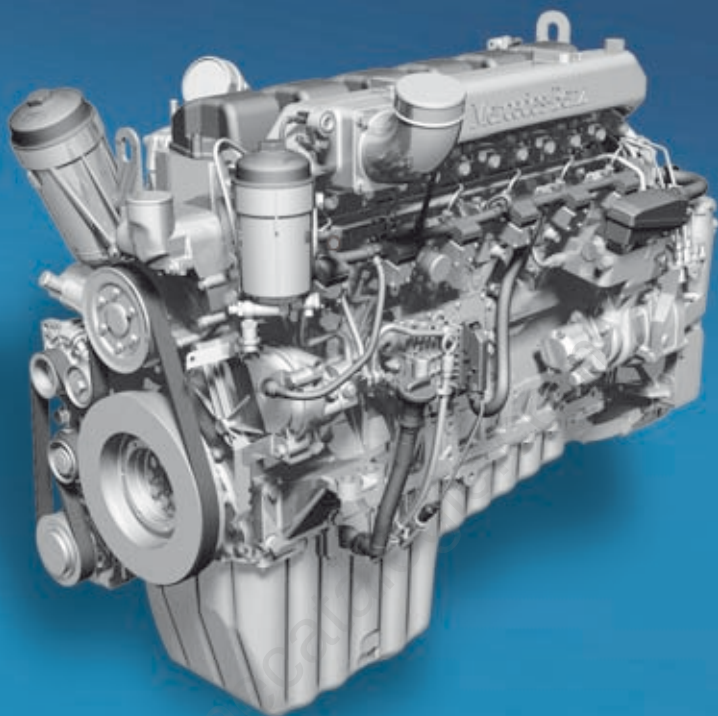




OM 457 LA BlueTec[®] / OM 457 LA OM 460 LA BlueTec[®] / OM 460 LA

Operating Instructions



Mercedes-Benz

Installation

The engine may only be installed as contractually specified.

The manufacturer of the end product is responsible for the correct installation and compatibility of the engine in the overall system.

Observe the sections "Correct use" (▷ page 9) and "Modification and changes to the engine" (▷ page 7).

The Owner's Manual contains information required for installation in the chapter "Technical Data" (▷ page 99).

Please consult a Mercedes-Benz or MTU Service Centre if you have any questions.

- i** When the engine leaves the factory, it is filled with an initial operation oil 5W30 according to Sheet 225.6 of the Mercedes-Benz Specification for Service Products.

Information on the implied warranty

A well-developed network of Mercedes-Benz and MTU Service Centres is available to carry out maintenance work.

Mercedes-Benz and MTU Service Centres:

- have special equipment and tools as well as specialists who receive continuous training
- guarantee that your engine is repaired and maintained thoroughly and expertly
- carry out all repairs within the framework of the engine warranty and the implied warranty
- carry out all maintenance work expertly
- confirm in the Maintenance Booklet that the maintenance work has been carried out at the required time
- handle warranty claims that are admissible according to the sales contract

Please observe the instructions and recommendations as well as the maintenance services in the Maintenance Booklet. Please observe these instructions even if you let a

third party use and care for your engine. This is the only way to ensure that you do not lose your entitlements.

If the prescribed maintenance work is not carried out, claims can only be decided after the manufacturer has inspected the claim.

During the engine warranty period in particular, have the prescribed maintenance service carried out as follows:

- regularly
- punctually
- at a qualified specialist workshop which has the necessary specialist knowledge and tools to carry out the work required. Mercedes-Benz recommends that you use a Mercedes-Benz or MTU Service Centre for this purpose. In particular, work relevant to safety or on safety-related systems must be carried out at a qualified specialist workshop.

If there are legal requirements on exhaust gas aftertreatment, please note that:

- maintenance on the engines must be carried out according to specific regulations and using special measuring devices.
- it is prohibited to modify or tamper with components relevant to emissions.

All Mercedes-Benz and MTU Service Centres are aware of the relevant regulations.

Maintenance work does not include repair work. Repair work requires a separate order. You may also consult a Mercedes-Benz or MTU Service Centre for further information.

Qualified specialist workshop

A qualified specialist workshop has the necessary specialist knowledge, tools and qualifications to carry out the work required on the engine to a professional standard. This is especially important for work relevant to safety.

A qualified specialist workshop must carry out the required service, maintenance and repair work and document it according to the



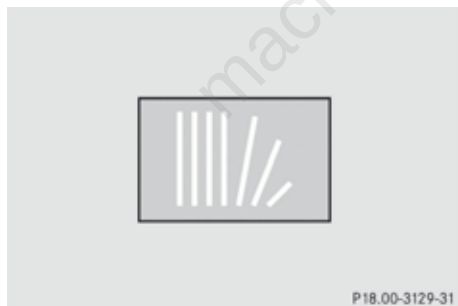
Example: charge current indicator lamp

If the  indicator lamp does not go out, or if it lights up while the engine is running, switch off the engine and check the poly-V-belt.

