



January, 1989

models PAH, BAH *High Efficiency*



WIRING DIAGRAMS
gas-fired unit heaters

manufactured before November 1987

DIAGRAM SELECTION

Diagrams are provided for both single- and three-phase circuits, and are readily identified in the Selection Table on the following page. The Selection Table enables easy selection of the correct wiring diagram after the electrical components of the unit heater have been determined. The control codes are listed to aid in locating the correct diagram.

DIAGRAM INTERCHANGEABILITY

The following Model PAH and BAH gas-fired unit heater wiring diagrams are for either 115-volt, 60 Hertz, single-phase power, or for 460-volt, 60 Hertz, three-phase electrical service.

The 115V / 60Hz / 1 ϕ diagrams may also be utilized for 230V / 60Hz / 1 ϕ by substituting 230-volt components for the 115-volt shown.

The 460V/60 Hz/3 ϕ diagrams may be modified to 230V/60Hz/3 ϕ by reconnecting the primary of the 460V/115V transformer as shown or by substituting 230-volt components for the 115-volt shown and supplying 230V/60Hz/1 ϕ power to the control system and accessories.

NOTE: As indicated in every diagram, all wiring must comply with the National Electrical Code and all local codes. All components must agree with their respective power source.

ABBREVIATIONS AND SYMBOLS

To facilitate interpretation and enable simplification the abbreviations and symbols have been selected as recommended by ANSI (American National Standards Institute) and NEMA (National Electrical Manufacturers Association) standards

XFMR or TR	Transformer
V	Volts
Hz	Cycle or Hertz
ϕ	Phase
LC	Limit Control
THERM or TH	Thermostat
MV	Main Valve
PV	Pilot Valve
SO	Shut Off
RC	Relay Contact or Coil
G	Ground
H	Hot
SW	Switch
EPS	Electric Pilot Switch
HI	High
Lo	Low
C	Common
"J" Box	Junction Box
H ₁ , H ₂ , etc.	Transformer Primary Terminals
SUM	Summer Contact (Summer-Winter Switch)
WIN	Winter Contact (Summer-Winter Switch)
S-W	Summer-Winter Switch
O.L.C.	Overload Contact
C.S.	Power Venter Centrifugal Switch
FTC	Fan Timer Contact
SPDT	Single-Pole Double-Throw Switch
VA	Volt Ampere
W	Watts

WIRE COLOR CODING

BK	Black
BL	Blue
R	Red
W	White
Y	Yellow
X1, X2, etc.	Transformer Secondary Terminals
L1, L2, etc.	Electric Load Terminals
T1, T2, etc.	Starter or Motor Terminals

POWER REQUIREMENTS — PAH MODELS

Power Supply	PAH 40, 55	PAH 90, 110	PAH 130, 150 PAH 180	PAH 240	PAH 300	PAH 360
115V / 1 ϕ	2.6 amp	4.2 amp	4.5 amp	6.3 amp	8.4 amp	8.4 amp
230V / 1 ϕ	1.4 amp	2.2 amp	2.3 amp	3.1 amp	4.4 amp	4.4 amp
230V / 3 ϕ	-	-	3.0 amp	3.0 amp	3.5 amp	3.5 amp
460V / 3 ϕ	-	-	1.5 amp	1.5 amp	1.7 amp	1.7 amp

POWER REQUIREMENTS — PAH MODELS

Power Supply	HP	BAH 55	BAH 90	BAH 110	BAH 130	BAH 150	BAH 180	BAH 240	BAH 300	BAH 360
		Amps								
115V / 1 ϕ	1/4	7.1	7.1	7.1	-	7.1	-	-	-	-
230V / 1 ϕ	1/4	3.6	3.6	3.6	-	3.6	-	-	-	-
230V / 3 ϕ	1/4	2.3	2.3	2.3	-	2.3	-	-	-	-
460V / 3 ϕ	1/4	1.1	1.1	1.1	-	1.1	-	-	-	-
115V / 1 ϕ	1/2	-	6.3	6.3	6.3	6.3	6.3	-	-	-
230V / 1 ϕ	1/2	-	3.6	3.6	3.6	3.6	3.6	3.6	-	-
230V / 3 ϕ	1/2	-	2.5	2.5	2.5	2.5	2.5	2.5	-	-
460V / 3 ϕ	1/2	-	1.2	1.2	1.2	1.2	1.2	1.2	-	-
115V / 1 ϕ	1/2	-	-	-	-	9.9	9.9	9.9	-	-
230V / 1 ϕ	1/2	-	-	-	-	4.7	4.7	4.7	-	-
230V / 3 ϕ	1/2	-	-	-	-	2.9	2.9	2.9	-	-
460V / 3 ϕ	1/2	-	-	-	-	1.4	1.4	1.4	-	-
115V / 1 ϕ	3/4	-	-	-	-	-	-	11.9	11.9	11.9
230V / 1 ϕ	3/4	-	-	-	-	-	-	6.1	6.1	6.1
230V / 3 ϕ	3/4	-	-	-	-	-	-	4.0	4.0	4.0
460V / 3 ϕ	3/4	-	-	-	-	-	-	2.0	2.0	2.0
115V / 1 ϕ	1	-	-	-	-	-	-	-	14.7	-
230V / 1 ϕ	1	-	-	-	-	-	-	-	7.4	-
230V / 3 ϕ	1	-	-	-	-	-	-	-	4.6	-
460V / 3 ϕ	1	-	-	-	-	-	-	-	2.3	-
115V / 1 ϕ	1 1/2	-	-	-	-	-	-	-	16.6	16.6
230V / 1 ϕ	1 1/2	-	-	-	-	-	-	-	8.8	8.8
230V / 3 ϕ	1 1/2	-	-	-	-	-	-	-	5.7	5.7
460V / 3 ϕ	1 1/2	-	-	-	-	-	-	-	2.8	2.8
115V / 1 ϕ	2	-	-	-	-	-	-	-	-	6.9
230V / 1 ϕ	2	-	-	-	-	-	-	-	-	3.4
230V / 3 ϕ	3	-	-	-	-	-	-	-	-	10.0
460V / 3 ϕ	3	-	-	-	-	-	-	-	-	5.0

6-450 WIRING DIAGRAMS MODELS PAH, BAH

WIRING DIAGRAM SELECTION

A) Field and Submittal Wiring Diagram Selection

Wiring in the field changes little when the brand of the controls furnished on the unit heater changes. Select correct wiring diagrams as follows:

- 1) Determine unit heater model and size.
- 2) Select control code number from Table 1.
- 3) Reference unit heater model in the Page Location Index with control code number and determine correct page number for single-phase or three-phase control. Single-phase wiring diagram page numbers are in the unshaded areas and the three-phase diagrams are in the shaded areas.
- 4) Wiring diagrams for unit heaters with accessories will have the same page number as the wiring diagram for the appropriate unit heater control code, but are suffixed according to Table 2.

B) Service and Trouble Shooting

Because internal or factory wiring may vary depending on controls manufacturer, the wiring diagrams must be selected with the series identity number when servicing or trouble shooting unit heater control system. The series identity number is the 5th thru 7th digits of the unit heater serial number.

EXAMPLE: Serial No. — 02021011283 has a series identity number of 101.

To select the correct wiring diagram:

- 1) Determine unit heater model and size from serial plate located on the rear of the unit.
- 2) Determine the control code numbers from box marked *Control Code*, also on the serial plate.
- 3) Determine the *series identity number* from unit serial number.

- 4) Select the Page Location Index which corresponds to the *series identity number* of the unit heater, then proceed with Steps 3 and 4 of Field and Submittal Wiring Diagram Selection.

EXAMPLE SELECTION

Select correct single-phase wiring diagram for a BAH180A, control Code 28, series identity number 101.

Locate the Page Location Index which shows the page numbers for units with Series identity number 101. Select the page number where the column for the BAH180 intersects with the line for control code 28. The correct single phase wiring diagram for this unit, without accessories, is found on page 3 in the unshaded area. If this unit also had a summer/winter switch the correct wiring diagram would be found on page 3A as determined from the page suffixes shown in Table 2.

TWO-IN-ONE DIAGRAMS

Two wiring diagrams are furnished for each circuit configuration in this manual. Included are a connection diagram at the left for field installation and a circuit schematic at the right to aid in continuity and trouble shooting.

The heavier lines in the connection diagram indicate line voltage; the lighter lines are for low voltage. Solid lines show pre-wiring performed at the factory; dotted lines inform the installer of connections required to put the heater in operation and/or wiring changes to connect accessory controls.

TABLE 1 — CONTROL CODE DESCRIPTIONS

08, 09	Intermittent Pilot Ignition, Non-Lockout, fan-time delay, low voltage thermostat, Natural Gas.
28, 29	Intermittent Pilot Ignition, with Lockout, fan-time delay, low voltage thermostat, Natural Gas.
78, 79	Intermittent Pilot Ignition, with Lockout, fan-time delay, low voltage thermostat, Propane Gas.

TABLE 2 — ACCESSORY SUFFIXES

Page Suffix	Accessory
A	Summer/ winter switch
B	Robertshaw CM-260 thermostat with SB-3A-1 subbase and relay
C	Energy saver kit

6-450 WIRING DIAGRAMS MODELS PAH, BAH

PAGE LOCATION INDEX: Series Identity Number 101

Control Code	PAH 40	PAH/BAH 55	PAH/BAH 90	PAH/BAH 110	PAH/BAH 130	PAH/BAH 150	PAH/BAH 180	PAH/BAH 240	PAH/BAH 300	PAH/BAH 360
08, 09	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4
28, 29	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4
78, 79	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4	3 4

PAGE LOCATION INDEX: Series Identity Number 102

Control Code	PAH 40	PAH/BAH 55	PAH/BAH 90	PAH/BAH 110	PAH/BAH 130	PAH/BAH 150	PAH/BAH 180	PAH/BAH 240	PAH/BAH 300	PAH/BAH 360
08, 09	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6
28, 29	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6
78, 79	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6	5 6

PAGE LOCATION INDEX: Series Identity Number 103

Control Code	PAH 40	PAH/BAH 55	PAH/BAH 90	PAH/BAH 110	PAH/BAH 130	PAH/BAH 150	PAH/BAH 180	PAH/BAH 240	PAH/BAH 300	PAH/BAH 360
08, 09	7 8	7 8	7 8	7 8	7 8	7 8	7 8	—	—	—
28, 29	7 8	7 8	7 8	7 8	7 8	7 8	7 8	—	—	—
78, 79	7 8	7 8	7 8	7 8	7 8	7 8	7 8	—	—	—

PAGE LOCATION INDEX: Series Identity Number 104

Control Code	PAH 40	PAH/BAH 55	PAH/BAH 90	PAH/BAH 110	PAH/BAH 130	PAH/BAH 150	PAH/BAH 180	PAH/BAH 240	PAH/BAH 300	PAH/BAH 360
08, 09	9 10	9 10	9 10	9 10	9 10	9 10	9 10	11 12	11 12	9 10
28, 29	9 10	9 10	9 10	9 10	9 10	9 10	9 10	11 12	11 12	9 10
78, 79	9 10	9 10	9 10	9 10	9 10	9 10	9 10	11 12	11 12	9 10

PAGE LOCATION INDEX: Series Identity Number 105

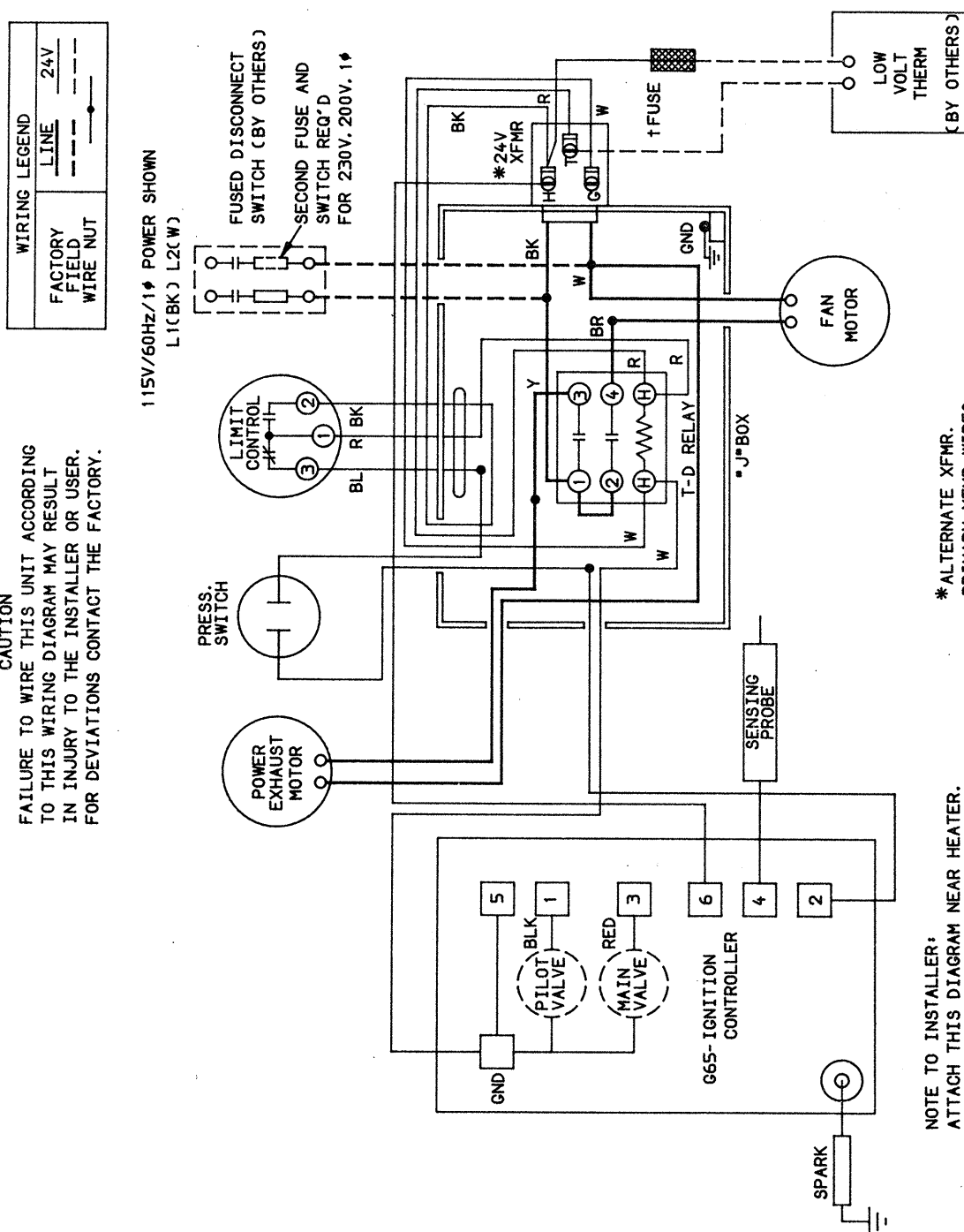
Control Code	PAH 40	PAH/BAH 55	PAH/BAH 90	PAH/BAH 110	PAH/BAH 130	PAH/BAH 150	PAH/BAH 180	PAH/BAH 240	PAH/BAH 300	PAH/BAH 360
08, 09	9 10	9 10	9 10	9 10	9 10	9 10	9 10	11 12	11 12	—
28, 29	9 10	9 10	9 10	9 10	9 10	9 10	9 10	11 12	11 12	—
78, 79	9 10	9 10	9 10	9 10	9 10	9 10	9 10	11 12	11 12	—



MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE 24V
FIELD	---
WIRE	---
NUT	—●—



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK&YCO

WIRE NUT THE WIRE NOT USED
+FOR CANADIAN UNITS ONLY

◆ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
+ FOR CANADIAN UNITS ONLY

5H71721B1 Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat



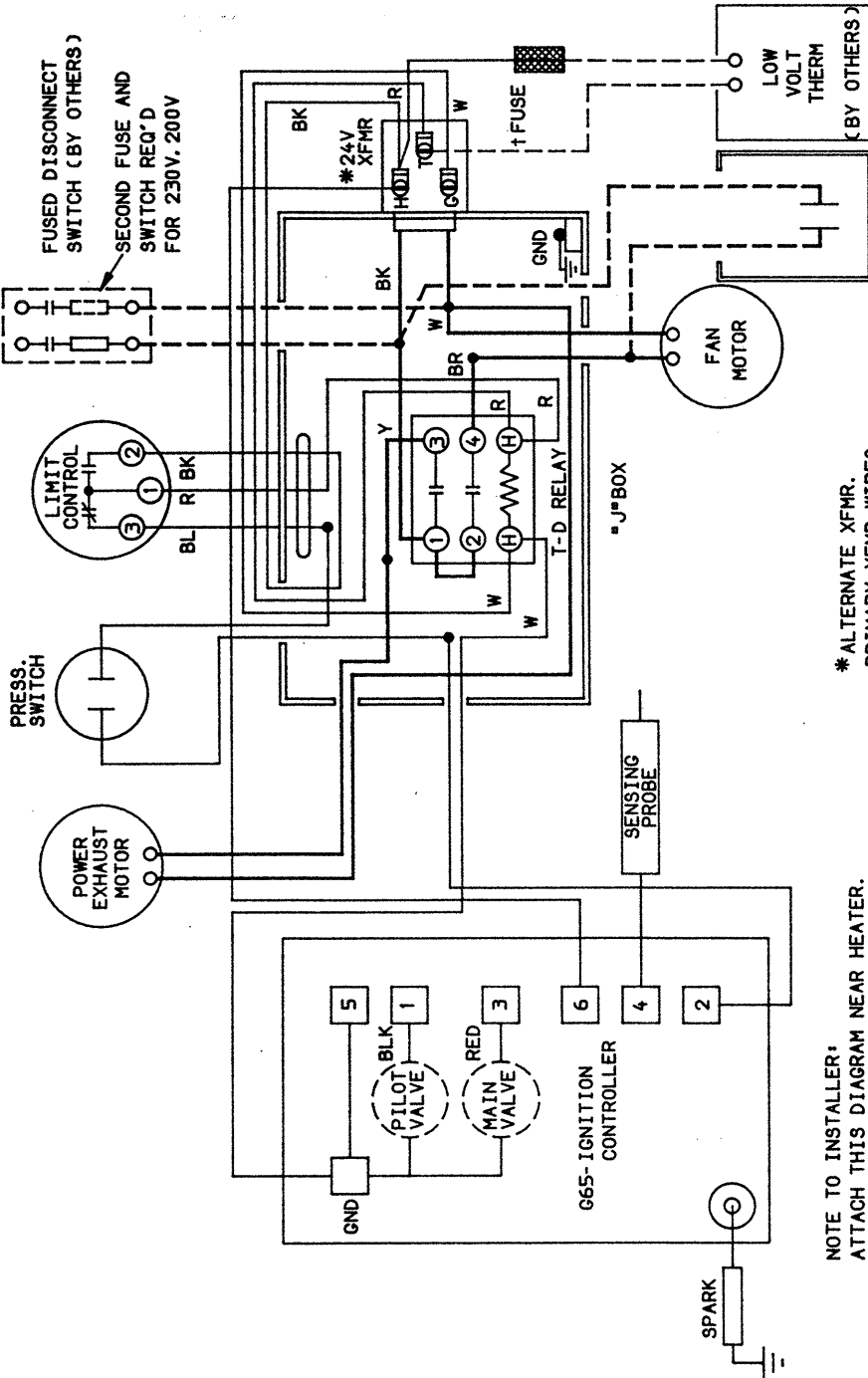
MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY FIELD WIRE NUT	LINE	24V.
	---	---

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)



NOTE TO INSTALLER:

ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.

PRIMARY XFMR WIRES

230V/60Hz/1 ϕ -BK&Y(OR 0)

WIRE NUT THE WIRE NOT USED

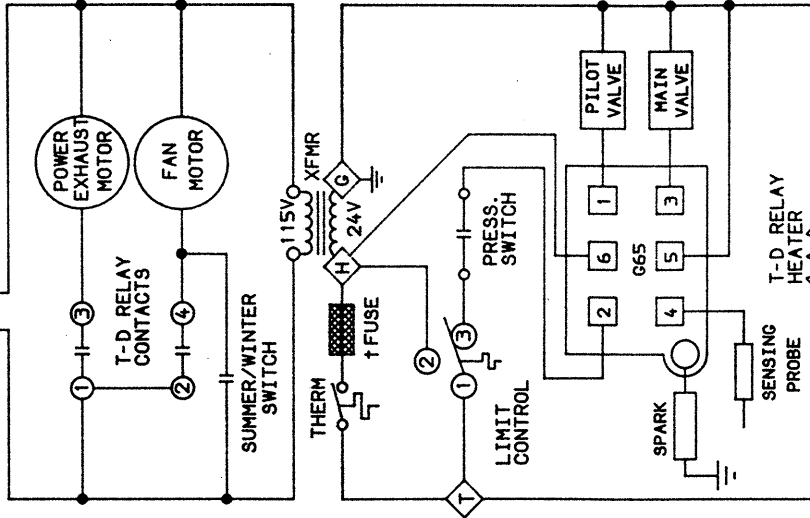
+ FOR CANADIAN UNITS ONLY

SUMMER/WINTER SWITCH

(BY OTHERS)

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
SECOND FUSE AND SWITCH REQ'D FOR 230V, 200V 1 ϕ



◇ INDICATES TRANSFORMER TERMINAL

□ INDICATES IPI CONTROLLER TERMINALS

+ FOR CANADIAN UNITS ONLY

8H656081 Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, summer/winter switch.

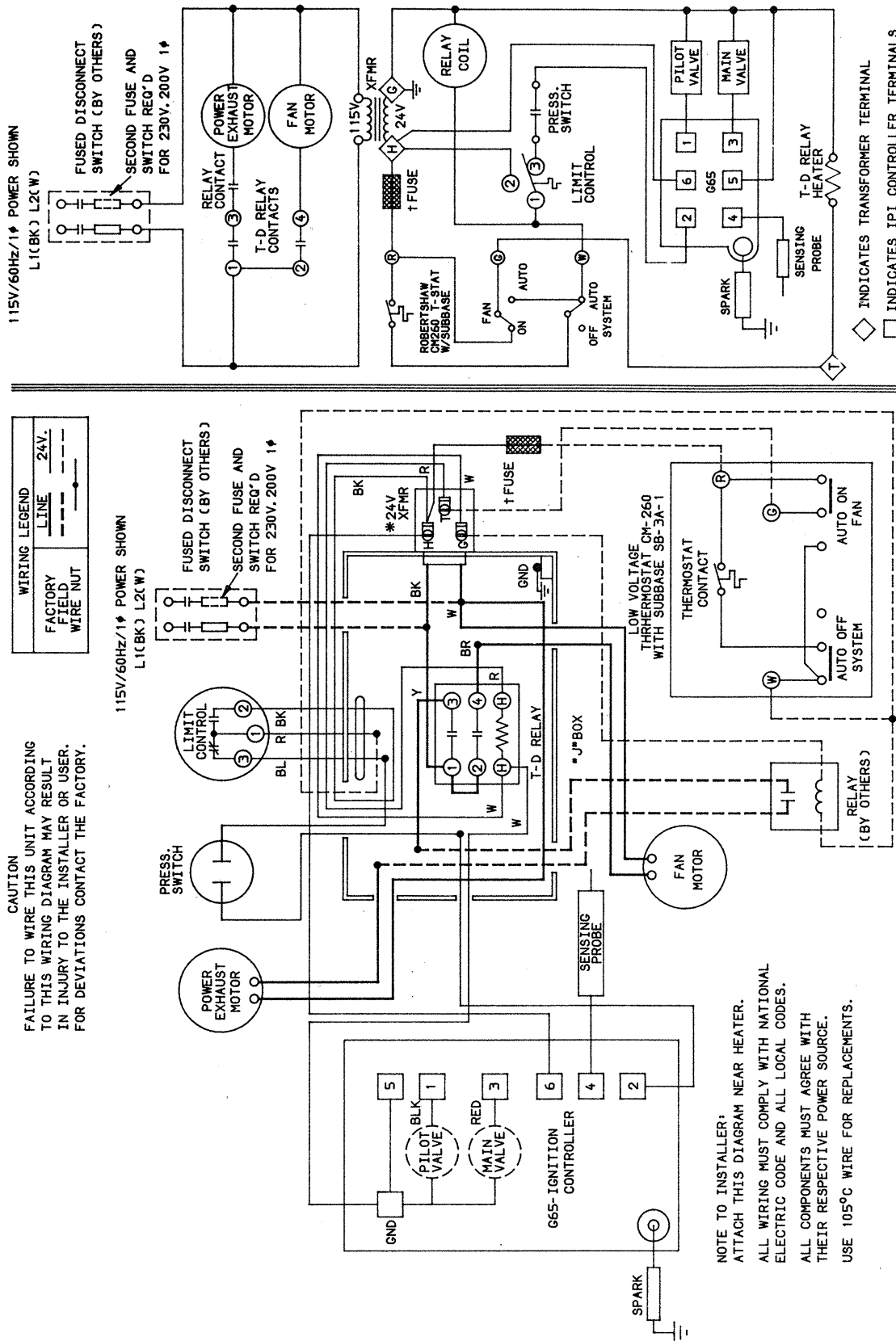


MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY FIELD WIRE NUT	LINE	24V
	---	---
	---	---



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK&YCOR 0)
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

BH6560B2

Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, Robertshaw CM-260 low-voltage T-stat with SB-3A-1 subbase and relay.

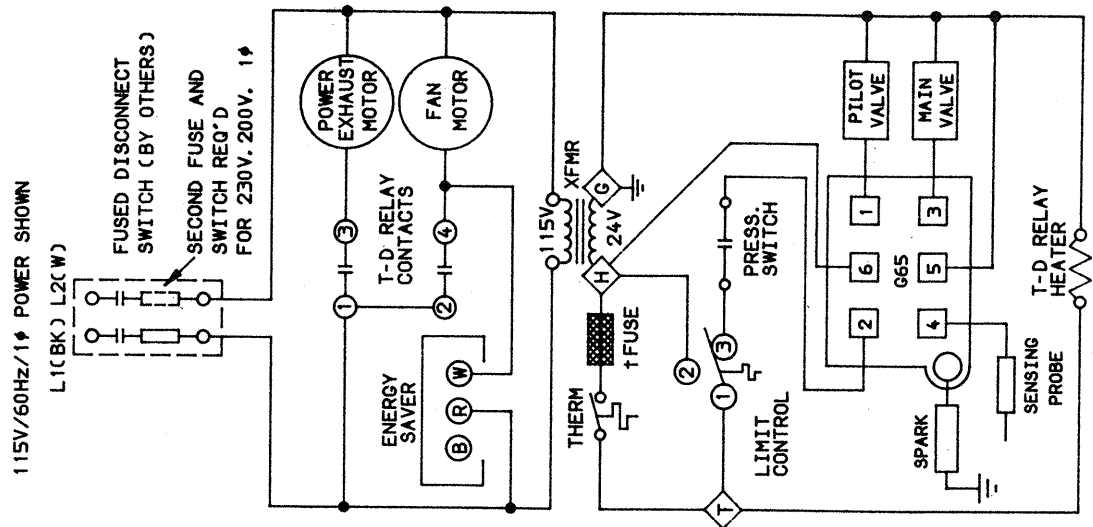
◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY



