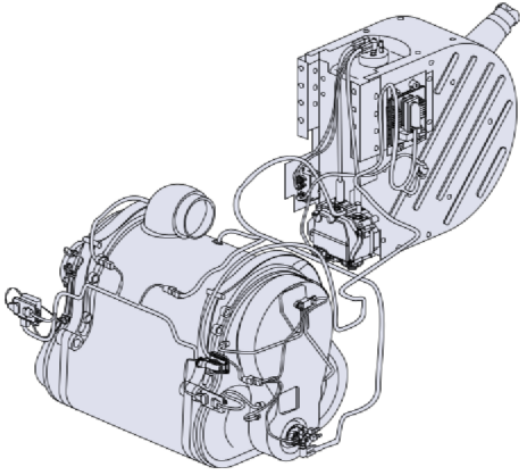


KC-2201 2589-08-03-18 IMG 1

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens

[Download PNG](#) ✕



2589-08-03-18 Exhaust Aftertreatment System Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Comprehensive check of Exhaust Aftertreatment System (EATS)

Note: This operation should only be used in the following circumstances

- Reference from diagnostic/service information or Technical support
- Relevant DTCs: **P103C, P20EE, P225E, P225C, P229F, P2201, P0422**

Description

- The ECM routine will perform a self-evaluating system test on the Exhaust Aftertreatment System (EATS)
- All tests can be performed in sequential order, or specific sub-tests can be individually selected

Available sub-tests that can be performed individually

- 1 NOx sensors
- 2 DEF dosing system
- 3 SCR efficiency

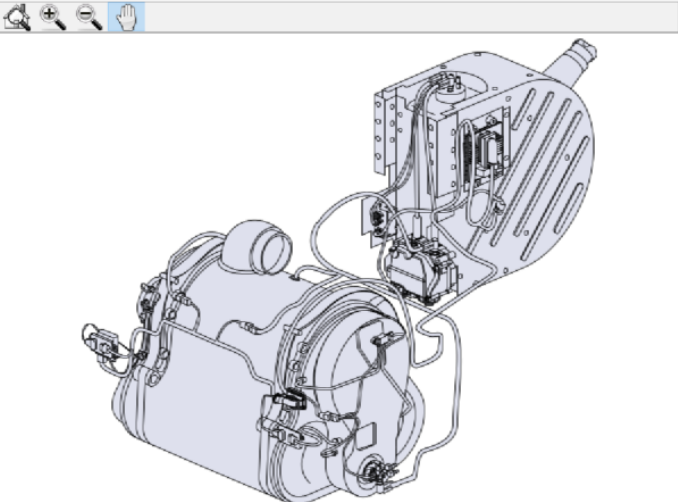
Operation may take approximately 15 - 45 minute(s) to complete

[Continue >](#) [Cancel](#)

KC-2201 2589-08-03-18 IMG 1

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens

Download PNG



2589-08-03-18 Exhaust Aftertreatment System Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Comprehensive check of Exhaust Aftertreatment System (EATS)

Note: This operation should only be used in the following circumstances

- Reference from diagnostic/service information or Technical support
- Relevant DTCs: **P103C, P20EE, P225E, P225C, P229F, P2201, P0422**

Description

- The ECM routine will perform a self-evaluating system test on the Exhaust Aftertreatment System (EATS)
- All tests can be performed in sequential order, or specific sub-tests can be individually selected

