



April, 1998

WIRING DIAGRAMS

Modine indoor duct furnace/make-up air units

models DJE/DHE 75 through DJE/DHE 400

and discontinued Transcon models IAF 75 through IAF 400

(units manufactured after June 1993)

Diagram Selection

This wiring diagram book contains three sections showing the wiring diagrams for the Modine Indoor Duct Furnace/Make-Up Air Units. The three sections are as follows:

Section A - Motor and Damper Wiring Diagrams. This section contains the motor wiring diagrams and optional two position and modulating damper wiring diagrams for models DHE.

Section B - Gas Control Wiring Diagrams. This section contains the wiring diagrams for the gas controls for models DJE and DHE.

Section C - Accessory Wiring Diagrams. This section contains the typical wiring diagrams for accessory items such as freeze stats, fire stats, damper controllers, etc.

The selection examples shown on the following pages demonstrate how each diagram is selected. This selection is based on the unit model number, power code number, control code number, and if the diagrams are being used for trouble shooting, the unit serial number.

Power Requirements

System Component		Full Load Amperes				
		115/60/1φ	230/60/1φ	208/60/3φ	230/60/3φ	460/60/3φ
Gas Controls	Gravity Vented	0.35	0.17	0.19	0.17	0.54 (0.16)
	Power Exhausted	2.05	1.04	1.06	1.04	1.09 (0.54)
Motor	1/4 HP	3.7	—	—	—	—
	1/3 HP	4.6	2.7	1.8	1.6	0.8
	1/2 HP	7.8	3.9	2.6	2.2	1.1
	3/4 HP	10.2	5.1	3.0	3.1	1.55
	1 HP	13	6.5	3.9	3.4	1.7
	1-1/2 HP	15.6	7.8	5.6	4.8	2.4
	2 HP	—	—	6.8	6.2	3.1
	3 HP	—	—	10.8	9.2	4.6
Dampers	Two-position	0.35	0.17	0.19	0.17	②
	Modulating	0.35	0.17	0.19	0.17	②

① – For Model DHE use the listed amp draw. For Model DJE use the amp draw listed in parentheses.

② – Damper transformer (40 VA) amp draw is included in the gas control step down transformer amp draw.

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	H	Hot	WIRE COLOR CODING	
V	Volts	C	Common	BK	Black
Hz	Cycle or Hertz	"J" Box	Junction Box	BU	Blue
φ	Phase	H ₁ , H ₂ , etc.	Transformer Primary Terminals	R	Red
LC	Limit Control	S-W	Summer-Winter Switch	W	White
THERM or TH	Thermostat	O.L.C.	Overload Contact	Y	Yellow
MV	Main Valve	C.S.	Power Venter Centrifugal Switch	X1, X2, etc.	Transformer Secondary Terminals
PV	Pilot Valve	FTc	Fan Timer Contact	L1, L2, etc.	Electric Load Terminals
RC	Relay Contact or Coil	SPDT	Single-Pole Double-Throw Switch	T1, T2, etc.	Starter or Motor Terminals
G	Ground	VA	Volt Ampere		

5-450 WIRING DIAGRAM - Models DJE/DHE

Wiring Diagram Selection

CAUTION

Field wiring, wiring required to be done at the time of installation by the installer, changes very little with changes in the control manufacturer therefore, selection of submittal wiring diagrams require that only the MODEL NUMBER, POWER CODE NUMBER, and CONTROL CODE NUMBER of the unit be known. The serial number is not necessary for submittal wiring diagram purposes. For this selection use the wiring diagram selection procedure titled "Submittal Wiring Diagram Selection".

Submittal Wiring Diagram Selection

When submitting wiring diagrams for approval, it is necessary to select a gas control wiring diagram, a motor and damper control wiring diagram, and an accessory wiring diagram if such accessories as fire stats, freeze stats, manual potentiometers etc. are to be used. For DJE models which do not include a blower section, only a gas control wiring diagram is required and an accessory diagram if used. DHE models have a blower section included with the unit and it is necessary to select a motor and damper wiring diagram as well as the gas control diagram and accessory diagram if accessories are used. The following two examples demonstrate how these wiring diagrams are selected.

NOTE: Examples 1 & 2 that follow a Page Location Index for Series Identity Number 202. Although in some cases other series identity numbers are shown, for submittal purposes any of the tables could have been used and an appropriate diagram selected. It is only for service or trouble shooting that the Series Identity Number must be known and the appropriate table used.

Example #1 - Submittal wiring diagram selection for Model DJE100AF0030 Indoor Duct Furnace.

Because the example unit is a indoor duct furnace without a blower section, it is necessary to select a wiring diagram for the gas controls only. No accessories are being used and therefore it will not be necessary to select any other diagrams for this example.

Step 1 Determine the model size of the unit. The 4th, 5th, and 6th digits of the model number indicate the model size. For this example the model size is 100.

Step 2 Determine the Control Code number of the unit. The 11th and 12th digits of the model number indicates the Control Code. For this example the Control Code is 30.

Step 3 With the information from Steps 1 and 2, it is possible to select the correct wiring diagram. The Wiring Diagram Page Location Indexes shown on page 8 are used to determine the correct page on which the wiring diagram is shown. For this example, with the unit being a DJE100 with a 30 Control Code, refer to page 8, Table #8.

Step 4 In Table #8, choose any series identity number as long as it contains the Control Code of the desired unit. Follow the column of the Control Code across until it intersects the line with any series identity number (For this example Control Code 30 and series identity number 202). The wiring diagram for this unit, a DJE100AF0030, is found on page B41 as indicated in the table.

The internal or factory wiring can vary depending on the particular controls being used (eg. Honeywell or Robertshaw controls.) Because of this, the wiring diagram must be selected using the MODEL NUMBER, POWER CODE NUMBER, CONTROL CODE NUMBER and SERIAL NUMBER when servicing or trouble shooting these units. When servicing or trouble shooting units, use the wiring diagram selection procedure titled "Service and Trouble Shooting Wiring Diagram Selection".

Example #2 - Submittal wiring diagram selection for Model DHE100AF0108 Indoor Duct Furnace/ Make-Up Air Unit with two-position dampers and a fire stat.

In this example, the unit selected includes a blower section as well as a duct furnace section. In addition, two position dampers and a fire stat are also included. For this unit, it will be necessary to select three wiring diagrams, 1) for the gas controls, 2) for the motor and damper controls, and 3) for the fire stat accessory. To select submittal wiring diagrams for this unit, use the following procedure.

Motor and Damper Controls Wiring Diagram Selection

Step 1 From the model number, determine the Power Code Number of the unit. The 9th and 10th digits of the model number are the Power Code Number. For this example, the Power Code Number is 01.

Step 2 Determine the Model size of the unit. The 4th, 5th, and 6th digits of the model number indicate the model size. For this example, 100 model size.

Step 3 The Motor Power Code tables are shown on pages 4-6, based on the model size of the unit. For this example, the model size is 100 and Table #1 is used. Locate the desired Power Code Number in the left hand column of the table under the heading Power Code. For this example, the Power Code is 01. The characteristics of the Power Code are shown to the right (eg. 115V/60Hz/1 ϕ , 1/4 Hp motor with 3.7 maximum nameplate amp draw).

Step 4 In the Motor Power Code tables, under the column headed "Wiring Diagram Page Number", select the column which fits the unit configuration. For this example, the correct column is "with two-position dampers". The correct wiring diagram is found on page A2. If modulating dampers were used, the correct wiring diagram would be on page A3.

Next it is necessary to select the gas controls wiring diagram. This selection is shown in Steps 1 through 3 below.

5-450 WIRING DIAGRAM - Models DJE/DHE

Gas Controls Wiring Diagram Selection

- Step 1** Again refer to the model number and determine the model size of the unit (100 model size for this example).
- Step 2** Determine the Control Code Number of the unit. The 11th and 12th digits of the model number are the Control Code Number. In this example, the Control Code Number is 08.
- Step 3** With the information from Steps 1 and 2, it is possible to select the correct gas controls wiring diagram. The Wiring Diagram Page Location Index shown in Table #8 on page 8 is used for determining the correct page on which the wiring diagram is shown. For this example, a unit with 100 model size and Control Code 08, (using series identity number 202) the wiring diagram for the duct furnace section is found on page B9 as indicated in the table. A single phase diagram is shown at the top of the page and a three phase diagram is shown at the bottom.

Accessories Wiring Diagram Selection

Table #9 on page 9 lists the various accessories used on Modine Indoor Duct Furnace/Make-Up Air Units. Locate the desired accessory description in this table and refer to the listed page for the corresponding typical wiring diagram. For this example, an accessory Fire Stat is being used and the wiring diagram for this accessory is shown on page C5.

Service and Trouble Shooting Diagram Selection

When servicing or trouble shooting units, it is necessary to find the correct wiring diagram which matches the controls furnished on the unit exactly (eg. Honeywell or Robertshaw controls). In order to achieve this, the MODEL NUMBER, POWER CODE NUMBER, CONTROL CODE NUMBER, and SERIAL NUMBER of the unit must be known.

Gas Controls Wiring Diagram Selection

To select the correct wiring diagram, follow Steps 1 through 3 for the Submittal Wiring Diagram Selection. To complete Step 4, it is necessary to determine which Series Identity Number the unit has, so that reference can be made to the correct Page Location Index by Series Identity Number. To demonstrate, see the following example.

Example #3 - Model DHE100AF0108 Serial Number 01102040693

Contained in the serial number of the unit is the Series Identity Number. The Series Identity Number is the 5th, 6th, and 7th digits of the serial number. For this example, the Series Identity Number is 204. Once the Series Identity Number has been determined, Step 4 can be completed in the following manner.

At the top of the Page Location Index, locate the Series Identity Number which matches that found in the unit serial number. Use this index to locate the correct wiring diagram by entering the top index and follow down the column until it intersects with the corresponding Control Code Number. For this example, it is Control Code 08. The correct wiring diagram for a DHE100AF0108 with a serial number of 01102040693 is found on page B5.

Selection of the motor and damper wiring diagrams and any accessory diagrams follow the same procedure as shown for Submittal Wiring Diagram Selection.

SPECIAL NOTE: When a model DJE duct furnace is shipped, there is no blower section and the unit serial number will contain four less digits than models with blower sections. In this case, the Series Identity Number is the 1st, 2nd, and 3rd digits of the serial number (eg. 2040693, Series Identity Number 204). The serial number is shown on the rating plate of the duct furnace. When a unit is shipped with a blower section, model DHE, a Model Identification Plate is attached to the duct furnace section as well as the duct furnace rating plate. For servicing these units, use the serial number shown on the Model Identification Plate.

Quick Reference Guide

Information Needed for Submittals

Full Modine Model Number: DHE100AF0130

Information Needed for Service and Trouble Shooting

Full Modine Model Number: DHE100AF0130

Unit Serial Number: 01102021396

Diagrams to Include For Submittals and Servicing

For DJE models:

Gas Control Wiring Diagrams
(Any Accessory Diagrams if applicable)

For DHE models:

Motor & Damper Diagram and
Gas Control Wiring Diagram
(Any Accessory Diagrams if applicable)

5-450 MOTOR SELECTION - Models DJE/DHE

Table 1
Motor Power Code
75, 100, and 125 Model Size Units

Power Code	Electric Power	Amps	Hp	Less Dampers	With Two Position Dampers	With Modulating Dampers
01	115V/1φ	3.7	1/4	A1	A2	A3
02	115V/1φ	5.0	1/3	A1	A2	A3
03	230V/1φ	2.5	1/3	A4	A5	A6
04	200V/3φ	1.2	1/3	A7	A8	A9
05	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
06	115V/1φ	7.2	1/2	A1	A2	A3
07	230V/1φ	3.6	1/2	A4	A5	A6
08	200V/3φ	2.1	1/2	A7	A8	A9
09	230V/460V/3φ	2.2/1.1	1/2	A7	A8	A9
10	115V/1φ	5.0	1/3	A1	A2	A3
11	230V/1φ	2.5	1/3	A4	A5	A6
12	230V/3φ	1.8	1/3	A7	A8	A9
13	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
14	115V/1φ	7.2	1/2	A1	A2	A3
15	230V/1φ	3.6	1/2	A4	A5	A6
16	200V/3φ	2.1	1/2	A7	A8	A9
17	230V/460V/3φ	2.2/1.1	1/2	A7	A8	A9
18	115V/1φ	11.0	3/4	A1	A2	A3
19	230V/1φ	5.5	3/4	A4	A5	A6
20	200V/3φ	2.8	3/4	A7	A8	A9
21	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
22	115V/1φ	12.0/6.0	1	A1	A2	A3
23	200V/3φ	4.0	1	A7	A8	A9
24	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
25	115V/230V/1φ	15.0/7.5	1-1/2	A1	A2	A3
26	200V/3φ	4.8	1-1/2	A7	A8	A9
27	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
28	115V/1φ	11.0	3/4	A1	A2	A3
29	230V/1φ	5.5	3/4	A4	A5	A6
30	200V/3φ	2.8	3/4	A7	A8	A9
31	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
32	115V/1φ	12.0/6.0	1	A1	A2	A3
33	200V/3φ	4.0	1	A7	A8	A9
34	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
35	115V/230V/1φ	15.0/7.5	111/2	A1	A2	A3
36	200V/3φ	4.8	1-1/2	A7	A8	A9
37	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
38	200V/3φ	6.8	2	A7	A8	A9
39	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
40	200V/3φ	10.1	3	A7	A8	A9
41	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
42	115V/230V/1φ	15.0/7.5	1-1/2	A1	A2	A3
43	200V/3φ	4.8	1-1/2	A7	A8	A9
44	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
45	200V/3φ	6.8	2	A7	A8	A9
46	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
47	200V/3φ	10.1	3	A7	A8	A9
48	230V/460V/3φ	8.8/4.4	3	A7	A8	A9

Table 2
Motor Power Code
126 Model Size Units

Power Code	Electric Power	Amps	Hp	Less Dampers	With Two Position Dampers	With Modulating Dampers
01	115V/1φ	5.0	1/3	A1	A2	A3
02	230V/1φ	2.5	1/3	A4	A5	A6
03	115V/1φ	5.0	1/3	A1	A2	A3
04	230V/1φ	2.5	1/3	A4	A5	A6
05	115V/1φ	7.2	1/2	A1	A2	A3
06	115V/1φ	11.0	3/4	A1	A2	A3
07	230V/1φ	3.6	1/2	A4	A5	A6
08	230V/1φ	5.5	3/4	A4	A5	A6
09	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
10	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
11	200V/3φ	2.1	1/2	A7	A8	A9
12	230V/460V/3φ	2.2	1/2	A7	A8	A9
13	200V/3φ	2.8	3/4	A7	A8	A9
14	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
15	200V/3φ	1.2	1/3	A7	A8	A9
16	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
17	200V/3φ	4.0	1	A7	A8	A9
18	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
19	200V/3φ	4.8	1-1/2	A7	A8	A9
20	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
21	200V/3φ	1.2	1/3	A7	A8	A9
22	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
23	115V/1φ	11.0	3/4	A1	A2	A3
24	230V/1φ	5.5	3/4	A4	A5	A6
25	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
26	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
27	200V/3φ	2.8	3/4	A7	A8	A9
28	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
29	200V/3φ	4.0	1	A7	A8	A9
30	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
31	200V/3φ	4.8	1-1/2	A7	A8	A9
32	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
33	200V/3φ	6.8	2	A7	A8	A9
34	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
35	200V/3φ	10.1	3	A7	A8	A9
36	230V/460V/3φ	8.8/4.4	2	A7	A8	A9
37	115V/1φ	3.7	1/4	A1	A2	A3
38	115V/1φ	3.7	1/4	A1	A2	A3

5-450 MOTOR SELECTION - Models DJE/DHE

Table 3
Motor Power Code
150 and 200 Model Size Units

Power Code	Electric Power	Amps	Hp	Less Dampers	With Two Position Dampers	With Modulating Dampers
01	115V/1φ	5.0	1/3	A1	A2	A3
02	230V/1φ	2.5	1/3	A4	A5	A6
03	200V/3φ	1.2	1/3	A7	A8	A9
04	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
05	115V/1φ	7.2	1/2	A1	A2	A3
06	230V/1φ	3.6	1/2	A4	A5	A6
07	200V/3φ	2.1	1/2	A7	A8	A9
08	230V/460V/3φ	2.2/1.1	1/2	A7	A8	A9
09	115V/1φ	11.0	3/4	A1	A2	A3
10	230V/1φ	5.5	3/4	A4	A5	A6
11	200V/3φ	2.8	3/4	A7	A8	A9
12	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
13	115V/230V/1φ	12.0/6.0	1	A1	A2	A3
14	200V/3φ	4.0	1	A7	A8	A9
15	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
16	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
17	200V/3φ	4.8	1-1/2	A7	A8	A9
18	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
19	115V/1φ	7.2	1/2	A1	A2	A3
20	230V/1φ	3.6	1/2	A4	A5	A6
21	200V/3φ	2.1	1/2	A7	A8	A9
22	230V/460V/3φ	2.2/1.1	1/2	A7	A8	A9
23	115V/1φ	11.0	3/4	A1	A2	A3
24	230V/1φ	5.5	3/4	A4	A5	A6
25	200V/3φ	2.8	3/4	A7	A8	A9
26	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
27	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
28	200V/3φ	4.0	1	A7	A8	A9
29	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
30	115V/230V/1φ	15.0/7.5	1-1/2	A1	A2	A3
31	200V/3φ	4.8	1-1/2	A7	A8	A9
32	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
33	200V/3φ	6.8	2	A7	A8	A9
34	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
35	200V/3φ	10.1	3	A7	A8	A9
36	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
37	115V/1φ	11.0	3/4	A1	A2	A3
38	230V/1φ	5.5	3/4	A4	A5	A6
39	200V/3φ	2.8	3/4	A7	A8	A9
40	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
41	115V/230V/1φ	12.0/6.0	1	A1	A2	A3
42	200V/3φ	4.0	1	A7	A8	A9
43	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
44	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
45	200V/3φ	4.8	1-1/2	A7	A8	A9
46	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
47	200V/3φ	6.8	2	A7	A8	A9
48	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
49	200V/3φ	10.1	3	A7	A8	A9
50	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
51	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
52	200V/3φ	4.0	1	A7	A8	A9
53	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
54	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
55	200V/3φ	4.8	1-1/2	A7	A8	A9
56	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
57	200V/3φ	6.8	2	A7	A8	A9
58	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
59	200V/3φ	10.1	3	A7	A8	A9
60	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
61	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
62	200V/3φ	4.8	1-1/2	A7	A8	A9
63	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
64	200V/3φ	6.8	2	A7	A8	A9
65	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
66	200V/3φ	10.1	3	A7	A8	A9
67	230V/460V/3φ	8.8/4.4	3	A7	A8	A9

Table 4
Motor Power Code
201 and 226 Model Size Units

Power Code	Electric Power	Amps	Hp	Less Dampers	With Two Position Dampers	With Modulating Dampers
01	115V/1φ	5.0	1/3	A1	A2	A3
02	230V/1φ	2.5	1/3	A4	A5	A6
03	200V/3φ	1.2	1/3	A7	A8	A9
04	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
05	115V/1φ	5.0	1/3	A1	A2	A3
06	230V/1φ	2.5	1/3	A4	A5	A6
07	115V/1φ	7.2	1/2	A1	A2	A3
08	115V/1φ	11.0	3/4	A1	A2	A3
09	230V/1φ	3.6	1/2	A4	A5	A6
10	230V/1φ	5.1	3/4	A4	A5	A6
11	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
12	200V/3φ	2.1	1/2	A7	A8	A9
13	230V/460V/3φ	2.2/1.1	1/2	A7	A8	A9
14	200V/3φ	2.8	3/4	A7	A8	A9
15	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
16	200V/3φ	1.2	1/3	A7	A8	A9
17	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
18	200V/3φ	10.1	3	A7	A8	A9
19	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
21	115V/1φ	11.0	3/4	A1	A2	A3
23	230V/1φ	5.5	3/4	A4	A5	A6
24	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
25	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
28	200V/3φ	2.8	3/4	A7	A8	A9
29	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
30	200V/3φ	4.0	1	A7	A8	A9
31	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
32	200V/3φ	4.8	1-1/2	A7	A8	A9
33	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
34	200V/3φ	6.8	2	A7	A8	A9
35	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
36	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
37	200V/3φ	4.0	1	A7	A8	A9
38	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
39	200V/3φ	10.1	3	A7	A8	A9
40	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
41	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
42	200V/3φ	6.8	2	A7	A8	A9
43	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
44	200V/3φ	10.1	3	A7	A8	A9
45	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
48	200V/3φ	10.1	3	A7	A8	A9
49	230V/460V/3φ	8.8/4.4	3	A7	A8	A9

5-450 MOTOR SELECTION - Models DJE/DHE

Table 5
Motor Power Code
225 and 250 Model Size Units

Power Code	Electric Power	Amps	Hp	Less Dampers	With Two Position Dampers	With Modulating Dampers
01	115V/1φ	7.2	1/2	A1	A2	A3
02	230V/1φ	3.6	1/2	A4	A5	A6
03	200V/3φ	2.1	1/2	A7	A8	A9
04	230V/460V/3φ	2.1/1.1	1/2	A7	A8	A9
05	115V/1φ	11.0	3/4	A1	A2	A3
06	230V/1φ	5.5	3/4	A4	A5	A6
07	200V/3φ	2.8	3/4	A7	A8	A9
08	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
09	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
10	200V/3φ	4.0	1	A7	A8	A9
11	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
12	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
13	200V/3φ	4.8	1-1/2	A7	A8	A9
14	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
15	115V/1φ	11.0	3/4	A1	A2	A3
16	230V/1φ	5.5	3/4	A4	A5	A6
17	200V/3φ	2.8	3/4	A7	A8	A9
18	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
19	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
20	200V/3φ	4.0	1	A4	A5	A6
21	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
22	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
23	200V/3φ	4.8	1-1/2	A7	A8	A9
24	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
25	200V/3φ	6.8	2	A7	A8	A9
26	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
27	200V/3φ	10.1	3	A7	A8	A9
28	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
29	115V/230V/1φ	12.0/6.0	1	A7	A8	A9
30	200V/3φ	4.0	1	A7	A8	A9
31	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
32	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
33	200V/3φ	4.8	1-1/2	A7	A8	A9
34	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
35	200V/3φ	6.8	2	A7	A8	A9
36	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
37	200V/3φ	10.1	3	A7	A8	A9
38	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
39	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
40	200V/3φ	4.8	1-1/2	A7	A8	A9
41	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
42	200V/3φ	6.8	2	A7	A8	A9
43	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
44	200V/3φ	10.1	3	A7	A8	A9
45	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
46	200V/3φ	6.8	2	A7	A8	A9
47	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
48	200V/3φ	10.1	3	A7	A8	A9
49	230V/460V/3φ	8.8/4.4	3	A7	A8	A9

Table 6
Motor Power Code
251 – 401 Model Size Units

Power Code	Electric Power	Amps	Hp	Less Dampers	With Two Position Dampers	With Modulating Dampers
01	115V/1φ	5.0	1/3	A1	A2	A3
02	230V/1φ	2.5	1/3	A4	A5	A6
03	200V/3φ	1.2	1/3	A7	A8	A9
04	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
05	115V/1φ	5.0	1/3	A1	A2	A3
06	230V/1φ	2.5	1/3	A4	A5	A6
07	115V/1φ	7.2	1/2	A1	A2	A3
08	115V/1φ	11.0	3/4	A1	A2	A3
09	230V/1φ	3.6	1/2	A4	A5	A6
10	230V/1φ	5.5	3/4	A4	A5	A6
11	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
12	200V/3φ	2.1	1/2	A7	A8	A9
13	230V/460V/3φ	2.2/1.1	1/2	A7	A8	A9
14	200V/3φ	2.8	3/4	A7	A8	A9
15	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
16	200V/3φ	1.2	1/3	A7	A8	A9
17	230V/460V/3φ	1.2/0.6	1/3	A7	A8	A9
18	200V/3φ	10.1	3	A7	A8	A9
19	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
21	115V/1φ	11.0	3/4	A1	A2	A3
23	230V/1φ	5.5	3/4	A4	A5	A6
24	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
25	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
28	200V/3φ	2.8	3/4	A7	A8	A9
29	230V/460V/3φ	2.8/1.4	3/4	A7	A8	A9
30	200V/3φ	4.0	1	A7	A8	A9
31	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
32	200V/3φ	4.8	1-1/2	A7	A8	A9
33	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
34	200V/3φ	6.8	2	A7	A8	A9
35	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
36	115V/230V/1φ	12.0/6.0	1	A1/A4	A2/A5	A3/A6
37	115V/230V/1φ	15.0/7.5	1-1/2	A1/A4	A2/A5	A3/A6
38	200V/3φ	4.0	1	A7	A8	A9
39	230V/460V/3φ	3.8/1.9	1	A7	A8	A9
40	200V/3φ	4.8	1-1/2	A7	A8	A9
41	230V/460V/3φ	4.8/2.4	1-1/2	A7	A8	A9
42	200V/3φ	6.8	2	A7	A8	A9
43	230V/460V/3φ	5.8/2.9	2	A7	A8	A9
44	200V/3φ	10.1	3	A7	A8	A9
45	230V/460V/3φ	8.8/4.4	3	A7	A8	A9
48	200V/3φ	10.1	3	A7	A8	A9
49	230V/460V/3φ	8.8/4.4	3	A7	A8	A9

5-450 CONTROL CODE - Models DJE/DHE

Table 7
Indoor Duct Furnace Control Code Descriptions

Control Code Descriptions	Control Code	Service Voltage	Type of Gas
Single-Stage, Standing Pilot, 100% Shut-Off — Utilizes a single-stage combination gas control and thermocouple. Pilot needs to be manually lit initially and stays lit.	11 12 81 82	115V 208V/230V 115V 208V/230V	natural natural propane propane
Single-Stage, Intermittent Pilot Ignition, Non-100% Shut-Off — Utilizes a single-stage gas control. Combination and an ignition control (non-100%-lockoff). Pilot is automatically lit on a call for heat.	08 09	115V 208V/230V	natural natural
Single-Stage, Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry — Utilizes a single-stage combination gas control and an ignition control (continuous retry). Pilot is automatically lit on call for heat.	30 31 85 86	115V 208V/230V 115V 208V/230V	natural natural propane propane
Two-stage Standing Pilot, 100% Shut-Off — Utilizes a two-stage combination gas control (which fires at 50% or 100% of full rated input) and thermocouple. Pilot needs to be manually lit initially and stays lit.	25 26 83 84	115V 208V/230V	natural natural
Two-stage Intermittent Pilot Ignition, Non-100% Shut-Off — Utilizes a two-stage combination gas control (which fires at 50% or 100% of full rated input) and an ignition control (non-100% shut-off). Pilot is automatically lit on a call for heat.	55 56	115V 208V/230V	natural natural
Two-stage Intermittent Pilot Ignition, 100% Shut-Off with Continuous Retry — Utilizes a two-stage combination gas control (which fires at 50% or 100% of full rated input) and an ignition control (continuous retry). Pilot is automatically lit on a call for heat.	63 64 87 88	115V 208V/230V 115V 208V/230V	natural natural propane propane
Mechanical Modulation with Automatic Pilot Ignition, Non-100% Shut-Off — Utilizes a modulating combination gas control and an ignition control (non-100% shut-off). Pilot is automatically lit whenever there is power to the unit. Modulation range is between 50% and 100% fire; gas control shuts off below 50% fire.	51 52	115V 208V/230V	natural natural
Mechanical Modulation with Automatic Pilot Ignition, 100% Shut-Off with Continuous Retry — Utilizes a modulating combination gas control and an ignition control (continuous retry). Pilot is automatically lit when there is power to the unit. Modulation range is between 50% and 100% fire; gas control shuts off below 50% fire.	59 60 89 90	115V 208V/230V 115V 208V/230V	natural natural propane propane
Electronic Modulation with Intermittent Pilot Ignition, Non-100% Shut-Off — For use with room sensing or duct sensing with remote temperature set-point adjustment. Includes combination gas control, ignition control (non-100% shut-off), modulating amplifier and modulating / regulator valve. Duct sensing requires addition of Maxitrol Duct Sensing System. Room sensing requires addition of Maxitrol Selectra-stat. When duct sensing, room override stat can be added.	41 42	115V 208V/230V	natural natural
Electronic Modulation with Automatic Pilot Ignition, 100% Shut-Off with Continuous Retry — For use with room sensing or duct sensing with remote temperature set-point adjustment. Includes combination gas control, ignition control (continuous retry), modulating amplifier and modulating / regulator valve. Duct sensing requires addition of Maxitrol Duct Sensing System. Room sensing requires addition of Maxitrol Selectra-stat . When duct sensing, room override stat can be added.	43 44 39 40	115V 208V/230V 115V 208V/230V	natural natural propane propane

5-450 WIRING DIAGRAM LOCATIONS - Models DJE/DHE

Table 8

Control Wiring Diagram Page Location Index for Models DJE
Gravity Vented Indoor Gas Control Systems^①

Control Code	Series Identity Number			
	201	202	203	204
08 OR 09	B5 ^A B6 ^A	B9 B10	B9 B10	B5 ^B B6 ^B
11 OR 12	B1 ^A B2 ^A	B1 ^A B3 ^D B2 ^A B4 ^D	B1 ^B B3 ^E B31 ^D B2 ^B B4 ^E B32 ^D	B3 ^C B4 ^C
25 OR 26	B19 ^B B21 ^C B20 ^B B22 ^C			
30 OR 31	B23 B24	B41 B42	B53 B54	
39 OR 40	B25 B26	B51 B52		
41 OR 42	B7 B8	B13 B14	B13 ^C B14 ^C	B7 ^B B8 ^B
43 OR 44	B25 B26	B51 B52		
51 OR 52	B11 B12	B17 B18		
55 OR 56	B15 B16	B33 B34		
59 OR 60	B27 B28	B37 ^B B39 ^C B38 ^B B40 ^C	B43 ^B B45 ^C B44 ^B B46 ^C	
63 OR 64	B29 B30	B35 B36	B49 B50	B47 B48
81 OR 82	B1 ^A B2 ^A	B1 B2	B1 ^B B3 ^E B31 ^D B2 ^B B4 ^E B32 ^D	B3 ^C B4 ^C
83 OR 84	B19 ^B B21 ^C B20 ^B B22 ^C			
85 OR 86	B23 B24	B41 B42	B53 B54	
87 OR 88	B29 B30	B35 B36	B49 B50	B47 B48
89 OR 90	B27 B28	B37 ^B B39 ^C B38 ^B B40 ^C	B43 ^B B45 ^C B44 ^B B46 ^C	

^① Cell format represents single or three phase power as shown in the following example.



A - Model sizes 75 - 300

B - Model Sizes 75 - 200

C - Model Sizes 225 - 400

D - Model Sizes 350 - 400

E - Model Sizes 225 - 300

5-450 WIRING DIAGRAM LOCATIONS - Models DJE/DHE

Table 9
Accessory Wiring Diagrams

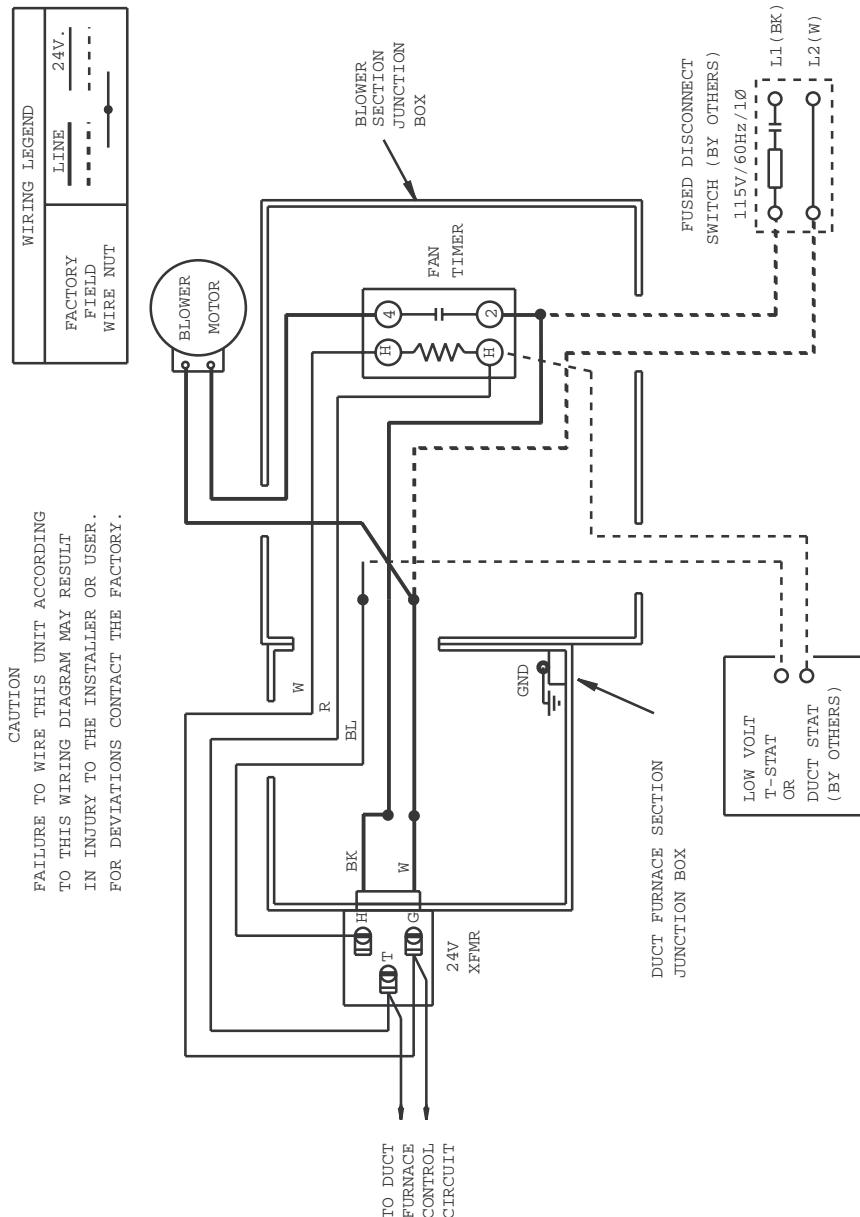
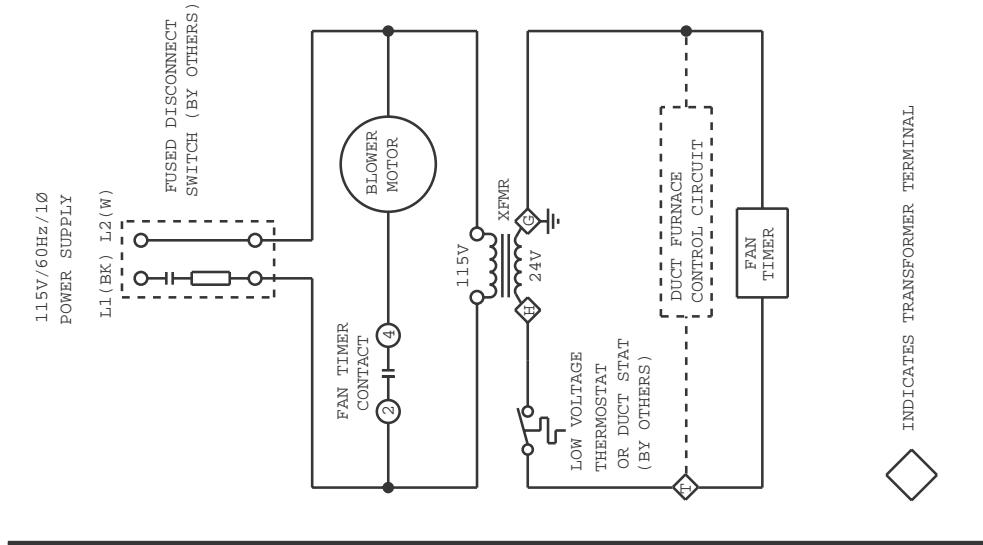
Modulating Damper Controllers	
Remote Manual Potentiometer	C1
Proportional Temperature Controller (Mixed Air)	C2
Remote Manual Potentiometer with Proportional Temperature Controller	C3
Freeze Stat	C4
Fire Stat	C5
Modulating Gas Control Thermostats	
Maxitrol Duct Sensing System	C6
Maxitrol Duct Sensing System with Room Override	C7
Maxitrol Selectra-Stat	C8
Remote Monitoring Panel Configurations	
Units without Dampers	C9
Units with Two-Position Dampers	C10
Units with Two-Position Dampers and Summer/Winter Switch	C11
Units with Modulating Dampers	C12
Robertshaw CM260 Thermostat with Subbase	
Units Less Dampers or with Modulating Dampers	C13
Units with Two-Position Dampers	C14
Summer/Winter Switch	
Units Less Dampers or with Modulating Dampers	C15
Units with Two-Position Dampers	C16
Power Exhauster	C17

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



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.

