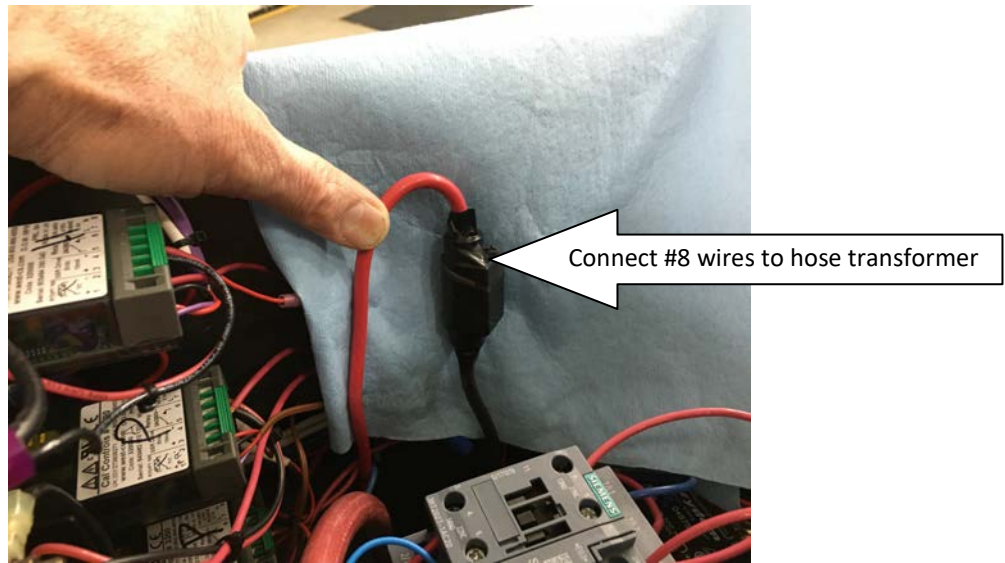


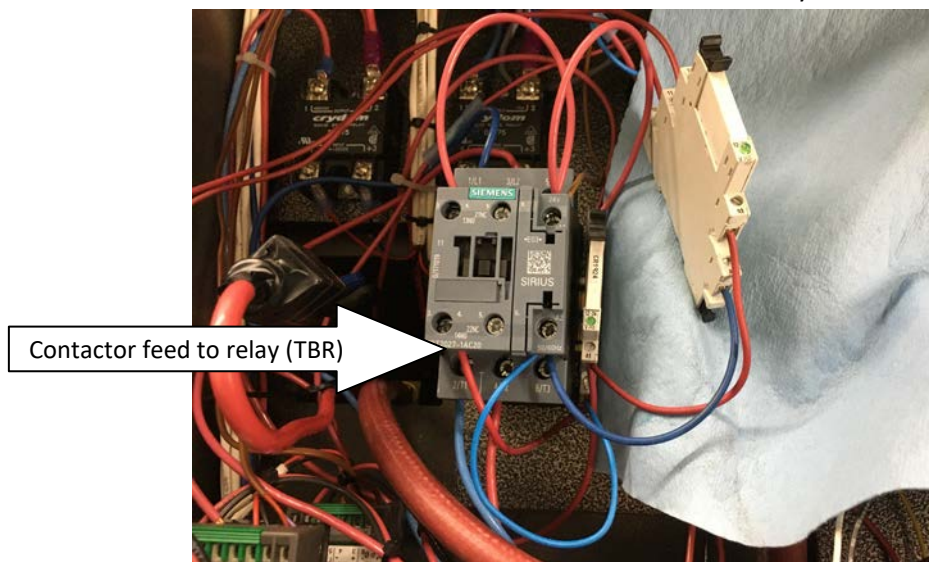
The low volt, high amp draw of the hose heat circuit has caused failures of the contactor used in the upgrade.

The fix is to switch the control of the hose heat from the high amperage leg to the low DC voltage control side of the hose heat relay. This is done by the addition of a terminal block relay that is tied into the hose controller and fed by the A1 & A2 control voltage of the existing terminal block relay.

