



## Solution

**Title (customer effect)** Service Only Regen Requested With No Warning. Diagnostic Trouble Codes ( DTC ) P24A4 / P10FE Active Or Inactive With Several Counts - OBD15 And OBD16 Conventional Chassis; **Does Not Apply To US17 (Common Rail Fuel System) Chassis**

**Cause** OBD15 and OBD16 Conventional Chassis that spend most of the time in stop-and-go operation may log DTCs P24A4 and P10FE, together or separately.

## Solution

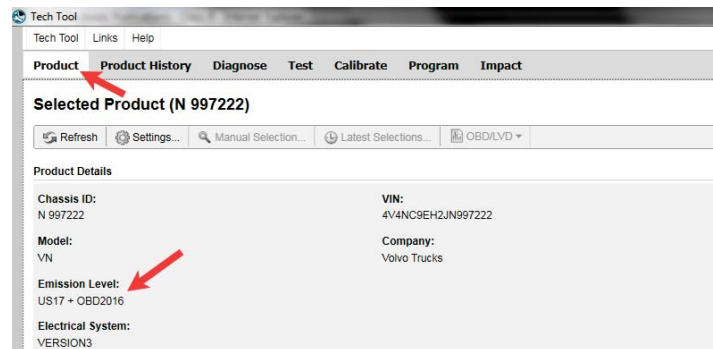
### Overview

During city driving (P&D and LTL) duty cycles, the Diesel Particulate Filter (DPF) can accumulate large amounts of soot inside. If the chassis is not driven on the highway enough for passive regeneration to reduce soot levels, a stationary regeneration will be required. The unit may also display “Service Only” regeneration on the Driver Information Display ( DID ) with no prior alert to the driver, which can result in an unplanned stop at a maintenance facility for a service regeneration can be performed.

### Repair

#### 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 this code. If P24A4 and /or P10FE are 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 symptoms present or the code(s) return following

the software update, normal diagnostic procedures should be followed to determine the issue.

**For OBD16 Chassis:**

- Basic triage should be performed to ensure there is not an existing issue causing the codes to set. Including but not limited to:
  - Any report of rapid soot buildup that may indicate a fuel or air issue
  - Boost or exhaust leaks or restrictions
  - Any issues with the EATS system
- If nothing is found from triage, an eService case should be opened with Dealer Technical Support prior to performing detailed diagnosis.

**- The eService Case must include:**

- A complete DTC readout from the time of the chassis's arrival
- A **thorough** description of the conditions the truck usually operates in, specific application, and any other pertinent information that will help Tech Support.

- Further instructions will be issued once the eService case is reviewed.

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Internal  
communications  
(FO)

P24A4 in OBD2015 and OBD2016 for city driving (short haul application) requires conversion kit and software update.

We need to maintain the VIN/Chassis number list of trucks with this software update to be provided to regulators (EPA/CARB) if needed.

Critical -- Every customer who gets updated with the conversion kit must receive good communication on what to expect with the conversion kit (attachment below). The driver/customer must be informed on what he/she will expect to see from DID, and when/how to react.

If conversion kit is not yet available for specific platform, we need customer dealer to trigger proactive regenerations (once or twice a week) until the time conversion kit is available.

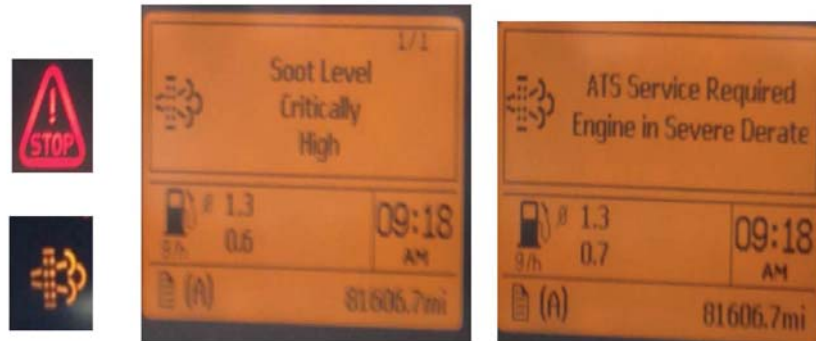
- Only to be applied to trucks/fleets with P24A4 issue
- No fault found and short haul /city duty cycle
- Consequence of this containment “ frequent regeneration requests”.

- Requires support from Aftermarket Support Engineers.

# Problem Description

Vehicle reached "Service only" regeneration with no warning

"Service only" regeneration forces customer to visit dealership (Unplanned stop).



- Truck MY 2016/2017 (may be Truck MY 2015).
- P24A4 or P10FE fault code (>150% Soot Load), RED STOP lamp is lit
- Dealer technicians are not finding any HW problem.
- **Only seen in 13L Short Haul/ City Driving vehicles**
- Customers -- Parr Lumber/ Lalonde Contractors/Lansdale Warehouse etc

# Instruction to Drivers/Customers

Do not watch and look for soot level through instrument cluster



- When regeneration is requested by the cluster, as shown below, start regeneration at the earliest convenience.
- Driver does not need to interrupt his/her mission, but has to complete regeneration within 8 hours of receiving first message.
- Typical regeneration takes ~40 minutes.



Regeneration Request Message



- Unique truck application (duty cycle) will dictate the regeneration request frequency. Expect regeneration request once or twice a week in light load, city driving applications.

# Containment until Permanent Solution Released

- Soot Warning Level moved from 130% (2) to 90% (< A=100%)



A = 100%
2 = 130%
3 = 140%
4 = 180%

- When soot level reaches 90% soot load, instrument cluster will request regeneration.
- High confidence in containment: "Warning" (90% soot load) message to "service only" (>150%) message will have 8 hour interval.
- Vehicles running short haul duty cycles with this containment may need to do regeneration once a week, depending on transiency of duty cycle.

- Only to be applied to trucks/fleets with P24A4 issue**
- No fault found and short haul /city duty cycle**
- Consequence of this containment " frequent regeneration requests".**
- Requires support from Aftermarket Support Engineers.**

If the conversion kit is performed, [THIS DOCUMENT](#) must be delivered to the servicing dealer and explained to the customer.

Internal comments (BO)	If the conversion kit is performed, <a href="#">THIS DOCUMENT</a> must be delivered to the servicing dealer and explained to the customer.
Temporary solution	Temporary solution , Technical document being drafted
Solution visibility	<a href="#">Dealer distribution</a>
<b>Function(s)/component(s) affected</b>	
Function affected	exhaust , DPF
<b>Function Group</b>	
Function Group	254 catalytic converter; exhaust emission control equipment , 258 emissions after-treatment , 284 control system, fuel supply

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**Customer effect**

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Main customer effect                      soot , regeneration , fault code/display

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**Administration**

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Author    ut0031h

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**NA\_MACK\_Vehicle\_Range**

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**NA\_MACK\_Vehicle\_Range**                      Conventional , CHU , CXU , GU

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**NA\_VOLVO\_Vehicle\_Range**

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**NA\_VOLVO\_Vehicle\_Range**                      Conventional , VNL , VNM , VHD , VAH

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**Engine family**

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

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**Emission Standard**

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Emission Standard                              US16 , US15

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