SERVICE BULLETIN

SB1628

ADDRESSEES	:	Owners and operators of the vehicles listed under “Application”.
VEHICLE MODEL	:	A330 K Hybrid
MANUAL CHAPTER	:	2.06H Traction system – diesel engine
BULLETIN TYPE	:	Field Change Program
DATE	:	May 23th, 2019
SUBJECT	:	**Replacement of DEF hose between pump and injector**
TERMS & CONDITIONS	:	Refer to the warranty section further in this Bulletin

APPLICATION:

The Field Change Program, subject of this bulletin, is applicable to following units:

Vehicle type	VIN
A330 K Hybrid	66302 → 66329 66331 → 66332

INTRODUCTION:

Some of the above mentioned vehicles left the factory with a poor quality DEF hose between pump and injector unit. The DEF hose shows early leakage at the connector sides. Owners and operators of the affected units should first identify the DEF hose and, if necessary, change the DEF hose. Refer to the step-by-step instructions in this service bulletin.

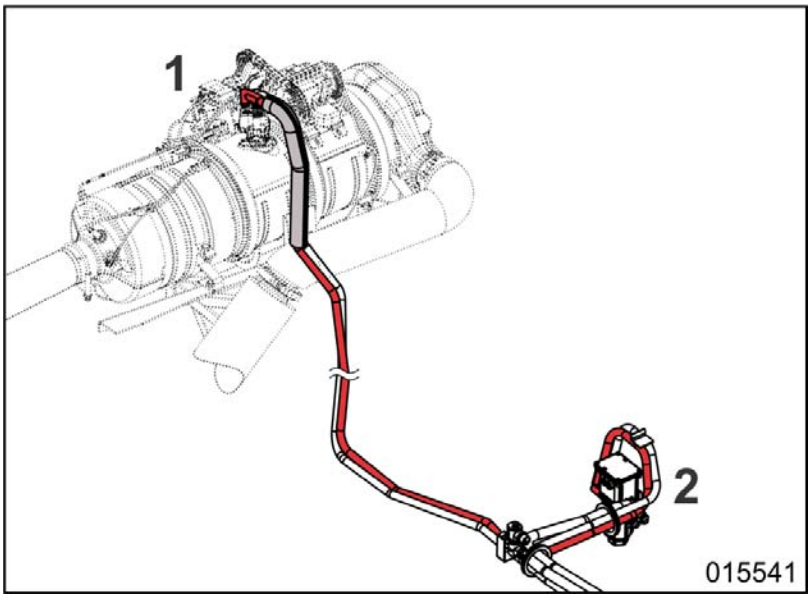


Figure 1: DEF hose between pump and injector unit

1. Injector unit
2. DEF pump

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COMPONENTS:

Parts of retrofit kit VH11680104

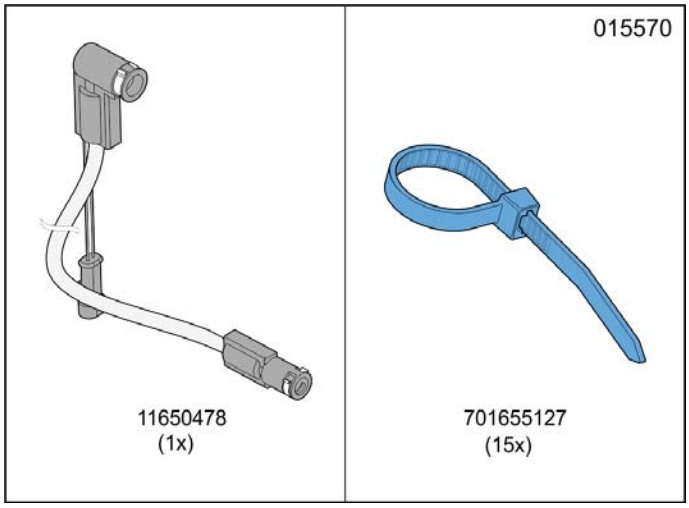


Figure 2

VH reference	Description	Quantity
11650478	DEF hose (between pump and injector unit)	1
701655127	Cable tie	15

JOB QUALIFICATION:

- **DEF hose removal/installation**: automotive technician trained in the operations at hand
- **DEF pressure test**: Cummins qualified service technician.