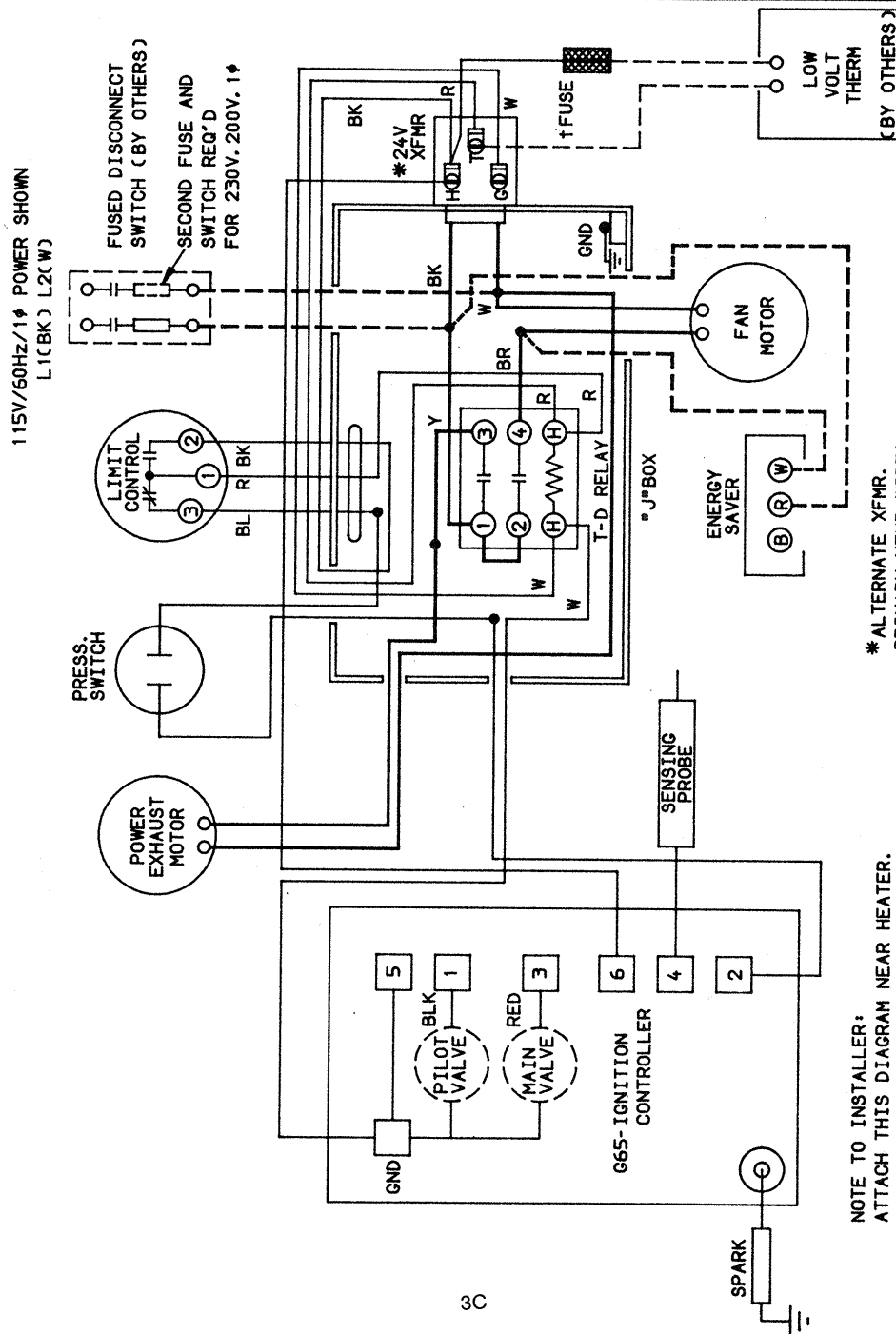
MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE 24V.
FIELD	---
WIRE NUT	—●—



◆ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY



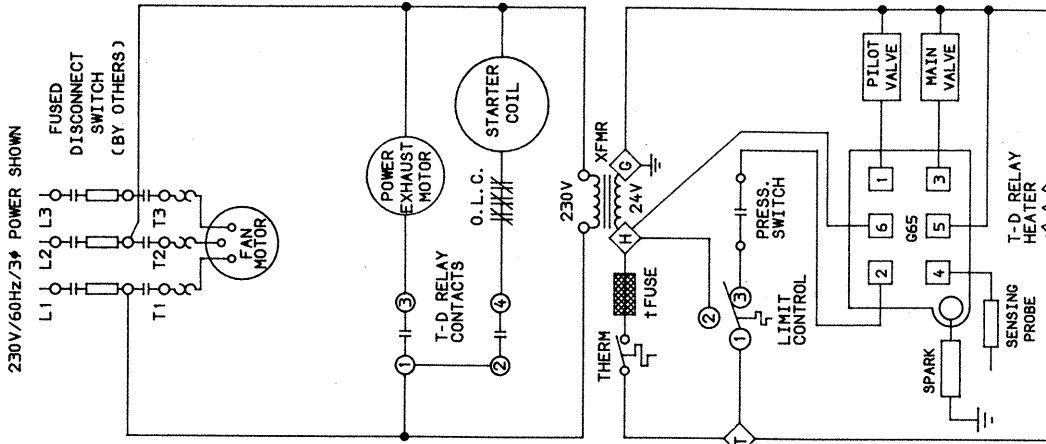
NOTE TO INSTALLER:
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ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK&Y(COR 0)

WIRE NUT THE WIRE NOT USED
+ FOR CANADIAN UNITS ONLY

8H6560B3 Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, energy saver kit.

MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH



◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
+ FOR CANADIAN UNITS ONLY

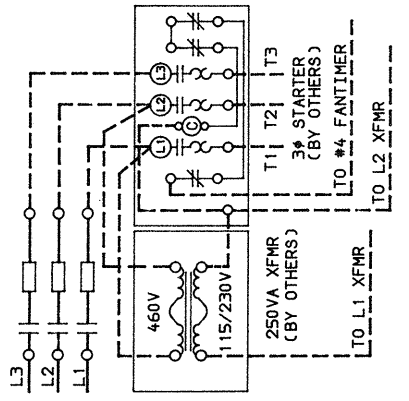
WIRE NUT THE WIRE NOT USED
+ FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER:
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ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

SH7172181 Three-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat

FOR U.S. UNITS ONLY

460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)

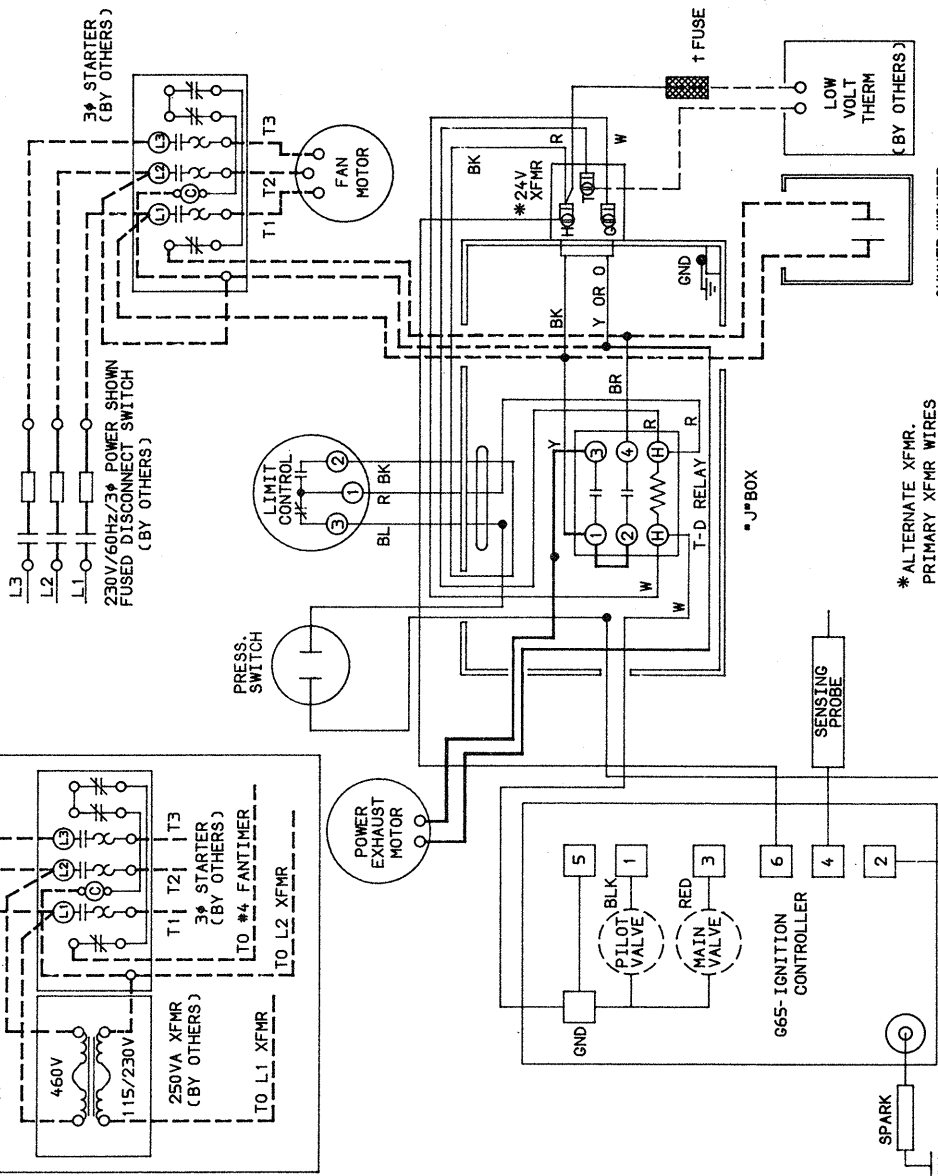


MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
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WIRING LEGEND	
FACTORY	LINE
FIELD	24V
WIRE NUT	---



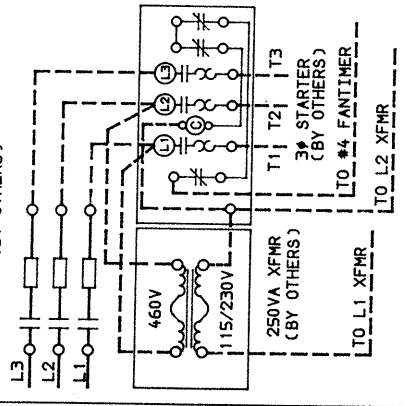
NOTE TO INSTALLER:
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USE 105°C WIRE FOR REPLACEMENTS.

- ◇ INDICATES TRANSFORMER TERMINAL
- INDICATES IPI CONTROLLER TERMINALS
- † FOR CANADIAN UNITS ONLY

8H6560B1 Three-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat, summer/winter switch.

FOR U.S. UNITS ONLY

460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)

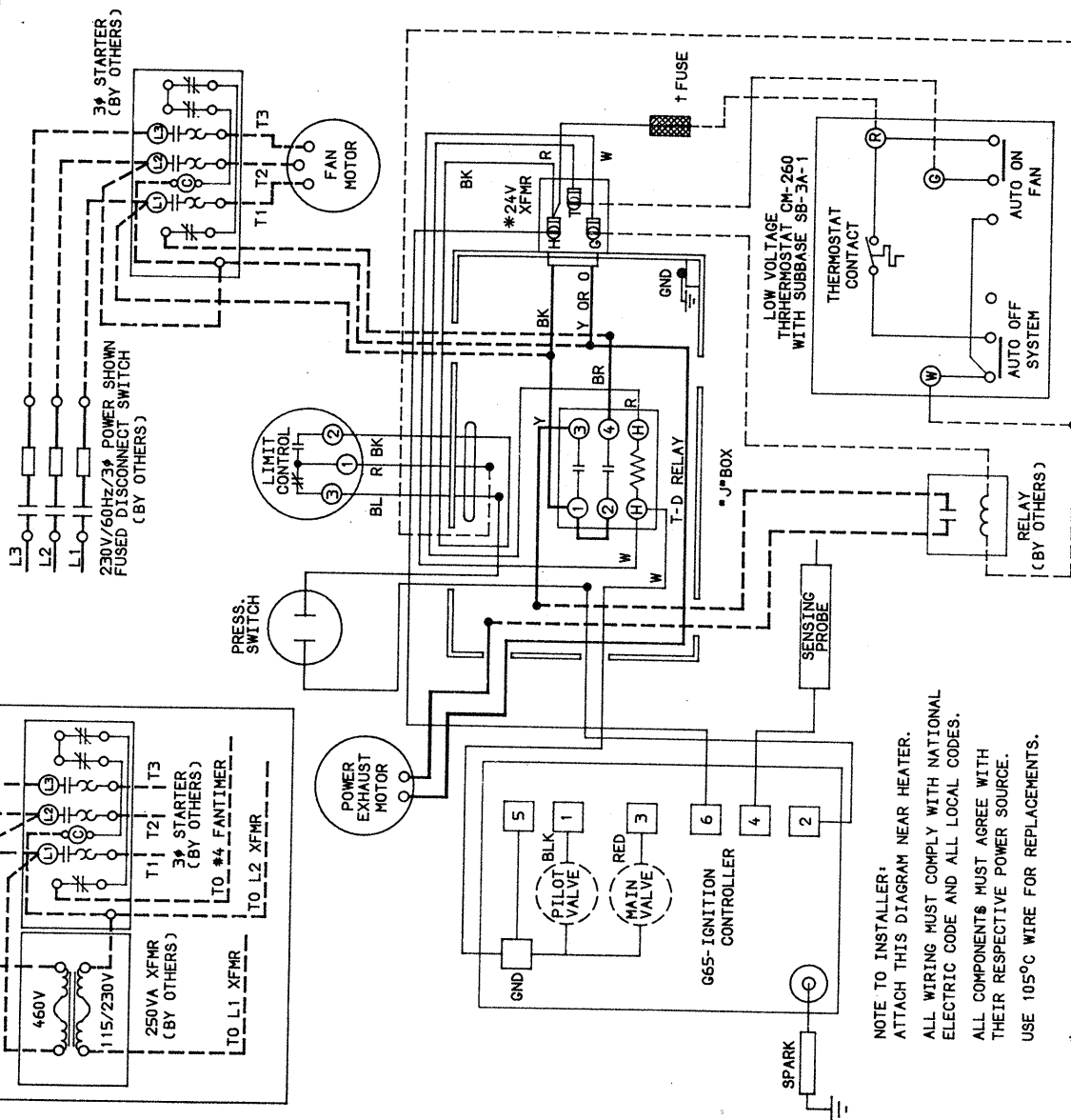


MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

CAUTION

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WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---



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* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(OR 0)

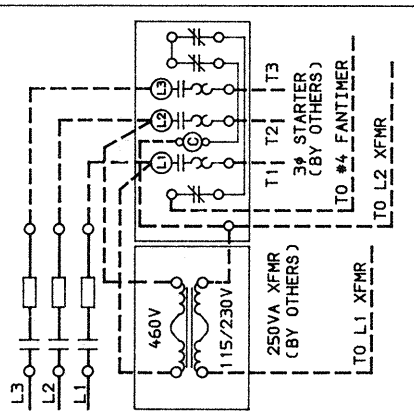
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY

8H6560B2 Three-phase, intermittent pilot ignition, non-100% (and 100%) shut-off time delay, Robertshaw CH-260 low-voltage thermostat with SB-3A-1 subbase and relay.

