



# RUSSELL HIGH SIERRA HOT GAS DEFROST SYSTEM

## SUPPLEMENTAL SERVICE INFORMATION

*(TO BE FOLLOWED WHEN CHRONIC COIL / DRAIN PAN ICING OCURRS)*

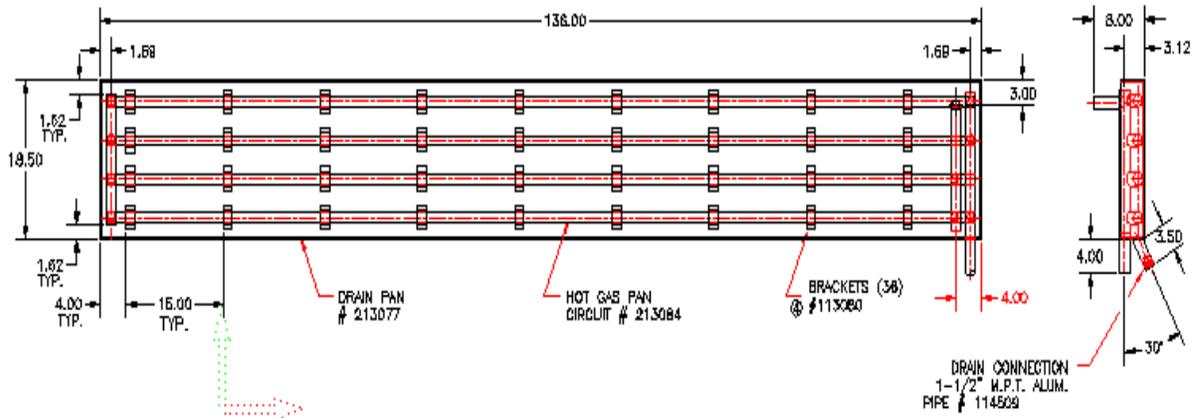
- Pumpdown / lock out system, disconnect all power supplies and manually remove all ice / frost accumulation from coil and pan assemblies using hot water.
- Confirm that the drain pan was constructed with the hot gas tubes physically mounted in direct contact with the bottom of the drain pan (see attached typical assembly drawing). If construction differs from this print the drain pan should be replaced with the most current design.
- Reduce the frequency of defrosts to a maximum of (2) 10 minute cycles per day (1 tripper pin depressed on time clock for each cycle initiated).
- Increase the defrost termination pressure control setting to a minimum of 280 PSIG. (this control senses discharge pressure in the suction line during the defrost cycle – control contacts close on pressure increase)
- Restart the system and allow it to operate continuously in the refrigeration cycle for a minimum of (4) hours to load the evaporator coil with frost. Initiate a defrost cycle and confirm that the system achieves the minimum termination pressure setting using an accurate high side gauge. The defrost cycle should be a minimum of 4 (optimum of 5 minutes) in length.
- If the cycle is substantially shorter than this – increase the defrost termination pressure control setting to 300 PSI and repeat test results after additional compressor run time.

***NOTE: If the coil surface has insufficient frost accumulation at the initiation of the defrost cycle it will be difficult if not impossible to achieve satisfactory length of defrost and complete clearing of frost from the coil internally. If this is the case, the system should be allowed to operate continuously in the refrigeration cycle until enough frost has built up on the coil surface to allow the defrost cycle to function properly.***

- If reducing the frequency of defrost cycles per day and increasing the defrost termination pressure control setting fails to achieve sufficient defrost duration to consistently clear the coil of all internal frost and residual ice accumulation then one of the following (2) modification is recommended;
  1. Pump the unit down, reclaim the system refrigerant charge and replace the power element on the TXV located at the condensing unit with a low temperature, pressure limiting type element (ex. Sporlan KT-33-SZP)
  2. Following the same preliminary procedure as outlined in item 1 above, install a CPR (crankcase pressure regulating) valve in the suction line just before it enters the compressor. Adjust this valve to maintain a maximum of 35 PSIG at the compressor suction service valve during the throughout the defrost cycle.

***For assistance in selecting the correct TXV power element or CPR valve for your particular application please contact technical product support.***

# TYPICAL HOT GAS EVAPORATOR DRAIN PAN CONSTRUCTION



# TXV POWER ELEMENT AND CPR VALVE LOCATIONS

