

KITS COMMON TO HEATING AND COOLING EQUIPMENT

507995-01
 11/2019
 Supersedes 503,849M

BLOWER DELAY RELAY REPLACEMENT KIT

INSTALLATION INSTRUCTIONS FOR BLOWER DELAY RELAY REPLACEMENT KIT (106397-01; 18Y93)

Shipping and Packing List

- 1- Blower Delay Relay K25 (1005-188; 106367)
- 1- Bag assembly containing:
 - 3-Wires
 - 2-Wire markers
 - 2-Wire nuts

Application

Blower delay relay 1005-188; 106367 replaces blower delay relay Camstat 28G2701, HD1-1 LB-66433A, and HD1-2 LB-91256A in the following units:

- GCS16-823 through 3003
- GHP16 & 24
- LGB
- GCS24W
- GCS24-650 and 950

K25 delays blower operation until approximately 45 seconds after ignition and maintains blower operation approximately 150 seconds after ignition is terminated. The 45 second delay allows discharge air to be warmed before it enters the conditioned space. The 150 second delay allows warm air which is already heated in the duct system to be used after the heating cycle is terminated.

The function of the relay remains the same. Mounting holes, terminal designations and wiring are different when changing out the Camstat 28G2701, HD1-1, and HD1-2.

CAUTION

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

WARNING

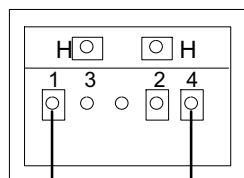
Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional HVAC installer or equivalent, service agency, or the gas supplier

Affix Wire Markers

- 1- Disconnect all power to unit. Remove heat access panel and heating control box cover (when provided).
- 2- Affix wire markers to existing K25 relay wires if the marker is not already there or readable. See figure 1 for Camstat relays and figure 2 for HD1 relays.

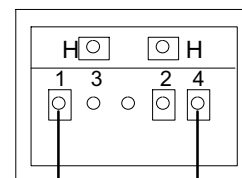
AFFIX WIRE MARKERS - CAMSTAT RELAY 28G2701