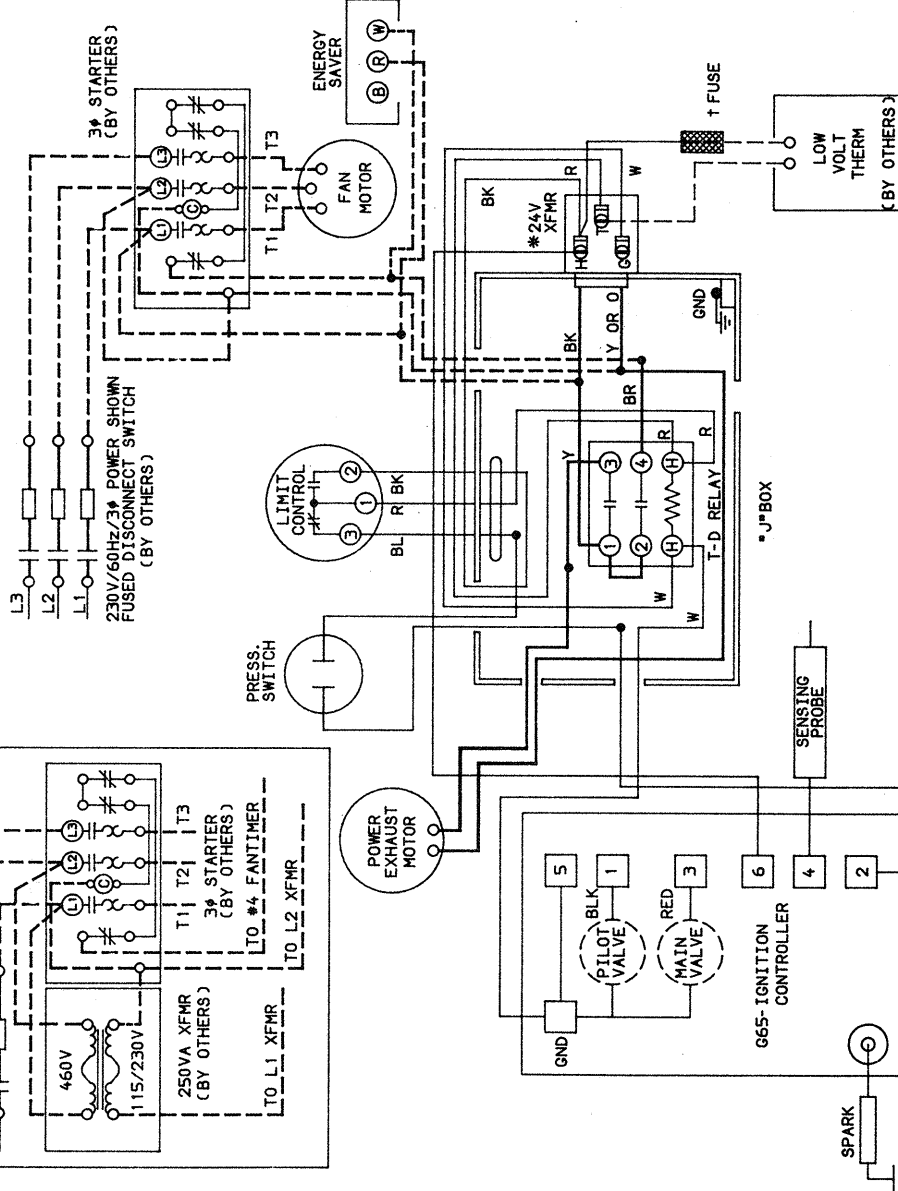
FOR U.S. UNITS ONLY

460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION
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FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---



* ALTERNATE XFMR.

PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(O)

WIRE NUT THE WIRE NOT USED

† FOR CANADIAN UNITS ONLY

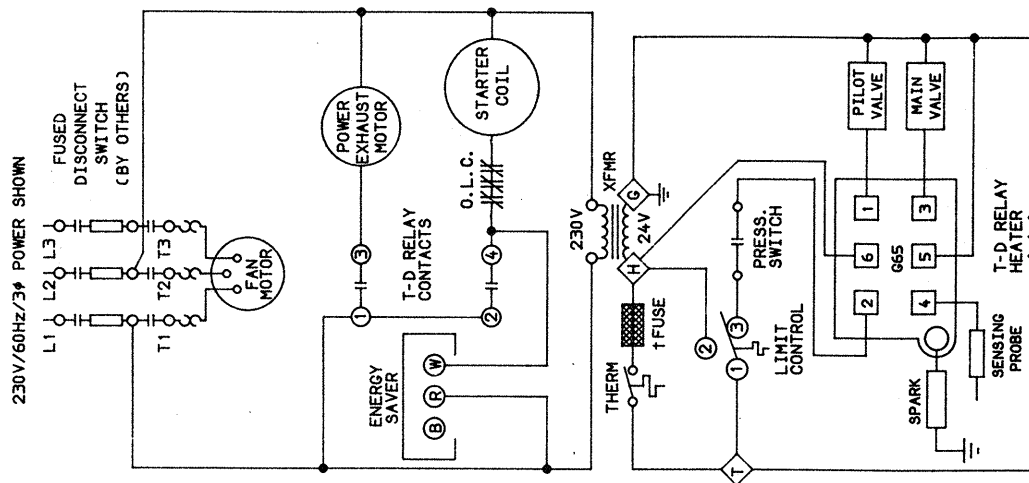
NOTE TO INSTALLER:
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ALL WIRING MUST COMPLY WITH NATIONAL
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ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH



◇ INDICATES TRANSFORMER TERMINAL

□ INDICATES IPI CONTROLLER TERMINALS

† FOR CANADIAN UNITS ONLY

8H656083 Three-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat, energy saver kit.



MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

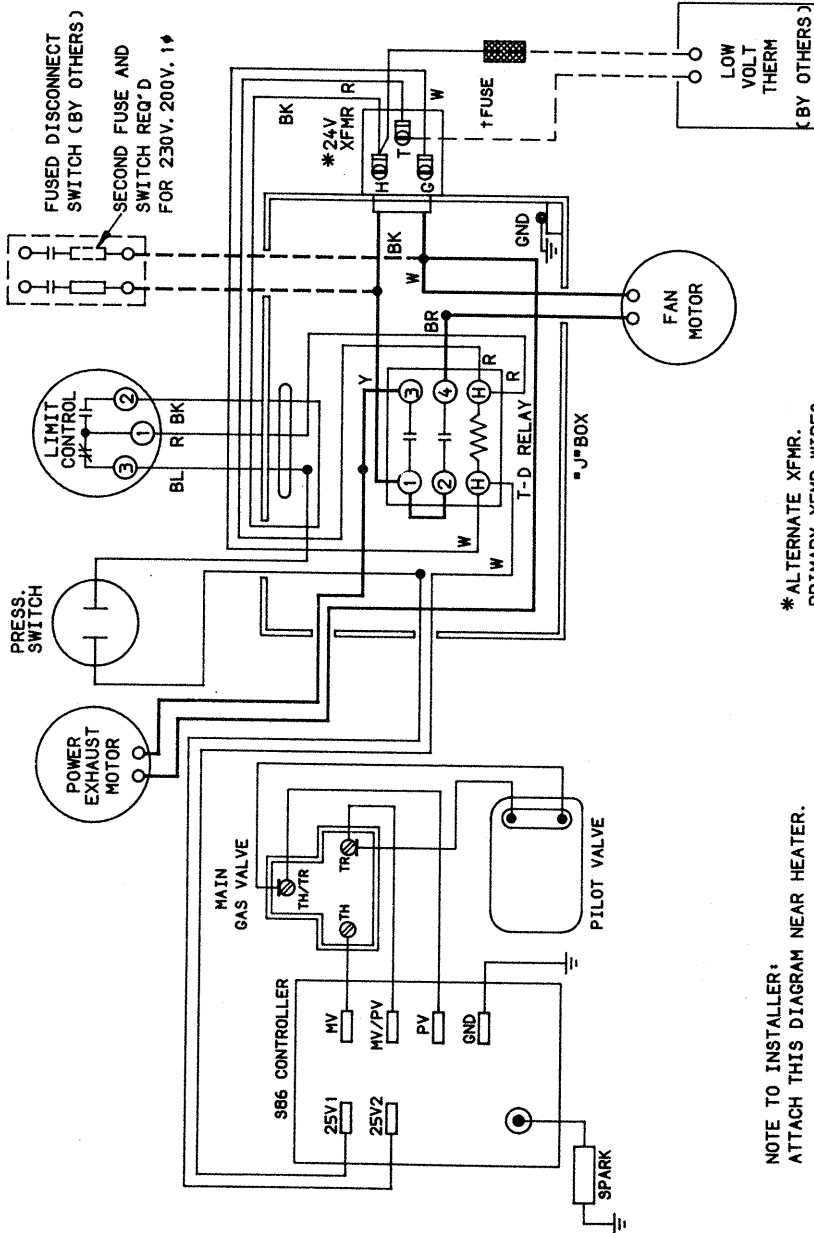
115V/60Hz/1 ϕ POWER SHOWN
L1(CBK) L2(W)

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY FIELD WIRE NUT	---
LINE	---
24V	---

115V/60Hz/1 ϕ POWER SHOWN
L1(CBK) L2(W)



NOTE TO INSTALLER:
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USE 105°C WIRE FOR REPLACEMENTS.

*ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(OR 0)

WIRE NUT THE WIRE NOT USED
†FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPT CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY

SH71721B2 Single-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat

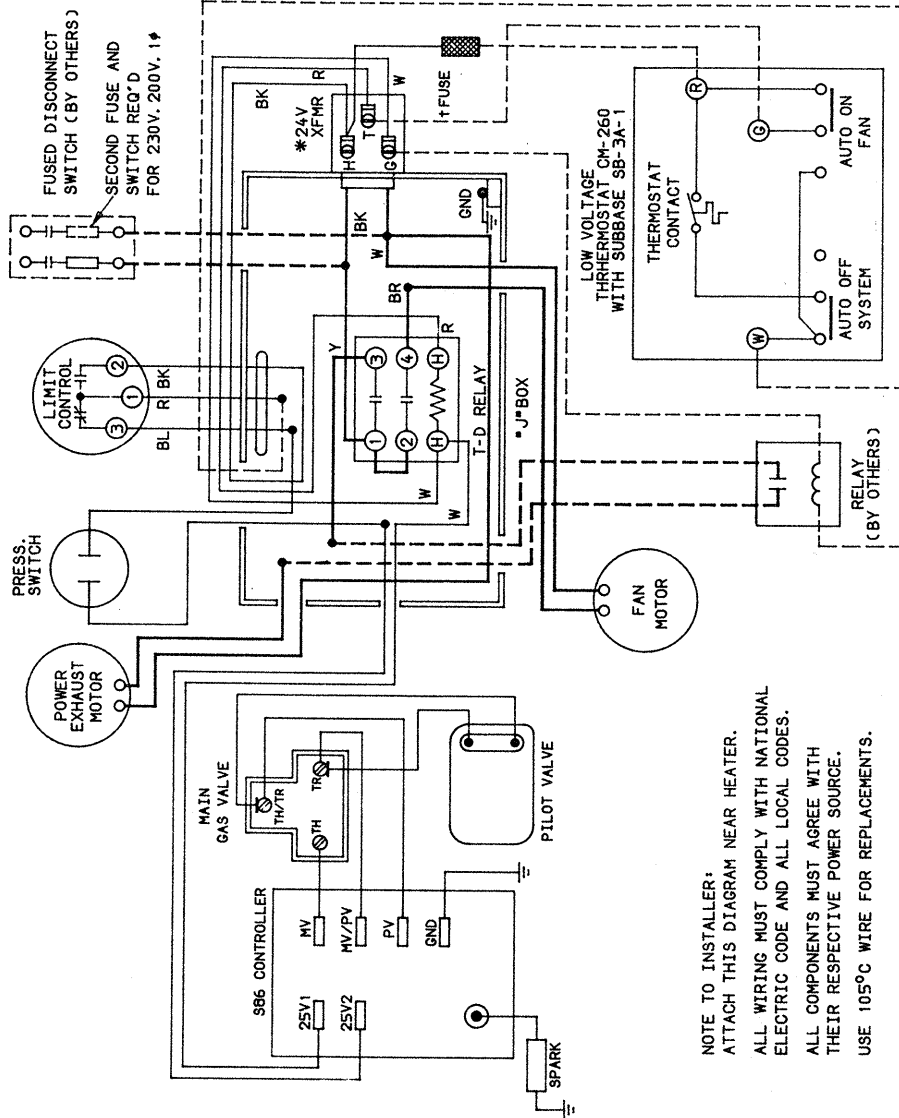


MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY WIRE NUT	—
LINE	---
24V.	---

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

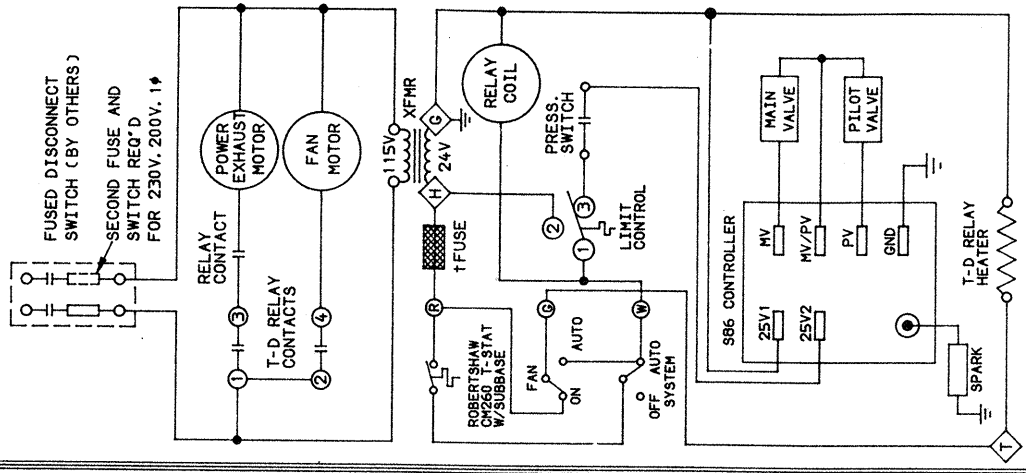
* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&(OR 0)

WIRE NUT E NOT USED
† FOR CANADIAN UNITS ONLY

8H6560B5

Single-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, Robertshaw CM-260 low volt t-stat
with SB-3A-1 subbase and relay.

