

	File In <u> SJ4 </u> Manual(s)		
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SERVICE BULLETIN	File with Form: 160.46-OM3.1 (SB10)		

SUBJECT: LIQUID COOLED STARTER NUISANCE HI-TEMP TRIPS

****IMPROVED MODIFICATION****

The modification described below will be more effective than that described in bulletin 160.46-OM3.1 (SB10), however this circuit change requires that you solder directly to the back of the logic circuit board.

We have recently seen a trend where chillers will occasionally trip and lock-out on high temperature (>100 °C) during inrush current. In these cases it is also know that the chiller has not been running previously, and the coolant loop is not abnormally warm. This situation is due to electrical noise been coupled into the control wires going to the logic board.

We can correct this by adding a capacitor which is soldered to the rear of the circuit board. The capacitor is the same device described in the earlier bulletin, SB10. You can purchase this capacitor at Radio Shack or any electronics supply house. The value is 470 µf, at 35 VDC or greater. (R/S part 272-1018).

To install this capacitor, you will need a low-wattage soldering iron and rosin core solder. Locate the existing capacitor C22 on the logic board, approximately one inch above the "Start" pot. The new capacitor is to be connected C22 , on the back side of the board.

Turn the board over and find the two leads from capacitor C22 on the back side of the board. One of these connects to a long, straight circuit conductor which is also tied to C23, C24 and C25. You will connect the positive lead of the new capacitor to the other side of C22, opposite the long, straight conductor. The negative side of the new capacitor connects to one of the pins on the large, wide ground conductor which runs along the bottom edge of the board. (see diagram, attached)

Use a pocket knife to scrape the humiseal coating from the two points to which you are going to solder. Do not overheat the board and do not use too much solder. We suggest you cut the capacitor leads to length first, bend the ends into a tiny circle, place the formed circle down over the post to which you are going to solder, and heat the capacitor leads only. Do not apply heat directly to the circuit board conductors. Allow the solder to flow onto the capacitor lead and then to flow together with the solder on the board to form a bond. Use as little solder as possible. See attached diagram for additional description of this modification.

