

M254 Engine idle fluctuation

Topic number	LI07.70-P-078547
Version	4
Function group	07.70 - Gasoline injection and ignition system direct injection
Date	12/17/25
Validity	Model 206 with M254 engine Model year 2022 and 2023
Reason for change	Software solution available

Complaint

Engine idle fluctuates or stumbles at approximately 7 second interval. No relevant fault codes are stored.

If fault codes are stored or check engine light illuminated, this should be diagnosed separately.

Attachments	
File	Description
Example M254 fluctuation.mp4	Example video of engine fluctuation

Cause

Torque signal mismatch between MRG and PTCU control units. Only effects version 20B of PTCU.

N127 - Control unit 'Powertrain' (PTCU) -✓-			
Model	Part number	Supplier	Version
Hardware	000 901 62 22	Continental	21/28 000
Software	254 902 12 01	Continental	21/46 000
Boot software	000 904 24 03	Continental	21/31 000
Diagnosis identifier	004B1D	Control unit variant	CPC3_R20B

Attachments	
File	Description
CPC 20B.png	

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Remedy

Update software of powertrain control unit N127.

XENTRY Tips

New software version:

MY 2022- A2549021611

MY 2023- A2549023610

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 > Engine running > Surges
Power generation > Engine management > Engine running > RPM too high/low
Power generation > Engine management > Engine running > Runs rough/shakes

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