Shipping and Packing List

14D89 & 14D96
Package 1 of 1 contains:
1- Pressure switch (S11)
2- Wire harnesses
1- Relay (K10 or K58)
1- Screw
1- Valve depressor tee

54W16
Package 1 of 1 contains:
2- Pressure switches (S11, S84)
2- Wire harnesses

14N31
Package 1 of 1 contains:
3- Pressure switches (S11, S84, S185)
1- Wire harness

15C84
Package 1 of 1 contains:
2- Pressure switches (S11, S185)
2- Relays (K58, K159)
1- Wire harness
1- Valve depressor tee

Application

See table 1 for usage.

TABLE 1

<table>
<thead>
<tr>
<th>Box</th>
<th>Unit</th>
<th>Cat. #</th>
<th>LB #</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>KG/KC 024-090</td>
<td>14D89</td>
<td>LB-107318BT</td>
</tr>
<tr>
<td>A</td>
<td>KH 024-074S</td>
<td>14D96</td>
<td>LB-107318BR</td>
</tr>
<tr>
<td>A</td>
<td>KHB/KDB 024-060H</td>
<td>15C84</td>
<td>603364-31</td>
</tr>
<tr>
<td>B</td>
<td>KG/KC 092-150, KHA 092S-150S</td>
<td>54W16</td>
<td>603364-06</td>
</tr>
<tr>
<td>B</td>
<td>KHB/KDB 092H-122H</td>
<td>14N31</td>
<td>603364-30</td>
</tr>
</tbody>
</table>

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.

Install a belly-band style crankcase heater on compressors which don't have one.

Install Pressure Switch

1- Disconnect power to unit.
2- Refer to table 2 for figure number showing switch location. Open appropriate unit panel.
3- 024-090 Units - Install the valve depressor tee on the liquid line pressure tap. See figure 1 and 2.
4- Install pressure switches on liquid line pressure taps or valve depressor tee.
5- Check system for leaks.

TABLE 2

<table>
<thead>
<tr>
<th>Unit</th>
<th>Switch Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/KC 024-090</td>
<td>Figure 1</td>
</tr>
<tr>
<td>KH 024-074S</td>
<td></td>
</tr>
<tr>
<td>KD/KH 024-060H</td>
<td>Figure 2</td>
</tr>
<tr>
<td>KG/KC 092-150, KHA 092S-150S</td>
<td>Figure 3</td>
</tr>
<tr>
<td>KHB/KDB 092H-122H</td>
<td>Figure 4</td>
</tr>
</tbody>
</table>
PRESSURE SWITCH LOCATION
KG/KC 024-090 & KH 024-074S SCROLL COMPRESSORS

FIGURE 1

PRESSURE SWITCH LOCATION
KH/KD 024-060H SCROLL COMPRESSORS

FIGURE 2

PRESSURE SWITCH LOCATION - KG/KC 092-150 AND KHA 092S-150S UNITS

FIGURE 3

Note - KGA/KCA shown; pressure switches are in the same location in KHA units.
FIGURE 4

PRESSURE SWITCH LOCATION - KHB/KDB 092H-122H UNITS

S11 PRESSURE SWITCH

S84 PRESSURE SWITCH

S185 PRESSURE SWITCH
Install Relay - KG/KC 024-090, KH 024-074

1- Install the relay in units shown in table 3. Refer to figure 5 for KG/KC and KH standard efficiency unit relay location. Refer to figure 6 for KH/KD high efficiency relay location. Secure with screws provided in kit.

Table 3

<table>
<thead>
<tr>
<th>Unit</th>
<th>Wiring Diagram Key No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KG/KC 024-090 Y &amp; P Volt</td>
<td>Relay not required; discard.</td>
</tr>
<tr>
<td>KG/KC 036-090 M, G &amp; J Volt*</td>
<td>K10</td>
</tr>
<tr>
<td>KH 024-074S</td>
<td>K58</td>
</tr>
<tr>
<td>KH/KD 024-060H</td>
<td>K58, K159</td>
</tr>
</tbody>
</table>

*Caution - Pressure switch is not rated for applications above 240V. Relay must be used in high voltage applications.

