INSTALLATION INSTRUCTIONS

EVENHEATER™ ELECTRIC HEAT SECTIONS

ELECTRIC HEAT SECTIONS
503,675M
5/99
Supersedes 7/97

Technical Publications
Litho U.S.A.

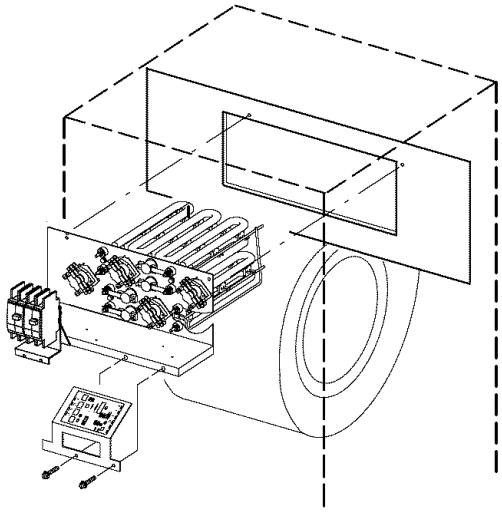


Table of Contents

RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

ECB29EH Electric Heat Sections

The EvenHeater™ ECB29EH electric heat sections provide field installed staged electric heat for Lennox Elite 10™ CB29M, Elite 12™ CB30M, Elite 12™ CB30U, and PowerMate™ CB31MV blower coil units.

In heat pump applications, the electric heat is staged to provide supplemental heat to meet desired comfort levels. When the electric heat section is used in applications that do not have a heat pump, the elements are staged to limit heat so that it meets heating demands only.

Adjust element staging by changing the location of the supply air temperature-selection jumper on the ECH1 control board.

ECB29EH heat sections are available in single-phase 9kW, 12.5 kW, 15 kW, and 20kW sizes. Heaters are equipped with circuit breakers. Refer to the engineering handbook for specific heat section applications.

Shipping & Packing List

Package 1 of 1 contains:

1 - Assembled electric heat section
1 - Bag assembly containing the following:
10-Screws; 1-Wiring diagram; 2-Wire nuts
1 - EHC1 control board assembly
1 - Supply air plenum thermistor
2 - Adhesive-backed foam seals
1 - Control bracket

Inspect the heater section for shipping damage. If you find any damage, immediately contact the last carrier.

General Information

These instructions are intended as a general guide and do not supersede local codes in any way. Consult authorities having jurisdiction before installation. Read these instructions thoroughly before installing the heater section.

The electric heat section and all other equipment used in HVAC systems must only be installed by qualified installers or technicians. You must follow federal, state, and local codes while installing this or any other HVAC equipment.

⚠ WARNING

If these instructions and/or codes are not followed or if the equipment is not properly installed, possible injury or death could occur during installation or operation.

Be sure to disconnect all power to unit while installing and servicing the equipment. Use proper tools and protective equipment during installation and service.

Installation of Lennox blower sections with or without optional electric heat must conform with standards in the National Fire Protection Association (NFPA) "Standard for Installation of Air Conditioning and Ventilation Systems NFPA No. 90A," and "Standard for Installation of Resident Type Warm Air Heating and Air Conditioning System, No. 90B," manufacturer's installation instructions, and local municipal building codes.

HEAT SECTION INSTALLATION

Before installing the unit, check information on unit rating plate to ensure unit meets job specification, proper electrical power is available and that proper duct clearances are maintained.

⚠ WARNING

Before installing or servicing unit, be sure ALL power to unit is OFF. More than one disconnect switch may be present. Electrical shock can cause personal injury or death!

NOTE–It is easier to install the ECB29EH heat section in the blower coil unit before the unit is set and the plenum is attached.

1 – Shut off all power to blower coil unit. More than one disconnect may be required.

2 – Remove blower section access panel.

3 – Remove electric heat knockout in blower coil vestibule panel for the appropriate size of heater used. Remove extended width knockout to allow for installation of 20kW heater. See figure 1.

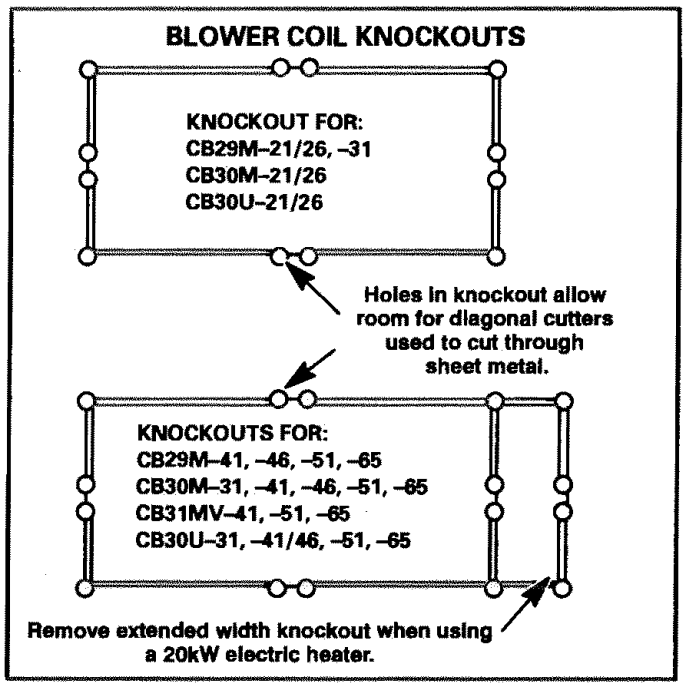


FIGURE 1

4 – Slide electric heat section into blower section. Be careful that heating elements do not rub against sheet metal opening when sliding into blower section. Hole(s) on each side of the heater line up with holes in the blower coil control box. Secure electric heater into place with screws provided in bag assembly.

CIRCUIT BREAKER INSTALLATION

1 – Install circuit breaker on blower deck flange. Use provided screws to secure. See figure 2.

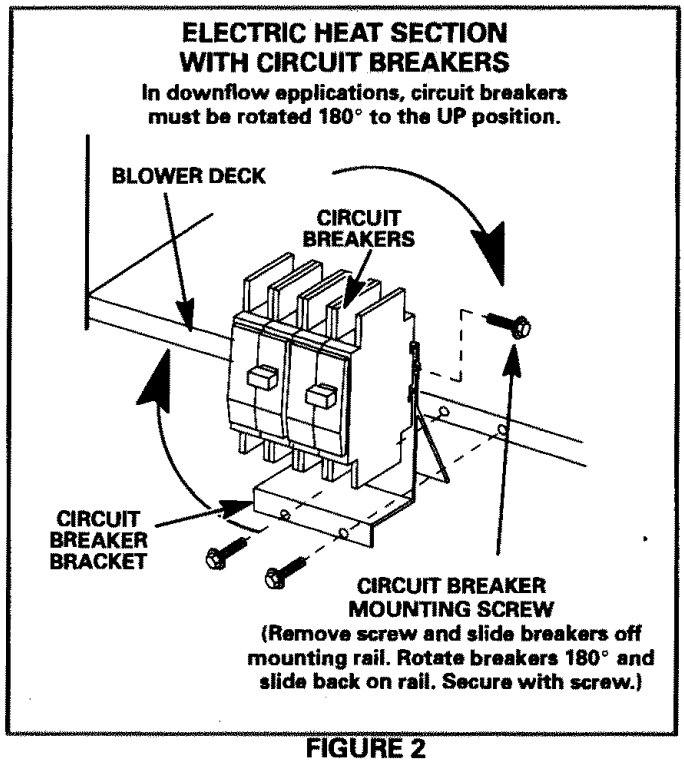


FIGURE 2

NOTE – When applied in the downflow position, ***the circuit breakers must be rotated to the UP position.*** *See figure 2 and follow the procedure below.*

a – Disconnect power to the unit if present.

b – Remove screw and slide breakers off mounting rail.

NOTE– Wire tie closest to the circuit breaker may need to be removed to allow for rotation.

c – Rotate circuit breaker 180°.

d – Slide circuit breaker back on rail and secure in place with previously removed screw.

2 – Blower coil access panels are factory supplied with a patch plate over the circuit breaker opening. Remove the circuit breaker patch plate from the blower access panel. See figure 3

3 – Replace the unit blower access door.

4 – Choose the appropriately sized adhesive–backed circuit breaker seal and remove any perforated sections (if needed). Apply the seal to the outside of the blower access panel so that the seal is snug around the circuit breakers.

