

24V Auxiliary Limit Kit

Instruction Sheet

24V Auxiliary (Manual) Limit Option Kit

(For use with boilers equipped with IHC boiler controls)

P/N: 103696-01

Included in the Kit:

- 1 - CSD-1 Compliant Honeywell L-4006E1133 Auxiliary Limit with Manual Reset (P/N 801607703)
- 1 – Auxiliary Limit Well, ½-inch NPT, Honeywell 123869A (P/N 80160456)
- 1 – Auxiliary Limit Wiring Harness, 48-inch long (P/N 103668-01)
- 2 – Arlington NM94 7/8-inch split button push grommet (P/N 103670-01)
- 1 – Instruction sheet (P/N 103695-03)

The 24V Auxiliary (Manual) Limit Kit can be applied to gas-fired atmospheric vented or induced draft boilers that are equipped with an Intelligent Hydronic Control (IHC) and that do not have a control system Option Panel.

Installation Steps:

WARNING Be sure to shut off boiler electric power, gas and water before proceeding.

1. Install the Auxiliary Limit as illustrated by Figure A (Boilers less Supply Manifold) or Figure B (Boilers with Supply Manifold). Do not exceed (a.) the specified vertical distance between boiler supply connection centerline and Auxiliary Limit Well centerline and (b.) the horizontal distance referenced from the boiler left side in order for supplied Auxiliary Limit Wiring Harness to reach the IHC boiler control and the boiler harness external limit inline plug-in connection.
2. When constructing a piping tree to install the Auxiliary Limit, select fittings (tees, elbows, etc.) and nipples to have the same size (NPT) as the boiler supply connection. **DO NOT REDUCE THE SIZE OF FITTINGS AND/OR NIPPLES.**
3. Install supplied Auxiliary Limit Well into piping tee (or cross), and then mount the Auxiliary Limit onto the well.
4. Remove the jumper connector from the boiler wiring harness plug (labeled "External Limit") and set the jumper connector aside. See Figure 1.

For boilers equipped with

Intelligent
Hydronic Control

WARNING

Kit must be installed by a qualified service agency in accordance with these instructions and all applicable codes and requirements of authority having jurisdiction. Failure to follow these instructions may cause electrical shock or explosion resulting in personal injury or death.