RELAY LOCATION - KG/KC 036-090, KH 024-074S UNITS (ABOVE COMPRESSORS)

K10 OUTDOOR FAN RELAY
KG/KC 036-090 M, G, & J VOLT UNITS

K58 LOW AMBIENT KIT RELAY
KH 024-074S UNITS

RELAY LOCATION - 024-060H UNITS (ABOVE COMPRESSORS)

K72, K27 DUAL FUEL GAS HEAT CONTROL
KD 024-060 P, Y, G, J, M VOLT UNITS

K58, 159 LOW AMBIENT KIT RELAY KH/KD 024-060H UNITS

FIGURE 5

FIGURE 6
## TABLE 4
### 024-090 UNIT WIRING

<table>
<thead>
<tr>
<th>Kit</th>
<th>Unit</th>
<th>Wiring</th>
<th>Notes</th>
<th>Reference Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>14D89</td>
<td>KG/KC 024-060 P Volt</td>
<td>Figure 7</td>
<td>Discard relay and longer harness.</td>
<td>P volt - 537780</td>
</tr>
<tr>
<td></td>
<td>KG/KC 036-090 Y Volt</td>
<td></td>
<td></td>
<td>Y volt - 537777</td>
</tr>
<tr>
<td>14D89</td>
<td>KG/KC 036-090 G, J, M Volt</td>
<td>Figure 8</td>
<td>All kit components used.</td>
<td>537777</td>
</tr>
<tr>
<td>14D96</td>
<td>KH 024-074S P, Y Volt</td>
<td>Figure 9 &amp; Figure 11*</td>
<td>P, Y volt units do not use K10. Figure 9 shows the multi-wire harness.</td>
<td>P volt - 537780</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Y volt - 537777</td>
</tr>
<tr>
<td>14D96</td>
<td>KH 036-074S G, J, M Volt</td>
<td>Figure 10 &amp; Figure 11*</td>
<td>Figure 10 shows the multi-wire harness.</td>
<td>537779</td>
</tr>
<tr>
<td>15C84</td>
<td>KD/KH 024-060H P, Y, G, J, M Volt</td>
<td>Figure 12</td>
<td>One harness</td>
<td>537855-537858</td>
</tr>
</tbody>
</table>

*Two-wire harness shown.

1- Wire pressure switches. Refer to table 4 for appropriate wiring diagram. Wires are stamped as shown in each figure.

2- Bundle wiring and secure away from unit components.

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**WIRING - KG/KC 024-090 P, Y VOLT UNITS**

![Diagram of KG/KC 024-090 P, Y Volt Unit Wiring](image)

**FIGURE 7**
Disconnect this wire from K1-T2.
WIRING - KD/KH 024-060H UNITS ALL VOLTAGES

FIGURE 12

CONNECT P336A HARNESS PLUG TO J336 OD FAN CONTROL JACK

CONNECT J336A HARNESS JACK TO P336 OD FAN CONTROL PLUG

UNIT WIRING

DISCONNECT OUTDOOR FAN CONTROL JACK PLUGS
Wiring - KG/KC/KH/KD 092-150 Units

1- Disconnect wires marked S11 as shown in figure 14.

2- Locate shorter kit harness and connect wires as shown in figure 13.

Note - Kits for KHB/KDB092H-122H units contain only one harness.

3- KHA 092S-150S Units Only -
   Locate longer kit harness. Disconnect wire to CMC1-FAN and connect to harness wire stamped “CMC1-FAN/P35-6”. See figure 15. Connect harness as shown in figure 16. Discard longer harness when installing a KG or KC unit.

4- KHB/KDB 092H-122H Units Only -
   Route the S185 pressure switch wires near the jumper plug shown in figure 14. Remove jumper plug and connect wires from S185.

5- Bundle wiring and secure away from unit components.
K58-3 AND K58-9 WIRES HANGING LOOSE NEAR K58

CMC1-FAN TERMINAL; DISCONNECT WIRE MARKED “CMC1-FAN/P35-6”

WIRING - KHA092S-150S UNITS

DISCONNECT WIRE FROM CMC1 FAN TERMINAL; CONNECT TO HARNESS WIRE STAMPED “CMC1-FAN”

UNIT WIRES HANGING NEAR K58

FIGURE 15

FIGURE 16
**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).

**KGA/KCA/KHA 092S-150S** -
Outdoor fans cycle together (all switches must be open).

**KHB/KDB 024H-122H** -
See table 5 for outdoor fan operation.

<table>
<thead>
<tr>
<th>Liquid Pressure (psig)</th>
<th>Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>♦ From 450 to 240</td>
<td>All OD Fans On</td>
</tr>
<tr>
<td>♦ From 240 to 180</td>
<td>All OD Fans at 25% of Full Speed</td>
</tr>
<tr>
<td>♦ From 180 to 0</td>
<td>All OD Fans Off</td>
</tr>
<tr>
<td>♦ From 0 to 300</td>
<td>All OD Fans Remain Off</td>
</tr>
<tr>
<td>♦ From 300 to 450</td>
<td>All OD Fans at 25% of Full Speed</td>
</tr>
<tr>
<td>♦ From 450 to higher</td>
<td>All OD Fans On</td>
</tr>
</tbody>
</table>