GCS16-823/1603 Units



AFFIX WIRE MARKERS

GCS24-1353 & 1603 Units
 GCS16-1853/3003 Units



AFFIX WIRE MARKERS

FIGURE 1



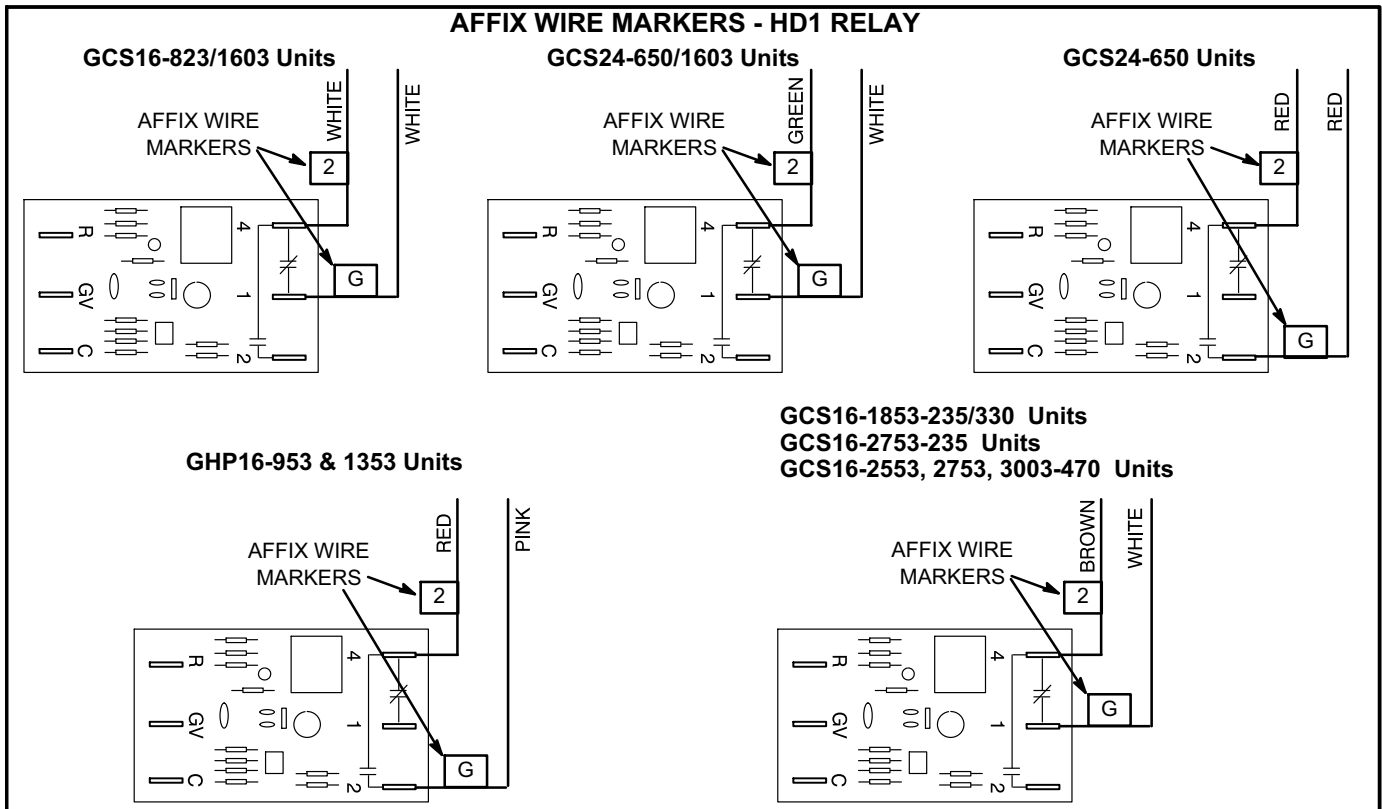


FIGURE 2

Wiring

For ease of installation, move wires from existing relay to replacement relay before installing new relay in unit.

- 1- Disconnect the wire connected to Camstat relay terminal H or HD-1 relay terminal GV. Disconnect the other end of the wire routed to GV1-W1. Discard wire.
- 2- Connect the the 36-inch, white wire (provided in kit) to replacement relay terminal G. Use the other end to splice into the W1 thermostat wire; secure with wire nut (provided in kit).
- 3- 650-1603 Units - Connect 6" blue jumper wire piggy back terminal (provided in kit) on replacement relay terminal R. Connect the other end to either N.O.

terminal or COM on replacement relay. See figure 3 through 8.

- 4- 1853 and Higher Units - Connect 12" blue wire (provided in kit) on replacement relay terminals R. Connect the other end to the blue lead from T12 transformer. Secure with wire nut (provided in kit). See figure 9 and 10.
- 5- Remove color-coded wires from existing relay and connect to kit relay as shown in appropriate figure 3 through 10.

NOTE - Wires shown in figures are color-coded to factory wiring. All wire junctions are not shown in each step; use typical schematic in figure 16 or relay wiring in figures 12 through 15 for unit function.