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)



◇ INDICATES TRANSFORMER TERMINAL

□ INDICATES IPI CONTROLLER TERMINALS

† FOR CANADIAN UNITS ONLY



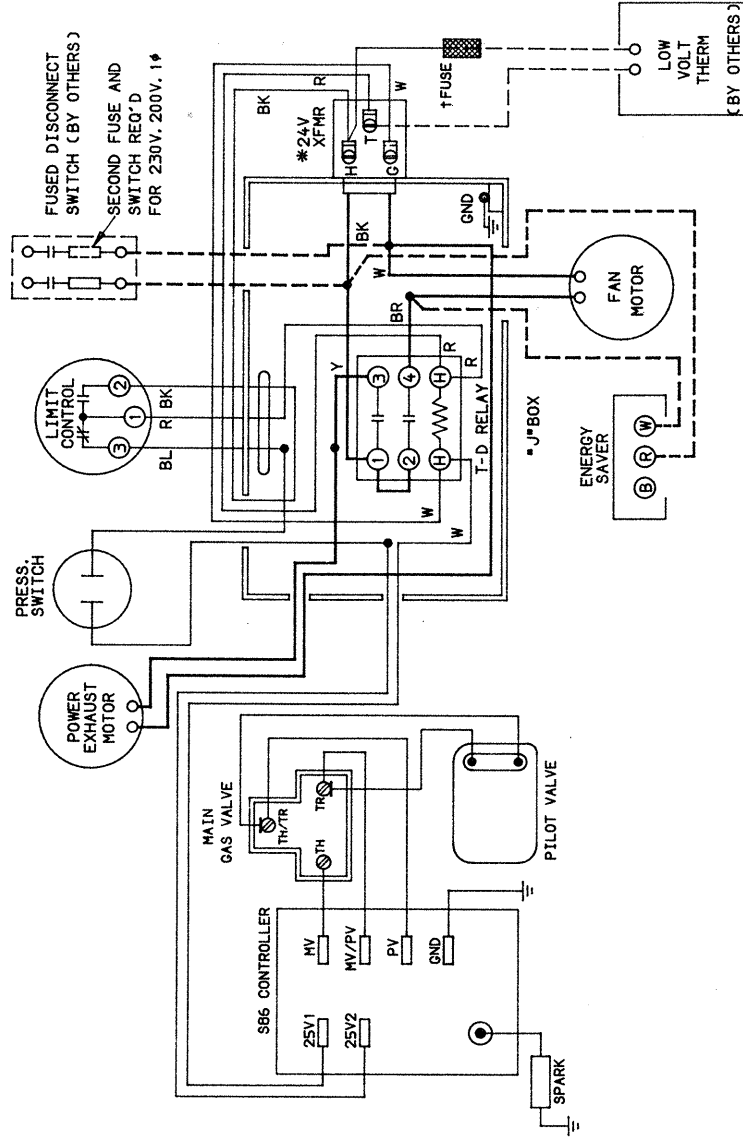
MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V.
WIRE NUT	---

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)

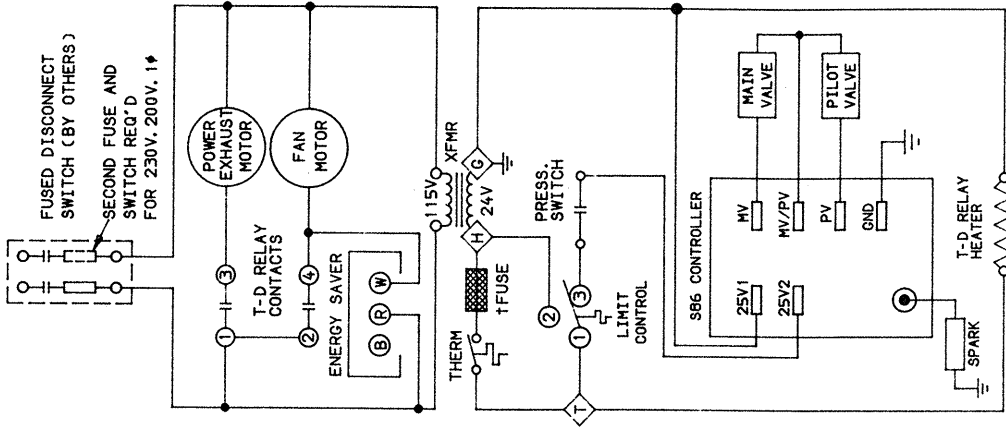


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(OR 0)

WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)

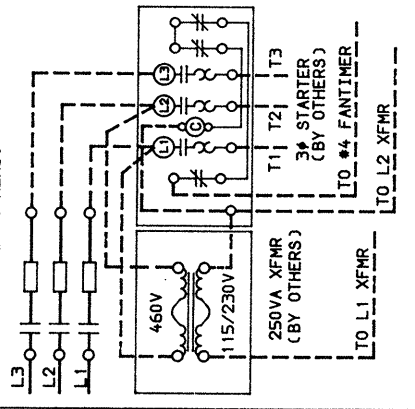


◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY

8H656086 Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, fan time delay, low-voltage thermostat, energy saver kit.

FOR U.S. UNITS ONLY

460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)

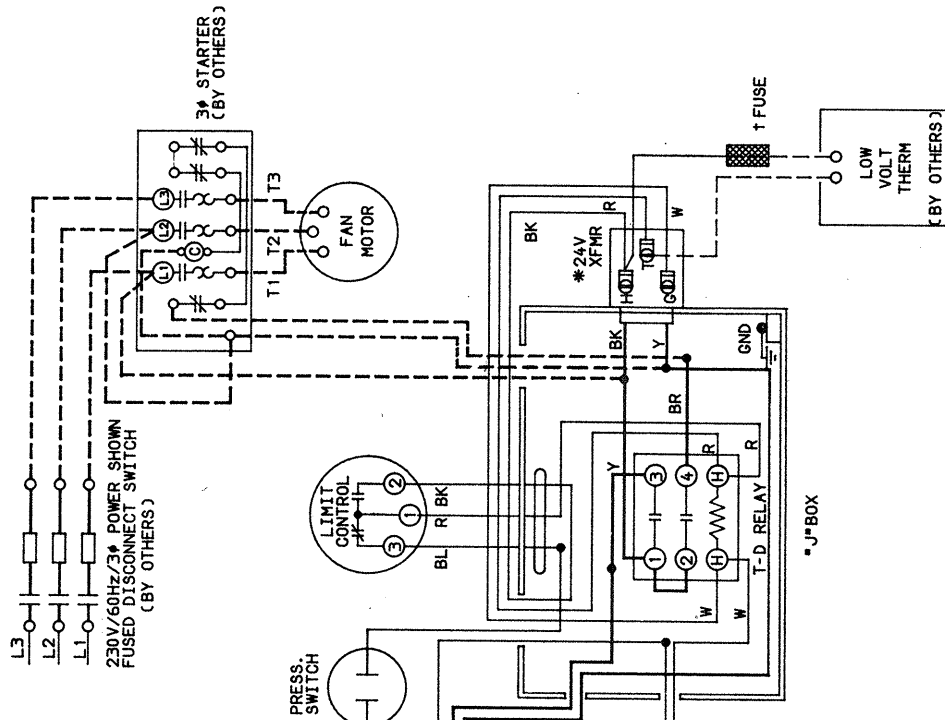


MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY	LINE	24V
FIELD	---	---
WIRE NUT	---	---

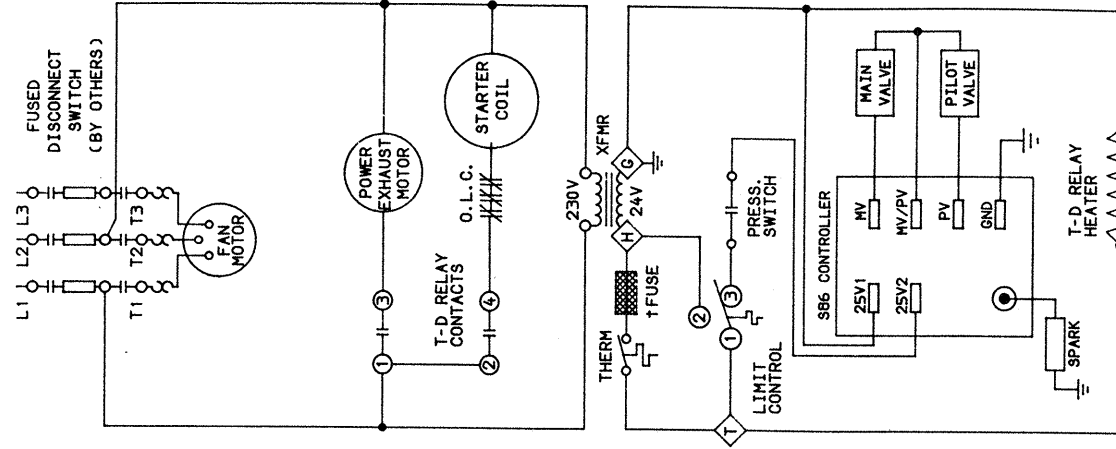


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ BK&Y (OR 0)

WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

230V/60Hz/3 ϕ POWER SHOWN

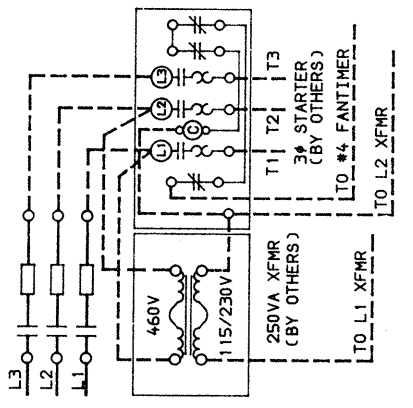


◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY



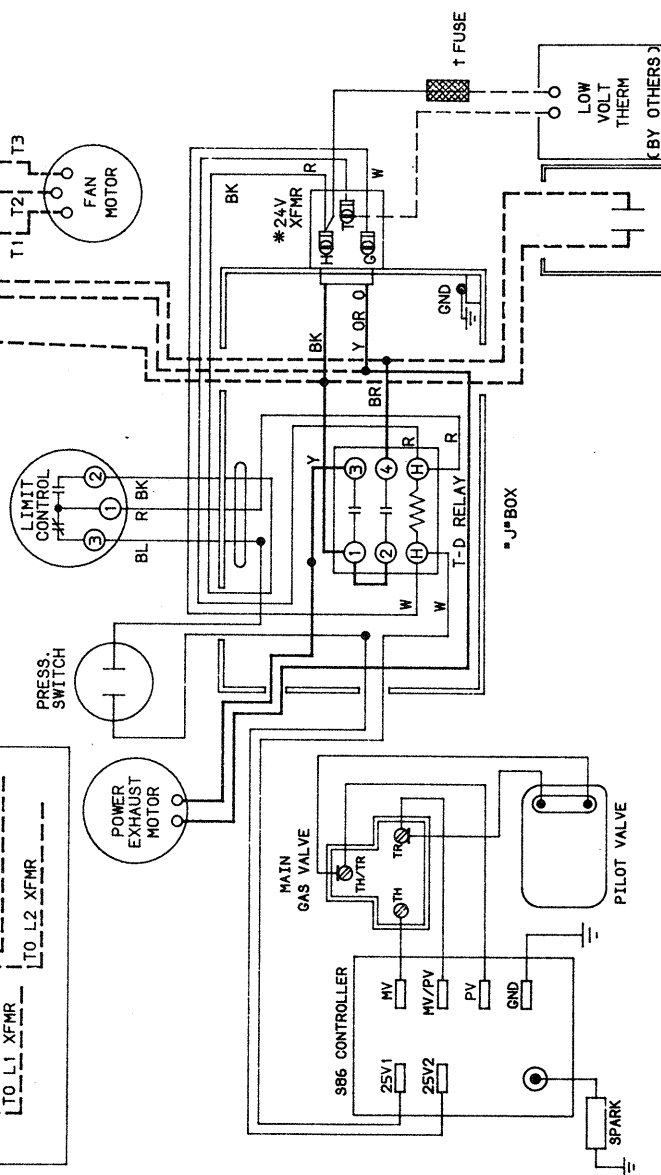
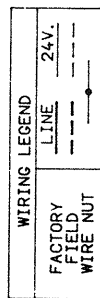
MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.



