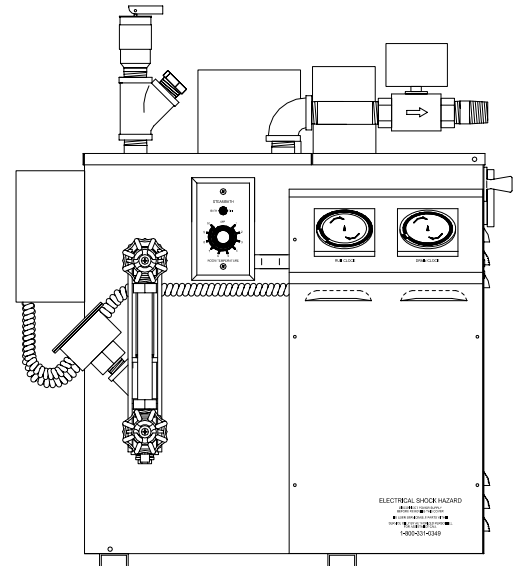


Installation of auxiliary Low Water Cut Off (LWCO) to Saunatec Boilers

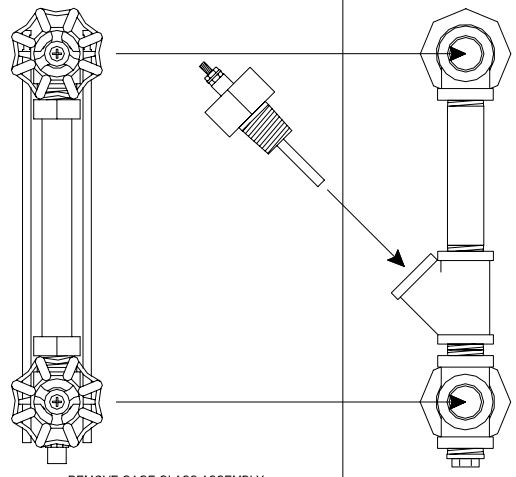
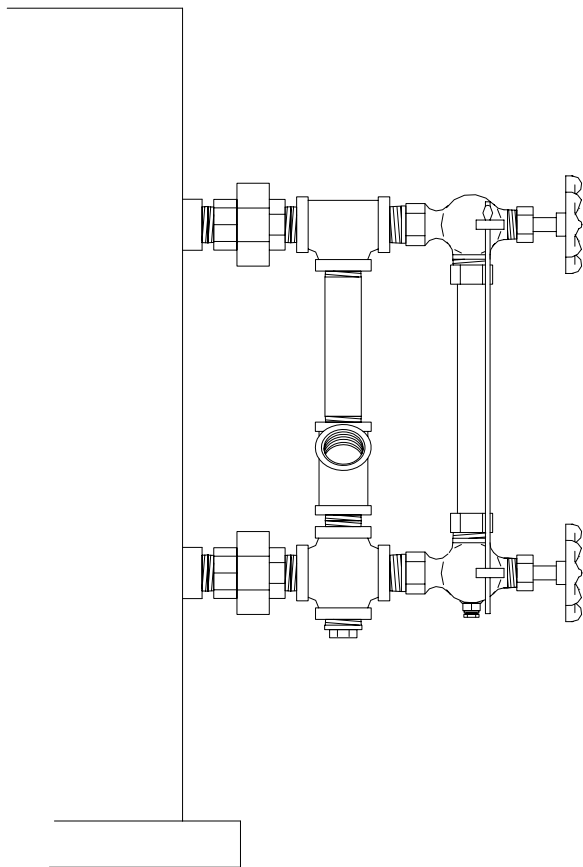
A LWCO may be added to the boiler using a piped by-pass mounted between the gage glass assembly and the boiler's tank.

