

HIGH LIMIT KIT INSTRUCTIONS

Kit #550003322

FOR UCS & DMG 240 & 380 BOILERS

Kit installation shall be completed by qualified agency.

⚠ WARNING

Fire, explosion, asphyxiation and electrical shock hazard. Improper installation could result in death or serious injury. Read this instruction and understand all requirements, including requirements of authority having jurisdiction, before beginning installation. Installation not complete until appliance operation verified per Installation, Operation & Maintenance Manual provided with boiler.

⚠ CAUTION

Laceration, burn hazard. Metal edges and parts may have sharp edges and/or may be hot. Use appropriate personal protection equipment to include safety glasses and gloves when installing or servicing this appliance. Failure to follow these instructions could result in minor or moderate injury.

Kit # 550003322 Contents	
Harness High Limit Kit	1 ea
High Limit, Manual Reset, L4006E	1 ea
Immersion Well, 3/4 " NPT	1 ea
Kit Instructions - 240011781	1 ea

Installation Procedure

1. Follow instructions TO TURN OFF GAS TO APPLIANCE found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual. Verify all electrical power to boiler is turned off.
2. Allow boiler to finish post purge if firing when shutting down gas supply.

⚠ WARNING

Electrical shock hazard. Turn OFF electrical power supply at service panel.

3. Turn electric and gas off to appliance.
4. Remove two (2) screws from jacket cover. Lift jacket off.

⚠ WARNING

Burn hazard. Verify unit has cooled before servicing. Use appropriate personal protection equipment.

5. Inspect combustion chamber through sight glass. Verify flame is not present.
6. Press tabs and place control panel in down position.
7. Install immersion well in preferred location within boiler supply piping.
 - a. Mount well with sensing area in main water flow
 - b. Mount high limit close to boiler to allow supplied harness to reach.

Figure 1 - Wire Harness - Supplied



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8. Install L4006E control in well, ensure sensing bulb is fully inserted into immersion well. Tighten clamp on control to secure control to well.
9. Install high limit harness to L4006E control.
 - a. Remove knockout.
 - b. Snap harness connector in place.
 - c. Connect two (2) fork terminals to screw lugs inside high limit control.
10. Route high limit harness to underside of boiler. Secure 90° connector to available knockout.
11. Locate high limit connector in main boiler harness. Remove jumper, connect high limit harness connector in its place. See Figures 2 and 3.
12. Return control panel to upright position.
13. Install front jacket panel.
14. Press RED reset button on L4006E.
15. Resume operation using OPERATING INSTRUCTIONS found on Operating Instructions label on boiler or in Installation, Operation & Maintenance Manual.
16. Verify proper operation by following START UP PROCEDURE in Installation, Operation & Maintenance Manual.

Operational Test Procedure:

Note Do not run boiler unattended until following procedure is complete to prevent nuisance tripping of boiler controls.

1. Press red reset button on front case of High Limit to verify controller is not locked out on safety.
2. Verify system by adjusting limit setting of L4006E 10°F below central heat (CH) supply temperature. Setting can be from 130°F -240°F.
3. When limit setting is reached L4006E locks out and boiler shuts down.
4. When temperature of controlled medium drops below L4006E high limit setting, minus differential, push manual reset button, system should operate.
5. Reset control to proper high limit setting, about 20°F above main limit control setting, not higher than above 190°F, before leaving the jobsite. Run boiler so main control cycles on and off to ensure L4006E does not trip.

Note Never use casing as handle to tighten leaking well.

Figure 2 - Boiler High Limit Connection

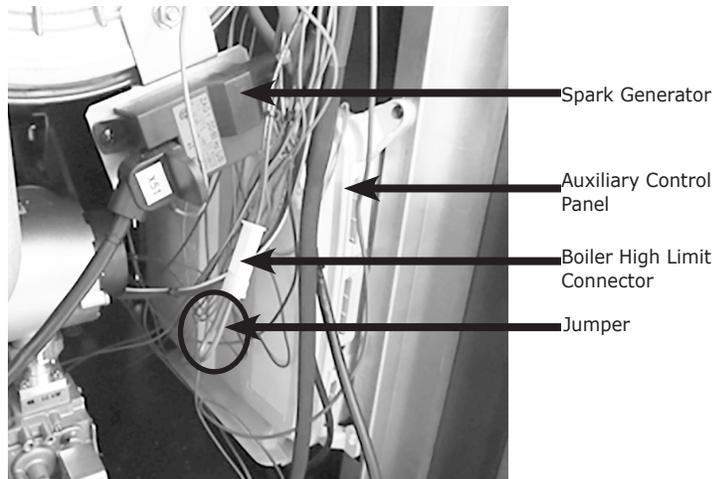
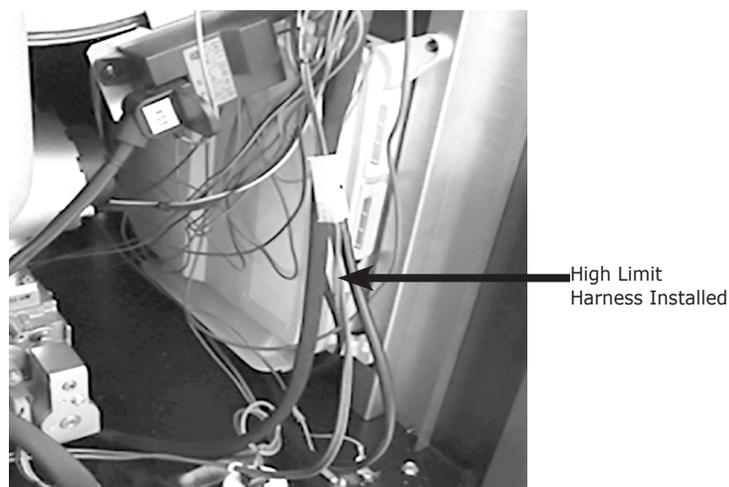


Figure 3 - Boiler High Limit Connection With High Limit Harness Installed



Troubleshooting:

- **IF BURNER DOES NOT SHUT DOWN.** When temperature is above L4006E setting.
 - a. Reduce temperature setting on thumb wheel.
 - b. Verify probe is properly inserted into the well and is in contact with end of well.
- **IF BURNER DOES NOT FIRE.**
 - a. Check reset button. If L4006E is tripped find cause of problem.
 - Main limit control may be malfunctioning.
 - or
 - Temperature is set too high.
 - b. Check wiring for continuity. Manual rest high limit is on/off switch. 120 VAC power runs through the switch. Operation of L4006E is not dependent on power.