

## KGK/KCA048S4 R410A CHARGING PROCEDURE

### REFRIGERANT CHARGE AND CHECK

**WARNING-Do not exceed nameplate charge under any condition.**

This unit is factory charged and should require no further adjustment. If the system requires charge, reclaim the charge, evacuate the system, and add required nameplate charge.

*NOTE - System charging is not recommended below 60°F (15°C). In temperatures below 60°F (15°C), the charge **must** be weighed into the system.*

If weighing facilities are not available, or to check the charge, use the following procedure:

- 1- Attach gauge manifolds and operate unit in **cooling mode** until system stabilizes (approximately five minutes). Make sure outdoor air dampers are closed.
- 2- Use a thermometer to accurately measure the outdoor ambient temperature.
- 3- Apply the outdoor temperature to table 1 to determine normal operating pressures.
- 4- Compare the normal operating pressures to the pressures obtained from the gauges. Minor variations in these pressures may be expected due to differences in installations. Significant differences could mean that the system is not properly charged or that a problem exists with some component in the system. **Correct any system problems before proceeding.**
- 5- If discharge pressure is high, remove refrigerant from the system. If discharge pressure is low, add refrigerant to the system.
  - Add or remove charge in increments.
  - Allow the system to stabilize each time refrigerant is added or removed.

TABLE 1  
NORMAL OPERATING PRESSURES

Outdoor Coil Entering Air Temp	Discharge ±10psig	Suction ±5 psig
65° F	279	132
75° F	319	136
85° F	360	140
95° F	404	144
105° F	454	147
115° F	506	148

- 6- Use the following approach method along with the normal operating pressures to confirm readings.

### CHARGE VERIFICATION - APPROACH METHOD

- 7- Using the same thermometer, compare liquid temperature to outdoor ambient temperature.  
Approach Temperature = Liquid temperature minus ambient temperature.
- 8- Approach temperature should be 11°F ± 1 (6.1°C ± 0.5). An approach temperature greater than this value indicates an undercharge. An approach temperature less than this value indicates an overcharge.
- 9- Do not use the approach method if system pressures do not match pressures in table 1. The approach method is not valid for grossly over or undercharged systems.



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