The following wiring steps refer to the Taco LFM120R1 LWCO available through Saunatec. These steps refer to installing the LWCO in the same manner as the factory installed LWCO, which is mounted to the rear panel of the boiler and sufficient space for service access must be provided per your local building and electrical codes. The LWCO switch box may be located in another location if desired; refer to the enclosed manufacturer's instructions for further details.

(1) The level probe is mounted in the provided ywe coupling. Turn the coupling and/or level probe in or out to adjust the trip level if needed. Be sure to seal all pipe connections to prevent leaks!



REMOVE HANDLE
KEEP TWO SCREWS WHICH
WILL BE USED TO MOUNT THE
LWCO SWITCH BOX.



REMOVE GAGE GLASS ASSEMBLY
ADD LWCO PIPING ASSEMBLY
INSTALL LWCO LEVEL PROBE IN Y-COUPLING
REINSTALL GAGE GLASS ASSEMBLY

(2) The LWCO is mounted to the boiler's rear panel by removing the handle and using two of the handle screws in the holes provided. If it is necessary to add a second hole, a 1/8" hole should be drilled 1-1/4" to the left of the lower right handle mounting hole.

(3) The supplied 1/2" Conduit is to be run from an available knockout in the electrical box to the bottom left knockout in the LWCO. The supplied conduit can be bent to shape as needed.

Four unterminated wires are supplied: A 47" white Neutral wire and a 39" black wire to connect 120VAC to power the LWCO and two 47" black wires used to connect the LWCO between the boiler's control board and its pressure switches.

(4) The supplied 3/8" conduit is to be run from the center knockout in the bottom of the LWCO to the knockout in the LWCO Level Probe cover. *Make sure the probe cover is mounted so the conduit hangs down.*

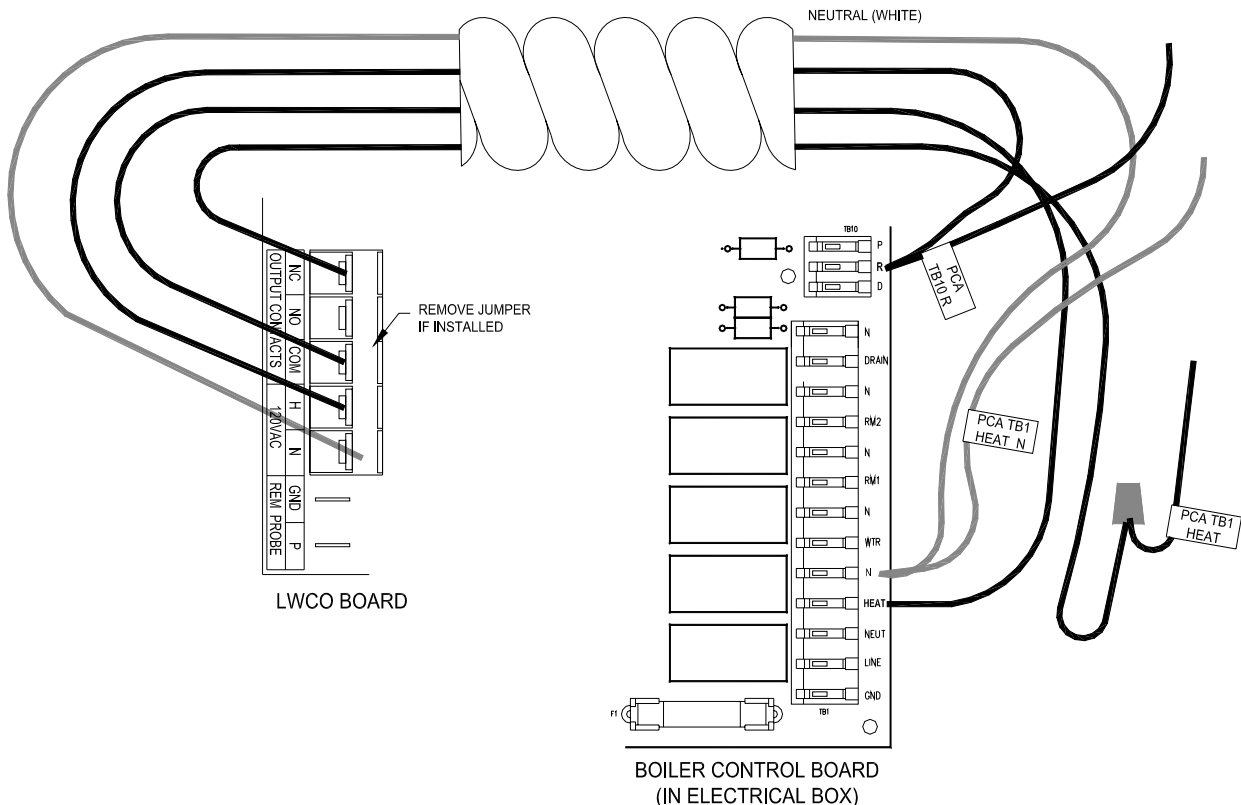
A black wire is provided to connect the Level Probe to the LWCO. The ring end of this wire connects to the Level Probe and the Quick-Connect end connects to the LWCO's "P" tab.