SPECIAL TOOLS, EQUIPMENT OR SERVICES:

- Cummins Data link Adapter Kit
- Notebook with Cummins Insite Pro Software installed

PREPARATIONS:

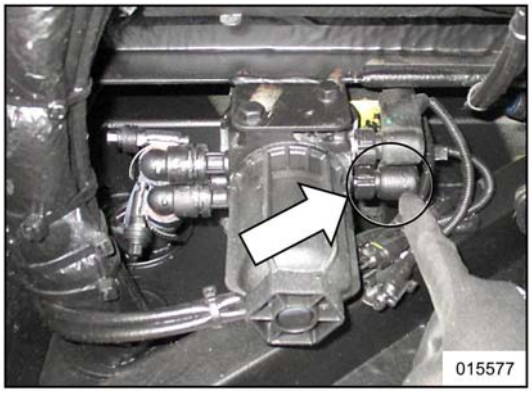
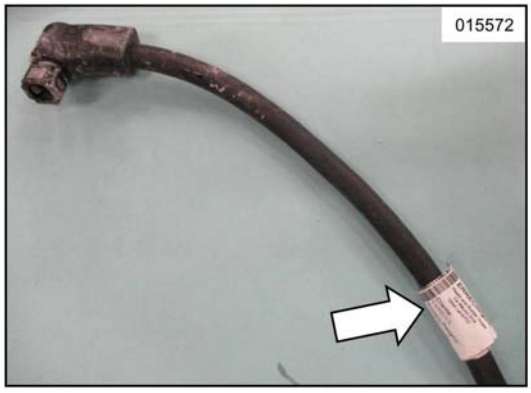
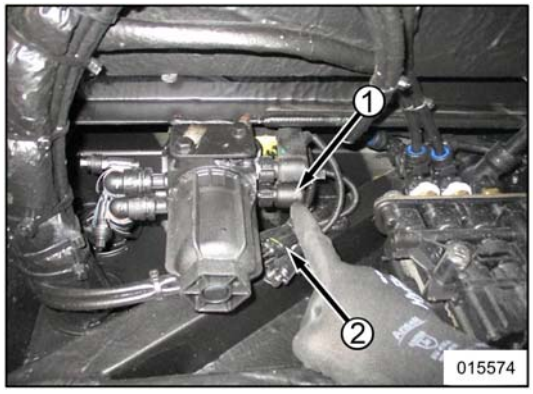
- Park the vehicle over a flat inspection pit, with the front wheels in the straight-ahead position. Apply the parking brake.
- Stop the engine.
- Switch off all systems and turn off the battery isolation switch on the dashboard.
- Install a "DO NOT OPERATE" warning message on the steering wheel.
- Put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

WARNING!

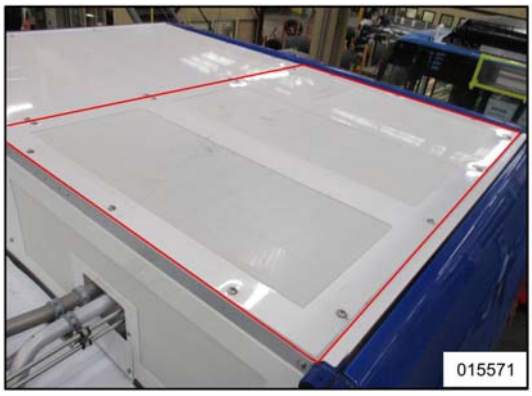
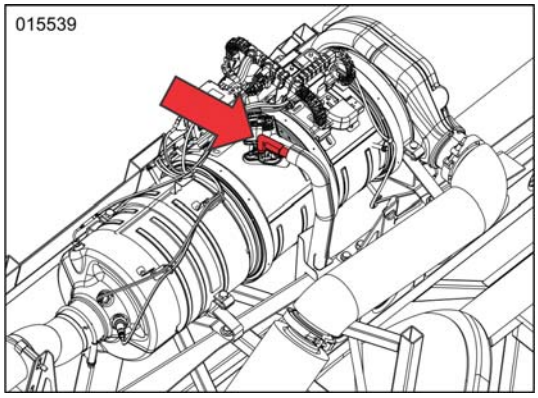
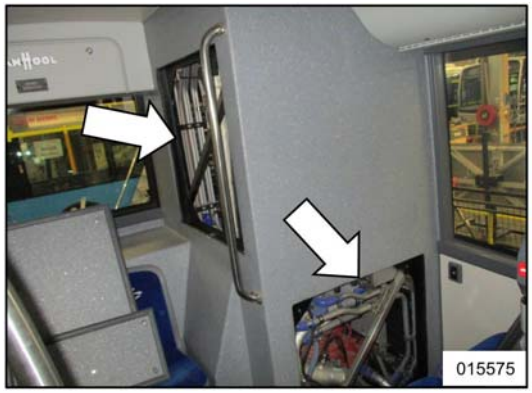
Observe safe shop practices at all times.