5 – Break the patch plate for the specific size of electric heat unit / blower coil unit being installed. Discard unused piece of patch plate. Refer to figure 4 for CB29M–21/26, CB29M–31, CB30M–21/26, CB30U–21/26 units; refer to figure 5 for all other blower coil units.

6 – Secure the patch plate on the blower access door.

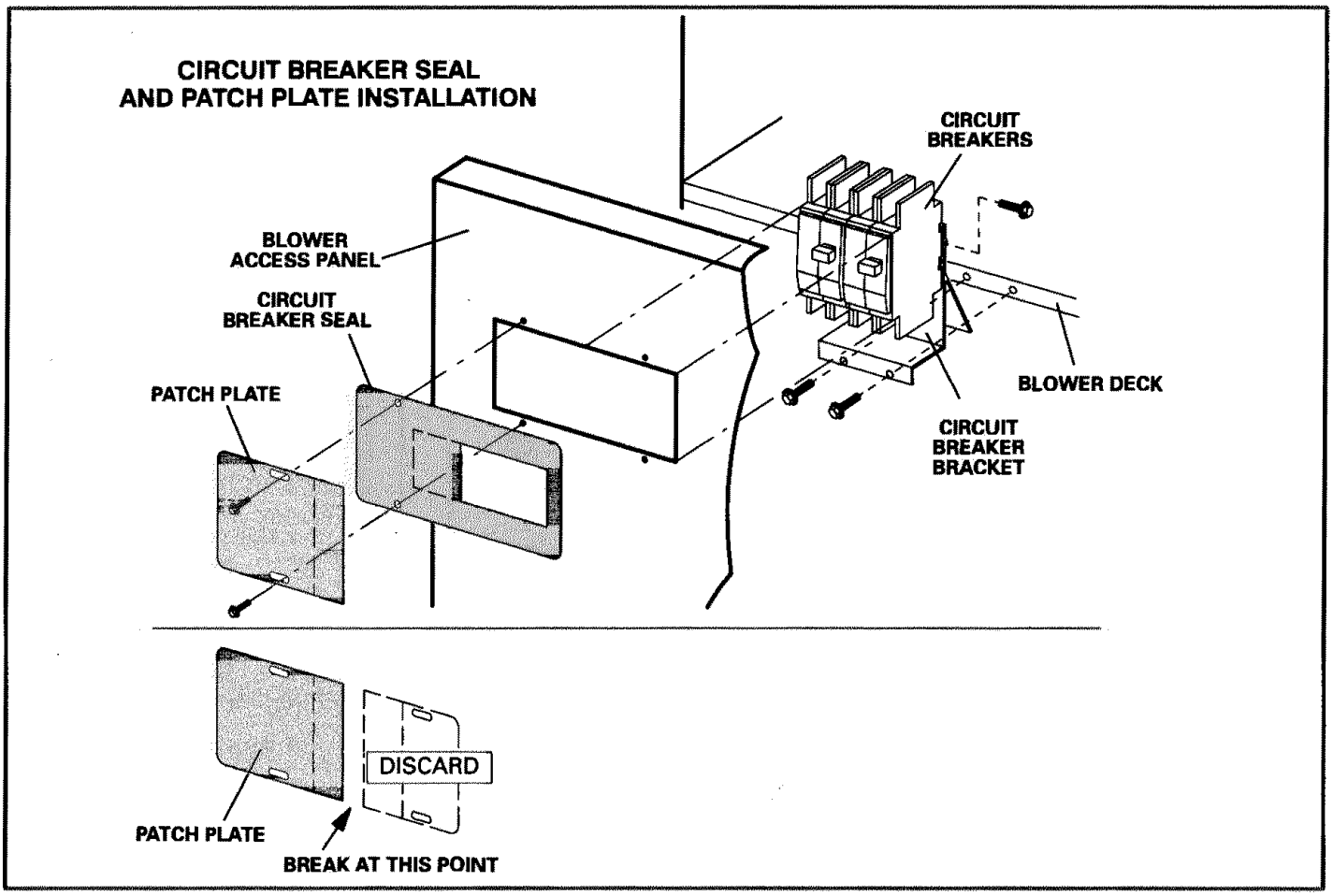


FIGURE 3

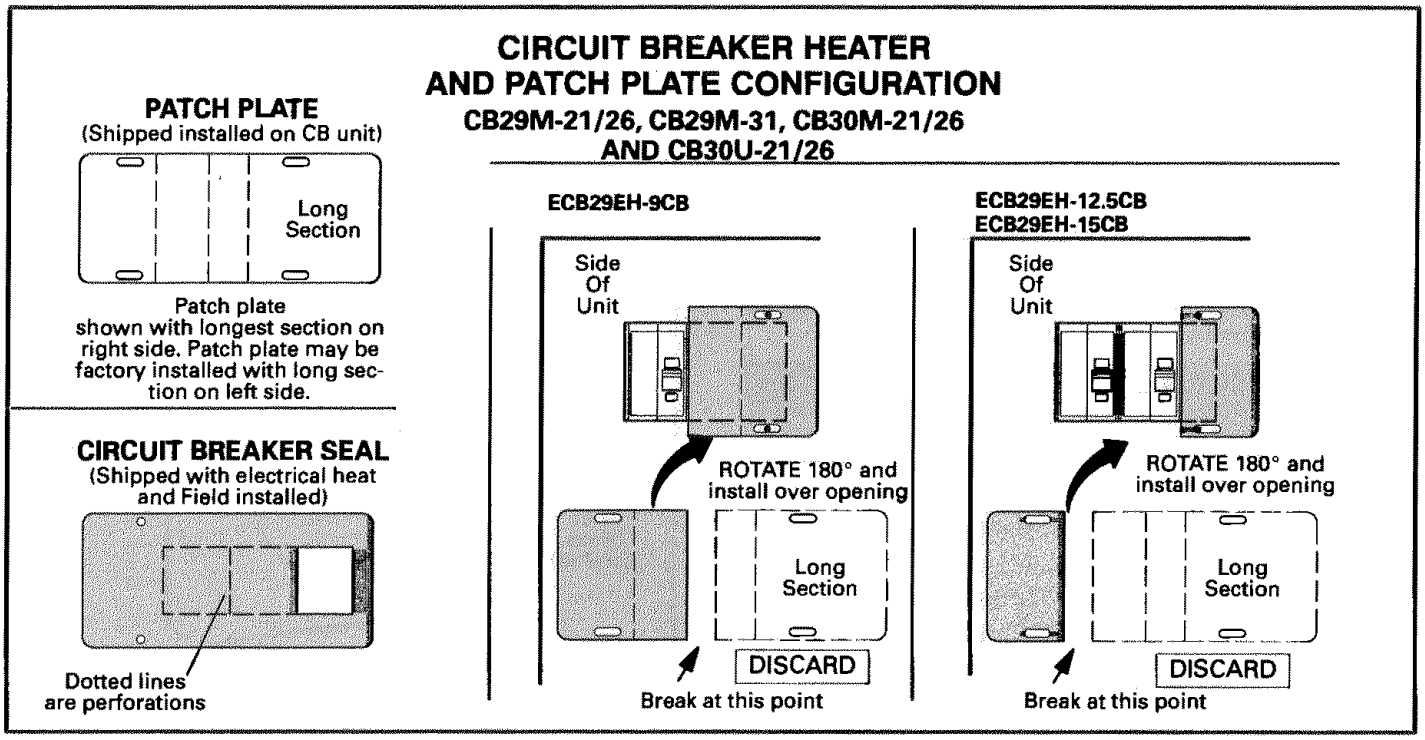
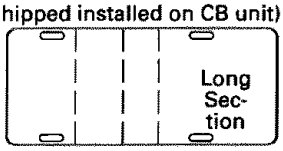


FIGURE 4

CIRCUIT BREAKER HEATER AND PATCH PLATE CONFIGURATION

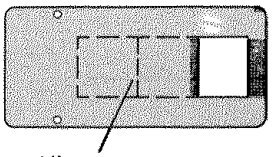
CB29M-41, CB29M-46, CB29M-51, CB29M-65 AND CB30M-31, CB30M-41, CB30M-46, CB30M-51 CB30M-65 AND CB31M-41, CB31M-51, CB31M-65 AND CB30U–31, CB30U–41/46, CB30U–51/65

PATCH PLATE
(Shipped installed on CB unit)



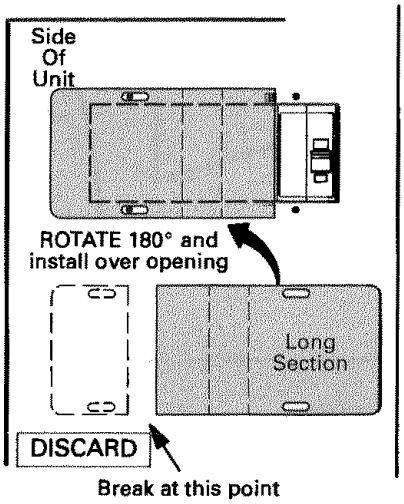
Patch plate shown with longest section on right side. Patch plate may be factory installed with long section on Left side.

