

ADDRESSEES	: Owners and operators ABC Customer Care and Parts Source
VEHICLE MODEL	: CX35 with Cummins L9 engine
MANUAL CHAPTER	: 2.30 Traction engine – exhaust system
BULLETIN TYPE	: Field Change Program
DATE	: February 21st, 2019
SUBJECT	: To change Diesel Exhaust Fluid (DEF) hose between pump and injector unit
TERMS & CONDITIONS	: Refer to the warranty section further in this Bulletin

APPLICATION:

The Field Change Program, subject of this bulletin, applies to CX35 vehicles equipped with a Cummins L9 engine.

DESCRIPTION:

On the vehicles affected by this service bulletin, there is a risk that the heated DEF hose between pump and injector unit overheats. Investigation has shown that the heat generated by the electric current flowing in the heating wire of the DEF hose could damage the line if the DEF flow is low.

To address this issue, Van Hool is conducting a Field Change Program to change the affected DEF hose by an improved hose. We also ask to change the 15A circuit breaker protecting the electric circuit of the heated DEF hose by an 8A type.

This Service Bulletin gives step-by-step installation instructions.

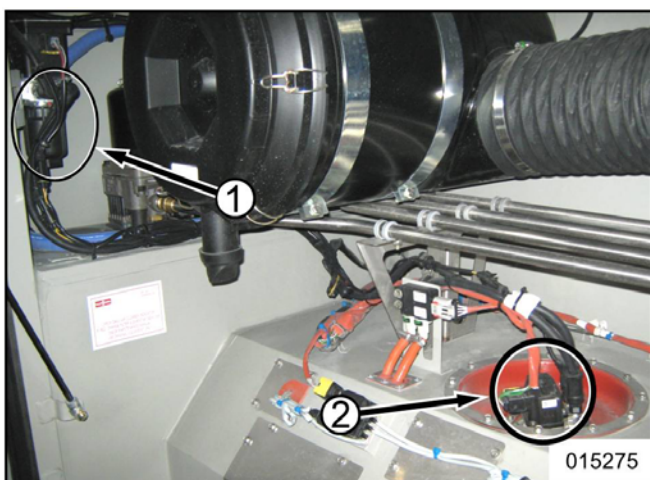
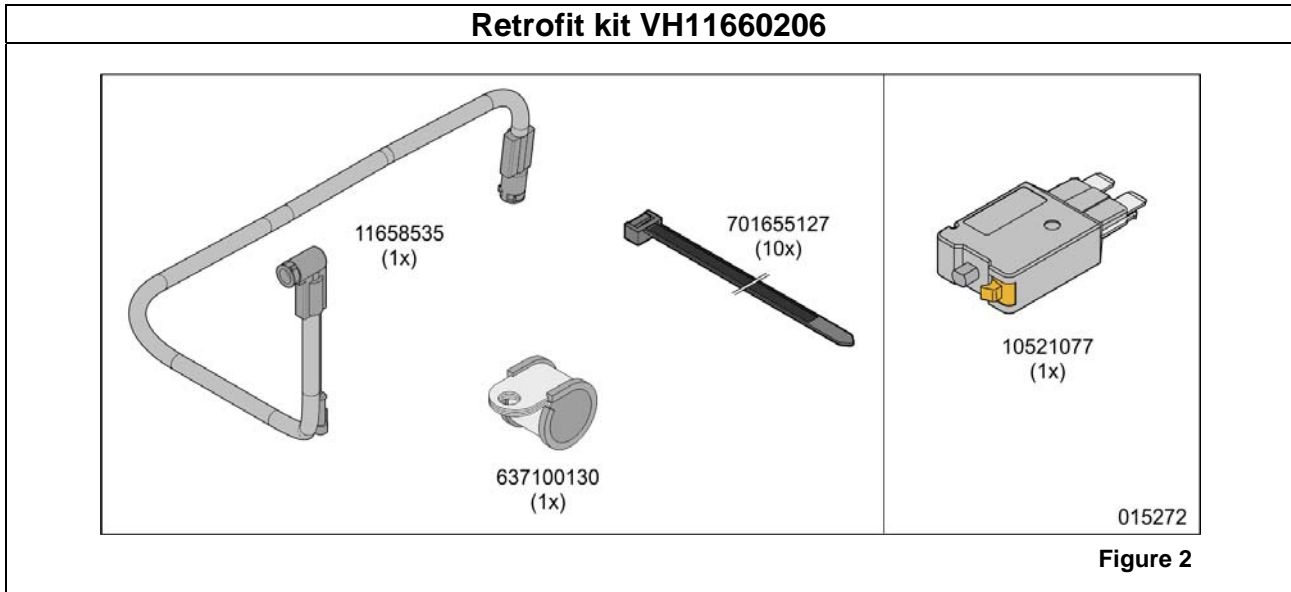


