

## LOW AMBIENT & CRANKCASE HEATER KIT

### INSTALLATION INSTRUCTIONS FOR LOW AMBIENT & CRANKCASE HEATER KIT USED ON KG/KC 092-150 PACKAGED ROOFTOP UNITS

#### Shipping and Packing List

10A88, 10A89, 10A90

Package 1 of 1 contains:

- 2- Crankcase heaters
- 2- Pressure switches (S11, S84)
- 2- Wire harnesses
- 2- Screws
- 2- Washers

#### Application

Crankcase heaters are used on units equipped with an optional low ambient kit. The crankcase heater is energized when outdoor fan motors are NOT operating.

Low ambient kits are used as follows:

KG/KC 092-150	240	10A88 / 603364-12
KG/KC 092-150	460	10A89 / 603364-13
KG/KC 092-150	575	10A90 / 603364-14

#### ⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer, service agency or the gas supplier

#### ⚠ CAUTION

Danger of sharp metallic edges. Can cause injury. Take care when servicing unit to avoid accidental contact with sharp edges.

The low ambient pressure switches cycle the outdoor fan while allowing compressor operation in the cooling cycle. This intermittent fan operation results in a high evaporating temperature which allows the system to operate without icing the evaporator coil and losing capacity. This kit is designed for use in ambient temperatures no lower than 0°F (-17.8°C) unless otherwise noted in the Engineering Handbook.

*NOTE - Do not use this low ambient kit on units with capillary tube metering devices.*

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#### ⚠ IMPORTANT

Power wiring must be routed and secured away from hot copper piping to avoid melting wiring insulation.

#### Crankcase Heater Installation

- 1- Disconnect all power to unit and open compressor access panels.
- 2- Position crankcase heater below dimples on compressors as shown in figure 1. Position belly-band screw over the vertical weld seam on the compressor. Tighten belly-band screw to secure in place.  
*Note - Tightening the belly-band screw over the compressor seam prevents damage to the heater wire.*
- 3- Route harness as shown in figure 2.
- 4- Use markings on wires to connect harness as shown in figure 3. Also refer to unit wiring diagram.
- 5- Secure crankcase heater ground wires using screws and washers provided in kit. See figure 4.

#### CRANKCASE HEATER POSITION

INSTALL ALL CRANKCASE HEATERS JUST BELOW DIMPLES ON COMPRESSOR HOUSING

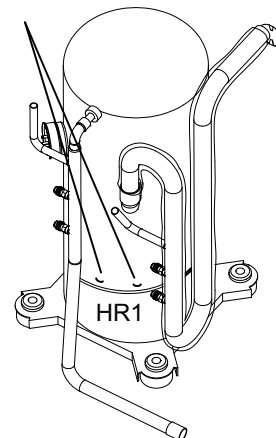
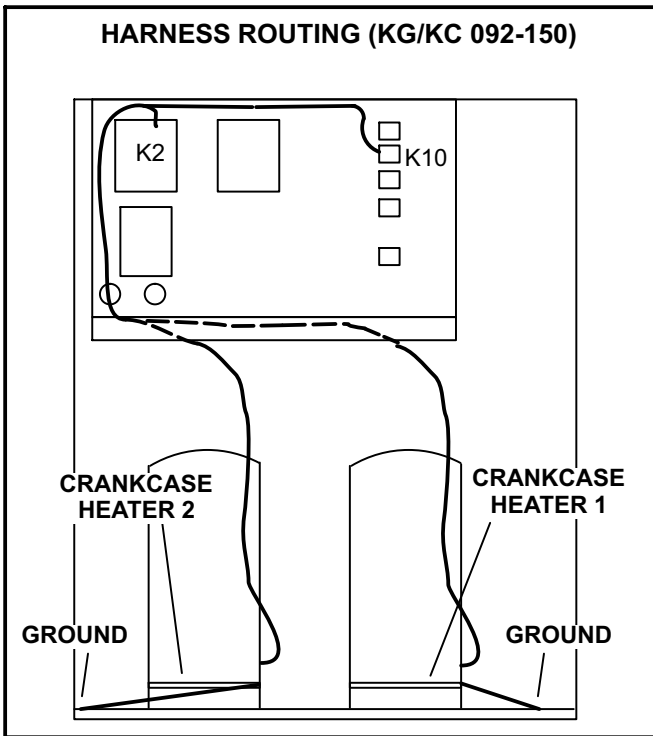


