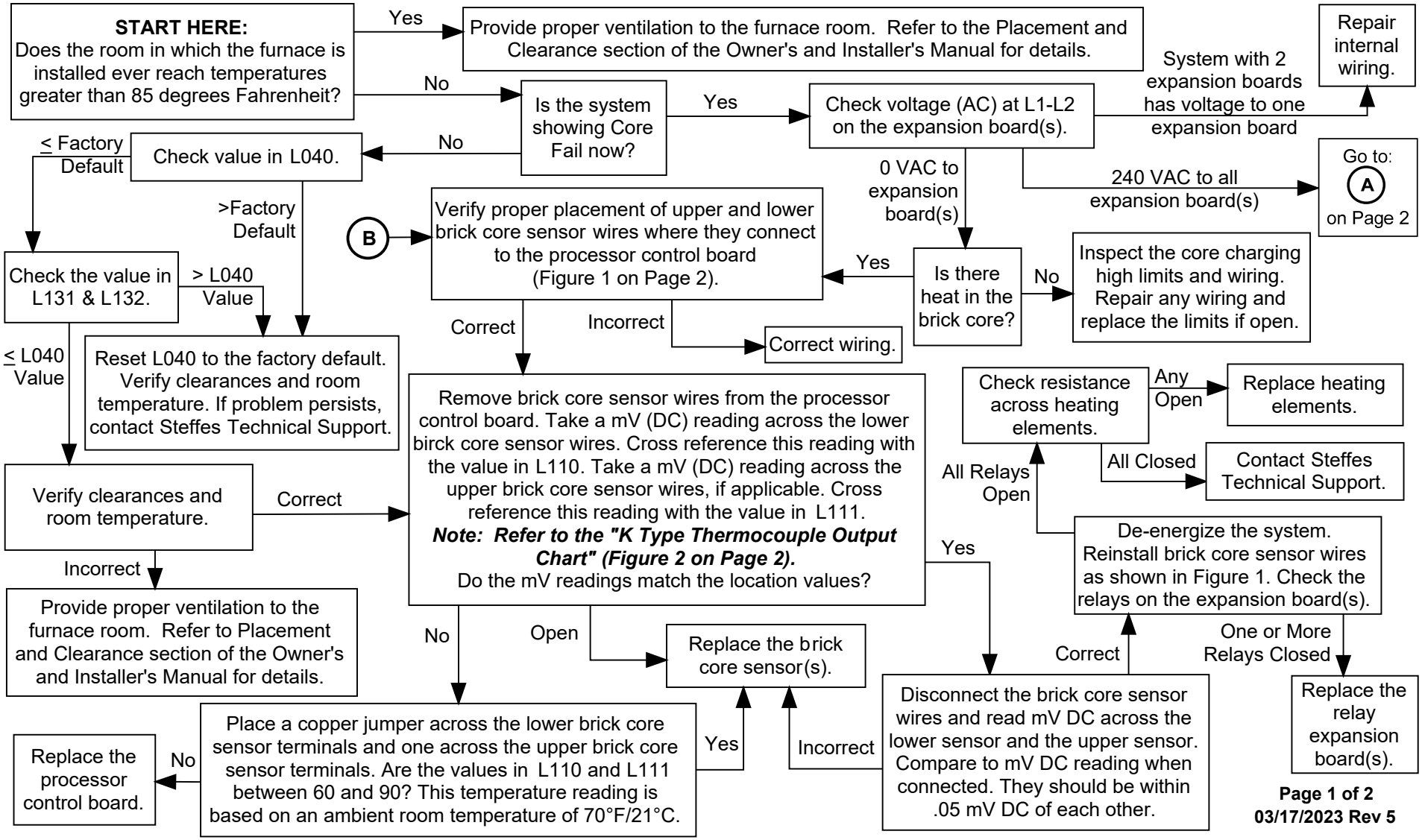
Core Fail - 3100/4100/5100 Series

Comfort Plus heating systems use multiple means of core temperature control to ensure safety. Brick core sensors are used to measure the temperature in the core. The processor control board monitors core temperature along with outdoor temperature and other conditions to determine the amount of storage required. It then cycles the relays on the system's expansion board(s) to maintain the appropriate core temperature.

Secondary high limit switches also monitor the core temperature. If the core temperature gets above a normal range, any one of the series connected switches can interrupt the line voltage power going to the system's expansion board(s) and triggering a "core fail" condition. These high limit switches are placed in the system's insulation package. If the system is in a room where the temperature is over 85 degrees Fahrenheit, or if the limit zone cover (4100 and 5100 Series only) clearance is violated, premature tripping of a limit can occur. Under normal circumstances, if a "core fail" occurs, the system will reset the maximum core temperature (L040) down by 50 degrees Fahrenheit.



Core Fail - 3100/4100/5100 Series Continued...

