

# ***Electro-HELPS V***

## **Standby Mode Troubleshooting Helps**

As an assistance for evaluating various field detected control board sequences, the following statements may be of help.

### ***WarmFlo II Controller, with WF-EZ3, -EM3, -LGR4, -HP2***

Conditions within main WF Board for Standby

1. J2-4 blue wire goes high, 22-35VDC
2. A1 tab jumpered or connected to 24VAC
3. MU timeout
4. SOT S timeout
5. Below, ODT dial temp. (EL to SB mode)

Hardware Conditions To Create Standby (WF yellow LED off)

1. Utility Load Control
2. Open or bad blue wires - external Load Control wiring
3. Connect 24V to A1 tab - verify A1 tab
4. Override switch, up - SB tab (left) goes to 0 ohms
5. External switch contact - SB tab to common
6. Something shorting L tab to Common - L tab goes to 1 volt DC
7. J2-2, brown wire – goes to 1 volt DC

Note: Brown wire – responds to heat call input

Conditions Which May Prevent Gas On

1. OT above 50° (HP chip code)
2. WF board Y tab input low or 0 volts
3. J2-4 blue wire (Load Control) not high
4. WF not controlling J2-2 brown wire - must go low, DC
5. OT at some very high incorrect temperature
6. WF K1 relay contact not making
7. Board K1 or K2 open/inoperative
8. Hang-up - power down, 10 seconds, power up
9. Wrong chip code (HPEL)

### ***Electro EZ-Mate, WF+ Controller***

Conditions Forcing Standby – these conditions are also monitored by the front panel EL Mode light being off.

1. Utility Load Control
2. SOT S timeout
3. MU timeout
4. OT below switchover set point - configuration mode setup dial switch also defines switchover function
5. Front override switch
6. Option WF-HP2 or WF-LGR4 interface has setup a standby condition

## Conditions Which May Prevent Standby or Gas On

1. No call for heat - T-call LED is off
2. ODT is above 50° - configuration switch in HP - dual or non-gas
3. OT at some very high incorrect temperature
4. LED EL ON mode- utility is not controlling or front panel is not in override
5. Somehow stat terminal block Y is also energized or at 24 volts
6. Board K1 or K2 open/inoperative
7. Hang-up - power down, 10 seconds, power up
8. Wrong dial position (no gas)

### ***Electro-Mate, DFC Series***

#### Conditions, Forcing Standby

1. Utility Load Control
2. Front override switch
3. X1 tab (top right) through a contact (typically W) to 24 volts
4. Board K1 or K2 open/inoperative
5. Option, SOT-EM

### ***HeatChoice***

#### Conditions, Forcing Standby

1. Utility Load Control
2. Front override switch
3. Board K1 or K2 open/inoperative
4. Open or cut brown jumper wire on board
5. Option, SOT-1

### ***Dual Energy Furnace, DFC Series***

#### Conditions, Forcing Standby

1. Utility Load Control
2. Front override switch
3. X1 tab (top right) through a contact (typically W) to 24 volts
4. Board K1 or K2 open/inoperative
5. SOT switchover time within controller

### ***TS Boiler Control Board***

#### Conditions Forcing Standby

1. Utility Load Control
2. Option plug-in, override switch
3. External contact - SBSW tab to Common
4. Option, SOT-1

## **Electric Mode Troubleshooting Helps**

### ***WarmFlo II Controller, with WF-EZ3, -EM3, -LGR4, -HP2***

Conditions Which May Prevent EL Stages On (No Stage LED's)

1. No call for heat - T-call LED is off
2. OT above 50° (HP chip code)
3. No WF board Y tab input
4. A1 is jumpered or connected to 24V
5. J2-4, blue wire, happens to be high
6. OT at some very high incorrect temperature
7. Below ODT dial temp. (EL to SB mode)
8. Hang-up - power down, 10 seconds, power up

Conditions Which May Prevent Electric Elements On (Staging LED's On )

1. Mechanical hi-limit, red LED on inside relay board is on
2. K1 relay not making
3. Some J1 cable issue
4. Inside relay board problem
5. Circuit breakers off
6. Burned 240 inside wires
7. Building power panel fusing or breakers

### ***Electro EZ-Mate, WF+ Controller***

Conditions Which May Prevent EL Stages On (No Stage LED's)

1. No call for heat - T-call LED is off
2. In standby mode, see previous section
3. OT is above 50° - configuration switch in HP – dual or non-gas
4. Hang-up - power down, 10 seconds, power up

Conditions Which May Prevent Electric Elements On (Staging LED's On)

1. Mechanical hi-limit, front panel top LED on
2. Board K1 or K2 open/inoperative
3. Inoperative element relays
4. Inside AC to DC power supply board bad
5. Circuit breakers off
6. Burn 240 inside wires
7. Building power panel fusing or breakers

### ***Electro-Mate, DFC Series***

Conditions Which May Prevent EL Stages On

1. No call for heat - Heat LED is off
2. 4-minute blower purge cycle, coming our of standby (earlier DFC's, also related to first power on)
3. In standby mode, see previous section
4. Mechanical hi-limit, buzzer should be on

5. Board K1 or K2 open/inoperative
6. Inoperative element relays
7. Gray wire connection problem at inside blower board
8. Circuit breaker off
9. Burned 240 inside wires
10. Building power panel fusing or breakers

### ***HeatChoice***

1. No call for heat - Heat LED is off
2. 4-minute blower purge cycle, coming out of standby
3. In standby mode, see previous section
4. Mechanical hi-limit, inside HL LED is on
5. Board K1 or K2 open/inoperative
6. Inoperative element relays
7. Circuit breaker off
8. Burned 240 inside wires
9. Building power panel fusing or breakers

### ***Dual Energy Furnace, DFC Series***

1. No call for heat - Heat LED is off
2. 4-minute blower purge cycle, coming out of standby
3. In standby mode, see previous section
4. Mechanical hi-limit, top LED is on
5. Board K1 or K2 open/inoperative
6. Inoperative element relay
7. Circuit breaker off
8. Burned 240 inside wires
9. Building power panel fusing or breakers

### ***TS Boiler Control Board***

Conditions Which Prevent EL Stages On

1. No call for heat - Heat LED is off
2. In standby mode, see previous section
3. 30-second delay, allows pump to circulate and equalize water temp.
4. Mechanical hi-limit, top LED on
5. Water temperature higher than set point or DT required
6. ST or outlet water sensor reporting unusually high temp. value
7. Board K1 or K2 open/inoperative
8. Inoperative element relays
9. Circuit breaker off
10. Burned 240 inside wires
11. Building power panel fusing or breakers



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