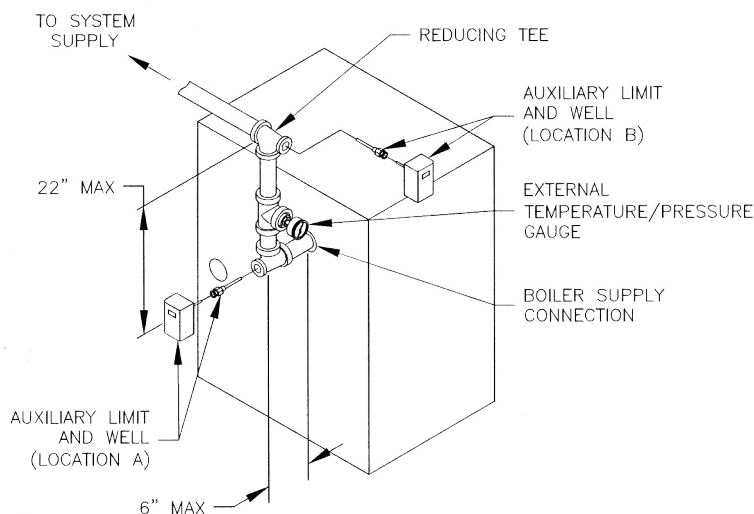


Figure A: Recommended Auxiliary Limit Location for Boilers Less Supply Manifold

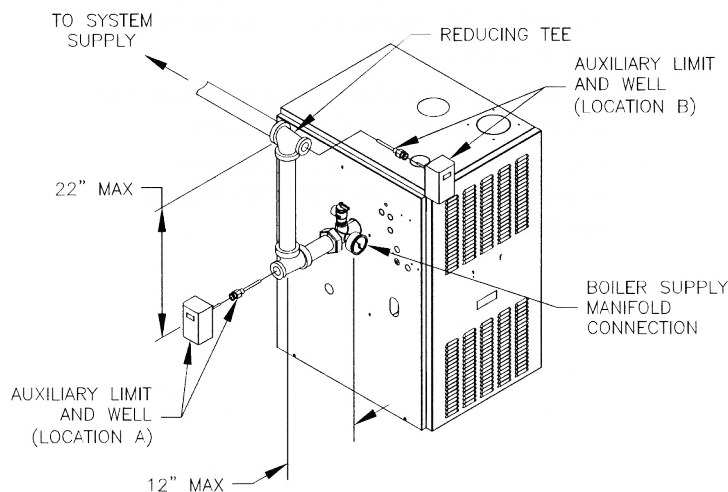
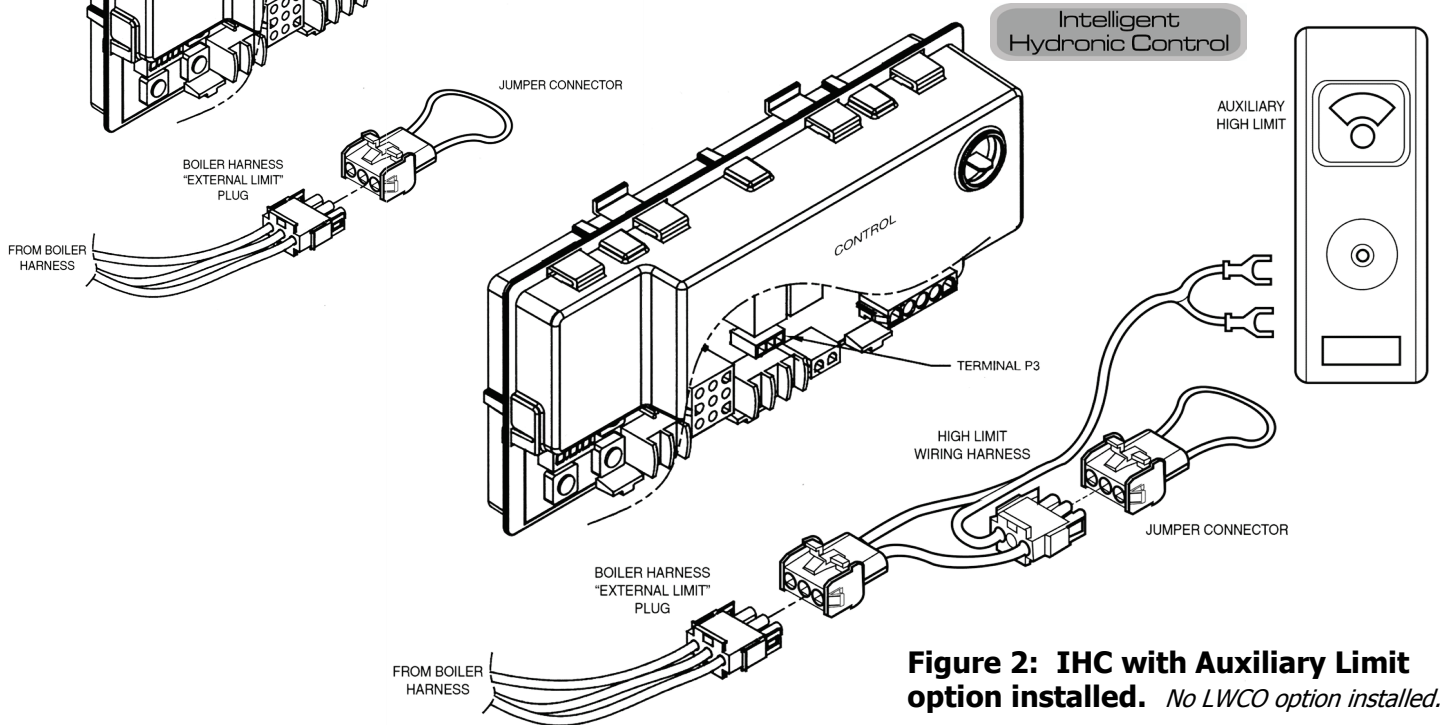
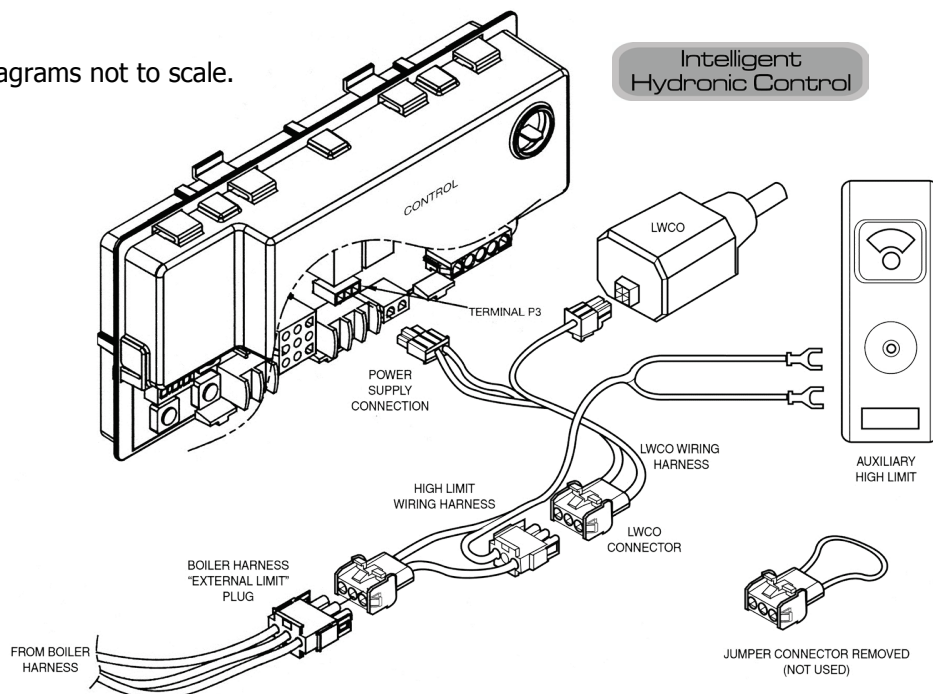