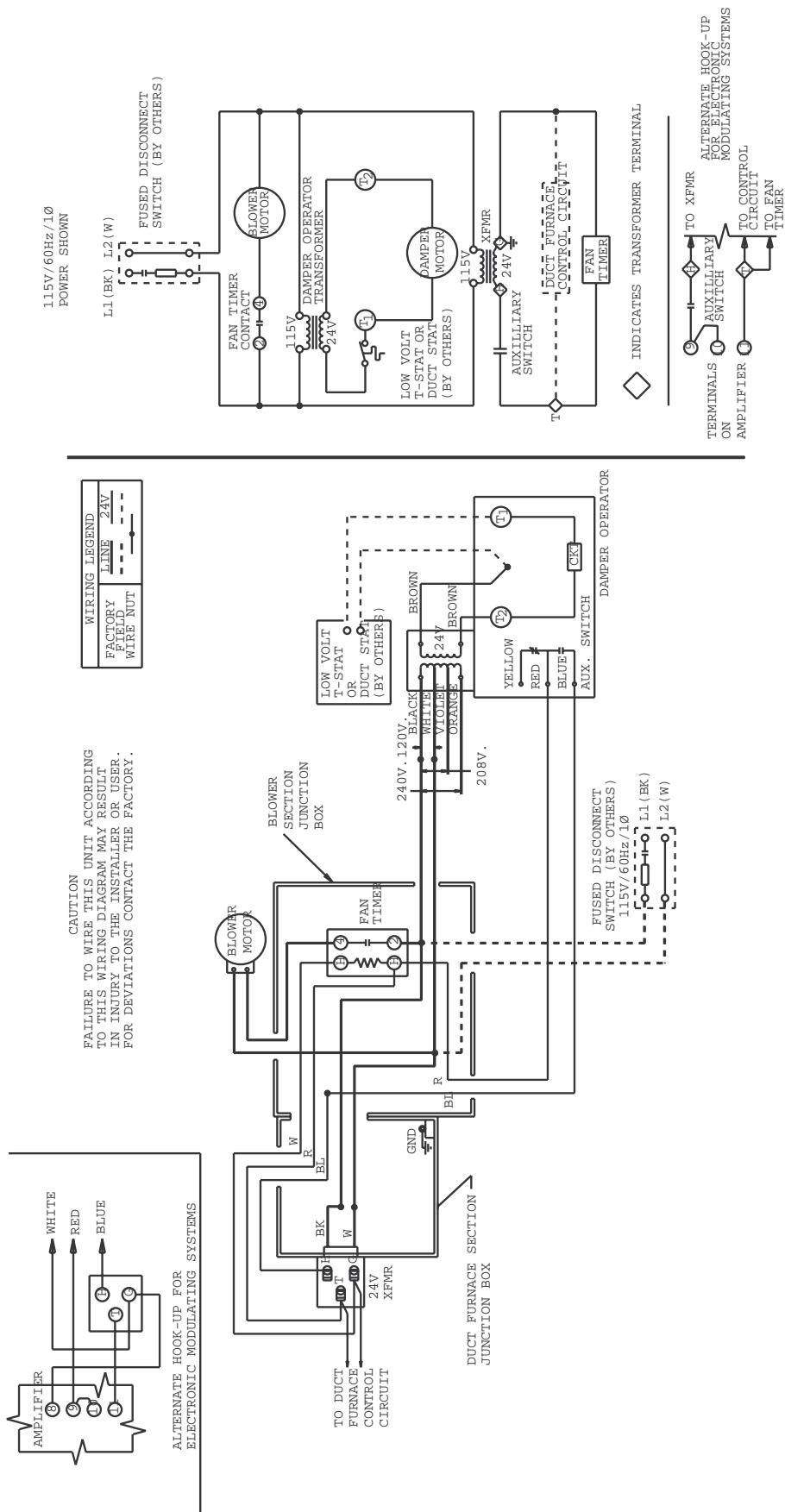
Indoor Duct Furnace
Blower Section Wiring 115V/1Ø

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



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.

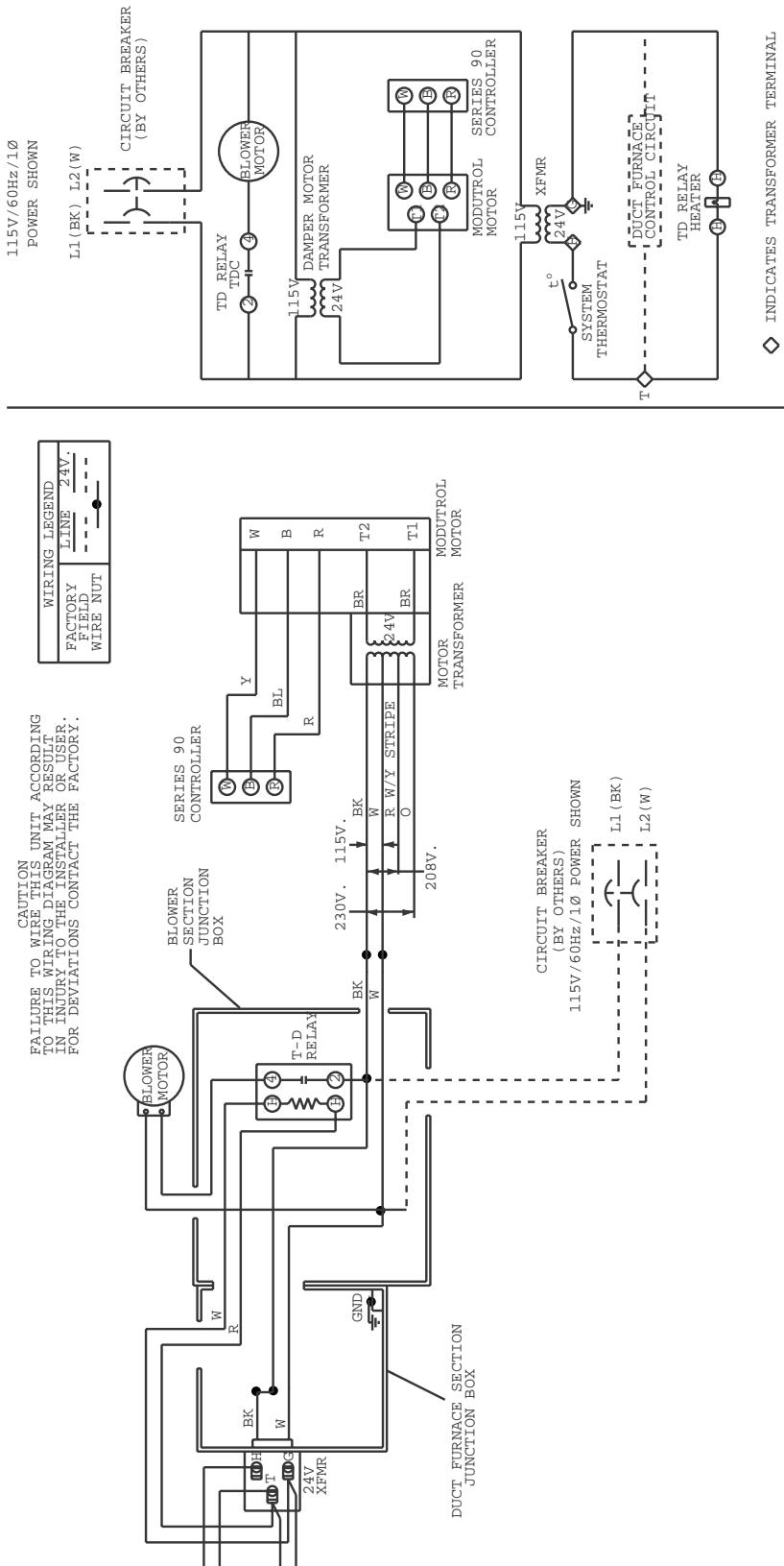
Indoor Duct Furnace
Blower Section Wiring 115V/1Ø with Honeywell 2-position damper operator

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



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.

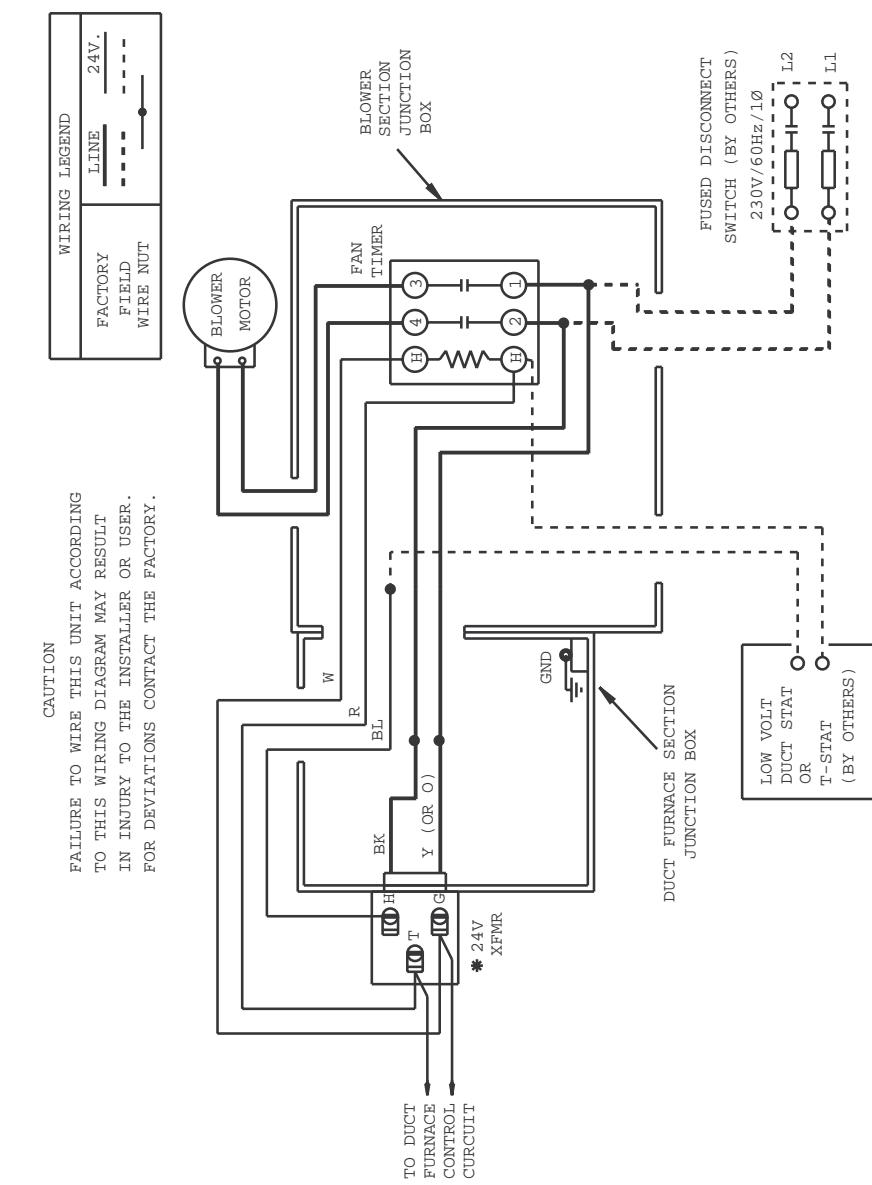
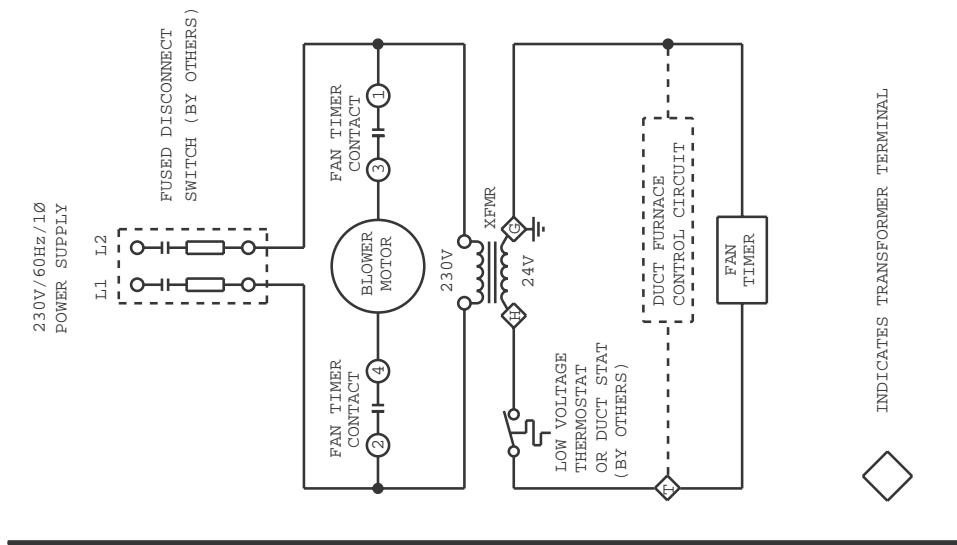
Indoor Duct Furnace
Blower Section Wiring 115V/1Ø with Honeywell modulating damper motor

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



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.

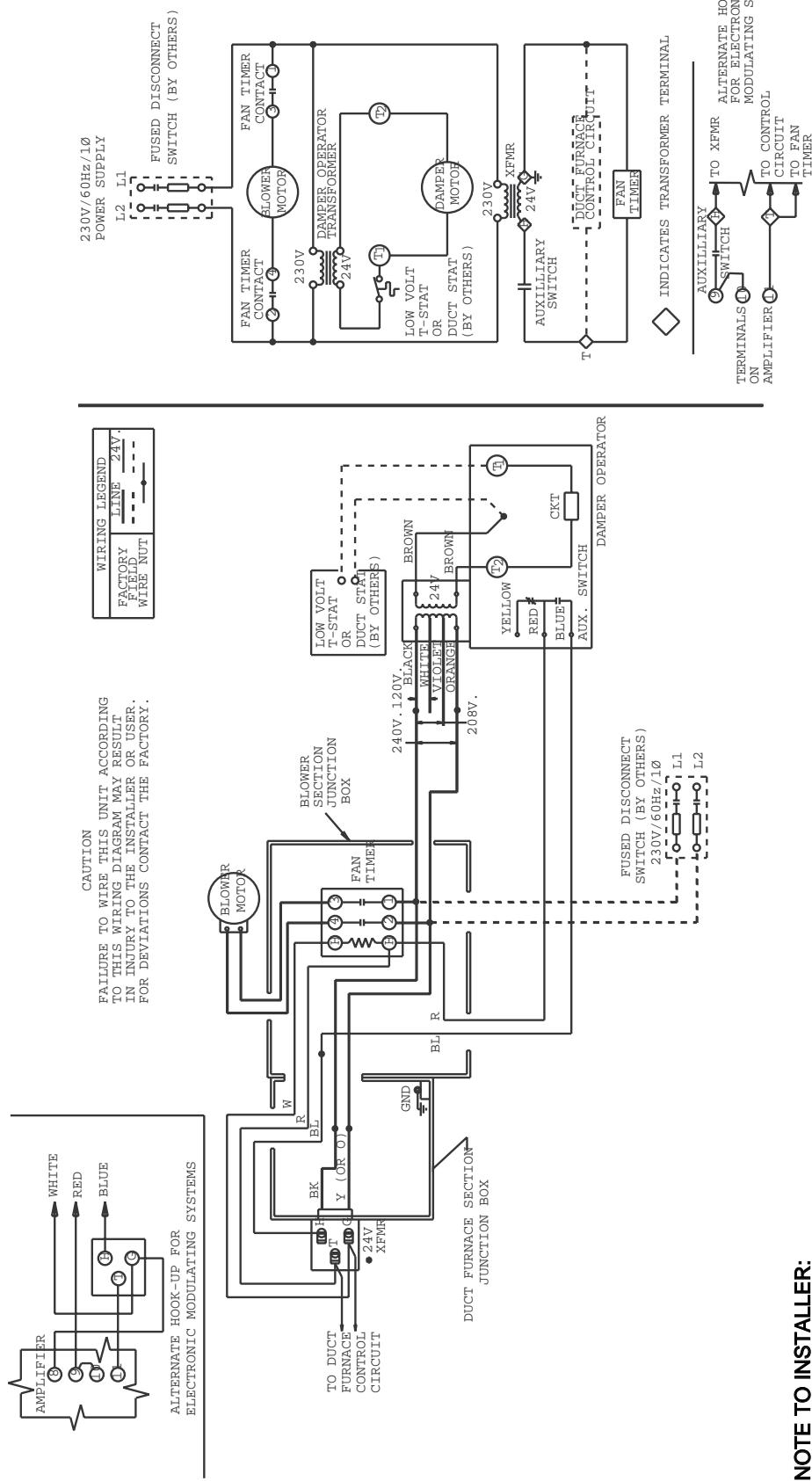
Indoor Duct Furnace
Blower Section Wiring 230V/1Ø

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



NOTE TO INSTALLER:

Attach this diagram near head

All wiring must comply with national electric code and all local codes

All components must agree with their respective power sources and all local codes.

Use 105°C wire for replacements.

*Alternate XFMR. Primary 200V/60Hz/1φ - BK&R wire not the wire not used.

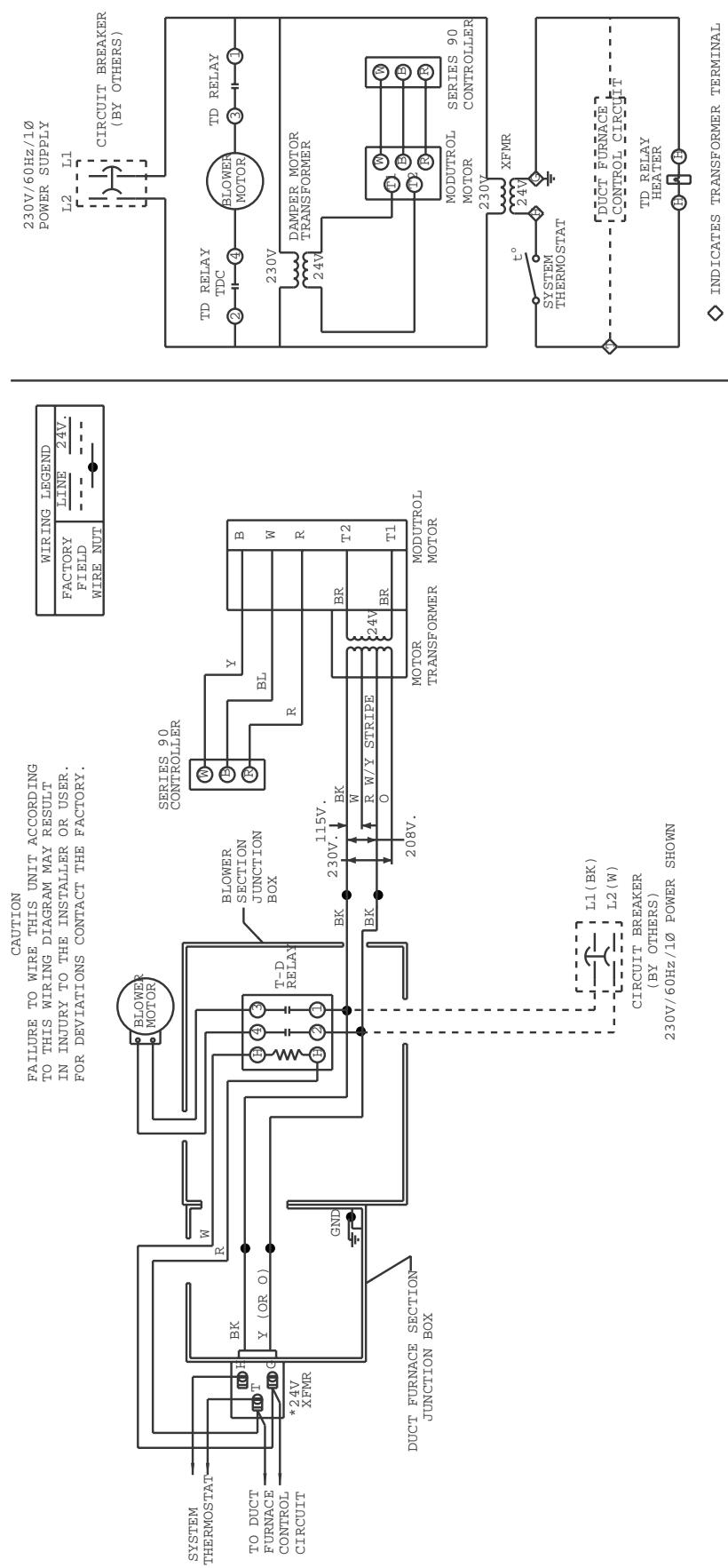
Indoor Duct Furnace
Blower Section Wiring

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



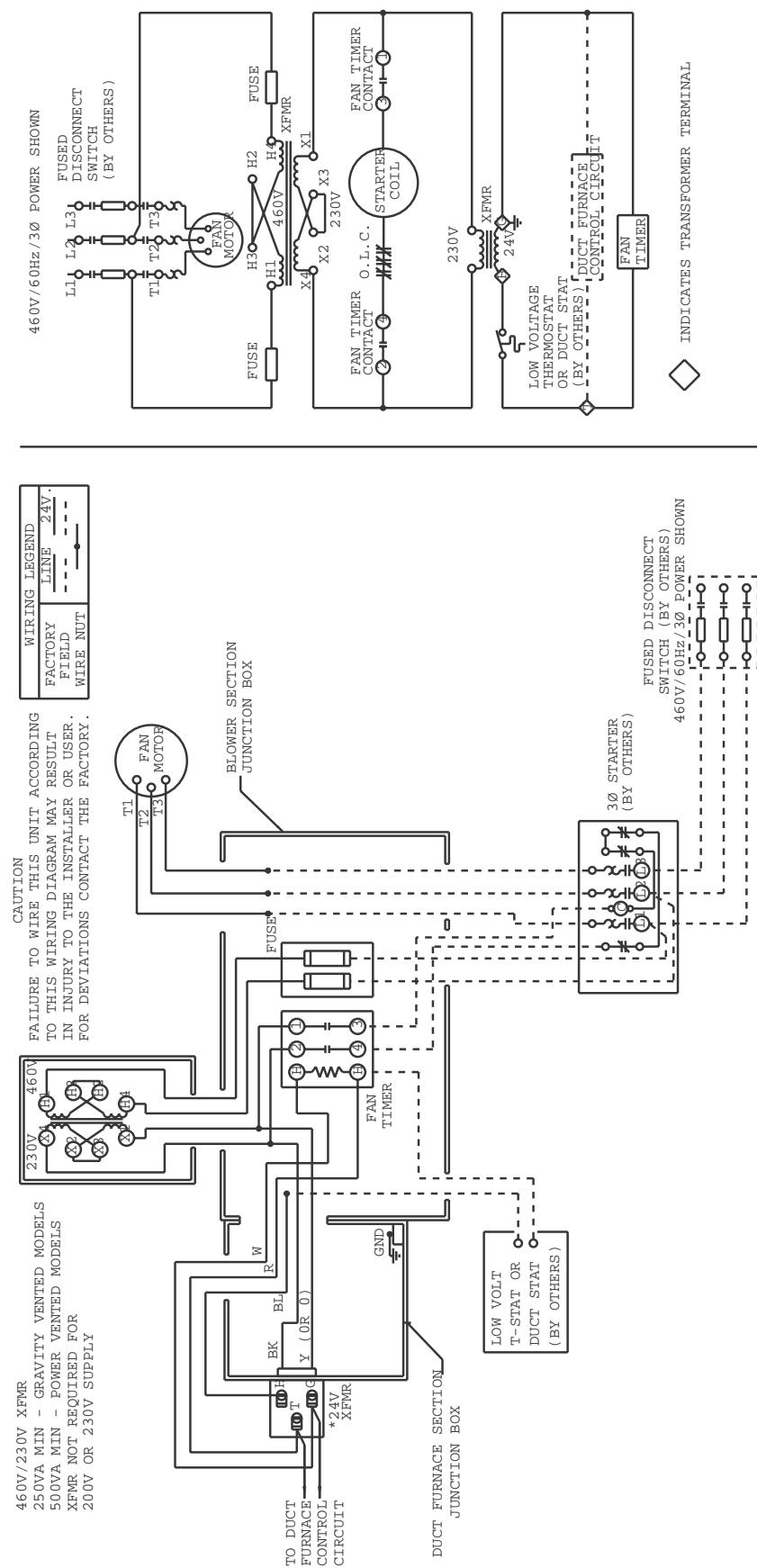
Indoor Duct Furnace
Blower Section Wiring 230V/1Ø with Honeywell modulating damper motor

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



NOTE TO INSTALLER:

Attach this diagram near heater.
All wiring must comply with nation
Code and all local codes

All components must agree with their respective power source.

- Use 105°C wire for replacements.

*Alternate XFMR. Primary 200V/60Hz/1φ - BK&R wire nut the wire not used.

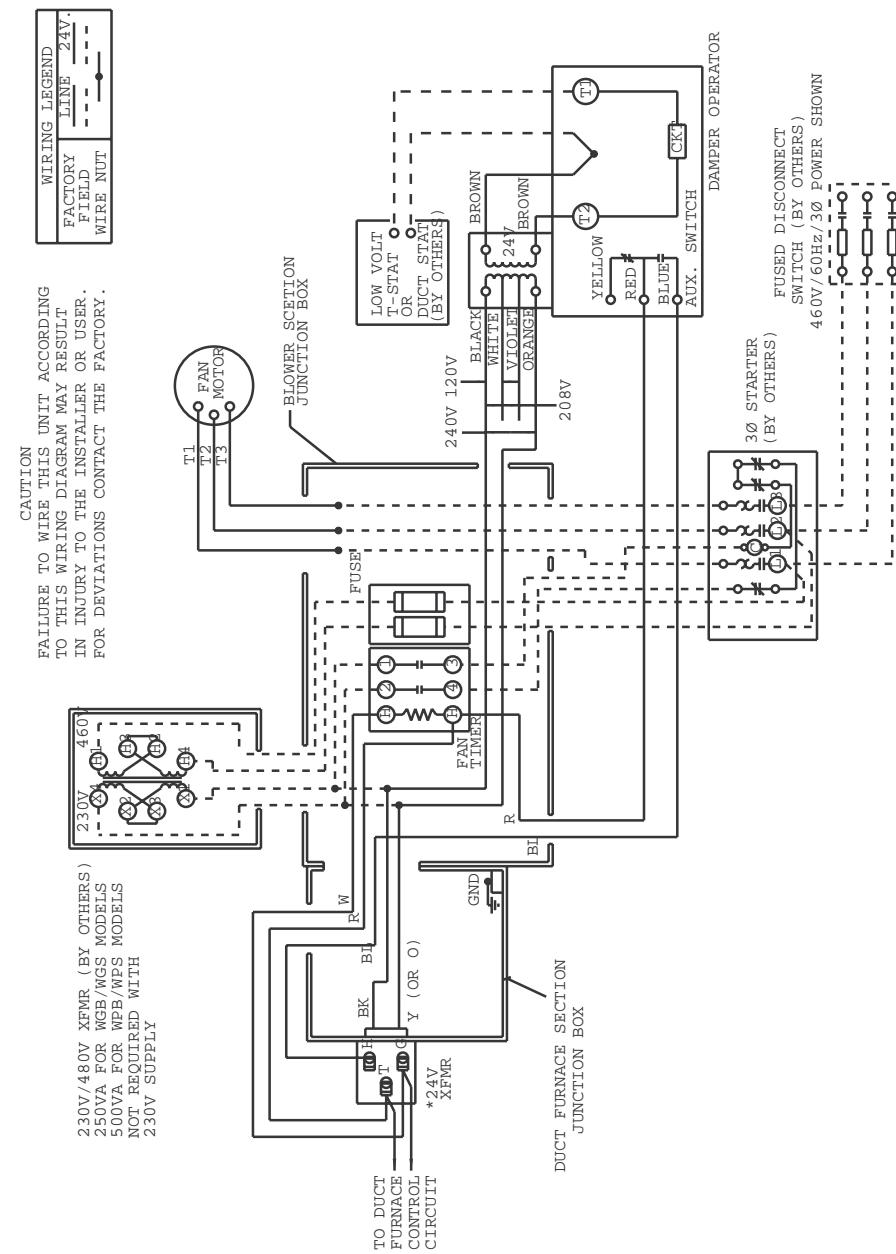
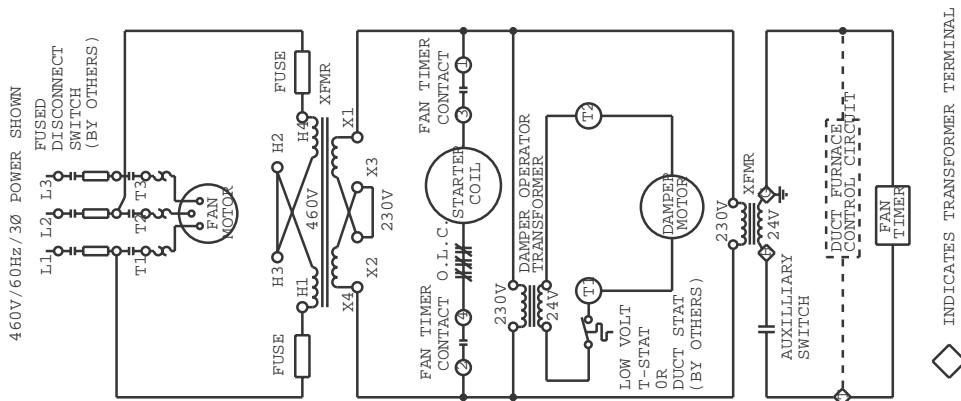
Indoor Duct Furnace
Blower Section Wiring 200V/260V/460V/3Φ

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



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.

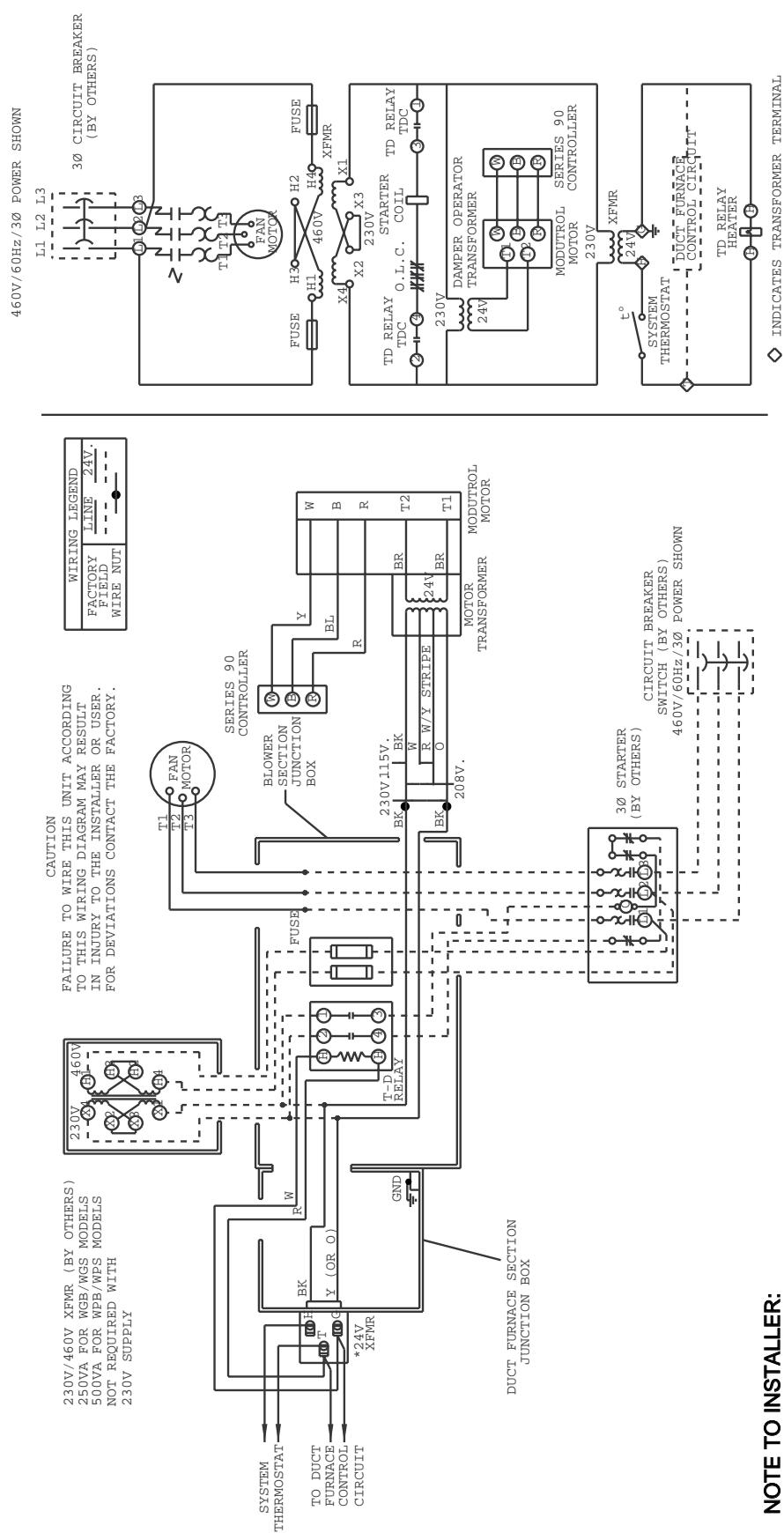
* Alternate XFMR. Primary 200V/60Hz/1φ-BK&R wire nut the wire not used.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section A



NOTE TO INSTALLER:

- Attach this diagram near heater.
- All wiring must comply with national code and all local codes.
- All components must agree with respective power source

*Alternate XFMR. Primary 200V/60Hz/1φ - BK&R wire not the wire not used.

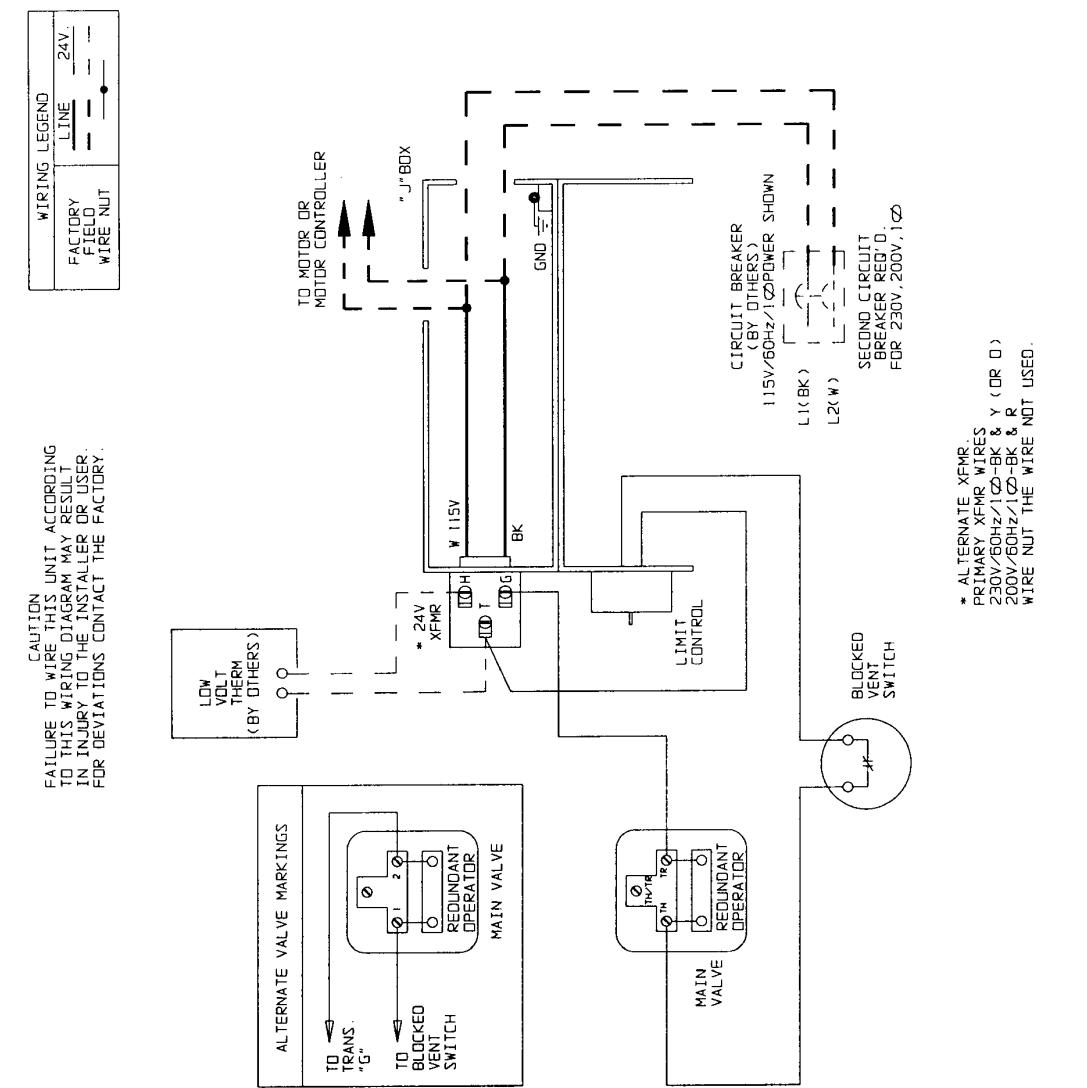
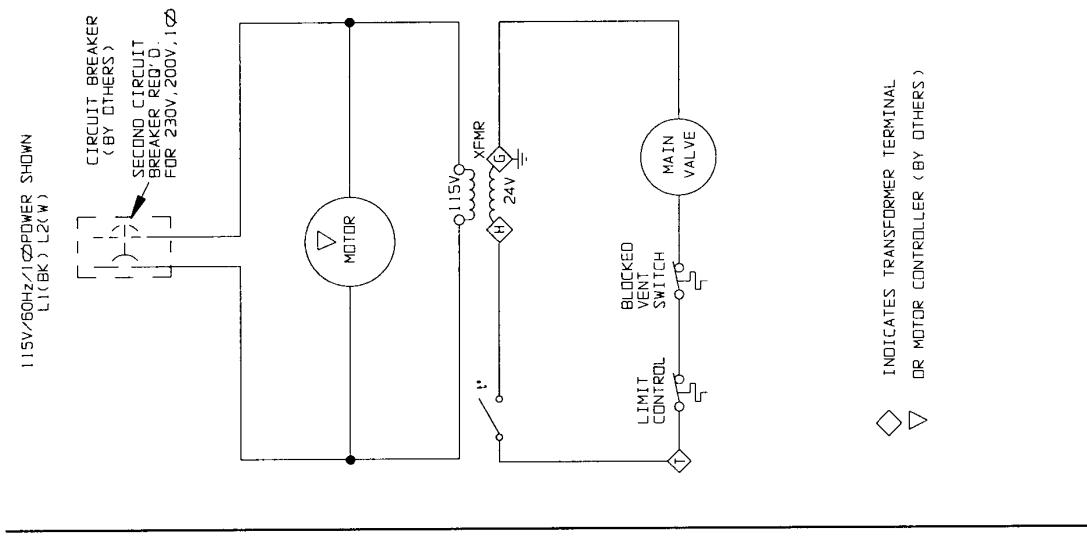
Indoor Duct Furnace
Blower Section Wiring

5-450 WIRING DIAGRAM - Models DJE/DHE

Section B



MODINE



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.

