



Volvo Models

Volvo Model Conventional , VNX , VNL , VNM , VHD , VAH

Engine family

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

Emission Standard

Emission Standard US17 GHG , US16 , US15 , US13 OBD , US14 GHG

** SOLUTION **

Title Volvo Chassis - Diagnostic Trouble Codes (DTC) P208E And P103B Logging With Possible Derate (SCR Inducement) - **US14+OBD13, US14+OBD15, US14+OBD16 And US17+OBD16 And Newer Emissions, Common Year Models 2015 And Newer**

Cause P208E and or P103B may be generated due to the intermittent, temporary clogging of the Diesel Exhaust Fluid (DEF) dosing valve, normally at startup.

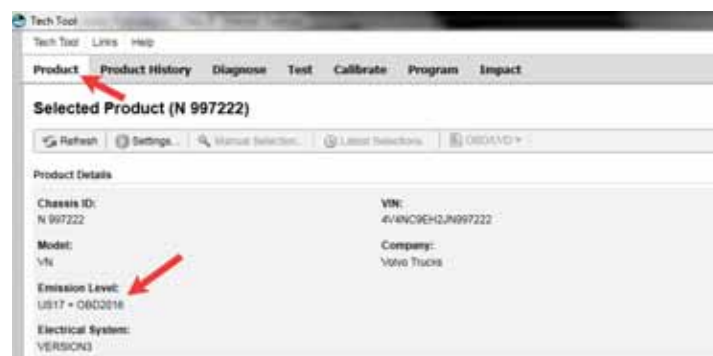
Solution - **DO NOT RUN A SERVICE REGENERATION OR CRYSTAL SUBLIMATION TO EXIT INDUCEMENT FOR THESE CODES.**

- **IF THE CHASSIS CAME IN WITH DERATE WARNINGS ACTIVE**, Proceed to section two **Prior To Programming**.

I. Software Levels

Verify the chassis emissions level

- Details can be found in the Product Details box on the Product tab in PTT as seen below:



Review the Detailed Status Information for the relevant code on the DTC Readout.



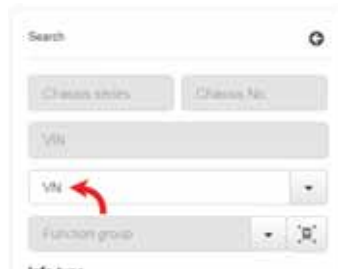
For US14+OBD13, US14+OBD15, and US14+OBD16

Software improvements have been released for all three emissions levels to address this DTC. Field Service Bulletins with information and instructions have been published for each emissions level. All of the FSBs can be found under the Service tab in [Impact, Function Group 284](#). The articles can also be searched for by Title. Refer to the chart below for the correct bulletin information:

Emissions Level (Model Year)	Field Service Bulletin
US14+OBD13 (2015)	FSB 284-066 Engine Control Module (ECM) and Aftertreatment Control Module (ACM), Reprogramming
US14+OBD15 (2016)	FSB 284-064 Engine Control Module (ECM) and Aftertreatment Control Module (ACM), Reprogramming
US14+OBD16 (2017)	FSB 284-065 Engine Control Module (ECM) and Aftertreatment Control Module (ACM), Reprogramming

If the Bulletin does not appear when searched with either VIN or Chassis information entered, search by model:

1. Clear any chassis information from the Search box.
2. Select or enter the applicable model.



3. Make sure Title is selected in the Search By field. Enter the correct Bulletin title in the text entry field.

Additional search values ▾

Search by:

Titles ↵

FSB 284-066 ↵

4. Press the Search button. The operation will appear in the results window.

Fgrp	Title	Info type	ID/Operation
284	FSB 284-066, Engine Control Module (ECM) and Aftertreatment Control Module (ACM) Reprogramming	Repair	2841-22-04-1E

5. Select the correct vehicle configuration from the list that appears as shown below:

FSB 284-066, Engine Control Module (ECM) and Aftertreatment Control Module (ACM), Reprogramming ×