Available sub-tests that can be performed individually

- 1 NOx sensors
- 2 DEF dosing system
- 3 SCR efficiency

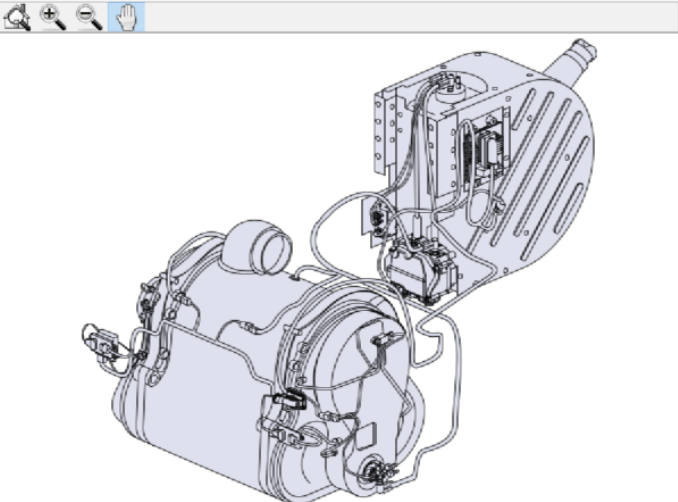
Operation may take approximately 15 - 45 minute(s) to complete

Continue > Cancel

KC-2201 2589-08-03-18 IMG 1

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens

Download PNG



2589-08-03-18 Exhaust Aftertreatment System Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Comprehensive check of Exhaust Aftertreatment System (EATS)

Note: This operation should only be used in the following circumstances

- Reference from diagnostic/service information or Technical support
- Relevant DTCs: **P103C, P20EE, P225E, P225C, P229F, P2201, P0422**

Description

- The ECM routine will perform a self-evaluating system test on the Exhaust Aftertreatment System (EATS)
- All tests can be performed in sequential order, or specific sub-tests can be individually selected

Available sub-tests that can be performed individually

- 1 NOx sensors
- 2 DEF dosing system
- 3 SCR efficiency

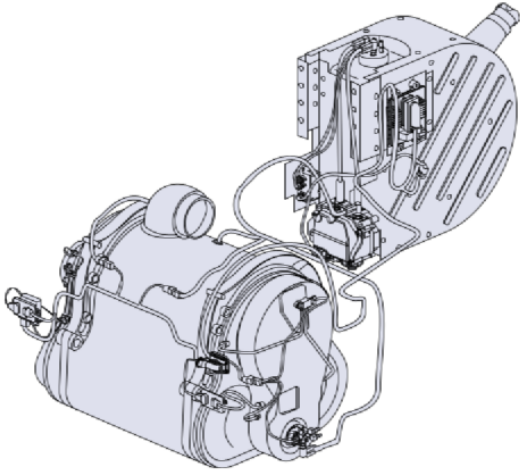
Operation may take approximately 15 - 45 minute(s) to complete

Continue > Cancel

KC-2201 2589-08-03-18 IMG 1

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens

Download PNG



2589-08-03-18 Exhaust Aftertreatment System Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Comprehensive check of Exhaust Aftertreatment System (EATS)

Note: This operation should only be used in the following circumstances

- Reference from diagnostic/service information or Technical support
- Relevant DTCs: **P103C, P20EE, P225E, P225C, P229F, P2201, P0422**

Description

- The ECM routine will perform a self-evaluating system test on the Exhaust Aftertreatment System (EATS)
- All tests can be performed in sequential order, or specific sub-tests can be individually selected

Available sub-tests that can be performed individually

- NOx sensors
- DEF dosing system
- SCR efficiency

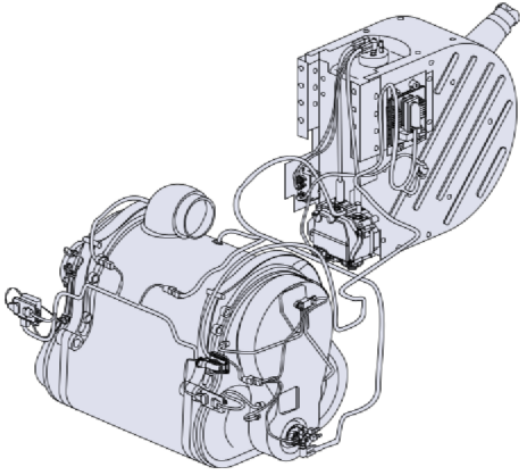
Operation may take approximately 15 - 45 minute(s) to complete