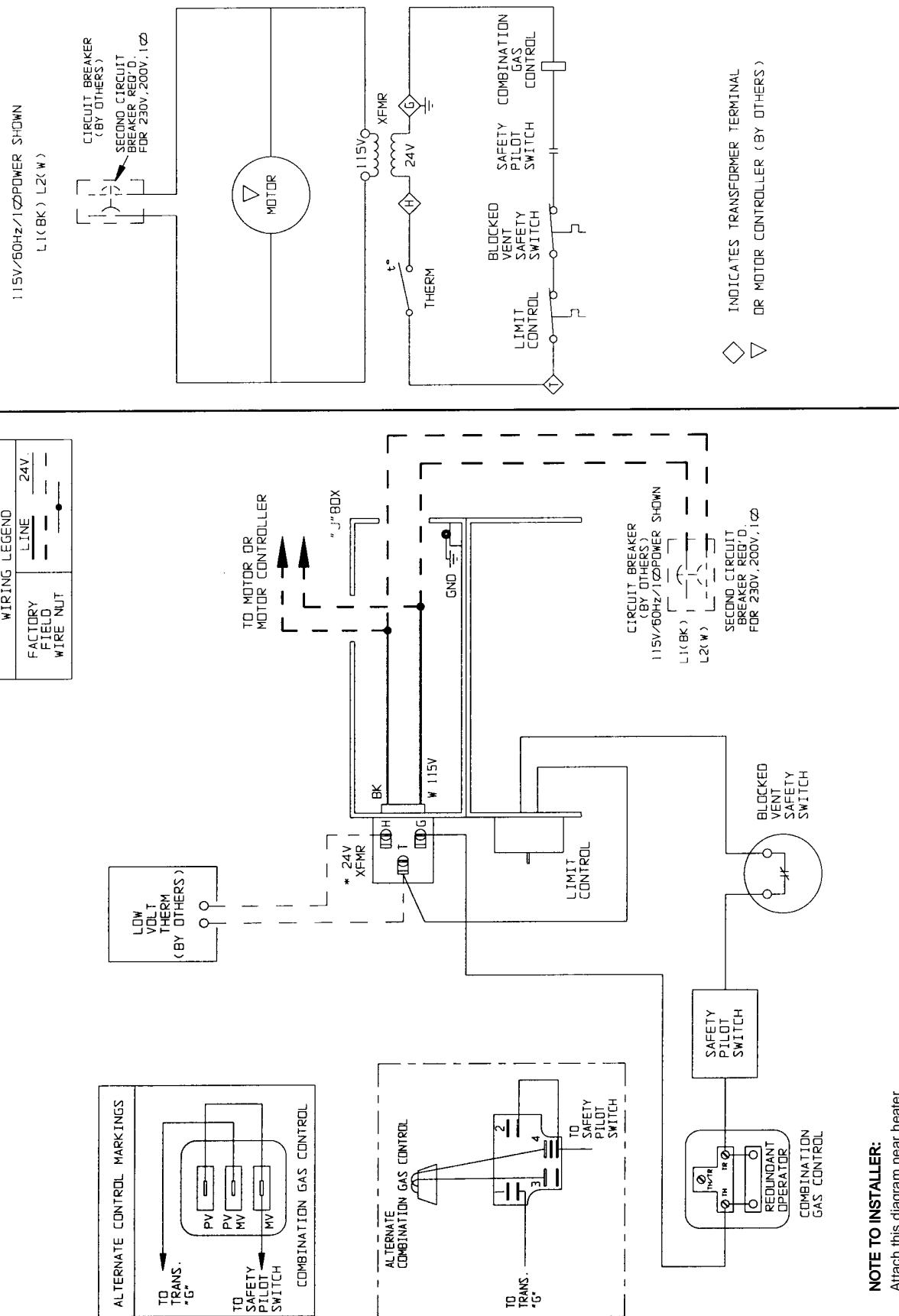
*Alternate XFMR. Primary 200V/60Hz/1 \varnothing -
BK&R wire nut the wire not used.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



5H70833C24 (Rev. H)

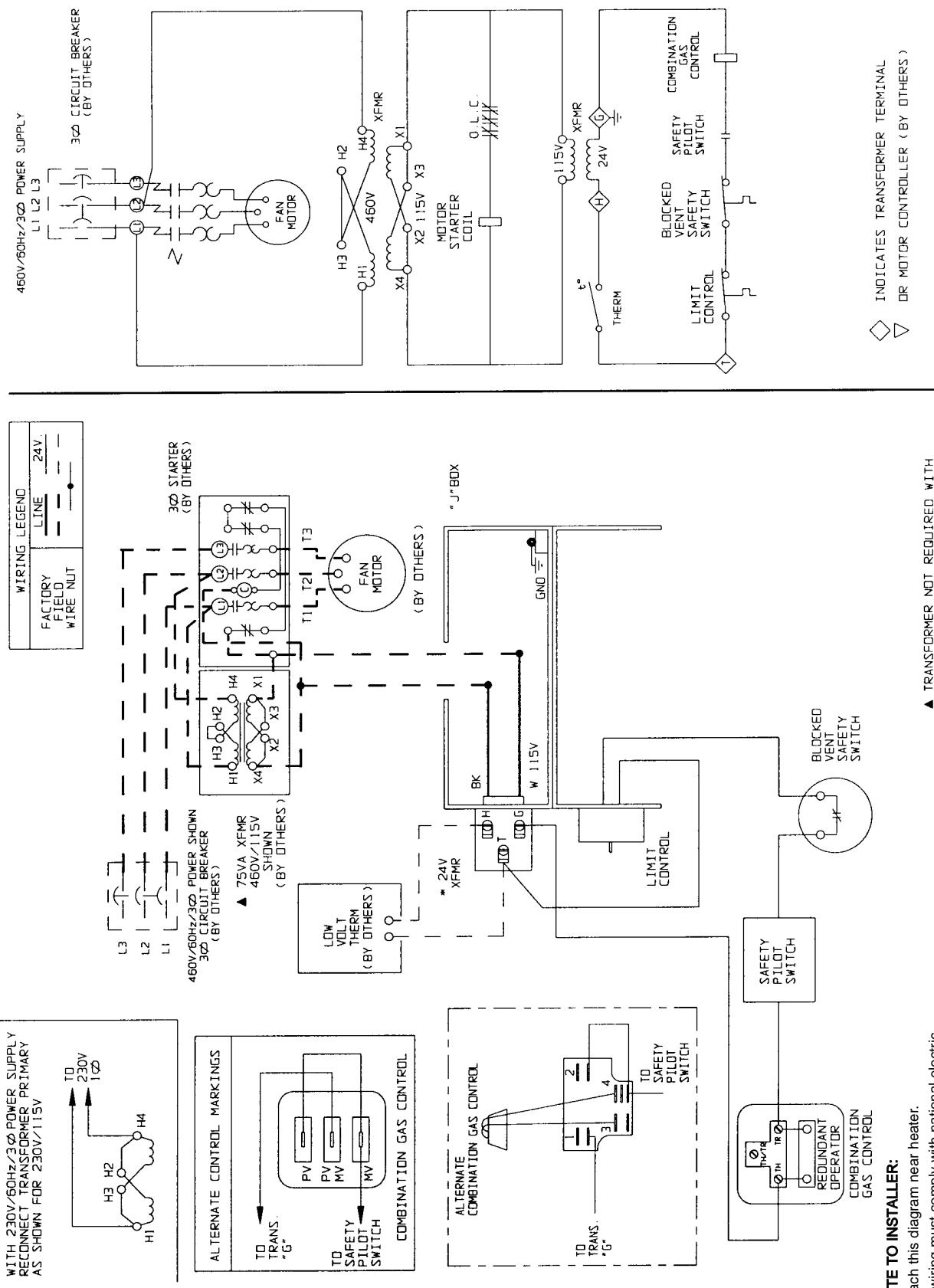
Single-stage, standing pilot ignition, 100% shut-off, single-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B

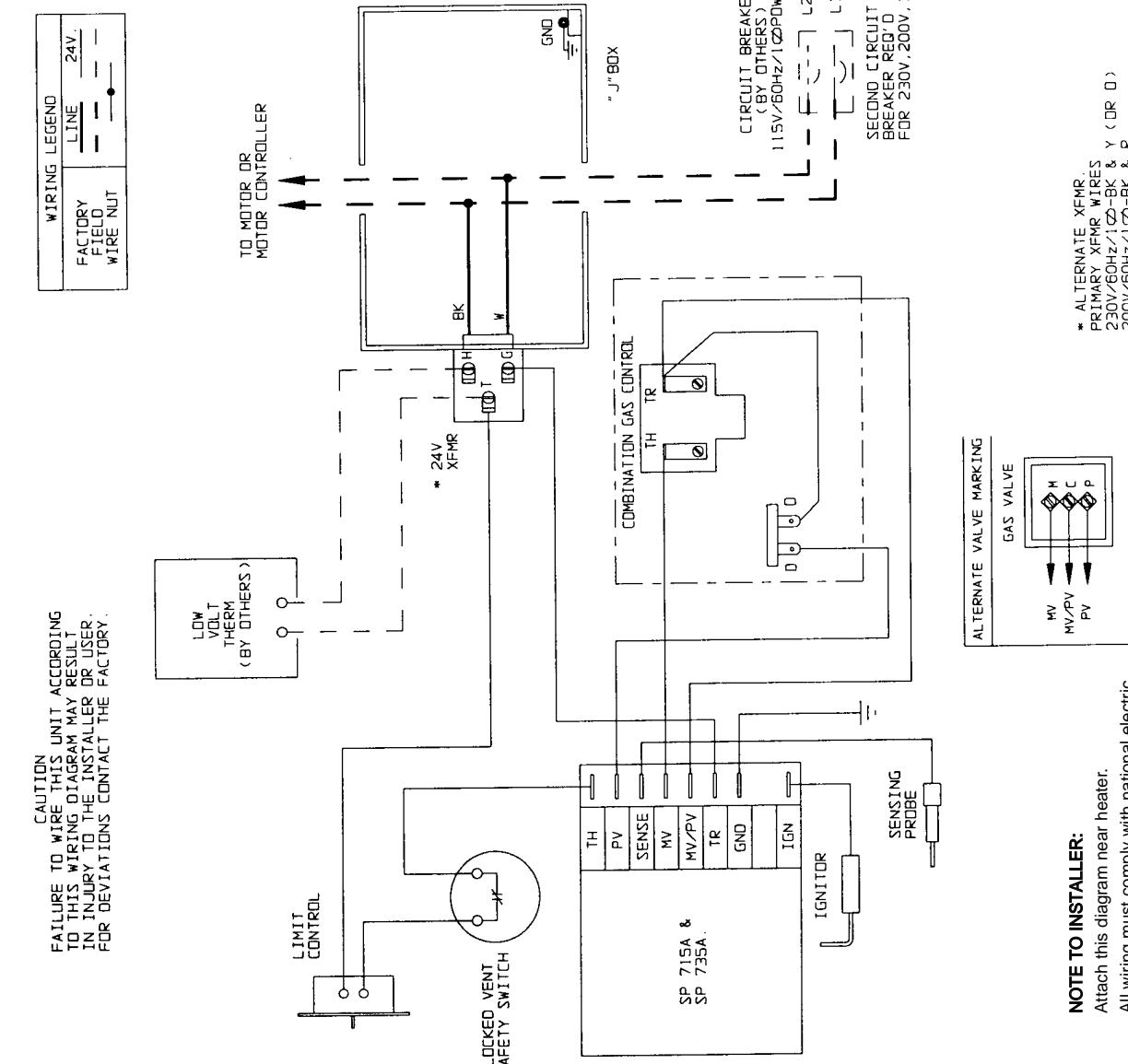
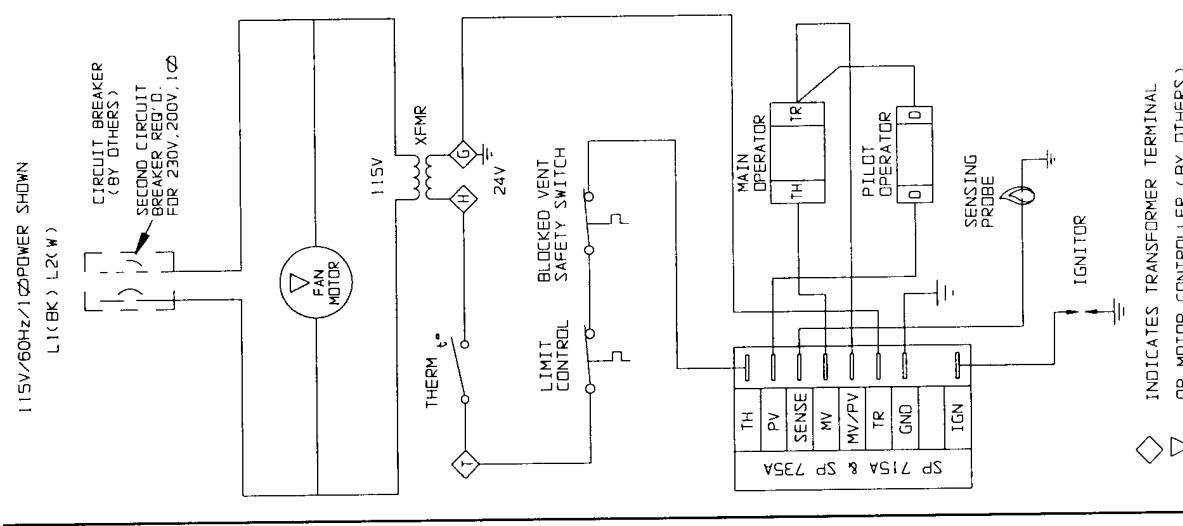


5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

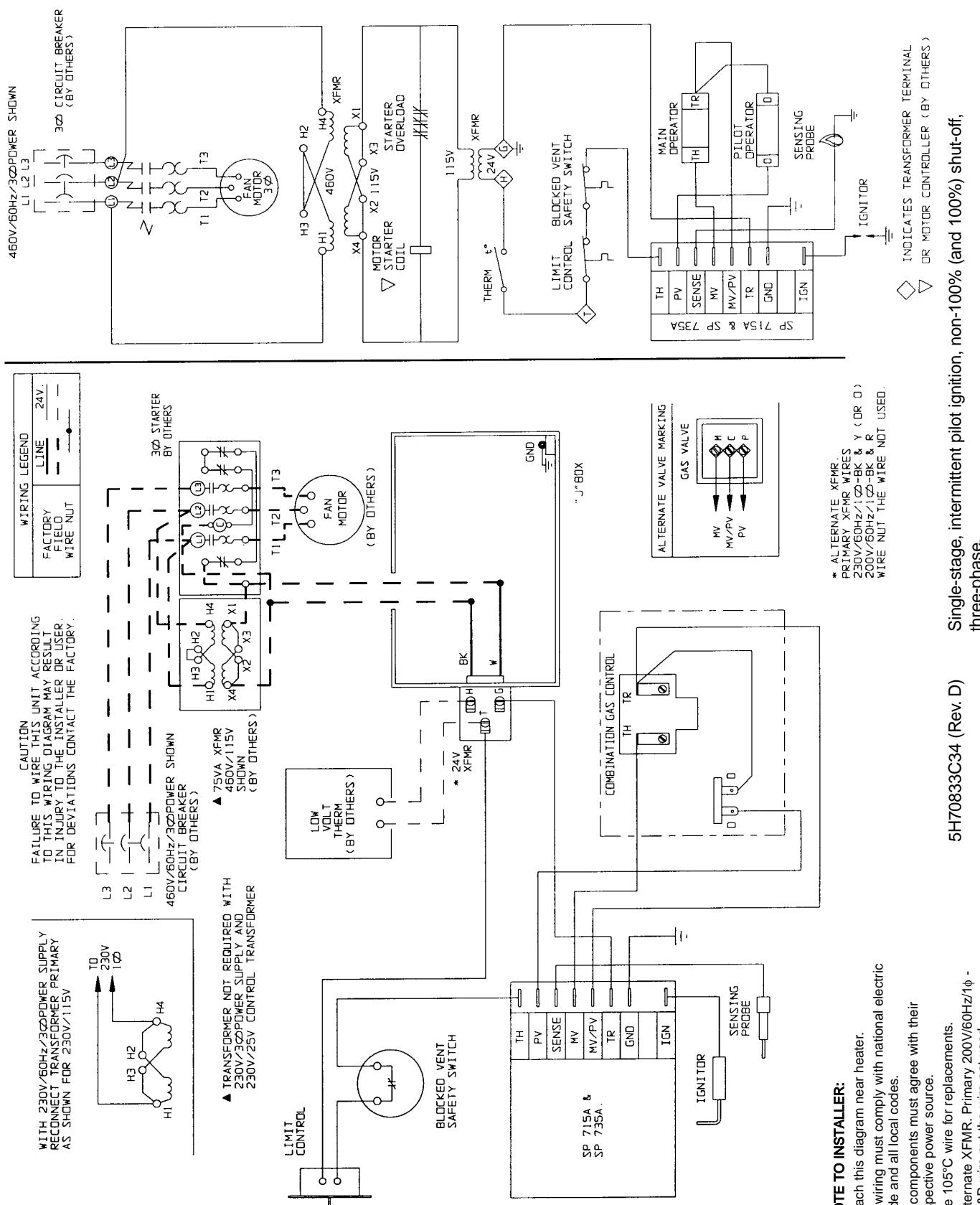
Section B



5H70833C34 (Rev. D)

Single-stage, intermittent pilot ignition, non-100% (and 100%) shut-off.
Single-phase.

Section B



NOTE TO INSTALLER:

Attach this diagram near heater.
All wiring must comply with national
code and all local codes.

All components must agree with their respective power source.
Use 105°C wire for replacements.
*Alternate XFMR. Primary 200V/60Hz/1Ø -

Single-stage, intermittent pilot ignition, non-100% (and 100%) shut-off, three-phase

INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
2230V/60Hz/1Q-BK & Y (OR O)
2000V/60Hz/1Q-BK & R
WIRE NUT THE WIRE NOT USED.

WITH 230V/60Hz/3ZOPOWER SUPPLY
RECONNECT TRANSFORMER PRIMARY
AS SHOWN FOR 230V/115V

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

▲ TRANSFORMER NOT REQUIRED WITH
230V/300W POWER SUPPLY AND
230V/25V CONTROL TRANSFORMER

The diagram shows a complex circuit loop involving several components and terminals. The loop starts at terminal TD, goes up through component Q2, then right through component Q1. It then splits into two parallel paths: one path goes down through component H1 and then right through component H3; the other path goes left through component H2. These two paths then converge and go up through component H4, finally returning to terminal TD.

A schematic diagram of a circuit. A vertical line descends from the top, ending in a rectangular component labeled "LIMIT CONTROL". Two horizontal lines extend from the sides of this component. The left line connects to a small circle representing a switch. The right line continues down to a larger rectangular component representing a motor. A third line extends from the bottom of the motor component to the right.

BLOCKED VENT
SAFETY SWITCH

TH	
PV	
SENSE	
MW	
MV/PV	

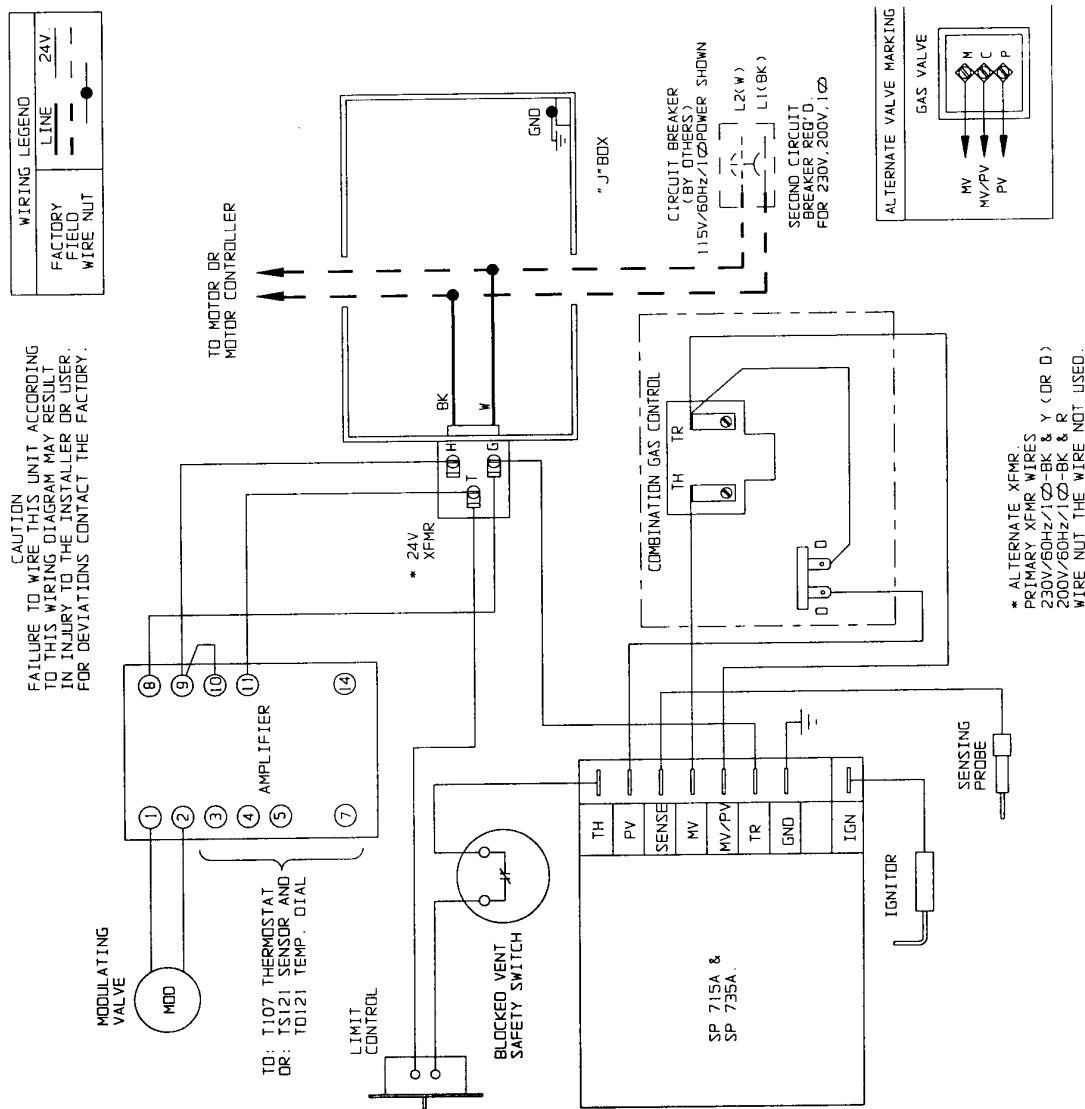
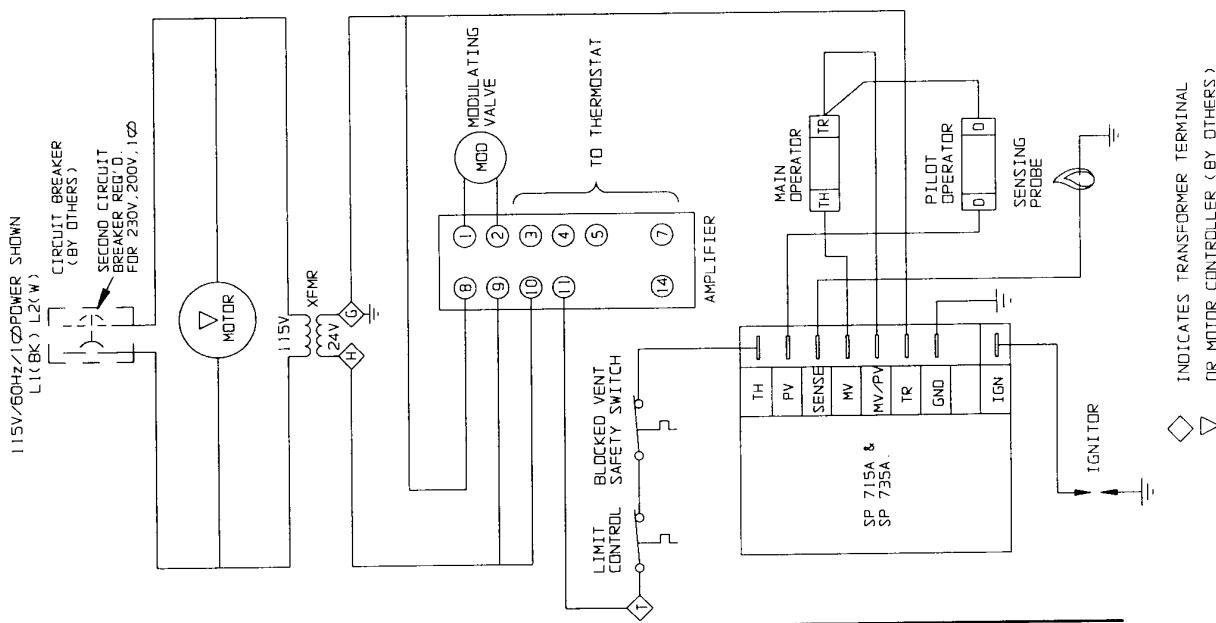
ALTERNATE XFMR.
ALTERNATE XFMR WIRES
120V/60Hz/120-BK & Y 120R 0
120V/60Hz/120-BK & R
NUT THE WIRE NOT USED.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



5H70833C37 (Rev. C)

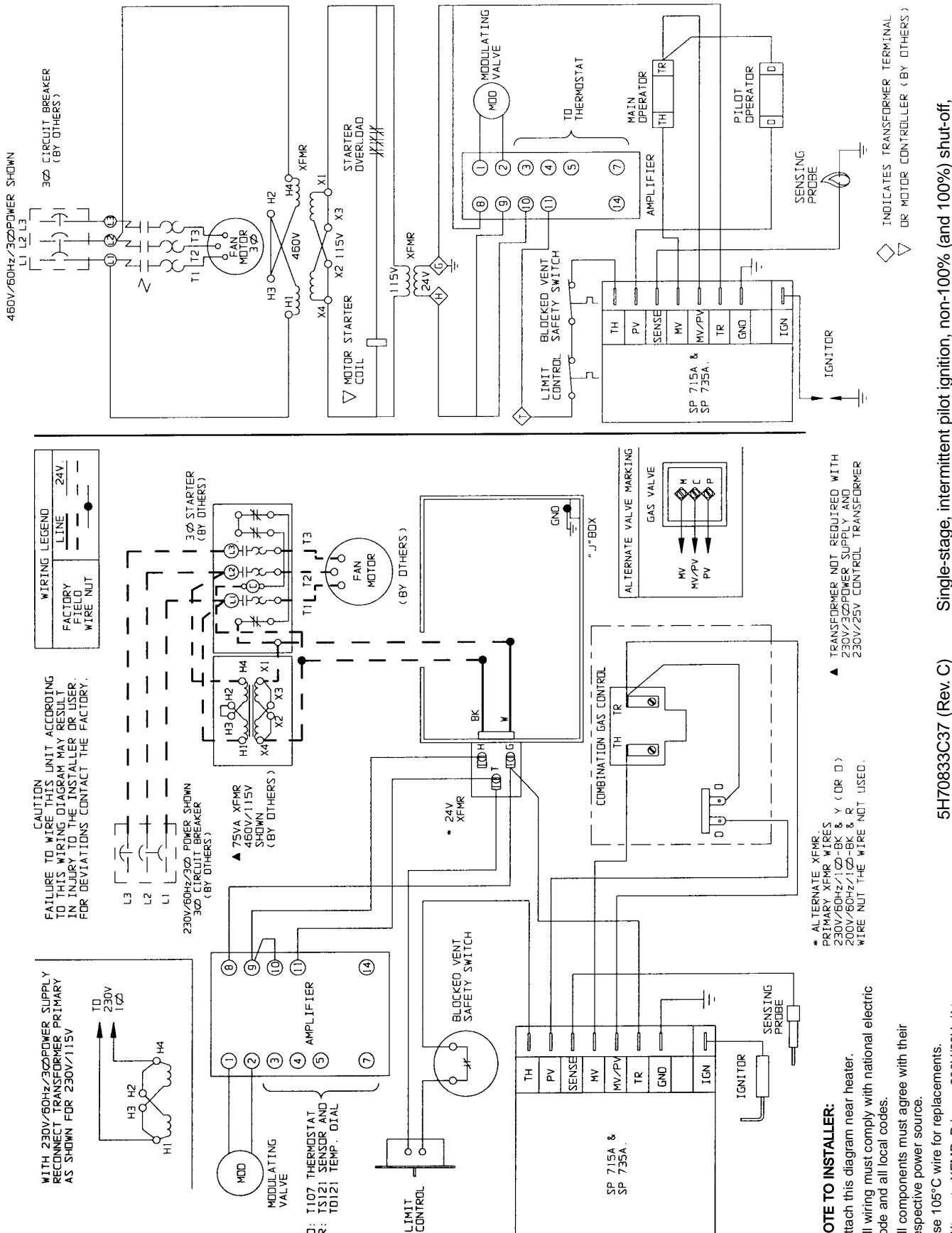
Single-stage, intermittent pilot ignition, non-100% (and 100%) shut-off,
single-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



WITH 230V/60Hz/3ØPOWER SUPPLY
RECONNECT TRANSFORMER PRIMARY
AS SHOWN FOR 230V/115V

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.

L - L
230V/60Hz/3Ø POWER SHOWN
3Ø CIRCUIT BREAKER
(BY OTHERS)

The diagram shows a vertical line representing a circuit. At the bottom, there is a rectangular box labeled "LIMIT CONTROL". Two wires extend from the top of this box to two circular components. The first component is a circle containing a square symbol with diagonal lines, representing a normally open (NO) contact. The second component is a circle containing a switch symbol with a horizontal bar, representing another normally open (NO) contact. A third wire connects the two contacts in series. Above this series connection is another circle containing a switch symbol with a horizontal bar, representing a third normally open (NO) contact. This final contact is connected in parallel with the rest of the series circuit. The label "BLOCKED VENT SAFETY SWITCH" is written vertically next to the topmost contact.

SP 715A &
SP 735A

COMBINATION GAS CONTROL

GAS VALVE

MV
MV/PV
PV

IGNITOR
SENSING PROBE

J 80X

ALTERNATE VALVE MARKING

TH PV SENSE MV MV/PV TP GND IGN

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 200V/60Hz/1φ -
3K&R wire nut the wire not used.

TRANSFORMER NOT REQUIRED WITH
230V/320V POWER SUPPLY AND
230V/25V CONTROL TRANSFORMER

* ALTERNATE XF
PRIMARY XFMR W
230V/60Hz/1Ø-
200V/60Hz/1Ø-
WIRE NUT THE

TRANSFORMER NOT REQUIRED WITH
230V/320V POWER SUPPLY AND
230V/25V CONTROL TRANSFORMER

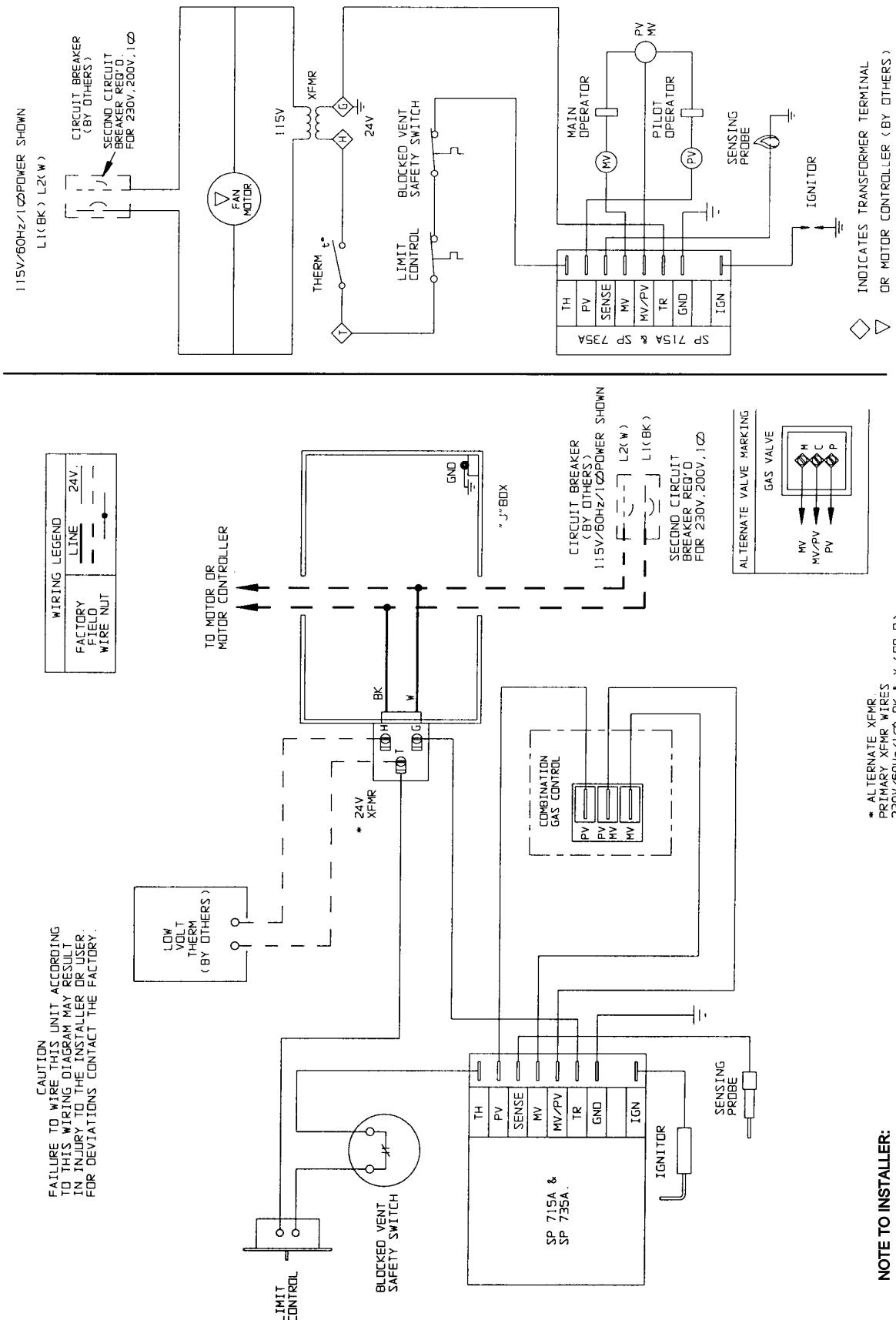
Single-stage, intermittent pilot ignition, non-100% (and 100%) shut-off,

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B

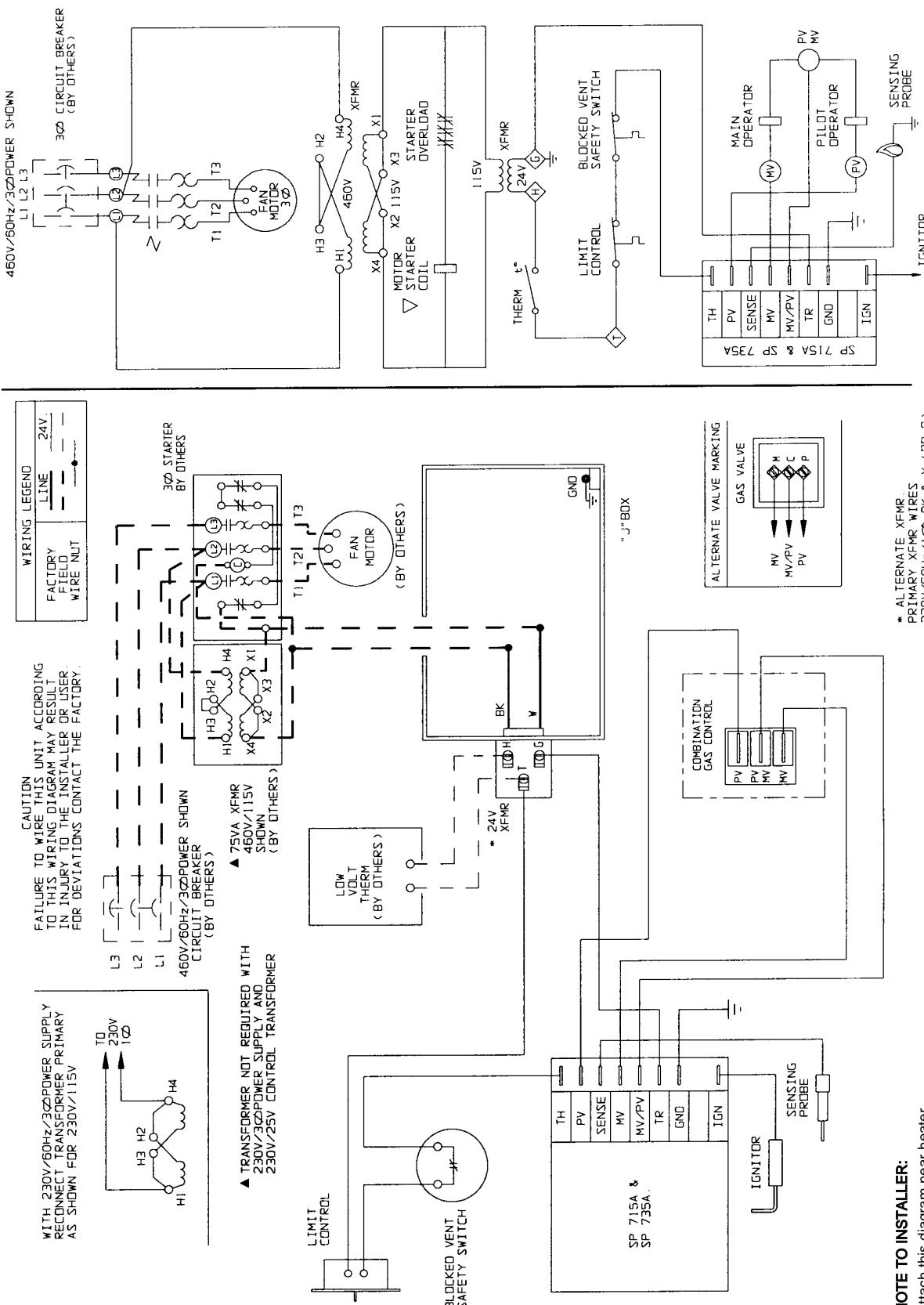


5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



NOTE TO INSTALLER:
Attach this diagram near heater.
All wiring must comply with nation
code and all local codes.