NOTE TO INSTALLER:

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.

USE 105°C WIRE FOR REPLACEMENTS.

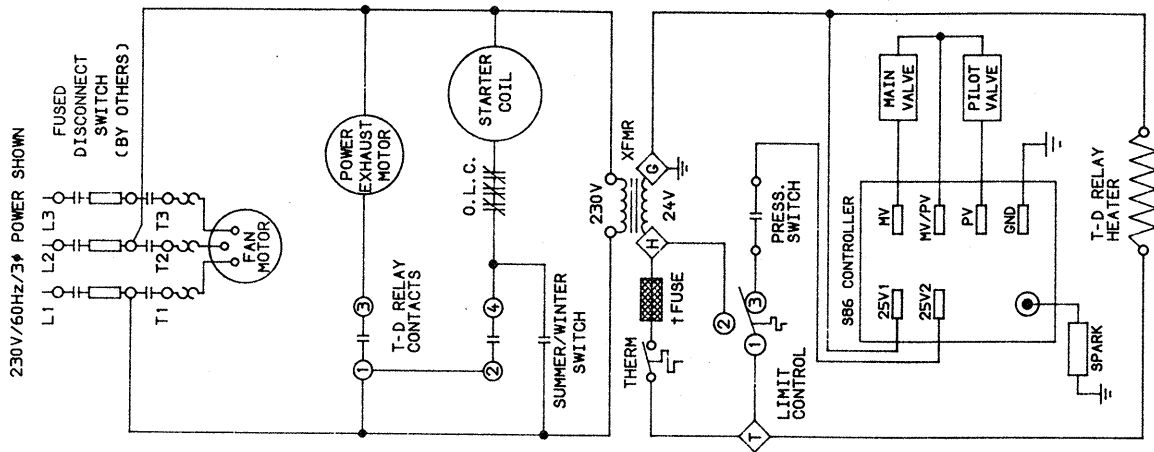
* ALTERNATE XFMR.

ALTERNATE XIMK.
PRIMARY XFMR WIRES

230V/60Hz/1Ø-BK&Y(COR 0)

WIRE NUT THE WIRE NOT USED

+FOR CANADIAN UNITS ONLY



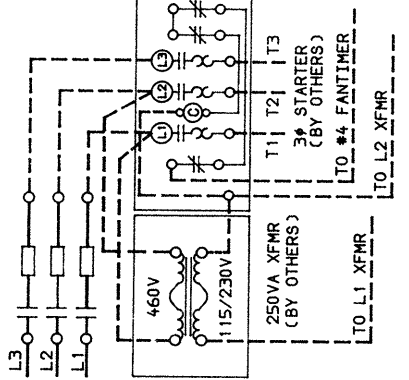
◇ INDICATES TRANSFORMER TERMINAL

☐ INDICATES IPI CONTROLLER TERMINALS

† FOR CANADIAN UNITS ONLY

FOR U.S. UNITS ONLY

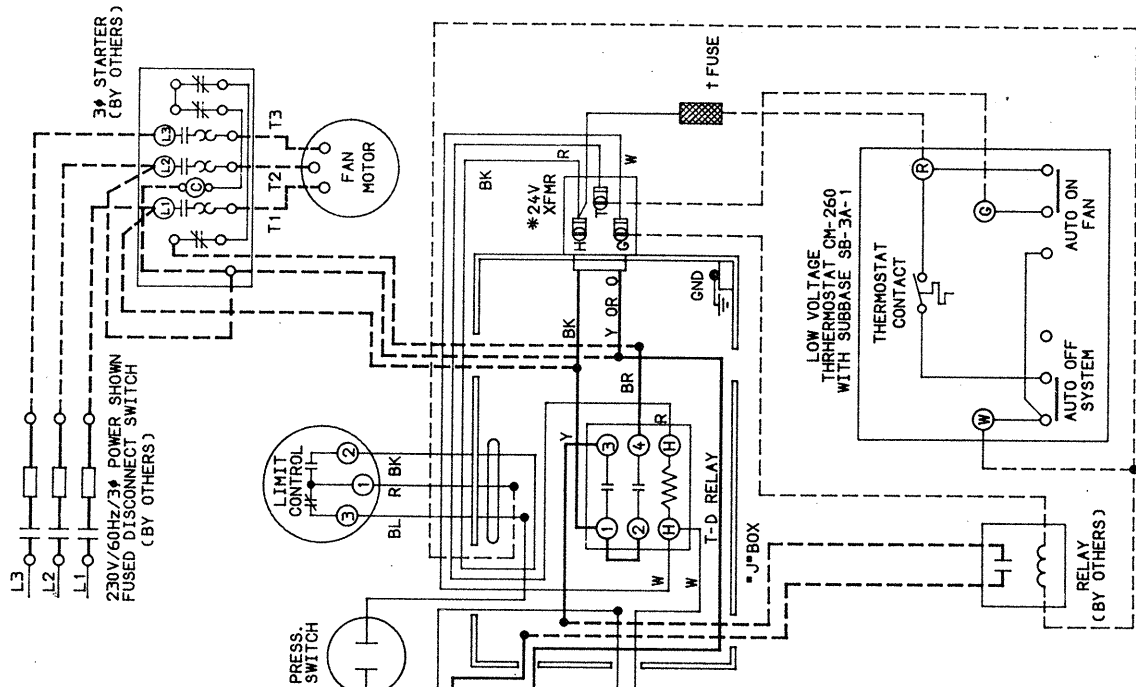
460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY	— LINE —	24V.
FIELD	- - - FIELD - - -	
WIRE NUT	•••••	



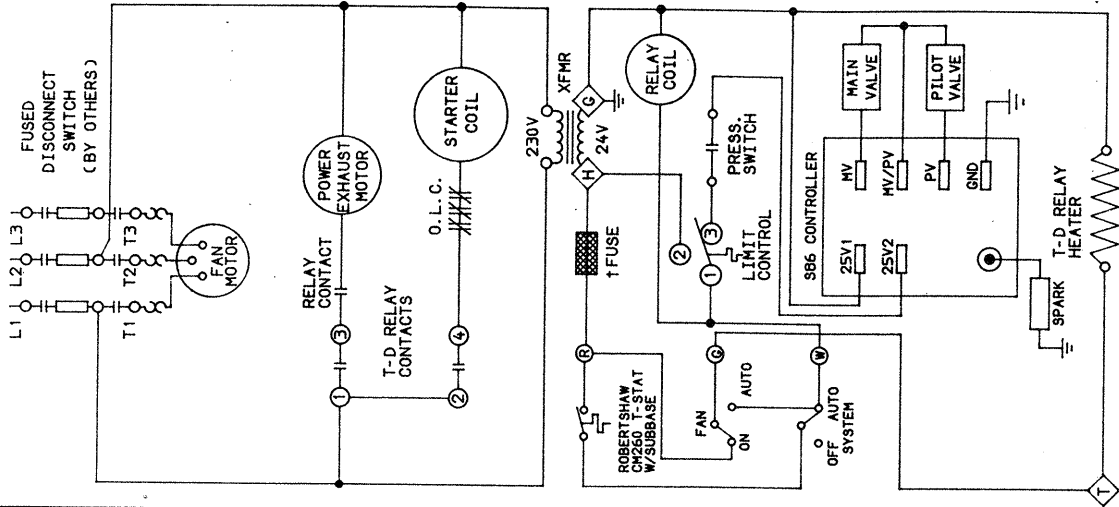
NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(OR 0)

WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

230V/60Hz/3 ϕ POWER SHOWN



◇ INDICATES TRANSFORMER TERMINAL

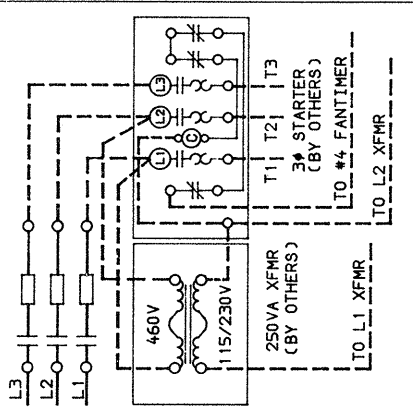
□ INDICATES IPI CONTROLLER TERMINALS

† FOR CANADIAN UNITS ONLY

8H656085 Three-phase, Intermittent Pilot Ignition, non-100% (and 100%)
Start-off, fan time delay, Robertshaw CH-260 low volt t-stat
With SB-3A-1 subbase and relay.

FOR U.S. UNITS ONLY

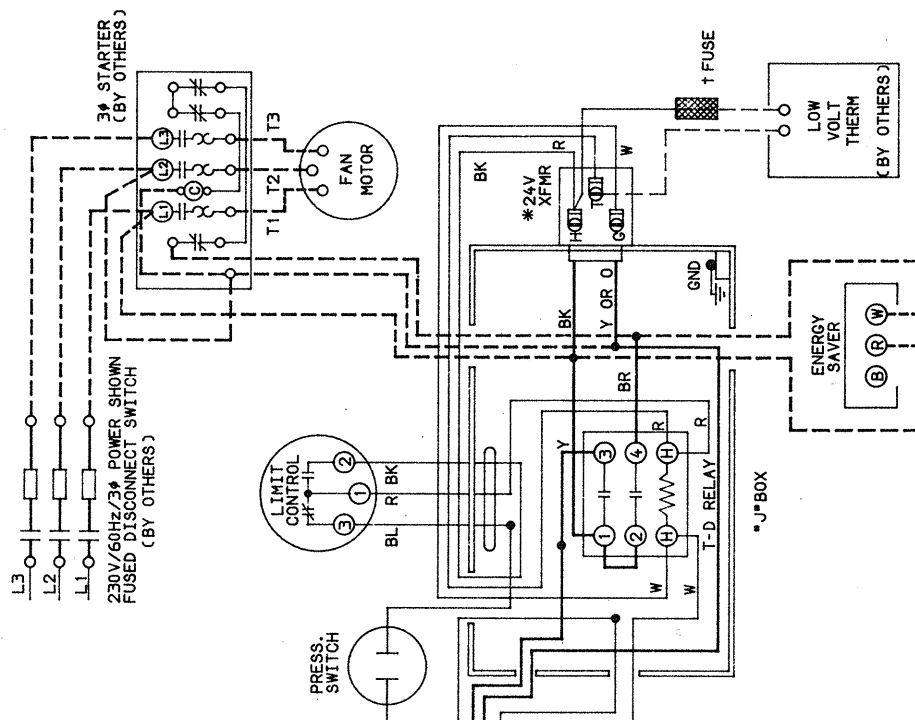
460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY	FIELD	24V.
---	---	---
---	---	---
---	---	---

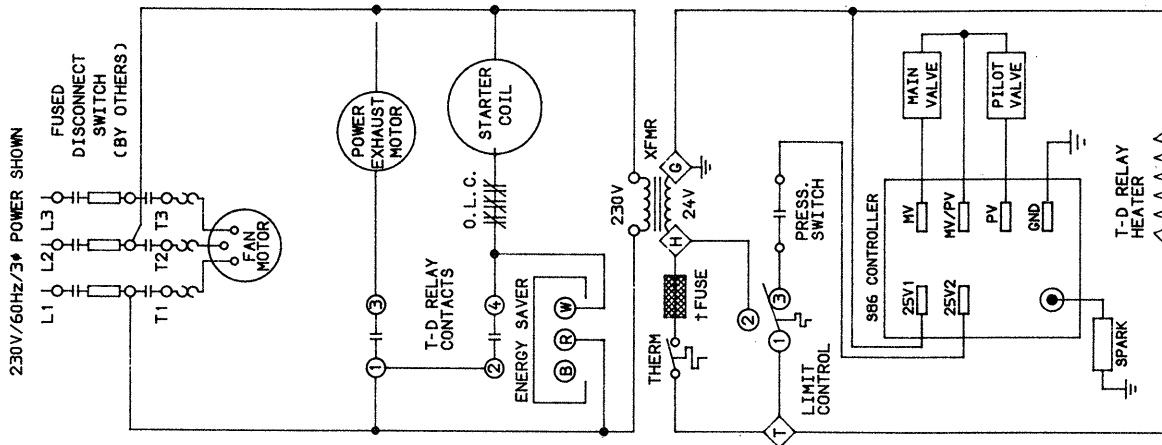


* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(COR 0)

WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH



◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY



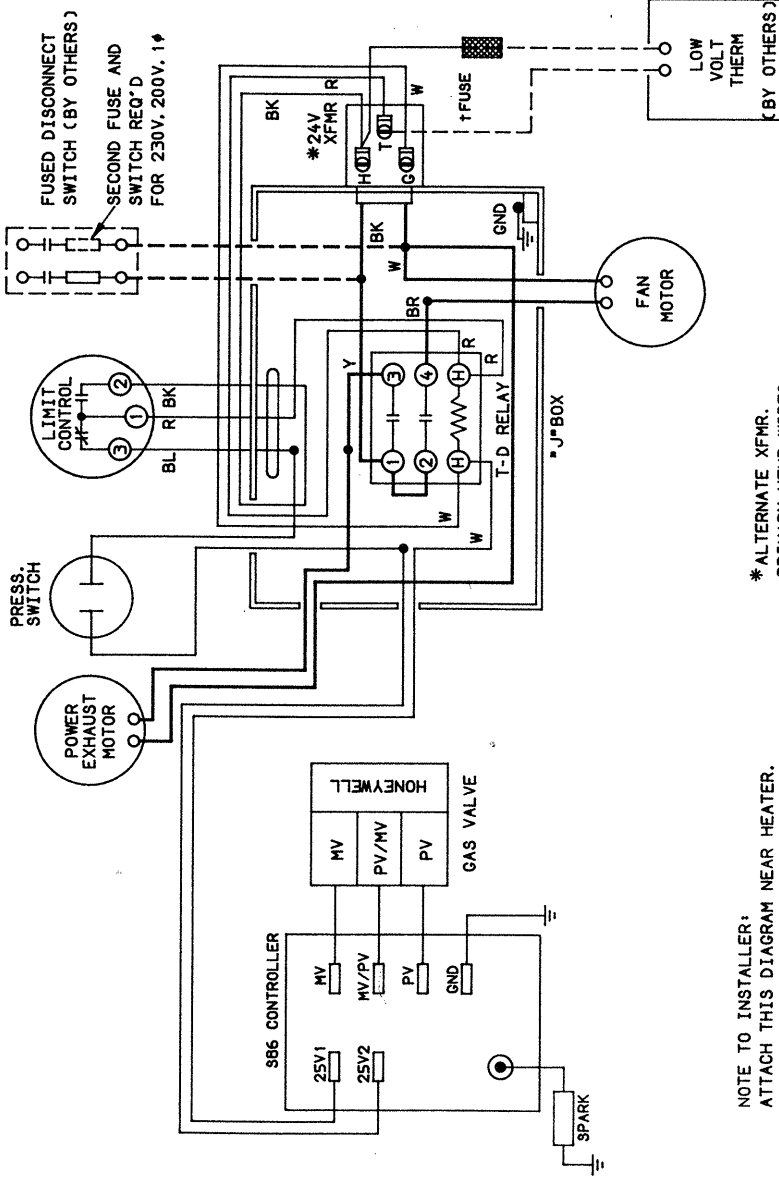
MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY	LINE	24V
WIRE NUT	---	---

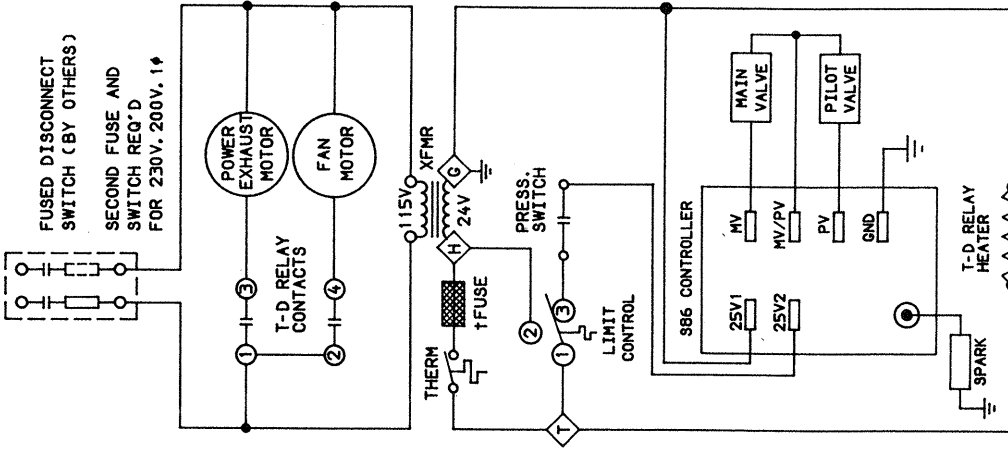
115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&(OR 0)
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)

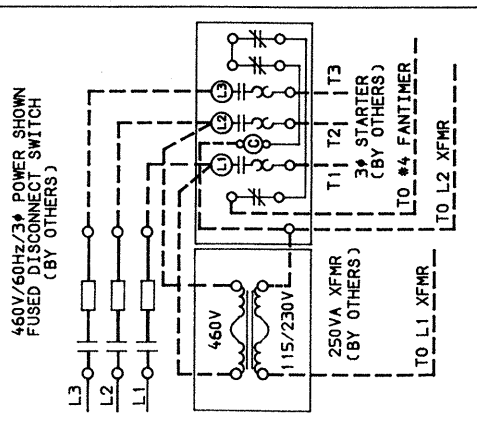


◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY

SH71721B3 Single-phase. Intermittent pilot ignition. non-100% (and 100%) shut-off. fan time delay. low-voltage thermostat

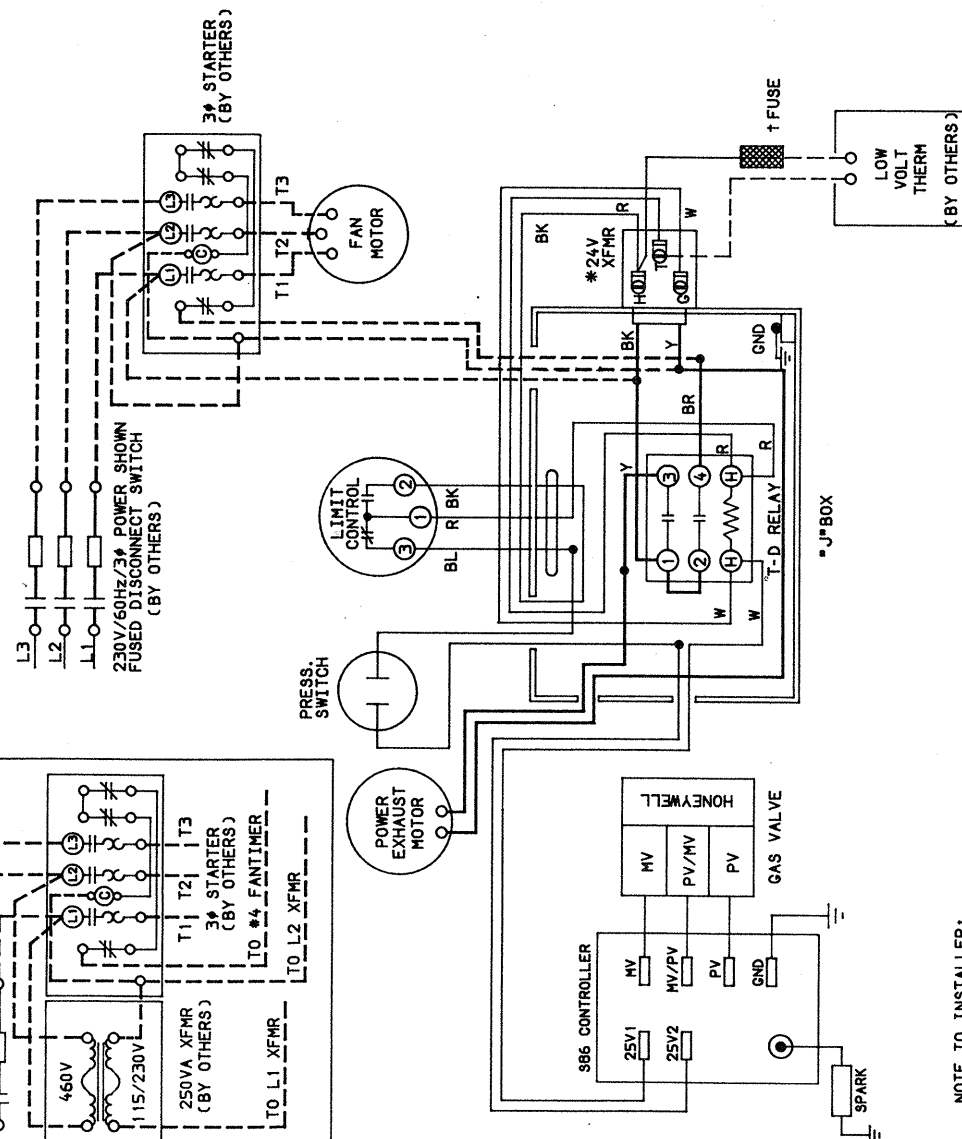
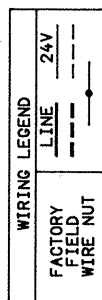


MODINE 6-450 WIRING DIAGRAM MODELS PAH, BAH



CAUTION

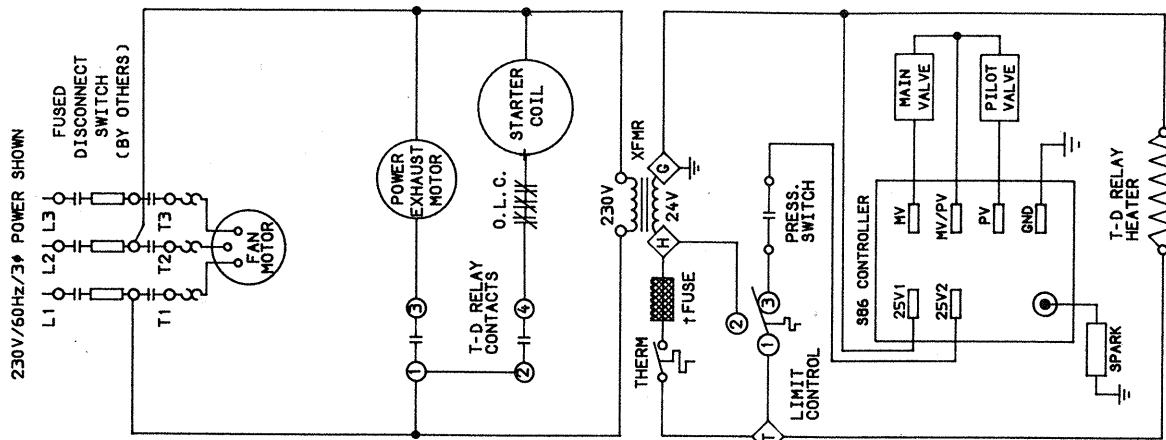
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK&Y(COR 0)

WIRE NUT THE WIRE NOT USED
+ FOR CANADIAN UNITS ONLY



◇ INDICATES TRANSFORMER TERMINAL

☐ INDICATES IPI CONTROLLER TERMINALS

† FOR CANADIAN UNITS ONLY

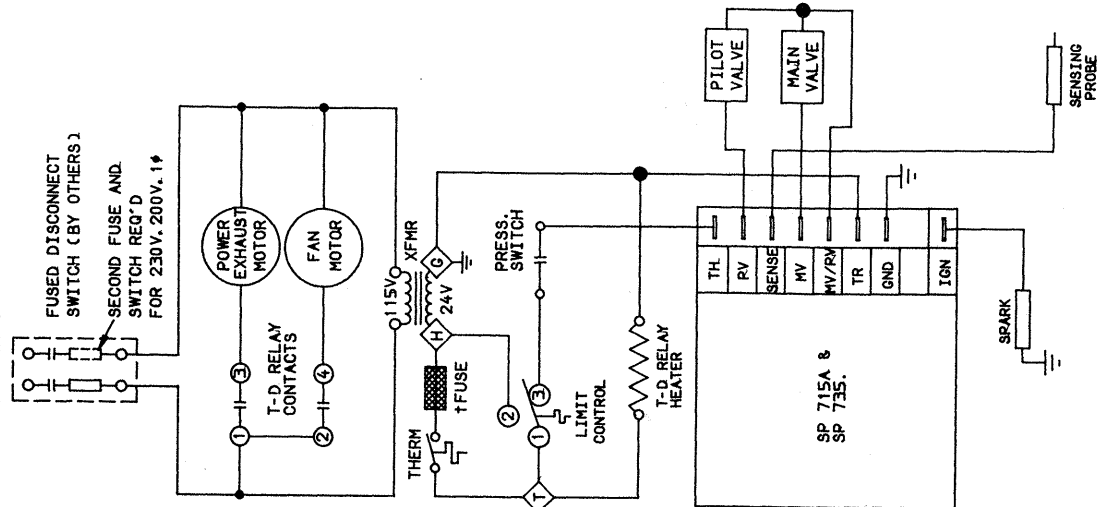


MODINE WIRING DIAGRAM

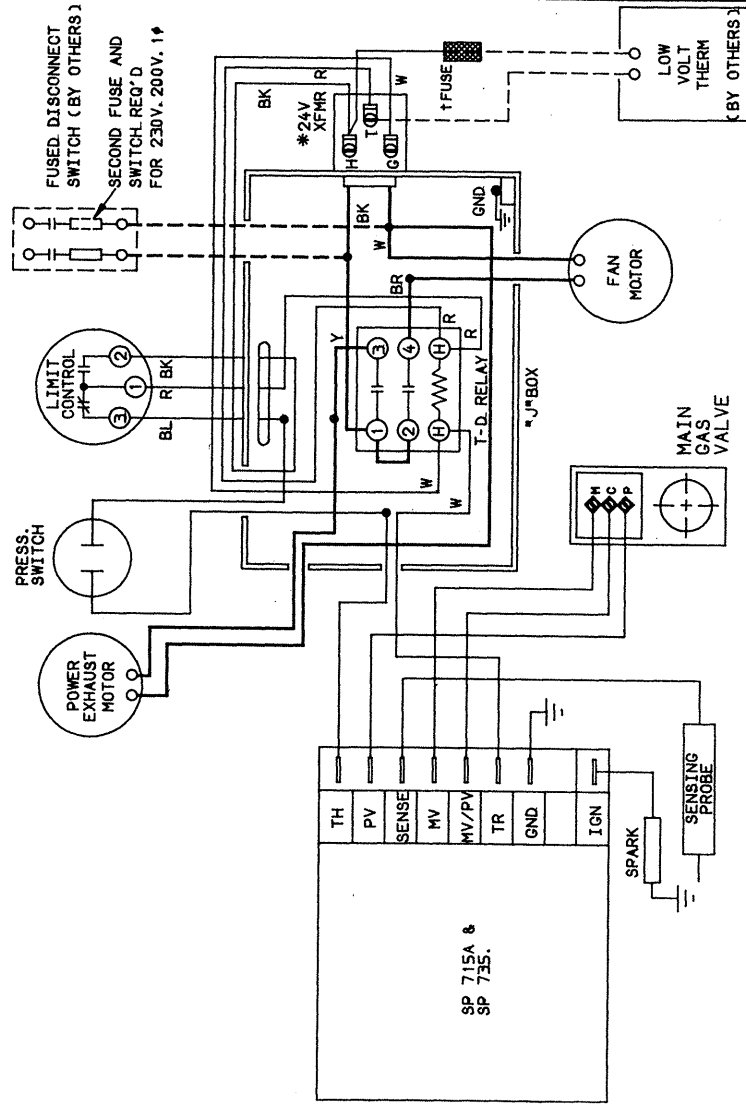
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V
WIRE NUT	---

