Engine Control Module (EMS) Software Information - Improvement List (Change Log), March 2023 – US21+OBD2021 Emissions ONLY

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⌄ Internal Content

Vehicles equipped with Variable Geometry Turbocharger will be referred as

VGT. Vehicles equipped with Turbo Compound will be referred as TC.

Information about Engine Control Module (EMS) Software content. This document lists issues (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.

This software applies to all vehicles, and both VGT and TC engines.

Software Release Table (Latest information at top)

Date Available Via PTT	VGT MSW Part #	TC MSW Part #
March 2023 (Current)	24419456	24419459
June 2021	23972412	23972419
December 2020	23992327	23992337

EMS software improvements with MSW Part Number

24419456 / 24419459. Available from March 2023.

🗔 Live UI **ehicles**

VGT and TC EMS Software

Reduces fault frequency of following fault codes

P02FA-00 – Particulate Matter Sensor Circuit Range/Performance

P2201-64 – NOx Sensor Bank 1 Sensor 1

P04DB-00 - Crankcase Ventilation System Disconnected

P205B-00 – Reductant Tank Temperature Sensor Circuit
Range/Performance

P20DC-00 – Exhaust Aftertreatment Fuel Supply Control Stuck
Closed

P0094-00 - Fuel System Leak Detected - Small Leak

VGT EMS Software Only

**Improved 2939-08-03-03 Exhaust gas recirculation system,
analysis test.**

**Improved 2589-08-03-18, Exhaust aftertreatment system
analysis test, to include evaluation of SCR Efficiency.**

13L VGT EMS Software Only

**Improve Engine Misfire Detection. Reduction of following
misfire faults.**

P0300-00 - Random Misfire Detected

TC EMS Software Only

Reduces fault frequency of following fault codes

P0471-64 - Engine Exhaust Back Pressure Circuit
Range/Performance

P055B-64 - Piston Cooling Oil Pressure Sensor
/Performance

Live UI

Added 2939-08-03-03 Exhaust gas recirculation system, analysis test on Turbo Compound products.

Improved 2939-08-03-01 Exhaust gas recirculation function, to test EGR valve on Turbo Compound products.

Added 2589-08-03-18, Exhaust aftertreatment system analysis test, to evaluate NOx sensors and DEF dosing valve (no capability to evaluate SCR efficiency).

EMS software improvements with MSW Part Number 23972412 / 23972419. Available from June 2021.

VGT and TC EMS

Reduction of false faults on the following NOx Sensor faults:

- P225C-00 - NOx Sensor Performance - Signal Stuck High Bank 1 Sensor 1
- P225E-00 - NOx Sensor Performance - Signal Stuck High Bank 1 Sensor 2

Improvement in fuel filter plugging detection

- Once engine ECU SW is updated, parameter 'TAU' set to 'True' to make instrument cluster display message as needed.

VGT EMS Software Only

Improved diagnostic function routines for EGR System Checks

- Test, 2939-08-03-01 – Exhaust Gas Recirculation Function has been replaced with 2939-08-03-03 – Exhaust Gas Recirculation System Analysis.
- New test, 2939-08-03-03 is more capable in detecting issues with EGR system.
- Use TT2.8.51 or newer and update product information to run this operation with new engine ECU software.

Live UI

TC EMS Software Only

Reduction of false faults on the following:

- P0471-64 - Engine Exhaust Back Pressure Circuit Range/Performance

Reduction of fault occurrence

- P0402-00 - Engine Exhaust Gas Recirculation 1 Valve Position Flow Excessive Detected

Improvement in Engine Speed stability during idle

Reduction of false fault occurrence

- P2002-00 - Diesel Particulate Filter Efficiency Below Threshold (Bank 1)

Tags

p0471-64   p0402-00   p2002-00   p225c-00

p225e-00   p047164   p040200   p200200

p225c00   p225e00   volvo   mack

ems software   p02fa-00   p2201-64   p04db-00

p205b-00   p20dc-00   p0094-00   p0300-00

p055b-64

Categories ★

Make and Model > Mack > CXU/CHU/PI - Pinnacle

Make and Model > Mack > LR

Make and Model > Volvo > VNL

Make and Model > Volvo > VNR

Make and Model > Volvo > VNX

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Make and Model > Volvo > VAH

Make and Model > Volvo > VHD

Powerplant > Volvo > D11

Powerplant > Volvo > D13

Make and Model > Mack > MRU/TE - TerraPro

Powerplant > Mack > MP7

Powerplant > Mack > MP8

Vehicle System > Control Systems

Make and Model > Mack > AN - Anthem

Make and Model > Mack > GU/GR - Granite

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