CIRCUIT BREAKER SEAL
(Shipped with electrical heat and Field installed)



Dotted lines are perforations

ECB29EH-9CB



ECB31EH-9CB, ECB29EH-12.5CB ECB29EH-15CB, ECB29EH-20CB

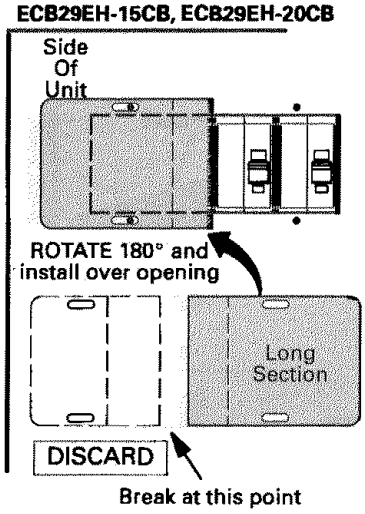


FIGURE 5

THERMISTOR INSTALLATION (RT1)

See figure 6 for thermistor installation.

1 – Drill a 5/8" hole in supply air plenum front. Locate hole 10" (254mm) above blower coil cabinet top, centered side to side.

2 – Insert thermistor probe into the hole and secure with two provided #8–18 self-drill self-tap screws.

3 – Adjust the probe depth as shown in figure 6.

4 – Before installing the EHC1 control board assembly, run the two thermistor leads through low voltage cabinet knockout opening and connect to "DAT" terminals on control board.

EHC1 CONTROL BOARD INSTALLATION (A45)

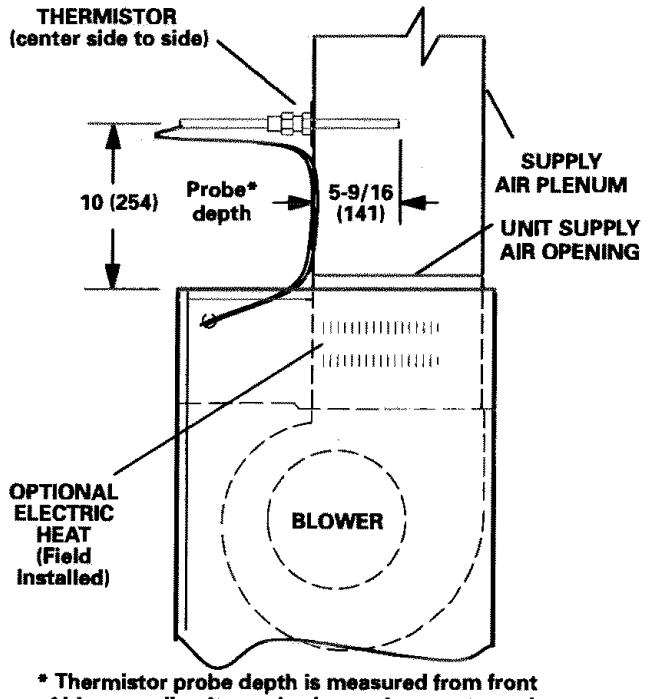
Refer to figure 7 for control board assembly installation.

1 – Assemble ECH1 control board with mounting bracket. See figure 7 for orientation.

2 – **On CB29M, CB30M & CB30U units –**
Align EHC1 control board assembly bracket holes with existing blower deck flange holes (located on the right side of the flange) and secure control board assembly with two provided screws.

3 – **On CB31MV units –**
Use the two existing screws that secure the variable speed motor control board bracket to blower deck flange to install the EHC1 control board assembly to blower deck flange.

THERMISTOR INSTALLATION



*** Thermistor probe depth is measured from front of blower coil unit supply air opening – not supply air plenum front (unless they are identical).**

FIGURE 6

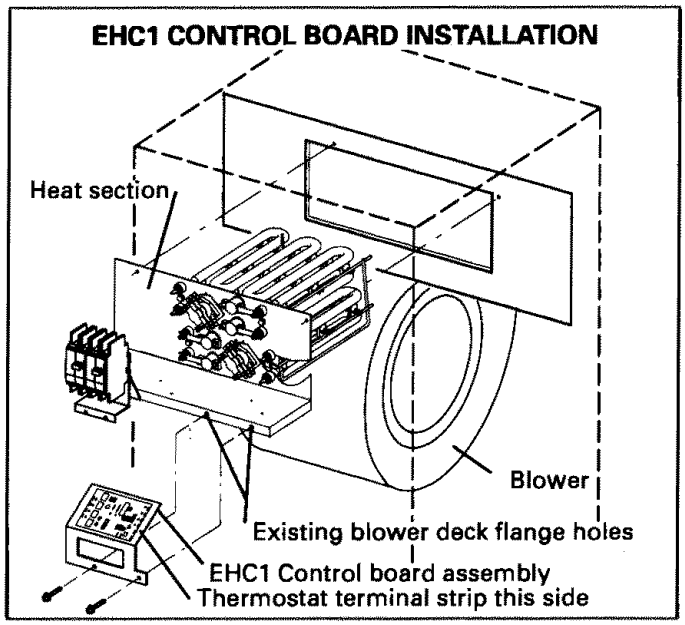


FIGURE 7

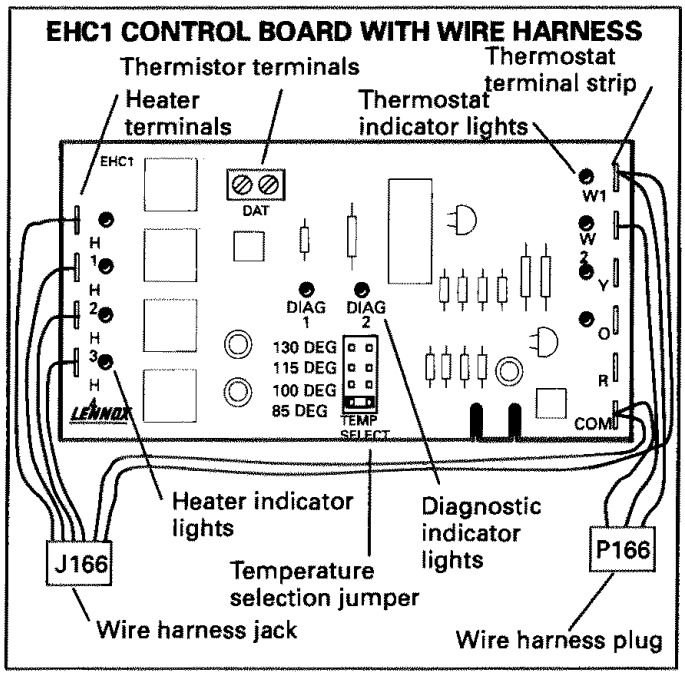


FIGURE 8

ELECTRICAL CONNECTIONS

⚠ WARNING

USE COPPER CONDUCTORS ONLY.

NOTE–Refer to nameplate on blower coil unit for minimum circuit ampacity and maximum overcurrent protection size.

The blower coil units are provided with openings for use with 1–1/2 inch trade size (1–31/32 inch diameter) conduit. A conduit reducer washer has been provided for use if installing smaller conduit.

Refer to figure 9 for typical condensing unit application and figure 10 for typical heat pump application with a blower coil unit and an electric heat section.

Refer to figure 11 and 12 for typical system diagram for the CB29M/CB30M/CB30U unit with installed electric heat sections and figure 13 and 14 for typical system diagram for the CB31MV unit with installed electric heat section.

Make wiring connections as follows –

Refer to figures 8 and 9 for condensing unit application and to figures 8 and 10 for heat pump application.

