Technical Service Bulletin:

A2 Error Code Troubleshooting

Models: C1210ESC, C1210ES, C1050ES, C950ES, 940ES, 940ESO, 830ES, 2400ES, 2700ES, 715ES, C800ES, C920ES/ESC, Integra 500, Evolution 500

BOSCH

Introduction

This procedure must be performed by a qualified technician.

Follow the procedures below and report results to Bosch Technical Support. This will assist in determining the cause and solution to the problem.

A2 error code
This error code detected by the flue gas limiter indicates a possible exhaust leak from the combustion chamber.

Flue Gas Limiter
The flue gas limiter is a safety device located in the upper right corner of the heater that is designed to trip (creating an open circuit) if the chamber outside the heat exchanger exceeds 220 °F or 104 °C.

The limiter will reset itself (closing the circuit) when it cools off, but the error will still have to be reset manually using the reset button on the control board.

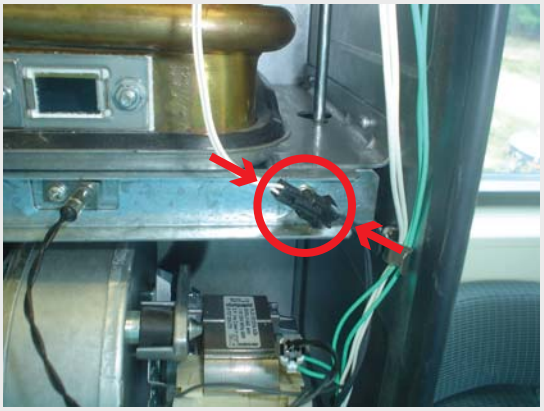
Tools needed:

- Phillips head screwdriver
- Digital Multi-meter

Procedure

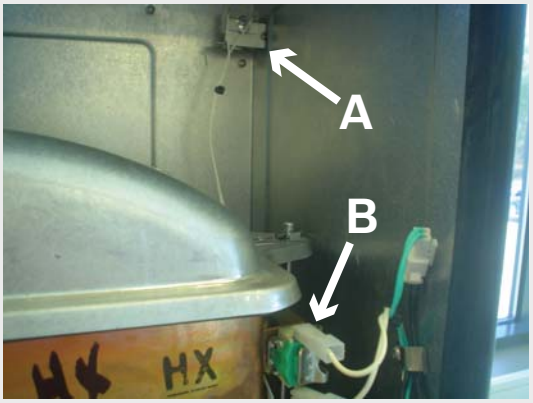
1. Press the “reset” button on the control panel of the heater to clear the error code. If the error code does not reset or continues to reoccur, proceed with the following troubleshooting steps.
2. Confirm that the heater is installed according to the specifications in the manual.
   - Confirm that the exhaust and intake pipes are the correct diameter, material and approved length as explained in the installation manual provided with your model.
3. Remove cover per the installation manual and verify that the plug connector between the flue gas limiter (white wires) and the control unit (black wires) is firmly connected (see Fig. 1).

Figure 1



The flue gas limiter (see Fig. 2 A) should not be confused with the overheat sensor (ECO) on the upper right corner of the heat exchanger (see Fig. 2 B). The ECO serves an entirely different function and prompts a different – E9 – error code.

Figure 2



4. Inspect the heat exchanger for signs of exhaust leakage:
   - Perform a visual inspection of the heat exchanger, looking for any signs of cracks or burn marks.
   - Visually inspect the gaskets on the top and bottom of the heat exchanger to ensure the gaskets are properly seated.
   - Inspect the gaskets for any burned or melted sections.
   - Inspect the viewing window on the heat exchanger for any cracks in the glass or breaks around the window gasket.
   - Inspect the gasket around the electrodes. Ensure holding clamps are tight and secure.
   - If the heater can be reset and operated, pass a telescoping mirror at and around all gaskets with the heater running. A fogging mirror is a sign of a leak.

DANGER:
Any damaged gaskets allowing flue gasses to leak must be replaced. Failure to replace the gaskets and continued operation can lead to serious illness or even death.

5. Inspect the exhaust and intake terminations for any obstructions and clear if needed.

6. Check the resistance on the flue gas limiter as outlined below:
   - Set your digital multi-meter to ohms if an auto ranging meter or 200 ohms if you need to set the range.
   - locate the flue gas limiter in the upper right hand corner of the machine.
   - Insert one probe into each wire at plug connection. Resistance should be 0.5 ohms or less. If there is no continuity or the resistance is too high, the flue gas limiter needs to be replaced.

After completing this procedure, please call us while still at the unit at 1-800-798-8161 for diagnosis and resolution. If it is more convenient for you, please email the results of this procedure to ldy.asa@us.bosch.com and we will reply within one business day.

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