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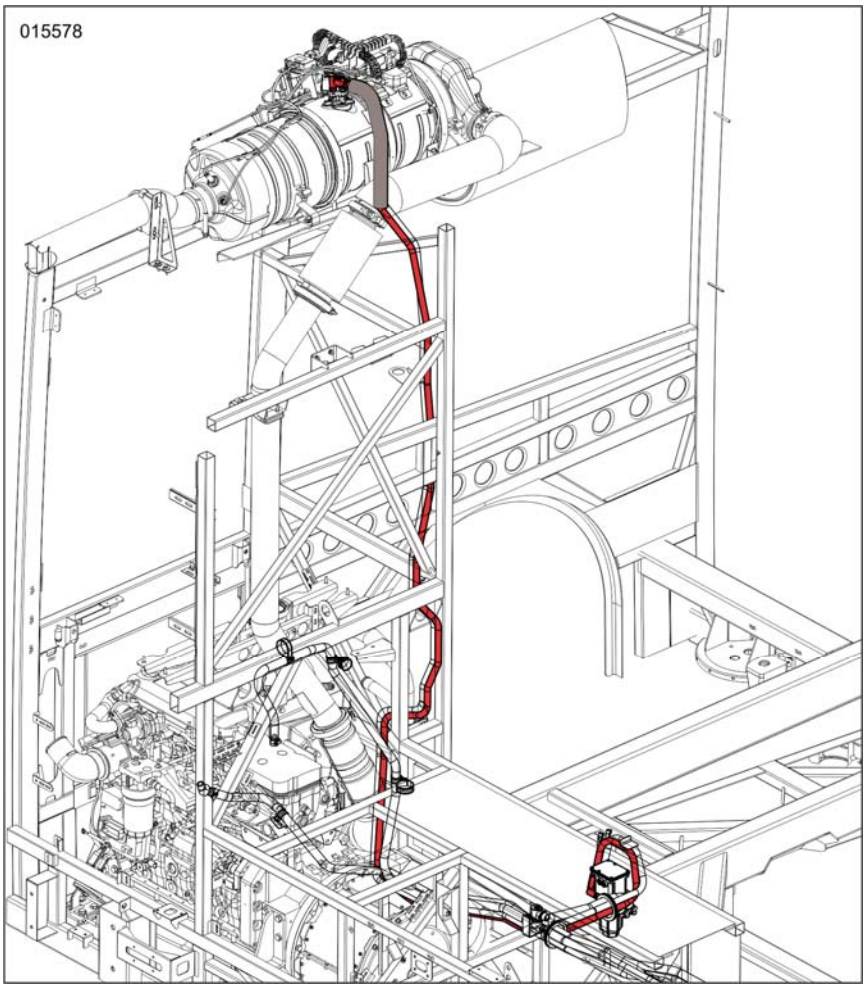
PROCEDURE:

Step	Action
1	**Underneath the vehicle, behind the drive axle:** remove the protective panel to gain access to the DEF pump.  **Figure 3**
2	**At the DEF pump:** identify the DEF hose between the pump and the injector unit by means of the identification tag on the hose. Does the identification tag on the hose contain the VH reference 11650478. • If so, reinstall the protective panel and go to step 13. • If not, go to step 3  **Figure 4: Connector of affected DEF hose**  **Figure 5: DEF hose identification tag**
3	**At the DEF pump:** place a container with sufficient capacity underneath the pump.
4	**At the DEF pump:** disconnect the quick fitting (1) and the electrical connector (2) of the affected DEF hose.  **Figure 6**

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5	**WARNING!** **Be sure that the exhaust aftertreatment device has cooled down completely before starting work.** **At the roof:** remove the protective panel above the exhaust aftertreatment device.  **Figure 7**
6	**At the exhaust aftertreatment device:** disconnect the quick fitting of the DEF hose at the injector unit.  **Figure 8**
7	**At the interior:** remove the indicated access panels.  **Figure 9**