All components must agree with the recommendations.

Use 105°C wire for replacements.

*Alternate XFMR. Primary 200V/60Hz/1Φ
BK&R wire nut the wire not used.

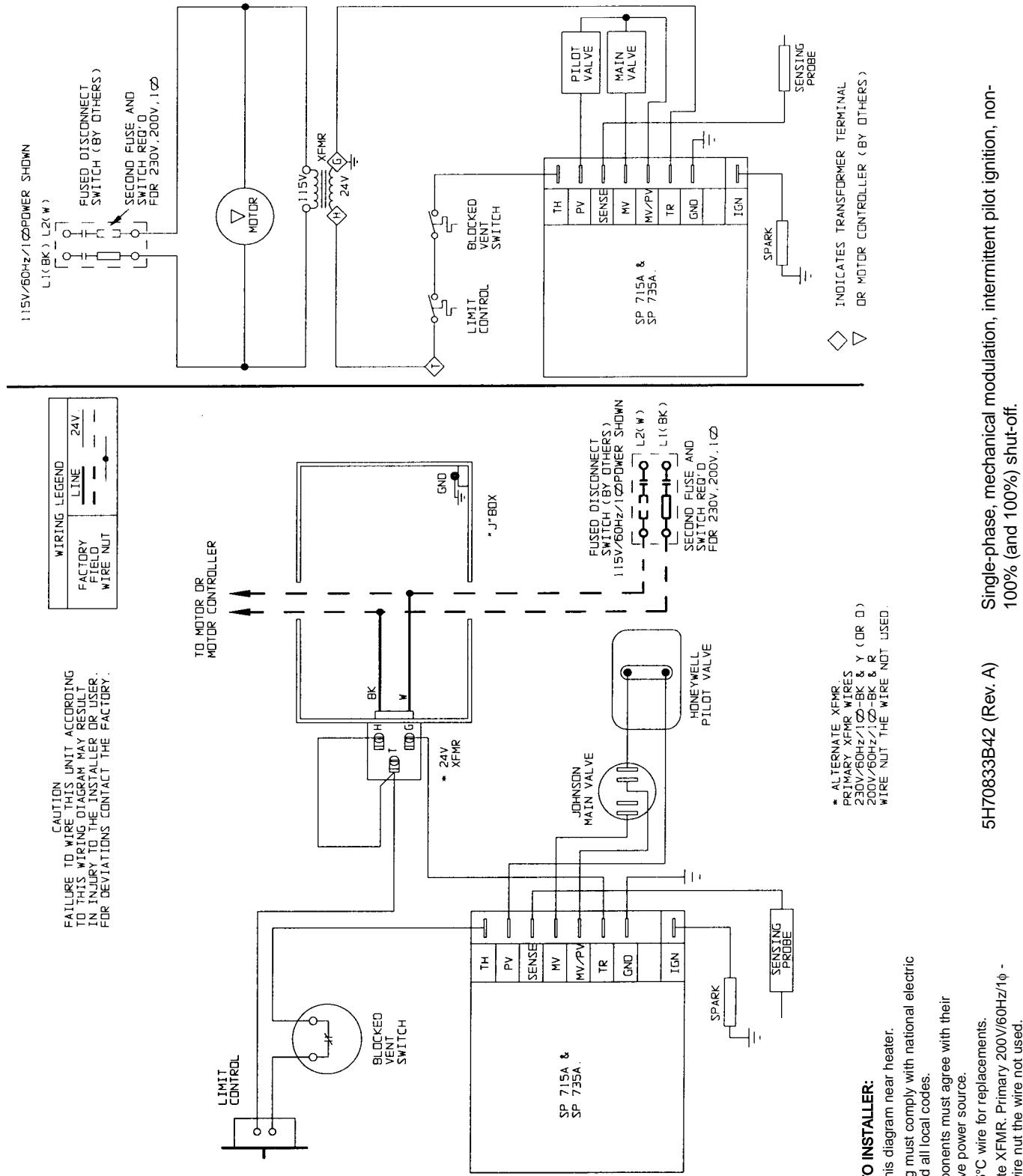
Single-stage, intermittent pilot ignition, non-100% (and 100%) shut-off, ~~4000-5000~~

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B

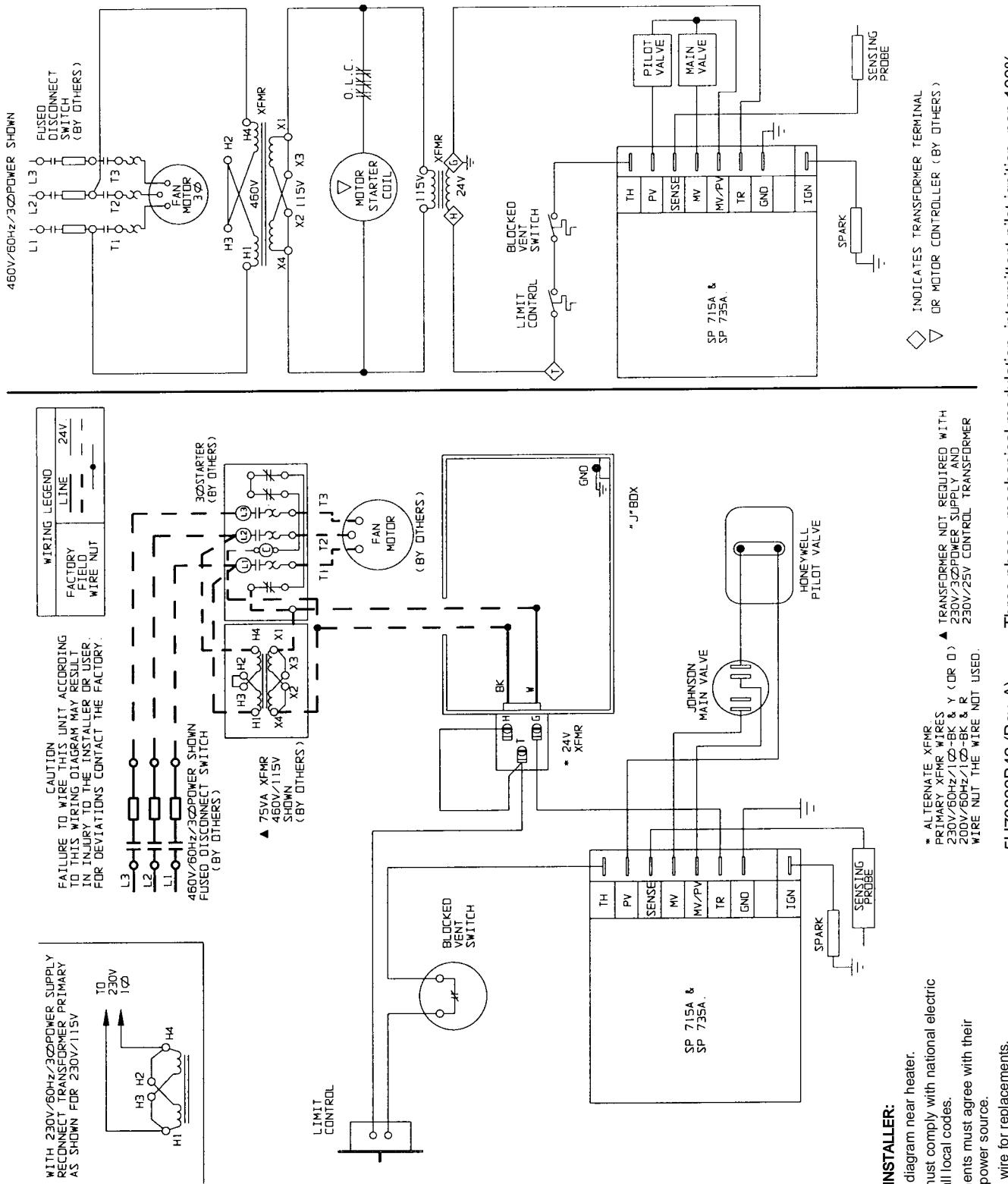


5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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 200V/60Hz/1φ - BK&R wire not the wire not used.

5H70833B42 (Rev. A) Three-phase (and 100

* ALTERNATE XFMR. TRANSFORMER NOT REQUIRED WITH
230V/60Hz-1C0-BK & Y (OR D) ▲ 230V/3CPOWER SUPPLY AND
230V/60Hz-1C0-BK & R 230V/25V CONTROL TRANSFORMER
WIRE NUT THE WIRE NOT USED.

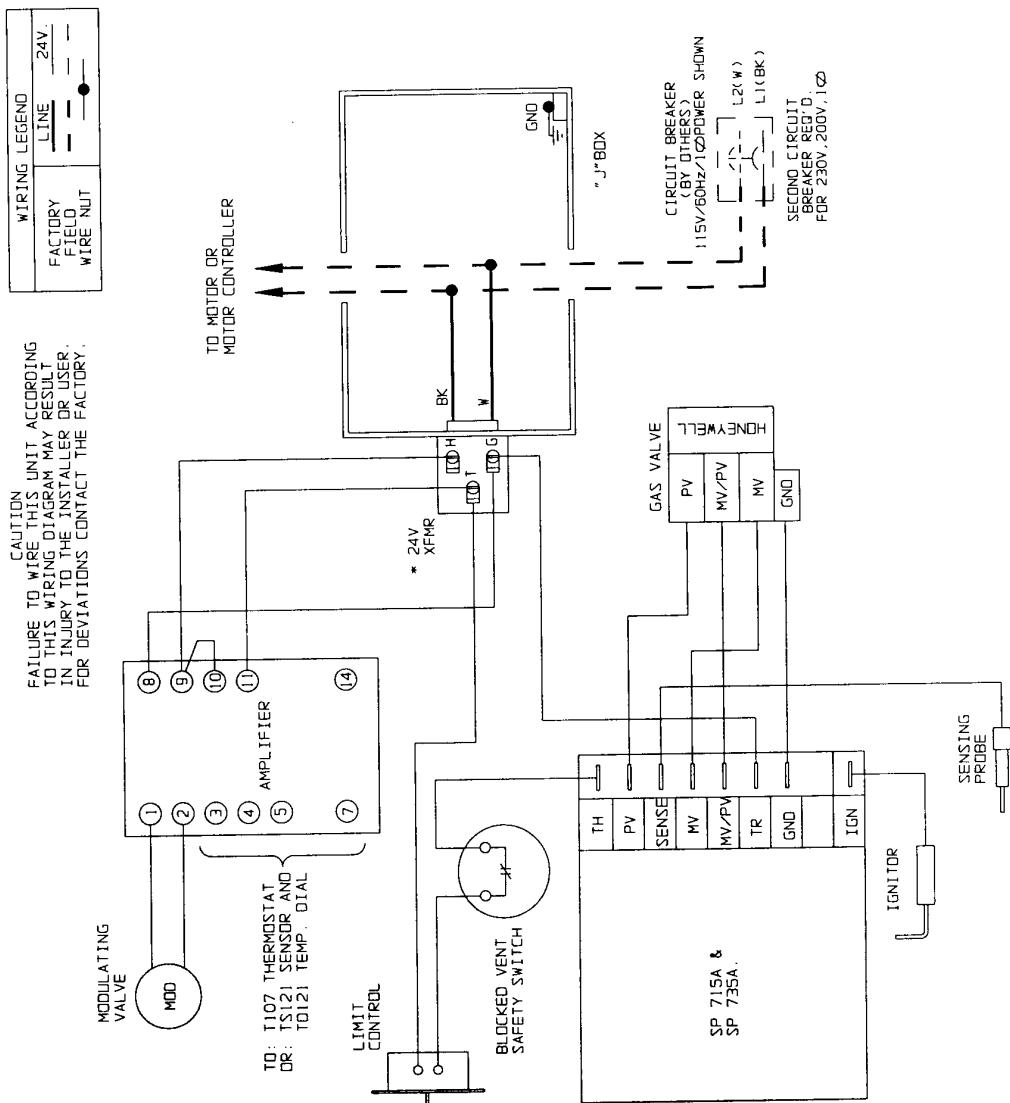
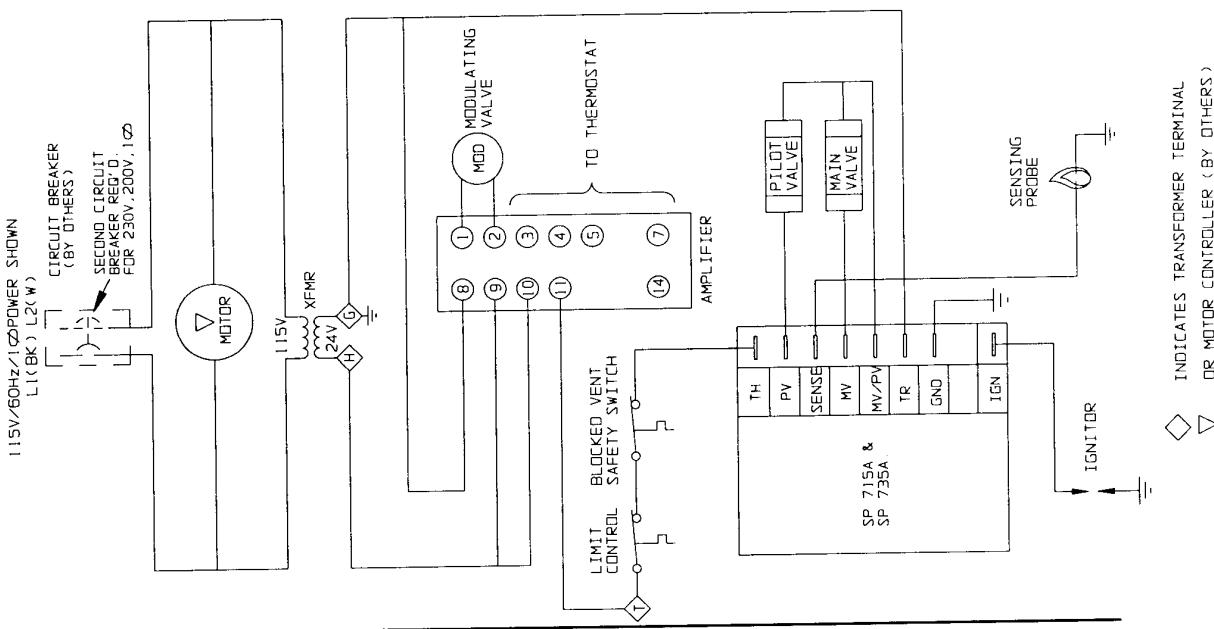
INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

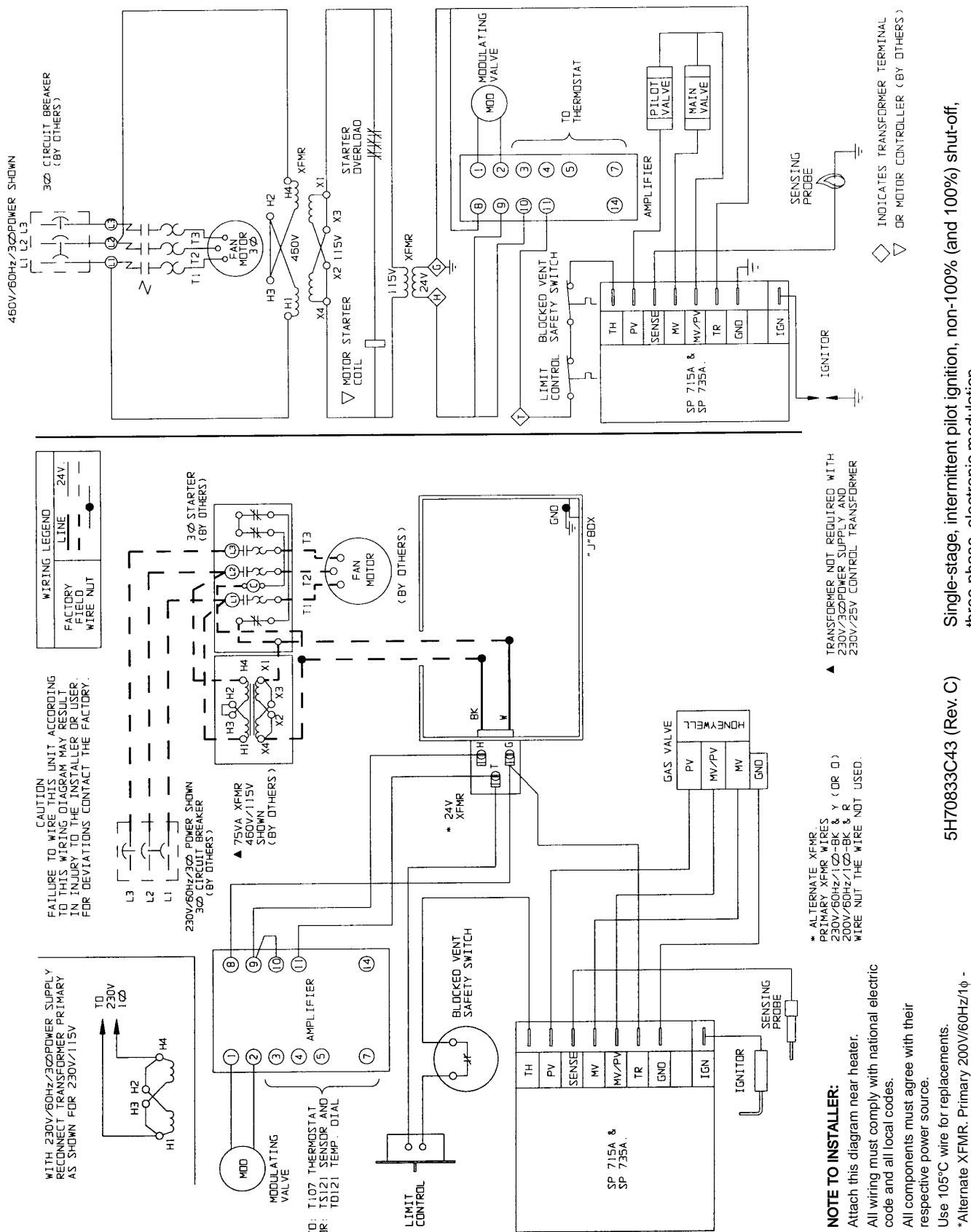
Section B



5H70833C43 (Rev. C)

Single-stage, intermittent pilot ignition, non-100% (and 100%) shut-off,
single-phase, electronic modulation.

Section B



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.

The diagram shows a three-phase motor connected in a star (Y) configuration. The phases are labeled H1, H2, and H3. A common neutral point is connected to ground (GND). The phases H1, H2, and H3 are connected to a 230V AC source through a switch labeled 1 \varnothing .

The diagram illustrates a safety circuit. A rectangular box labeled "LIMIT CONTROL" contains two open terminal blocks. A vertical line connects the top terminal block to a circular component labeled "BLOCKED VENT SAFETY SWITCH". This circular component has two terminals: one connects to the bottom terminal block in the "LIMIT CONTROL" box, and the other connects to a small "X" symbol.

• ALTERNATE
DENIM VEN

PRIMARY X-FMR WIRES
230V/60Hz/1Ø-BK & Y (OR O)
200V/60Hz/1Ø-BK & R
WIRE NUT THE WIRE NOT USED.

All wiring must comply with national electric code and all local codes.

卷之三

All components must agree

respective power source.

Use 105°C wire for replacements.
*Alternate XFMR. Primary 200V/60Hz/1φ -
DVK 9 D

Single-stage, intermittent pilot ignition, non-100% (and 100%) shut-off,

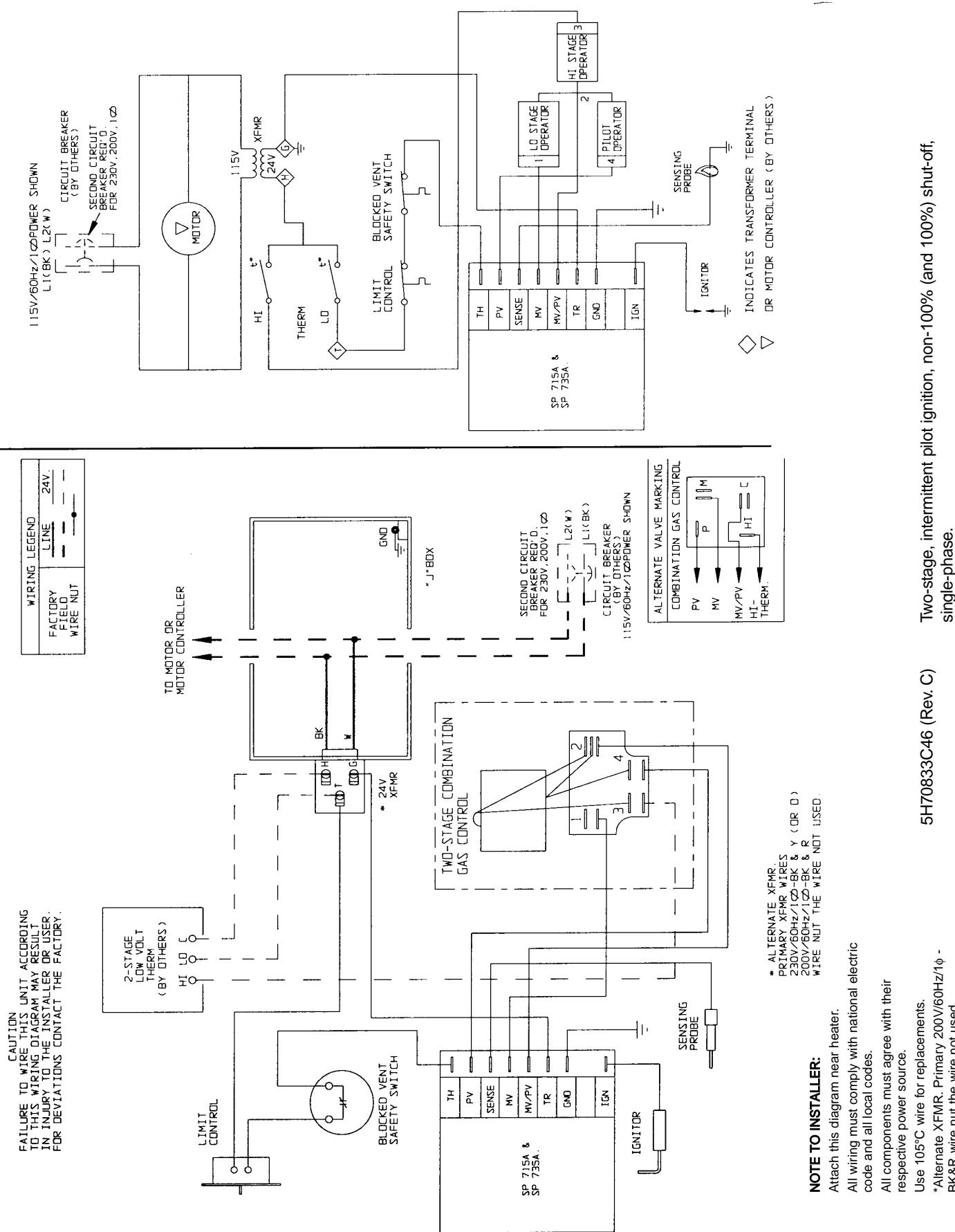
5H70833C43 (Rev C)

5-450 WIRING DIAGRAM - Models DJE/DHE

Section B

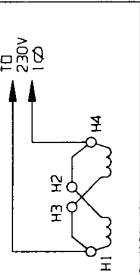


MODINE



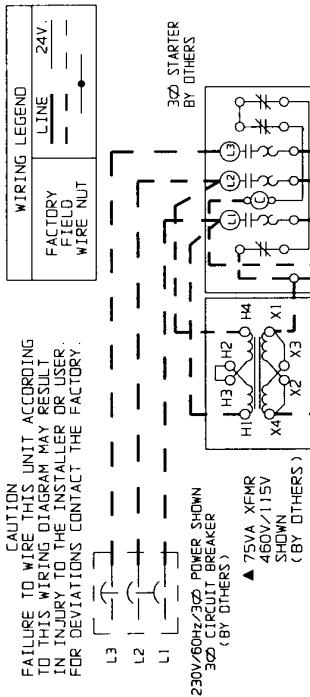
Section B

CAUTION
WITH 230V/60Hz/3kW POWER SUPPLY
RECONNECT TRANSFORMER PRIMARY
AS SHOWN FOR 230V/115V
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.



230V/60Hz/3Ø POWER SHOWN
3Ø CIRCUIT BREAKER
(BY OTHERS)

WITH 230V/60Hz/300W POWER SUPPLY
RECONNECT TRANSFORMER PRIMARY
AS SHOWN FOR 230V/115V



2-STAGE
LOW VOLT
THERM
(BY OTHERS)

LIMIT
CONTROL

BLOCKED VENT
SAFETY SWITCH

SP 715A 8

NOTE TO INSTALLER:

Attach this diagram near heater.
All wiring must comply with national
code and all local codes.

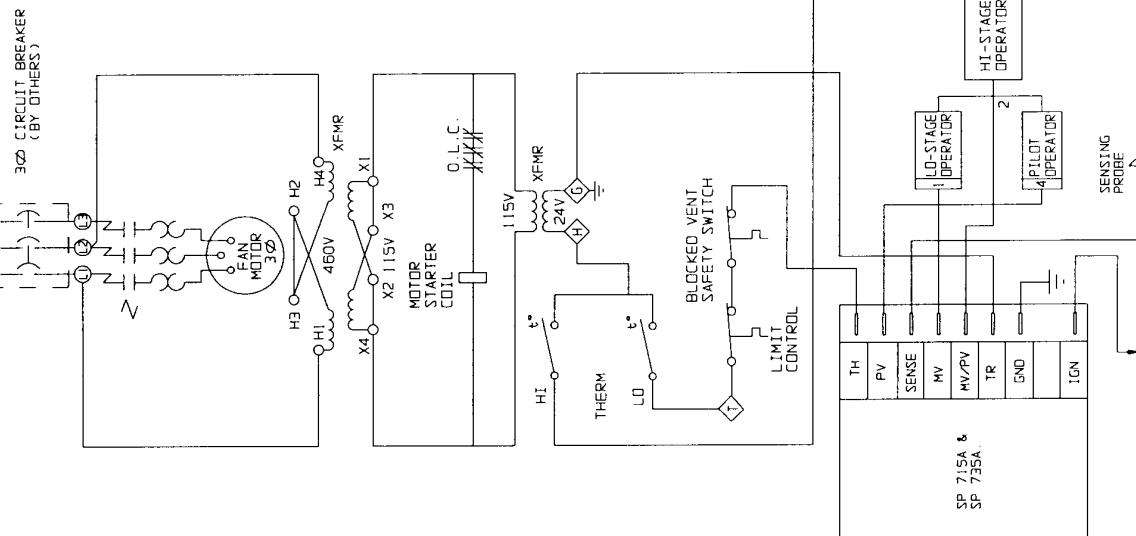
All components must agree with their respective power source.
Use 105°C wire for replacements.
*Alternate XFM/R, Primary 200V/60Hz
BK&R wire nut the wire not used.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
2230V/60Hz/1Q-BK & Y (OR O)
2000V/60Hz/1Q-BK & R
WIRE NUT THE WIRE NOT USED.

**TRANSFORMER NOT REQUIRED WITH
230V/300W POWER SUPPLY AND
230V/300W CONTROL TRANSFORMER**

5H70833C46 (Rev. C)

Two-stage, intermittent pilot ignition, non-100% (and 100%) shut-off,



PRIMA
230V/
200V/
WIRE

200V/60Hz/120-BK & R
WIRE NUT THE WIRE NOT USED.

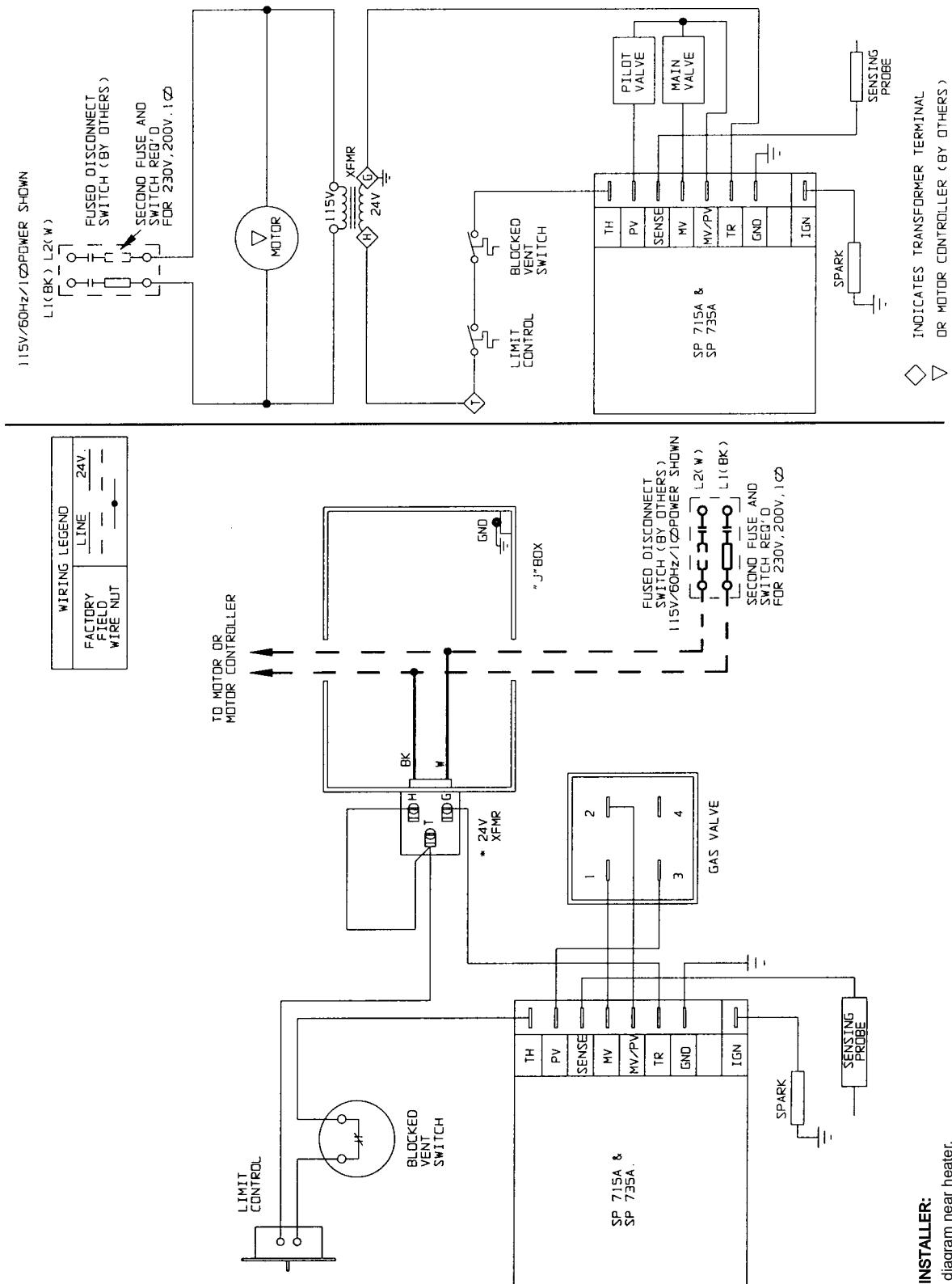
- All components must agree with their respective power source.
- Use 105°C wire for replacements.
- *Alternate XFMR. Primary 200V/60Hz/1φ
BK&R wire nut the wire not used.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



Single-phase, mechanical modulation, intermittent pilot ignition, non-100% (and 100%) shut-off.

