

Fault Code	Description	Fault Cause	Recommended Solutions
01	Overheating of the heat exchanger	The sensor sends a signal to shut down the heater. Heat exchanger temperature in the sensor zone is over 250°C	<p>Check the intake and outlet of the heating unit for unobstructed entry and exit of heated air.</p> <p>Check the integrity of the fan and its performance.</p> <p>Check the temperature sensor and replace it if necessary. (see items 5.3-5.4)</p> <p>Inspect the heat exchanger.</p> <p>Check and remove carbon deposits from the inside of the heat exchanger, if necessary (see items 5.8-5.9)</p>
02	Possible overheating at the intake temperature sensor. Sensor temperature (control unit) is more than 55 degrees.	Control unit is insufficiently cooled down during 5 min. purging before startup; or overheating of the control unit during operation.	<p>Check the intake and outlet of the heating unit for unobstructed entry and exit of air and re-start the heater to cool it down.</p> <p>Replace the control unit. (see item 5.7)</p>
05	Faulty temperature sensor (PLANAR-2D) or flame indicator	Short circuit to the casing or open circuit in the wiring of the sensor.	Check sensor as in 5.3 or 5.5, replace if necessary
04 or 06	Faulty temperature sensor in the control unit	Temperature sensor out of order (located in the control unit, cannot be replaced)	Replace control unit (see item 5.7)
07	Overheat sensor- open circuit	Faulty sensor. Oxidation of contacts in the terminal block.	Check overheat sensor circuit for an open. Remove oxidation from the connector contacts.
08			See Fault Code 29.
09	Faulty glow plug	Short circuit, open circuit, faulty control unit.	<p>Check glow plug, replace if necessary. (see item 5.1)</p> <p>Check the control unit, replace if necessary. (see item 5.7)</p>

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10	Electric motor of the air blower does not develop the necessary speed.	Increased friction in the bearings or contact between the impeller and fan shroud in the blower. Faulty electric motor.	Check electric motor, if possible correct the fault; replace air blower if necessary (see item5.6).
11	Faulty air temperature sensor (intake) only for PLANAR-8DM.	Mechanical fault. Oxidation of contacts in the block.	Check connecting wires. Check sensor (item5.4).
12	Shut down, overvoltage more than 30V (for 24V) or more than 16V (for 12V).	Faulty voltage regulator. Faulty battery.	Check battery terminals and wiring. Check the battery, charge it or replace if necessary.
15	Shut down, low voltage, less than 20V (for 24V) or less than 10V (for 12V)		
13	The heater does not start - two automatic start attempts failed.	No fuel in the tank	Fill the fuel tank.
		Fuel grade does not match the operating conditions at low temperatures.	Replace fuel, see Operation Manual.
		Insufficient supply of fuel.	Eliminate fuel line leakage or blockage. Check the performance of the fuel pump, replace if necessary (see item5.10).
		Clogged exhaust duct or combustion air intake.	Clean air intake or exhaust duct of possible clogging.

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13	The heater does not start - two automatic start attempts failed.	Insufficient pre-heating of the glow plug, faulty control unit.	Check the plug, replace if necessary (see item5.1). Check voltage supplied by control unit, replace if necessary.
		The impeller touches the fan shroud in the blower, and, as a result, flow of air into the combustion chamber is reduced.	Replace blower after determining its malfunction. (see item5.6).
		The glow plug housing in CC is clogged. Clogged glow plug screen or it is not installed all the way into housing.	Clean the glow plug hole. Replace the glow plug screen, if needed, and install it in accordance with item5.2.
16	During the purge time, temperature sensor was not cooled down. Time for ventilation was exceeded.	During5 min purge before start-up, temperature sensor was not sufficiently cooled.	Check the intake and output of the heater for unobstructed entry and exit of air. Check the integrity of the fan and its operation. Checkthe sensor, replace if necessary.
17	Faulty fuel pump	Short circuit or open circuit in the wiring of the fuel pump.	Check the wiring of the fuel pump for short circuit and open circuit. Check the wires to overheat sensor, insulation integrity.
20	Heater does not start	Burnt out fuses on the power harness.	Check the fuses andreplace if necessary.
		No communication between the controller and the control unit. Controller receives no data from the control unit.	Check the connectors and the green wire in the connecting harness. Remove oxidation from connectors. Check the controller and the connecting harness, replace if necessary. If the controller is operational, replace the control unit.

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27	Motor does not rotate	Damaged bearing or rotor, foreign objects, etc.	Check connectors and wiring leading to the electric motor board and the control unit. Eliminate the fault, if possible. (see item 5.6)
28	Motor rotates. Speed is not regulated.	Faulty electric motor control board or heater CU.	Replace air blower.
08 or 29	Flame failure during operation of the heater.	Insufficient fuel supply. Faulty fuel pump. Faulty flame indicator.	Check for leaks or clogging of fuel lines, tighten the clamps on the fuel lines. Check combustion air intake and exhaust pipe. Check the amount of fuel supplied by the fuel pump, and replace it if necessary. (see item 5.10) If the heater starts, check flame indicator and replace it if needed. (see items 5.3 or 5.5)
30	Heater does not start	No communication between the controller and the control unit. Control unit receives no data from the controller.	Check connectors and white wire in the connecting harness. Remove oxidation of connectors. Check controller and connecting harness, replace if necessary. If controller is operational, replace control unit.
31	Overheating of hot air outlet temperature sensor. Planar 8DM	Hot air temperature sensor gives a signal to turn off the heater.	Check the temperature sensor (item 5.4) only PLANAR-8DM

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32	Faulty temperature sensor at air intake.	Faulty temperature sensor at air intake.	Check connecting wires. Check sensor (item 5.4). only PLANAR-8DM
33	Heater control is blocked	Error "Overheating" repeated three times.	See instructions for unblocking the heater. only for PLANAR-8DM
34	Wrong component assembly	One of the temperature sensors (intake, output or overheating) is installed in wrong location and gives wrong signal.	Check location of temperature sensors. Check sensors (item 5.4) only PLANAR-8DM
35	Flame failure	Supply voltage drop.	Check the battery, wiring. (Voltage drop may occur due to prolonged use of electric starter) only PLANAR-8DM
36	Flame indicator temperature above normal	Faulty flame indicator. Malfunction of the stabilizer in combustion chamber.	Check flame indicator (item 5.5). Inspect combustion chamber. (item 5.8) only for PLANAR-8DM
78	Flame failure during operation.	Air bubble in fuel system. Faulty fuel pump. Faulty flame indicator.	Check fuel lines for leaks or clogging. Tighten fuel line hose clamps. Check combustion air intake and exhaust duct.