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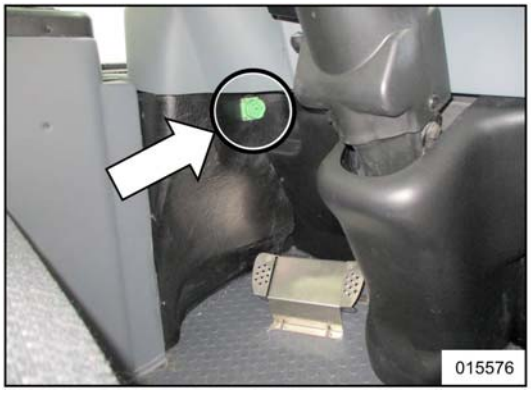
8	Remove the DEF hose between pump and injector unit as follows: a. Cut the cable ties securing the DEF hose. b. Remove the P-clamps securing the DEF hose. c. Remove the hose.  **Figure 10: Routing of DEF hose between pump and injector unit**
9	Install DEF hose 11650478 from the kit as follows: a. **At the roof:** connect the quick fitting of DEF hose at the injector unit. b. Route the hose to the pump as indicated in figure 10. c. Secure the DEF hose by using the P-clamps removed and some new cable ties 701655127 from the kit. d. **At the DEF pump:** connect the quick fitting and electrical connector of the DEF hose. e. Secure the DEF hose by using the P-clamps removed and some new cable ties 701655127 from the kit.
10	Check if the compartments are clean of diesel exhaust fluid. DEF can easily be cleaned with hot water.
11	Top up the DEF tank.

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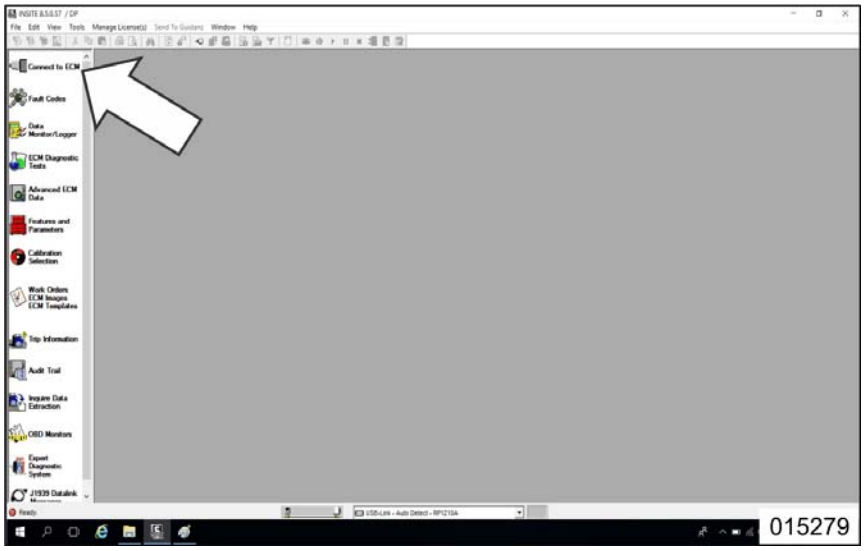
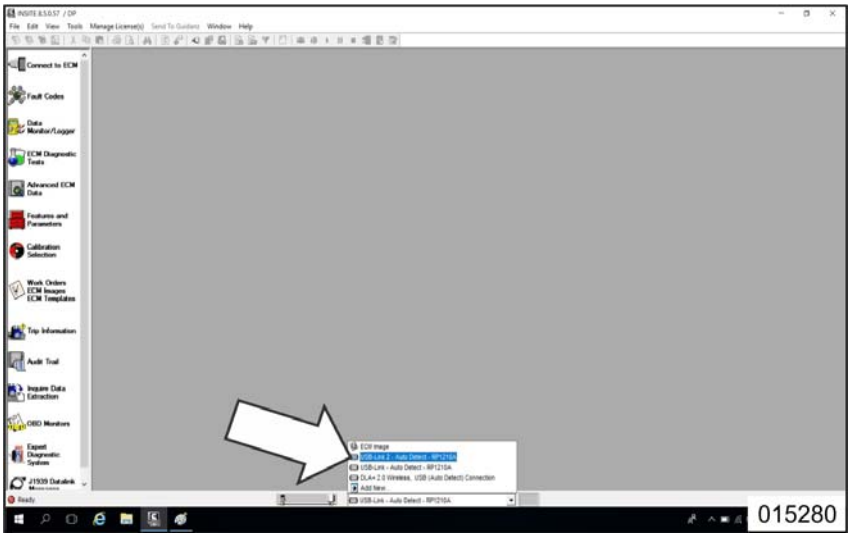
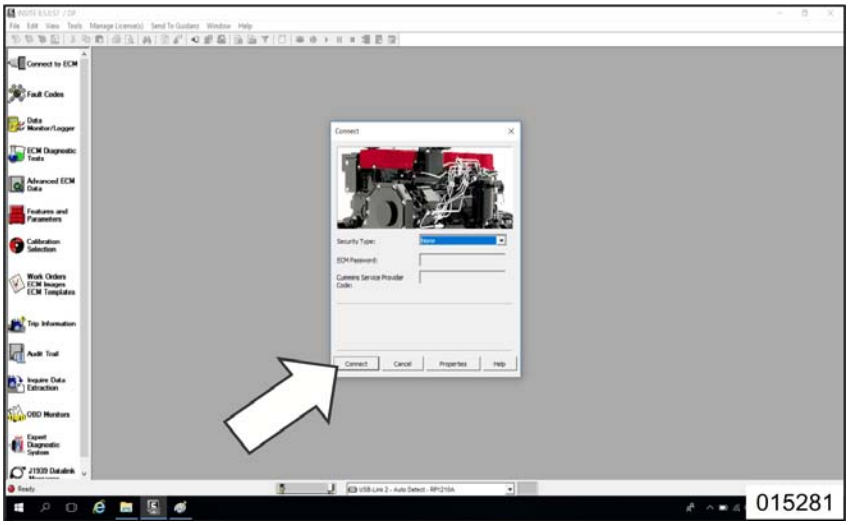
12	Pressure test the DEF installation as explained in “STEP 12 IN DETAIL”.
13	Register the works through the registration button located behind service bulletin SB1628 on the Van Hool customer portal. Write the text "DEF hose already OK” or “DEF hose changed” in the "Remark" field. Labour allowance will only be awarded after registration of the works.