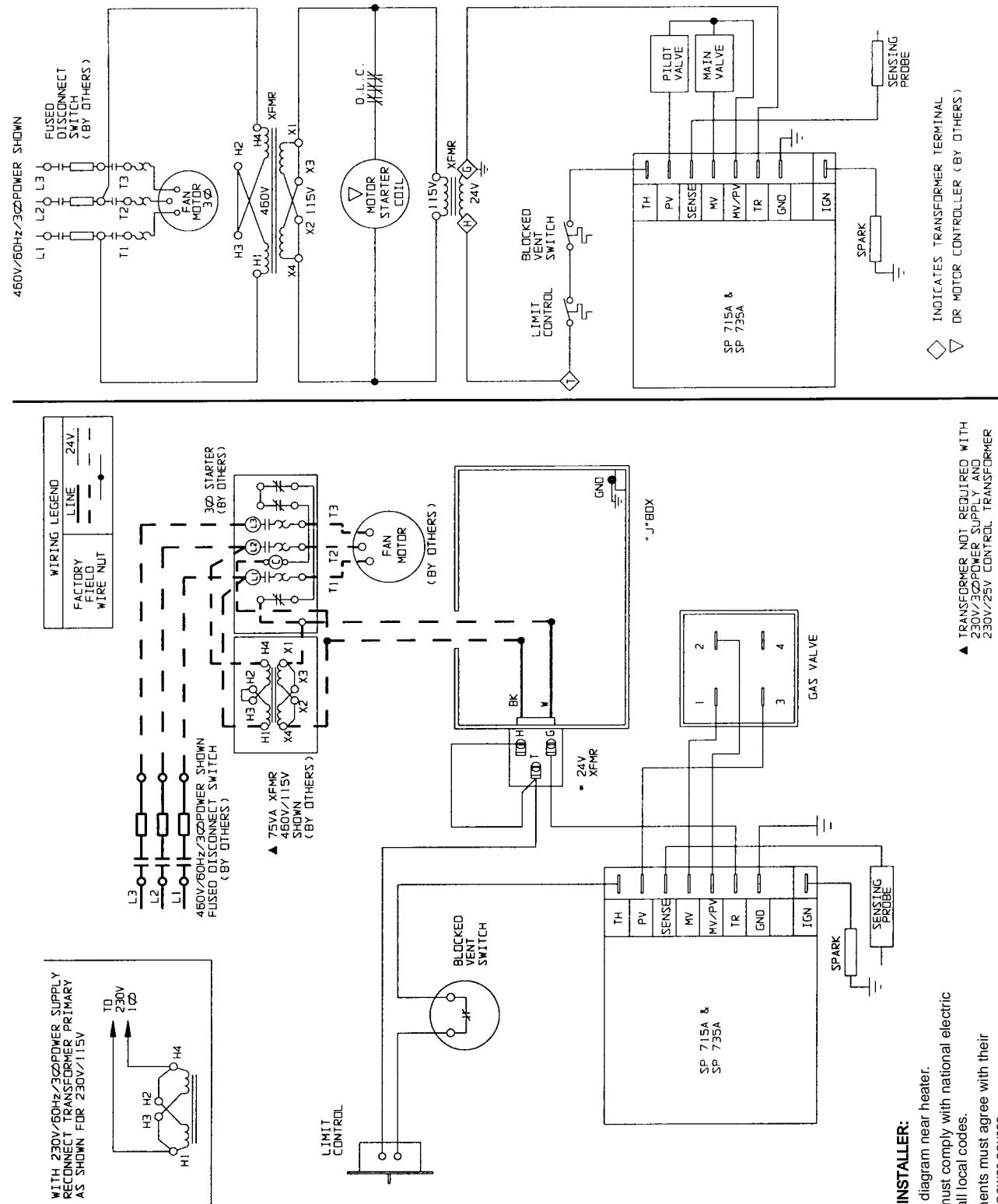
5H70833B49

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



5H70833B49

Three-phase, mechanical modulation, intermittent pilot ignition, non-100% (and 100%) shut-off.

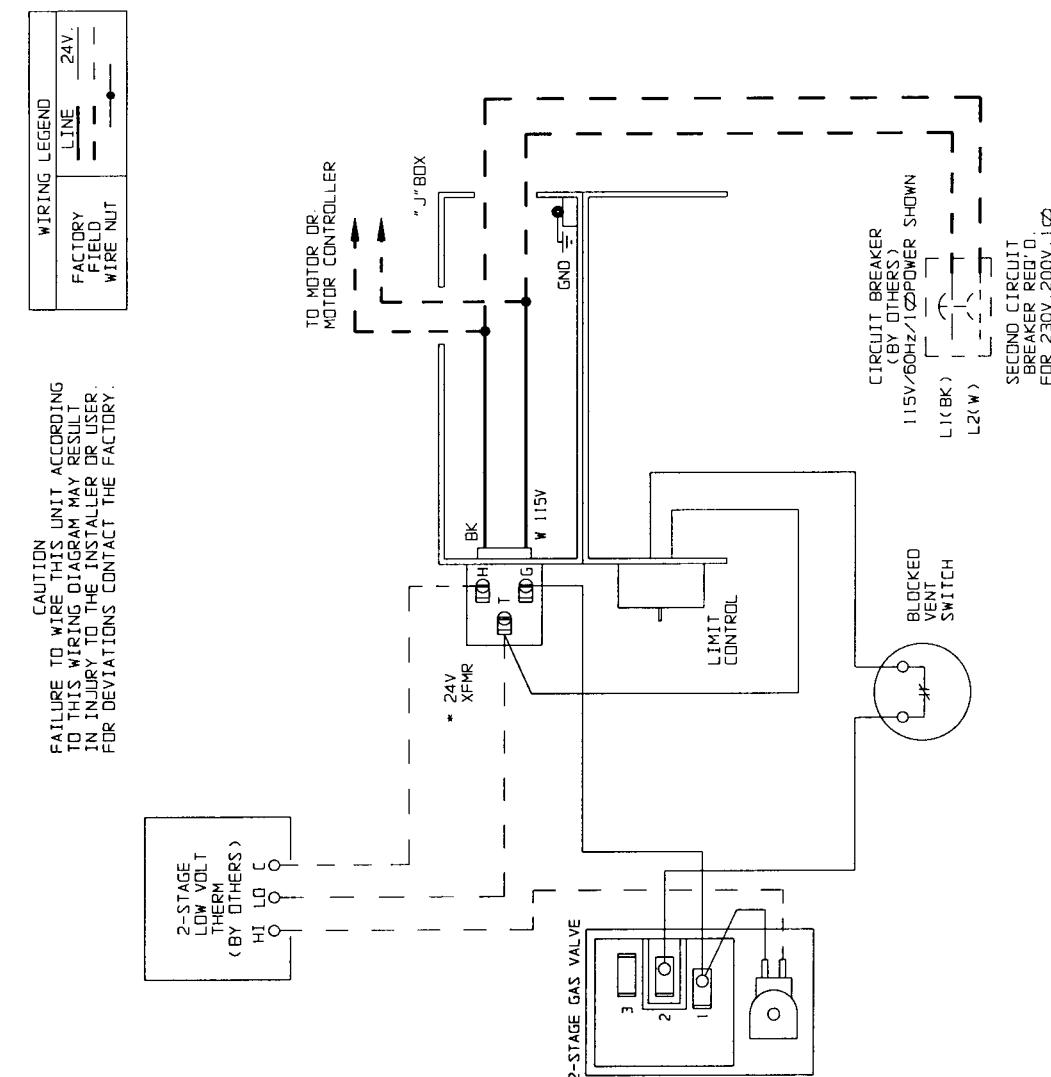
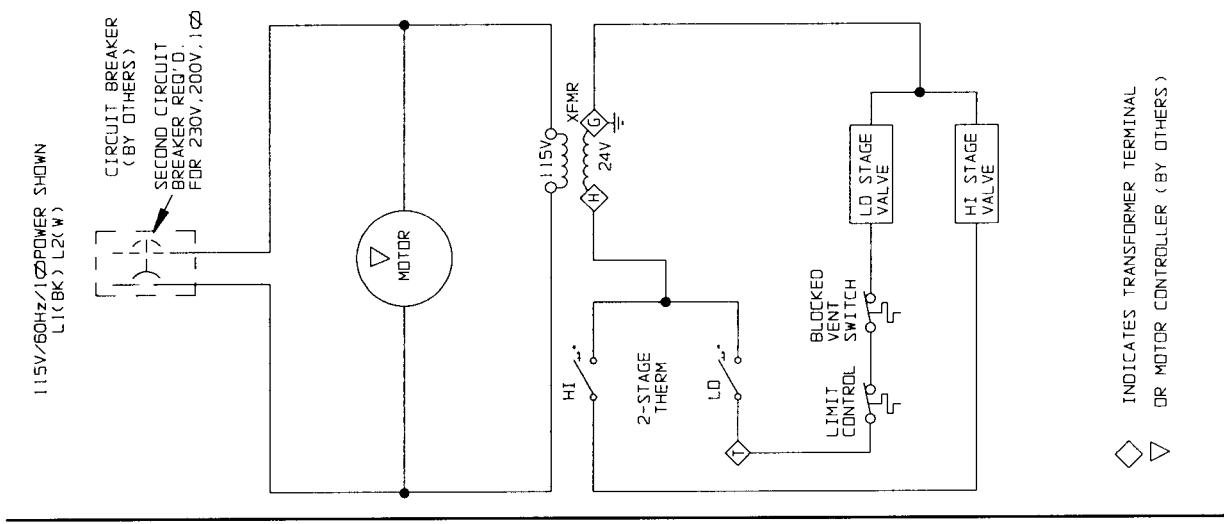
▲ TRANSFORMER NOT REQUIRED WITH 230V/3Ø POWER SUPPLY AND WITH 230V/25V CONTROL TRANSFORMER

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



◇ INDICATES TRANSFORMER TERMINAL
▽ OR MOTOR CONTROLLER (BY OTHERS)

Single-phase, two-stage gas valve, standing pilot, 100% shut-off, two-stage, low-voltage thermostat.

5H70833C50 (Rev. B)

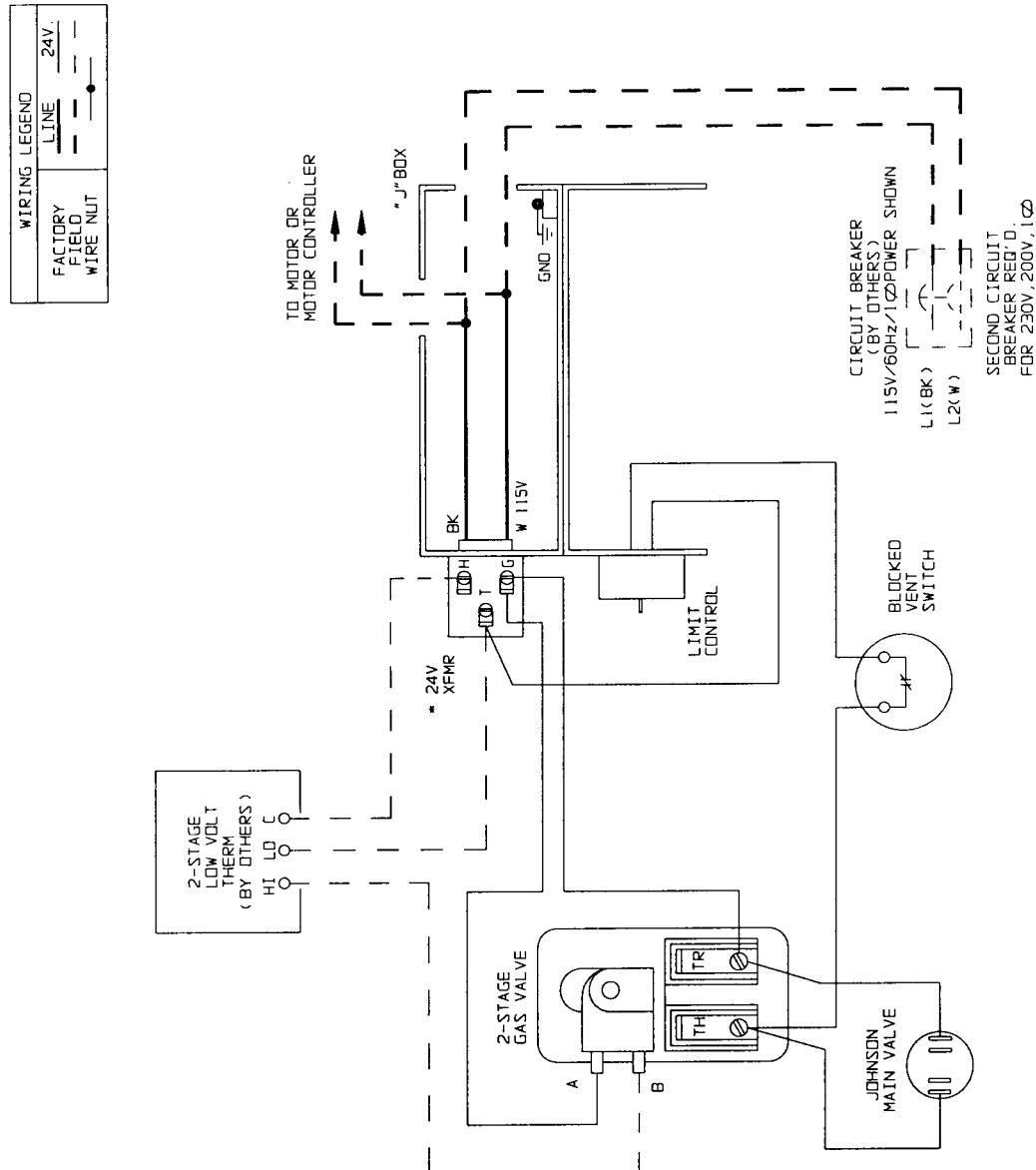
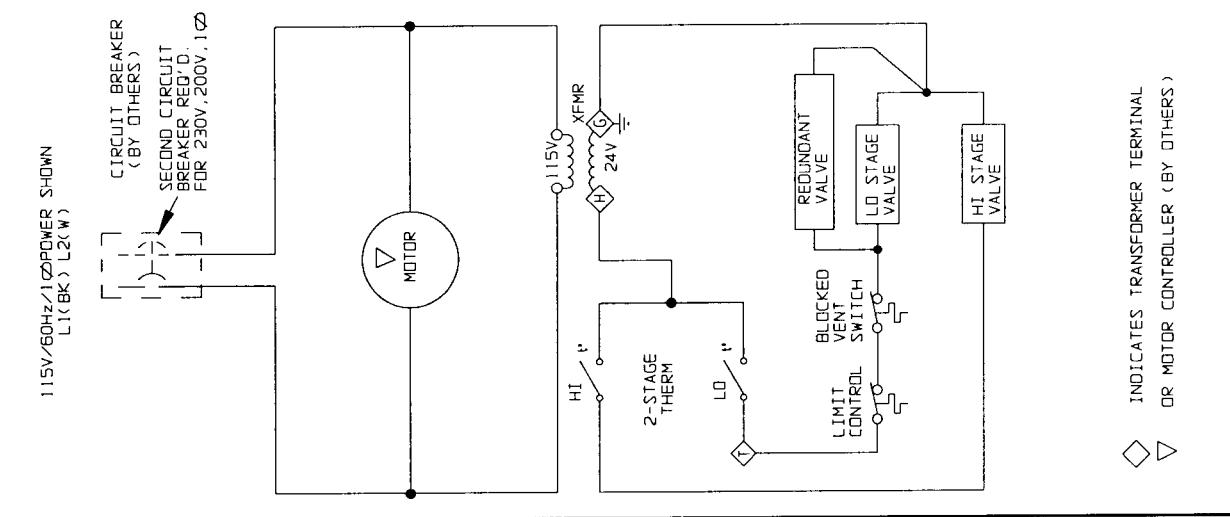
* ALTERNATE XFMR
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK & Y (OR ▽)
200V/60Hz/1Ø-BK & R
WIRE NOT THE WIRE NOT USED.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



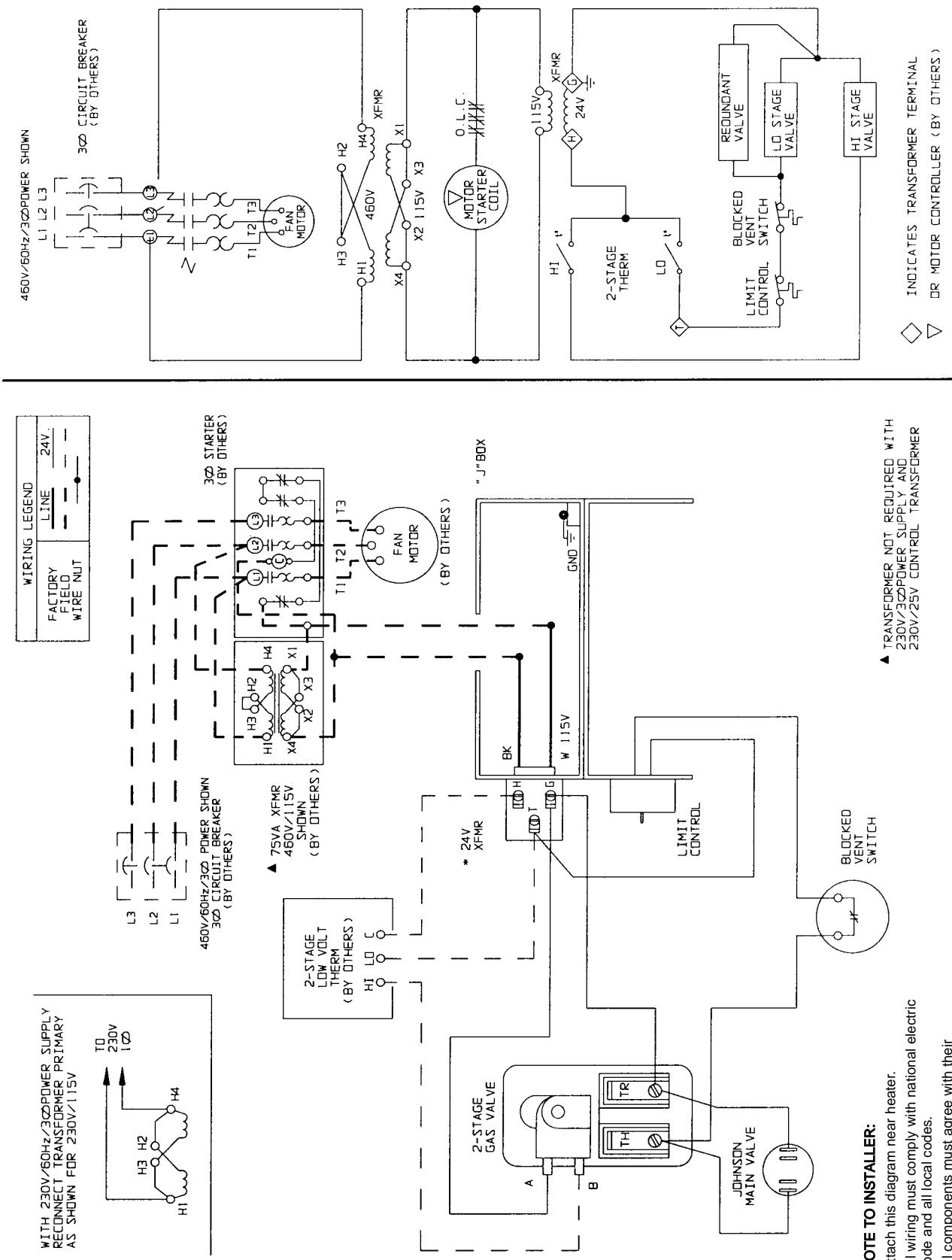
NOTE TO INSTALLER:

- 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 200V/60Hz/1Ø - BK&R wire nut the wire not used.

5H70833C51 (Rev. B)

Single-phase, two-stage gas valve, standing pilot, 100% shut-off, two-stage low-voltage thermostat.

Section B



NOTE TO INSTALLER:

Attach this diagram near heater.
All wiring must comply with national
code and all local codes.

All components must agree with their respective power source.
Use 105°C wire for replacements.
*Alternate XFMR. Primary 200V/60Hz/1φ -

5H70833C51 (Rev. B) Three-phase, two-stage gas valve, standing pilot, 100% shut-off, two-

▲ TRANSFORMER NOT REQUIRED WITH
230V/320V POWER SUPPLY AND
230V/25V CONTROL TRANSFORMER

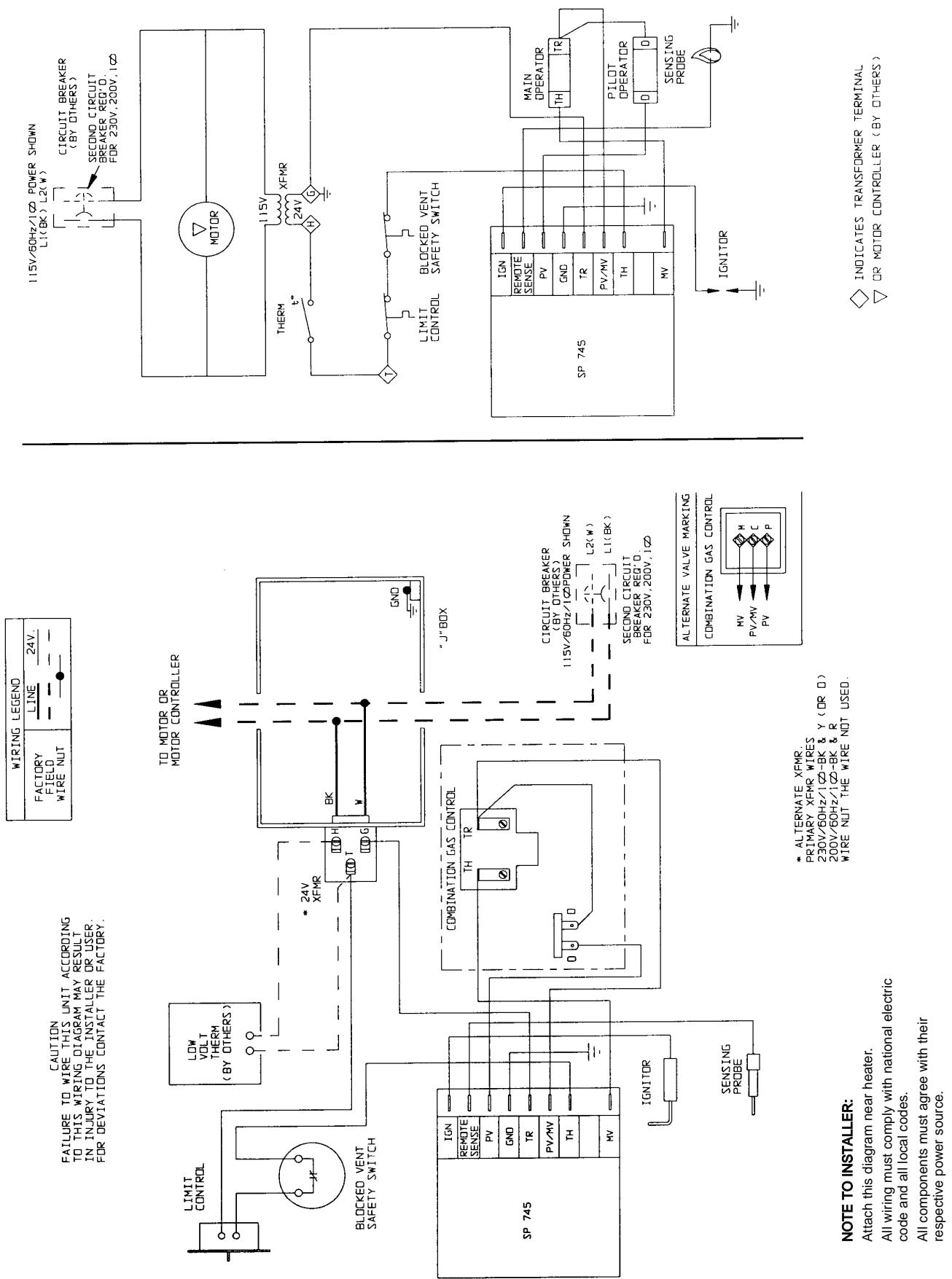
INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B

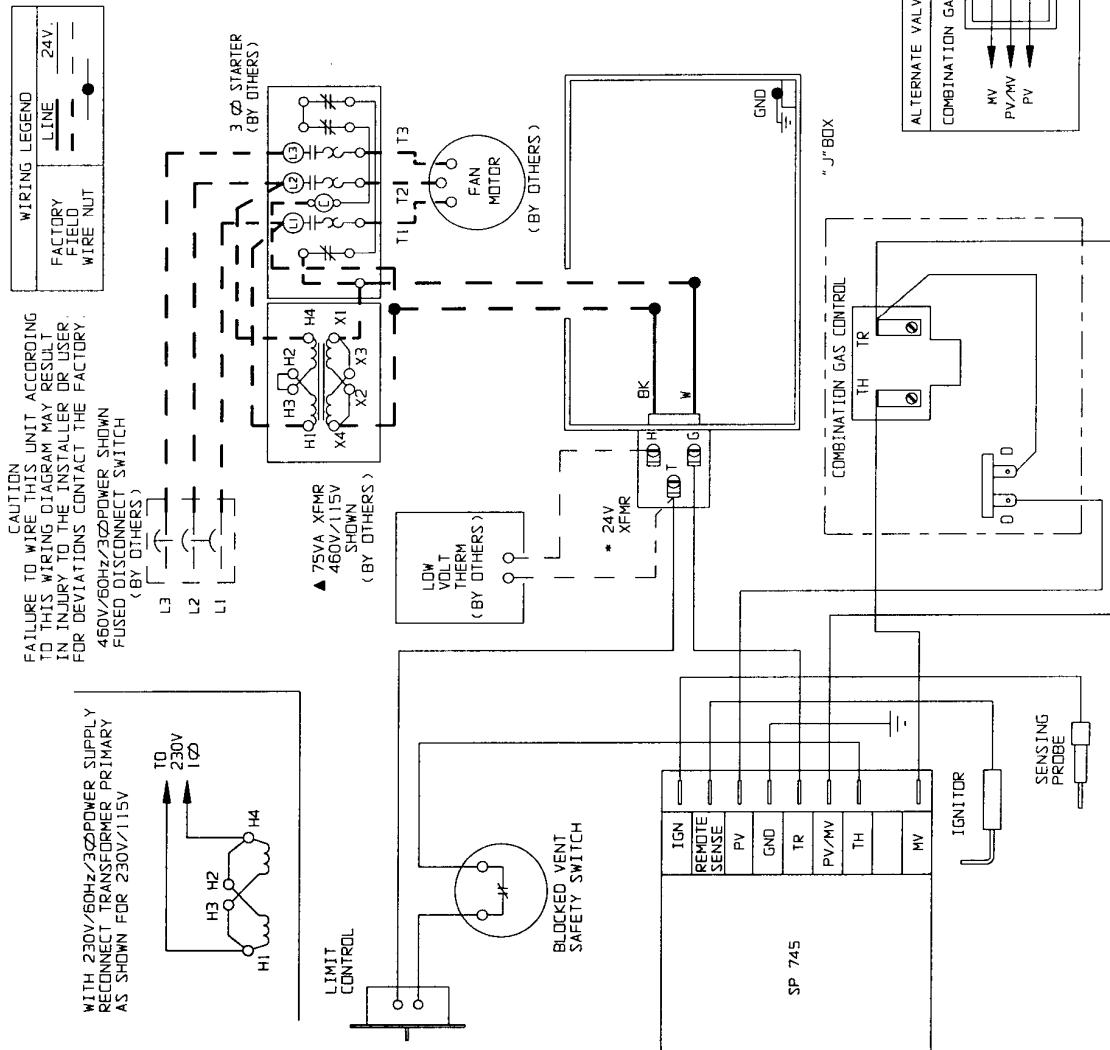
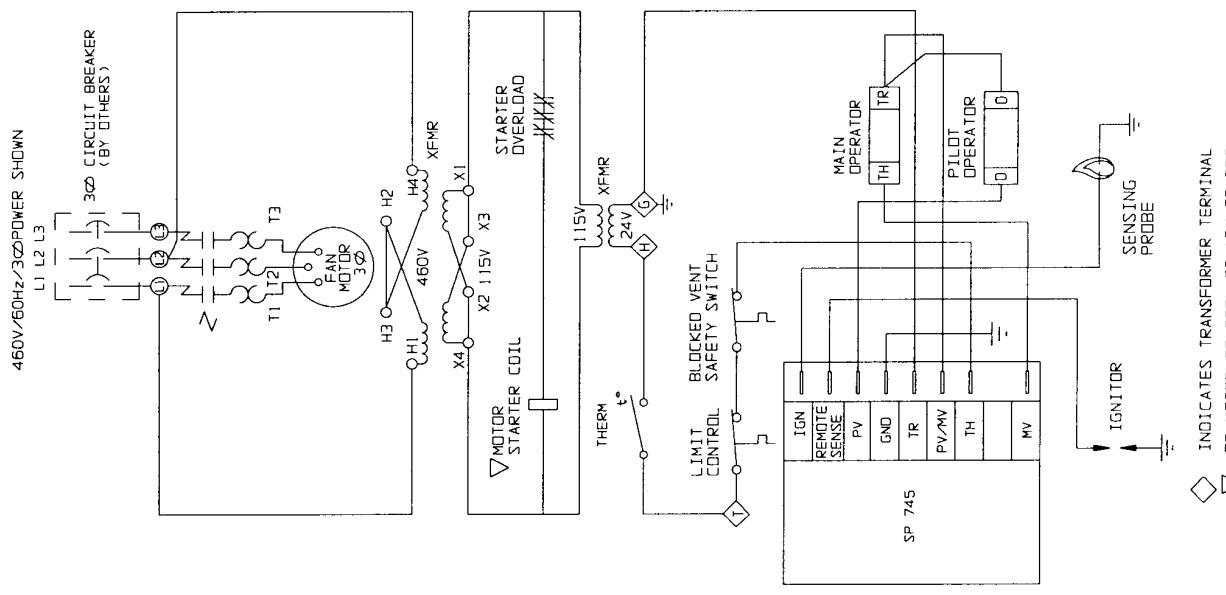


5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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 (OR 0)
200V/60Hz/1Ø-BK & R
WIRE NUT THE WIRE NOT USED.

5H70833C62 (Rev. A)

Single-stage, intermittent pilot ignition, 100% shut-off, with continuous
ignition. Primary 200V/60Hz/1Ø -
retary Three-phase.

* ALTERNATE Xfmr.
PRIMARY Xfmr wires 230V/60Hz/1Ø-BK & Y (OR 0)
200V/60Hz/1Ø-BK & R
WIRE NUT THE WIRE NOT USED.

▲ TRANSFORMER NOT REQUIRED WITH
230V/3ØPOWER SUPPLY AND
230V/25V CONTROL TRANSFORMER

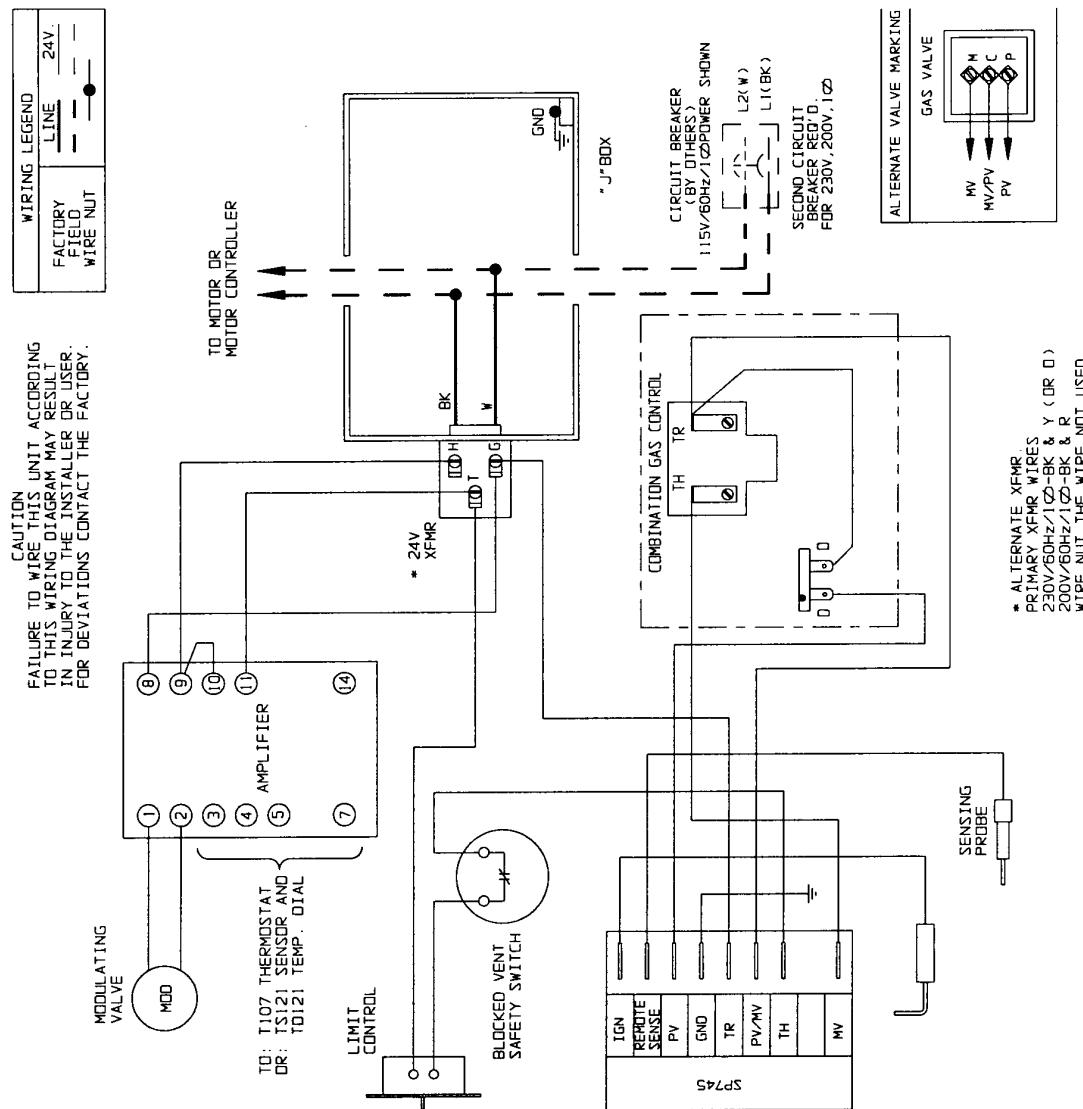
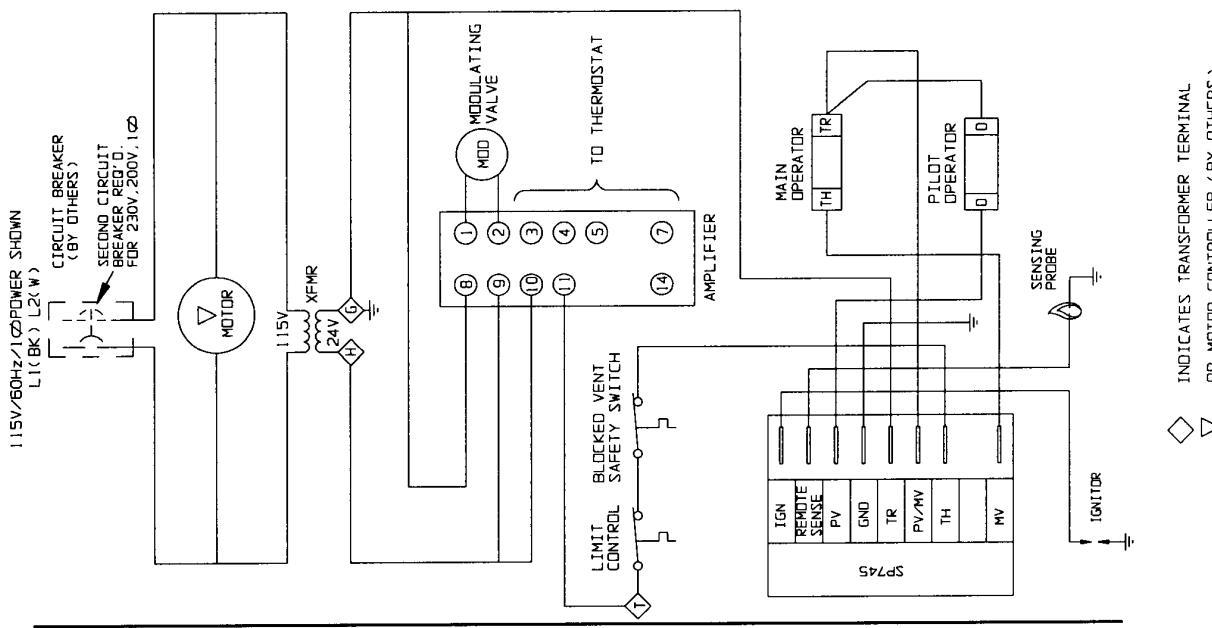
◆ INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



◇ INDICATES TRANSFORMER TERMINAL
▽ OR MOTOR CONTROLLER (BY OTHERS)

5H70833C63 (Rev. B)

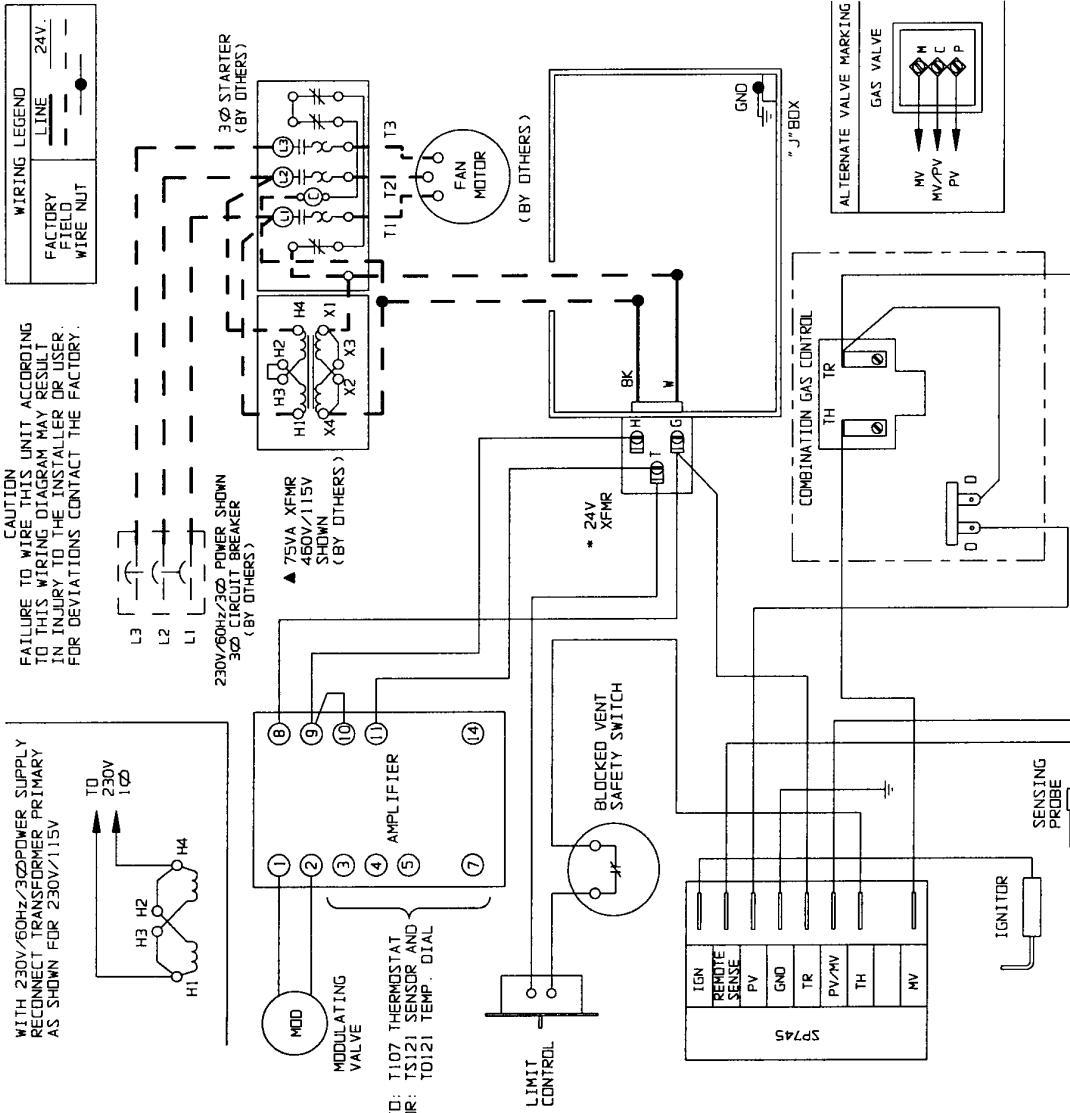
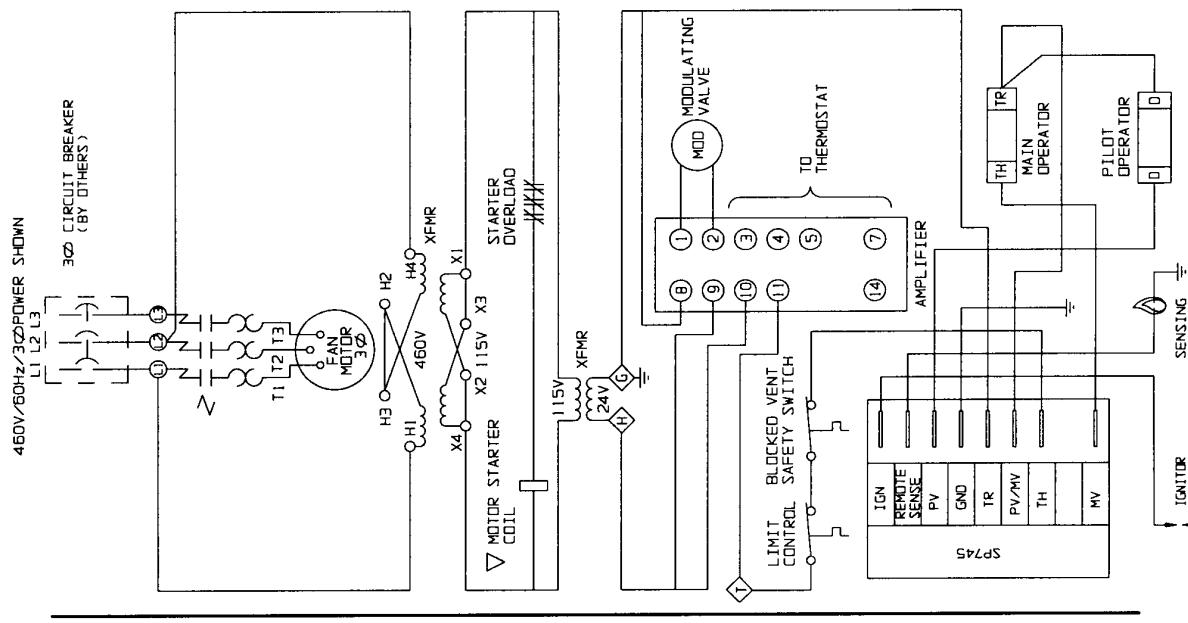
Single-phase, intermittent pilot ignition, 100% shut-off with continuous retry, electronic modulation.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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 XFMF. Primary 200V/60Hz/1Ø - BK&R wire not the wire not used.