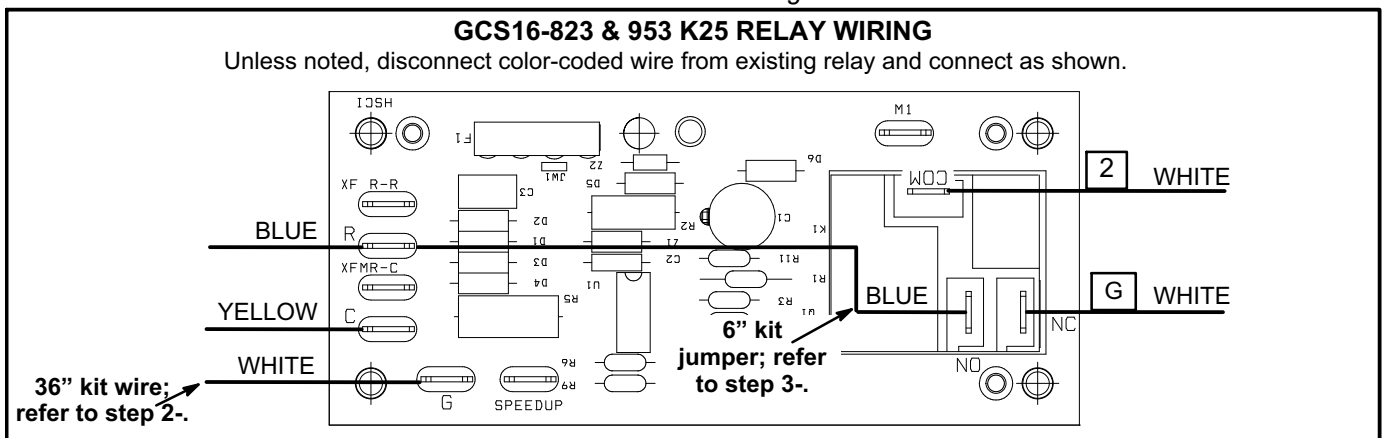


FIGURE 3

GCS16-1353 & 1603 K25 RELAY WIRING

Unless noted, disconnect color-coded wire from existing relay and connect as shown.

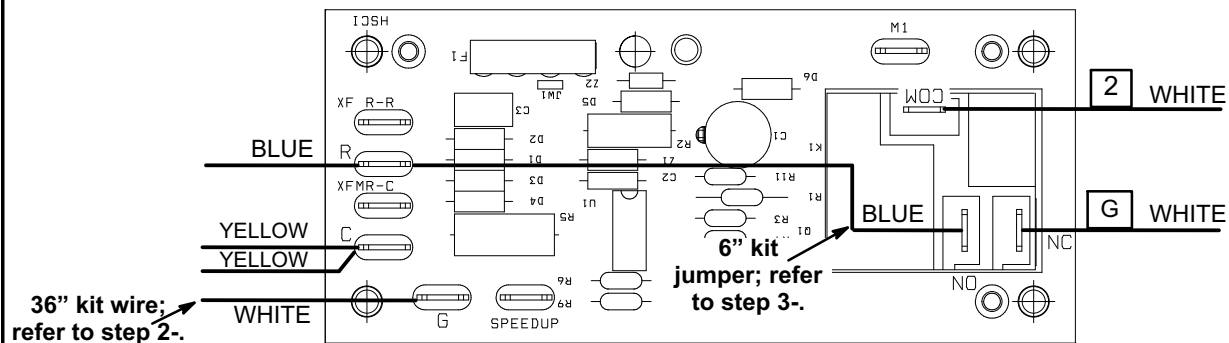


FIGURE 4

GCS24-650 & 813 K25 RELAY WIRING

Unless noted, disconnect color-coded wire from existing relay and connect as shown.

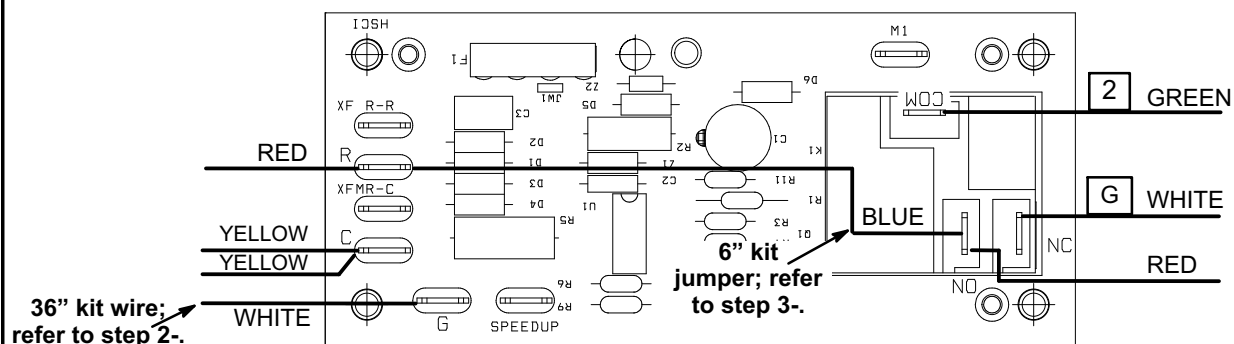


FIGURE 5

GHP24-650 K25 RELAY WIRING

Unless noted, disconnect color-coded wire from existing relay and connect as shown.

