
INSTALLATION INSTRUCTIONS

OPTIONAL ELECTRIC HEAT PACKAGES

Models:

EH3GSVA-A05C

EH3GSVA-A09C

EH3GSVA-A14C

EH5GSVA-A09C

EH5GSVA-A14C

EH5GSVA-A18C



CLIMATE CONTROL SOLUTIONS

Bard Manufacturing Company, Inc.
Bryan, Ohio 43506

Since 1914...Moving ahead, just as planned.

Manual: 2100-318B
Supersedes: 2100-318A
File: Volume 1, Tab 7
Date: 04-09-09

GENERAL

IMPORTANT

The equipment covered in this manual is to be installed by trained, experienced service and installation technicians.

SHIPPING DAMAGE

Upon receipt of equipment, the carton should be checked for external signs of shipping damage. If damage is found, the receiving party must contact the last carrier immediately, preferably in writing, requesting inspection by the carrier's agent.

UNPACKING THE HEAT PACKAGE

Remove the heat package from the shipping carton. The heat package must consist of the following:

1. Basic heater enclosure and control panel.
2. Installation instructions and wiring diagram.

INSTALLATION

INSTALLING HEAT PACKAGE TO GSVS UNIT

Service access clearance of two feet (24 inches) minimum required on side of unit in which heater package is installed.

Disconnect all power supplies to the unit. Remove the blower access door and compressor access door.

Remove the two (2) screws used to secure the blower angle to blower slide. Unplug motor leads from motor. Remove angle and slide blower assembly from unit. (See Figure 1.)

Slide the heat package into the blower slide and screw into place. (See Figure 2.)

Connect heat package control panel to top of unit. (See Figure 3.) Slide blower assembly into heat package and secure in place with blower angle. (See Figure 4.)



CAUTION

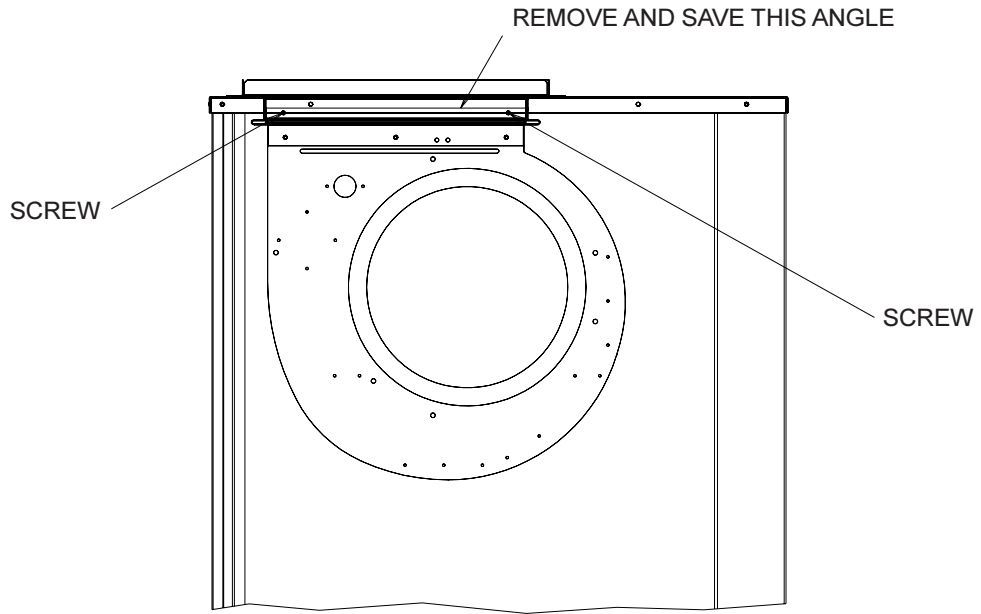
Do not plug or unplug power connector with power applied. The power must be off for 5 minutes before plugs may be disconnected. Failure to remove power will result in motor failure.