Continue > Cancel

KC-2201 2589-08-03-18 IMG 1

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens

Download PNG



2589-08-03-18 Exhaust Aftertreatment System Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Comprehensive check of Exhaust Aftertreatment System (EATS)

Note: This operation should only be used in the following circumstances

- Reference from diagnostic/service information or Technical support
- Relevant DTCs: **P103C, P20EE, P225E, P225C, P229F, P2201, P0422**

Description

- The ECM routine will perform a self-evaluating system test on the Exhaust Aftertreatment System (EATS)
- All tests can be performed in sequential order, or specific sub-tests can be individually selected

Available sub-tests that can be performed individually

- NOx sensors
- DEF dosing system
- SCR efficiency

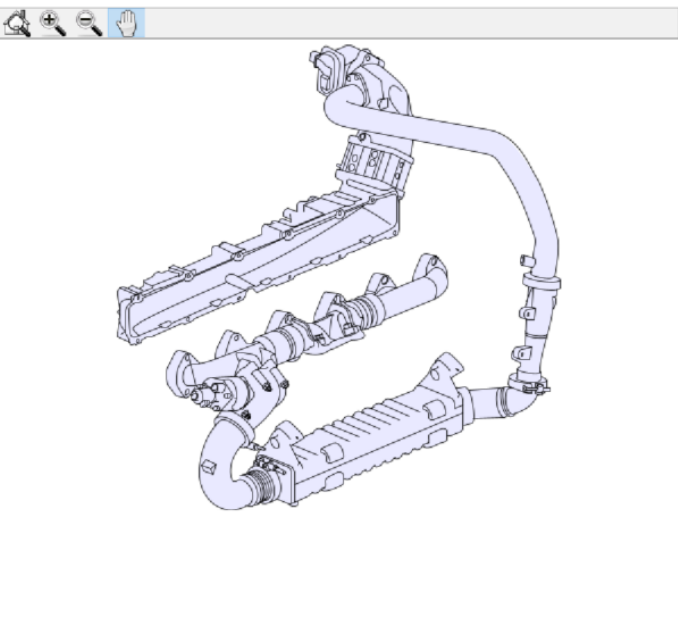
Operation may take approximately 15 - 45 minute(s) to complete

Continue > Cancel

KC-2201 2939-08-03-03 IMG 1

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens

Download PNG ✕



2939-08-03-03 Exhaust Gas Recirculation System, Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Check the function of the exhaust gas recirculation (EGR) system

Components to be tested are:

- EGR Valve
- EGR Cooler
- EGR differential pressure sensor

Note: This operation should only be used in the following circumstances

Relevant DTCs: **P0401, P04D9, P1121, P240F, P04D9**

Description

This operation is a self-evaluating test that requires the vehicle to be stationary with engine running in order to evaluate system components

Engine speed, EGR valve and the VGT will be commanded to specified ranges during the test

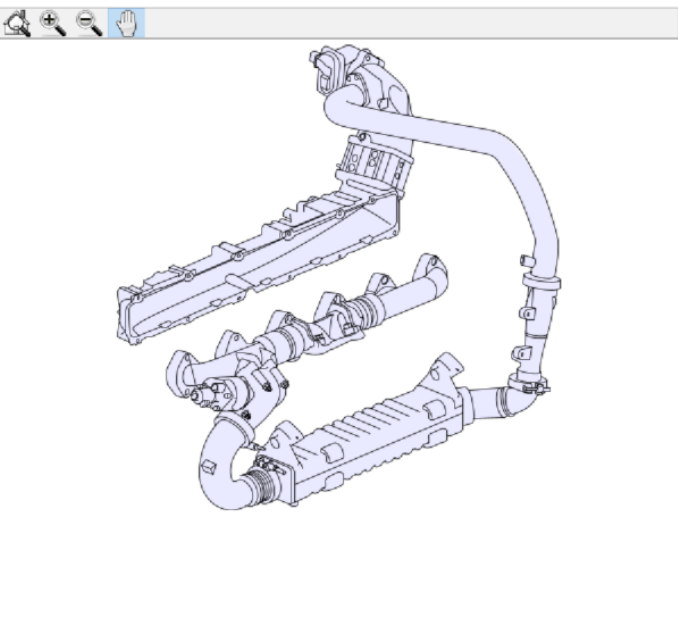
The turbo speed and the EGR differential pressure are used as primary parameters for evaluating the EGR system