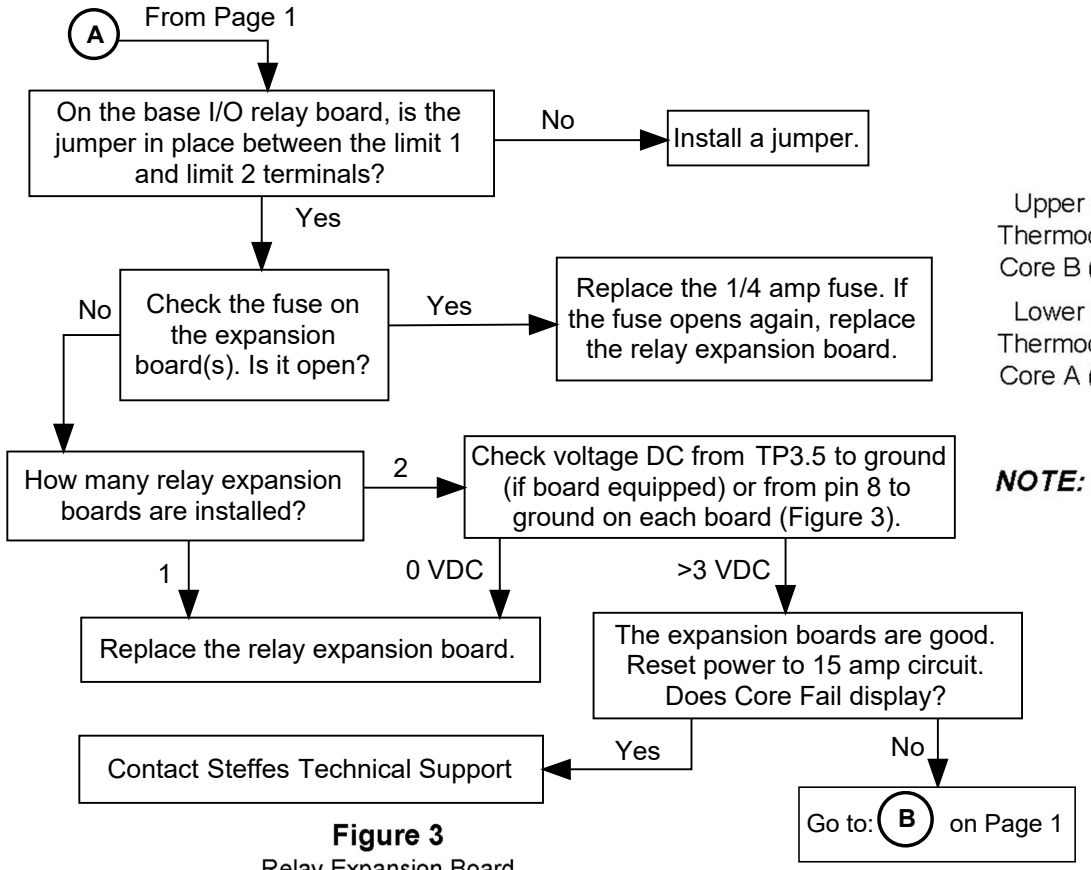


Figure 3

Relay Expansion Board

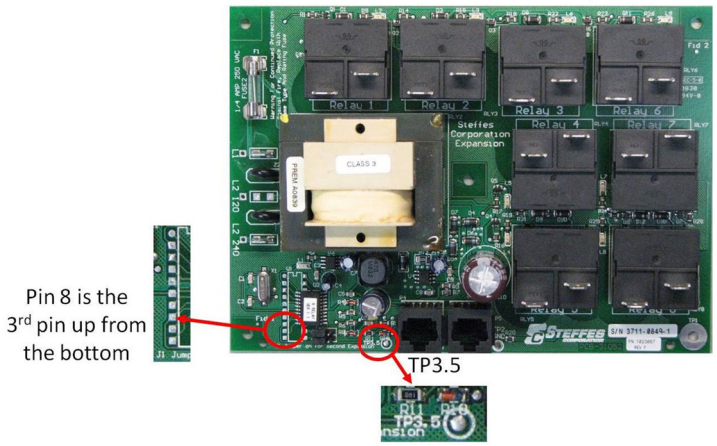
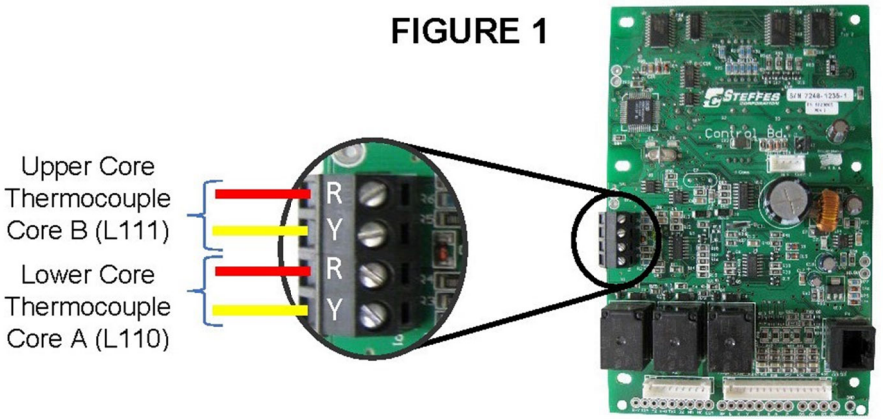


FIGURE 1



NOTE: 4120 and 5120 systems only have one core thermocouple (Core A) connected to the lower two terminals.

Figure 2

K-Type Thermocouple Output