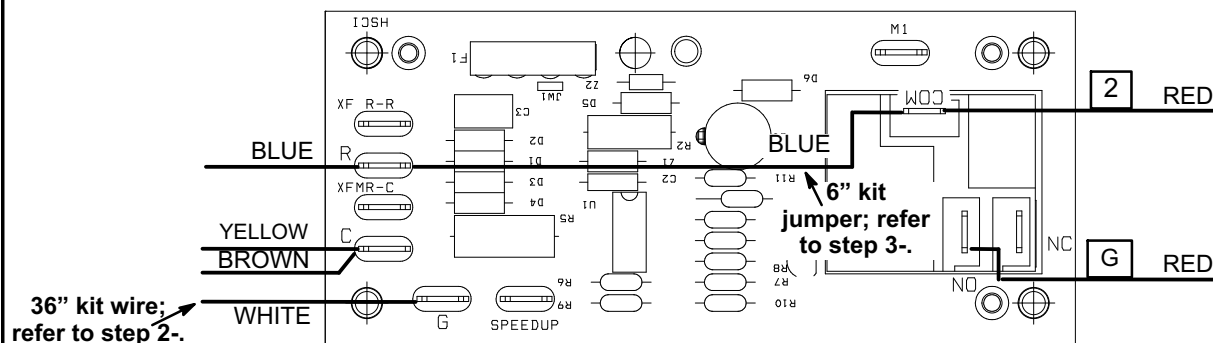


FIGURE 6

GHP16-953 & 1353 K25 RELAY WIRING

Unless noted, disconnect color-coded wire from existing relay and connect as shown.

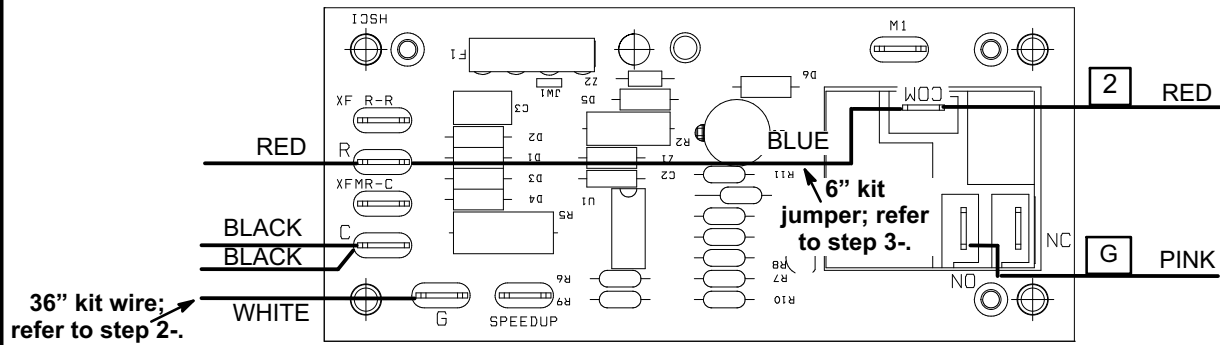


FIGURE 7

GCS24-1353 & 1603 K25 RELAY WIRING

Unless noted, disconnect color-coded wire from existing relay and connect as shown.

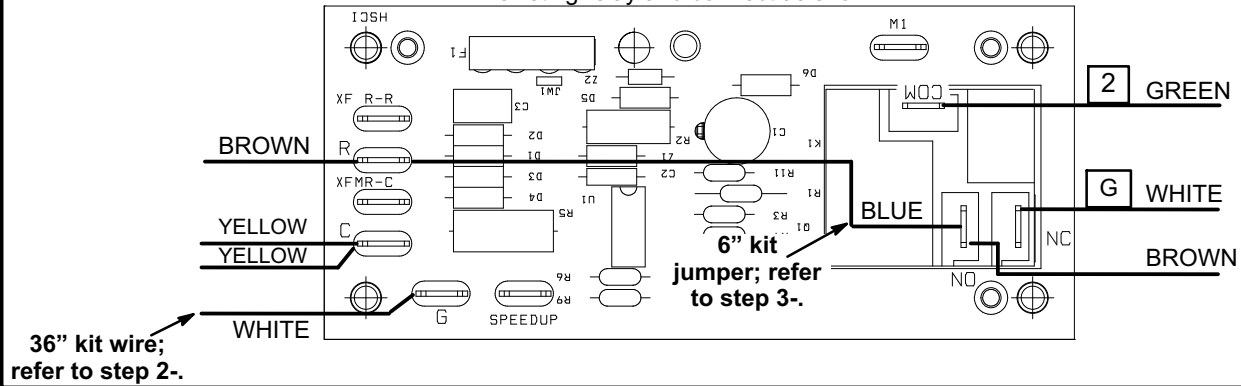


FIGURE 8

GCS16-1853-235/330 & 2753-235 K25 RELAY WIRING

Unless noted, disconnect color-coded wire from existing relay and connect as shown.

