Volvo Chassis - Fuel Injector Offset Learning Diagnostic Trouble Codes (DTC); Possible Rough / Uneven Idle - US14+OBD13 Emissions, Commonly Model Year 2015

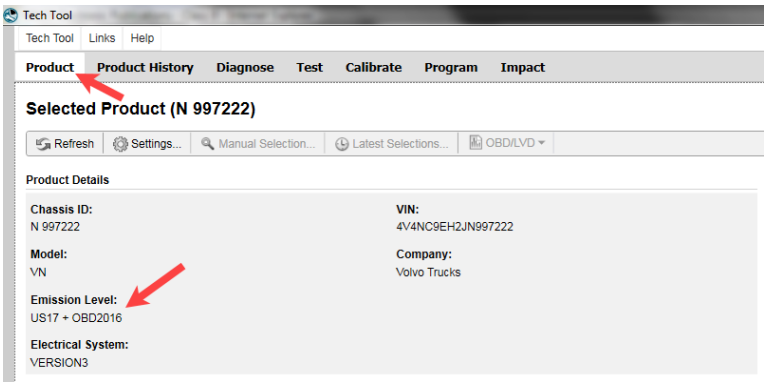
Internal Content

Relevant DTCs

The list of all applicable DTCs for this issue is included in the Fault Codes section below.

Repair

- Verify the chassis emissions level and ensure that the vehicle is within the applicable range for this solution.
- Details can be found in the Product Details box on the Product tab in PTT as seen below:



If any of the fault codes in the section below are logged in a US14+OBD15 chassis:

1. Update the EMS software

2. Reset Cylinder Balance from Premium Tech Tool (PTT) Operation 2387-08-03-01 Cylinder Balancing, located in the Test tab.

3. Run a Cylinder Balance test from the same screen following the reset. Start the test at minimum temperature (140 °F, 60 °C) and monitor balancing until coolant temperature reaches approximately 177 °F (81 °C). This will allow observation of performance during multiple engine modes that are entered during warm-up.

Live UI : Cylinder Balance test still shows an issue and/or there are one or earning Offset codes that return following the update, follow Guided Diagnostics for the applicable code or codes

Guided Diagnostics for the applicable code or codes.

- **If the EMS MSW is part number 23167865.P01 or newer**, proceed with Guided Diagnostics for the applicable code or codes.

Tags

volvo k25847618 p02cc-00 p02cd-00 p02ce-00 p02cf-00 p02d0-00 p02d1-00 p02d2-00 p02d3-00 p02d4-00 p02d5-00 p02d6-00 p02d7-00 p1011-00 p1012-00 p1013-00 p1014-00 p101d-00 p1023-00 p1024-00 p1025-00 p1026-00 p1027-00 p1028-00 p02cc00 p02d000 p02d100 p02cf00 p02cd00 p02ce00 p101200 p101300 p101400 p02d200 p02d300 p02d400 p02d500 p02d600 p02d700 p101100 p101d00 p102300 p102400 p102600 p102700 p102500 p102800 p1029-00

Live UI

Related links and attachments

No links or attachments available

Feedback

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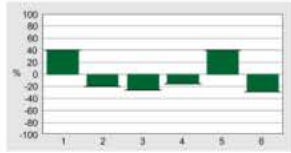
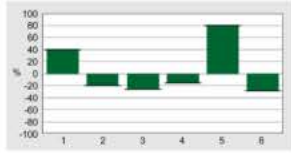
Live UI





2387-08-03-01 Cylinder Balancing

Simulation

Information >> Conditions >> Execution

Purpose

Check the injector fuel compensation values

Description

The injectors are always compensated plus or minus to obtain an even idle speed

When some cylinders are compensated more than the others it could indicate combustion faults in more than one cylinder

Note: Positive compensations means that the injection time is increased to achieve an even operation
Negative compensations means that the injection time is decreased to achieve an even operation

Continue >

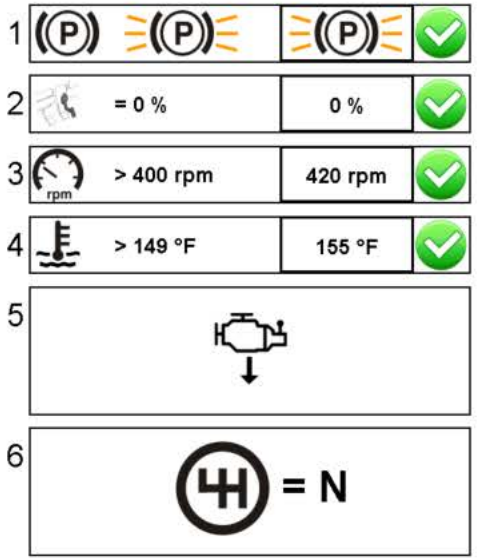
Cancel

Tech Tool

Tech Tool | Links | Help

BRADLEY PICKENS

Product | **Product History** | **Diagnose** | **Test** | **Calibrate** | **Program** | **Impact**



2387-08-03-01 Cylinder Balancing

Simulation

Information >> **Conditions** >> Execution

Automatically checked conditions

1 Parking brake applied
2 Accelerator pedal (AP) released
3 Engine speed above 400 rpm
4 Engine Coolant Temperature (ECT) above 149 °F

Manual conditions

5 The power take-off must be deactivated
6 Gear selector in neutral position

☐ Confirmed

Continue > | Cancel

Chassis ID: M763 19305 VIN: 1M2AV07C0JM019305 Work Order: 000000

Product | Online

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1/31/2022

Tech Tool

Tech Tool | Links | Help

BRADLEY PICKENS

Product | **Product History** | **Diagnose** | **Test** | **Calibrate** | **Program** | **Impact**

Cylinder fuel compensation in percent

Time	1	2	3	4	5	6

Reset

2387-08-03-01 Cylinder Balancing

Simulation

Information >> Conditions >> **Execution**

Action

Keep the engine at idle during the test

After starting the test or resetting the values, run the test until the values are stable for at least 5 minute(s)

Note: For more accurate test results the engine should be at operating temperature

Evaluation

- The cylinder's unbalanced condition could be caused by the ECM trying to compensate for another weak cylinder
- When some cylinders are compensated more than the others it could indicate combustion faults in more than one cylinder
- The ECM can compensate for sensor signals that are not reliable by adjusting the fueling offset ratios

Note: The compensation values can be reset by clicking the button

Parameter values

600 rpm	**Engine speed**
50 %	**Engine load**
155 °F	**Engine Coolant Temperature (ECT)**

Test result

Select one of the following alternatives

Note: Selecting a test result will stop reading values from the vehicle

- (•) OK
- ( ) Not OK

Continue >

Chassis ID: M763 19305 VIN: 1M2AV07C0JM019305 Work Order: 000000

Product Online

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