1 – Connect field power supply wiring to circuit breaker(s).

2 – Connect heater section wire harness plug "P2" to EHC1 control board left side wire harness jack "J166."

3 – Remove interface harness from blower coil section. Connect blower coil section wire harness jack "J2" to EHC1 control board right side wire harness plug "P166."

4 – Use provided wire nut to connect stripped yellow wire from "Y" terminal of EHC1 control board to wire from "Y1" terminal of indoor thermostat **inside** blower coil cabinet.

5 – **In heat pump applications only –**
Use provided wire nut to connect stripped orange wire from "O" terminal of EHC1 control board to wire from "O" terminal of indoor thermostat **inside** control box. Remove the factory installed jumper between EHC1 control board terminals "O" and "R."

6 – Disconnect existing red wire from terminal "R" of TB1 terminal block. Connect this wire to tab of tab/receptacle combination of red wire from terminal "R" of EHC1 control board. Then connect this wire-assembly to terminal "R" of TB1 terminal block.

7 – **In applications where outdoor thermostat is used only –**
Remove jumper between "W2" and "R" of TB1 terminal block and connect outdoor thermostat leads to "W2" and "'R."

BLOWER SPEED CONNECTIONS

When using the ECB29EH heat section with the CB29M, CB30M, CB30U or CB31MV series blower coil units, the blower speed must be adjusted according to the size of electric heat and blower coil unit. The **minimum blower setting** for each blower size, with any heat sections in any application is **HIGH**. See specific blower coil installation instructions for blower speed adjustment procedure and location.

DISCHARGE AIR TEMPERATURE ADJUSTMENT

The EHC1 control board can be adjusted to provide four different discharge air temperatures: 85°F (29.5°C), 100°F (37.8°C), 115°F (46.1°C) and 130°F (54.4°C). To adjust the factory setting of 85°F (29.5°C), move the temperature selection jumper on the EHC1 control board to the desired setting (see figure 8).

The EHC1 control board uses the discharge air temperature value provided by the thermistor to maintain the selected discharge air temperature by staging on the required number of heating elements.

When higher discharge air temperatures are required for comfort or to satisfy the heating load, change the temperature selection jumper on the EHC1 control board to a higher setting. In heat pump applications, when the heat pump is on and a "W1" demand is present from the indoor thermostat, the control board temperature setting will automatically increase to the next higher setting. Once the "W1" demand is satisfied or removed, the control board temperature setting will automatically return to the jumper setting.

UNIT START-UP

1 – Replace blower compartment access cover.

2 – Restore power to unit.

3 – Set thermostat heat anticipator to 0.4 amps.

4 – Set thermostat above room temperature.

5 – Verify that element staging and supply air temperatures are correct for the given application. If unexpected results are obtained, check heat pump and heat section for normal operation. A table showing diagnostic codes for the EHC1 control board is given in the troubleshooting section of these instructions.

6 – Set thermostat to desired setting.

7 – Affix wiring diagram sticker to blower scroll, aligned with existing CB unit wiring diagram sticker.

TROUBLESHOOTING

Refer to table 1 for EHC1 control board diagnostic codes.

See figure 8 for location of diagnostic and operation indicator LEDs.

TABLE 1
EHC1 CONTROL BOARD DIAGNOSTIC CODES

BOARD DIAGNOSTIC PATTERNS	MODE INDICATION	REMEDY
DIAG 1 Flashing Together Slow DIAG 2 Flashing Together Slow	Normal Operation	None. Slow flashing LED signifies normal operation.
DIAG 1 Flashing Slow DIAG 2 On	Shorted Thermistor*	Check thermistor for short circuit.
DIAG 1 On DIAG 2 Flashing Slow	Open Thermistor*	Check thermistor for open circuit.
DIAG 1 Flashing Alternately fast DIAG 2 Flashing Alternately Slow	Jumper Error	Resistor fault on board. Board must be replaced.
DIAG 1 Flashing Alternately Slow DIAG 2 Flashing Alternately Fast	No Jumper**	No temperature-selection jumper installed. Install jumper
DIAG 1 On DIAG 2 Continuously Off	General Failure	Component fault on board. Board must be replaced.
DIAG 1 Continuously Off DIAG 2 Continuously On	General Failure	Component fault on board. Board must be replaced.
DIAG 1 On DIAG 2 On	General Failure	Component fault on board. Board must be replaced.
DIAG 1 Continuously Off DIAG 2 Continuously Off	General Failure	Component fault on board. Board must be replaced.

* This mode of operation is indicated by elements staging on every 4 minutes until "W1" demand is satisfied.
** Last setting retained by board if jumper removed while unit operating; if no jumper present on power-up,the default setting of 85°F is used by the board.