Figure 1: View in compartment behind rearmost exterior access door at the left

- 1. DEF pump
- 2. Injector unit

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COMPONENTS AND PRODUCTS:



VH reference	Description	Quantity
11658535	Heated DEF hose (between pump and injector unit)	1
637100130	P-clamp	1
701655127	Cable tie	10
10521077	Circuit breaker 8A	1

JOB QUALIFICATION:

The task has to be carried out by a Cummins qualified service technician, trained in the operations at hand. If you are not sure that you're qualified, contact ABC Customer Care.

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	Open the rearmost exterior access door at the left.
2	Change the heated DEF hose as explained in "STEP 2 IN DETAIL".
3	In junction box EKA: change the 15A circuit breaker on position F5 in fuse holder ZB by 8A circuit breaker 10521077 from the kit.
4	Connect the laptop with the INSITE PRO diagnostic software installed to the engine diagnostic socket of the vehicle.
5	Pressure test the DEF installation as explained in "STEP 5 IN DETAIL".
6	Close the rearmost exterior access door at the left.
7	Notify ABC Companies by mail. Write the text "SB1583 executed for VIN....." in the mail and send the mail to warranty@abc-companies.com .
8	For ABC Companies only: register through the registration button located behind the Service Bulletin on the Van Hool customer portal. Write the text "SB1583 executed"" in the field "Remark". Labor allowance will only be awarded after Van Hool has received the registration.

End of procedure.


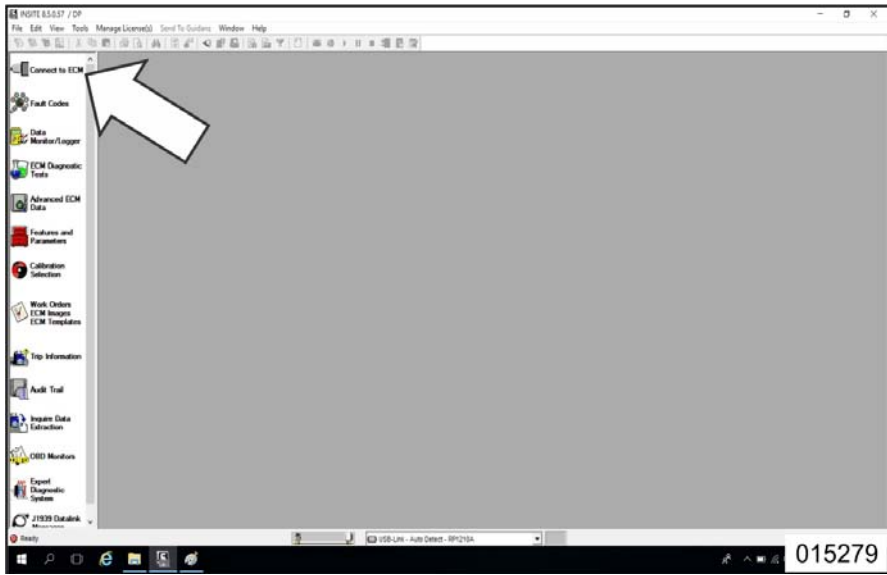
STEP 2 IN DETAIL: To change heated DEF hose between pump and injector