A green wire is provided to connect the Level Probe's ground to the LWCO's using fork terminals on each end.

When assembling, a fitting should be screwed into one end of the conduit, then the black wire's ring terminal end should be run through the fitting and conduit, then one end of the green wire should be run through, then the other conduit fitting may be added.

After mounting the LWCO and its conduit:

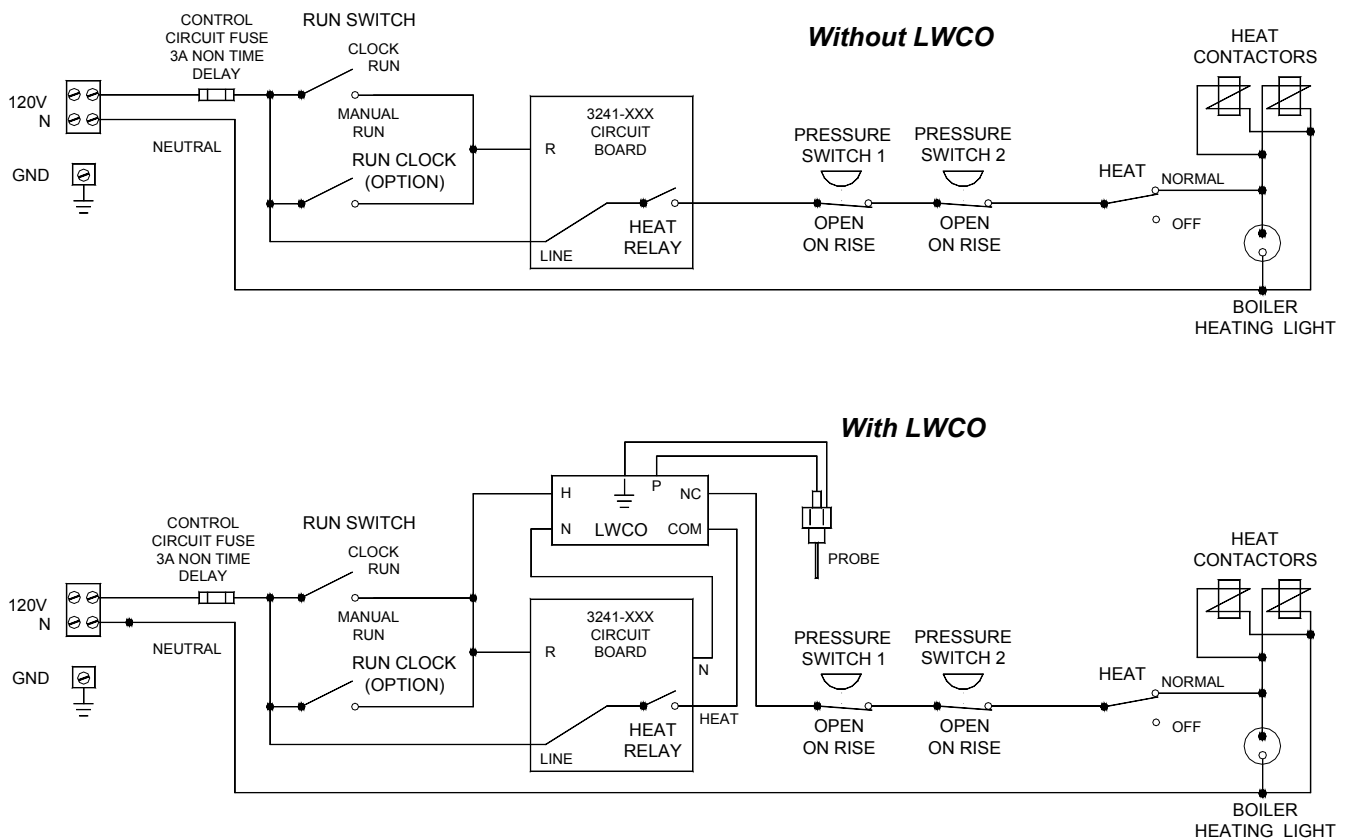
1. Remove the jumper between the LWCO's terminal block's **COM** and **H** terminals, if installed.
2. Connect the LWCO's white wire to its **120VAC N** connection. At the other end of this wire, remove the white wire from the boiler PCA's HEAT **N** connection on its long terminal block (TB1), twist it together with the white wire from the LWCO, then place both wires back into the terminal block's **N** connection.



