

Check engine light with possible Adblue warning with fault code P20F409 or P202E84

Topic number	LI49.20-N-079157
Version	3
Function group	49.20 - Exhaust gas aftertreatment
Date	4/17/25
Validity	Model 907, equipped with OM654 and a Gen4 SCR system.
Reason for change	Remedy update

Complaint

The check engine light is activated, accompanied by one or more of the following fault codes related to the Adblue System:

- P20F409: The Adblue consumption is too low. There is a component fault.
- P202E84: The Adblue metering valve 1 (Motor side) has a malfunction. There is a signal below the permissible limit value.

Cause

The potential causes for these fault codes are:

- A. A leak in the Adblue System
- B. An internal fault with the Adblue Injection Valve #1 (Motor side)
- C. An air pocket forming in the Adblue Injection Valve #1 (Motor side) Adblue Injector Line

Remedy

--Prior To Production Date 08/01/2024--

A. A Leak in the Adblue System

1. Complete the Guided Tests for P20F409 or P202E84:

- Perform a thorough inspection of the Adblue Tank, the Adblue Pump, the Adblue Line, and both Adblue Injectors for leaks.
- Ensure the Adblue line is properly installed, securely fastened in all clips, and not in contact with the exhaust system.
- Remove both Adblue Injection Valves and complete 2-3 pressure build-ups and inspect for Adblue leakage.
- If a leak is identified, repair it and retest.

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B. An internal fault with the Adblue Injection Valve #1 (Motor side)

1. Process Other Fault Codes First:

- If there are other fault codes for the Adblue Injection Valves, address these first.
- If the Adblue Injection Valve #1 (engine side) fails the guided tests, replace it and retest.

C. An air pocket forming in the AdBlue Line (Motor side)

1. If Guided Tests Pass and No Leaks are Found:

- Do not replace any components.
- Germany has identified the root cause of fault code P20F409 and is working on a solution. The design of the MY23-24 OM654 AdBlue Line (A907 470 01 01) is causing air pockets in the system, resulting in fault code P20F409. Depending on the size of the air pocket, you may also encounter fault code P202E84 AdBlue Metering Valve 1 (Motor side).
- The guided tests for fault code P20F409 have been updated to include the resetting of learned values for component 'A103m1 (AdBlue delivery pump)' and to release the vehicle back to the client.

NOTE: Replacing the Adblue tank or Adblue line will not resolve this issue.

NOTE: TIPS cases are no longer required for MY23-24.

Steps to Perform

1. Complete the guided tests for fault code P20F409 and/or P202E84.
2. Perform an initial start-up of the following components:
 - SCR control unit
 - AdBlue Tank components
 - Both AdBlue injectors
3. Conduct a 20-mile test drive. If no faults return during the test drive, release the vehicle.
4. Inform the client that frequent starting and stopping of the vehicle can increase the frequency of the fault due to Ad-blue being cycled in and out of the Adblue line during each ignition cycle.

NOTE: Replacing the Adblue tank or Adblue line will not resolve this issue.

NOTE: TIPS cases are no longer required for MY23-24.

--Post-Production Date 08/01/2024--

Open a TIPS case addressed to the Powertrain inbox, referencing this LI, and include the following details:

- Current Quick Test, SCR N118/5 SCR Control Unit Log, and Guided Test Results
- Photo of the Adblue Line part number label
- Photos documenting any issues, leaks, or melting observed

NOTE: Effective from the production clean point of 08/01/2024, all MY25 vans come equipped with the updated Ad-blue Line A907 470 33 02. If you encounter a MY25 vehicle with an incorrect Adblue injector line installed, please

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open a TIPS case addressed to the Powertrain inbox, referencing this LI document and detailing the reason for the case.

NOTE: This Adblue Line is not backward compatible.

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

Communication/information > Information display > Indicator lamp > lit

Parts

Part number	ES1	ES2	Designation	Quantity	Note	EPC
A907 470 01 01					MY23-24 Part	X
A907 470 33 02					MY25 as of August 1, 2024	X

Control unit/fault code

Control unit	Fault text
N118/5 N141 - Selective catalytic reduction (SCR GEN4) (UDCM2)	P202E84 - The AdBlue® metering valve 1 (Motor side) has a malfunction. There is a signal below the permissible limit value. P20F409 - The AdBlue® consumption is too low. There is a component fault.

Operation numbers/damage codes

Op. no.	Operation text	Time	Damage code	Note
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