Step	Action
2.1	<div data-bbox="316 1025 405 1115" data-label="Image"> </div> <p>WARNING!</p> <p>Be sure that the exhaust aftertreatment device has cooled down completely before starting work.</p> <p>Remove the DEF hose between pump and injector as follows:</p> <ol style="list-style-type: none"> Cut the cable ties securing the electric wires to the DEF hose. Remove the P-clamp (1, figure 3) securing the DEF hose to the bracket. Disconnect the electric connector of the DEF hose (figure 4). Disconnect the quick fittings of DEF hose (2, figure 3) and remove the hose. <div data-bbox="331 1431 858 1814" data-label="Image"> </div> <div data-bbox="347 1825 446 1854" data-label="Caption"> <p>Figure 3</p> </div> <div data-bbox="895 1431 1422 1814" data-label="Image"> </div> <div data-bbox="895 1825 1369 1883" data-label="Caption"> <p>Figure 4: Electric connector of DEF hose between pump and injector</p> </div>

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2.2	<p>Install DEF hose 11658535 from the kit as follows:</p> <ol style="list-style-type: none"> Connect the DEF hose. Secure the DEF hose to the bracket by using clamp 637100130 from the kit. Secure the electric wires to the DEF hose by using the cable ties 701655127 from the kit. Connect the electric connector of the DEF line.
2.3	<p>Check if the compartment is clean of diesel exhaust fluid. DEF can easily be cleaned with hot water.</p>

STEP 5 IN DETAIL: To activate pressure test of DEF installation

Step	Action
5.1	Switch on the battery isolating switch on the dashboard.
5.2	Switch on the vehicle ignition.
5.3	<p>Click on the “INSITE” icon to open the program.</p>  <p style="text-align: right;">Figure 5</p>
5.4	<p>Click on “CONNECT TO ECM”.</p>  <p style="text-align: right;">Figure 6</p>

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5.5

Select USB - link2 - Auto Defect- RP1210A.

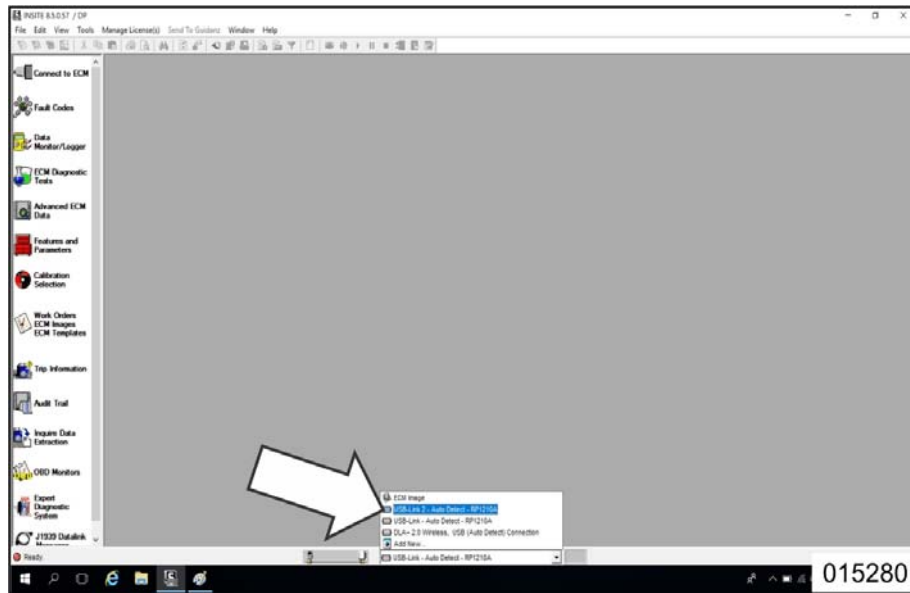


Figure 7

5.6

Click on "CONNECT".