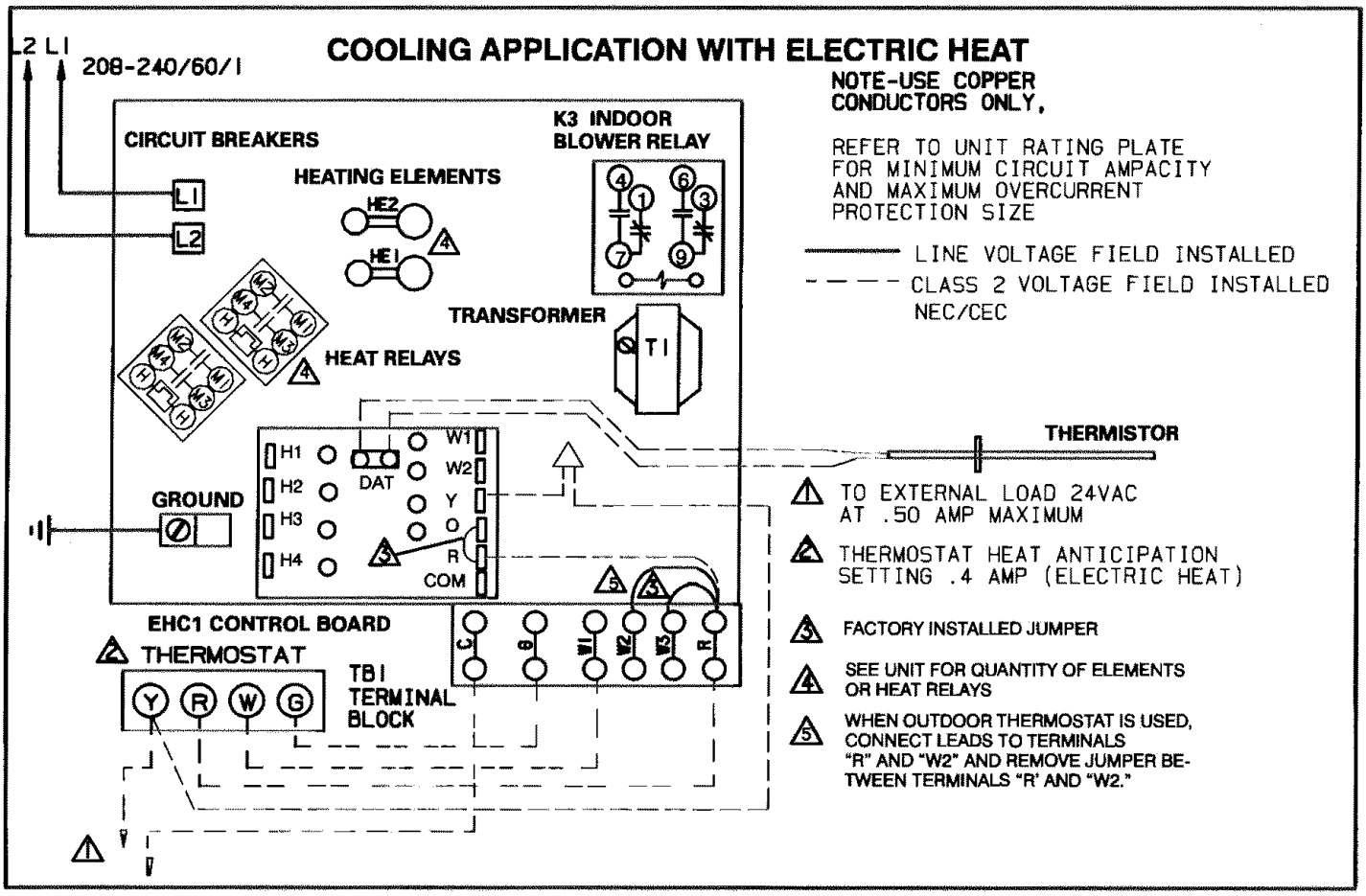


FIGURE 9

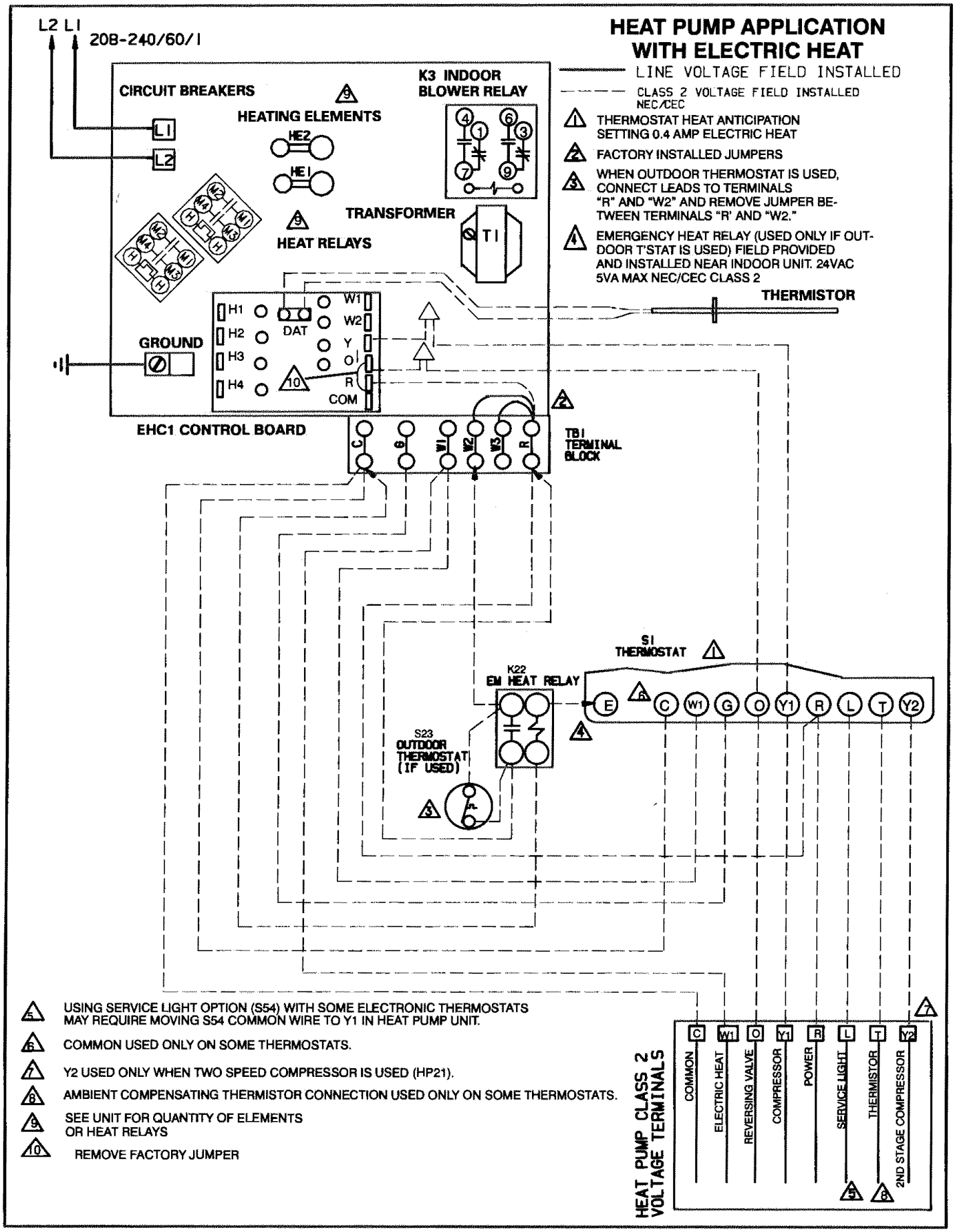
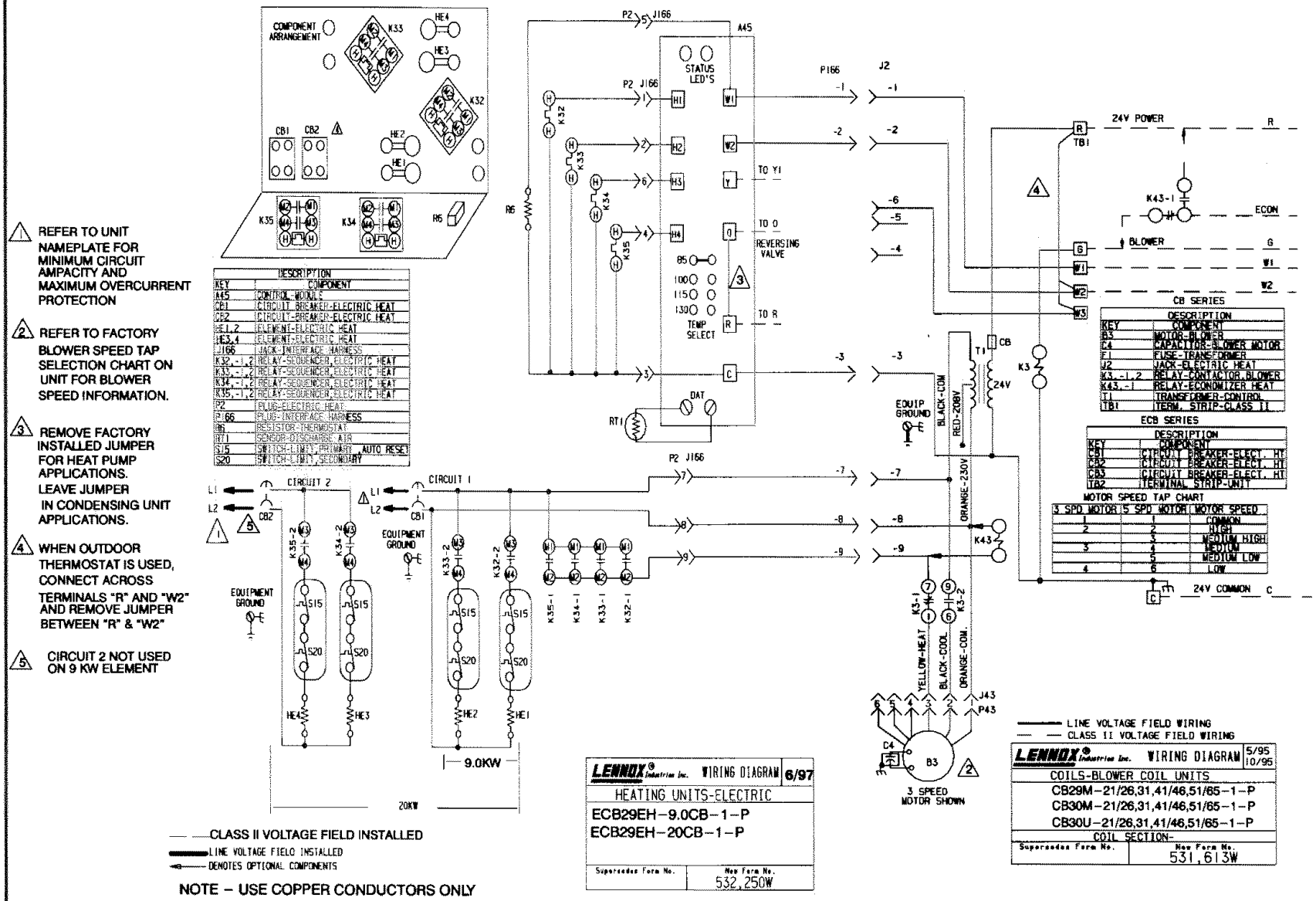