Continue > Cancel

KC-2201 2939-08-03-03 IMG 1

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens

Download PNG



2939-08-03-03 Exhaust Gas Recirculation System, Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Check the function of the exhaust gas recirculation (EGR) system

Components to be tested are:

- EGR Valve
- EGR Cooler
- EGR differential pressure sensor

Note: This operation should only be used in the following circumstances

Relevant DTCs: **P0401, P04D9, P1121, P240F, P04D9**

Description

This operation is a self-evaluating test that requires the vehicle to be stationary with engine running in order to evaluate system components

Engine speed, EGR valve and the VGT will be commanded to specified ranges during the test

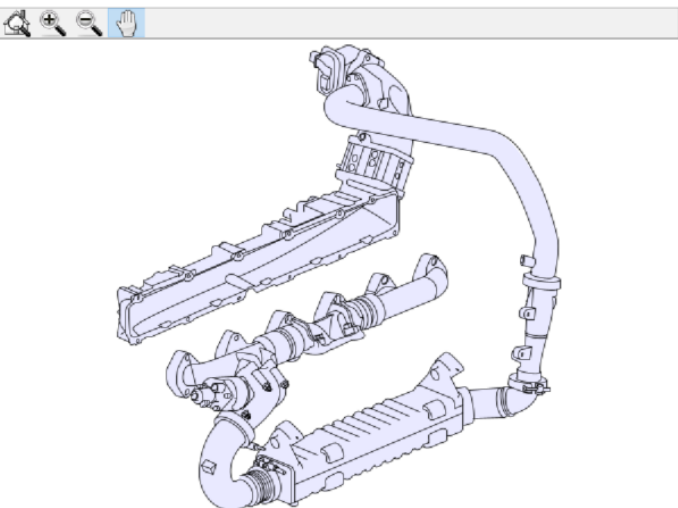
The turbo speed and the EGR differential pressure are used as primary parameters for evaluating the EGR system

Continue > Cancel

KC-2201 2939-08-03-03 IMG 1

Download PNG

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens



2939-08-03-03 Exhaust Gas Recirculation System, Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Check the function of the exhaust gas recirculation (EGR) system

Components to be tested are:

- EGR Valve
- EGR Cooler
- EGR differential pressure sensor

Note: This operation should only be used in the following circumstances

Relevant DTCs: **P0401, P04D9, P1121, P240F, P04D9**

Description

This operation is a self-evaluating test that requires the vehicle to be stationary with engine running in order to evaluate system components

Engine speed, EGR valve and the VGT will be commanded to specified ranges during the test

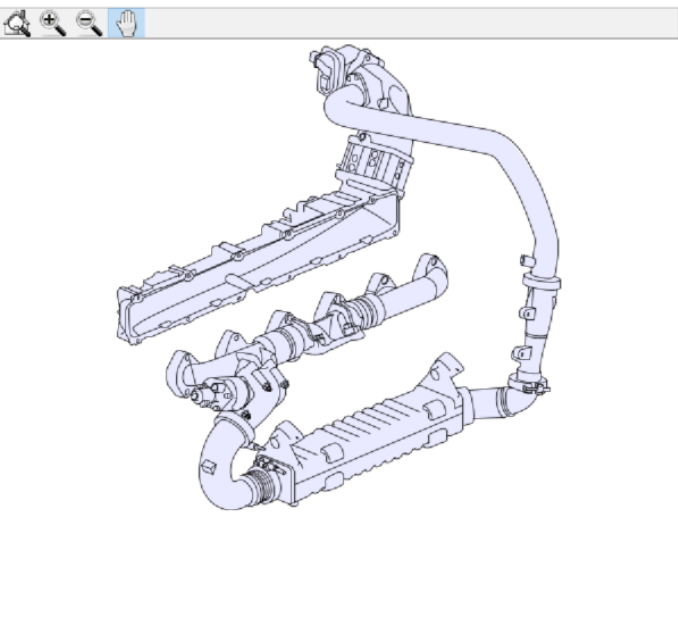
The turbo speed and the EGR differential pressure are used as primary parameters for evaluating the EGR system