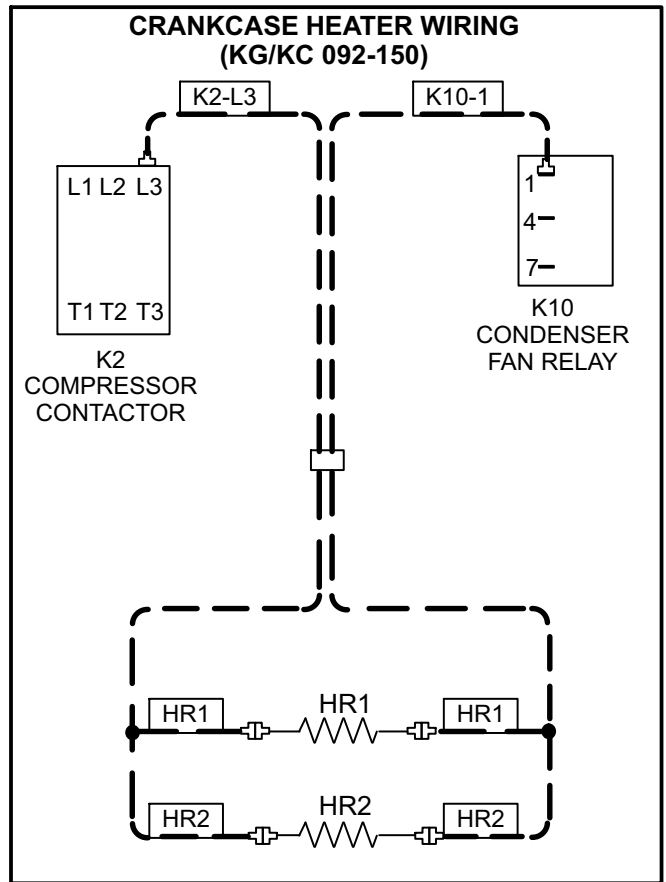
FIGURE 1

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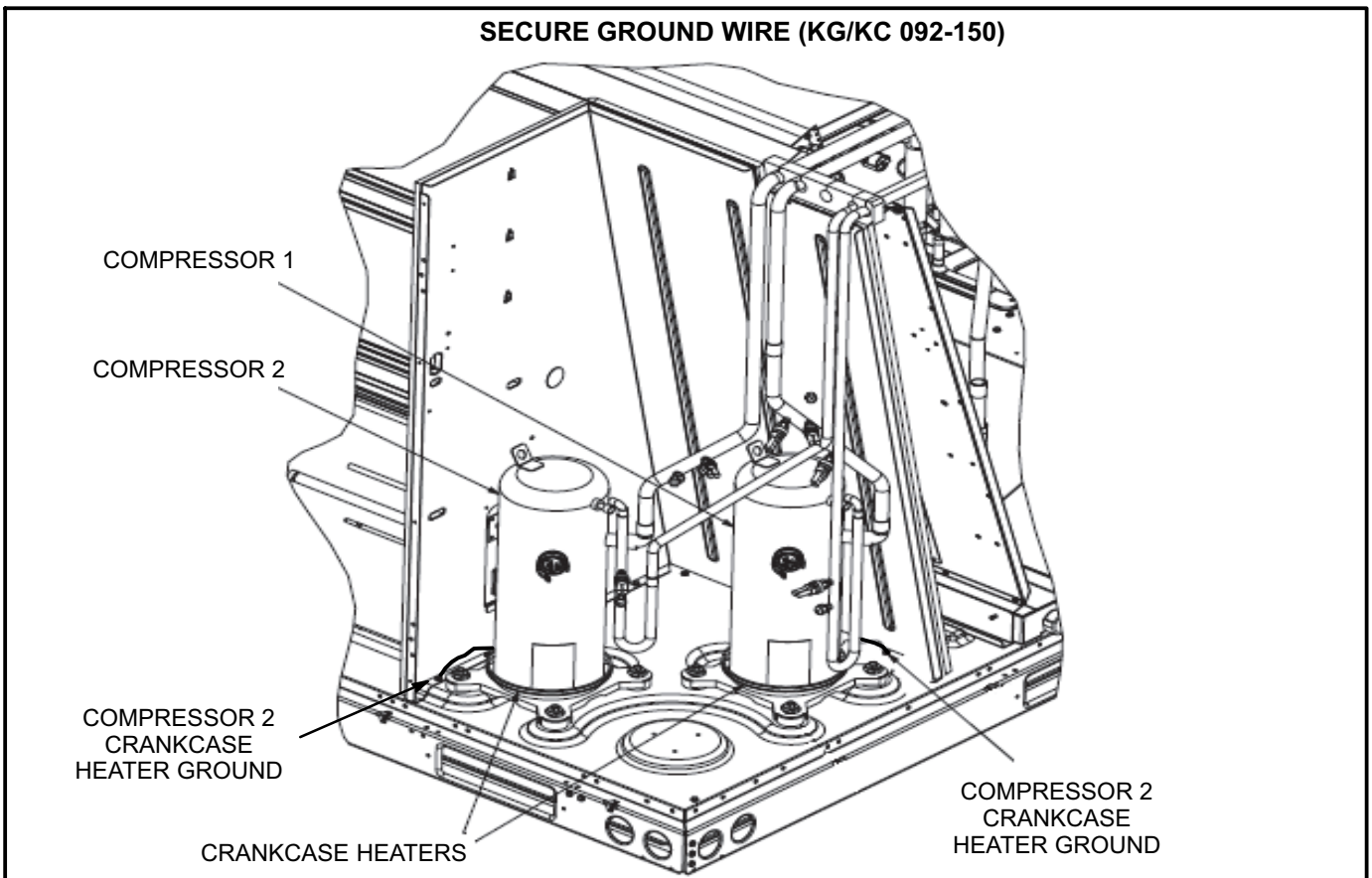




**FIGURE 2**



**FIGURE 3**



**FIGURE 4**

## Pressure Switch Installation

- 1- Disconnect power to unit.
- 2- Refer to table 2 for figure number showing switch location. Open appropriate unit panel.
- 3- Install pressure switches on liquid line pressure taps.
- 4- Check system for leaks.