End of procedure.

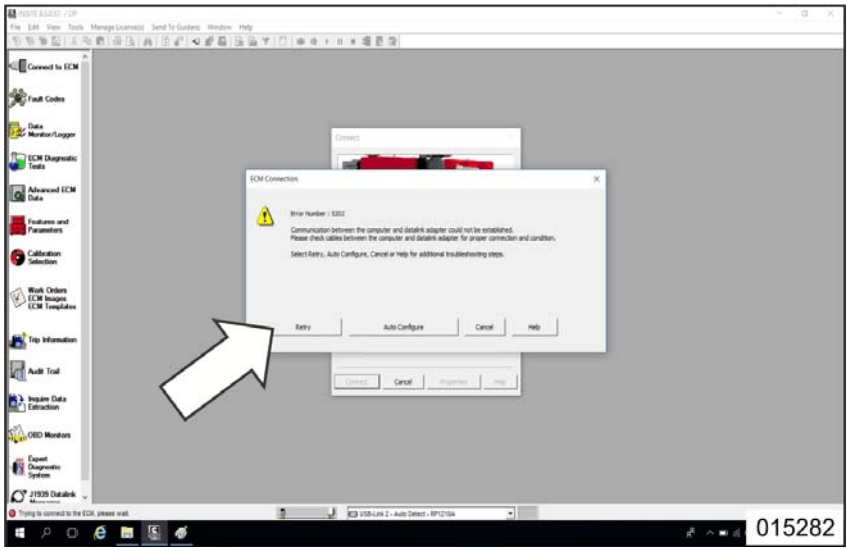
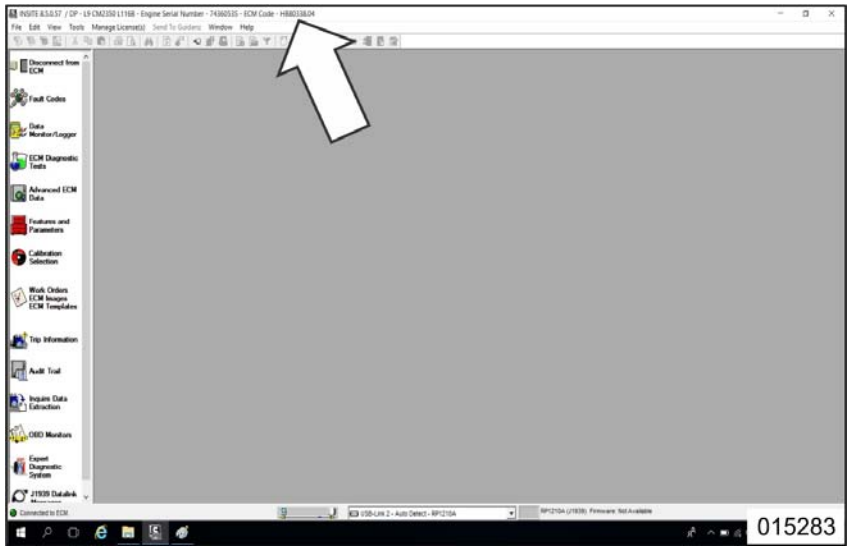
STEP 12 IN DETAIL: To pressure test DEF installation

Step	Action
12.1	Connect the laptop with the INSITE PRO diagnostic software installed to the engine diagnostic socket of the vehicle.  **Figure 11: Engine diagnostic socket located at the LHS of the steering colomn**
12.2	Switch on the battery isolating switch on the dashboard.
12.3	Switch on the vehicle ignition.
12.4	Click on the “INSITE” icon to open the program.  **Figure 12**