Continue > Cancel

KC-2201 2939-08-03-03 IMG 1

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens

Download PNG



2939-08-03-03 Exhaust Gas Recirculation System, Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Check the function of the exhaust gas recirculation (EGR) system

Components to be tested are:

- EGR Valve
- EGR Cooler
- EGR differential pressure sensor

Note: This operation should only be used in the following circumstances

Relevant DTCs: **P0401, P04D9, P1121, P240F, P04D9**

Description

This operation is a self-evaluating test that requires the vehicle to be stationary with engine running in order to evaluate system components

Engine speed, EGR valve and the VGT will be commanded to specified ranges during the test

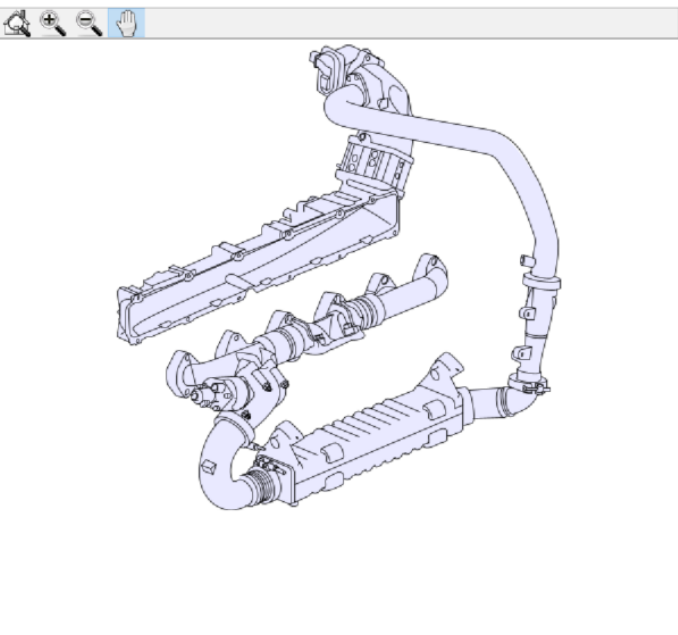
The turbo speed and the EGR differential pressure are used as primary parameters for evaluating the EGR system

Continue > Cancel

KC-2201 2939-08-03-03 IMG 1

Download PNG

Image | Oct 26, 2022 01:09 PM EDT by Bradley Pickens



2939-08-03-03 Exhaust Gas Recirculation System, Analysis

Simulation

Information >> Conditions >> Execution >> Result

Purpose

Check the function of the exhaust gas recirculation (EGR) system

Components to be tested are:

- EGR Valve
- EGR Cooler
- EGR differential pressure sensor

Note: This operation should only be used in the following circumstances

Relevant DTCs: **P0401, P04D9, P1121, P240F, P04D9**

Description

This operation is a self-evaluating test that requires the vehicle to be stationary with engine running in order to evaluate system components

Engine speed, EGR valve and the VGT will be commanded to specified ranges during the test

The turbo speed and the EGR differential pressure are used as primary parameters for evaluating the EGR system

Continue > Cancel



Engine Control Module (EMS) Software (MSW) Information – October 2022; Improvement List (Change Log) - US21+OBD22 (13L VGT, TC) And US17+OBD22 (11L) Emissions



Software Release Table (Latest information at top)

Date Available Via PTT	VGT MSW Part #	TC MSW Part #
October 2022	24352217	24352221
August 2022	24389202	24389223
January 2022	24252321	24252605

Note: Part numbers are not sequential from August to October

EMS software improvements with MSW Part Number 24389202 / 24389223. Available from October 2022.

