

**ENERGY-EFFICIENT,
ENVIRONMENTALLY-FRIENDLY
HEATING SOLUTIONS**

BAXI

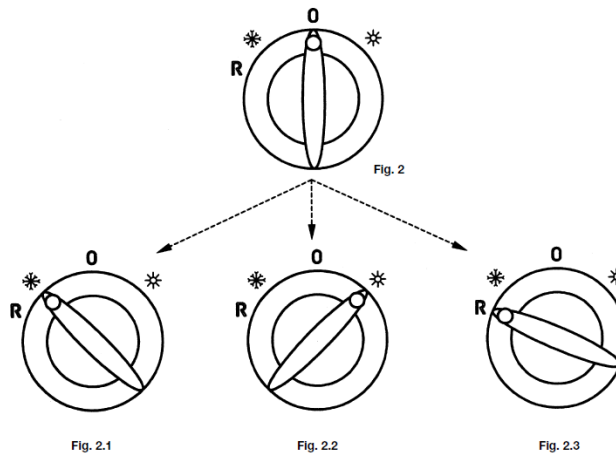
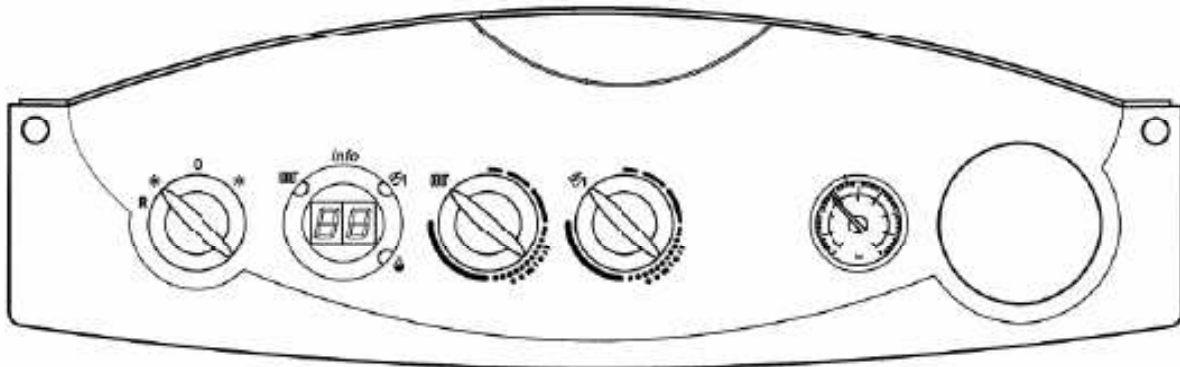
**Baxi Luna HT
Residential
Troubleshooting
Guide**

WARNING!

THIS DOCUMENT IS INTENDED ONLY AS AN EDUCATIONAL TOOL

THIS TROUBLESHOOTING GUIDE, AND THE INSTRUCTIONS AND SUGGESTIONS WITHIN ARE INTENDED SOLELY AS AN EDUCATIONAL TOOL ASSISTING COMPLETELY QUALIFIED GAS APPLIANCE MECHANICS WHO HAVE SUCCESSFULLY COMPLETED THE BAXI INSTALLATION PROGRAM. USE OF THE INFORMATION HEREIN FOR THE PURPOSES OF ONSITE APPLIANCE CORRECTION BY UNTRAINED PERSONNEL MAY CAUSE EXTREMELY DANGEROUS CONDITIONS, AND MAY VOID THE MANUFACTURER'S WARRANTY. BAXI N.A. ASSUMES ABSOLUTELY NO LIABILITY IN THE EXECUTION OF THE TRAINING SUGGESTIONS IN THIS DOCUMENT. SHOULD YOU EXPERIENCE PROBLEMS OR COMPLICATIONS BEYOND YOUR REALM OF TRAINING, PLEASE CONTACT BAXI N.A. FOR FURTHER INSTRUCTIONS.

