

**** SOLUTION ****

Title Engine Control Module (EMS) Software (MSW) Information - [November 2019](#);
Improvement List (Change Log) And Explanations For Issues And Diagnostic Trouble
Codes (DTC, Fault Codes) [US17+OBD2016 And US17+OBD18 Emissions, Model
Years 2018 And 2019](#)

Mack Models

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

Volvo Models

Volvo Model VN , VNL , VNR , VNX , VAH , VHD

Emission Standard

Emission Standard US17+OBD16 , US17+OBD18

Engine family

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

**** SOLUTION ****

Cause The purpose of this solution 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 to as
VGT.**
Vehicles equipped with Turbo Compound will be referred to as TC.

Software Release Table (Latest information at top)

Date Available Via PTT	VGT MSW Part #	TC MSW Part #
November 2019 (Current)	23766686	23766691
May 2019	23470183	23470187
June 2018	23398790	23399381
February 2018	23242993	23242996

EMS software improvements with MSW Part Number 23766686 /23766691. Available from November 2019.

All Vehicles

- **Bug fix to prevent repeated or incomplete evaluations. Reduction in occurrences of the following faults.**

- **P0420-00** Catalyst System Efficiency Below Threshold
- **P0422-00** Catalyst 2 Efficiency Below Threshold (Bank 1)

- **Exhaust Aftertreatment System analysis tool now active in Tech tool (Health Check). 2589-08-03-18 Exhaust Aftertreatment System Analysis is added with this EECU SW (TT 2.7.75 is needed with this EECU SW)**

- **2103-08-03-02 Cylinder Compression** is unavailable.
- **2589-08-03-18 Exhaust After-treatment System Analysis** will replace 2549-08-03-03 NOx Conversion.
- **2589-08-03-17 Aftertreatment Particulate Sensor, Diagnostic Monitor** does not work.

EMS software improvements with MSW Part Number 23470183 /23470187. Available from May 2019.

All Vehicles

- **Smart Revert (DEF draining process) was added to prevent urea doser clogging. Reduces occurrences of clogged urea dosage valve. Smart Revert requires EMS and ACM software for functionality.**

- **P208E-00** - Aftertreatment Reagent Dosing Valve Clogged
- **P103B-00** - Reagent Dosing Valve Inducement

- **Reduction in occurrences of oil temperature plausibility fault.**

- **P0196-64** - Oil Temperature

- **Reduction in the following Exhaust Aftertreatment faults.**

- **P0420-00** - Catalyst System Efficiency Below Threshold
- **P0422-00** - Catalyst 2 Efficiency Below Threshold (Bank 1)
- **P2698-00** - Exhaust Aftertreatment Fuel Injector "A" Performance

- **Improved robustness for EATS Temperature Sensor faults**

- **P2080-64** - Exhaust Gas Temperature Sensor Circuit Range/Performance (Bank 1 Sensor 1)
- **P2084-64** - Exhaust Gas Temperature Sensor Circuit Range/Performance (Bank 1 Sensor 2)

- **P242B-64** - Exhaust Gas Temperature Sensor Circuit Range/Performance (Bank 1 Sensor 3)

TC Only

- **Improved robustness for Fuel Injection fault.**
 - **P026C-00** - Fuel Injection Quantity Lower Than Expected

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).

NA_Sister solutions	US17+OBD19 - K46475568
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 Codes And Error Codes	
OBDII Diagnostic Trouble Codes (P, U, B Format)	P009E-73 , P0196-64 , P026C-00 , P02FA , P0420-00 , P0422-00 , P0471-64 , P04DB-00 , P1031 , P103B-00 , P10FE-00 , P2080-64 , P2084-64 , P208E-00 , P242B-64 , P24A4-00 , P24DA-00 , P2698-00
Administration	
Author	UT4155H
Dealer ID	UT4155H
Last modified by	RU4469V
Creation date	14-01-2020 15:01

Date of last update	14-01-2020 17:01
Status	Published
Average score	0
Number of scores	2
NA_Author_Group	GTT

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