WARNING

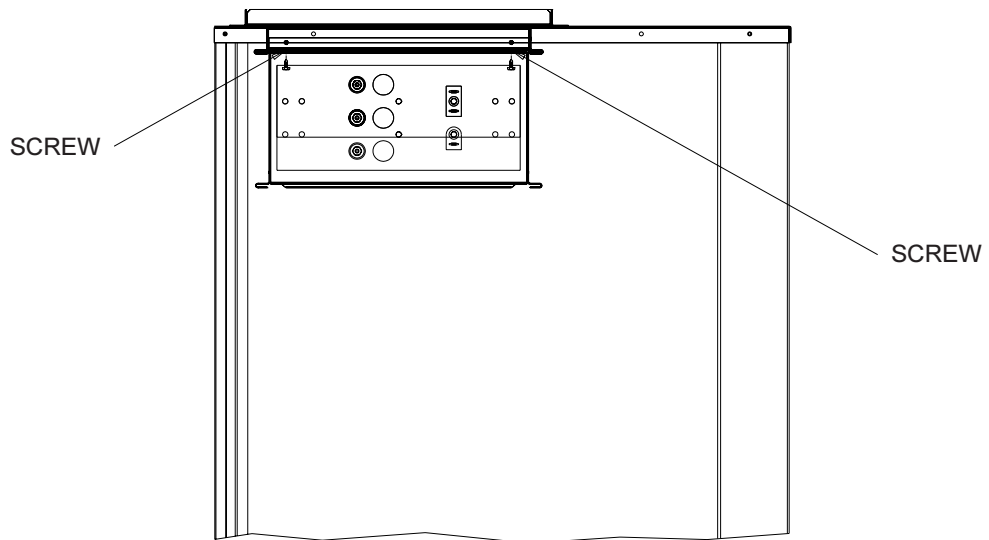
Failure to provide the one inch (1") clearance between the supply duct and a combustibile surface for the first 3 feet of duct can result in fire causing property damage, personal injury, or death.