RESETTING UNIT



IF A FAULT OCCURS, THE DISPLAY READS OUT AN ERROR MESSAGE IDENTIFYING IT. NOTE: IF THE ERROR MESSAGE CONTAINS MORE THAN TWO DIGITS (E.G. E133), THE DISPLAY READS OUT THE FIRST TWO DIGITS "E1" FOLLOWED BY THE LAST TWO DIGITS "33".

IF AN ERROR CODE APPEARS YOU WILL NEED TO RESET THE BOILER USING THE TOGGLE SWITCH ON THE LEFT-HAND SIDE OF THE CONTROL PANEL. TURN THE TOGGLE SWITCH TO THE "R" POSITION (RESET) FOR THREE SECONDS (FIG. 2.3) AND THEN LET GO. THE TOGGLE SWITCH SHOULD GO TO THE WINTER MODE POSITION (FIG. 2.1) AND ATTEMPT IT'S SEQUENCE OF OPERATION PROVIDING THERE IS A CALL FOR HEAT OR DOMESTIC HOT WATER.

Baxi Luna HT Troubleshooting Guide

Note: It is recommended that a combustion analyzer test be performed at every visit and that the proper adjustments are made if necessary.

Error Code	Description	Solution
E10	Outdoor Temperature Sensor fault	<ol style="list-style-type: none"> 1- Disconnect the outdoor temperature sensor and take an ohm reading using chart B. If the sensor is out of calibration replace it. 2- If the Sensor is working properly replace the main control board.
NOTES:		
E20	CH NTC Sensor Fault	<ol style="list-style-type: none"> 1- Take an ohm reading of the CH NTC sensor using chart A. If the sensor is out of calibration, replace the sensor. If the sensor is working properly, replace the main control board. <p>Note: The CH NTC sensor sits in a dry well and should always be covered in heat transfer paste.</p>
NOTES:		
E50	DHW NTC Sensor Fault	<ol style="list-style-type: none"> 1- Take an ohm reading of the DHW NTC sensor. If the NTC sensor is out of calibration replace the faulty sensor. 2- Check for a resistance in terminals 9 and 10 on the M2 connector (Only for heating boilers) 3- If utilizing an indirect tank sensor, take an ohm reading using chart C. If the sensor is faulty replace it. If the sensor is working check parameter 651 on the QAA73. (For heating only models) 4- If problem persists replace the main control board <p>Note: The DHW NTC sensor is in a wet well, shutoff the cold water inlet and open a hot water tap before replacing the sensor.</p>
NOTES:		
E110	High Limit Temperature Sensor Activating	<ol style="list-style-type: none"> 1- Check pump to make sure it is running and not ceased. 2- Check for restrictions 3- Make sure that all air is purged from the system 4- Take an ohm reading on the high limit sensor (0Ω indicates the sensor is closed, OL indicates the sensor is open) 5- If an E110 error code persists change the high limit sensor.
NOTES:		