Figure B: Recommended Auxiliary Limit Location for Boilers With Supply Manifold



NOTE: Diagrams not to scale.



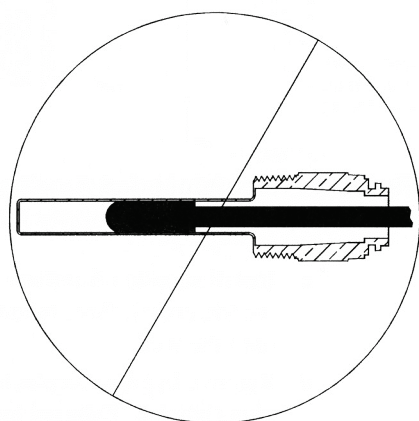
5. Insert the Auxiliary Limit wiring harness receptacle into the boiler wiring harness plug (labeled "External Limit") where the jumper connector was removed. See Figure 2.
6. Install the jumper connector (that was set aside in Step #4) into Auxiliary Limit wiring harness remaining Molex plug. NOTE: If also installing an optional LWCO Kit, install the LWCO wiring harness connector into this Molex plug instead of the jumper connector. See Figure 3 and the instructions provided with optional LWCO kit.
7. Remove the 7/8-inch knockout from the boiler jacket left side panel.
8. Feed Auxiliary Limit harness end with two fork terminals through the boiler jacket left side panel 7/8-inch hole.
9. Remove the Auxiliary Limit housing top or bottom 7/8-inch knockout.
10. Feed Auxiliary Limit Harness end with two fork terminals through the Auxiliary Limit housing hole and connect them to the limit screw terminals (wires are interchangeable).
11. Secure the harness to Auxiliary Limit housing with one Arlington NM94 split button push connector (grommet) that is provided.
12. Secure the harness to the jacket with the second Arlington NM94 split button push connector (grommet) that is provided.
13. After completion of the Auxiliary Limit and harness installation, perform the following Auxiliary Limit Operational Testing procedures.

WARNING

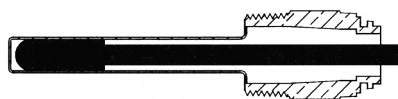
Failure to properly install the limit sensor may result in property damage, personal injury, or loss of life due to elevated operating temperatures and/or pressures.

Operational Test Procedures:

- Factory installed Intelligent Hydronic Control (IHC) maximum setting for limit rated temperature sensor is 220°F.
 - Auxiliary Limit with Manual Reset is factory set at 230°F.
- A. Start the boiler and then remove the limit rated temperature sensor clip and the sensor itself from the well (located in the boiler near the IHC control) to bypass the Intelligent Hydronic Control (IHC). The boiler will continue to fire with the sensor outside of the well.
 - B. Run the boiler until the Auxiliary Limit set temperature is reached. The burners will stop firing.
 - C. Push the Reset button on the Auxiliary Limit and wait for the boiler water temperature to drop below 240°F. The burners will start firing again.
 - D. Upon completion of the Auxiliary Limit testing, re-install the limit rated temperature sensor and secure it with the clip that was removed in Step A. Ensure that the limit sensor probe is fully inserted into the immersion well as illustrated in Figure 4.



INCORRECT



(FULLY INSERTED)

CORRECT

Figure 4: Limit Rated Sensor Probe Insertion into Immersion Well