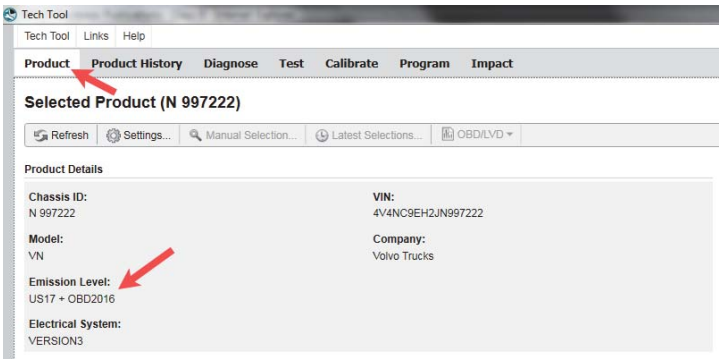
Solution

Title (customer effect)	Engine Diagnostic Trouble Codes (DTC's) P24A0 And P249F Lighting The Malfunction Indicator Lamp (MIL) - OBD15 (Commonly Model Year 2016) And Newer
Cause	Diagnostic Trouble Codes (DTC) P24A0 and P249F Lighting The Malfunction Indicator Lamp (MIL). Troubleshooting steps leading to No Fault Found. The following emissions levels are affected: • OBD15 - Model Year 2016 • OBD16 - Model Year 2017 (Non-Common Rail Fuel System) • US17 / OBD16 - Model Year 2018 (Common Rail Fuel System)
Solution	**Overview** Vehicles may display the MIL and one or both of the following DTCs: • P24A0 - Closed Loop DPF Regeneration Control At Limit - Temperature Too Low • P249F - Excessive Time To Enter Closed Loop DPF Regeneration Control These DTCs set from monitors on operations requiring Aftertreatment Hydrocarbon Injector (AHI, 7th Injector) input, including: • Moving Crystal Sublimations (OBD15 and OBD16 emissions levels) • Moving Sulfur Regenerations (US17 / OBD2016 emission level only) These operations run in the background and are transparent to the driver. The fault codes **do not inhibit regeneration** or cause any operational problem with the vehicle except for the MIL illuminating. The regen will continue normally even with the fault codes present. The faults may set over a several day period due to the amount of time it takes to complete some moving regenerations.

Repair Information

Verify the chassis emissions level

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



For OBD15 (Commonly Year Model 2016) Chassis ONLY:

- Software improvements have been released to address these codes. If P24A0 and /or P249F is present, software should be checked and updated as necessary.

- Two modules are affected by this update and should be reprogrammed in the following order:
    1. Engine Control Module (EMS)
    2. Aftertreatment Control Module (ACM)

- If there are other codes and symtoms present or the code(s) return following the software update, normal diagnostic procedures should be followed to determine the issue.

For OBD16 (Non-Common Rail) chassis:

The following steps should only be performed if one or both codes are present in the chassis and there are no other codes indicating another existing issue. If there are other codes present they should be diagnosed as normal first, and the problem reverified following repairs.

- Open an eService Service Request. The request must include:
    - Any historical information of issues with the Emissions Aftertreatment System (EATS) or failures that could have contaminated the EATS
    - A complete, current DTC Readout from the time of the chassis's arrival
    - **Await further instruction from Dealer Technical Support**

For US17 / OBD16 (Common Rail Fuel System) chassis:

- **Verify that EMS and ACM software do not have any updates available**
- Perform a sulfur regen using Premium Tech Tool (PTT) and clear DTCs.
- This will temporarily resolve the fault codes. **Do Not** change any components on subject vehicles with these fault codes.

Internal comments (BO)

When an eService case for OBD16 is received:

1. Review all sources for DTC information to verify that there is no other issue that could be causing the codes to set
    - DTC readout provided by the technician
    - Insight or QlikView (We have seen codes present in Insight that do not appear on DTC Readouts and vice versa)
    - Product History Viewer

2. Verify that there have been no previous issues that could affect the EATS
    - Technician should be providing this information
    - UCHP
    - Product History Viewer

3. Have the technician perform a regen.
    - A screenshot of the successful regen showing the temperature graph needs to be attached to the case
    - **The code(s) should go inactive following the regen if they are currently active**

4. If all above criteria are met, send the case details to Matthew McVeigh for containment software to be loaded.

For US14 / OBD2016, Containment 4 has been released. This containment can only be applied to a chassis in central systems. **An e-service case is required for containment requests.** This applies to trucks which have had at least one incident of either of the fault codes listed above (P24A0 or P249F).
Containment software can be loaded for a code currently active, or a code that was active on a previous visit.

- **NOTE:** The dealer technician will have to reload EMS software after the vehicle is set up.

For US17 / OBD2016 emission level vehicles, the next software release (most likely in September 2017) will be an improvement to this diagnostic.

Containment Action 4 may be applied to US14 / OBD2016 vehicles, both 11L and 13L, to solve P249F and P24A0 Faults.

In order to apply this Containment Action 4 Release to a vehicle, the following Conversion Kit must be applied via. Premium Tech Tool (PTT).

The Conversion Kit can ONLY be applied with PTT AFTER the appropriate Maintenance “S” Note has been added to VDA under EACH particular VIN to receive the Kit. The “S” Notes are coordinated, managed, and applied in VDA by After Market Support Engineering (Terry Isley or Mathew McVeigh).

Note: After the final corrective action is released for QJ 1-6720277401 rclo P249F, P24A0, EACH vehicle that has received the Containment Action 4 MUST be returned to

a Dealership to load the final Software and Data Sets.

Temporary solution	Temporary solution
Solution visibility	Dealer distribution

Function(s)/component(s) affected

Function affected	engine , exhaust , EGR , CV electronic control unit , 1 1 0 EMS , MID 128 – EMS , MID 140 – IC04 / IC05 , EECU , Diagnostic tool

Function Group

Function Group	254 catalytic converter; exhaust emission control equipment , 258 emissions after-treatment , 2841 Electronic Control Unit

Customer effect

Main customer effect	regeneration , calibration/programming/pairing/missing operation , diagnostics /methodology , fault code/display
Lights/Messages on information display	message on display , - - - - , - - / - -

Fault code(s)

OBD 2013 Diagnostic Trouble Codes	POWERTRAIN , P249F00 , P24A0

Conditions

Vehicle operating mode	when driving , when stationary
Frequency of occurrence of problem	always

Administration

Author	ut0389h
Last modified by	RU4469V
Creation date	12-01-2017 21:01
Date of last update	10-01-2018 19:01
Review date	16-02-2017 00:02
Status	Published
Average score	1.25
Number of scores	4
NA_Author_Group	GTT

NA_MACK_Vehicle_Range

NA_MACK_Vehicle_Range	Conventional , CHU , CXU , GU

NA_VOLVO_Vehicle_Range

NA_VOLVO_Vehicle_Range	Conventional , VNL , VNM , VHD , VAH

Engine family

Engine family	Volvo , 11L Engine , 13L Engine , Mack , MP7 , MP8

Emission Standard

Emission Standard	2018 , OBD2017 , US17 GHG , US16 , US15 , US14 GHG