

## OM654 Extended engine crank or starting concerns and/or poor running characteristics

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Topic number	LI05.30-N-080518
Version	1
Function group	05.30 - Valves
Date	6/3/26
Validity	Model 907 with OM654
Reason for change	

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### Complaint

One or more of the following may be reported:

- Extended crank or hard start
- Rough idle or misfire like condition
- Engine stalls during low-speed maneuvering

### Cause

In some cases, one or more exhaust valves may be leaking due to:

- Burnt exhaust valve seat rings
- Burnt valve faces
- Heavy carbon buildup on the exhaust valve seat leading to poor sealing

This can result in loss of compression in the affected cylinder(s). Please review the photos in the attachments.

Attachments	
File	Description
<a href="#">Auslassventil undicht.png</a>	Exhaust valve leaking



Ventilsitz defekt.png

Valve seat defective



Ventilteller durchgebrannt.png

Burnt valve face



Ventilsitzring durchgebrannt.png

Burnt valve seat ring



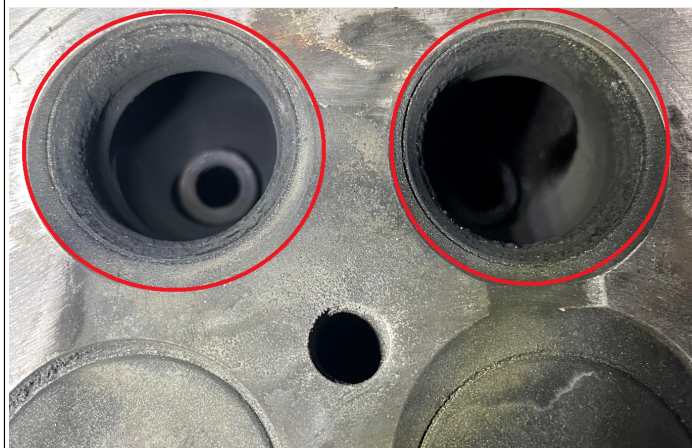
Auslassventile undicht.png

Exhaust valves leaking



Auslassventilsitz stark verkohlt.png

Exhaust valve seat heavily carboned



Kompressionsdruckprüfung.png

Compression test



[Druckverlustprüfung.png](#)

Cylinder leak down test



## Remedy

Follow the steps below in order. Do not replace components before completing verification.

### 1. Initial check

- Perform a quick test with XENTRY Diagnosis
- Check for stored or pending fault codes

## 2. Fuel system verification

- Using XENTRY Diagnosis, monitor actual values during cranking under:

“Engine start – starter turning, engine not starting”

- Check rail pressure during cranking

Evaluation:

- If rail pressure is below specification: diagnose fuel system per WIS
- If rail pressure is within expected range (approximately 250 to 300 bar): proceed with mechanical checks

## 3. Compression evaluation

Perform compression test per WIS (engine at operating temperature if possible):

- Manual compression test per WIS doc AR01.00-D-1201TSM
- If compression is out of specification, continue to leak down testing

## 4. Cylinder leakage test

- Perform cylinder leakage test on all cylinders per WIS doc AR01.00-D-1300TSM
- Ensure test equipment is calibrated before testing

Evaluation:

- Leakage confirmed through exhaust path → suspect exhaust valve sealing
- Leakage into crankcase → do not proceed; submit TIPS case for further direction

## 5. Additional validation (if needed)

- Smoke test may be used to confirm leakage path

Repair

If leaking or burnt exhaust valves are confirmed:

- Replace the complete cylinder head assembly with valves pre-installed

Do not attempt partial repair of affected valves or seats.

Notes:

- These conditions are not specific to a single cylinder and may affect multiple cylinders
- Multiple root causes can produce similar symptoms; proper diagnosis must be completed before repair
- This information does not imply warranty coverage

WIS-References		
Document number	Title	Note
AH01.00-P-1300-02KOA	Determine loss of pressure at cylinder	
AH05.30-P-1000-02SZ	General information on checking valves, valve seats and valve guides	

## 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 > Cuts out intermittently
Power generation > Engine management > Engine running > Runs rough/shakes
Power generation > Engine management > Engine start/stop > Long starting time
Power generation > Engine management > Engine start/stop > Does not start
Power generation > Engine management > Engine performance > No/poor output

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
	Exhaust valve seat ring – burnt / carboned	H	0120593	