2.5 Fault code table

Fault code P000…	Error description	Cause ▪ Remedial action
P000100 **P000101** **P000102**	Water outlet sensor – Interruption – Short circuit – Short circuit after Ub+	▪ Check the water outlet sensor. – Check cables for continuity, short circuit and damage. – Unplug connector XB4, measure resistance between cable RD (chamber 9) and cable RD (chamber 10). – Measured values see page 17, deviating values –> renew lead harness of heater.
P00010A	Cold air – timeout	The combustion chamber has not cooled sufficiently for a restart. ▪ Check whether hot combustion air is drawn in. If not –> check flame sensor, see Fault code P000120 and Fault code P000121.
P000110 **P000111** **P000112**	Water inlet sensor – Interruption – Short circuit – Short circuit after Ub+ **Note!** Fault code P000110 and P000111 are only displayed if ▪ the heater is in operation ▪ Temperature reached at water outlet sensor at least 80 °C.	▪ Check the water inlet sensor. – Check cables for continuity, short circuit and damage. – Unplug connector XB4, measure resistance between cable BU (chamber 5) and cable BU (chamber 6). – Measured values see page 17, deviating values –> renew lead harness of heater.
P000114	Possible risk of overheating (implausible signal) **Note!** Fault code P000114 is only displayed if ▪ the heater is in operation ▪ Temperature reached at water outlet sensor at least 80 °C.	Too large temperature difference between the water inlet and water outlet sensor. ▪ For remedial action, see Fault code P000115. ▪ Check the water inlet sensor. – Unplug connector XB4, measure resistance between cable BU (chamber 5) and cable BU (chamber 6). – Measured values see page 17, deviating values –> renew lead harness of heater.
P000115	Overheating – software threshold exceeded	Temperature at the water outlet sensor >125 °C. ▪ Check water circuit for leaks (heater controller in warm position) ▪ If non-return valve / thermostat in the water circuit, check the flow direction. ▪ Check water throughput rate. ▪ Vent water circuit. ▪ Check the water outlet sensor – Check cables for continuity, short circuit and damage. – Unplug connector XB4, measure resistance between cable RD (chamber 9) and cable RD (chamber 10). – Measured values see page 17, deviating values –> renew lead harness of heater. ▪ Check water pump, see Fault code P000253 to Fault code P000258.

Fault code P000…	Error description	Cause ▪ Remedial action
P000116	Overheating – hardware threshold exceeded	Temperature at the water outlet sensor >130 °C. ▪ For remedial action, see Fault code P000115. ▪ Check the water outlet sensor. – Check cables for continuity, short circuit and damage. – Unplug connector XB4, measure resistance between cable RD (chamber 9) and cable RD (chamber 10). – Measured values see page 17, deviating values –> renew lead harness of heater.
P00011A	Operating lock-out – too many overheating events detected	The control box is locked due to too frequent consecutive overheating (Fault code P000114, Fault code P000115). ▪ For remedial action, see Fault code P000114, Fault code P000115. ▪ Unlock control box, see page 7.
P000120 **P000121** **P000122**	Flame sensor – Interruption – Short circuit – Short-circuit to Ub+	▪ Check flame sensor. – Check cable for continuity, short circuit and damage. – Unplug connector XB4, measure resistance between cable BN (chamber 7) and cable BN (chamber 8). – Measured values see page 17, deviating values –> renew lead harness of heater. ▪ Next display Fault code P000120, Fault code P000121 –> Renew control box, see repair step 1, see page 14.
P000125 **P000126** **P000127** **P000128** **P000129**	Flame cutout from start process Flame cutout within the control range 0% – 25% Flame cutout within the control range 25% – 50% Flame cutout within the control range 50% – 75% Flame cutout within the control range 75% – 100% **Note!** In case of flame cutout during the start phase or in normal operation the heater is restarted (max. 3 times). If the restart was successful, the fault code display is deleted.	▪ Check exhaust and combustion air system. ▪ Check fuel quantity and fuel supply, see page 21. ▪ Check flame sensor, see Fault code P000120 and Fault code P000121.
P00012A	Safety time – exceeded	▪ Check exhaust and combustion air system. ▪ Check fuel quantity and fuel supply, see page 21. ▪ Renew the fuel filter. ▪ Clean the fuel filter in the connection socket of the metering pump.
P00012B	Operating lock-out, too many safety timeouts	Following three unsuccessful start attempts the control box is locked. ▪ Unlock control box, see page 7. ▪ Check fuel quantity and fuel supply, see page 21.
P000143	Air pressure sensor – implausible signal	Heater in emergency mode. The air pressure is outside the characteristic curve for the altitude adjustment (P < 598 hPa or P > 1106 hPa). ▪ 12V: Check connection to the CAN BE. Delete error. ▪ 24V: Delete error. If the fault persists, replace the control box
P000200 **P000201**	Metering pump interruption Metering pump – short circuit	▪ Check metering pump lead harness for continuity, short circuit and damage. – Lead harness ok –> renew the metering pump.