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)



115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)



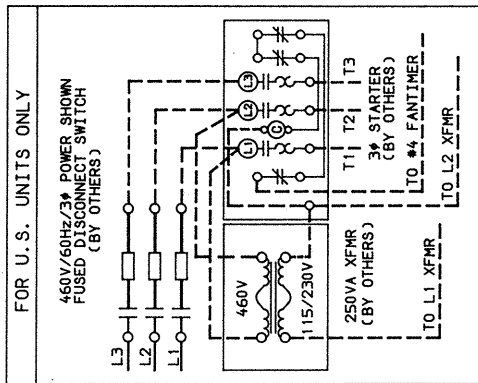
NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y OR O J
WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY

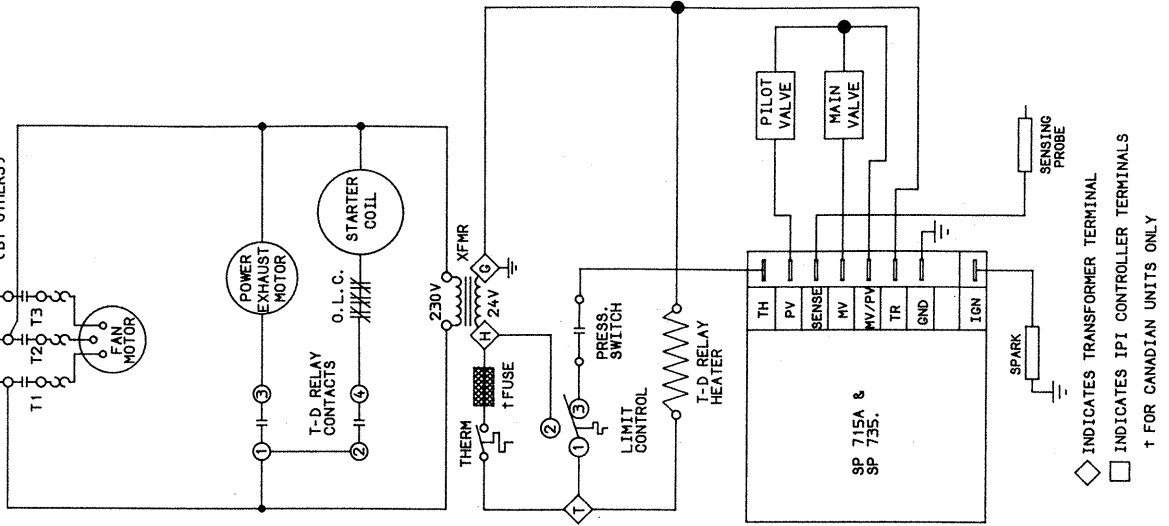
SH71721B4 Single-phase, Intermittent pilot ignition, non-100% (and 100%
shut-off, fan time delay, low-voltage thermostat)

MODINE WIRING DIAGRAM



CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V
WIRE NUT	---



◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

5H71721B4 Three-phase, intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat



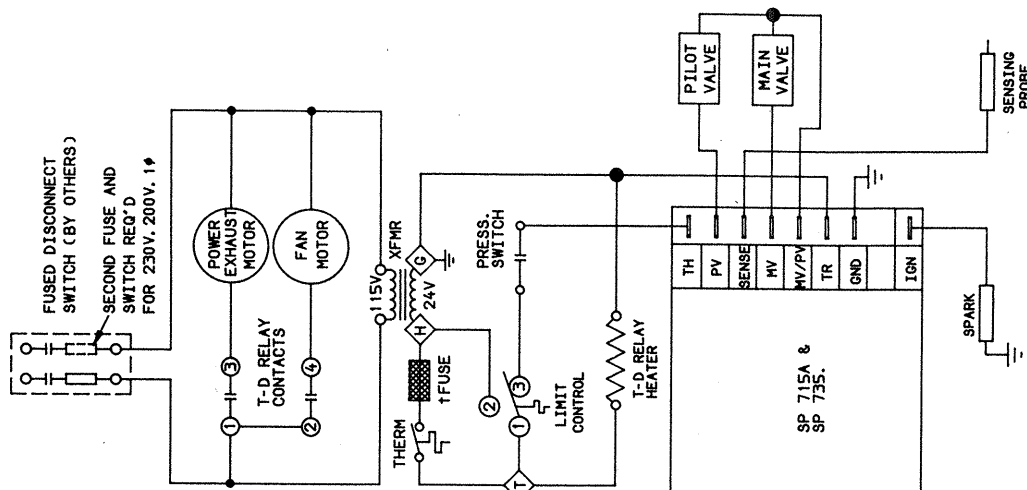
MODINE WIRING DIAGRAM

CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND		
FACTORY	LINE	24V
FIELD	---	---
WIRE NUT	---	---

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)

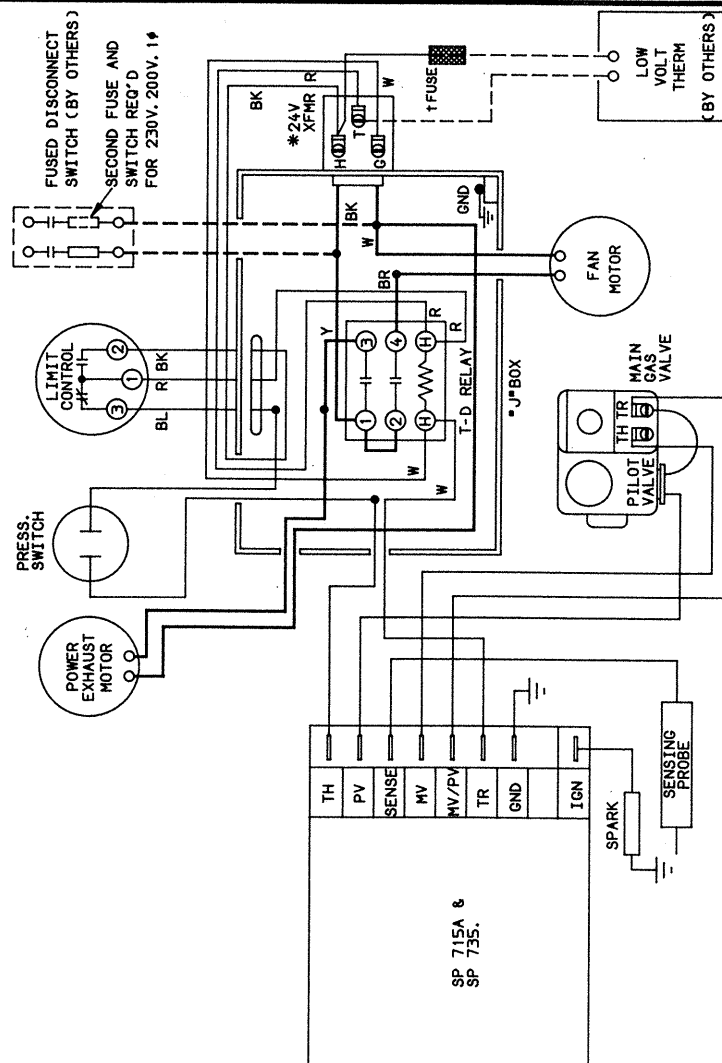


◇ INDICATES TRANSFORMER TERMINAL

□ INDICATES IPI CONTROLLER TERMINALS

† FOR CANADIAN UNITS ONLY

115V/60Hz/1 ϕ POWER SHOWN
L1(BK) L2(W)



* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&(OR 0)

WIRE NUT THE WIRE NOT USED

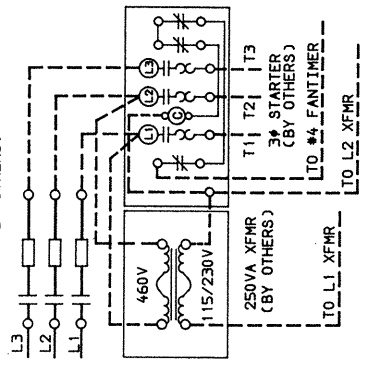
† FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

SH71721B5 Single-phase, Intermittent pilot ignition, non-100% (and 100%)
shut-off, fan time delay, low-voltage thermostat

FOR U.S. UNITS ONLY

460V/60Hz/3 ϕ POWER SHOWN
FUSED DISCONNECT SWITCH
(BY OTHERS)



MODINE WIRING DIAGRAM

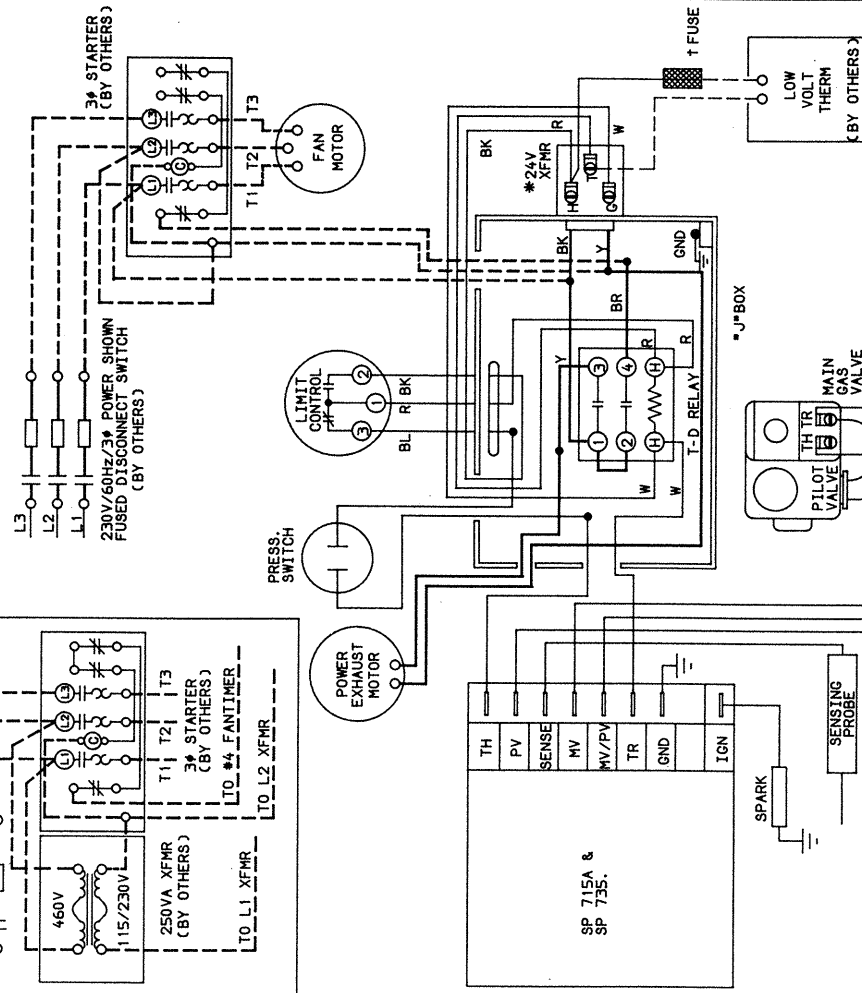
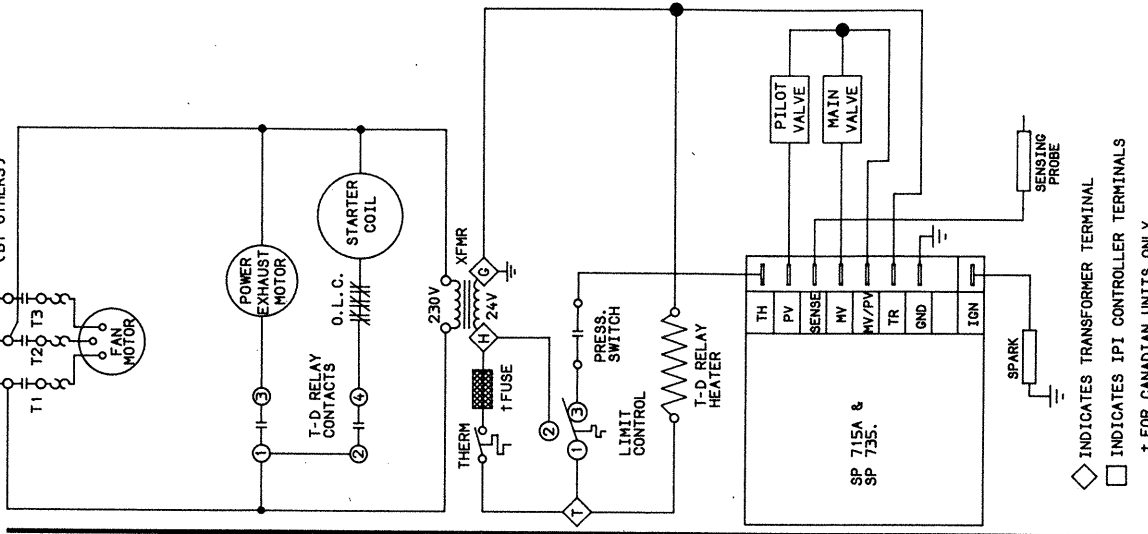
CAUTION

FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LINE
FIELD	24V
WIRE NUT	---

230V/60Hz/3 ϕ POWER SHOWN

FUSED
DISCONNECT
SWITCH
(BY OTHERS)



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1 ϕ -BK&Y(COR 0)

WIRE NUT THE WIRE NOT USED
† FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
□ INDICATES IPI CONTROLLER TERMINALS
† FOR CANADIAN UNITS ONLY