Description	ID	Date
<input type="checkbox"/> VAH, ENG-VE11, Assembly Date 2014-01-01 - 2014-12-31		06/08/2018
VAH, ENG-VE13, Assembly Date 2014-01-01 - 2014-12-31		
VAH, ENG-VE16, Assembly Date 2014-01-01 - 2014-12-31		
VHD, ENG-VE11, Assembly Date 2014-01-01 - 2014-12-31		
VHD, ENG-VE13, Assembly Date 2014-01-01 - 2014-12-31		
VHD, ENG-VE16, Assembly Date 2014-01-01 - 2014-12-31		
VN, ENG-VE11, Assembly Date 2014-01-01 - 2014-12-31		
VN, ENG-VE13, Assembly Date 2014-01-01 - 2014-12-31		
VN, ENG-VE16, Assembly Date 2014-01-01 - 2014-12-31		
VT, ENG-VE11, Assembly Date 2014-01-01 - 2014-12-31		
VT, ENG-VE13, Assembly Date 2014-01-01 - 2014-12-31		
VT, ENG-VE16, Assembly Date 2014-01-01 - 2014-12-31		

For All US17+OBD16 And Newer

- Verify software levels are current. Update if they are not. Note that per FSB284-067, the software released for GHG17 vehicles **did not address these codes**.
- Proceed to Section II.

If software shows to be current, ensure the Confirmed DTC status is True as shown above, then proceed with diagnostics below.

II. System Tests

Premium Tech Tool (PTT) Operation number [2589-08-03-05 Aftertreatment selective catalytic reduction \(SCR\) system](#), found under Function Group 2 in the Test tab should be utilized to diagnose the problem and exit inducement in the order listed below:

1. Test A: System Pressure Build Up

- This test confirms that the DEF pump builds pressure as expected (this test can be skipped if other tests will also be performed).
- **IF PRESSURE IS NOT BUILT, DO NOT REPLACE DEF PUMP.** Follow the instructions below:

1. Start the truck and allow it to run for 10 minutes.
2. Shut off the truck.
3. Rerun the test.

2. Test B: Dosing Test

- A graduated cylinder or other appropriate container with measurement accurate within 2 milliliters (cubic centimeters) should be used to measure dosing test results.

1. Sub-Test 2, Small dosing test - 120 seconds at 25% dosing
2. Sub-Test 3, Large dosing test - 120 seconds at 100% dosing
3. Sub-Test 4, Dosing Test, Exit inducement mode - This will clear any inducement (derate) condition caused by P208E or P103B.

3. Test C: Exit Inducement Mode

- Test B, sub-test 4 mentioned in the previous section runs the diagnostic monitor on the dosing valve and verifies it is operating correctly. Test C will reset any inducement (derate) timers present.

- This test should be run as the last step before releasing vehicle back to the customer so that if the problem is not completely fixed, the driver will still have 4 hours to reach a service location before the vehicle begins going into severe derate.



Internal comments (BO)

Do not recommend EECU /ACM replacements for this issue.
Recommend GD along with this CBR.

If the truck has been in multiple times for this issue, recommend thorough inspection for any clog/electrical issues.

NA_Sister solutions

[K00491826](#)

Campaign code

FSB284-064, FSB284-065, FSB284-066

Solution visibility

[Dealer distribution](#)

Function(s)/component(s) affected

Function affected

DEF Dosing , SCR , 1 1 0 EMS , 2 1 0 ACM , Diagnostic tool

Function Group

Function Group

254 catalytic converter; exhaust emission control equipment , 2584 Dosage Valve;
Injector , 284 control system, fuel supply

Customer effect

Main customer effect	regeneration , diagnostics/methodology , efficiency/abnormal behavior , fault code /display
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Fluid implicated	AdBlue
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Fault code(s)

OBD 2013 Diagnostic Trouble Codes	P103B , P208E
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Conditions

Vehicle operating mode	when driving , when stationary
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Frequency of occurrence of problem	random
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Administration

Author	ut0031h
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Last modified by	RU4469V
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Creation date	15-12-2016 17:12
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Date of last update	19-06-2018 18:06
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Review date	15-02-2019 00:02
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Status	Published
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Number of scores	2
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