<p>E119</p>	<p>Low Water Cut-off Pressure Switch Activating</p>	<ol style="list-style-type: none"> 1- Ensure all air is purged from the system and all shutoff valves are open 2- Check boiler and system for leaks 3- Ensure the pressure in the expansion tank is 11.6 psi 4- Fill the system between 1 and 1.5 bar on the pressure gauge. 5- If an E119 error code persists jump the leads on the low water cutoff. If the boiler fires up change the low water cutoff switch.
<p>NOTES:</p>		
<p>E130</p>	<p>Flue Gas Temperature Sensor/ Air Pressure Switch</p>	<p>If unit can be reset (Pressure Switch Activated)</p> <ol style="list-style-type: none"> 1- Check for obstructions in the venting and termination 2- Ensure the venting is within the maximum venting length requirements 3- Make sure there is water in the condensate trap 4- Check that the proper QAA73 parameter values have been adjusted with respect to gas type, venting length and altitude. Refer to installation manual for values 5- Check the silicone tubes coming from the air pressure switch for kinks, melting and holes, make sure that the low pressure opening at the back of the unit is not blocked. 6- Ensure that there are no loose wires and that the pressure switch is opening and closing properly 7- Reset boiler and analyze the combustion gas to ensure the correct CO2 and CO values. Refer to the installation guide for combustion specifications. <p>Note: When CO levels are significantly higher than the numbers above the boiler's specifications it is recycling products of combustion. Check all gasket seals between the flue and air intake venting connections.</p> <p>If unit cannot be reset (Flue High Limit has Activated)</p> <ol style="list-style-type: none"> 1- The flue high limit has a red manual reset button in the center of the sensor. 2- Check for obstructions in the venting and termination 3- Ensure the venting is within the maximum venting length requirements 4- Check that the proper QAA73 parameter values have been adjusted with respect to gas type, venting length and altitude. Refer to installation manual for values 5- Reset boiler and analyze the combustion gas to ensure the correct CO2 and CO values. Refer to the installation guide for combustion specifications. <p>Note: When CO levels are significantly higher than the numbers above the boiler's specifications it is recycling products of combustion. Check all gasket seals between the flue and air intake venting connections.</p>
<p>NOTES:</p>		
<p>E133</p>	<p>Burner Lockout</p>	<p>No Spark:</p> <ol style="list-style-type: none"> 1- Check ground and polarity back to the circuit breaker 2- Ensure the boiler is on a dedicated circuit 3- Check for 30 V DC going to the spark generator <p>If there is voltage to the spark generator change the spark generator. If there is no voltage to the spark generator change the main control board.</p>

<p>E133</p>	<p>Burner Lockout</p>	<p>Weak Spark:</p> <ol style="list-style-type: none"> 1- Make sure you have 3-5 sparks per second and the boiler is grounded 2- Make sure the spark generator is fastened tightly to the mounting bracket 3- If a weak spark persists follow the procedure outlined in the "No Spark" section <p>No Flame:</p> <ol style="list-style-type: none"> 1- Ensure that all gas shutoffs are open and that adequate working gas pressure is coming to the unit. Refer to the installation manual for gas specifications. 2- Ensure the silicon tube going from the fan to the gas valve is secure and does not have any moisture or holes in it. 3- Check for 120 V going to coils 1 and 2 on the gas valve 4- If converting to propane gas, try turning the "V" screw (High Fire Adjustment) an additional half to full turn counterclockwise <p>If there is voltage to the gas valve replace the gas valve. If there is no voltage to the gas valve replace the main control board.</p> <p>Flame Sensor is not sensing:</p> <ol style="list-style-type: none"> 1- Check polarity and ground from the boiler back to the circuit breaker 2- Check for 3-5 micro amps going to the board 3- If you do not have 3-5 micro amps try cleaning the flame sensor <p>Note: Do not clean the flame sensor using sandpaper as it may damage the protective coating. If the sensor is dirty check you're venting to ensure you are not recycling products of combustion. Also ensure that your QAA73 parameters are correct for the type of gas you are using.</p>
<p>NOTES:</p>		
<p>E160</p>	<p>Fan Speed Thresholds not Reached</p>	<ol style="list-style-type: none"> 1- Check QAA73 fan speed parameters values have been adjusted with respect to gas type, venting length and altitude. Refer to installation manual for values <p>If the fan speed parameters are correct then replace the fan.</p>
<p>NOTES:</p>		
<p>E168</p>	<p>Communication Lockout</p>	<ol style="list-style-type: none"> 1- Ensure that the boiler is operating on a dedicated circuit, proper polarity and grounding 2- Check the grounds on the internal pump, gas valve and fan 3- Check for water on the board 4- Unplug the boiler for 20 minutes and disconnect all external controls including the QAA73. Plug the boiler back in and use a jumper at the M1 block on terminals 1 and 2 to call the boiler on. If an E168 persists replace the main control board. 5- If the boiler fire's up make sure all secondary pumps and controls are grounded and connect them again one by one 6- If at any point while reconnecting the error code reappears, look for a bad ground or electrical error on that particular device.
<p>NOTES:</p>		