**FIGURE 1
(RIGHT HAND RETURN SHOWN)**



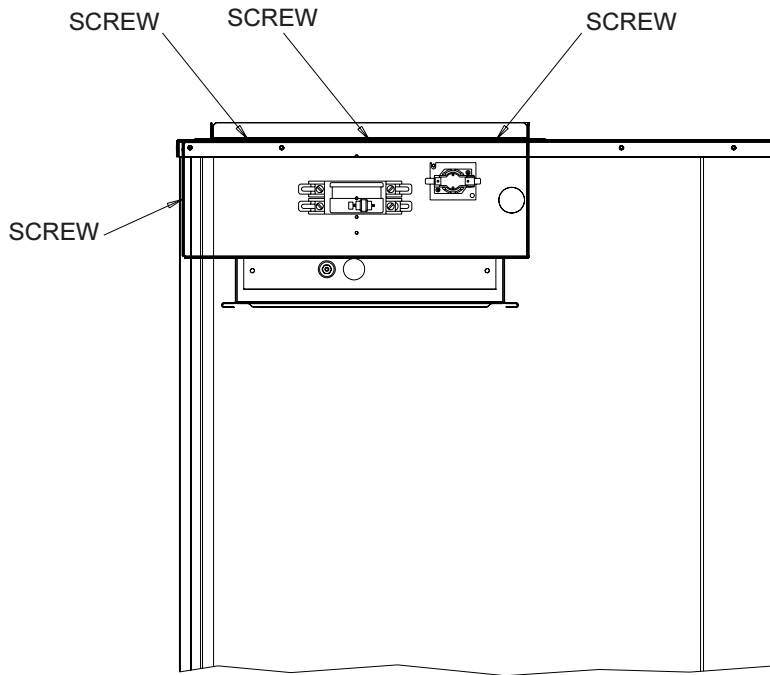
MIS-1239

**FIGURE 2
(RIGHT HAND RETURN SHOWN)**



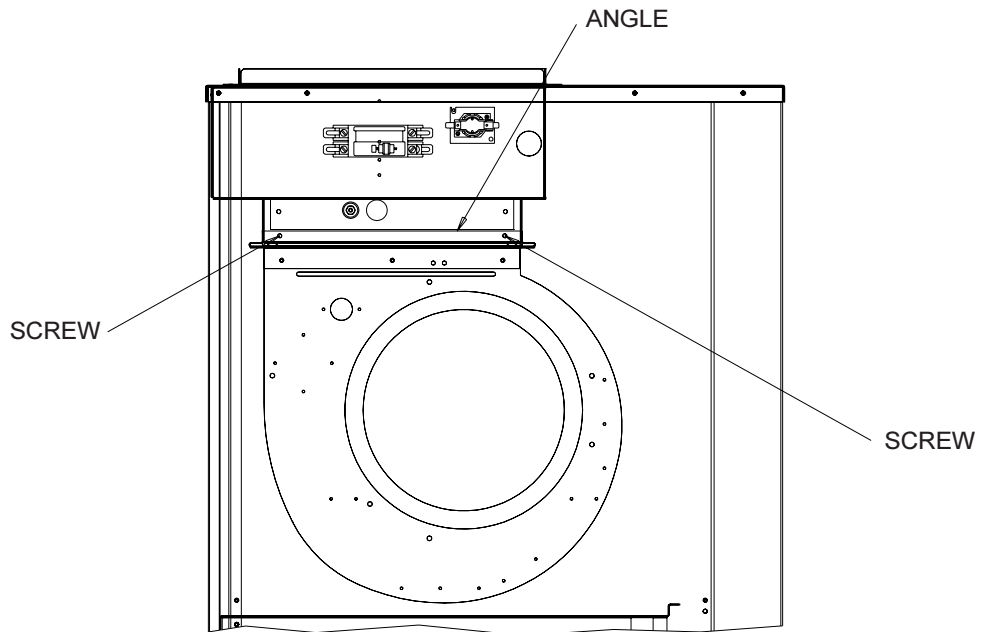
MIS-1240

**FIGURE 3
(RIGHT HAND RETURN SHOWN)**



MIS-1241

**FIGURE 4
(RIGHT HAND RETURN SHOWN)**



MIS-1242

Power supply wiring can now be made to the heat package. Route the low voltage three pin plug through the partition and plug into mating plug in top of control panel. (See Figure 5.) This connection supplies the low voltage control circuit to the heat package from the heat pump control circuit.

Inspect all wiring for damage and secure any loose wiring. Apply the heat package wiring diagram supplied onto the blower access panel in such a way as to not cover the circuit breaker knockouts.

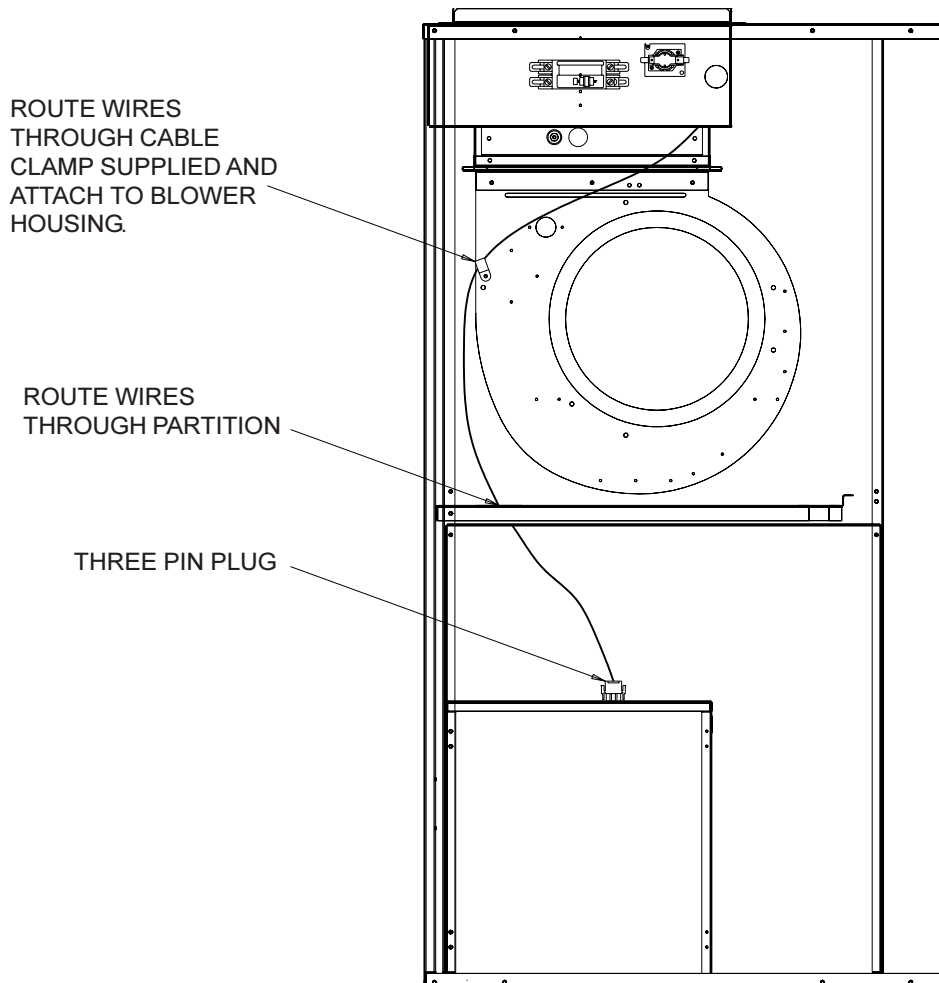
Remove the proper knockout(s) in the blower access door that will allow the circuit breakers to extend through the door.

