### Air Top 5000 ST

## 5 Troubleshooting

#### 5.4 Error code output

If the heater is fitted with a combination timer, an error code output will appear on the display of the timer after a fault occurs.

NOTE

The error code is output if the heater is fitted with a control element after an error has occurred by the switch-on indicator/error code indicator flashing. After 5 seconds of fast flashing, the error code will be output by a sequence of long flash pulses, the number of flashes is shown in the table below (for example F04 – 4 long flash pulses).

Error code	Error (group)	Additional information during PC diagnostic	Remedy
F 00	Control unit error	01 Control unit error	Replace control unit
		81 EOL checksum error	
		<b>11</b> Incorrectly coded control unit or incorrect heater (fuel type) installed (the heater will not work if this error occurs)	
		<b>91</b> Neutrally coded or disabled control unit (the heater will not work if this error occurs)	
		<b>92</b> Maintain command failed (the heater will not work if this error occurs)	
		18Customer bus defective	
F 01	No start	<b>02</b> Even after the restart, no flame has formed	Check fuel supply (tank empty, lines blocked) Clean burner insert, replace flame senso
		82 No start in test	
F 02	Flame failure	<ul> <li>03 The flame has gone out during operation and has not reformed after a restart attempt</li> <li>83 The flame has gone out during a heating cycle more than FAZ times (EEPROM)</li> </ul>	Check fuel supply (tank empty, lines blocked) Clean burner insert, replace flame sensc
F 03	Undervoltage or overvoltage	<b>84</b> The voltage was less than 10.5 V or 21 V for longer than 20 seconds	
		<b>04</b> The voltage was more than 16 V or 32 V for longer than 6 seconds	
F 04	Premature flame recognition	<b>05</b> The flame sensor recognised a flame before combustion had started	Replace flame sensor
F 06	External temperature sensor break or short circuit	<ul> <li>14 Temperature sensor circuit short circuit to earth</li> <li>94 Temperature sensor circuit break or short circuit to +Ub</li> </ul>	Check cables, replace temperature sense Check cables and terminating resistor, replace temperature sensor

Fig. 503 Troubleshooting (page 1 of 2)

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# 5 Troubleshooting

Error code	Error (group)	Additional information during PC diagnostic	Remedy
F 07	Metering pump interrupt or short circuit	88 Break or short circuit to +Ub	Check cables, replace metering pump
		08 Short circuit to earth	Check cables, replace metering pump
F 08	Drive unit (combustion and hot air blower) break or short circuit	89 Break or short circuit to +Ub 09 The switched drive unit cable	Replace drive unit (combustion and hot air blower) Eliminate the cause of the blockage / difficulty in movement Replace drive unit (combustion and hot air blower)
		(combustion and hot air blower) has a short circuit to earth or the drive unit is overloaded	
		15 Burner motor block guard has tripped	
		<b>95</b> Burner motor not turning easily sensor has tripped	
F 09	Glow plug/Flame monitor interrupt or short circuit	8A Glow plug / Flame sensor: Break or short circuit to + Ub	Replace glow plug / flame monitor
		<b>19</b> Glow circuit: The switched cable of the element has a short circuit to earth	Replace glow plug / flame monitor
F 10	Overheating	<b>06</b> The overheating fault lock-out has tripped (heater overheated)	Find and remove the cause of the overheating <b>NOTE</b> If no other cause can be found for the overheating, the pressure losses caused by the hot air distribution (too many resistance points) are too high or a hot air filter is soiled
		<b>17</b> Incorrect application or illegal insulation (ÜHS gradient too high)	
F 11	Overheating sensor interrupt or short circuit	AB Overheating sensor circuit break or short circuit to +Ub	Replace overheating sensor
		<b>1B</b> Overheating circuit: The switched cable of the element has a short circuit to earth	Replace overheating sensor
F 12	Heater fault lock-out	<b>07</b> The heater fault lock-out has been activated	Remove the fuse and then refit it <b>NOTE</b> The following error has occurred several times: Fault counter more than 3 times Incorrect start counter more than 9 times Overheating counter more than 3 times Flame failure counter more than 2 times
F 13	Permanent heater fault lock-out	87 The permanent heater fault lock-out has been activated	Delete the error with the PC diagnostic <b>NOTE</b> Permanent flame failure counter more than 3 times
F 14	Overheating sensor incorrect position	<b>97</b> Incorrect position of the overheating system (ÜHS gradient too low)	Position the overheating sensor correctly
F 15	Nominal sensor break	<b>9B</b> Nominal value potentiometer circuit break or short circuit to + Ub	Check cables, replace control element

Fig. 503 Troubleshooting (page 2 of 2)

## 10 Packing / Storage / Shipment

Page for notes