Fault code P000…	Error description	Cause ▪ Remedial action
P000202	Metering pump – short circuit downstream of +Ub or transistor error	▪ Check cables for continuity, short circuit and damage. – Unplug the connector at the metering pump. ▪ Display Fault code P000200 metering pump defective –> renew metering pump.
P000210 **P000211** **P000212**	Glow plug – interruption Glow plug – short circuit Glow plug – short circuit downstream of +Ub or transistor error **Caution!** **Damage to unit in case of overvoltage** Voltage > 9.5 V irreparably damages the glow plug. → Test function with max. 9.5 V. **Note** Note the short-circuit withstand capability of the power pack.	▪ Check glow plug. – Check cables for continuity, short circuit and damage. – Unplug connector -XB4, unclip cable WH (chamber 3) and cable WH (chamber 4). – Apply 9.5 V ±0.1 V voltage to the glow plug and after 25 sec measure the current intensity. – Measured value 9.5 A (+1 / –1.5) the glow plug is ok – Deviating values –> renew the glow plug.
P000213	Glow plug – ignition energy too low	Glow plug energy input is too low. ▪ Check cables for continuity, short circuit and damage. ▪ Check glow plug, see Fault code P000210 to Fault code P000212.
P000220 **P000221** **P000222**	Electric motor – interruption Electric motor – short circuit Electric motor – short circuit downstream of +Ub or transistor error	▪ Measure blower speed with EasyScan diagnostic tool, see EasyScan operating instructions.
P000223 **P000224**	Electric motor – blocking Electric motor – current input too low	Impeller blocked (frozen, soiled, sluggish, ...). ▪ Remove blockage. – Check electric motor for smooth and easy running by turning the impeller manually. ▪ Next display Fault code P000223 / Fault code P000224 –> renew the blower, see repair step 7, Page 18.
P000250 **P000251**	Water pump – interruption Water pump – short circuit	▪ Check lead harness of the water pump: – Unplug connector -XB3 at the heater – Unplug connector -XB8/2 at the water pump. – Check cable for continuity, short circuit and damage. – Lead harness of the water pump ok –> renew the water pump.
P000252	Water pump - short circuit downstream of +Ub or transistor error	▪ Unplug connector -XB8/2 at the water pump. – Display Fault code P000250 Water pump defective –> renew water pump.
P000253	Water pump – blocking	▪ Water hoses laid free from kinks?
P000254	Water pump – overcurrent cutout	▪ Water pump / water circuit dirty?
P000255	Water pump – speed below minimum	▪ Water pump / water circuit dirty?
P000256	Water pump – dry running	▪ Check the coolant liquid level in the water circuit. ▪ Vent the water pump / water circuit.
P000257	Water pump – overheating	Water pump ambient temperature too high. ▪ Position the water pump at an adequate distance from hot vehicle parts.

