STEP 2 IN DETAIL".                                                                                                                            |
| 3    | Modify the upper coolant hose at the DEF dosing unit as explained under "STEP 3 IN DETAIL".                                                                                                |
| 4    | Modify the DEF line routing to the DEF dosing unit as explained under "STEP 4 IN DETAIL".                                                                                                  |
| 5    | Check the coolant line to the DEF dosing unit for leaks. For hose clamps mounting guidelines, refer to instruction sheet "Hose clamp types" on the customer portal.                        |
| 6    | Re-install the cover plates.                                                                                                                                                               |
| 7    | Register through the registration button located behind work procedure W1319 on the Van Hool customer portal. Write the text "WP1319 completed" in the field "Remark".                     |

Figure 2

End of procedure.

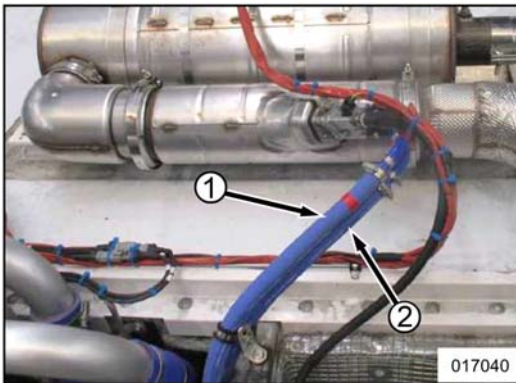
Continued on next page.

## STEP 2 IN DETAIL: To modify the cover plates

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1  | <p>Make an additional hole into the stainless steel cover plate (2) shown in figure 2 by using a hole saw and a grinder.</p>  <p><b>Figure 3:</b></p> <p>A: 2 inch (5 cm)<br/>B: 2 inch (5 cm)<br/>C: 1 inch (2 cm)</p>                                                                               |
| 2.2  | <p>Make an additional hole into the stainless steel cover plate (1) shown in figure 2 using a hole saw and a grinder.</p>  <p><b>Figure 4:</b></p> <p>A: 12 inch (31 cm)<br/>B: 2 inch (5 cm)<br/>C: 6 inch (16 cm)</p>                                                                              |
| 2.3  | <p>Make clamping profile 11146419 from the kit at length and fix it to the edges of the holes (figure 6 and 7) avoiding damage at the hoses passing through.</p>  <p><b>Figure 5</b></p>  <p><b>Figure 6</b></p> |

*Continued on next page.*

**STEP 3 IN DETAIL: To modify the coolant hose at the DEF dosing unit**

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.1  | <p>Pinch off both coolant hoses (1 and 2) to the DEF dosing unit.</p>  <p>Figure 7</p>                                                                                                                                                                                                                               |
| 3.2  | <p>Remove the upper coolant hose from its bracket as follows:</p> <ol style="list-style-type: none"><li>Remove fastener (2).</li><li>Remove the P-clamp from upper coolant hose (1). Keep the P-clamp apart for later reuse.</li><li>Secure the lower coolant hose again to its bracket.</li></ol>  <p>Figure 8</p> |
| 3.3  | <p>Install coolant hose 10814314 from the kit as follows:</p> <ol style="list-style-type: none"><li>Disconnect the upper coolant hose at the DEF dosing unit (see figure).</li><li>Replace the smaller diameter hose by the longer coolant hose from the kit. Reuse the hose clamps!</li></ol>  <p>Figure 9</p>    |

*Continued on next page.*

3.4



## CAUTION!

The coolant hose 10814314 must be routed upwards from the P-clamp so that most of the hose is located above the DEF dosing unit!

Route the upper coolant hose as follows:

- Make clamping profile 11146419 (2) from the kit from length and fix it to the edge of the reinforcement rib.
- Route coolant hose (3) as indicated in figure 10. Secure the hose with the P-clamp (removed in step 3.2) to bracket (1) by using self-locking screw 11560253, serrated conical spring washer 11354416 and nut 660209922 from the kit.

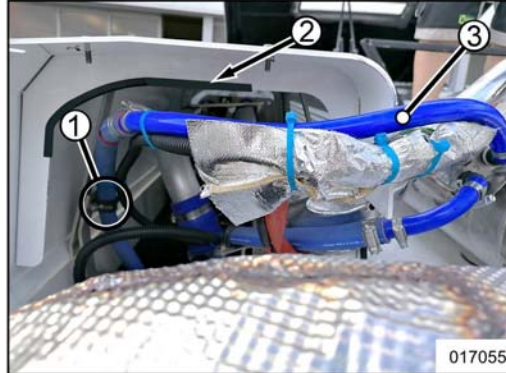


Figure 10

### STEP 4 IN DETAIL: To modify the routing of the DEF line

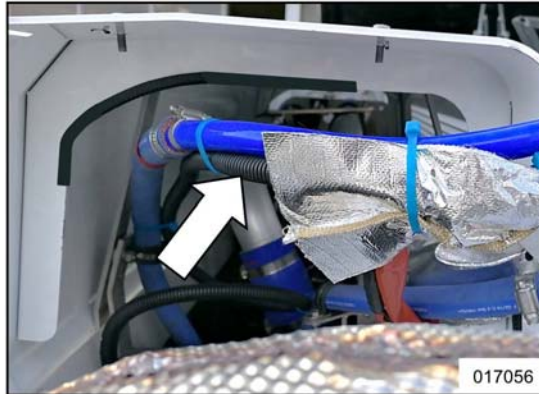
| Step | Action                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------|
| 4.1  | Remove the cable ties securing the DEF line. <div data-bbox="603 1131 1129 1512" data-label="Image"> </div>         |
| 4.2  | Pull the surplus of the DEF line out of the chimney. <div data-bbox="609 1565 1136 1948" data-label="Image"> </div> |

*Continued on next page.*



**4.3**

Reroute the DEF line as shown in figure 13. Secure the DEF hose with several cable ties to the upper coolant hose so that the DEF line is located above the DEF dosing unit.



**Figure 13**

**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.

**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.