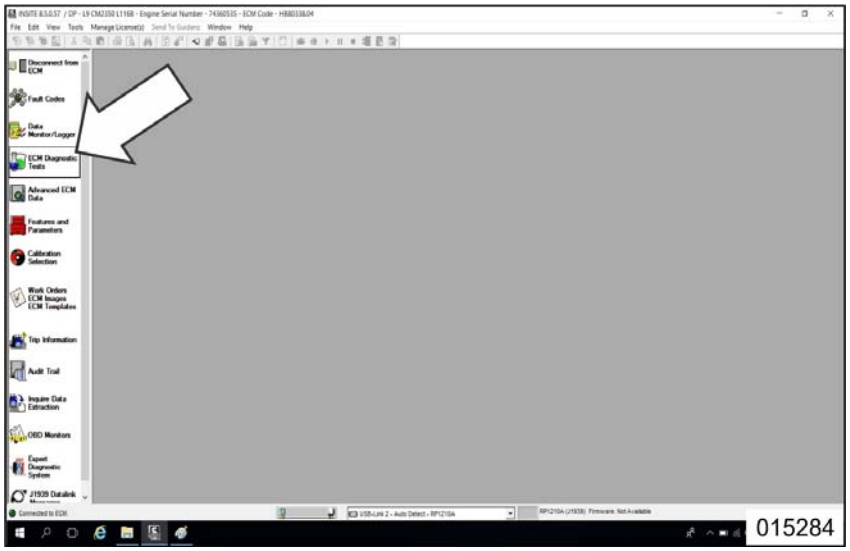
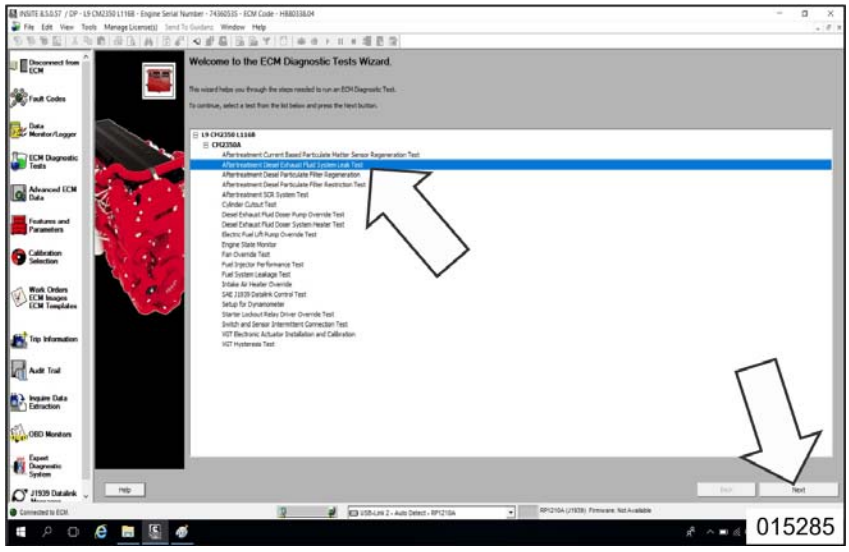
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12.5	Click on “CONNECT TO ECM”.  **Figure 13**
12.6	Select USB - link2 - Auto Defect- RP1210A.  **Figure 14**
12.7	Click on “CONNECT”.  **Figure 15**