Replace the blower access door and the compressor access door. Energize the unit and check for proper system operation.

IMPORTANT

When electric heat package is installed the "Heat" setting on the Blower Control Board must be adjusted according to the KW rating of the heat package. See basic GSVS Installation Instructions 2100-317.

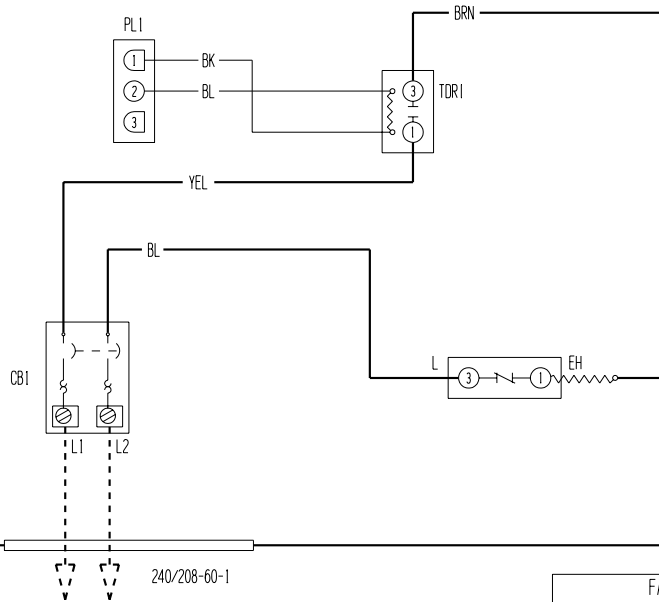
FIGURE 5
(RIGHT HAND RETURN SHOWN)



MIS-1243

CONNECTION DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD.
DISCONNECT POWER BEFORE SERVICING.



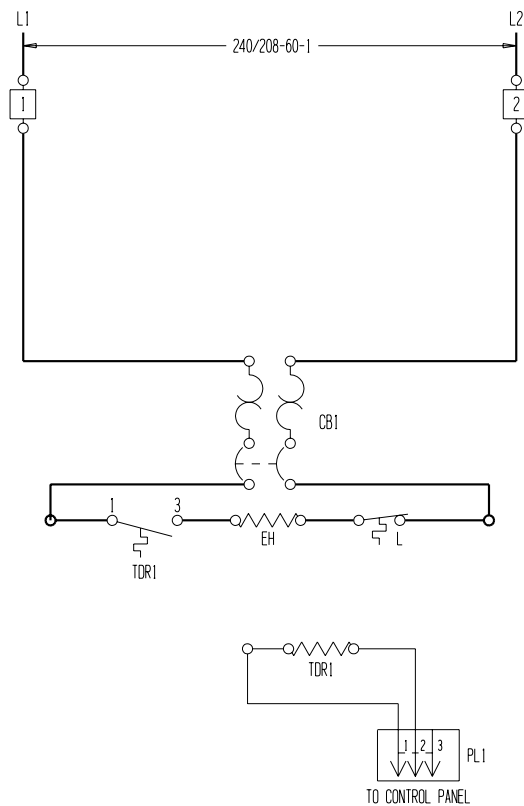
| COMPONENT CODE | |
|----------------|--------------------|
| CB1 | CIRCUIT BREAKER 1 |
| CB2 | CIRCUIT BREAKER 2 |
| EH | ELECTRIC HEATER |
| L | LINE BREAK LIMIT |
| PL1 | PLUG #1 |
| TB | TERMINAL BLOCK |
| TDR1 | TIME DELAY RELAY 1 |
| TDR2 | TIME DELAY RELAY 2 |