3. Connect the 39 inch black wire to the LWCO's terminal block at the **H** terminal. Run the wire through the conduit. In the electrical box, remove the wire from the circuit board's **R** connection in the small terminal block then twist that wire's end together with the black **H** wire from the LWCO and reinsert the twisted wire ends into the circuit board terminal block's **R** connection.

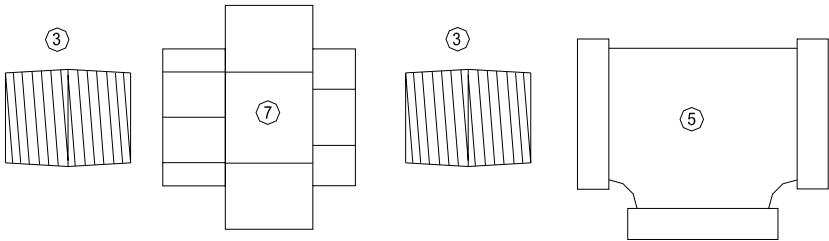
4. Connect one 47 inch black wire to the LWCO's terminal block's **COM** terminal and the other 47 inch black wire to the **NC** terminal. Run those wires through the conduit. In the electrical box, remove the circuit board's **HEAT** connection in the large terminal block then twist that wire's end together with the black wire from the LWCO's **NC** terminal and secure them together with a wire nut. Connect the other black wire from the LWCO's **COM** terminal to the circuit board terminal block's **HEAT** connection.
5. Test the installation following the manufacturer's instructions.

Test and Reset switches and status lights are located on the top of the LWCO. Refer to the manufacturer's instructions for further details.



For service or assistance contact Saunatec Steam Service, 7:00 am to 5:00 pm at 1-800-331-0349

Fittings used:



Item	QTY	Description
1	1	FTG,PLUG,1/2NPT,BRASS
2	1	FTG,CROSS,1/2NPT,BRASS
3	5	FTG,NIPPLE,1/2NPT X CLOSE,BRASS
4	1	FTG,NIPPLE,1/2NPT X 4IN,BRASS
5	1	FTG,TEE,1/2NPT,BRASS
6	1	FTG,WYE,1/2NPT,BRASS
7	2	FTG,UNION,1/2NPT,BRASS