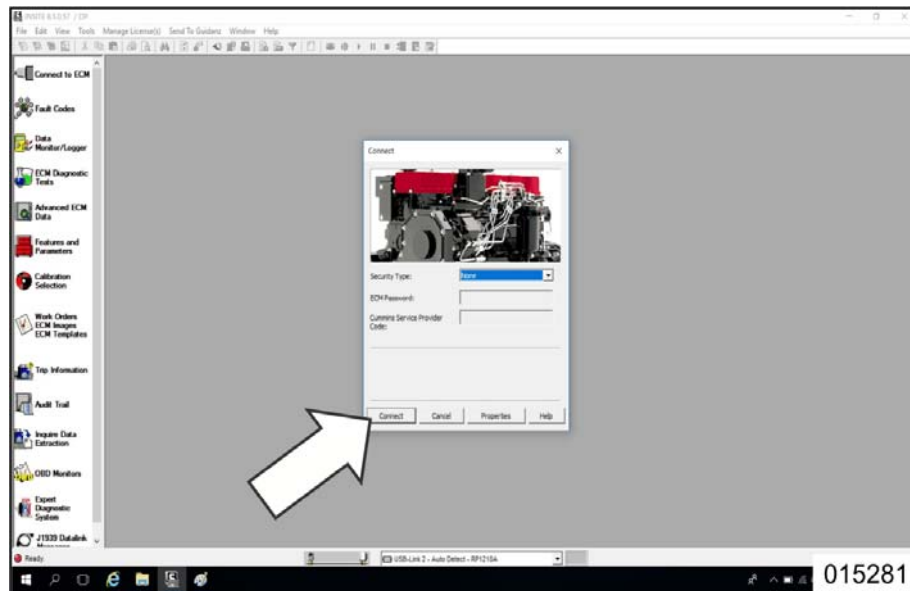
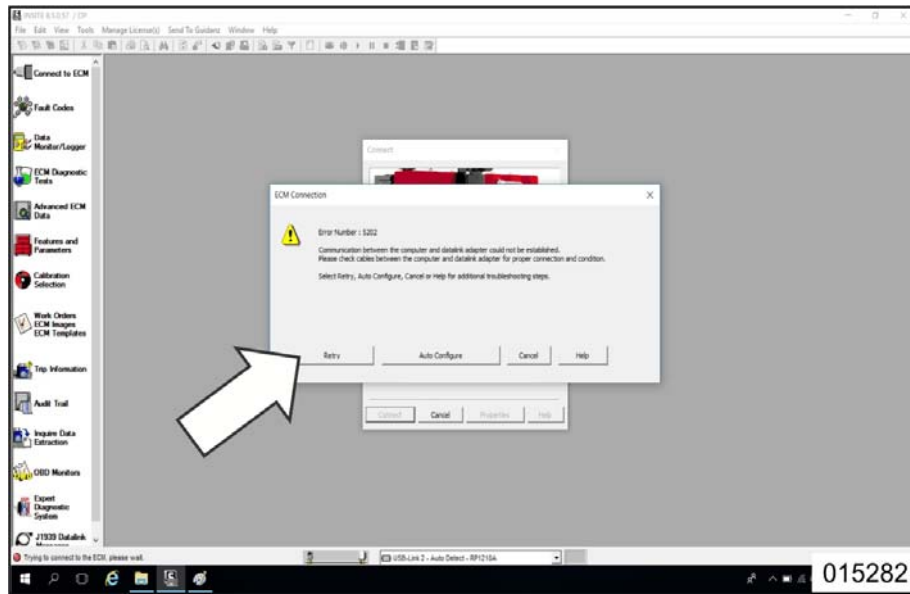