NOTE: REFER TO THE HEATER PACKAGE
INSTRUCTIONS FOR PROPER INSTALLATION

| | FACTORY WIRING | FIELD WIRING |
|--------------|----------------|--------------|
| Low Voltage | ————— | ----- |
| High Voltage | ————— | ----- |

USE COPPER OR
ALUMINUM WIRE

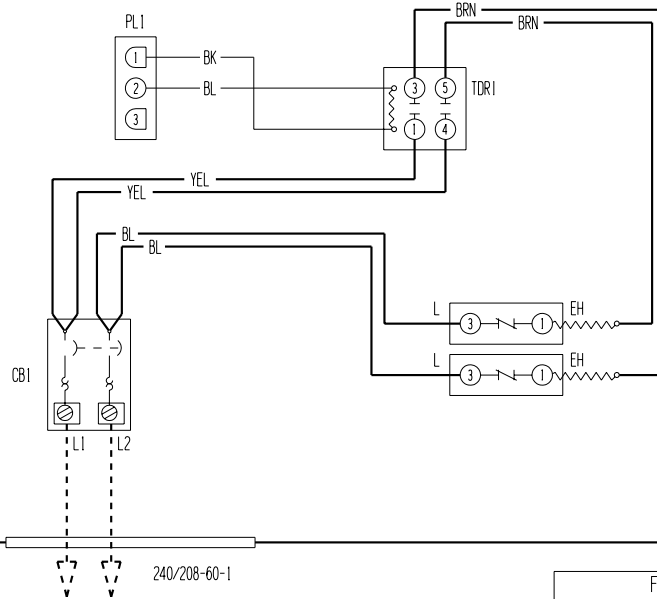
LADDER DIAGRAM



4106-100

CONNECTION DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD.
DISCONNECT POWER BEFORE SERVICING.



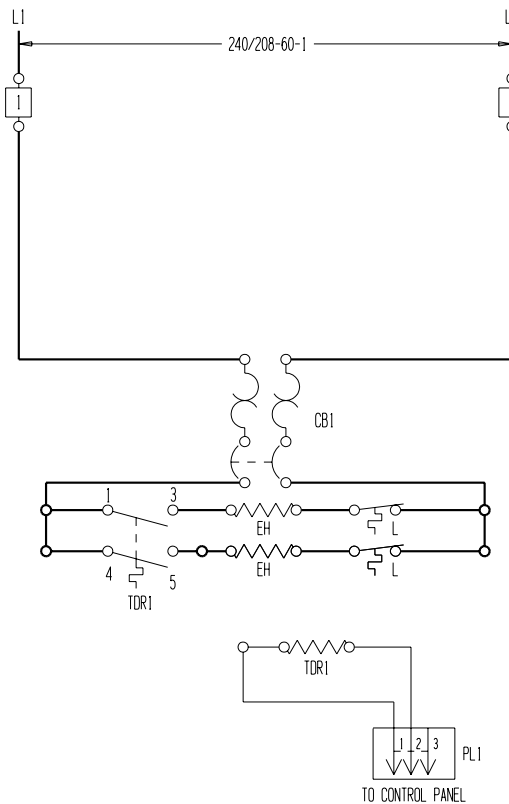
| COMPONENT CODE | |
|----------------|--------------------|
| CB1 | CIRCUIT BREAKER 1 |
| CB2 | CIRCUIT BREAKER 2 |
| EH | ELECTRIC HEATER |
| L | LINE BREAK LIMIT |
| PL1 | PLUG #1 |
| TB | TERMINAL BLOCK |
| TDR1 | TIME DELAY RELAY 1 |
| TDR2 | TIME DELAY RELAY 2 |