No Error code	No DHW	<ol style="list-style-type: none"> 1- Make sure there is a bar in the upper left corner of the QAA73 indicating that the DHW mode is on 2- Check the DHW hall sensor to ensure it is connected to the inlet group properly 3- Check for debris in the DHW flow sensor 4- Ensure the motorized diverter valve is moving properly 5- Clean the DHW plate heat exchanger
NOTES:		
No Error code	DHW Not Hot enough	<ol style="list-style-type: none"> 1- Make sure the CH water is going through the plate heat exchanger and not into the CH loop. If it is going through the CH loop replace the paddles inside the diverter valve and clean the diverter valve 2- Clean the DHW plate heat exchanger 3- Check the DHW NTC sensor 4- Check the Combustion
NOTES:		
No Error code	Boiler Short Cycles	<ol style="list-style-type: none"> 1- Make sure the combustion settings are correct for the unit and its application 2- Make sure your heat load is adequate for the boiler
NOTES:		
No Error code	Boiler makes a Squealing Noise	<ol style="list-style-type: none"> 1- Check that there is no more than 25% of the system volume of glycol in the system 2- Clean the diverter valve
NOTES:		
No Error code	Boiler makes a banging noises	<ol style="list-style-type: none"> 1- Make sure the pump is moving 2- Ensure there is no air in the system 3- Make sure there is no restrictions
NOTES:		

Temperature Sensor Testing Chart
Temperature VS. Resistance (°C/Ω)

-20	96125	0	32505	20	12483	40	5332	60	2492	80	1257	100	677
-19	90743	1	30898	21	11935	41	5123	61	2404	81	1216	101	657
-18	85694	2	29381	22	11414	42	4923	62	2319	82	1178	102	638
-17	80957	3	27946	23	10919	43	4732	63	2238	83	1141	103	620
-16	76510	4	26590	24	10447	44	4549	64	2160	84	1105	104	602
-15	72335	5	25308	25	9999	45	4374	65	2086	85	1070	105	585
-14	68412	6	24094	26	9572	46	4207	66	2014	86	1037	106	568
-13	64725	7	22946	27	9166	47	4047	67	1945	87	1005	107	552
-12	61259	8	21859	28	8779	48	3894	68	1879	88	974	108	537
-11	57999	9	20829	29	8411	49	3748	69	1815	89	944	109	522
-10	54932	10	19854	30	8060	50	3608	70	1754	90	915	110	507
-9	52045	11	18930	31	7726	51	3473	71	1695	91	887	111	493
-8	49327	12	18054	32	7407	52	3345	72	1638	92	860	112	480
-7	46767	13	17223	33	7103	53	3222	73	1584	93	835	113	467
-6	44354	14	16436	34	6813	54	3104	74	1532	94	810	114	454
-5	42080	15	15689	35	6537	55	2991	75	1481	95	785	115	442
-4	39936	16	14980	36	6273	56	2882	76	1433	96	762	116	430
-3	37914	17	14306	37	6021	57	2778	77	1386	97	740	117	418
-2	36006	18	13667	38	5781	58	2679	78	1341	98	718	118	407
-1	34205	19	13060	39	5551	59	2583	79	1298	99	697	119	396

Part Resistance		
Gas Valve	380/1.330	1&3 -1250Ω ±5%
	1.450/1.650	1&3 - 1180Ω ±5%
	1.100	EV1-620 Ω ±5% EV2 - 3356Ω ±5%
Pump	380/1.330	45 Ω ±5%
3 Way Motor	380/1.330	1480 Ω ±5%
Fan	380/1.330	9 Ω ±5%
Spark Generator	380/1.330	370 Ω ±5%
DHW Flow Sensor	380	2706 Ω ±5%