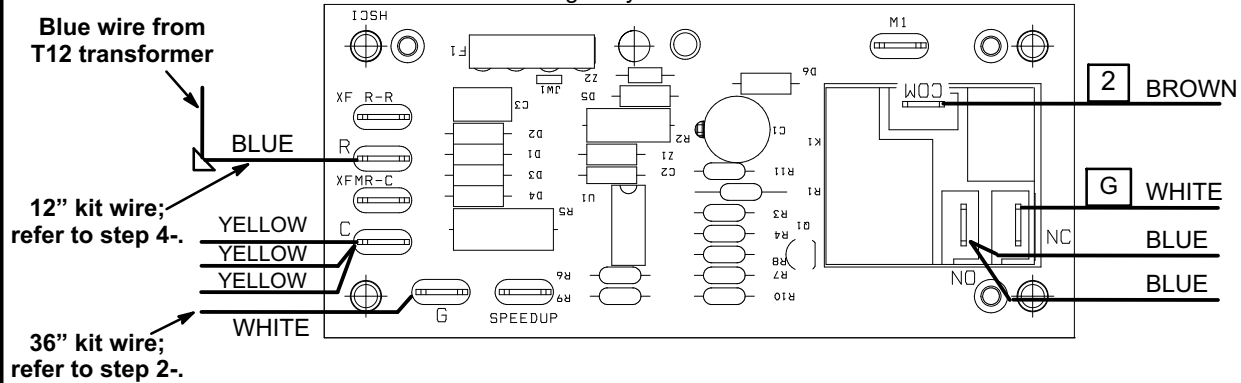


FIGURE 9

GCS16-2553, 2753, & 3003-470 K25 RELAY WIRING

Unless noted, disconnect color-coded wire from existing relay and connect as shown.

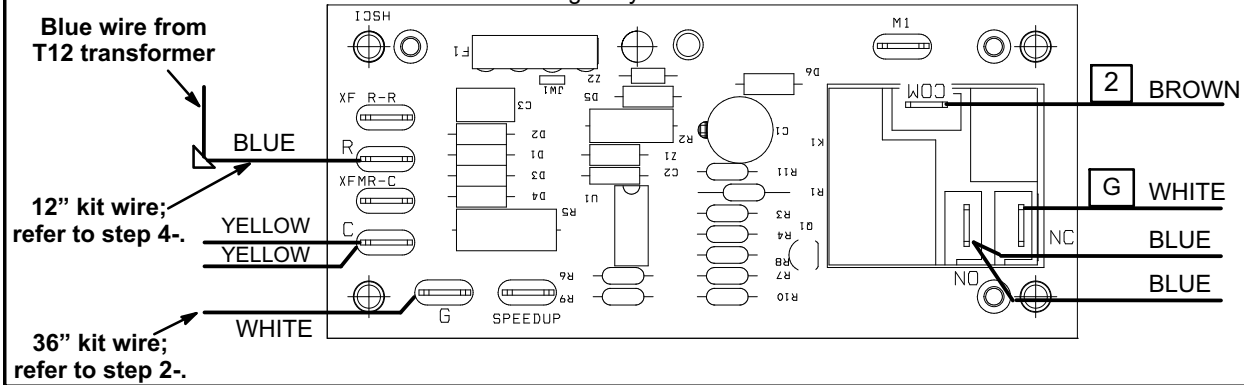


FIGURE 10

Installation

- 1- Use self-tapping screws to secure board where possible. Figure 11 may be used as a template.

Operation

See typical blower delay circuit in figure 15 and the following steps for blower delay operation.

NOTE - If thermostat is set in continuous blower position, thermostat blower "G" energizes K3 blower contactor through K25-1 and K20-1 N.C. contacts without interruption.