NOTE: REFER TO THE HEATER PACKAGE
INSTRUCTIONS FOR PROPER INSTALLATION

| | FACTORY WIRING | FIELD WIRING |
|--------------|----------------|--------------|
| Low Voltage | ————— | ----- |
| High Voltage | ————— | ----- |

USE COPPER OR ALUMINUM WIRE

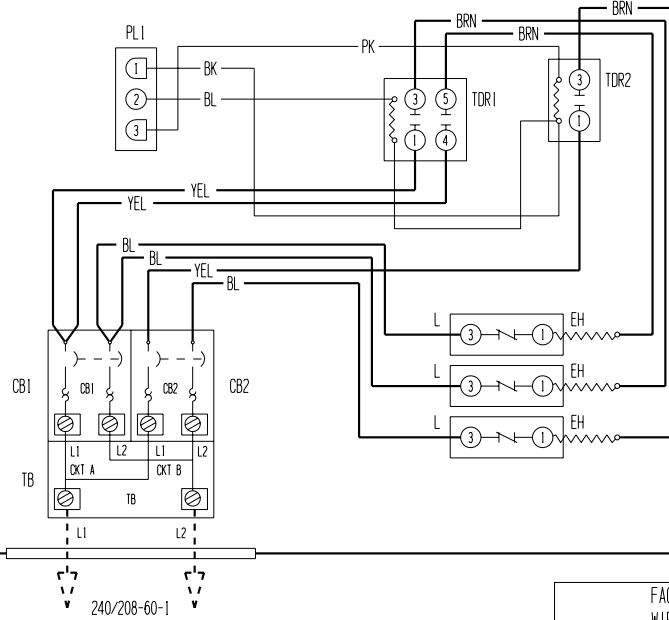
LADDER DIAGRAM



4106-110

CONNECTION DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD.
DISCONNECT POWER BEFORE SERVICING.



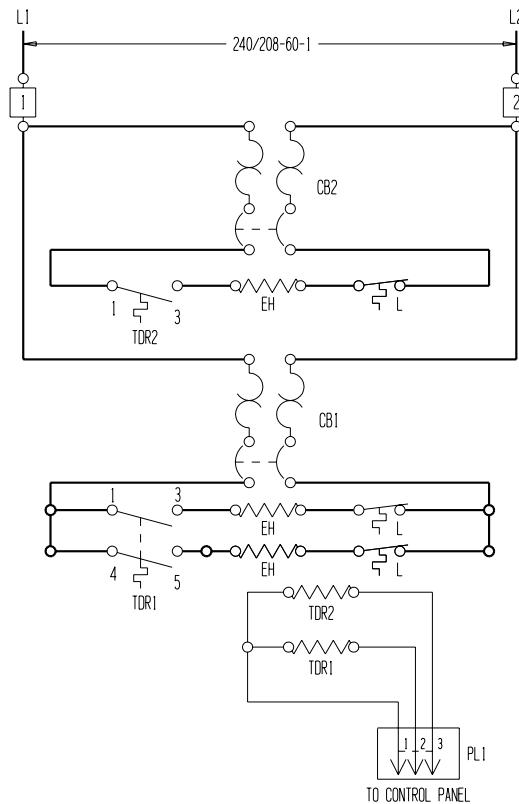
| COMPONENT CODE | |
|----------------|--------------------|
| CB1 | CIRCUIT BREAKER 1 |
| CB2 | CIRCUIT BREAKER 2 |
| EH | ELECTRIC HEATER |
| L | LINE BREAK LIMIT |
| PL1 | PLUG #1 |
| TB | TERMINAL BLOCK |
| TDR1 | TIME DELAY RELAY 1 |
| TDR2 | TIME DELAY RELAY 2 |