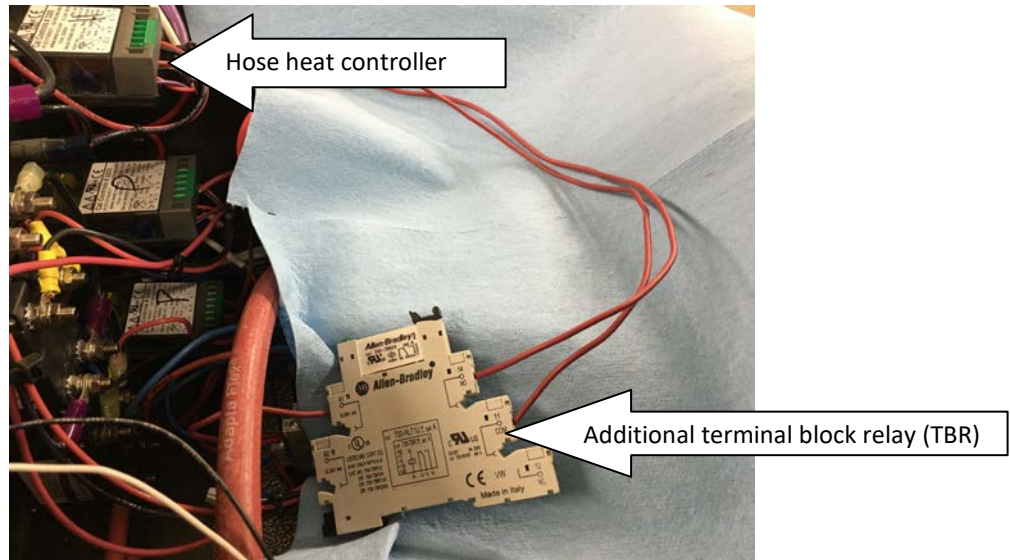
- 1) Turn main power to the machine off and remove the top panel lid.
- 2) Locate the Siemens contactor; the contactor base may be unhooked from the DIN rail to make it easier to access the terminals and wires, slide the base to the front or back and lift to dis-connect. Unhook the L3 and T3 #8 heavy wires, (one red, one black) connect these together with the provided heavy gauge connector; wrap the connector with electrical tape. L3 and T3 terminals on the contactor will not be used.



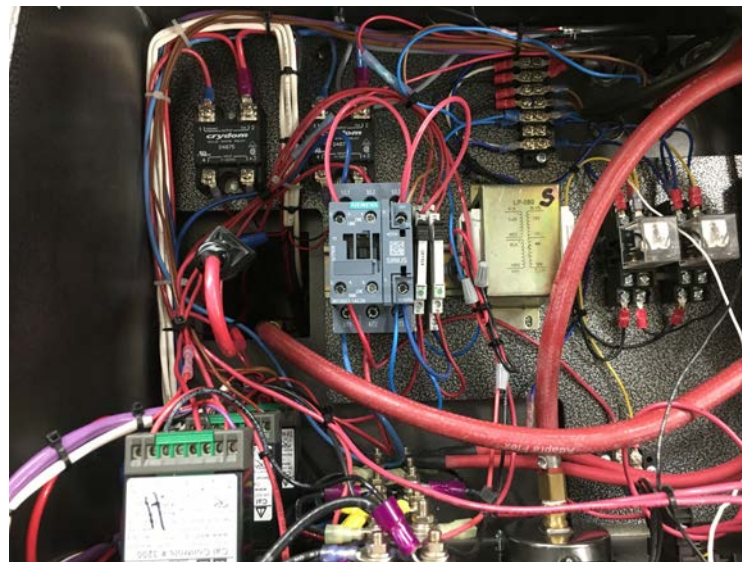
- 3) The additional terminal block relay will be installed just to the right of the existing relay looking at the front of the machine. Jump the A1 & A2 control power from the existing relay to the A1 & A2 terminals on the new relay. It may be more convenient to tie the A2 wire to the A2 on the contactor which is the A2 source. Slide out the black latch on the bottom of the terminal block relay to unhook it from the DIN rail.



- 4) Locate the hose heat controller. Unhook the #4 terminal wire marked "SSR relay drive". Add one foot of #14 wire and connect to "#11 com" terminal on the new relay. Add another section of #14 wire and connect from the #4 terminal marked "SSR relay drive" to the "#14/NO" terminal on the new relay.



- 5) Re-connect the contactor and the two terminal block relays to the DIN rail. Make sure that T1, T2 , L1 and L2 have a good connection at the contactor. Re-check all other wires connections that have been disturbed. Used zip-ties to route and secure wires as needed.



The hose heat in the safety circuit is now being controlled on the low voltage control side of the 90 amp hose relay and will work as intended.

John Powers
Turboliner Tech Dept