**TABLE 2**

Unit	Switch Location
KG/KC 092-150	Figure 5

## Pressure Switch Wiring

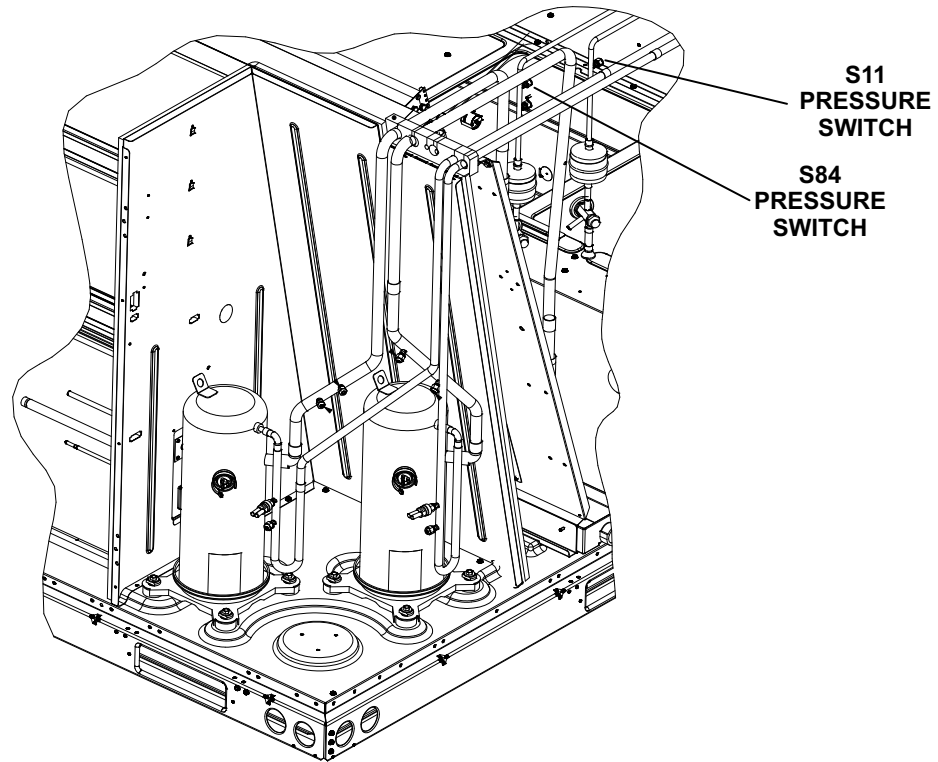
- 1- Disconnect wires marked S11 as shown in figure 7.
- 2- Connect harness wires as shown in figure 6.
- 3- Bundle wiring and secure away from unit components.

## Operation

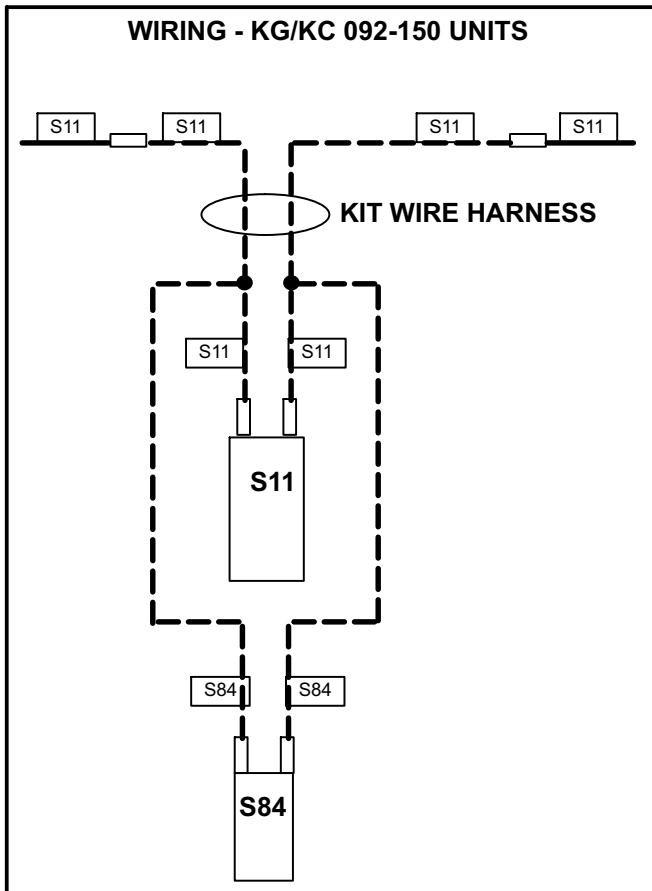
Outdoor fans will be energized when the liquid pressure rises to 450 psig (3103kPa) and de-energize when liquid pressure drops to 240 psig (1655kPa).

Outdoor fans cycle together (all switches must be open).