NOTE: REFER TO THE HEATER PACKAGE
INSTRUCTIONS FOR PROPER INSTALLATION

| | FACTORY WIRING | FIELD WIRING |
|--------------|----------------|--------------|
| Low Voltage | ————— | - - - - - |
| High Voltage | ————— | - - - - - |

USE COPPER OR
ALUMINUM WIRE

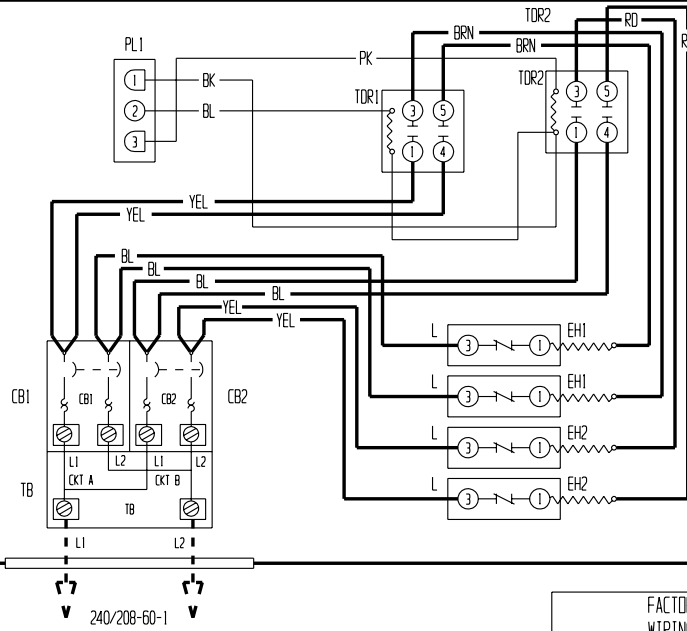
LADDER DIAGRAM



4106-120

CONNECTION DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD.
DISCONNECT POWER BEFORE SERVICING.



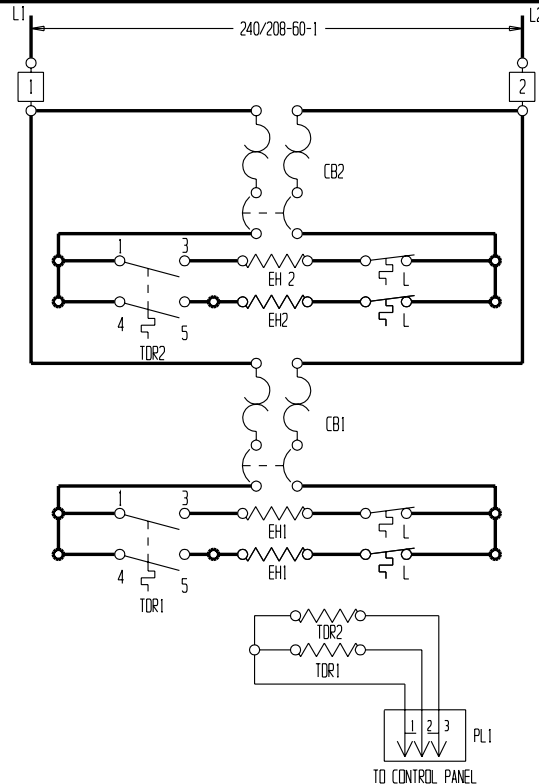
| COMPONENT CODE | |
|----------------|--------------------|
| CB1 | CIRCUIT BREAKER 1 |
| CB2 | CIRCUIT BREAKER 2 |
| EH1 | ELECTRIC HEATER 1 |
| EH2 | ELECTRIC HEATER 2 |
| L | LINE BREAK LIMIT |
| PL1 | PLUG #1 |
| TB | TERMINAL BLOCK |
| TDR1 | TIME DELAY RELAY 1 |
| TDR2 | TIME DELAY RELAY 2 |

NOTE: REFER TO THE HEATER PACKAGE
INSTRUCTIONS FOR PROPER INSTALLATION

| | FACTORY WIRING | FIELD WIRING |
|--------------|----------------|--------------|
| Low Voltage | ————— | ----- |
| High Voltage | ————— | ----- |

USE COPPER OR
ALUMINUM WIRE

LADDER DIAGRAM



4106-130