

Ignition Sequence

Applies to models:

Toyotomi Laser Heaters: L-30, L56, L-60, L-73, OM-22

This document indicates the step-by-step events in sequence and with time delay from the moment the heater thermistor calls for heat and starts the ignition cycle.

Laser 56, L-60AT, L-73 Ignition Sequence.

- Power switch on
- Room temperature is less than set temperature (example: set = 70, room = 68)
- [Pre-heat] Combustion Blower on high 15 seconds
- Combustion Blower drops to low, igniter on (Pre-heat cycle)
- Pre-heat cycle timing: Room temperature above 61 F = 3 minutes

Room temperature between 34 F and 61 F = 6 minutes

Room temperature below 34 F = 9 minutes

- [Pre-Purge] Ignition: Combustion Blower increases to medium, medium lamp flashes, FUEL PUMP ON.
- Medium lamp changes to solid when the flame contacts (touches) the flame sensor. If the system does not sense a flame, it will purge and start Pre-heat cycle. If the system does not sense a flame during the second ignition cycle, Digital Indicator will display error code EE-2.
- Medium lamp off, low lamp on, combustion blower on low (3 min.)
- Low lamp off, medium lamp on, circulation fan on, combustion blower on medium (3 min.)

WARNING

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- After three minutes in medium burn, system checks room temperature and determines burn level: [Normal Combustion]

Room temperature below set temperature = high burn

Room temperature 1 degree F above set temperature = low burn

- System shuts off when room temperature is 4 degrees F above set temperature

Laser 30 & OM-22, OM-23 Ignition Sequence

- Power switch on

- Room temperature is less than set temperature (example: set = 70, room = 68)

- [Pre-heat] Power lamp flashes at 1 Hz, combustion blower on low, igniter on (Pre-heat)

- Pre-heat timing: Room temperature above 59 F = 90 seconds

Room temperature between 32 F and 59 F = 120 seconds

Room temperature below 32 F = 240 seconds

- [Pre-combustion] Power lamp flashes at 2 Hz, combustion blower increases to high, FUEL PUMP ON

- Power lamp changes to solid when the flame contacts (touches) the flame sensor. If the system does not sense a flame, it will purge and start Pre-heat cycle. If the system does not sense a flame during second ignition cycle, the Digital Indicator will display error code EE-2. NOTE: An EE-22 error code will occur if there are three sequential ignition failures. You must disconnect the power cord for 30 minutes to erase this code.

- Medium burn, combustion blower in medium, circulation fan starts in 120 seconds

- After 300 seconds in medium burn, system checks room temperature and determines burn level: [Normal Combustion]

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Room temperature below set temperature = high burn

Room temperature 1 degree F above set temperature = low burn

· System shuts off when room temperature is 4 degrees F above set temperature.

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