- * ALTERNATE XFMF:
PRIMARY XFMF WIRES:
230V/60Hz/1Ø-BK & Y (OR Ø)
200V/60Hz/1Ø-BK & R
WIRE NUT THE WIRE NOT USED.
- ▲ TRANSFORMER NOT REQUIRED WITH
230V/3Ø POWER SUPPLY AND
230V/25V CONTROL TRANSFORMER

5H70833C63 (Rev. B)

Three-phase, intermittent pilot ignition, 100% shut-off, with continuous retry, electronic modulation.

◇ INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)

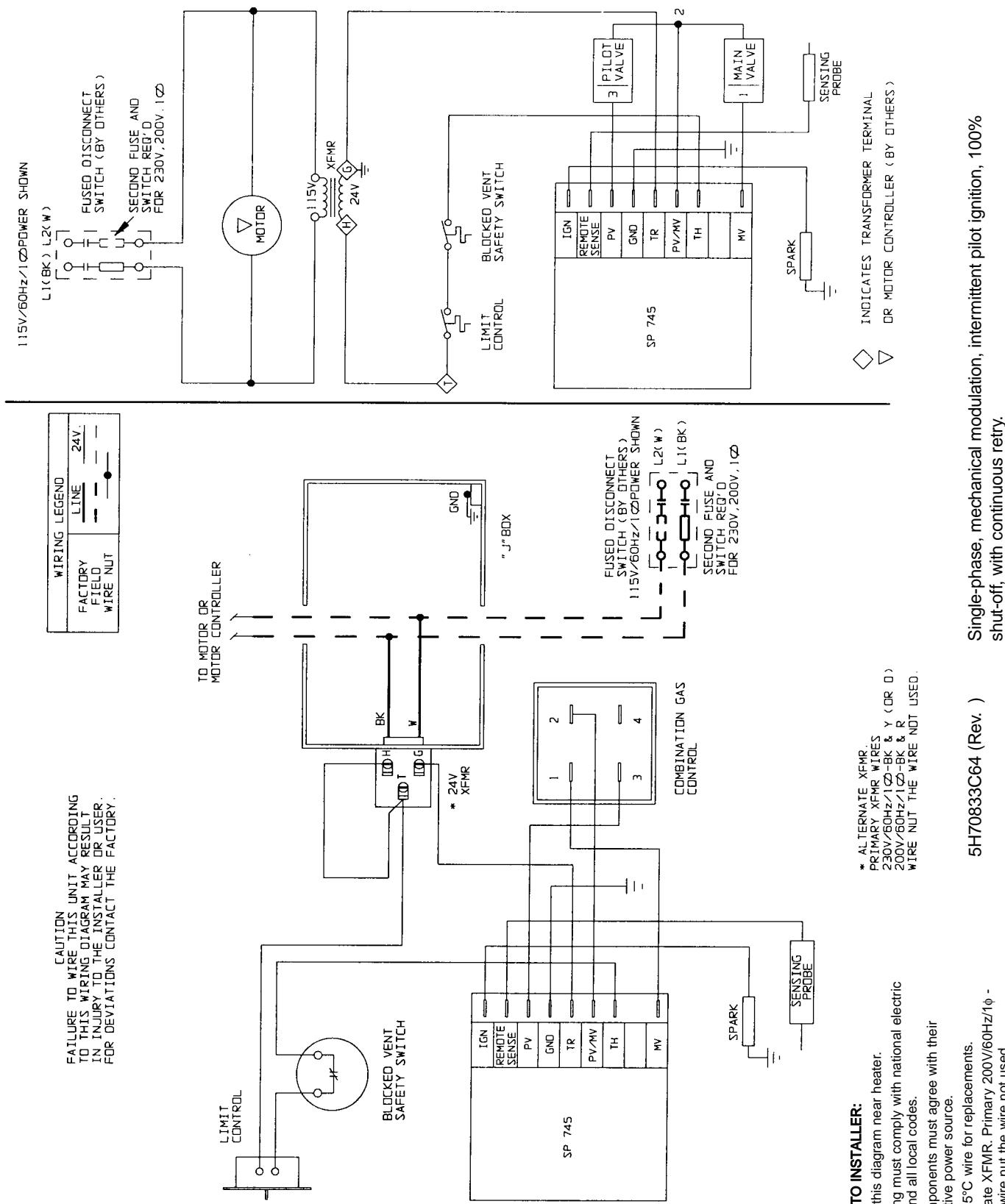


5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



NOTE TO INSTANT ESR.

FIGURE 10-10 **INSERIMENT**

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 XFMX Primary 200V/60Hz 1φ -
BK&R wire nut the wire not used.

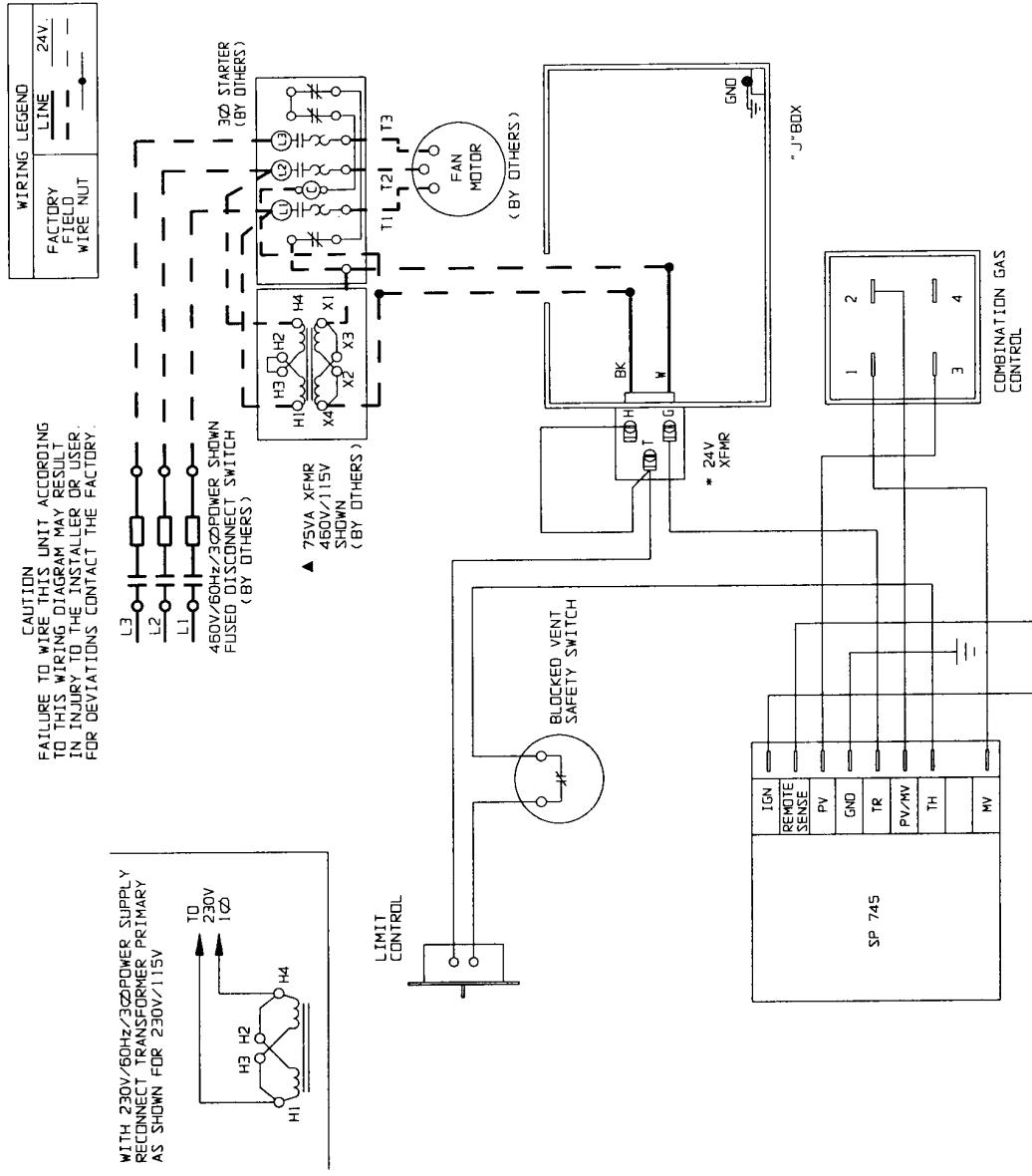
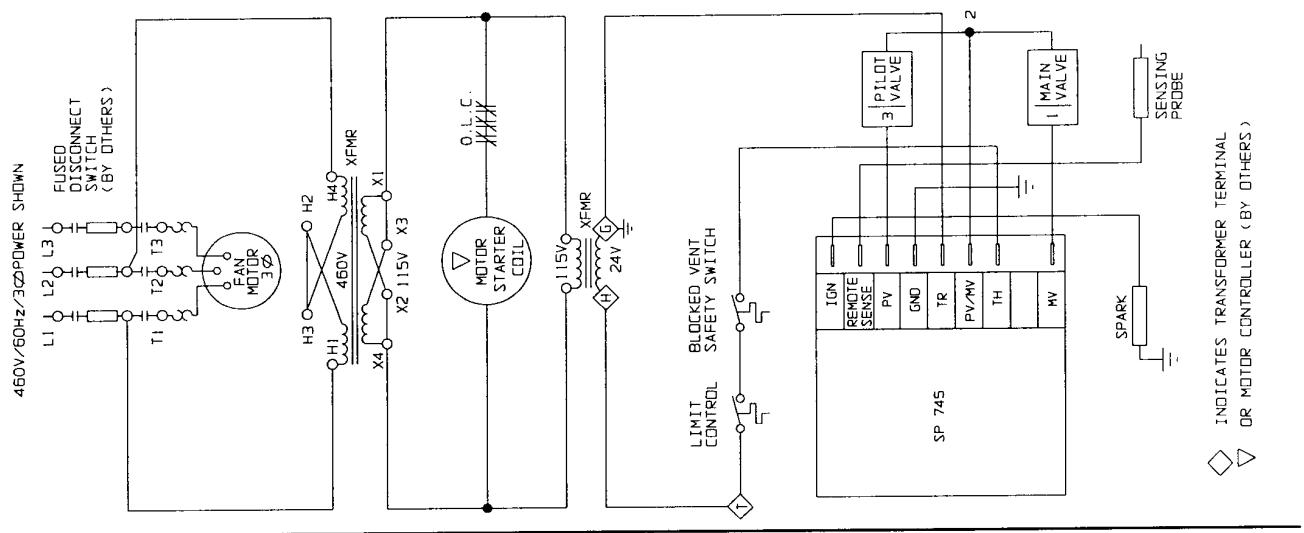
* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-BK &
200V/60Hz/1Ø-BK &
WIRE NUT THE WIRE N

5H70833/C61 (Rev.)

Single-phase, mechanical modulation, intermittent pilot ignition, 100% shut-off, with continuous retry.



Section B



NOTE TO INSTALLER:
Attach this diagram near heater.
All wiring must comply with national
code and all local codes.

- All components must agree with their respective power source.
- Use 105°C wire for replacements.
- *Alternate XFMR. Primary 200V/60Hz/1φ - BK&R wire nut the wire not used.

* ALTERNATE X-MR
 PRIMARY XFMR WIRES
 230V/60Hz/1Q-BK &
 200V/60Hz/1Q-BK &
 WIRE NUT THE WIRE

TRANSFORMER NOT REQUIRED WITH
230V/300W SUPPLY AND
230V/25W CONTROL TRANSFORMER

INITIATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)

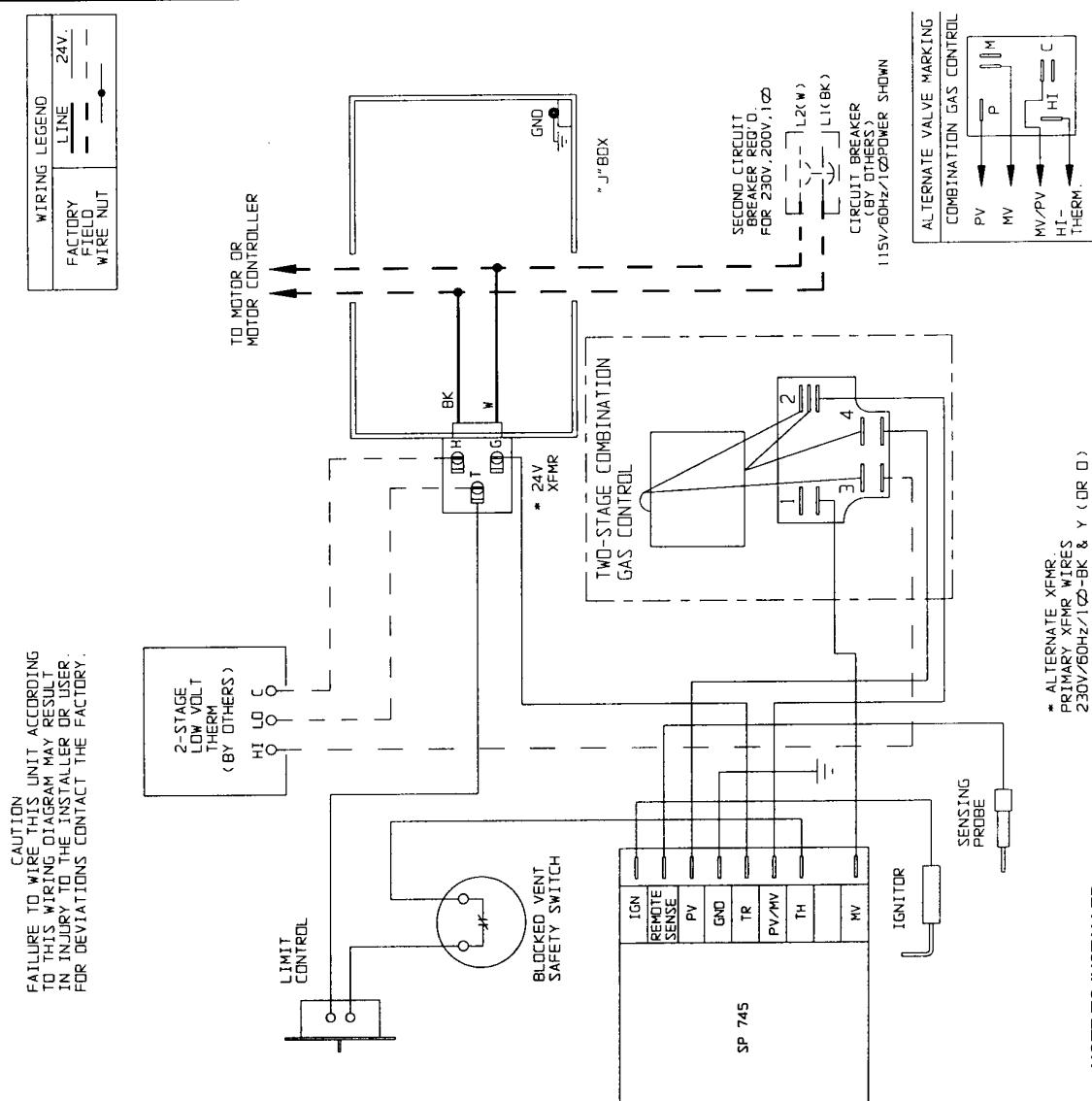
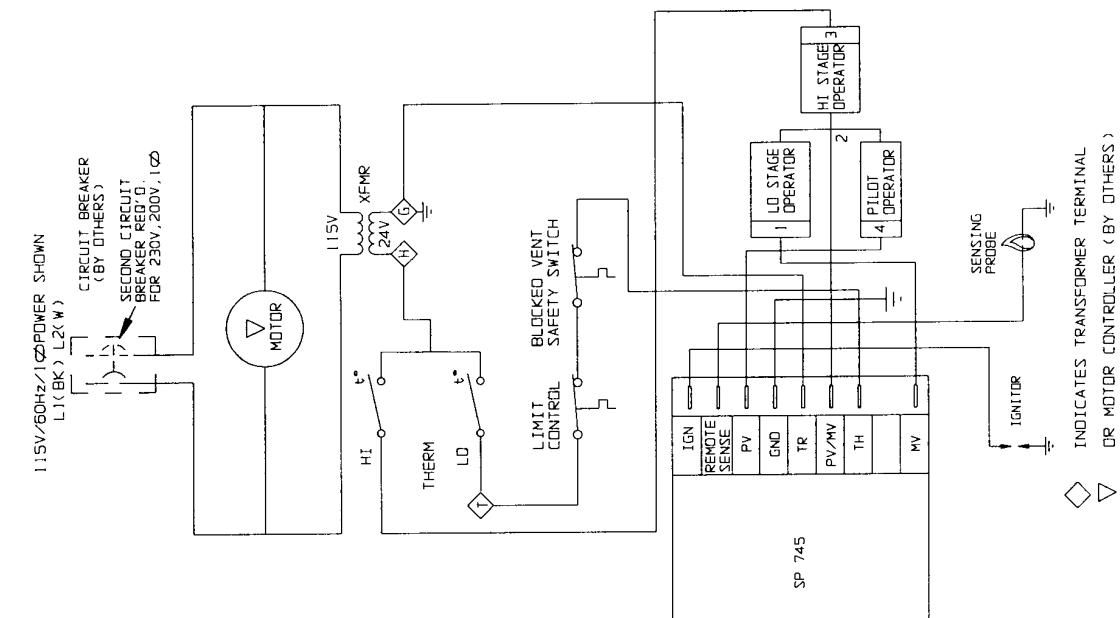
Three-phase, mechanical modulation, intermittent pilot ignition, 100%

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



5H70833C65 (Rev. B)

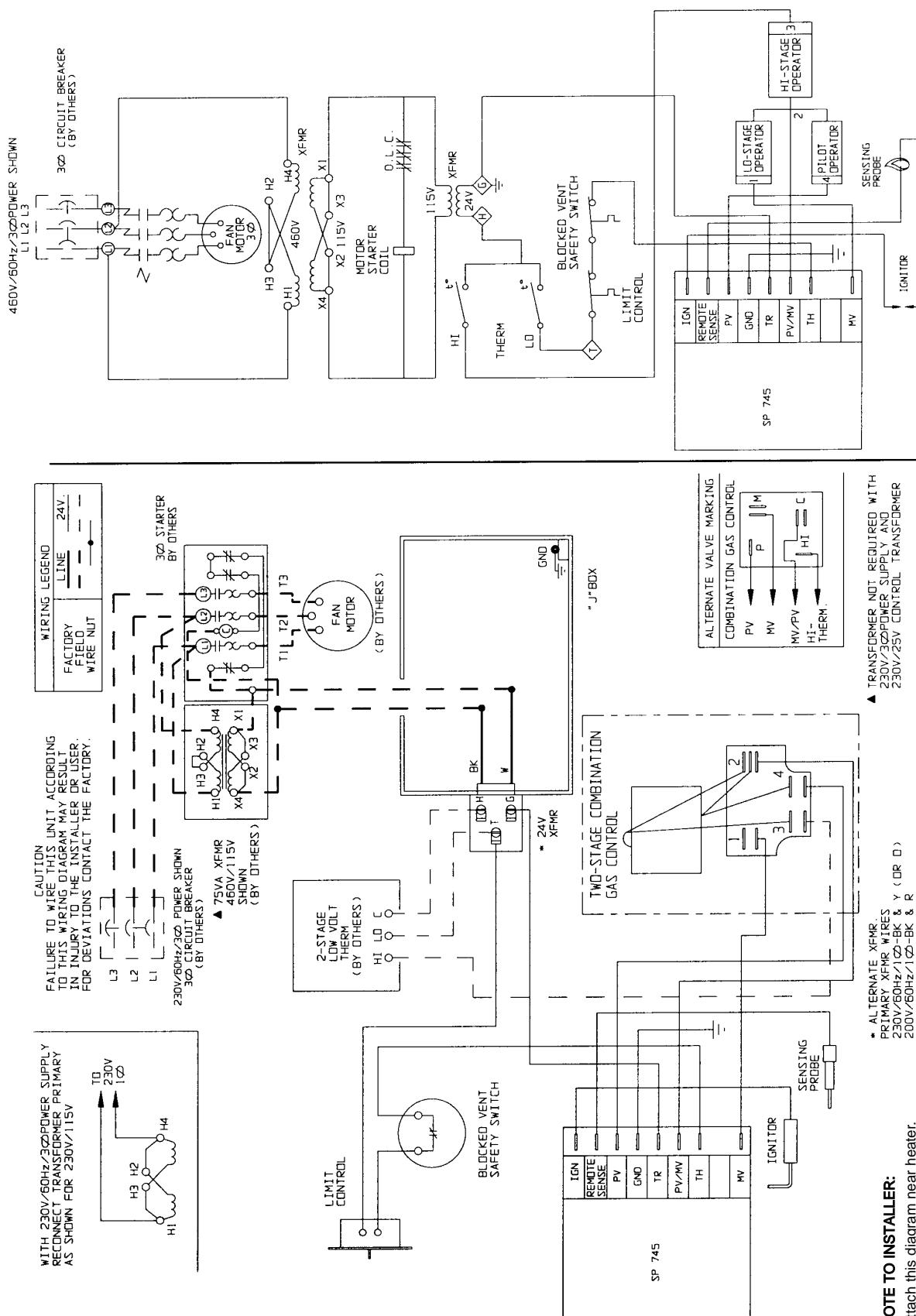
Two-stage, intermittent pilot ignition, 100% shut-off, with continuous retry,
single-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



5H70833C65 (Rev. B)

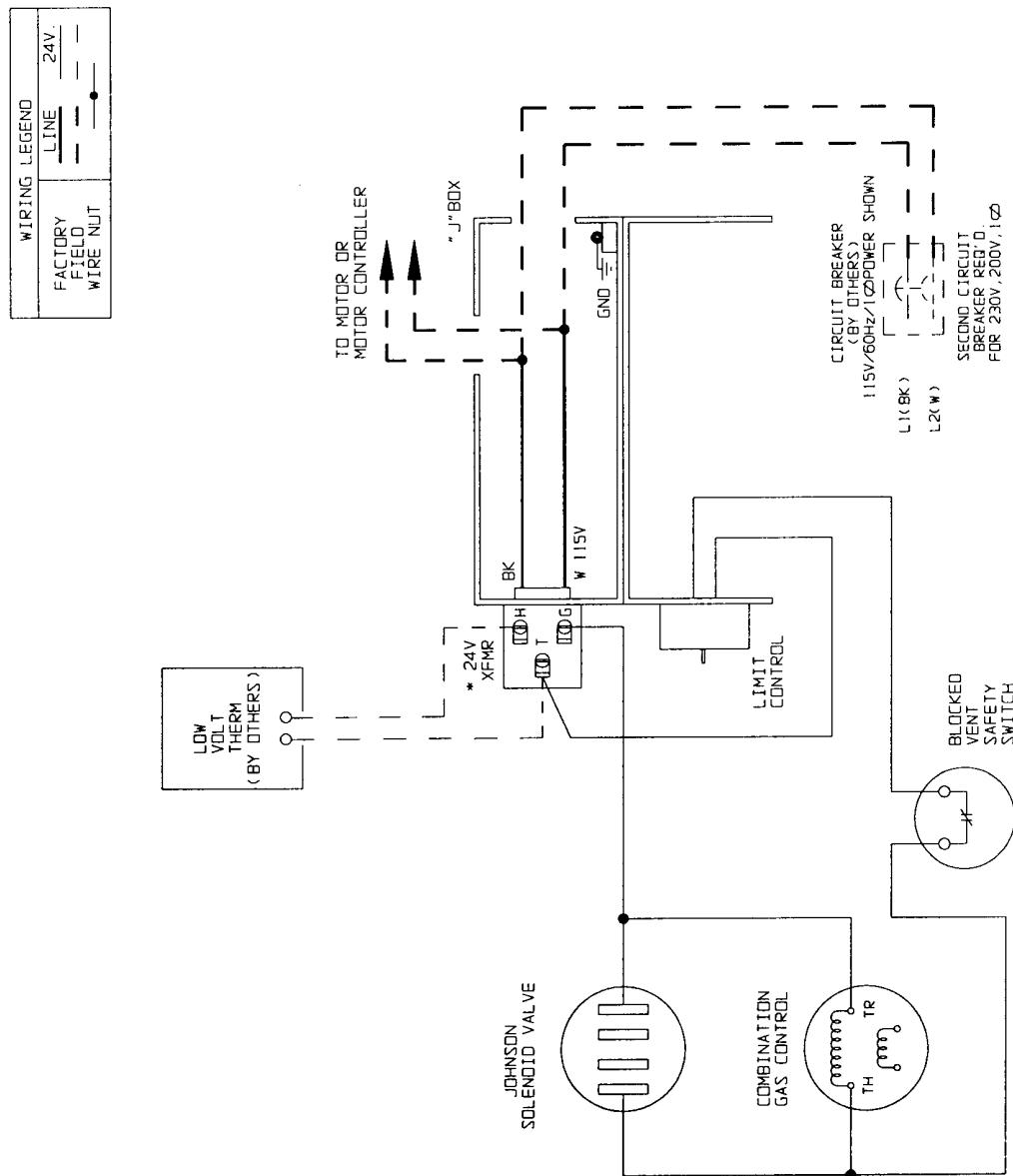
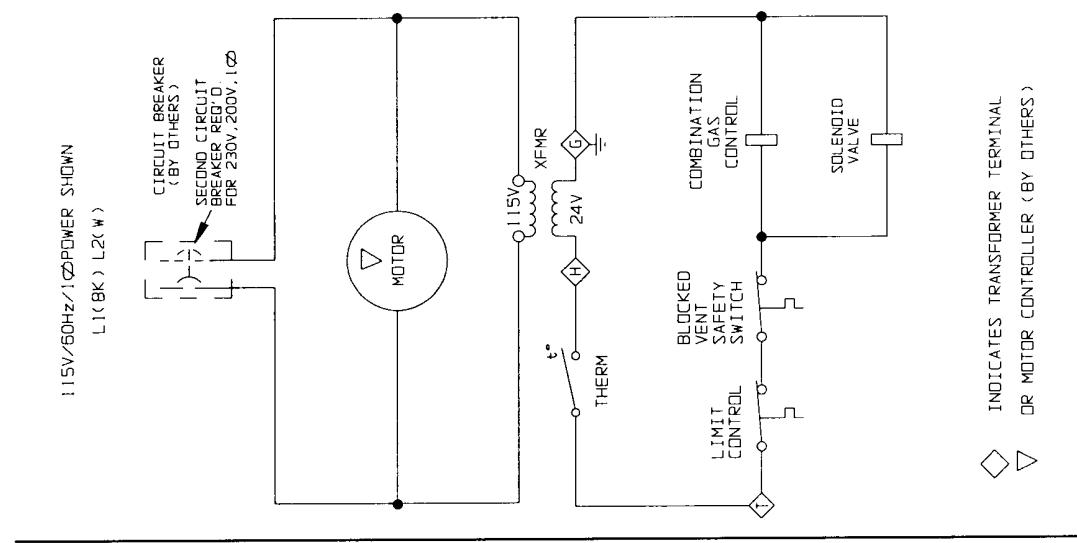
Two-stage, intermittent pilot ignition, 100% shut-off, with continuous retry,
three-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE

Section B



MODINE



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 200V/60Hz/1Ø -
BK&R wire not the wire not used.

5H70833C70 (Rev. A)

Single-stage, standing pilot, 100% shut-off, single-phase.