All Vehicles

VGT and TC EMS Software

Reduction of faults

P0299-00 - Turbocharger/Supercharger Underboost

P205B-64 – Reductant Tank Temperature Sensor Circuit Range/Performance

P2453-64 – Diesel Particulate Filter Pressure Sensor "A" Circuit Range/Performance

P00C6-00 – Fuel Rail Pressure Too Low - Engine Cranking

P00BA-00 - Low Fuel Pressure

P1151-00 – Aftertreatment System Over Temperature

P0191-64 – Fuel Rail Pressure Sensor Circuit Range/Performance



Disable fuel rail system small leak monitor. Fault code removed.

[P0094-00 – Fuel System Leak Detected – Small Leak](#)

New Faults added

[P215B-00 - Vehicle Speed - Output Shaft Speed Correlation Error](#)

[P203E-96 - Reductant Level Sensor "A" Circuit Intermittent/Erratic - Component Internal Failure](#)

13L VGT Only

Reduction of faults

[P20EE-00 – SCR NOx Catalyst Efficiency Below Threshold \(Bank 1\)](#)

[P0301-00 – Cylinder 1 Misfire Detected](#)

[P0306-00 – Cylinder 6 Misfire Detected](#)

13L TC Only

Mitigate 13L TC Stumble

Improvements to EGR Diagnostic Test Routine

[2939-08-03-03 Exhaust Gas Recirculation System Analysis](#)

Enable Wastegate Routine for Tech Tool

[2550-08-03-01 Actuator By-Pass Valve](#)

EATS Health Check implementation for TC

[2589-08-03-18 Exhaust Aftertreatment System Analysis](#)

Reduction of faults

[P0471-64 - Engine Exhaust Back Pressure Circuit Range/Performance](#)

EMS software improvements with MSW Part Number 24389202 / 24389223. Available from August 2022.

All Vehicles

VGT and TC EMS Software

Fix to eliminate the possibility of intermittent DTCs U029D, U029E, U02A3 at key on resulting in SCR inducement, derate.

- U029D00 – Lost Communication With NOx Sensor “A”**
- U029E00 - Lost Communication With NOx Sensor “B”**
- U02A300 - Lost Communication With PM Sensor**

Tags

- [u029d-00](#) [u029e-00](#) [u02a3-00](#) [u029d00](#)
- [u029e00](#) [u02a300](#) [volvo](#) [mack](#)
- [ems software](#) [p0299-00](#) [p205b-64](#) [p2453-64](#)
- [p00c6-00](#) [p029900](#) [p205b64](#) [p245364](#)
- [p00c600](#) [p00ba-00](#) [p00ba00](#) [p115100](#)
- [p1151-00](#) [p0191-64](#) [p019164](#) [p0094-00](#)
- [p009400](#) [p215b-00](#) [p215b00](#) [p203e-96](#)
- [p203e96](#) [p20ee-00](#) [p20ee00](#) [p0301-00](#)
- [p030100](#) [p0306-00](#) [p030600](#) [p0471-64](#)
- [p047164](#)

[KC-2201 2939-08-03-03 IMG 1](#)

[KC-2201 2939-08-03-03 IMG 1](#)

[KC-2201 2589-08-03-18 IMG 4](#)

[KC-2201 2589-08-03-18 IMG 3](#)

[KC-2201 2589-08-03-18 IMG 2](#)

[KC-2201 2939-08-03-03 IMG 2](#)

[KC-2201 2939-08-03-03 IMG 3](#)

[KC-2201 2939-08-03-03 IMG 4](#)

[Give feedback](#)

to help improve the content of this article