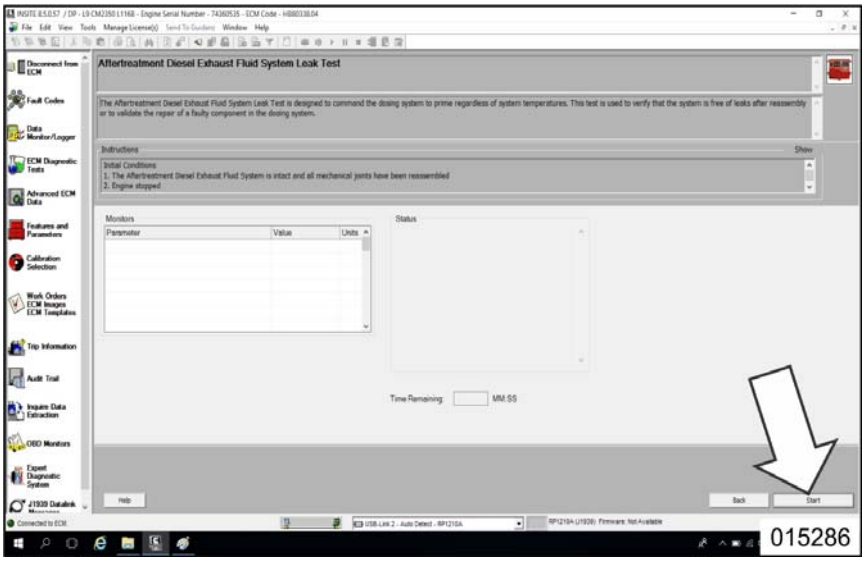
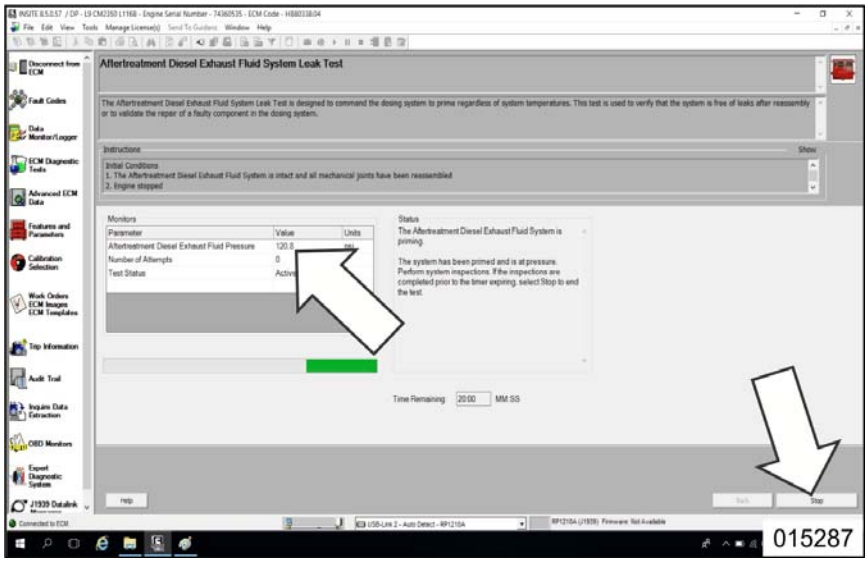
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12.8	Check the connection between the laptop and the adapter in case that “Error Number” 5202 appears and click on “RETRY” to check again.  **Figure 16**
12.9	Check if the correct engine type, serial code and ECM code appears.  **Figure 17**

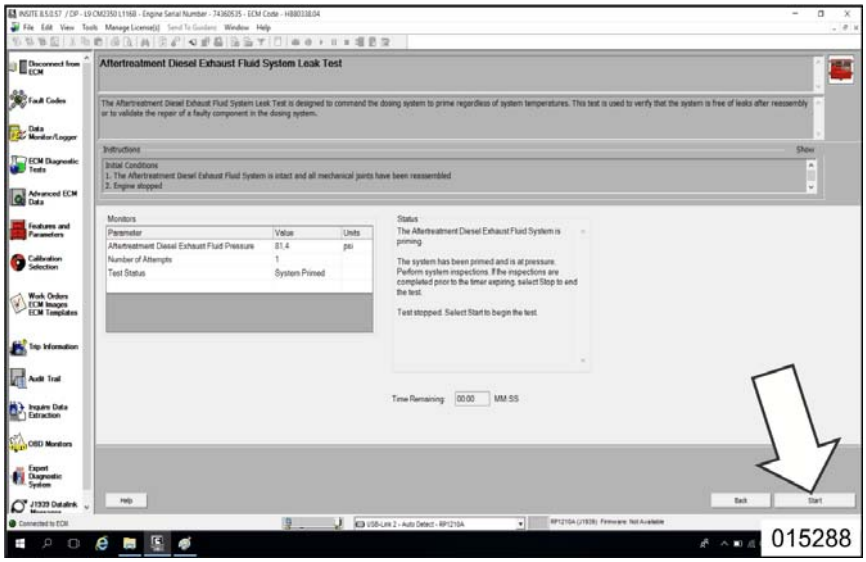
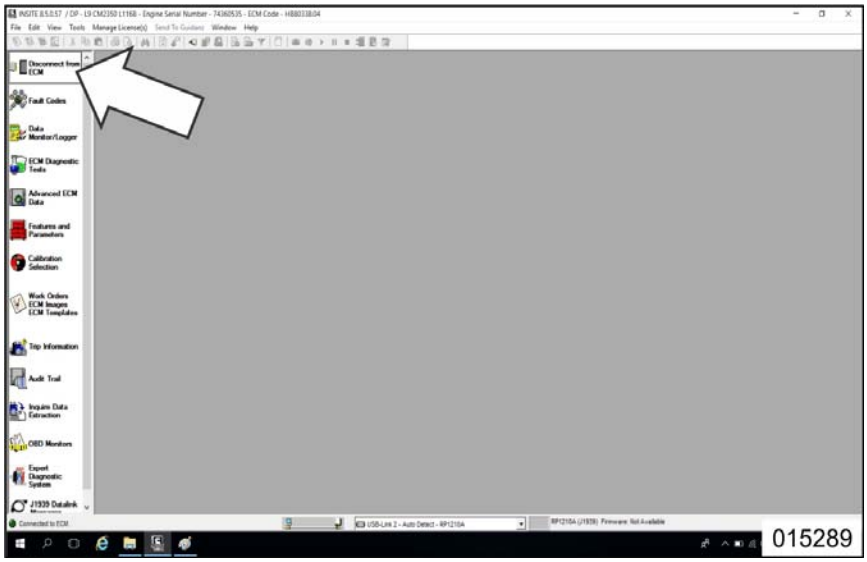
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12.10	Click on “ECM DIAGNOSTIC TESTS”.  **Figure 18**
12.11	Select “AFTERTREATMENT DIESEL EXHAUST SYSTEM LEAK TEST” and click then on “NEXT”.  **Figure 19**