! Make sure that the poly-V-belt contact surfaces are not damaged (e.g. torn), oily or glazed, as this could cause the poly-V-belt to slip. Do not run the engine without a poly-V-belt. Otherwise, the alternator and coolant pump are not driven, which results in engine damage.

Electronic engine control

The electronics warning lamp must go out after the engine has started.



Example: electronics warning lamp

If the electronics warning lamp does not go out, or if it lights up while the engine is running, there is a malfunction in the electronic engine control system.

Each malfunction is stored in the system with its own fault code. Temporary faults are also stored.

Fault codes can be read using the Mercedes-Benz diagnostic tester STAR DIAGNOSIS or minidiag2 (► page 8). If the electronics warning lamp lights up while the engine is running, read or determine the fault code.

Oil pressure

! Once the operating temperature has been reached, the engine oil pressure may not drop below the following values:

- 2.5 bar at rated speed
- 0.5 bar at idling speed

If the oil pressure falls below these values, stop the engine and trace the cause.

Stopping and switching off the engine

WARNING

When switching off the equipment or parking the vehicle, make sure that the exhaust system does not come into contact with combustible objects, e.g. dry leaves, grass or other highly flammable materials.

- Park the vehicle/equipment.
- Safeguard the vehicle/equipment against rolling away.
- Shift the transmission into neutral/decouple the drive system.

Let the engine idle for approximately two minutes before switching off the engine if:

- the coolant temperature is very high (over 90 °C).
- the engine has been operated at full output.
- **To switch off the engine:** turn the vehicle key in the ignition lock back to the stop at position .
- Press the start/stop button on the engine or on the engine shutoff device on the equipment.
- Safeguard the vehicle/equipment against rolling away.

! Stop the engine immediately if:

Work schedule overview

Maintenance work overview

 WARNING

The engine becomes very hot while it is running and remains so for some time after it has stopped. It will cause burns if touched.

Before starting any work on the engine, allow all engine parts to cool down, or wear suitable gloves and items of clothing to protect yourself from being burned on hot engine components.

 WARNING

There is a danger of limbs being caught, pulled in and thereby crushed or severed by rotating engine parts.

Therefore you should:

- keep a safe distance between yourself and rotating engine parts, including when the engine is being started.
- wait until all engine parts have stopped moving before carrying out any work on the engine.
- wear work clothing which is fastened and close-fitting. Wear a hair net if necessary. Remove jewellery such as watches and necklaces.

	With BlueTec®	Without BlueTec®
Maintenance schedule for maintenance service		
Engine: oil and filter change		
AP18.00-W-0101C ⁷ Operation with diesel fuel: carry out an oil and filter change at least every two years .	•	•
AP18.00-W-0101C Operation with FAME fuels (bio-diesel): carry out an oil and filter change at least once a year .	•	•
Check and adjust the fluid level		
AP20.00-W-2010A Engine cooling system: check corrosion/antifreeze protection. Adjustment subject to a separate invoice. In the event of fluid loss, find cause and remedy.	•	•
Engine		
AP13.22-W-1351A Check poly-V-belt for wear and tear and damage.	•	•

⁷ Work item number of the Mercedes-Benz workshop information system (WIS).

Effective engine speed range		2000 rpm	2000 rpm
Idling speed		Approximately 500 to 550 rpm	Approximately 500 to 550 rpm
Engine brake permissible up to		2300 rpm	2300 rpm
Engine speed limiter (emergency running mode)		1300 rpm	1300 rpm
Oil pressure	At idling speed	Minimum 0.5 bar	Minimum 0.5 bar
	At nominal engine speed	Minimum 2.5 bar	Minimum 2.5 bar
Coolant temperature	Normal operation	Approximately 80 – 95 °C	Approximately 80 – 95 °C
	Maximum permissible coolant temperature	100 °C	100 °C
	Arduous operation (automatically reduced engine power output)	105 °C	105 °C

Capacities

		Capacity approximately	Service product (sheet no. ⁹)
Engine with oil filter (with standard truck oil pan)	OM 45745 LA (457.9)	37 l - 39 l	For all engines: Engine oil (228.2, 228.3, 228.31, 228.5, 228.51) For engines without BlueTec [®] , also: Engine oil (228.0, 228.1)
	OM 460 LA (458.9)	37 l - 39 l	
Fuel tank	Vehicle operation using diesel fuel	–	Diesel fuels (131.0)
	Vehicle operation with fatty acid methyl ester	–	Fatty acid methyl ester fuel (135.0)
Exhaust gas aftertreatment	AdBlue [®] /DEF	–	AdBlue [®] /DEF according to DIN 70070/ISO 22241

⁹ MB Specifications for Service Products.

Full Version Available

Mercedes-Benz OM 460 LA Engine Operator Manual (A460 584 18 81)

Mercedes-Benz OM 460 LA engine operator manual covering safe operation, daily checks and care. Searchable PDF, English and German. Instant PDF download.

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