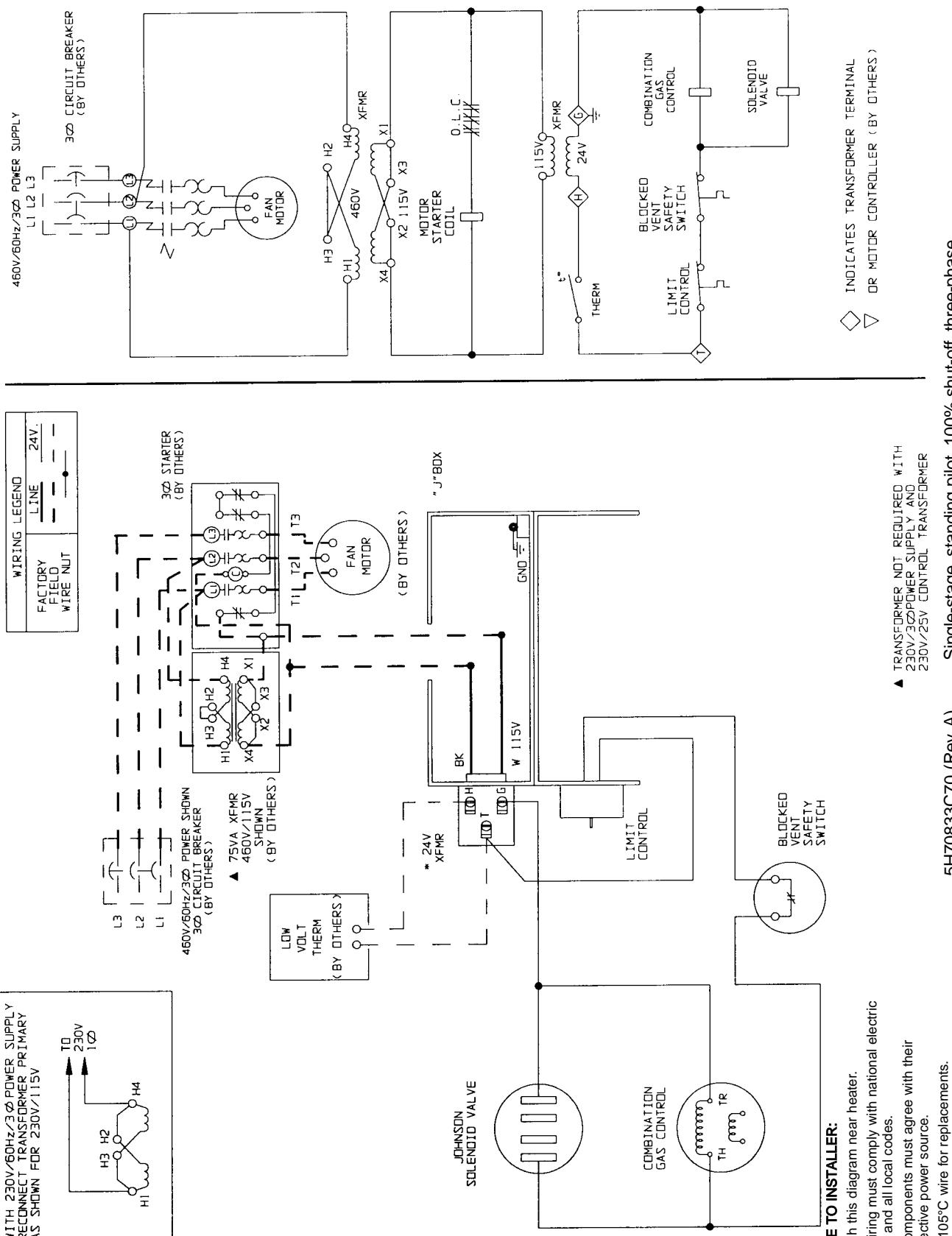
Single-stage, standing pilot, 100% shut-off, single-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B

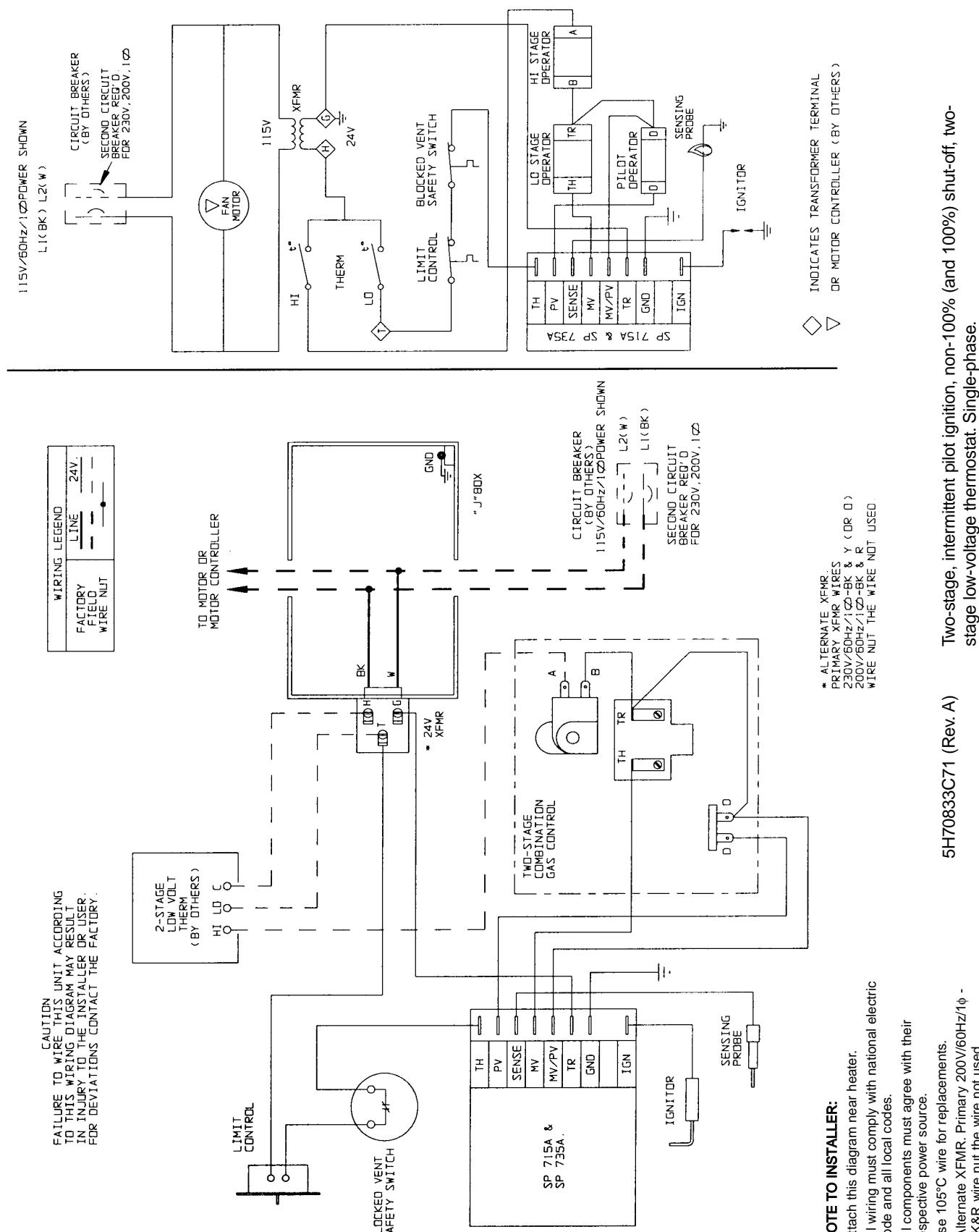


5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B

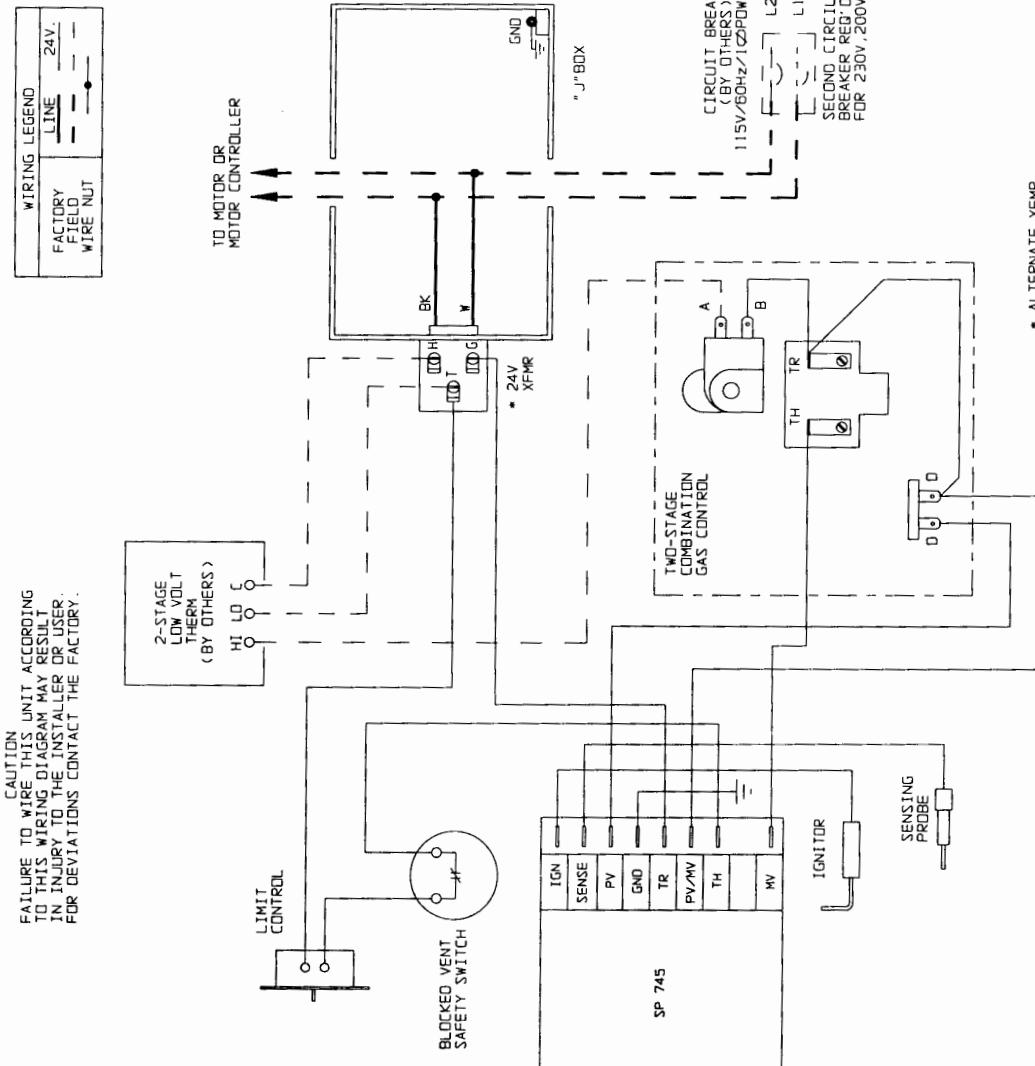
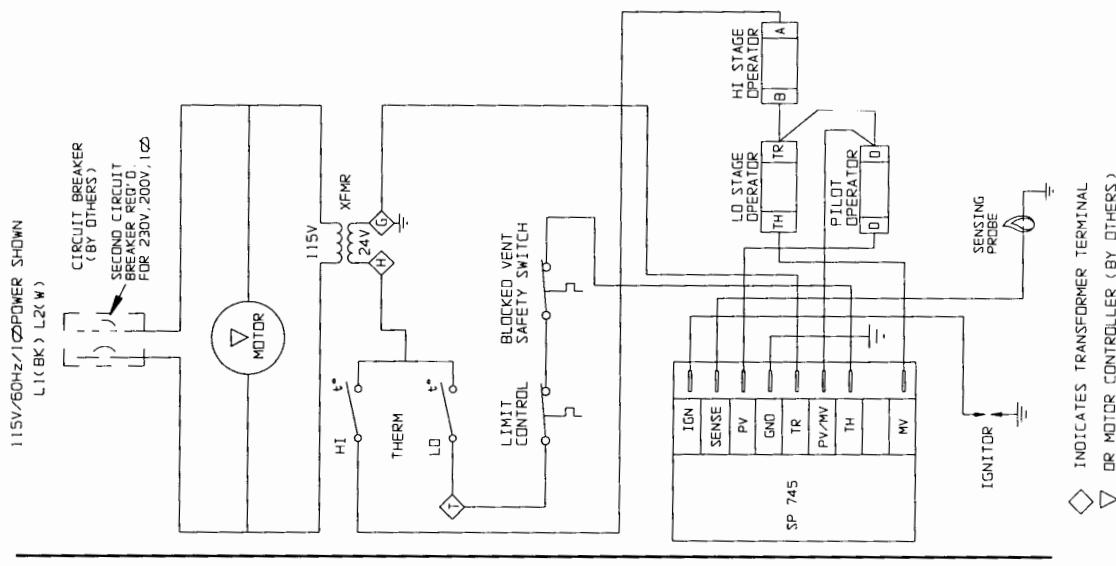


5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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.

115V/60Hz/1ØPOWER SHOWN
L1(BK) L2(W)

WIRING LEGEND		
FACTORY FIELD	L	LINE
WIRE NUT	-	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 XFRM. Primary 200V/60Hz/1Ø -
BK&R wire not the wire not used.

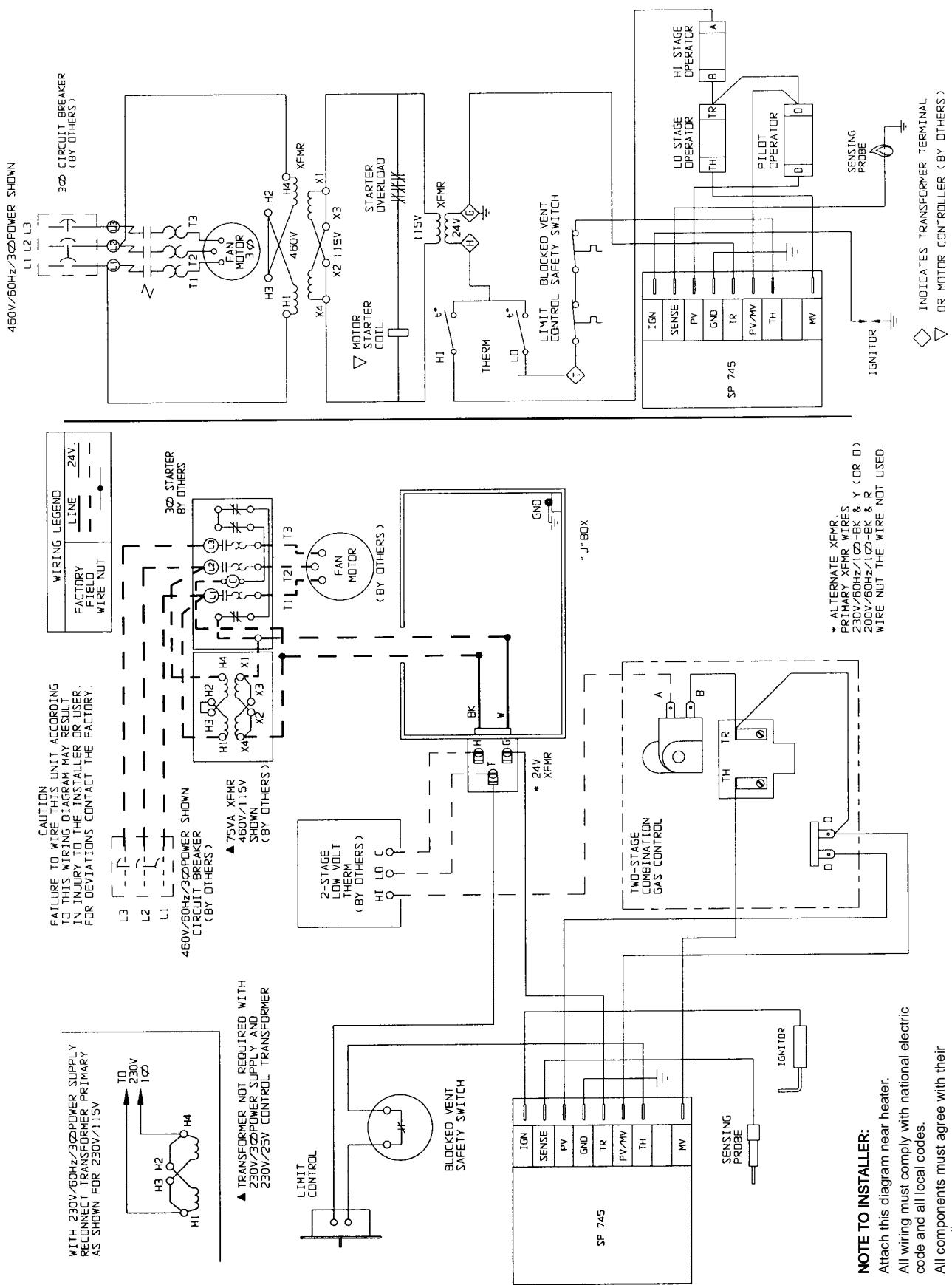
5H70833C72 (Rev. A)

Two-stage, intermittent pilot ignition, 100% shut-off, with continuous retry,
two-stage low-voltage thermostat, single-phase.

◇ INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)

* ALTERNATE XFRM
PRIMAR Y XFRM WIRES
230V/60Hz/1Ø BK & Y (OR D)
230V/60Hz/1Ø-BK & R
WIRE NOT THE WIRE NOT USED.

Section B



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 the respective power source.

Use 105°C wire for replacements.
*Alternate XFMR. Primary 200V/60Hz/1Ø - BK&R wire nut the wire not used.

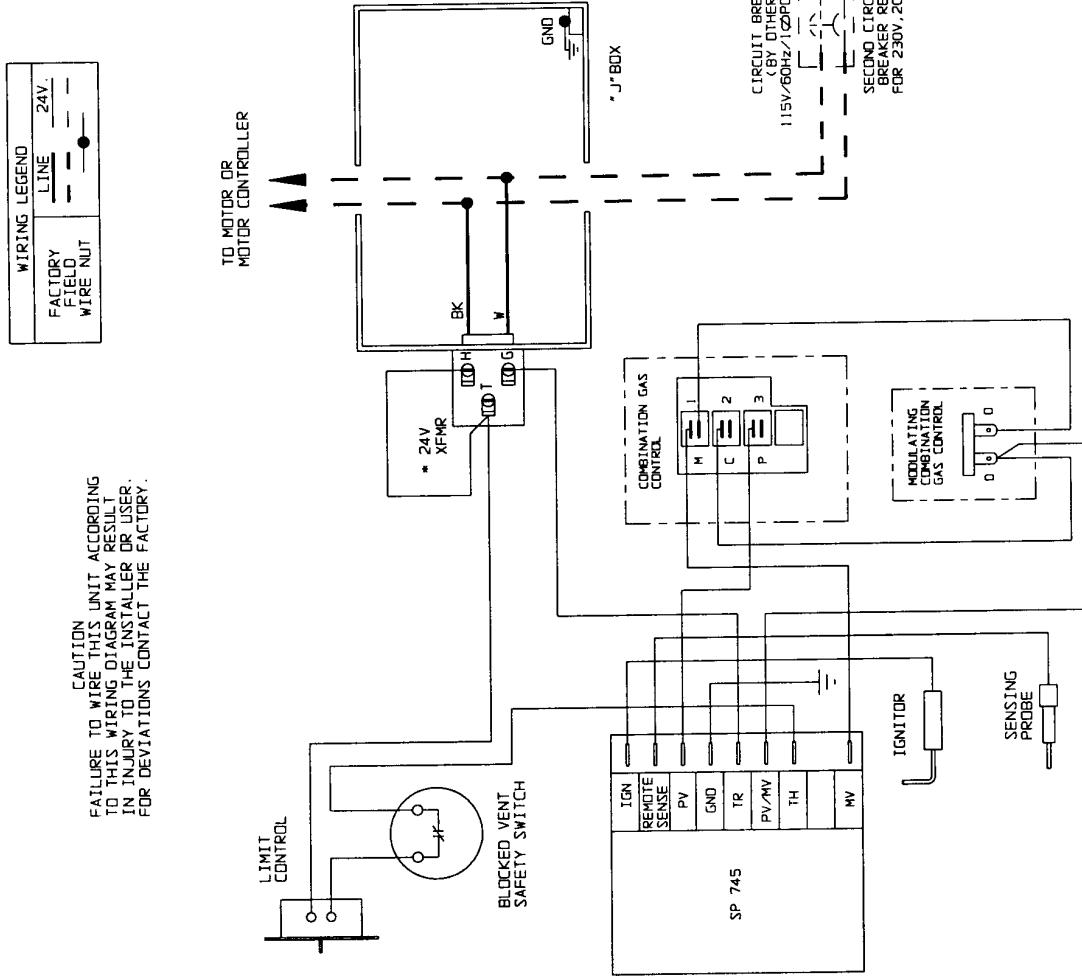
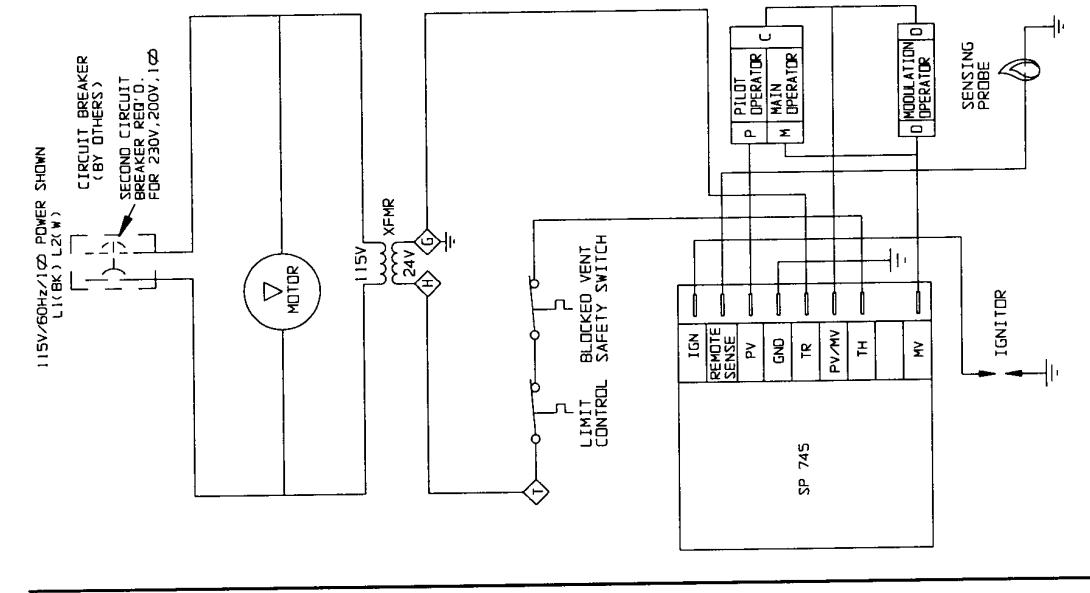
Two-stage, intermittent pilot ignition, 100% shut-off, with continuous retry, two-stage low-voltage thermostat three-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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 200V/60Hz/1 ω - BK&R wire not the wire not used.

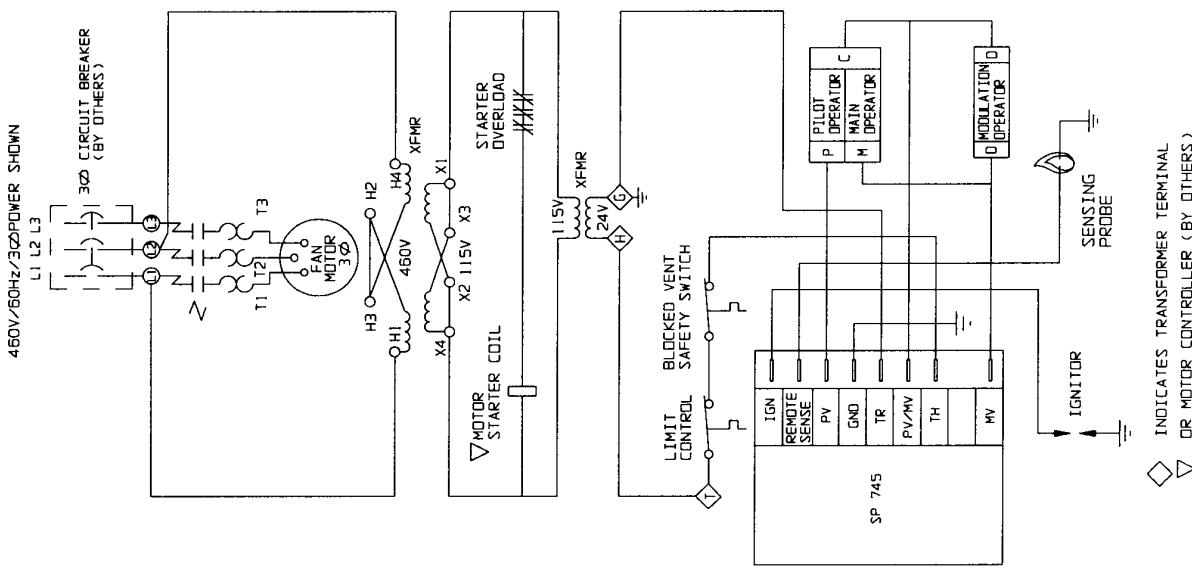
* ALTERNATE XFMR.
* PRIMARY XFMR WIRES
230V/60Hz/1 ω -BK & Y (OR O)
200V/60Hz/1 ω -BK & R
WIRE NUT THE WIRE NOT USED.

5H70833C83 (Rev. A)

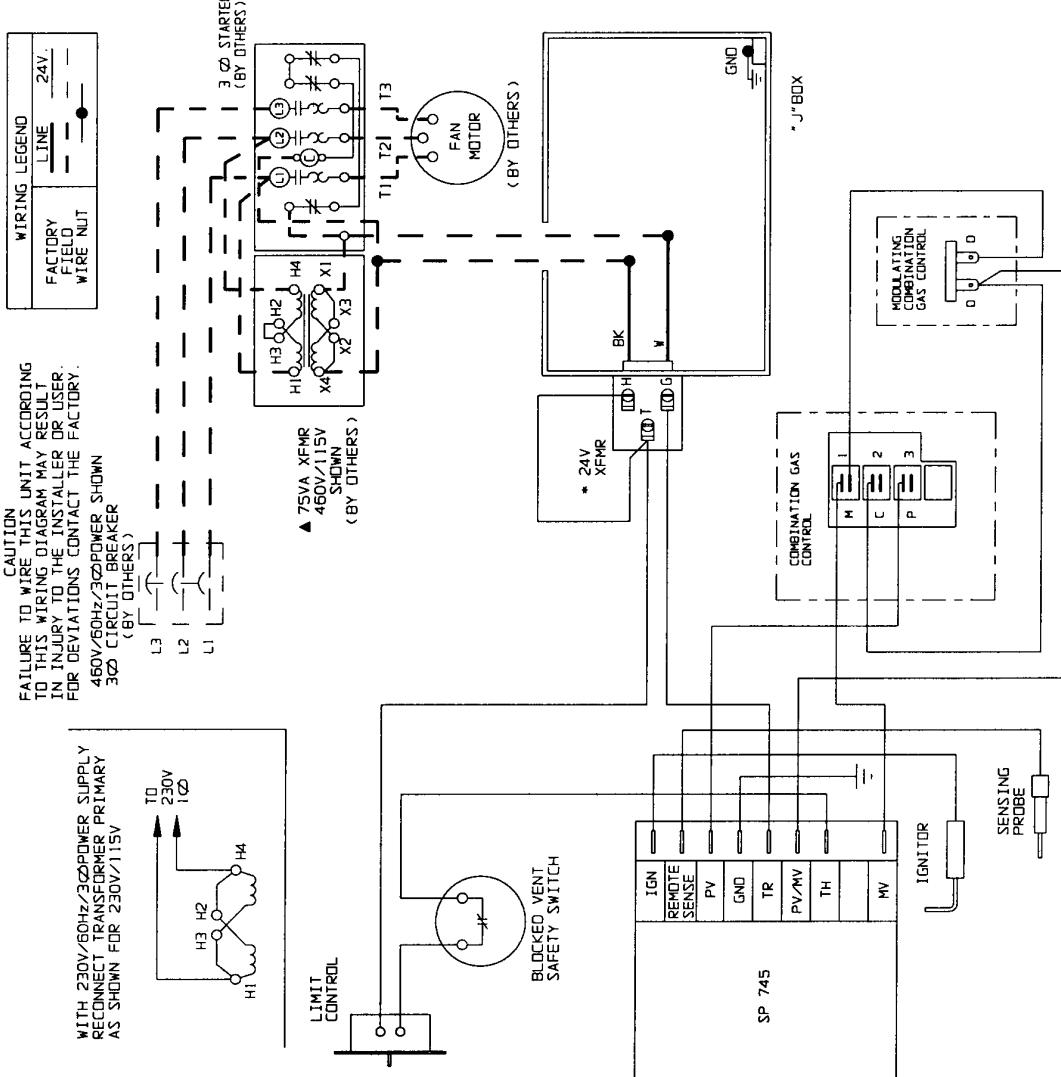
Single-phase, mechanical modulation, intermittent pilot ignition, 100% shut-off, with continuous retry.

◇ INDICATES TRANSFORMER TERMINAL
▽ OR MOTOR CONTROLLER (BY OTHERS)

Section B



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
code and all local codes.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/1Ø-8K &
200V/60Hz/1Ø-8K &
WIRE NUT THE WIRE

▲ TRANSFORMER NOT REQUIRED WITH
230V/320V POWER SUPPLY AND
230V/25V CONTROL TRANSFORMER

5H70833C83 (Rev A)

Three-phase mechanical modulation intermittent pilot ignition 100%

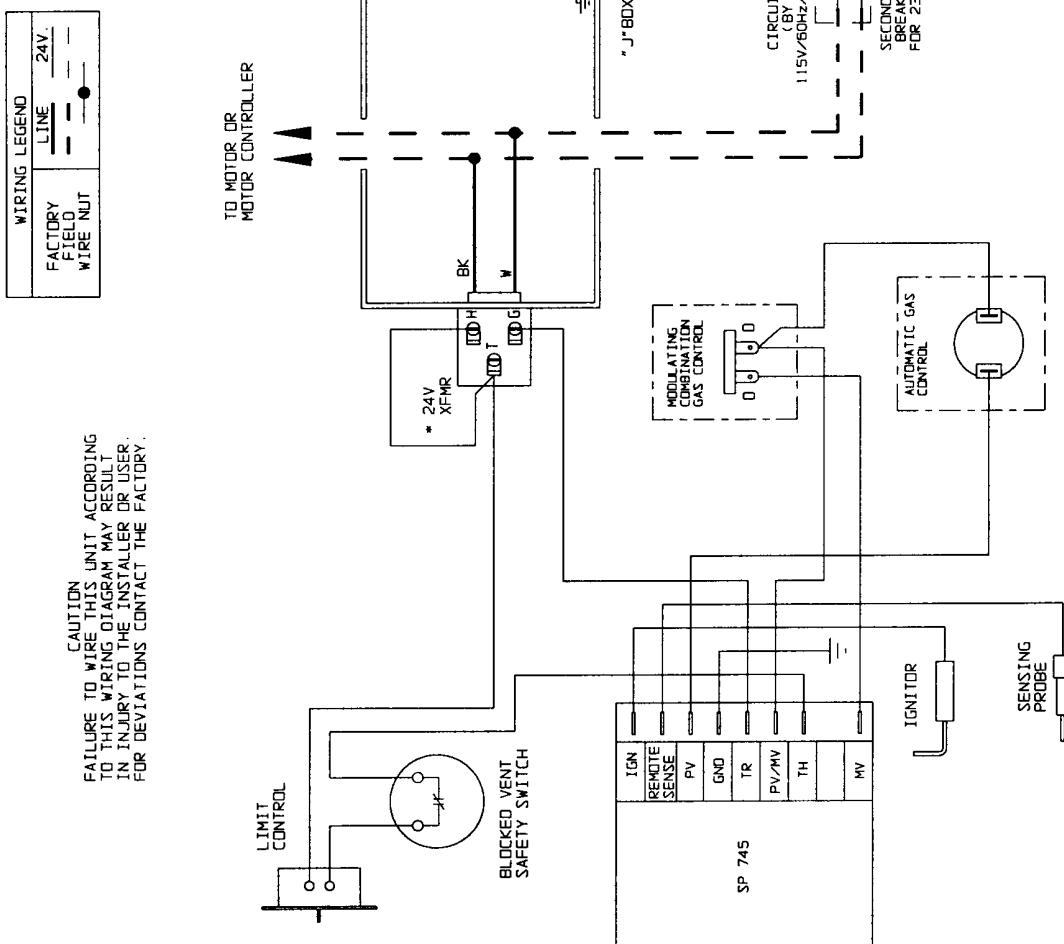
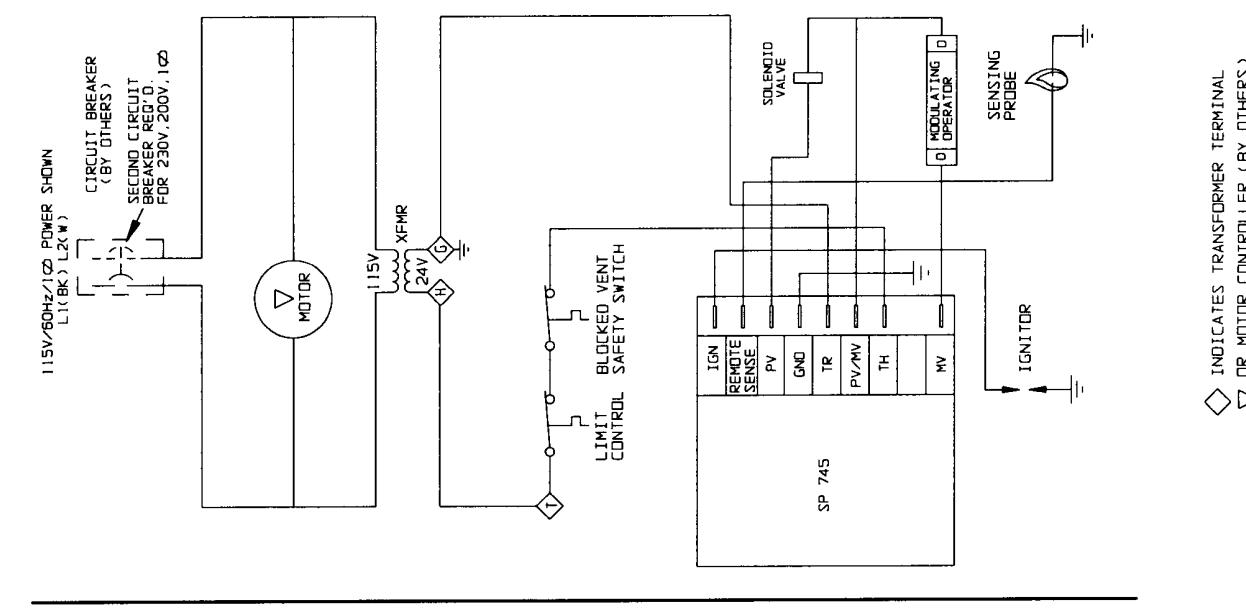
Three-phase, mechanical mod
shut-off. With continuous retry.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



5H70833C84 (Rev. A)

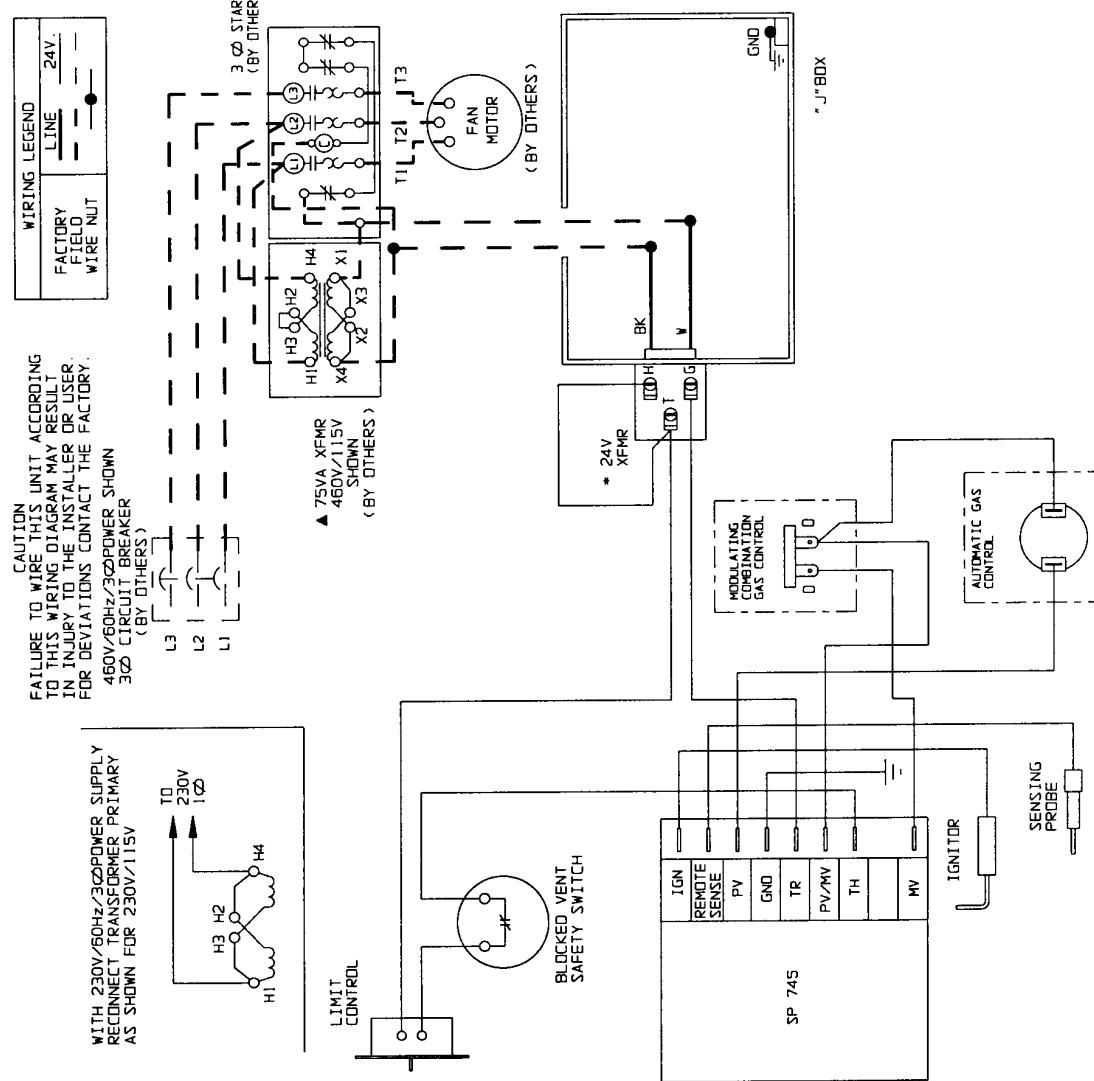
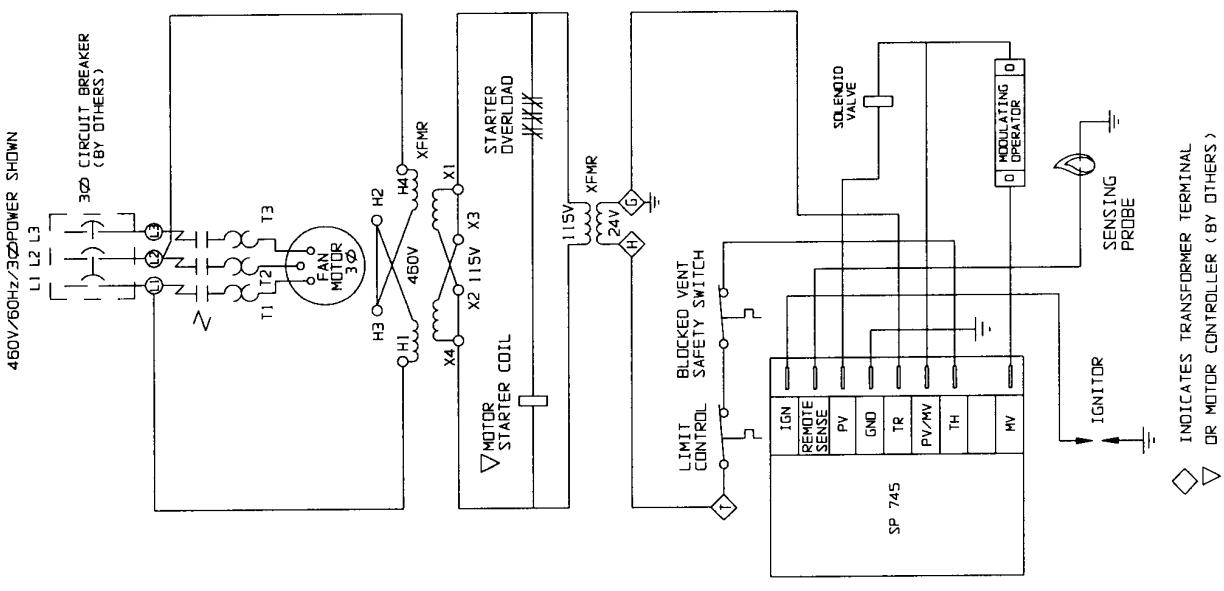
Single-phase, mechanical modulation, intermittent pilot ignition, 100% shut-off, with continuous retry.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B