Figure 8

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5.7

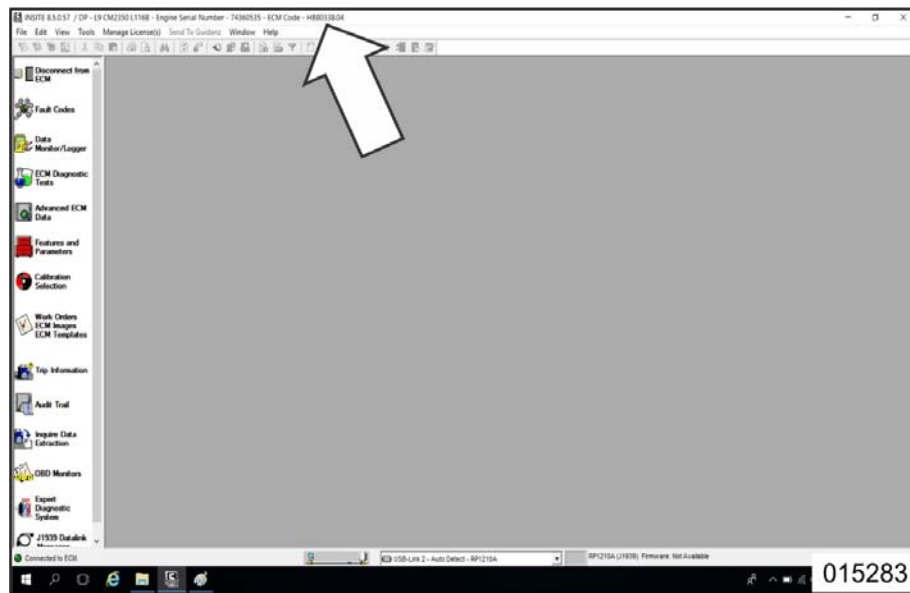
Check the connection between the laptop and the adapter in case that “Error Number” 5202 appears and click on “RETRY” to check again.



015282 Figure 9

5.8

Check if the correct engine type, serial code and ECM code appears.



015283 Figure 10

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5.9

Click on “ECM DIAGNOSTIC TESTS”.

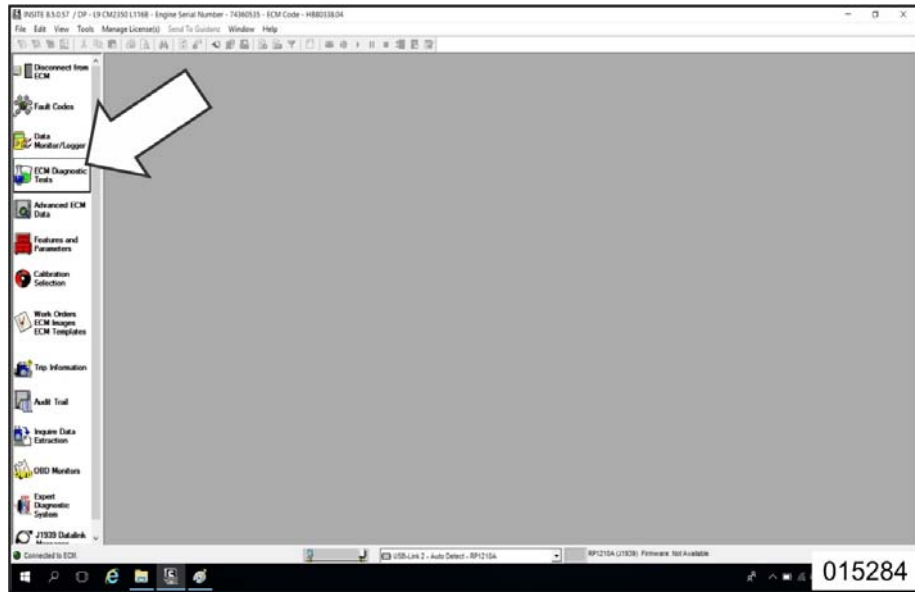


Figure 11

5.10

Select “AFTERTREATMENT DIESEL EXHAUST SYSTEM LEAK TEST” and click then on “NEXT”.