- 1- Thermostat heating demand "W1" energizes K25-G.
- 2- After approximately 45 seconds, K25-1 N.O. contacts close. K3 blower contactor is energized through K20-1 N.C. contacts.
- 3- Thermostat heating demand "W1" ends de-energizing K25-G.
- 4- Approximately 150 seconds after W1 thermostat demand ending, N.O. contacts open to de-energize K3 blower contactor. Also, N.C. contacts close to allow 24 volts to K3 blower contactor when thermostat calls for continuous blower.

REPLACEMENT RELAY INSTALLATION HOLES

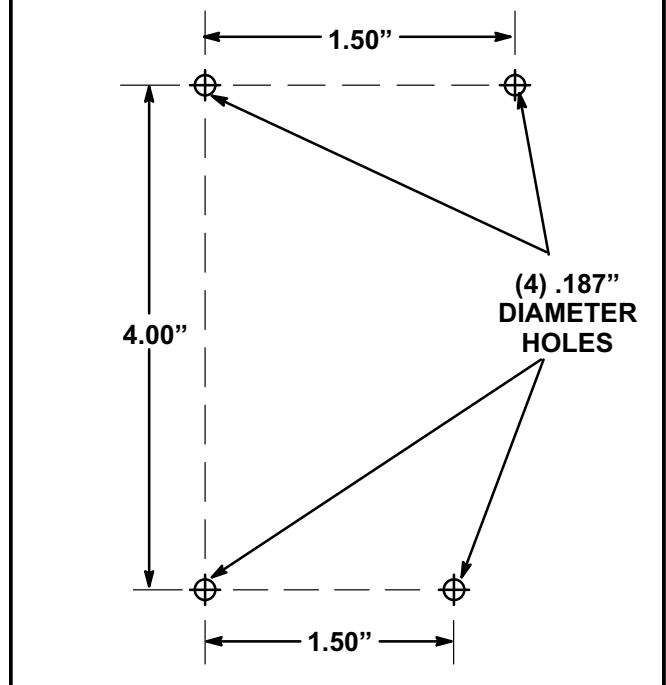


FIGURE 11