HEAT PUMP APPLICATION
WITH ELECTRIC HEAT
LINE VOLTAGE FIELD INSTALLED
CLASS 2 VOLTAGE FIELD INSTALLED NEC/CEC
1 THERMOSTAT HEAT ANTICIPATION SETTING 0.4 AMP ELECTRIC HEAT
2 FACTORY INSTALLED JUMPERS
3 WHEN OUTDOOR THERMOSTAT IS USED, CONNECT LEADS TO TERMINALS "R" AND "W2" AND REMOVE JUMPER BETWEEN TERMINALS "R" AND "W2."
4 EMERGENCY HEAT RELAY (USED ONLY IF OUTDOOR T'STAT IS USED) FIELD PROVIDED AND INSTALLED NEAR INDOOR UNIT. 24VAC 5VA MAX NEC/CEC CLASS 2
L2 L1
208-240/60/1
CIRCUIT BREAKERS
9
K3 INDOOR BLOWER RELAY
HEATING ELEMENTS
HE2
HE1
TRANSFORMER
T1
HEAT RELAYS
THERMISTOR
GROUND
H1
H2
H3
H4
DAT
W1
W2
Y
O
R
COM
10
EHC1 CONTROL BOARD
TB1 TERMINAL BLOCK
S1 THERMOSTAT
K22 EM HEAT RELAY
S23 OUTDOOR THERMOSTAT (IF USED)
E
C
W1
G
O
Y1
R
L
T
Y2
5 USING SERVICE LIGHT OPTION (S54) WITH SOME ELECTRONIC THERMOSTATS MAY REQUIRE MOVING S54 COMMON WIRE TO Y1 IN HEAT PUMP UNIT.
6 COMMON USED ONLY ON SOME THERMOSTATS.
7 Y2 USED ONLY WHEN TWO SPEED COMPRESSOR IS USED (HP21).
8 AMBIENT COMPENSATING THERMISTOR CONNECTION USED ONLY ON SOME THERMOSTATS.
9 SEE UNIT FOR QUANTITY OF ELEMENTS OR HEAT RELAYS
10 REMOVE FACTORY JUMPER
HEAT PUMP CLASS 2 VOLTAGE TERMINALS
COMMON
ELECTRIC HEAT
REVERSING VALVE
COMPRESSOR
POWER
SERVICE LIGHT
THERMISTOR
2ND STAGE COMPRESSOR

FIGURE 10

CB29M/CB30M/CB30U BLOWER COIL UNIT WITH INSTALLED ECB29 ELECTRIC HEAT – P VOLTAGE – 9.0 & 20 KW



KEY	DESCRIPTION COMPONENT
A45	CONTROL MODULE
CB1	CIRCUIT BREAKER-ELECTRIC HEAT
CB2	CIRCUIT BREAKER-ELECTRIC HEAT
HE1,2	ELEMENT-ELECTRIC HEAT
HE3,4	ELEMENT-ELECTRIC HEAT
J166	JACK-INTERFACE HARNESS
K32,-1,2	RELAY-SEQUENCER, ELECTRIC HEAT
K33,-1,2	RELAY-SEQUENCER, ELECTRIC HEAT
K34,-1,2	RELAY-SEQUENCER, ELECTRIC HEAT
K35,-1,2	RELAY-SEQUENCER, ELECTRIC HEAT
P2	PLUG-ELECTRIC HEAT
P166	PLUG-INTERFACE HARNESS
R6	RESISTOR-THERMOSTAT
RT1	SENSOR-DISCHARGE AIR
S15	SWITCH-LIMIT, PRIMARY AUTO RESET
S20	SWITCH-LIMIT, SECONDARY

KEY	CB SERIES DESCRIPTION COMPONENT
B3	MOTOR-BLOWER
C4	CAPACITOR-BLOWER MOTOR
F1	FUSE-TRANSFORMER
J2	JACK-ELECTRIC HEAT
K3,-1,2	RELAY-CONTACTOR,BLOWER
K43,-1	RELAY-ECONOMIZER HEAT
T1	TRANSFORMER-CONTROL
TB1	TERM. STRIP-CLASS II

KEY	ECB SERIES DESCRIPTION COMPONENT
CB1	CIRCUIT BREAKER-ELECT. HT
CB2	CIRCUIT BREAKER-ELECT. HT
CB3	CIRCUIT BREAKER-ELECT. HT
TB2	TERMINAL STRIP-UNIT

3 SPD MOTOR	5 SPD MOTOR	MOTOR SPEED
1	1	COMMON
2	2	HIGH
	3	MEDIUM HIGH
3	4	MEDIUM
	5	MEDIUM LOW
4	6	LOW

1. REFER TO UNIT NAMEPLATE FOR MINIMUM CIRCUIT AMPACITY AND MAXIMUM OVERCURRENT PROTECTION
2. REFER TO FACTORY BLOWER SPEED TAP SELECTION CHART ON UNIT FOR BLOWER SPEED INFORMATION.
3. REMOVE FACTORY INSTALLED JUMPER FOR HEAT PUMP APPLICATIONS. LEAVE JUMPER IN CONDENSING UNIT APPLICATIONS.
4. WHEN OUTDOOR THERMOSTAT IS USED, CONNECT ACROSS TERMINALS "R" AND "W2" AND REMOVE JUMPER BETWEEN "R" & "W2"
5. CIRCUIT 2 NOT USED ON 9 KW ELEMENT

—— ——CLASS II VOLTAGE FIELD INSTALLED
LINE VOLTAGE FIELD INSTALLED
DENOTES OPTIONAL COMPONENTS

NOTE – USE COPPER CONDUCTORS ONLY

LINE VOLTAGE FIELD WIRING
CLASS II VOLTAGE FIELD WIRING

LENNOX Industries Inc. WIRING DIAGRAM 6/97
HEATING UNITS-ELECTRIC
ECB29EH-9.0CB-1-P
ECB29EH-20CB-1-P
Supersedes Form No. / New Form No. 532,250W

LENNOX Industries Inc. WIRING DIAGRAM 5/95 10/95
COILS-BLOWER COIL UNITS
CB29M-21/26,31,41/46,51/65-1-P
CB30M-21/26,31,41/46,51/65-1-P
CB30U-21/26,31,41/46,51/65-1-P
-COIL SECTION-
Supersedes Form No. / New Form No. 531,613W