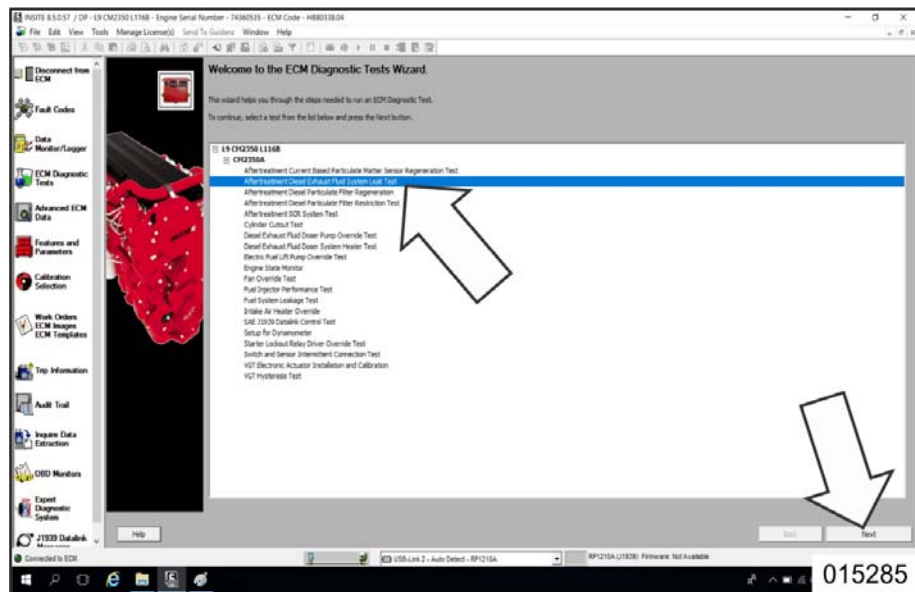


Figure 12

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5.11

Click on "START".

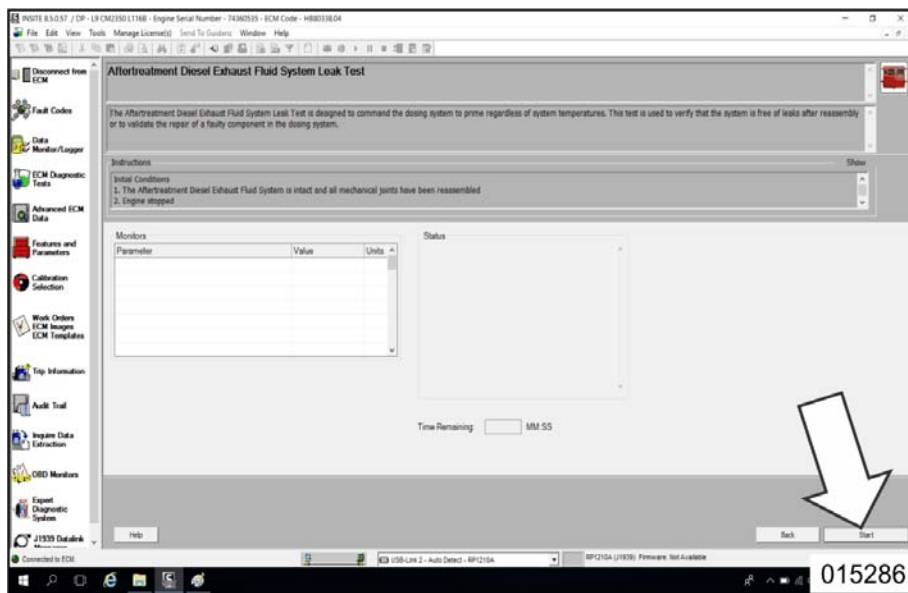


Figure 13

5.12

Does the pressure of the DEF stabilizes at a constant level of 120-123 psi?

- If so, wait until the test is completely finished continue with step 5.14.
- If not, click on "STOP" and check for leaks, repair and go to the next step.

