

## payne furnace error codes

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The Payne gas furnace has built in diagnostics and is designed to assist with the identification and correction of faults. The furnace utilizes an LED, to describe its condition. This can be viewed through a port on the blower access panel. You can take corrective action in response to any faults indicated by the LED.

The number of short flashes of the LED represents the first digit of the two digit fault code. The number of long flashes of the LED represents the second digit of the fault code.

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**CODE:** RED LED<sub>1</sub> ON.

**RESULT:** Furnace is operating in emergency heat.

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**CODE:** RED LED<sub>2</sub> ON.

**RESULT:** The microprocessor has malfunctioned. To reset: Put setup switch "SW-1" in the "ON" position and jumper thermostat terminals "R", "W/W<sub>1</sub>" and "Y/Y<sub>2</sub>" simultaneously with the door switch pushed in and power to the unit "ON". Disconnect jumper and place setup switch in the "OFF" position. If LED<sub>2</sub> reappears, replace main control board.

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**CODE:** YELLOW LED<sub>3</sub> ON.

**RESULT:** Furnace is operating in high heat.

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**CODE:** GREEN LED<sub>4</sub> ON.

**RESULT:** Furnace is operating in low heat.

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**CODE:** RED LED<sub>2</sub> FLASHING.

**RESULT:** Line voltage polarity is reversed.

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**CODE:** 11.

**RESULT:** NO FAULT IN RECENT HISTORY DISPLAY- Indicates no faults have occurred within the last five cycles. To read recent fault history, put setup switch "SW-1" in the "ON"

position. To clear recent fault history, put setup switch "SW-1" in the "ON" position and jumper thermostat terminals "R", "W/W1" and "Y/Y2" simultaneously until an "11" is flashed.

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**CODE: 12.**

**RESULT: BLOWER CALIBRATION LOCKOUT-** Indicates RPM calculated for low heat was less than 250 RPM or greater than 1300 RPM on two successive attempts. Auto reset after three hours. Reset power and refer to fault #44 section.

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**CODE: 13.**

**RESULT: LIMIT SWITCH LOCKOUT-** Indicates the occurrence of 10 successive limit trips during high heat or three successive limit trips during low heat. Auto reset after three hours. Check for \*Improper or misaligned limit and/or limit shield. \*Improper high or low heat gas input adjustment. \*Stuck high heat solenoid in gas valve.

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**CODE: 14.**

**RESULT: IGNITION LOCKOUT-** Control will auto-reset after three hours. Refer to #34.

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**CODE: 21.**

**RESULT: INVALID MODEL SELECTION-** Indicates model plug is missing or incorrect. See wiring diagram for correct connector jumper location.

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**CODE: 22.**

**RESULT: SETUP ERROR-** Indicates setup switch "SW-1" or "SW-6" is positioned improperly. The following combinations will cause the fault: \*Thermostat call with "SW-1" "ON", or Thermostat call with "SW-6" "ON", or "SW-1" and "SW-6" both "ON" together.

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**CODE: 23.**

**RESULT: INVALID BLOWER AIRFLOW SELECTION-** Indicates improper "A/C" or "CF" switch setting. The 042 and 14 units can deliver 1-1/2 to 3-1/2 tons A/C and 600 to 1400 CFM for continuous fan. The 060 and 20 unit can deliver 2 to 5 tons A/C and 800 to 2000 CFM for continuous fan. If code is flashing, unit will default to closest allowable airflow.

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**CODE: 24.**

**RESULT: SECONDARY VOLTAGE FUSE IS OPEN** Check for: - Short circuit in secondary voltage (24VAC) wiring. **PRESSURE SWITCH DID NOT CLOSE OR REOPENED** - If open longer than five minutes, inducer shuts off for 15 minutes before retry. Check for: - Excessive wind.

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**CODE: 31.**

**RESULT:** Proper vent sizing -- Defective inducer motor - Low inducer voltage (115VAC) - Defective pressure switch - Inadequate combustion air supply - Restricted vent - Disconnected or obstructed pressure tubing - Low inlet gas pressure (if LGPS used) If it opens during blower ondelay period, blower will come on for the selected blower off-delay.

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**CODE: 33.**

**RESULT:** LIMIT CIRCUIT FAULT - Indicates a limit, or flame rollout is open. Blower will run for 4 minutes or until open switch remakes whichever is longer. If open longer than 3 minutes, code changes to lockout #13. If open less than 3 minutes status code #33 continues to flash until blower shuts of Flame rollout switch requires manual reset. Check for: - Restricted vent - Proper vent sizing - Loose blower wheel - Excessive wind - Dirty filter or restricted duct system. - Defective blower motor or capacitor. - Defective switch or connections. - Inadequate combustion air supply (Flame Roll-out Switch open).

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**CODE: 34.**

**RESULT:** IGNITION PROVING FAILURE - Control will try three more times before lockout #14 occurs. If flame signal lost during blower on-delay period, blower will come on for the selected blower off-delay. Check for: - Control ground continuity - Flame sensor must not be grounded - Oxide buildup on flame sensor (clean with fine steel wool) - Proper flame sense microamps (.5 microamps D.C. min., 4.0 - 6.0 nominal). - Gas valve defective or gas valve turned off - Manual valve shut-off - Defective Hot Surface Ignitor - Low inlet gas pressure - Inadequate flame carryover or rough ignition - Green/Yellow wire MUST be connected to furnace sheet metal.

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**CODE: 41.**

**RESULT:** BLOWER OUTSIDE VALID SPEED RANGE- Indicates the blower is not operating at the calculated RPM. If this fault occurs in conjunction with fault #44 check wiring to motor otherwise refer to the trouble-shooting guide.

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**CODE: 42.**

**RESULT:** INDUCER OUTSIDE VALID SPEED RANGE- Indicates the inducer is not operating at the calculated RPM. Or it has not started within 10 seconds after a call for heat. Check wiring to motor otherwise refer to the troubleshooting guide.

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**CODE: 43.**

**RESULT:** PRESSURE SWITCH CALIBRATION FAULT- Indicates the low and high pressure switch "make" points during high heat purge are not within calibration range. Check

for: -Plugged condensate drain Water in vent piping, possibly sagging pipe -Improper pressure switch wiring or pressure switch tubing connections -Failed or "out of calibration" pressure switches.

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**CODE:** 44.

**RESULT:** BLOWER CALIBRATION FAULT- Indicates the calculated blower speed is below 250 or above 1300 RPM. Unit will default to low or high heat mode if possible. If this fault occurs in conjunction with fault #41, check wiring to motor otherwise refer to the trouble shooting guide. If this fault occurs by itself, check for undersized ductwork, or excessive static caused by a dirty filter, or closed registers.

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**CODE:** 45.

**RESULT:** CONTROL CIRCUITRY LOCKOUT -Auto-reset after one hour lockout due to; - Gas valve relay stuck open - Flame sense circuit failure - Software check error Reset power to clear lockout. Replace control if status code repeats.

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