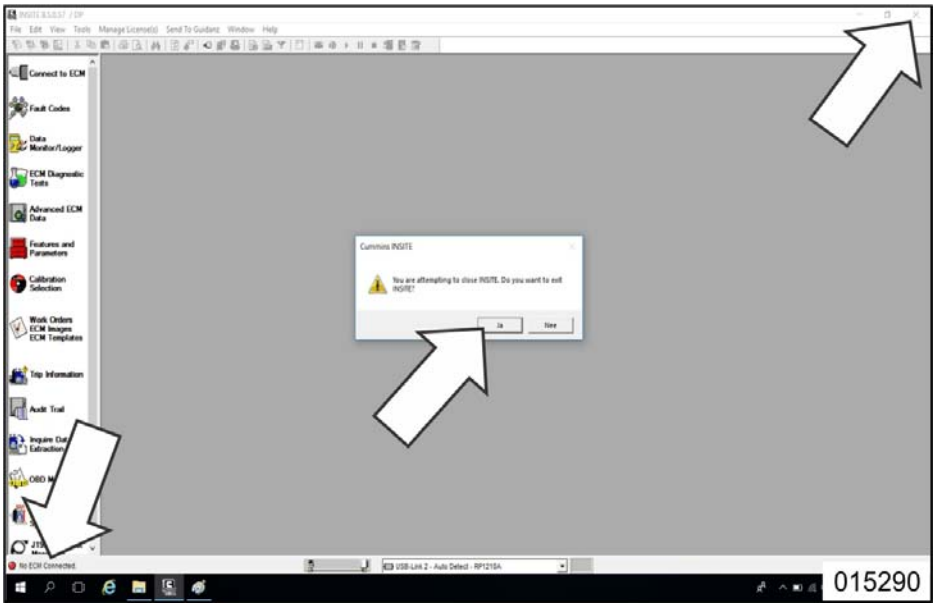
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12.12	Click on “START”.  **Figure 20**
12.13	Does the pressure of the DEF stabilizes at a constant level of 8,27-8,48 bar (120-123 psi)? • If so, wait until the test is completely finished and continue with step 12.15. • If not, click on “STOP” and check for leaks, repair and go to the next step.  **Figure 21**

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12.14	Click on “START” to continue and wait until the test is completely finished.  **Figure 22**
12.15	Click on “DISCONNECT FROM ECM”.  **Figure 23**

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12.16	Close the program: a. Check if “NO ECM CONNECTED“ appears in the left corner at the bottom of the screen. b. Click on the cross at the upper right side of the screen to close the program. c. Click on “YES” as mentioned in the popup “You are attempting to close INSITE. Do you want to exit INSITE?”  **Figure 24**
12.17	Switch off the vehicle ignition.
12.18	Remove the equipment.

WARRANTY:

1. Terms and conditions:

Van Hool will accept warranty claims for this repair as follows:

Labor allowance for identification of DEF hose: 0.5 hour
Labor allowance for identification and replacement of DEF hose: 7 hours per vehicle

Campaign/expiration date: Service bulletin issue date + 0,5 year

2. Claim references:

- **Job code for identification of DEF hose:** O61628N
- **Job code for identification and replacement of DEF hose:** O61628V

HELP DESK

If you have any more questions, address your usual contact person at the Service Department or at your local Van Hool Service Point.

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

VAN HOOL CUSTOMER PORTAL:

Consult the customer portal regularly 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, 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.