

## LGH/LCH048U 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 to discharge and suction lines. With the economizer disabled, operate the unit in **cooling mode at high speed** using the following Unit Controller menu path:  
SERVICE > TEST > COOL > COOL 3
- 2- Use a thermometer to accurately measure the outdoor ambient temperature.
- 3- Apply the outdoor temperature to table 1 to determine normal operating pressures. Pressures are listed for seal level applications at 80°F dry bulb and 67°F wet bulb return air.

**TABLE 1  
NORMAL OPERATING PRESSURES**

| Outdoor Coil Entering Air Temp | Discharge<br>±10psig | Suction ±5<br>psig |
|--------------------------------|----------------------|--------------------|
| 65° F                          | 252                  | 142                |
| 75° F                          | 289                  | 145                |
| 85° F                          | 332                  | 147                |
| 95° F                          | 379                  | 149                |
| 105° F                         | 428                  | 151                |
| 115° F                         | 484                  | 153                |

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

### CHARGE VERIFICATION - SUBCOOLING METHOD - AHRI TESTING

- 1- Attach gauge manifold to the liquid line. With the economizer disabled, operate the unit in **cooling mode at high speed** using the following Unit Controller menu path:  
SERVICE > TEST > COOL > COOL 3
- 2- Use the liquid line pressure and a PT chart to determine the saturated liquid temperature.
- 3- Measure the liquid line temperature at the condenser outlet.  
Subcooling Temperature = Liquid Saturated Temperature  
Minus Liquid Temperature.
- 4- The subcooling temperature should be 15.5°F ± 1.5°. A subcooling temperature greater than this value indicates an overcharge. A subcooling temperature less than this value indicates an undercharge.



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