FIGURE 11

CB29M/CB30M/CB30U BLOWER COIL UNIT WITH INSTALLED ECB29 ELECTRIC HEAT – P VOLTAGE – 12.5 & 15 KW

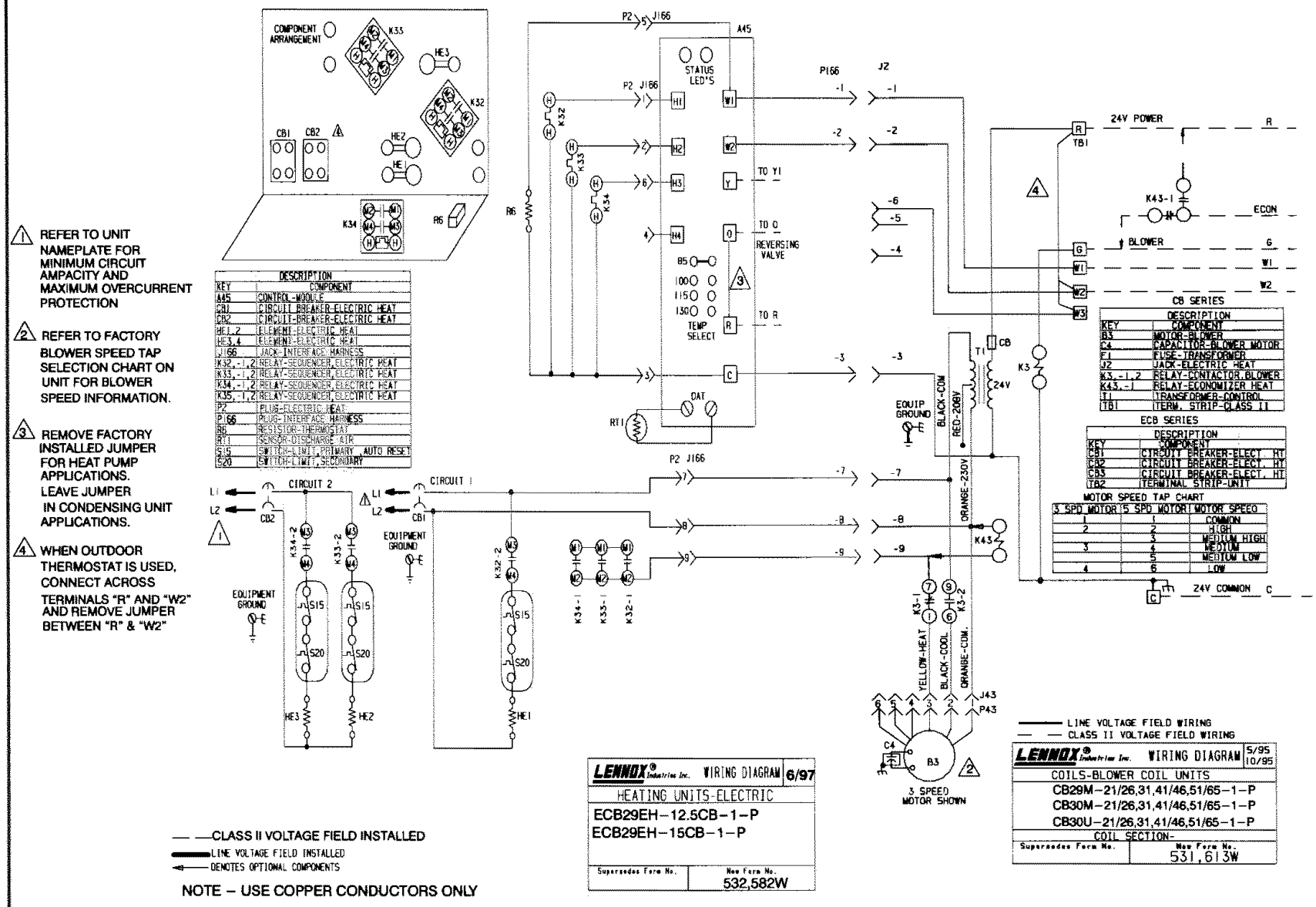
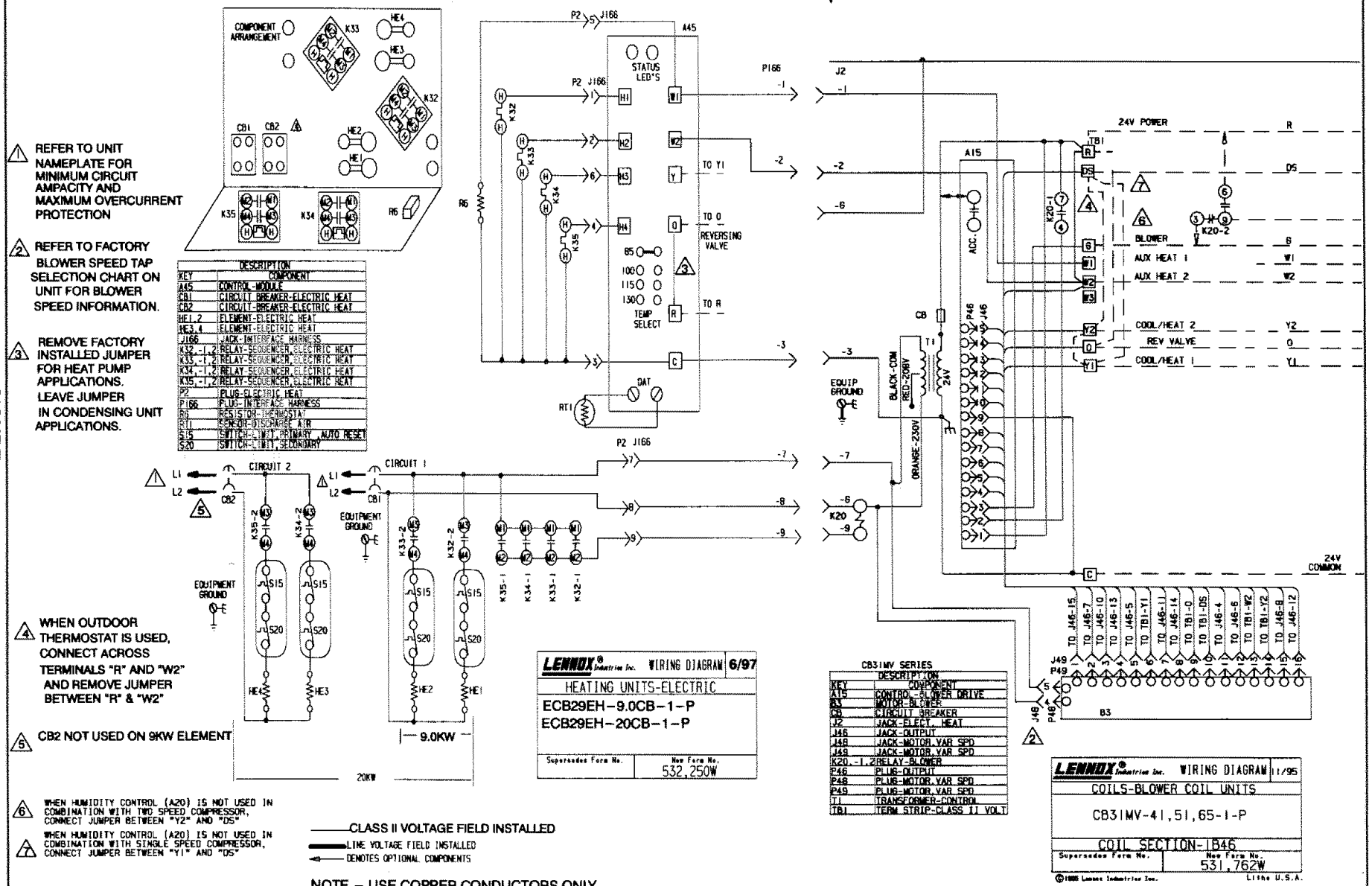


FIGURE 12

CB31MV BLOWER COIL UNIT WITH INSTALLED ECB29 ELECTRIC HEAT – P–VOLTAGE – 9.0 & 20 KW



1. REFER TO UNIT NAMEPLATE FOR MINIMUM CIRCUIT AMPACITY AND MAXIMUM OVERCURRENT PROTECTION
2. REFER TO FACTORY BLOWER SPEED TAP SELECTION CHART ON UNIT FOR BLOWER SPEED INFORMATION.
3. REMOVE FACTORY INSTALLED JUMPER FOR HEAT PUMP APPLICATIONS. LEAVE JUMPER IN CONDENSING UNIT APPLICATIONS.
4. WHEN OUTDOOR THERMOSTAT IS USED, CONNECT ACROSS TERMINALS "R" AND "W2" AND REMOVE JUMPER BETWEEN "R" & "W2"
5. CB2 NOT USED ON 9KW ELEMENT
6. WHEN HUMIDITY CONTROL (A20) IS NOT USED IN COMBINATION WITH TWO SPEED COMPRESSOR, CONNECT JUMPER BETWEEN "Y2" AND "DS"
7. WHEN HUMIDITY CONTROL (A20) IS NOT USED IN COMBINATION WITH SINGLE SPEED COMPRESSOR, CONNECT JUMPER BETWEEN "Y1" AND "DS"

DESCRIPTION KEY	COMPONENT
A45	CONTROL-MODULE
CB1	CIRCUIT BREAKER-ELECTRIC HEAT
CB2	CIRCUIT-BREAKER-ELECTRIC HEAT
HE1,2	ELEMENT-ELECTRIC HEAT
HE3,4	ELEMENT-ELECTRIC HEAT
J166	JACK-INTERFACE HARNESS
K32,-1,2	RELAY-SEQUENCER, ELECTRIC HEAT
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K34,-1,2	RELAY-SEQUENCER, ELECTRIC HEAT
K35,-1,2	RELAY-SEQUENCER, ELECTRIC HEAT
P2	PLUG-ELECTRIC HEAT
P166	PLUG-INTERFACE HARNESS
R6	RESISTOR-THERMOSTAT
RT1	SENSOR-DISCHARGE AIR
S15	SWITCH-LIMIT, PRIMARY, AUTO RESET
S20	SWITCH-LIMIT, SECONDARY

CB31MV SERIES DESCRIPTION KEY	COMPONENT
A15	CONTROL-BLOWER DRIVE
B3	MOTOR-BLOWER
CB	CIRCUIT BREAKER
J2	JACK-ELECT. HEAT
J46	JACK-OUTPUT
J48	JACK-MOTOR, VAR SPD
J49	JACK-MOTOR, VAR SPD
K20,-1,2	RELAY-BLOWER
P46	PLUG-OUTPUT
P48	PLUG-MOTOR, VAR SPD
P49	PLUG-MOTOR, VAR SPD
T1	TRANSFORMER-CONTROL
TB1	TERM STRIP-CLASS II VOLT

