LGH/LCH180U 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 additional refrigerant, *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** with economizer disabled until system stabilizes (approximately five minutes). Make sure outdoor air dampers are closed.

2- Check each system separately with all stages operating.

3- Use a thermometer to accurately measure the outdoor ambient temperature.

4- Apply the outdoor temperature to table 1 to determine normal operating pressures. Pressures are listed for sea level applications at 80°F dry bulb and 67°F wet bulb return air.

5- 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.**

6- 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.

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

TABLE 1
NORMAL OPERATING PRESSURES

Outdoor Coil Entering Air Temp	Circuit 1		Circuit 2	
	Dis. ±10 psig	Suc. ±5 psig	Dis. ±10 psig	Suc. ±5 psig
65°F	246	135	256	136
75°F	282	138	293	139
85°F	324	140	336	142
95°F	368	142	387	145
105°F	407	145	421	147
115°F	461	148	475	151

CHARGE VERIFICATION - APPROACH METHOD - AHRI TESTING

1- Using the same thermometer, compare liquid temperature to outdoor ambient temperature.

Approach Temperature = Liquid temperature (at condenser outlet) minus ambient temperature.

2- Approach temperature should be 5°F ± 1 (2.8°C ±0.5) for circuit 1 and 6.5°F ± 1 (3.6°C ±0.5) for circuit 2. An approach temperature greater than this value indicates an undercharge. An approach temperature less than this value indicates an overcharge.

3- The approach method is not valid for grossly over or undercharged systems. Use table 1 as a guide for typical operating pressures.

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