Fault code P000…	Error description	Cause ▪ Remedial action
P000258	ADR water pump – Undervoltage / Overvoltage	▪ Check lead harness of the water pump: – Unplug connector -XB3 at the heater – Unplug connector -XB8/2 at the water pump. – Check cable for continuity, short circuit and damage. – Lead harness of the water pump ok –> renew the water pump.
P000259	ADR water pump / vehicle blower – Short circuit	▪ Check the cables to the water pump and to the vehicle blower for continuity, short circuit and damage. ▪ Check the coolant circuit. ▪ Check blower relay.
P000260	Universal output Interruption	▪ Check cable for continuity and damage. ▪ If necessary, check coding for universal outlet.
P000261	Vehicle blower – short circuit	▪ Check electric motor cover for damage and correct fit. – Electric motor cover ok –> renew blower relay -K1.
P000262	Universal output Short circuit downstream of Ub+ or transistor fault	▪ Check cable for continuity, short circuit and damage.
P000300	Overheating detection Metering pump hardware or cutout circuit defective	▪ Check the water outlet sensor. – Check cables for continuity, short circuit and damage. – Unplug connector XB4, measure resistance between cable RD (chamber 9) and cable RD (chamber 10). – Measured values see page 17, deviating values –> renew lead harness of heater. ▪ Next display Fault code P000300 –> renew lead harness of the heater. ▪ Unlock control box, see page 7.
P000301 **P000302**	Control box defective Control box defective	▪ Replace control box, see repair step 1, Page 14
P000303	Control box defective	▪ Replace control box, see repair step 1, Page 14
P000304	Control box defective	▪ Replace control box, see repair step 1, Page 14
P000305	Control box defective	▪ Replace control box, see repair step 1, Page 14
P000306	Control box defective	▪ Replace control box, see repair step 1, Page 14
P000307	CAN communication error control unit	▪ Delete error, if it occurs repeatedly check the CAN connection between heater and control unit
P00030A	CAN communication error	▪ Delete error, if it occurs repeatedly check the CAN connection between heater and control unit
P000310 **P000311**	Control box cutout due to overvoltage Heater cutout due to overvoltage **Note!** Heater is not functioning.	Overvoltage applied at the control box without interruption for at least 20 seconds. ▪ Unplug connector -XB1 at the heater. ▪ Start the vehicle engine. ▪ Measure voltage between cable RD (chamber 1) and cable BN (chamber 2). – Voltage >15 volt – Check alternator controller – Check the battery.
P000312 **P000313**	Control box cutout due to undervoltage Heater cutout due to undervoltage **Note!** Heater is not functioning.	Undervoltage applied at the control box without interruption for at least 20 seconds. ▪ Unplug connector -XB1 at the heater. ▪ Start the vehicle engine. ▪ Measure voltage between cable RD (chamber 1) and cable BN (chamber 2). – Voltage < 10 volt – Check the fuses, the supply cables, the ground connections and the positive terminal post at the battery for voltage drop (corrosion).

Fault code P000…	Error description	Cause ▪ Remedial action
P000315	Implausible air pressure information	▪ Check connection to the control unit. If fault persists, use EasyScan to test the control unit.
P000316	Insufficient heat dissipation via the coolant	Too many consecutive short heating mode operations. ▪ Check coolant circuit
P000330	Control box defective	▪ Replace control box, see repair step 1, Page 14
P000331	Control box defective	▪ Replace control box, see repair step 1, Page 14
P000332	Control box defective	▪ Replace control box, see repair step 1, Page 14
P000342	Invalid configuration	▪ 12V / 24V: Too many CAN components connected. Check the configuration. ▪ 24V ADR: Use one CAN control unit only, check the connection to the control unit if necessary.
P000394	ADR button – Short circuit	▪ Check the cable and button for continuity, short circuit, damage. Replace if necessary.
P000500	Fault memory entry ErrorState_GSC. Fault response: Heating or ventilation mode is continued.	▪ Withdrawal of the active request (fault remains active as long as heating or diagnosis request still exists). ▪ Delete fault memory.
P000A00	Communication is ended by the heater. EasyFan does not respond to the coded number of messages.	▪ Reset the fault by withdrawing the active request (fault remains active as long as heating or diagnosis request exists). ▪ Delete fault memory.
P000E01	Runtime limit exceeded	▪ Coded runtime end reached.