LENNOX Industries Inc. WIRING DIAGRAM 6/97

HEATING UNITS-ELECTRIC

ECB29EH-9.0CB-1-P

ECB29EH-20CB-1-P

Supersedes Form No. | New Form No. 532,250W

LENNOX Industries Inc. WIRING DIAGRAM 11/95

COILS-BLOWER COIL UNITS

CB31MV-41,51,65-1-P

COIL SECTION-1B46

Supersedes Form No. | New Form No. 531,762W

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——— CLASS II VOLTAGE FIELD INSTALLED

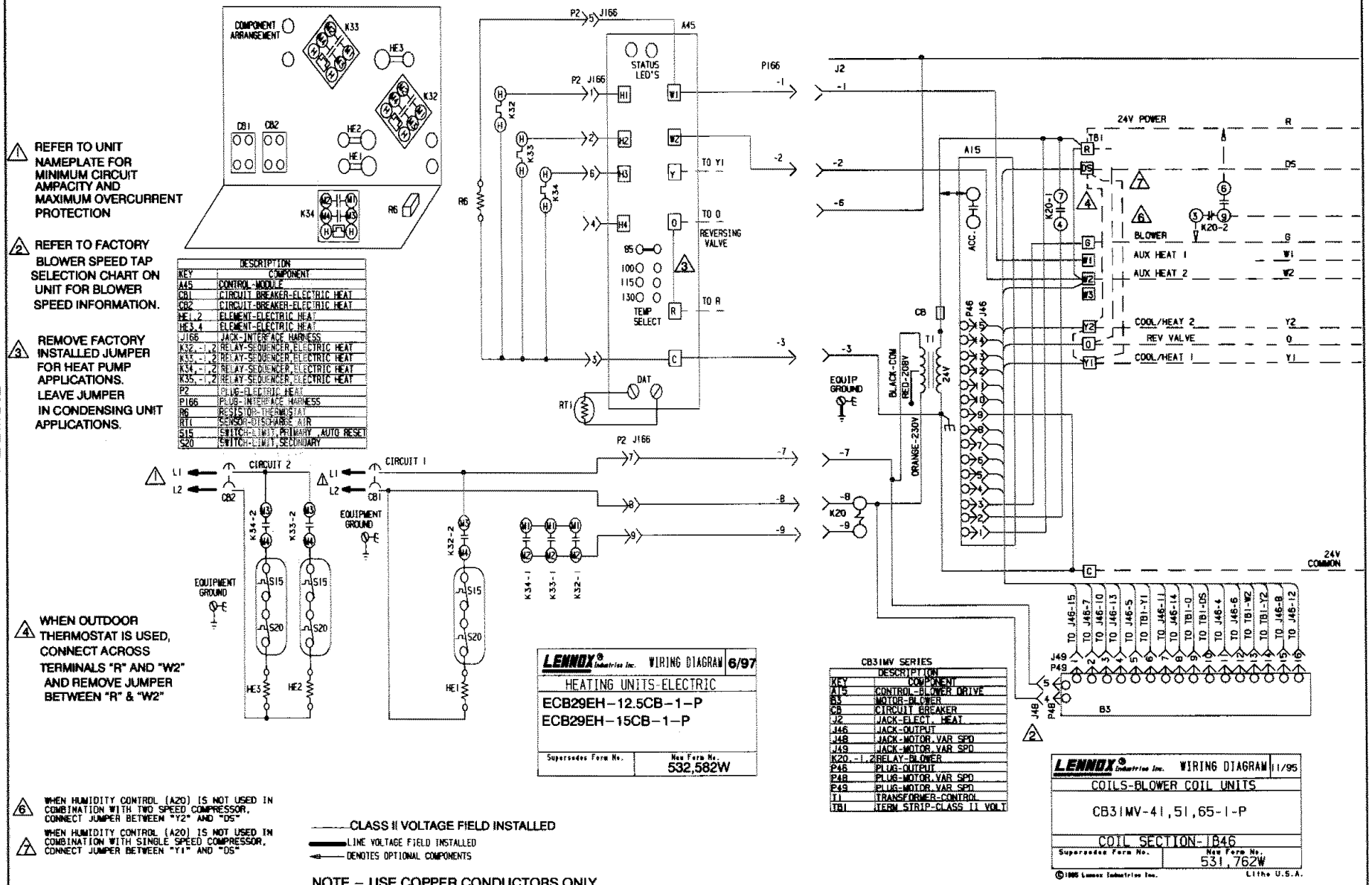
▬▬ LINE VOLTAGE FIELD INSTALLED

⊰— DENOTES OPTIONAL COMPONENTS

NOTE – USE COPPER CONDUCTORS ONLY

FIGURE 13

CB31MV BLOWER COIL UNIT WITH INSTALLED ECB29 ELECTRIC HEAT – P–VOLTAGE – 12.5 & 15 KW



1. REFER TO UNIT NAMEPLATE FOR MINIMUM CIRCUIT AMPACITY AND MAXIMUM OVERCURRENT PROTECTION
2. REFER TO FACTORY BLOWER SPEED TAP SELECTION CHART ON UNIT FOR BLOWER SPEED INFORMATION.
3. REMOVE FACTORY INSTALLED JUMPER FOR HEAT PUMP APPLICATIONS. LEAVE JUMPER IN CONDENSING UNIT APPLICATIONS.
4. WHEN OUTDOOR THERMOSTAT IS USED, CONNECT ACROSS TERMINALS "R" AND "W2" AND REMOVE JUMPER BETWEEN "R" & "W2"
6. WHEN HUMIDITY CONTROL (A20) IS NOT USED IN COMBINATION WITH TWO SPEED COMPRESSOR, CONNECT JUMPER BETWEEN "Y2" AND "DS"
7. WHEN HUMIDITY CONTROL (A20) IS NOT USED IN COMBINATION WITH SINGLE SPEED COMPRESSOR, CONNECT JUMPER BETWEEN "Y1" AND "DS"

DESCRIPTION	
KEY	COMPONENT
A45	CONTROL-MODULE
CB1	CIRCUIT BREAKER-ELECTRIC HEAT
CB2	CIRCUIT BREAKER-ELECTRIC HEAT
HE1,2	ELEMENT-ELECTRIC HEAT
HE3,4	ELEMENT-ELECTRIC HEAT
J166	JACK-INTERFACE HARNESS
K32,-1,2	RELAY-SEQUENCER,ELECTRIC HEAT
K33,-1,2	RELAY-SEQUENCER,ELECTRIC HEAT
K34,-1,2	RELAY-SEQUENCER,ELECTRIC HEAT
K35,-1,2	RELAY-SEQUENCER,ELECTRIC HEAT
P2	PLUG-ELECTRIC HEAT
P166	PLUG-INTERFACE HARNESS
R6	RESISTOR-THERMOSTAT
RT1	SENSOR-DISCHARGE AIR
S15	SWITCH-LIMIT,PRIMARY ,AUTO RESET
S20	SWITCH-LIMIT,SECONDARY

LENNOX Industries Inc.	WIRING DIAGRAM	6/97
HEATING UNITS-ELECTRIC		
ECB29EH-12.5CB-1-P ECB29EH-15CB-1-P		
Supersedes Form No.	New Form No. 532,582W	

CB31MV SERIES DESCRIPTION	
KEY	COMPONENT
AT5	CONTROL-BLOWER DRIVE
B3	MOTOR-BLOWER
CB	CIRCUIT BREAKER
J2	JACK-ELECT. HEAT
J46	JACK-OUTPUT
J48	JACK-MOTOR,VAR SPD
J49	JACK-MOTOR,VAR SPD
K20,-1,2	RELAY-BLOWER
P46	PLUG-OUTPUT
P48	PLUG-MOTOR,VAR SPD
P49	PLUG-MOTOR,VAR SPD
T1	TRANSFORMER-CONTROL
TB1	TERM STRIP-CLASS II VOLT

LENNOX Industries Inc.	WIRING DIAGRAM	11/95
COILS-BLOWER COIL UNITS		
CB31MV-41,51,65-1-P		
COIL SECTION-1846		
Supersedes Form No.	New Form No. 531,762W	

Litho U.S.A.

——— CLASS II VOLTAGE FIELD INSTALLED
▬▬ LINE VOLTAGE FIELD INSTALLED
—⊲— DENOTES OPTIONAL COMPONENTS

NOTE – USE COPPER CONDUCTORS ONLY

FIGURE 14