

Faults, Causes and Remedies


9 Faults, causes and remedies



NOTE

*) Faults may be eliminated only by authorised personnel

Fault	Probable cause	Remedy
Engine		See the operating instructions for the engine
Engine does not start.	Drive switch (4-11/6) is not in neutral position	Set the drive switch to the neutral position
The bucket arm cannot be lifted/ lowered	Pressure-relief valve in servo valve is open	Remove and clean pressure-relief valve coupling, readjust*
	Pilot valve for working hydraulics (4-11/5) is locked	Unlock pilot valve (4-10/3)
	Pilot pressure too low or does not exist	Open, clean and readjust pressure-relief valve in control line *
	Diesel engine failed	Spring force can be used to bring the bucket arm to its lowermost position immediately after an engine failure.
Steering is sluggish	Pressure-relief valve in steering unit is open	Remove and clean entire pressure-relief valve, readjust*
	Slide in priority valve stuck	Replace priority valve *
Swivel unit does not swivel	Swivel block blocks swivelling (1-4/ arrow)	Remove swivel block and store in holder
	Pressure-relief valve in servo valve is open	Remove and clean entire pressure-relief valve, readjust*
Support fails	Switching of stop valve in frame under revolving seat stuck	Bring bucket arm into travel direction; unstick leverage
The support fails when the bucket arm is lowered in a swivelled state	Non-return valve in pressure line stuck in open position	Bring bucket arm into travel direction, remove and clean non-return valve (replace if necessary)*

Fault	Probable cause	Remedy
Faults in the driving and working hydraulics	Clogged filter	Replace filter cartridge (section 8.2.10).
	Lack of oil in hydraulic oil reservoir	Top off oil
	Electrical connection at axial piston pump are not tight, are not connected or are oxidised	Connect or clean electrical connection according to electrical plan
	High-pressure valves soiled	clean
Faults in the braking system	Parking brake does not hold the device	Check setting; adjust if necessary*
		Check whether electrical traction drive break is connected to brake lever
Alternator does not charge	Loose connection	Press in and lock connection
	V-belt torn	Replace V-belt
	Alternator speed too low	Check V-belt tension, tighten if necessary
Heater and ventilation system failed	Fuse in fuse box defective	Replace fuse
Hose couplings of attachments cannot be connected	Increased pressure due to heating of the attachment	<p>Carefully loosen the screwed connection on the end of the hose using the quick-change couplings. Oil squirts out and the increased pressure is eliminated. Tighten the screwed connection.</p> <div>  <p>NOTE Waste oil must be disposed of in such a way that it will not cause pollution!</p> </div> <p>Turn off the engine and eliminate pressure from the lines by alternatingly pressing the two buttons for the auxiliary hydraulic system (4-11/3) several times.</p>

9.1 Diagnostic code (engine error code)

Flash code			Function / component	Error
Short 0.4 s	Long 0.8 s	Short 0.4 s		
1	2	3	Output to coolant temperature indicator	Faulty signal, controller overtemperature
1	2	6	Hand throttle	Faulty/implausible signal
1	2	8	Intake air temperature sensor	Faulty signal
1	3	3	Transmission oil temperature sensor	Faulty signal
1	3	4	Rail pressure monitoring	Implausible signal, pressure / pressure deviation exceeds permissible range
1	3	5	Output to oil pressure warning lamp	Faulty signal, controller overtemperature
			Output to the valve controller	Faulty signal, overtemperature of fuel metering
1	3	6	Air filter monitoring	Air pressure downstream of filter too low
1	3	7	Output to actuators	Short-circuit to battery
1	3	8	Output to actuators	Short-circuit to ground
1	4	2	Output to engine ready lamp	Faulty signal, overtemperature of fuel metering
1	4	3	Multi-level switch 1 / 2 / 3	Faulty/implausible signal
1	4	4	Oil temperature sensor	Faulty/implausible signal
			Oil temperature monitoring	Temperature not within nominal range
1	4	5	Override switch monitoring	Implausible signal
1	4	6	Rail pressure limitation valve	Valve open / pressure surge required / no opening after pressure surge
1	4	7	Rail pressure sensor	Implausible signal, pressure deviation exceeds permissible range
2	1	2	Camshaft/crankshaft monitoring	No camshaft/crankshaft signal
2	1	3	Camshaft/crankshaft monitoring	Deviation between camshaft and crankshaft signal
2	1	4	Motor protection	Implausible overspeed / override status
2	1	6	Fuel low pressure sensor	Faulty signal
			Fuel low pressure monitoring	Fuel low pressure not within nominal range
2	1	9	Output to engine brake exhaust flap actuator	Faulty signal, controller overtemperature
2	2	2	Input accelerator 1 (PWM)	Faulty PWM signal
2	2	3	Charge air pressure sensor	Faulty signal
			Charge air pressure monitoring	Charge air pressure not within nominal range
2	2	4	Oil pressure sensor	Faulty/implausible signal
2	2	5	Coolant temperature sensor	Faulty/implausible signal in comparison to oil temperature, invalid CAN signal
2	2	6	Input accelerator 1 (analogue)	Faulty/implausible signal
2	2	7	Fuel temperature sensor	Faulty signal
2	2	8	Water level sensor in the fuel filter	Faulty signal
			Fuel filter water level monitoring	Max. water level exceeded
2	3	1	Oil pressure monitoring	Pressure not within nominal range
2	3	2	Coolant temperature monitoring	Temperature above nominal range
2	3	3	Intake air temperature monitoring	Temperature above nominal range
2	3	5	Coolant level monitoring	Level below nominal
2	3	7	Fuel temperature monitoring	Temperature not within nominal range
2	3	8	Output to fan actuator 1 / 2	Faulty signal, overtemperature of fuel metering
			Fan speed monitoring	Speed not within nominal range
2	4	1	Combustion monitoring	Misfire detected in one or several cylinders
2	6	1	Monitoring of output to actuators	Relay fails to open or opens too late, short-circuit to ground
2	6	3	Output to cold start aid	Faulty signal, relay defective, stuck or incorrectly wired, short circuit
2	7	1	CAN bus	Time out of one or several messages, inactive bus
2	8	2	Sensor supply voltage 1 / 2 / 3	Voltage not within nominal range
2	9	2	Atmospheric pressure sensor	Faulty/implausible signal

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Flash code			Function / component	Error
Short 0.4 s	Long 0.8 s	Short 0.4 s		
3	1	4	Hydraulic oil temperature sensor	Faulty signal
			Hydraulic oil temperature monitoring	Temperature not within nominal range
3	1	8	Battery monitoring	Voltage not within nominal range
3	2	8	Output to cold start aid indicator	Faulty signal, controller overtemperature
4	1	4	Output to external AGR actuator	Faulty signal
4	1	5	Output to external AGR actuator	Faulty signal, controller overtemperature
4	1	6	Output to external AGR actuator	Faulty signal
4	1	7	Oil wear timer	Critical time reached
5	1	2	Output to start relay	Faulty signal, controller overtemperature
5	1	3	Output to error indicator	Faulty signal, controller overtemperature
5	1	4	Terminal 15 monitoring	No signal detected
5	1	5	Terminal 50 monitoring	Permanent signal detected
5	2	1	Speed measurement	Implausible travelling speed
5	2	8	Output to internal engine brake	Faulty signal

For all other flash codes: Please consult your service partner