**REPLACEMENT BLOWER DELAY RELAY WIRING
GCS16 & 24 - 650/1603 UNITS**

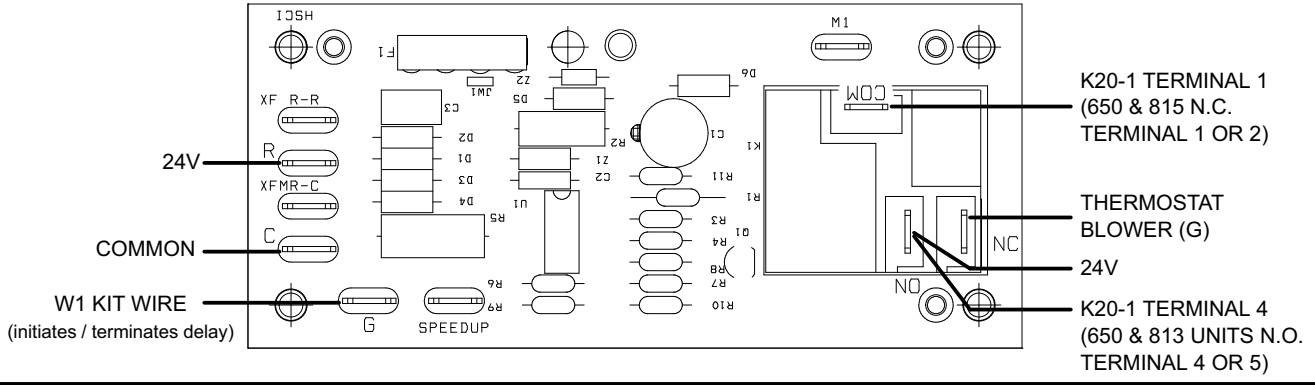


FIGURE 12

**REPLACEMENT BLOWER DELAY RELAY WIRING
GHP16 & 24 - 650/1353 UNITS**

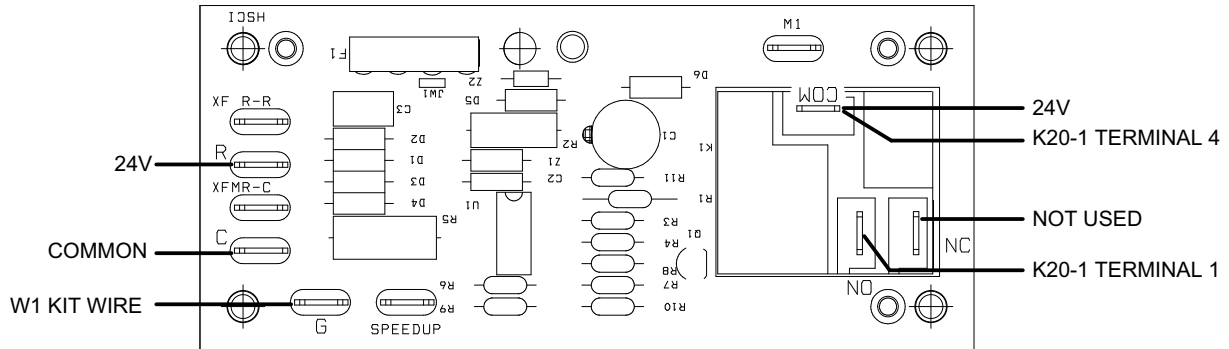


FIGURE 13

**REPLACEMENT BLOWER DELAY RELAY WIRING
GCS16 & 24 - 1853/3003-235, 330 UNITS**

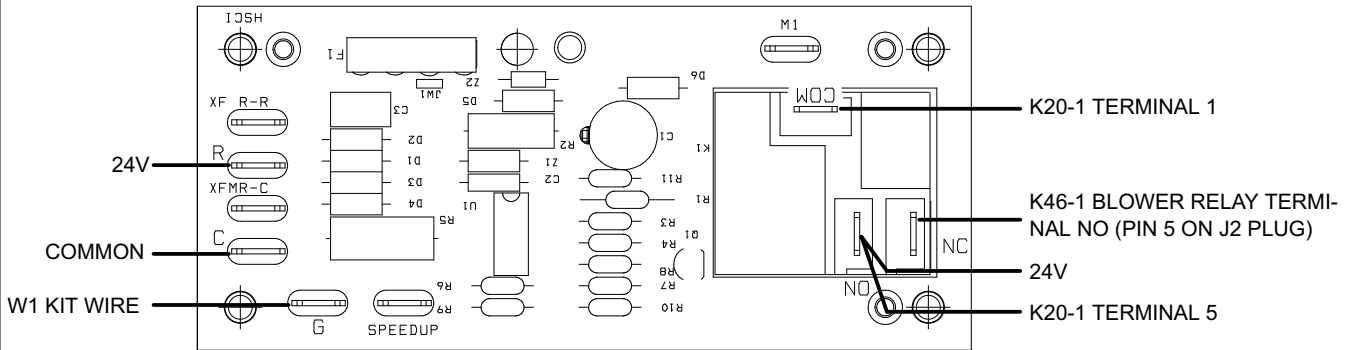


FIGURE 14

**REPLACEMENT BLOWER DELAY RELAY WIRING
GHP16 & 24 - 1854/3003-470 UNITS**

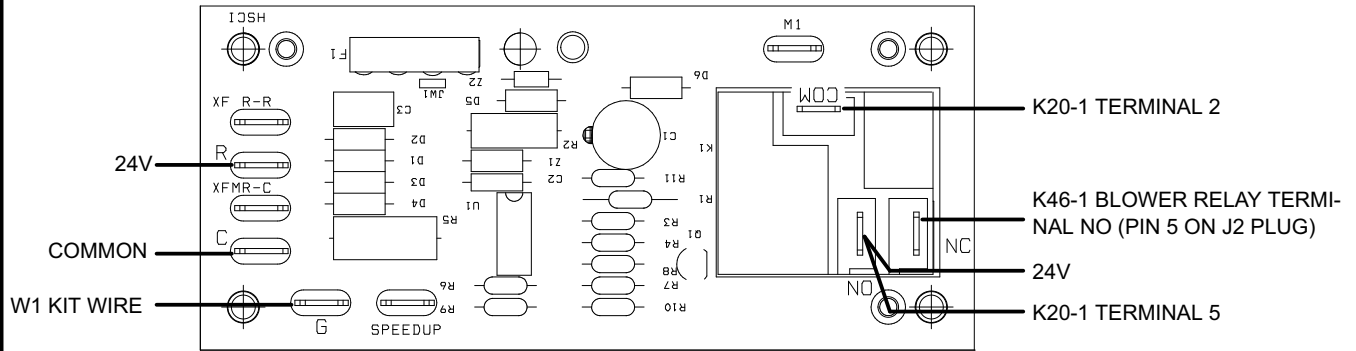


FIGURE 15

TYPICAL BLOWER DELAY RELAY CIRCUIT (K25)

