

Check engine light with fault code P300E5F and/or P300E5E in MRD1 (CDI)

Topic number	LI49.20-N-080011
Version	1
Function group	49.20 - Exhaust gas aftertreatment
Date	1/14/26
Validity	All OM654
Reason for change	

Complaint

The check engine light is on, with a possibility in a reduction of power, with no soot present in the exhaust system.

Fault codes:

P300E5F The fill level of the diesel particulate filter is too high. (Early warning)

P300E5E The fill level of the diesel particulate filter is too high. Regeneration of the diesel particulate filter is disabled.

Additional information:

No additional fault codes related to the Diesel Particulate Filter (DPF) system or the Exhaust Gas Recirculation (EGR) system may be present for this LI to apply.

Cause

These fault codes may be triggered due to unfavorable driving conditions, such as:

- Frequent short-distance trips
- Extended idle periods
- Infrequent highway driving
- Incomplete regeneration cycles

These conditions can lead to excessive soot accumulation in the Diesel Particulate Filter (DPF), resulting in elevated fill levels and regeneration lockout.

Remedy

Fault code P300E5F:

Indicates DPF soot DPF soot load has exceeded 100%, but is still below 130%. Regeneration remains permitted.

Fault code P300E5E:

Indicates DPF soot load has exceeded 130% (critical threshold). Regeneration is disabled to protect components.

1. Perform a tailpipe wipe test. If no soot is present, proceed to step 2.

NOTE: If soot is detected, follow the steps outlined in LI49.20-N-078466.

2. Review DPF fill level and regeneration history in XENTRY, and print out.

3. Attempt to complete a manual standstill regeneration of the Diesel Particulate Filter.

4. If the regeneration completes successfully, print the completed regeneration data, clear fault codes, and return the vehicle to the client.

•Use damage code 14370F7 if the vehicle is under warranty.

5. If manual regeneration fails, please perform the following checks and open a TIPS case directed to the Team Powertrain inbox with a reference to this case and the information collected.

•Please collect and provide the diagnostic performance data from the CPC/Drivetrain Control Unit, located under the Special Procedures tab, in .CSV format..

•Request and document the vehicle’s purpose and driving profile, including usage type (e.g., people mover, daily driver, delivery vehicle), proportion of highway vs. city driving, start/stop frequency, and typical idle time.

•Collect a fuel sample; note fuel condition (color, clarity, separation, odor) and attach a photo.

•Capture screenshots of actual values (AVs) for exhaust back pressure and DPF at Key On Engine Off (KOEO), idle, and 1,000 / 2,000 / 3,000 RPM.

•Provide screenshots of DPF actual values, fill level, and regeneration history.

•Complete a pressurized smoke test of the intake, charge air, and exhaust systems to verify no leaks. Apply up to 26 psi from the exhaust pipe end, seal at the air filter housing side, and manipulate all components during the test.

•Check exhaust flap M16/92 functionality and inspect connection points for any signs of corrosion/damage.

•Detach the exhaust pipe downstream of DPF; inspect DPF and SCR for soot, blockage, or damage, and provide clear photos.

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 > Engine management > Indicator lamp > Engine diagnosis > lit

Control unit/fault code	
Control unit	Fault text
N3/40 - Motor electronics 'MRD1' for combustion engine 'OM654' (CDI) (MRD1NFZ)	P300E5E - The fill level of the diesel particulate filter is too high. Regeneration of the diesel particulate filter is disabled.
	P300E5F - The fill level of the diesel particulate filter is too high. (Early warning)

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
496505	Particulate filter Clean (After check)	1.0 H	14370F7	Diesel Particulate Filter - Poor Flow
541011	Perform quick test	H		Refer to XENTRY Operation Time Guide for complete operations.