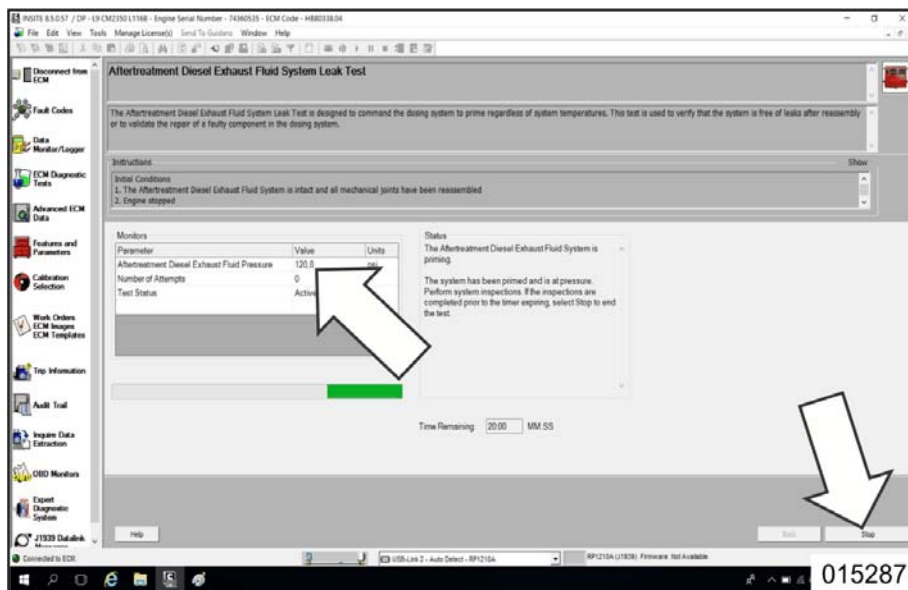


Figure 14

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5.13

Click on "START" to continue and wait until the test is completely finished.

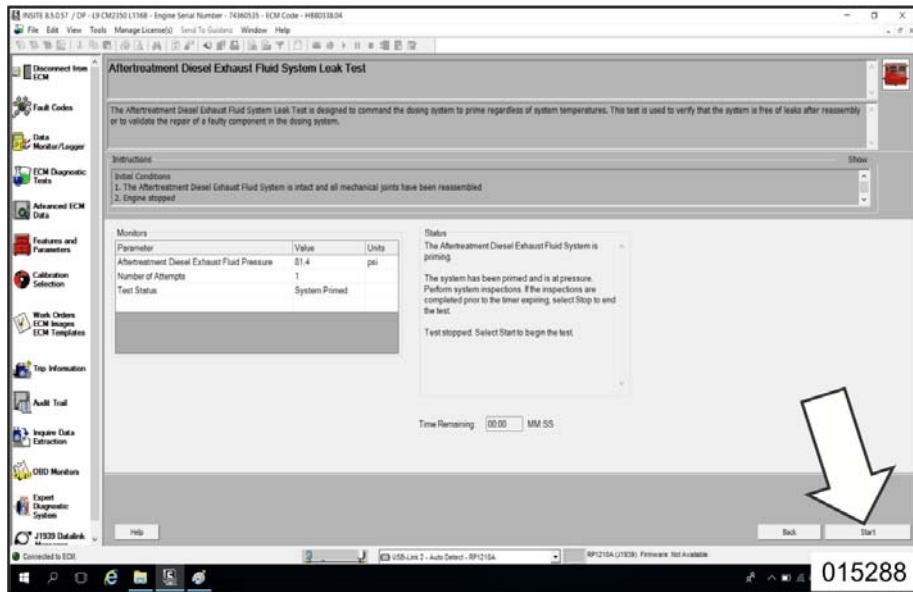


Figure 15

5.14

Click on "DISCONNECT FROM ECM".