(Reference blower circuit only; for troubleshooting see unit wiring diagram)

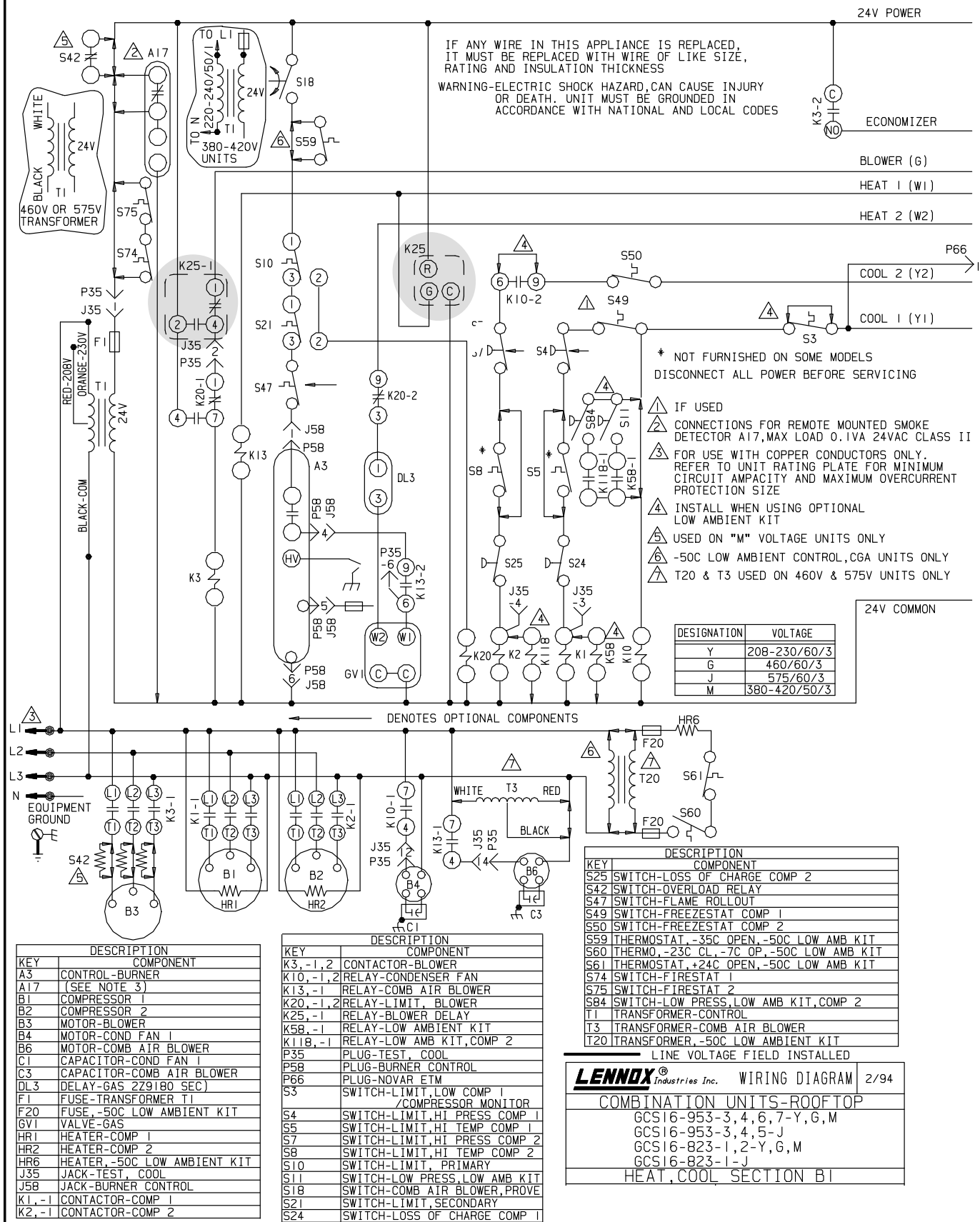


FIGURE 16