

Check engine light with reduced power –
P300A6D due to charge air system contamination

Topic number	LI09.41-N-080666
Version	1
Function group	09.41 - Charge air pipe/charge air cooling
Date	6/3/26
Validity	Model 907 with OM654
Reason for change	

Complaint

The check engine light is activated, accompanied by fault code 'P300A6D The boost pressure is too low', indicating reduced boost pressure.

Cause

Charge air system restriction due to contamination:

- Oil mist from the crankcase ventilation system can enter the intake tract and deposit within the charge air system
- Under high thermal load and with soot-laden or aged engine oil, these deposits may carbonize
- Carbonized deposits can loosen and accumulate in the charge air cooler and related components
- This can result in partial or complete restriction of the charge air cooler, leading to underboost conditions and fault codes such as P300A6D

Contributing factors may include:

- High engine load operating profiles
- Extended oil service intervals or degraded engine oil condition

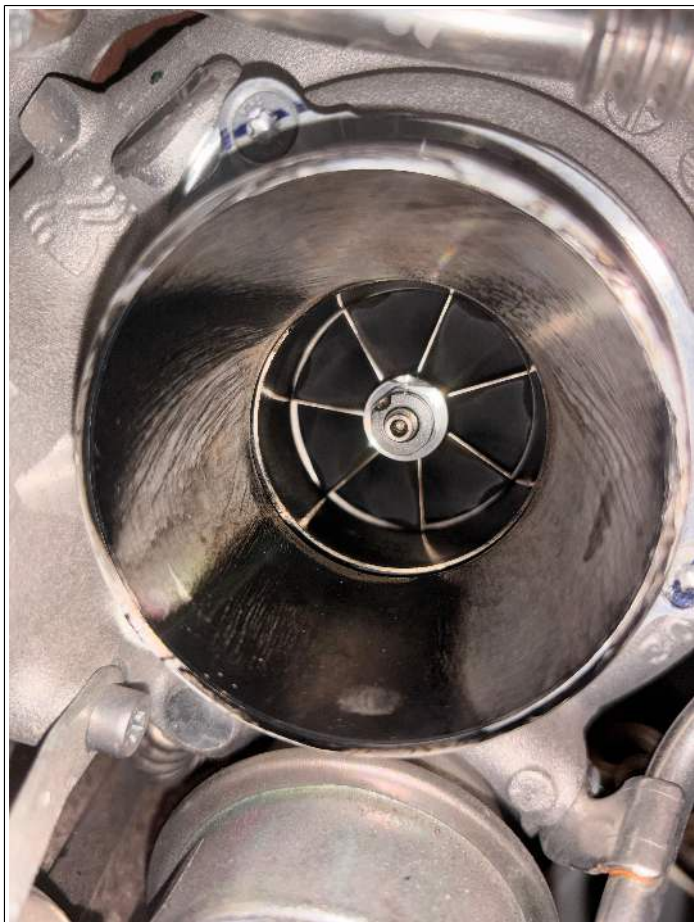
Attachments	
File	Description
Charge Air Cooler 2.jpg	



Charge Air Cooler 1.JPG



[Turbo Charger Oil.jpg](#)



[Charge Air Pipe.png](#)



Remedy

Prerequisite: Complete all guided diagnostic test steps for fault code P300A6D in Xentry Diagnostics and follow LI09.40-N-079144 before performing the repairs below.

If carbonized oil deposits or restriction are identified within the charge air system:

1. Replace the following components as a set:

- Charge air cooler
- Exhaust turbocharger
- Charge air pipe upstream of the charge air cooler

2. After completing repairs:

- Perform engine oil and filter replacement using an approved specification oil.

Approved oil specifications:

- MB 229.52 SAE 5W-30 - BB00.40-P-0229-52A
- MB 229.51 SAE 5W-30 - BB00.40-P-0229-51A

3. Perform control unit adaptations:

- Reset intake air system adaptation values

XENTRY Tips

- Reset low-pressure exhaust gas recirculation (EGR) adaptation values

4. After repair completion:

- Perform a test drive
- Verify that the fault code does not return

5. If the vehicle is within warranty and the charge air cooler is determined to be obstructed by debris, use damage code 50301 B2 when submitting the warranty claim.

Notes:

- Additional component replacement is not required unless supported by further diagnostic results.
- Do not replace the charge air distributor pipe or Clean Air Line unless additional faults (for example, air mass-related faults) are present.
- After replacement of components, ensure proper initialization and learning procedures are completed in the control unit.
- Creation of an XENTRY TIPS case is not required for this condition.
- Please review the attached photos for previously identified causes of these fault codes.

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				
Power generation > Engine management > Engine performance > No/poor output				
Control unit/fault code				
Control unit			Fault text	
N3/40 - Motor electronics 'MRD1' for combustion engine 'OM654' (CDI) (MRD1NFZ)			P300A6D - The boost pressure is too low.	
Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note

XENTRY Tips

		H	50301B2	During your inspection, if it is determined that the Charge Air Cooler is obstructed by debris, please use damage code 50301 B2 when submitting your warranty repair claims.
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