

**Mack Models**

Mack Model TE-TerraPro , LR , GR-Granite , PI-Pinnacle , AN-Anthem , CHU , CXU , GU

Volvo Models

Volvo Model VNR , VNX , VNL , VHD , VAH

Engine family

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

Emission Standard

Emission Standard US17 GHG

**** SOLUTION ****

Title Engine Control Module (EMS) Software (MSW) Information; Improvement List (Change Log) And Explanations For Issues And Diagnostic Trouble Codes (DTC, Fault Codes) **US17+OBD2016 Emissions, Model Year 2018 (Common Rail Fuel System ONLY)**

Cause The purpose of this CBR is to give information on Engine Control Module (EMS) Software content. This document lists issues or problems (DTCs, Fault Codes) mitigated or resolved in specific EMS software. The newest EMS Main Software (MSW) part number typically includes improvements from previous EMS software releases, and updating to the latest part number will most often cover items listed for older software releases.

Solution **Vehicles equipped with Variable Geometry Turbocharger will be referred as VGT. Vehicles equipped with Turbo Compound will be referred as TC.**

Software Release Table (Latest information at top)

Date Available Via PTT	VGT MSW Part #	TC MSW Part #
June 2018 (Current)	23398790	23399381
February 2018	23242993	23242996
On or Before February 2018	23245812 or older	23245806 or older

EMS software improvements with MSW Part Number 23398790 / 23399381. Available from June 2018.

All Vehicles

- Reduces occurrences of **P04DB** Crankcase Ventilation System Disconnected (P04DB00, P04DB-00).
- Reduces occurrences of Intermittent engine speed signal loss, sudden change in vehicle speed, for short period of time (Hiccup or Surge).
- Reduces the potential for Intake Throttle Icing in Cold Weather. Any of the fault codes below are possible with this issue:
 - **P24A4** Diesel Particulate Filter Restriction - Soot Accumulation Too High (Bank 1) (P24A400, P24A4-00)
 - **P10FE** Particulate Filter Restriction - Soot Accumulation Moderately High Bank 1 (P10FE00, P10FE-00)
 - **P02EC** Diesel Intake Air Flow Control System - High Air Flow Detected (P02EC00, P02EC-00)
 - **P02ED** Diesel Intake Air Flow Control System - Low Air Flow Detected (P02ED00, P02ED-00)
- Improvement in detection of Sweet spot, valid only when performance bonus feature is turned ON.
- Allows operation of DEF Dosing Test, PTT Operation 2589-08-03-05 Aftertreatment selective catalytic reduction (SCR) system Part 4, below 32° F (0° C).

Turbo Compound Only

- Reduces occurrences of **P0471** Engine Exhaust Back Pressure Circuit Range /Performance (P047164, P0471-64).

EMS software improvements with MSW Part Number 23242993 / 23242996. Available from February 2018.

All Vehicles

- Reduces occurrences of **P02FA** Diesel Intake Air Flow Position Sensor Minimum /Maximum Stop Performance (P02FA97, P02FA-97).
- Reduces occurrences of **P24DA** Particulate Matter Sensor Exhaust Sample Error Bank 1 (P24DA00, P24DA-00).
- Reduces the potential for Intake Throttle Icing in Cold Weather. Any of the fault codes below are possible with this issue:
 - **P24A4** Diesel Particulate Filter Restriction - Soot Accumulation Too High (Bank 1) (P24A400, P24A4-00)
 - **P10FE** Particulate Filter Restriction - Soot Accumulation Moderately High Bank 1 (P10FE00, P10FE-00)
 - **P02EC** Diesel Intake Air Flow Control System - High Air Flow Detected (P02EC00, P02EC-00)
 - **P02ED** Diesel Intake Air Flow Control System - Low Air Flow Detected (P02ED00, P02ED-00)
- Improvements in the aftermarket routine for the PM sensor, PTT Operation 2589-08-03-17 Aftertreatment Particulate Sensor, Diagnostic Monitor.

Vehicles With 2-Box Exhaust Aftertreatment System (EATS) Only

- Reduces occurrences of **P0420** Catalyst System Efficiency Below Threshold (P042000, (P0420-00)).

Solution visibility **Dealer distribution**

Function(s)/component(s) affected

Function affected 1 1 0 EMS

Function Group

Function Group 17 service and maintenance , 284 control system, fuel supply

Customer effect

Main customer effect calibration/programming/pairing/missing operation , fault code/display

Fault code(s)

OBD 2013 Diagnostic Trouble Codes P10FE , P24A4 , P0471 , P009E , P04DB , P02FA , P0420 , P1031 , P24DA

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