SMOG/Emissions Test fail due to one or more Readiness Monitors not set

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Version	2
Function group	49.00 - General
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Validity	906 and 907 with Diesel engines
Reason for change	Legal review

Complaint

The vehicle has failed the State Emissions Certification because one or more of the OBDII readiness monitors are not completely set.

Cause

One or more of the following Readiness Monitors are not fully set within XENTRY:

Misfire Monitoring - Injection System

Fuel System Monitoring - Injection System, Fuel System, EGR Valve, O2 Sensor

NMHC Catalyst Monitoring - NMHC/Diesel Oxidation Catalyst

NOx Aftertreatment Monitoring - SCR Catalyst System

Boost Pressure System Monitoring - Turbocharger, Charge Air System

Exhaust Gas Sensor Monitoring - O2 Sensor, NOx Sensors

Diesel Particulate Filter Monitoring - Diesel Particulate Filter System

Exhaust Gas Recirculation System Monitoring - EGR Valve and system

Remedy

Please complete the required driving conditions to fully set the incomplete Readiness Monitor.

DO NOT:

- Erase any fault codes. If fault codes are present, process these and allow the readiness drives to clear fault codes.

- Flash or SCN code the CDI or SCR control units.

- Perform a manual DPF regeneration, unless instructed below.

- Disconnect the main battery.

Note: Taking any of these actions will reset the readiness monitors and will hinder the completion of the readiness checks. If any fault codes or other issues arise while attempting to complete the monitors, address the issues and perform the necessary drive cycles to clear the faults. However, do not erase the faults using a scan tool.

Note: The driving cycles must be performed under the following preconditions:

- Each driving cycle must last for at least 10 minutes.

- During the driving cycle, the vehicle must be driven for at least 5 minutes at a speed of > 25mph.

- Run the combustion engine at idle for approx 15 seconds before starting the driving cycle.

Misfire Monitoring:

1) Start the engine and let it idle for 2 minutes, followed by a 10-minute test drive in normal city conditions.

Fuel System Monitoring:

1) Part load (Maintain the throttle at approximately the mid position, keep a steady speed without any major acceleration).

2) Perform multiple urban drive cycles with brief accelerations, 30 seconds of partial load driving, followed by 30 seconds of deceleration (coasting). This should be done at least 20 times and up to a maximum of 100 times.

NMHC Catalyst Monitoring:

1) Drive for 20 minutes while maintaining a speed between 50 and 80 mph. During this time, make five decelerations, each lasting 15 to 30 seconds, starting from a speed of 65 mph. On a flat road, it will take approximately 12 to 15 seconds to reduce your speed from 65 mph to 50 mph.

Note: If the above drive cycle does not set the monitor:

a) Trigger a Manual DPF Regeneration via XENTRY.

b) While in regeneration mode, complete the above step 6-8 times.

Note: If a manual DPF regeneration is required to complete this monitor, it may reset other monitors that were previously set, which will need to be completed before vehicle release or SMOG testing.

NOx Aftertreatment Monitoring:

1) One naturally occuring regeneration.

2) Drive for 20 minutes while maintaining a speed between 50 and 80 mph. During this time, make five decelerations, each lasting 15 to 30 seconds.

Note: If the above drive cycle does not set the monitor:

a) Trigger a Manual DPF Regeneration via XENTRY.

b) While in regeneration mode, complete the above step 6-8 times.

Note: If a manual DPF regeneration is required to complete this monitor, it may reset other monitors that were previously set, which will need to be completed before vehicle release or SMOG testing.

Boost Pressure System Monitoring:

1) Drive for 20 minutes and conduct 8 to 10 acceleration phases, reaching speeds of 25 mph to 65 mph for 5 to 10 seconds each.

- During the acceleration phase, the engine's RPM should not drop below 2,000 RPM.

Exhaust Gas Sensor Monitoring:

1) Ignition off time > 8 hours.

2) Start the engine, DO NOT idle beyond 30 seconds.

3) Gradually press the accelerator pedal to reach 4000 RPM within 5 seconds (hold roughly 5 seconds), and gradually reduce back to idle.

4) Repeat step 3 at least 5 times.

5) Drive for 20 minutes while maintaining a speed between 50 and 80 mph. During this time, make five decelerations, each lasting 15 to 30 seconds.

Diesel Particaulate Filter Monitoring:

Note: This monitor will be set after three successful natural occurrences of regeneration.

Note: If the above monitor has not been set after three successful naturally occurring regenerations:

1) Trigger a Manual DPF Regeneration via XENTRY.

2) While in regeneration mode, Drive for 20 minutes while maintaining a speed between 50 and 80 mph. During this time, make five decelerations, each lasting 15 to 30 seconds.

Note: If a manual DPF regeneration is required to complete this monitor, it may reset other monitors that were previously set, which will need to be completed before vehicle release or SMOG testing.

Exhaust Gas Recirculation System Monitoring:

1) Start the engine and let it idle for 2 minutes, followed by a 10-minute test drive in normal city conditions.

Note: The setting only occurs when the regeneration of the Diesel Particulate Filter is not in progress.

If the Readiness Monitor does not set after completing these drive cycles 4-5 times, please open a TIPS case and submit it to the Powertrain box with the following information:

- Current short test

- Guided test results on any fault codes present and include all measured values

--DO NOT CLEAR CODES IF REPAIRS ARE MADE--

- Current actual value screen "Fill level of diesel particulate filter"

- Current actual value screen "Regeneration of diesel particulate filter History

- Current printout of test from State inspection machine indicating the state of all monitors

- Indicate the mileage/date of any recent service history that required the CDI DTCs to be cleared or the CDI software to be updated

- Does the vehicle have anything plugged into the OBD II Connector?

Note: Engineer Services and RDNA are collaborating to update the Readiness Monitor drive cycles. Please continue checking for further updates.

Disclaimer

NOTE: The information contained in this document is intended for use by trained, professional technicians with the knowledge to properly and safely perform diagnosis and repairs on Mercedes-Benz vehicles, using Mercedes-Benz approved tools and equipment. It informs service technicians about conditions that could occur in certain vehicles and provides information that could assist in proper vehicle diagnosis, service, or repair. It does not indicate that a defect is present in any vehicle referenced in this document nor does it imply warranty coverage. DO NOT assume that a symptom or condition, or a described cause of a symptom or condition, affects any particular vehicle or groups of vehicles, or that a described repair applies to any particular vehicle or groups of vehicles. There can be multiple causes resulting in the same or similar symptoms or conditions described in this document, and trained professional service technicians must use their diagnostic skills to make evaluations on a case-by-case basis. The information contained in this document does not guarantee warranty coverage nor does it extend the vehicle's warranty in any way.

Symptoms
Power generation > Exhaust system > Function > Exhaust gas causes pollution

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note