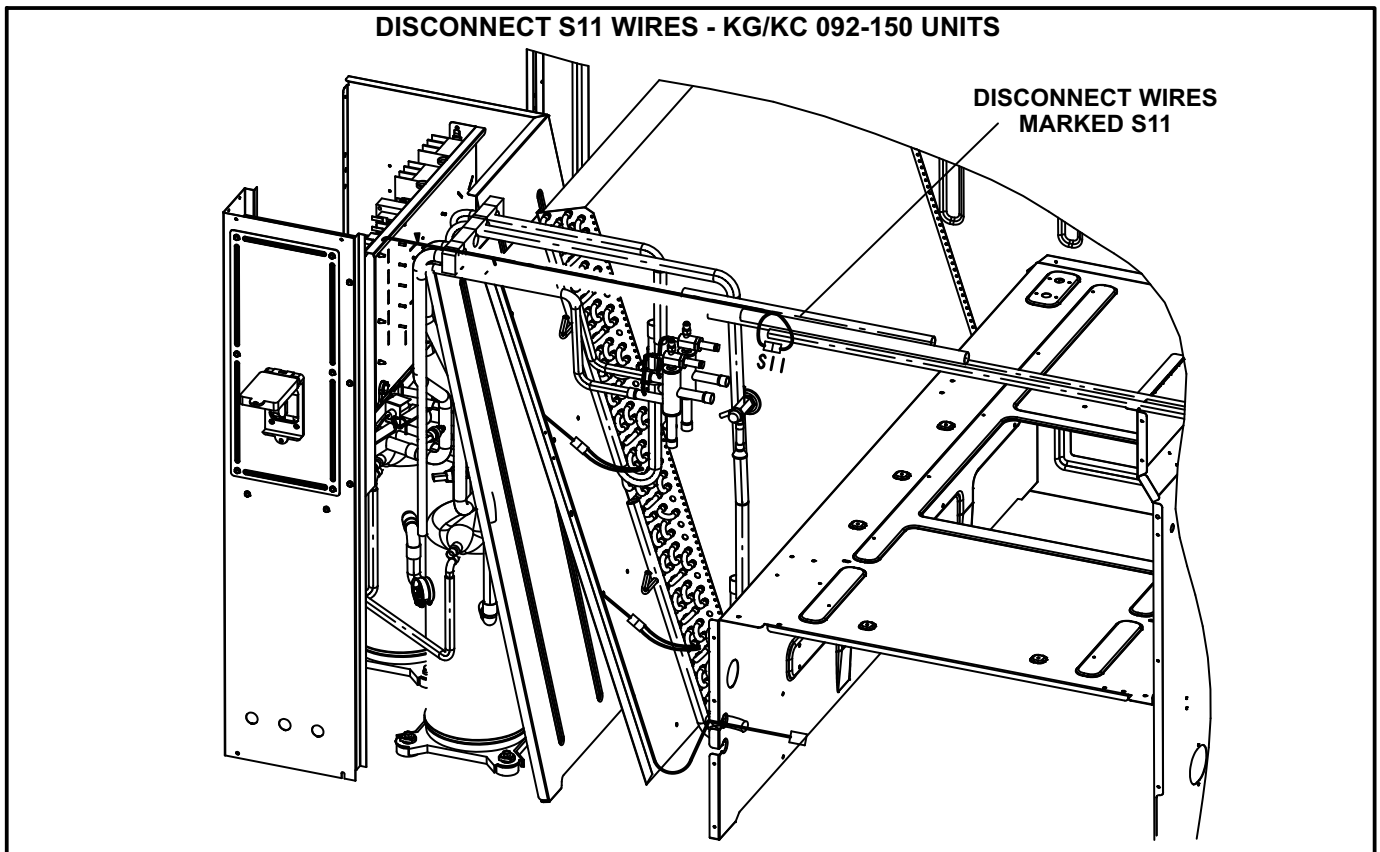
**PRESSURE SWITCH LOCATION - KG/KC 092-150 UNITS**



**FIGURE 5**



**FIGURE 6**



**FIGURE 7**