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

Topic number	LI49.20-N-080011
Version	2
Function group	49.20 - Exhaust gas aftertreatment
Date	10/30/26
Validity	All OM654
Reason for change	Remedy Update

Complaint

The check engine light is on, with a possible reduction in power. No soot is 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 or Exhaust Gas Recirculation 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, resulting in elevated fill levels and regeneration lockout.

Remedy

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Fault code P300E5F indicates that the Diesel Particulate Filter soot load has exceeded 130% but remains below 160%. Regeneration remains permitted.

Fault code P300E5E indicates that the Diesel Particulate Filter soot load has exceeded 160%. Regeneration is disabled to protect components.

1. Perform a tailpipe wipe test

Inspect the tailpipe for soot using a clean white cloth.

• If **soot** is found, stop this procedure and follow LI49.20-N-078466.

• If no soot is found, continue with Step 2.

2. Check the Diesel Particulate Filter data

Using XENTRY, review and save the following information:

• Diesel Particulate Filter fill level

• Calculated soot load

• Ash load

• Regeneration history

• Distance and operating time since the last successful regeneration

• Relevant exhaust-temperature and differential-pressure actual values

Process any additional fault codes according to the applicable Guided Tests before attempting regeneration.

3. Perform a manual standstill regeneration

Perform a manual standstill regeneration of the Diesel Particulate Filter according to the current XENTRY instructions.

• Save or print the regeneration results.

4. If the manual standstill regeneration completes successfully

Clear the fault memory and verify that the Diesel Particulate Filter actual values are plausible.

• Confirm that the applicable fault codes do not return.

• Complete a road test and confirm that no fault codes return.

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

Release the vehicle only after proper Diesel Particulate Filter operation has been confirmed.

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5. If the manual standstill regeneration does not complete successfully

Replace the Diesel Particulate Filter according to the current Workshop Information System instructions.

• Confirm that the MRD1/CDI control unit has the latest available software. Update the software if it is not current.

• Thoroughly inspect the exhaust system downstream of the Diesel Particulate Filter for soot.

• If soot is found, follow LI49.20-N-078466 for the required inspection and replacement of affected components.

• Complete all required teach-in, initial startup, and reset procedures after the repair.

• Clear the fault memory and perform a road test.

• Recheck the fault memory and verify that the Diesel Particulate Filter actual values are plausible.

IMPORTANT:

Soot is not permitted downstream of the Diesel Particulate Filter. Do not release the vehicle until the downstream exhaust system has been inspected and all soot-contaminated components have been addressed according to LI49.20-N-078466.

A TIPS case is not required when the condition is resolved by following this LI.

TIPS case requirements

Open a TIPS case routed to the Powertrain Team Inbox only when:

• The fault returns, or the condition remains unresolved after completing the applicable repair instructions.

• The manual regeneration failure or inspection findings do not support the repair direction in this LI.

• Additional technical support is required.

Include:

• Reference to this LI, the current Quick Test, and the MRD1/CDI control unit log.

• Manual regeneration results and the Diesel Particulate Filter actual values, fill level, and regeneration history.

• Current MRD1/CDI software level, tailpipe wipe-test result, and photographs of the inspected downstream exhaust components.

• Documentation of all completed repairs, teach-in procedures, resets, and post-repair validation

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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.

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