INFORMATION ABOUT FAILURES

TROUBLESHOOTING

The information below are provided to facilitate the identification and solution of possible anomalies and failures which may occur during operation. Some of these problems can be solved by the user, while others require specific technical skills or abilities, therefore they should be exclusively dealt with by qualified technicians with extensive experience in the specific sector of intervention.

Caution - Precaution

Activation of a visual and/or acoustic signal indicates some form of malfunction. In this case, turn the engine off immediately and consult the documentation supplied by the manufacturer of the vehicle/device in which the engine is installed.

Problem	Cause	Remedy
During the ignition phase the control board and the engine do not start.	Flat battery	Recharge or replace battery
	Blown fuse	Replace fuse
	The electric cables are disconnected or they do not guarantee continuity	Check the electric connections
	Failure of engine revolution sensor	Replace the sensor
		Apply to an authorised workshop
The engine does not start	Presence of air in the fuel supply circuit	Carry out bleeding (See “Fuel supply circuit bleeding”)
	Dirty or faulty injectors	Replace the injectors
		Apply to an authorised workshop
	faulty fuel pressure regulation valve	Replace the valve
		Apply to an authorised workshop
	Failure of the start control	Replace the start control
		Apply to an authorised workshop
	water and/or impurities in the fuel	Apply to an authorised workshop
	Clogged fuel filter	Replace filter (See “Fuel filter replacement.”)
The starter motor runs idle	Electromagnet failure	Check the starter motor
		Apply to an authorised workshop

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Problem	Cause	Remedy
The starter motor is not running	Flat battery	Recharge or replace battery
	Interrupted electric connection	Check the electric connections
	Worn brushes	Replace the worn brushes
		Apply to an authorised workshop
The engine stops after ignition	Presence of air in the fuel supply circuit	Carry out bleeding (See “Fuel supply circuit bleeding”)
	Clogged fuel filter	Replace filter (See “Fuel filter replacement.”)
	Injection pump malfunction	Apply to an authorised workshop
	faulty fuel pressure regulation valve	Replace the valve
		Apply to an authorised workshop
	Presence of air in the fuel supply circuit	Carry out bleeding (See “Fuel supply circuit bleeding”)
	water and/or impurities in the fuel	Apply to an authorised workshop
	The electric cables are disconnected or they do not guarantee continuity	Check the electric connections
The engine does not reach the operating speed	Clogged fuel filter	Replace filter (See “Fuel filter replacement.”)
	Presence of air in the fuel supply circuit	Carry out bleeding (See “Fuel supply circuit bleeding”)
	Injection pump malfunction	Apply to an authorised workshop
	Dirty or faulty injectors	Replace the injectors
		Apply to an authorised workshop
	water and/or impurities in the fuel	Apply to an authorised workshop
	clogged air filter	Clean or replace the filter
	Insufficient combustion air flow	Apply to an authorised workshop
	Engine overheating	Apply to an authorised workshop
	Overload	Reduce the load
	problems related to SCR system	See chapter “OPERATING INFORMATION”, paragraph “**Driver warning system activation DWS Lamp**  ”
Emission of black smoke from the exhaust pipe	Dirty or faulty injectors	Replace the injectors
		Apply to an authorised workshop
	Faulty turbocharging turbine	Replace the turbine
		Apply to an authorised workshop

Problem	Cause	Remedy
Light emission of white smoke from the exhaust pipe	oil level too high	Adjust the oil level
	Worn segments	Check compression
		Apply to an authorised workshop
	Worn valve guideways	Check wear
		Apply to an authorised workshop
Abundant emission of white smoke from the exhaust pipe	Burnt gasket head	Apply to an authorised workshop
	Water pump malfunction	Replace the pump
		Apply to an authorised workshop
		Replace the belt (See “Changing the belt (type Poly-V)”)
	Thermostat valve malfunction	Replace the valve
		Apply to an authorised workshop
	Coolant too low	Top up, if necessary (See “Engine coolant level check”)
The pressure gauge shows a too low engine oil pressure and the corresponding warning light comes on	Failure of pressure gauge	Check or replace the pressure gaug
		Apply to an authorised workshop
	Oil level too low	Adjust the oil level (See “Engine oil level control”)
	Oil pump failure	Check or replace the pump
		Apply to an authorised workshop
	Faulty sensor	Check and, if appropriate, replace the sensor.
		Apply to an authorised workshop
	engine oil filter blocked	Replace the engine oil filter (See “Oil filter cartridge replacement”)
The coolant temperature warning light comes on	Coolant too low	Adjust the engine coolant level (See “Engine coolant level check”)
	Stucked overpressure valve of the load plug	Replace the plug
	Water pump malfunction	Replace the pump
		Apply to an authorised workshop
	Thermostat valve malfunction	Replace the valve
		Apply to an authorised workshop

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Problem	Cause	Remedy
The coolant temperature warning light comes on	Broken or worn belt	Replace the belt (See “Changing the belt (type Poly-V)”)
Output reduction	Clogged fuel filter	Replace filter (See “Fuel filter replacement.”)
	Presence of air in the fuel supply circuit	Carry out bleeding (See “Fuel supply circuit bleeding”)
	Injection pump malfunction	Replace the pump
		Apply to an authorised workshop
	Dirty or faulty injectors	Replace the injectors
		Apply to an authorised workshop
	clogged air filter	Clean or replace the filter
	Engine overheating	Apply to an authorised workshop
	Insufficient combustion air flow	Apply to an authorised workshop
	problems related to SCR system	See chapter “OPERATING INFORMATION”, paragraph **“Driver warning system activation DWS Lamp”**
The battery warning light comes on	The alternating current generator does not charge the battery	Check and, if appropriate, replace the alternating current generator
		Apply to an authorised workshop
The oil pressure warning light comes on	Engine oil pressure too low	Turn off the engine. Apply to an authorised workshop
The warning light which detects water in fuel comes on 	Presence of water in the fuel filter	(See chapter “OPERATING INFORMATION”, paragraph “Recommendations for use point no.9)
The warning light of the engine MIL/ SYS (*) turns on.	Engine malfunction	Apply to an authorised workshop
The particular filter indicator light turns on 	Particulate filter is clogged	The particulate filter regeneration is necessary (see chapter ““OPERATING INFORMATION””, paragraph “Particulate Filter Regeneration”
The Warning inducement lamp (DWS)  turns on	the causes could be different	See chapter “OPERATING INFORMATION”, paragraph **“Driver warning system activation DWS Lamp”**

(*) The luminous warning light MIL (amber colour) turns on to signal the malfunction of the engine due to the surpassing of emission thresholds.

The luminous warning light SYS (red colour) turns on to signal the malfunction of the engine without the surpassing of particle emission thresholds.

INFORMATION ABOUT COMPONENT REPLACEMENT

RECOMMENDATIONS FOR PART REPLACEMENT

Before carrying out any replacement, activate all safety devices and evaluate the need to inform the personnel working on the engine or nearby. In particular, place proper signs in the nearby areas and keep away all devices which, once activated, may represent a source of unexpected danger and risk for people's safety and health. When necessary, replace the worn components, and use original spare parts only. The manufacturer cannot be held responsible for damages to people or components resulting from the use of non original spare parts and from repairs carried out without the authorisation of the manufacturer.

When requesting spare parts, always contact your nearest VM MOTORI spare parts centre (See "documentation enclosed": Spare parts and service centre address booklet), indicating the engine serial number. (See"Manufacturer and engine identification")