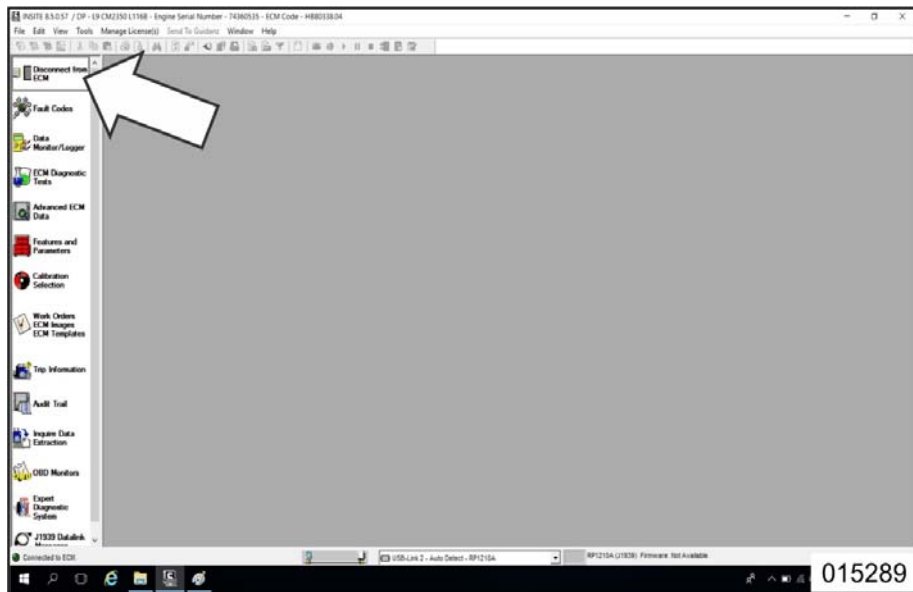
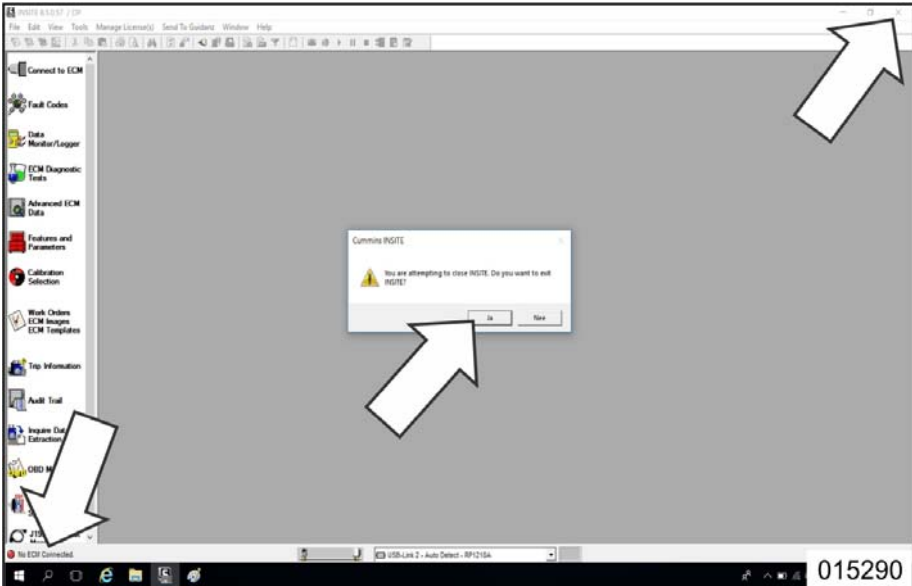


Figure 16

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<p>5.15</p>	<p>Close the program:</p> <ol style="list-style-type: none"> Check if “NO ECM CONNECTED“ appears in the left corner at the bottom of the screen. Click on the cross at the upper right side of the screen to close the program. Click on “YES” as mentioned in the popup “You are attempting to close INSITE. Do you want to exit INSITE?”  <p style="text-align: right;">Figure 17</p>
<p>5.16</p>	<p>Switch off the vehicle ignition.</p>
<p>5.17</p>	<p>Remove the equipment.</p>

WARRANTY:

1. Terms and conditions:

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

Labor allowance: 1.5 hours of labor will be awarded per vehicle

Campaign/expiration date: Service Bulletin issue date + 1 year

2. Claim references:

Job code: O61583N

Claim submission: Contact ABC Customer Care Warranty Department for guidance.

Monitoring and performance: The claim records pertaining to this Bulletin will be used to determine that the remedy has been executed in accordance with the manufacturer’s instructions and to evaluate the status of this Field Change Program.

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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 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.