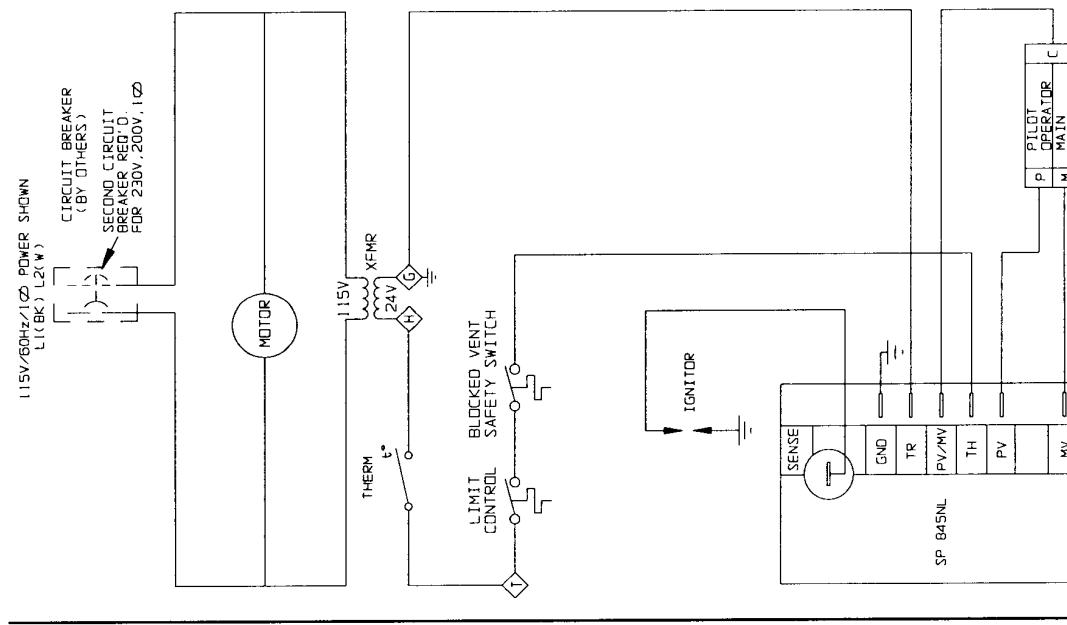


5-450 WIRING DIAGRAM - Models DJE/DHE

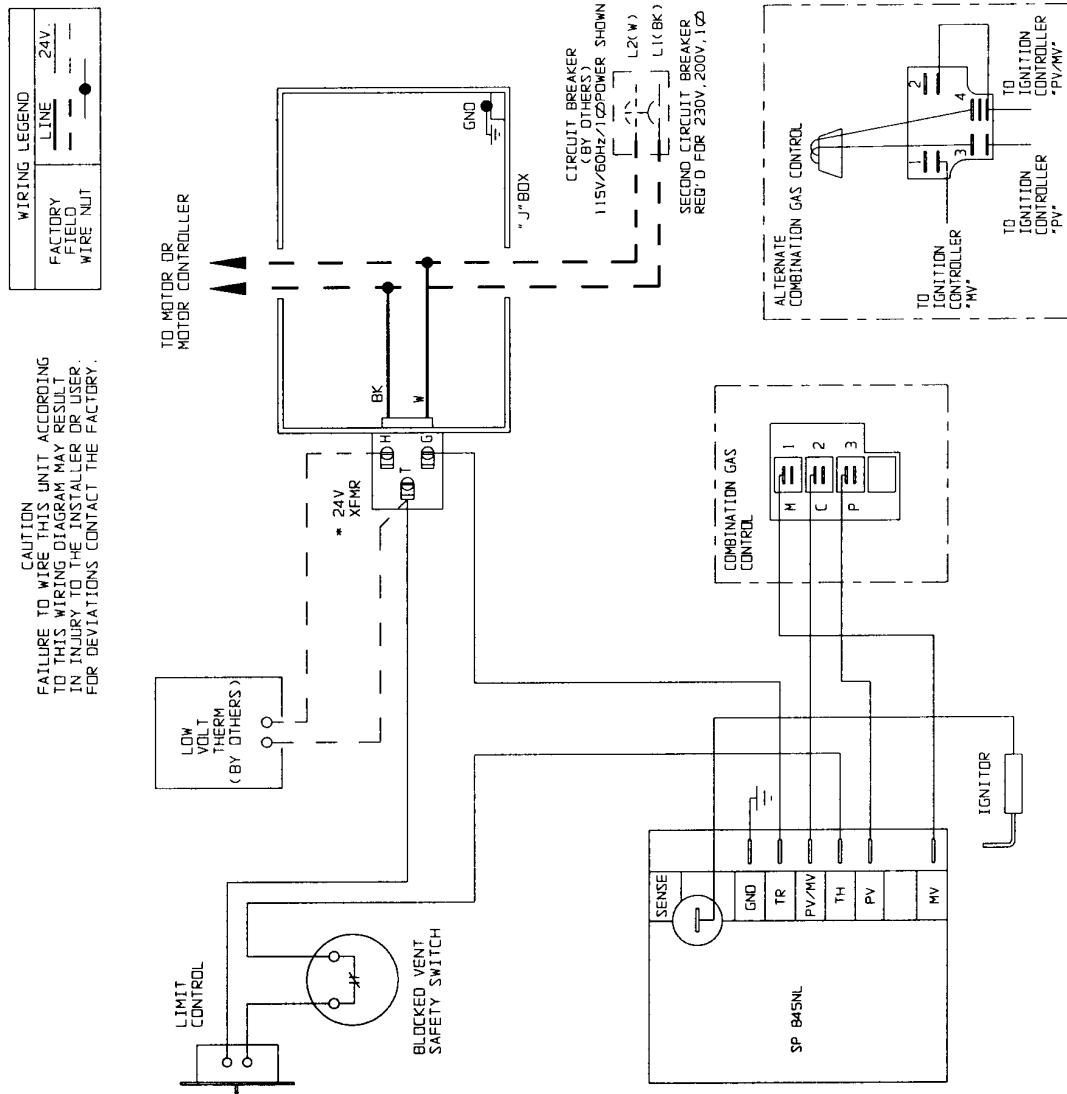


MODINE

Section B



◇ INDICATES TRANSFORMER TERMINAL



5H70833C85 (Rev.)

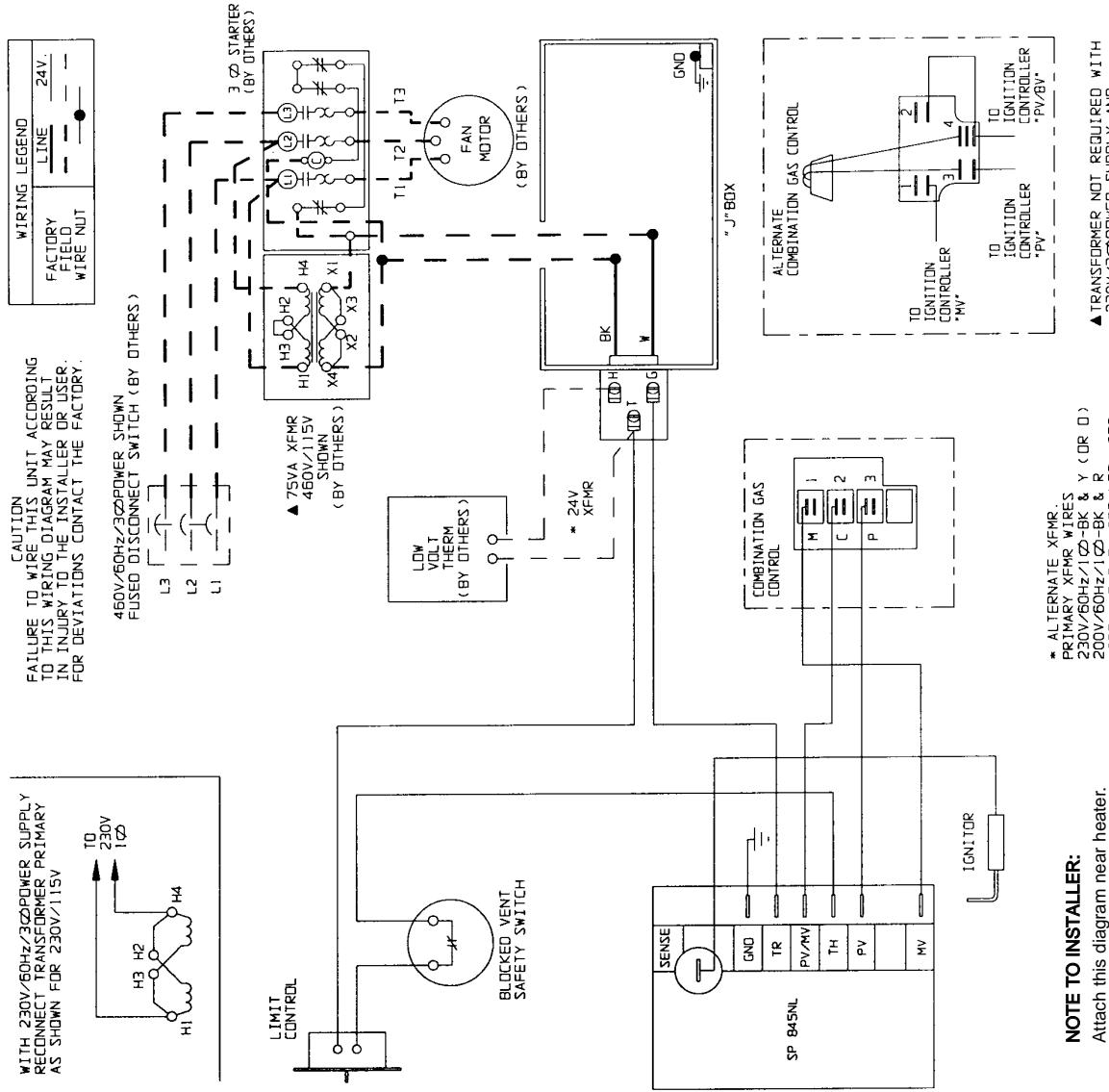
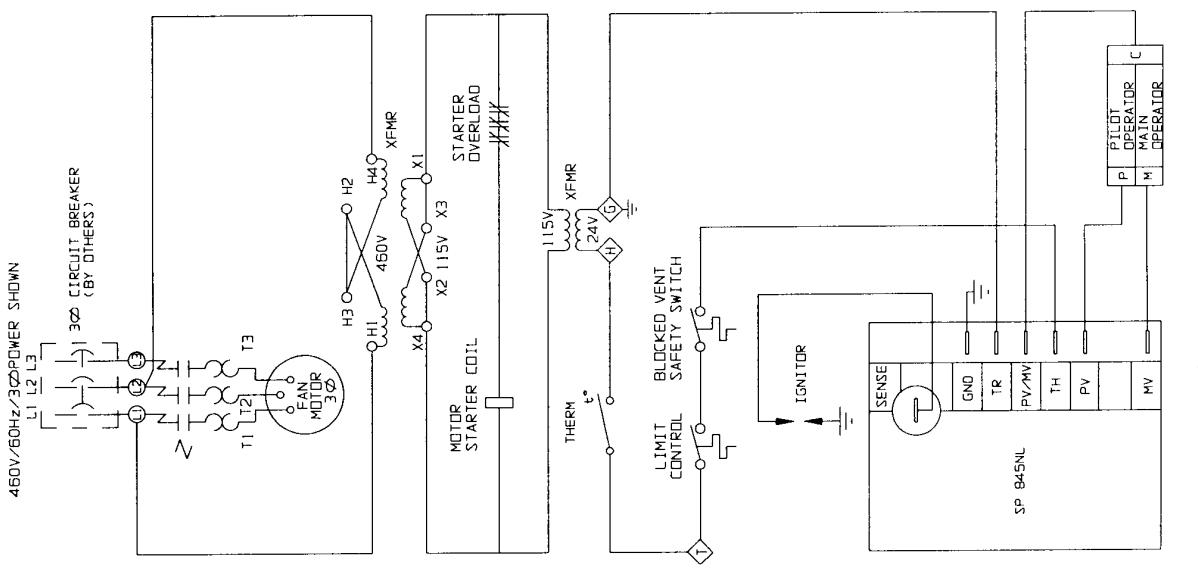
Single-stage, intermittent pilot ignition, 100% shut-off, with continuous
retry, single-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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 XFMER. Primary 200V/60Hz/1Ø -
BK&R wire nut the wire not used.

5H70833C85 (Rev.) Single-stage, intermittent pilot ignition, 100% shut-off, with continuous
retry, three-phase.

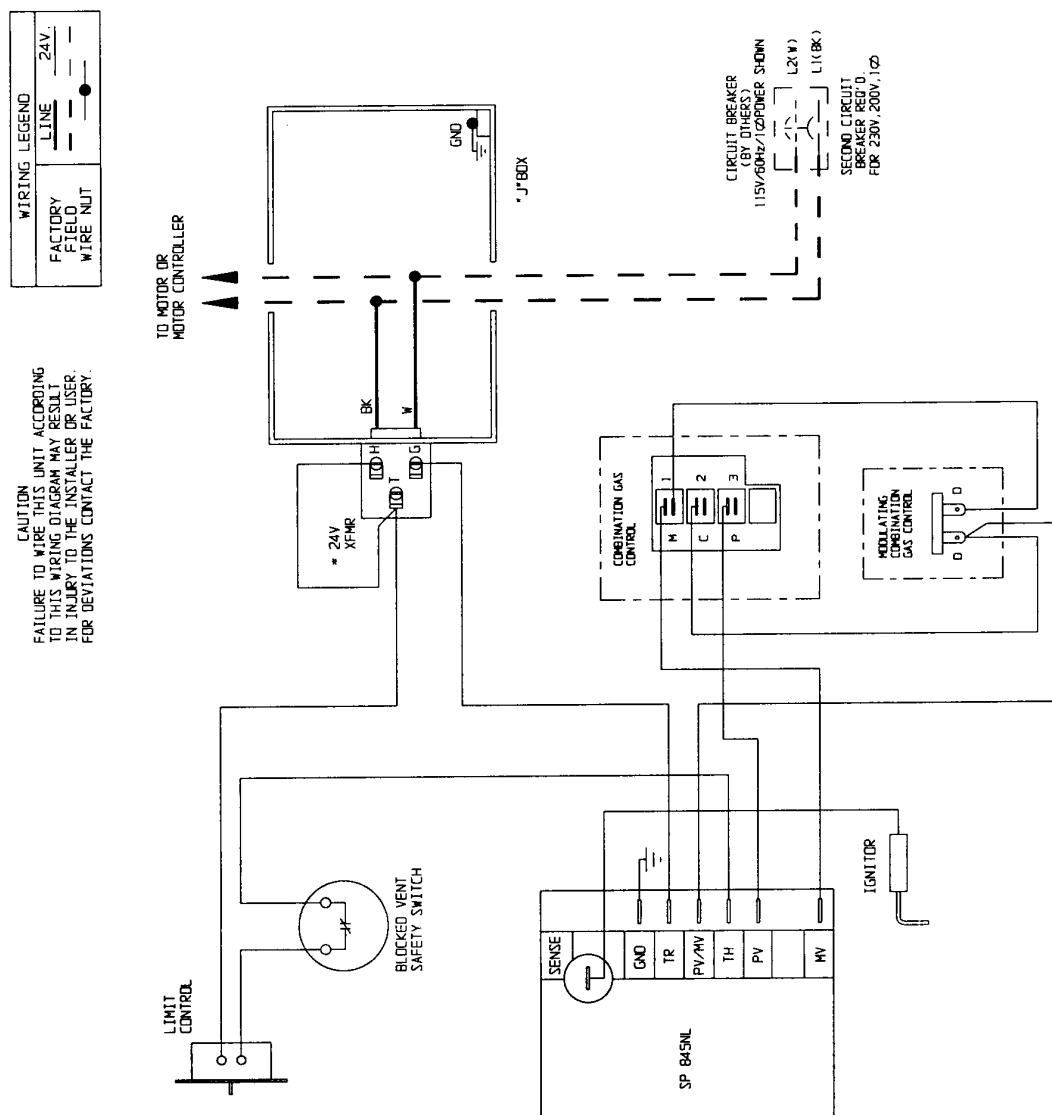
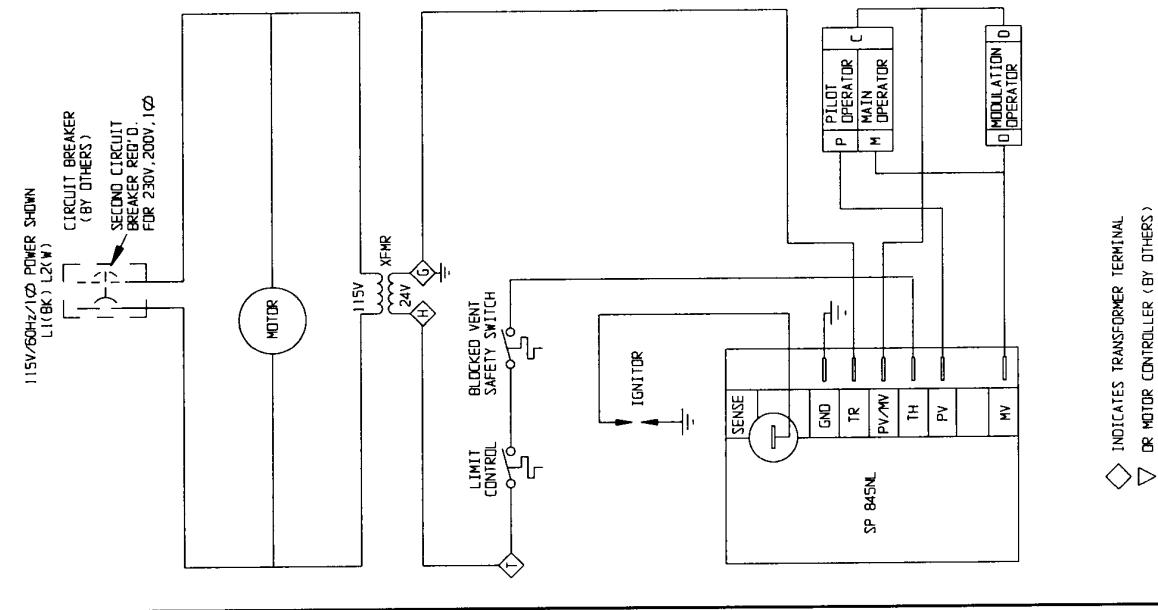
◇ INDICATES TRANSFORMER TERMINAL

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



NOTE TO INSTALLER:

Attach this diagram near the 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 XFRM. Primary 200V/60Hz/1Ø -
BK&R wire nut the wire not used.

◇ INDICATES TRANSFORMER TERMINAL
▽ OR MOTOR CONTROLLER (BY OTHERS)

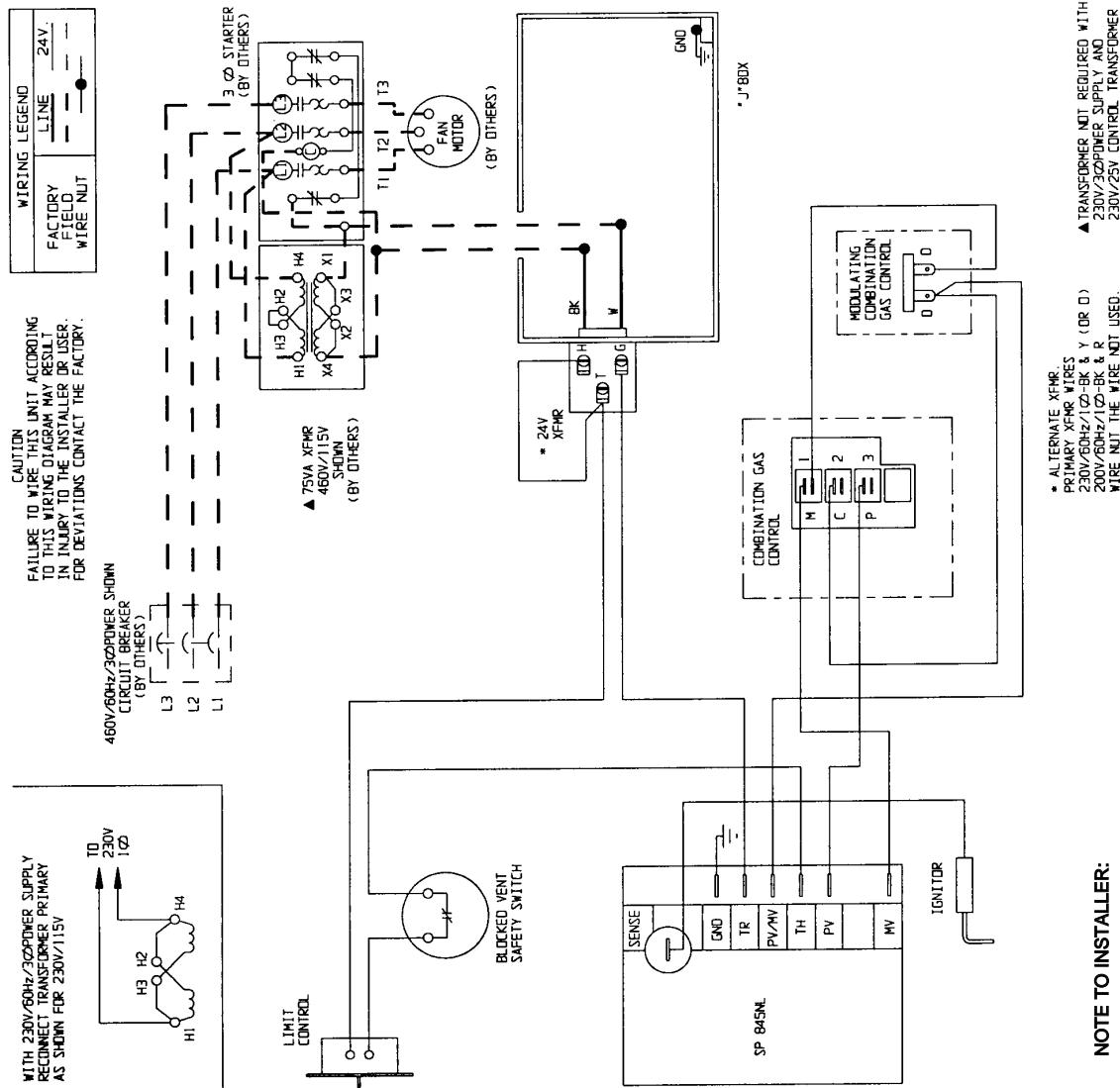
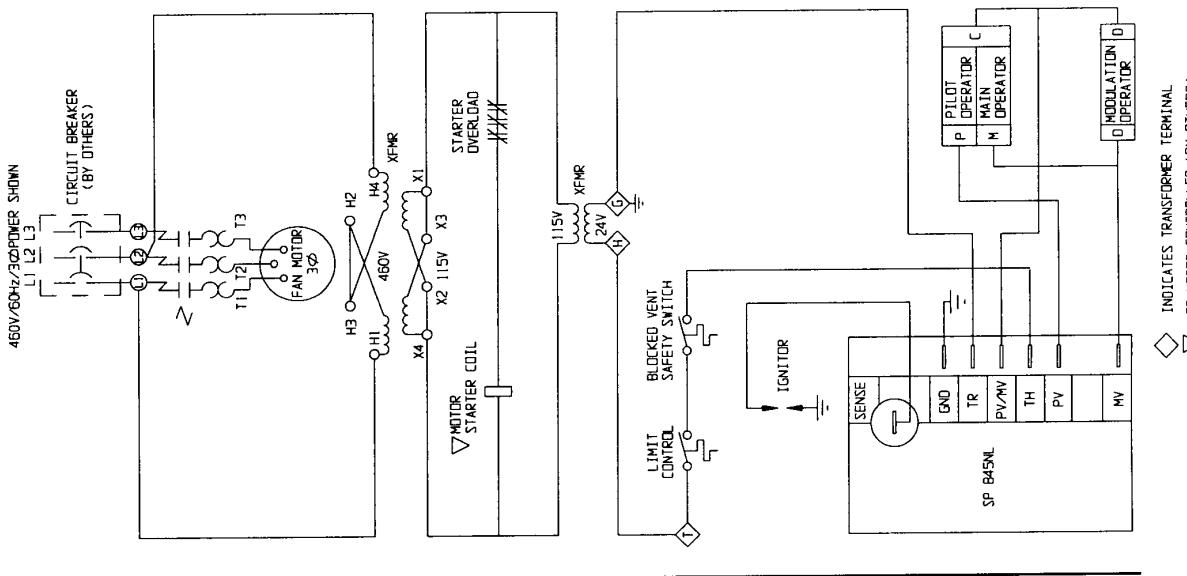
Single-phase, mechanical modulation, intermittent pilot ignition, 100%
shut-off, with continuous retry.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



5H74300C01 (Rev.A)

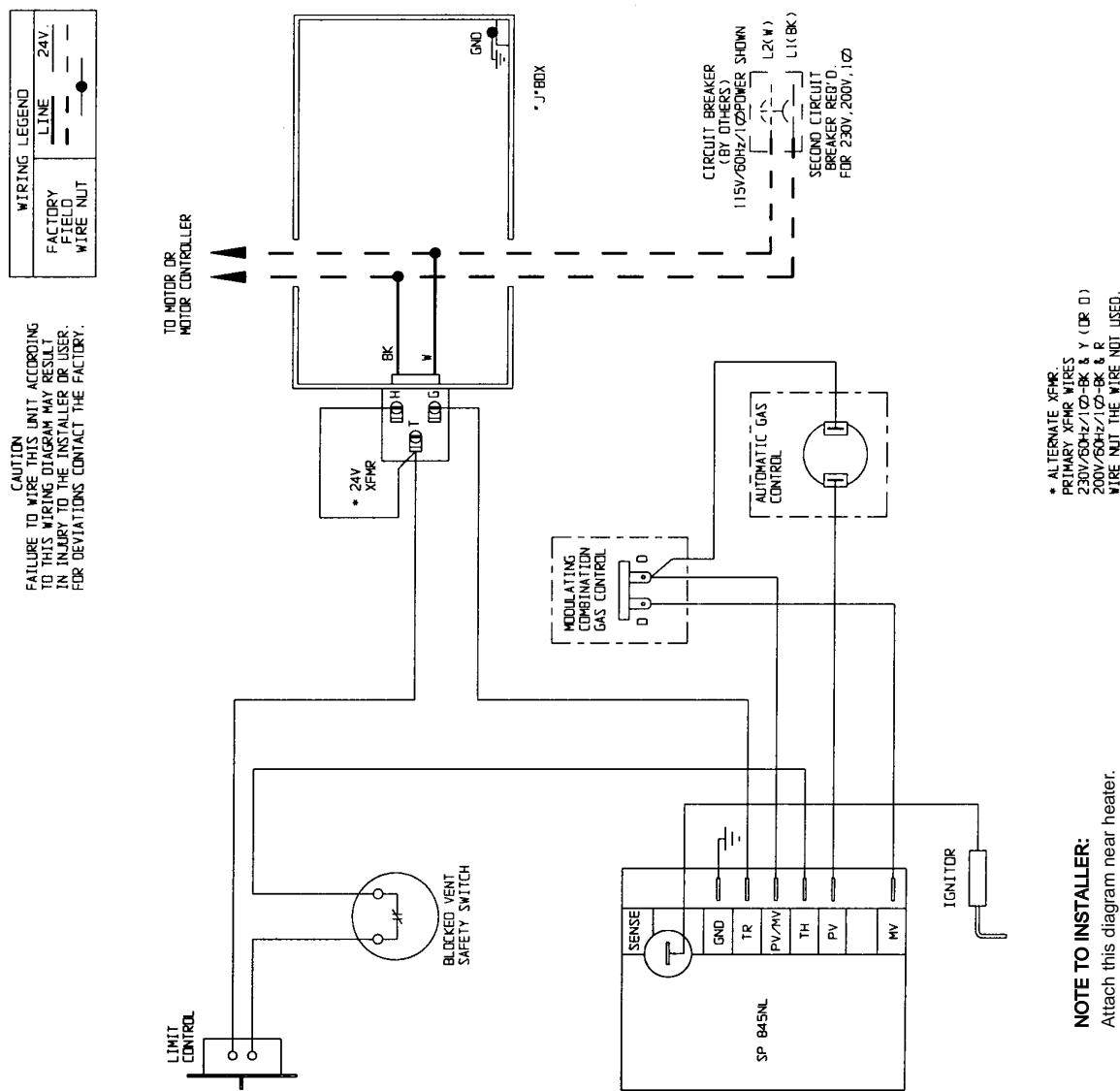
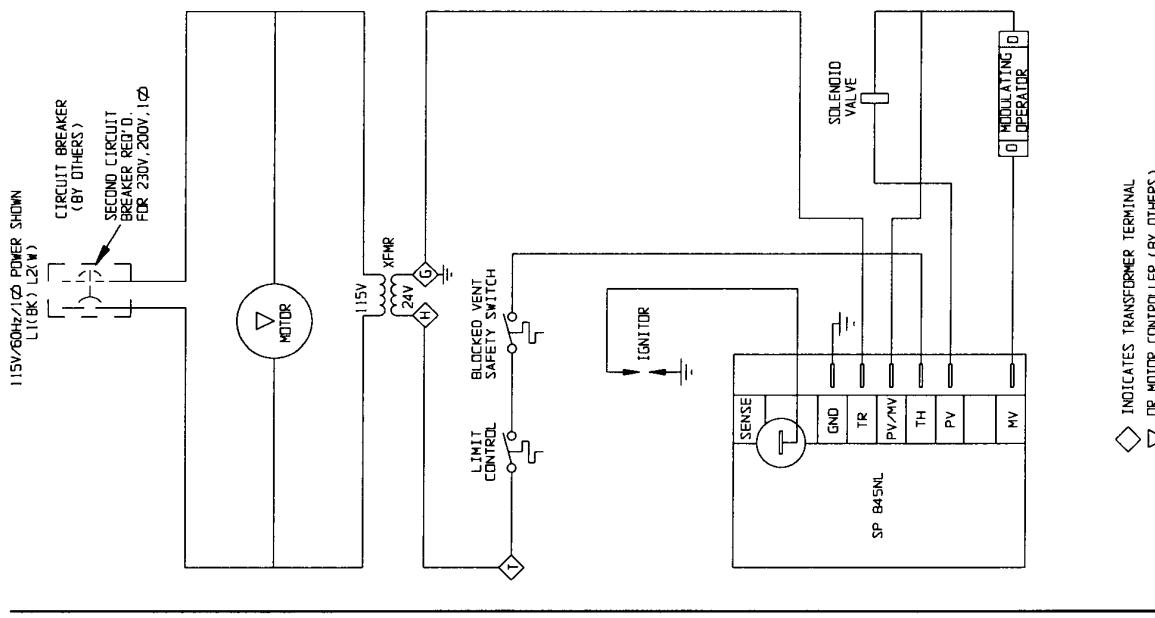
Three-phase, mechanical modulation, intermittent pilot ignition, 100% shut-off, with continuous retry.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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 200V/60Hz/1 $\frac{1}{2}$ -
BK&R wire nut the wire not used.

- ◇ INDICATES TRANSFORMER TERMINAL
- ▽ OR MOTOR CONTROLLER (BY OTHERS)

Single-phase, mechanical modulation, intermittent pilot ignition, 100%
shut-off, with continuous retry.

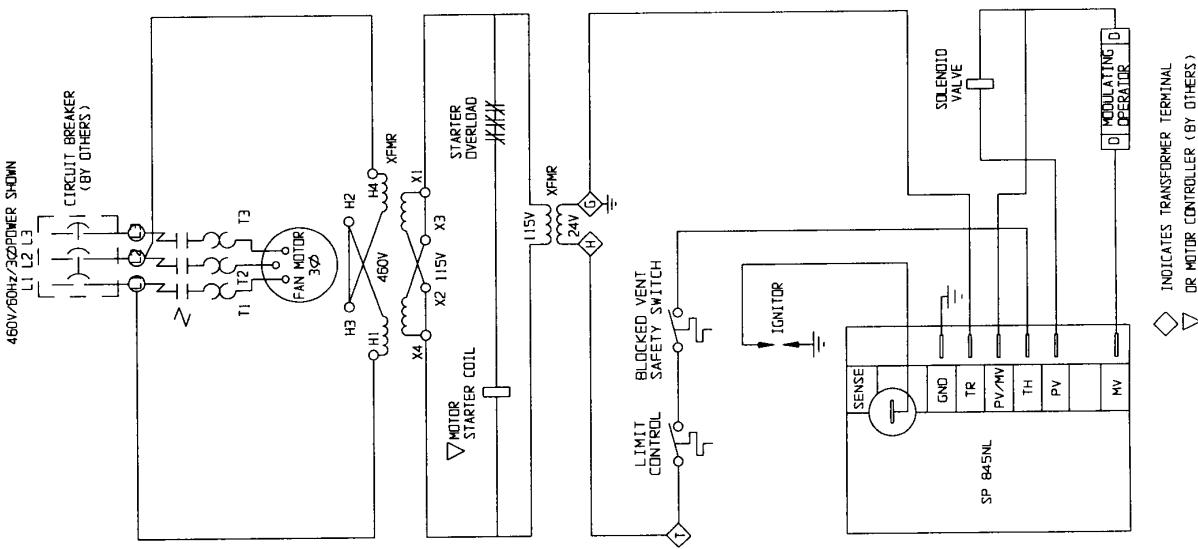
5H74300C02 (Rev. A)

5-450 WIRING DIAGRAM - Models DJE/DHE

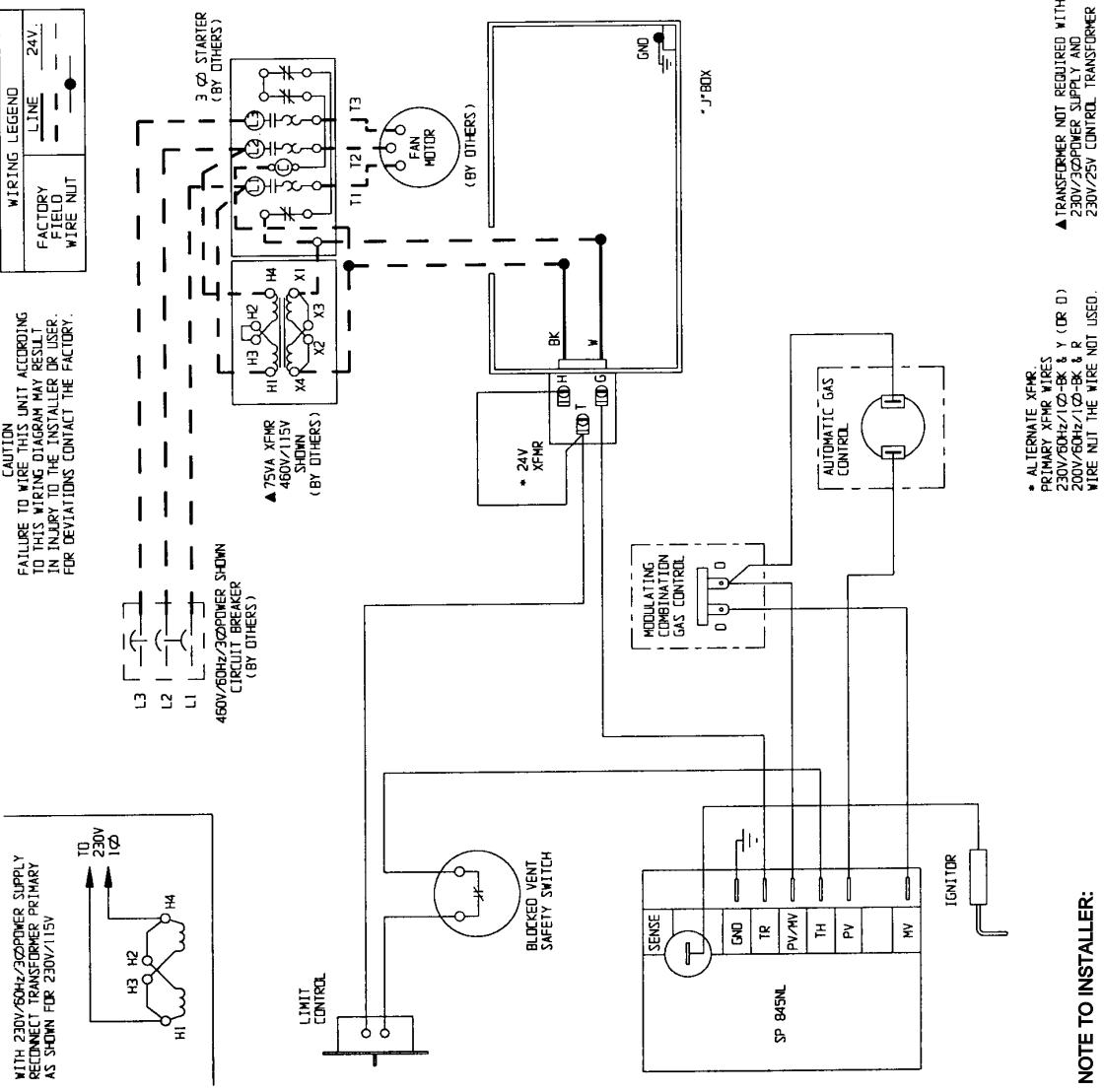


MODINE

Section B



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 nation
code and all local codes.

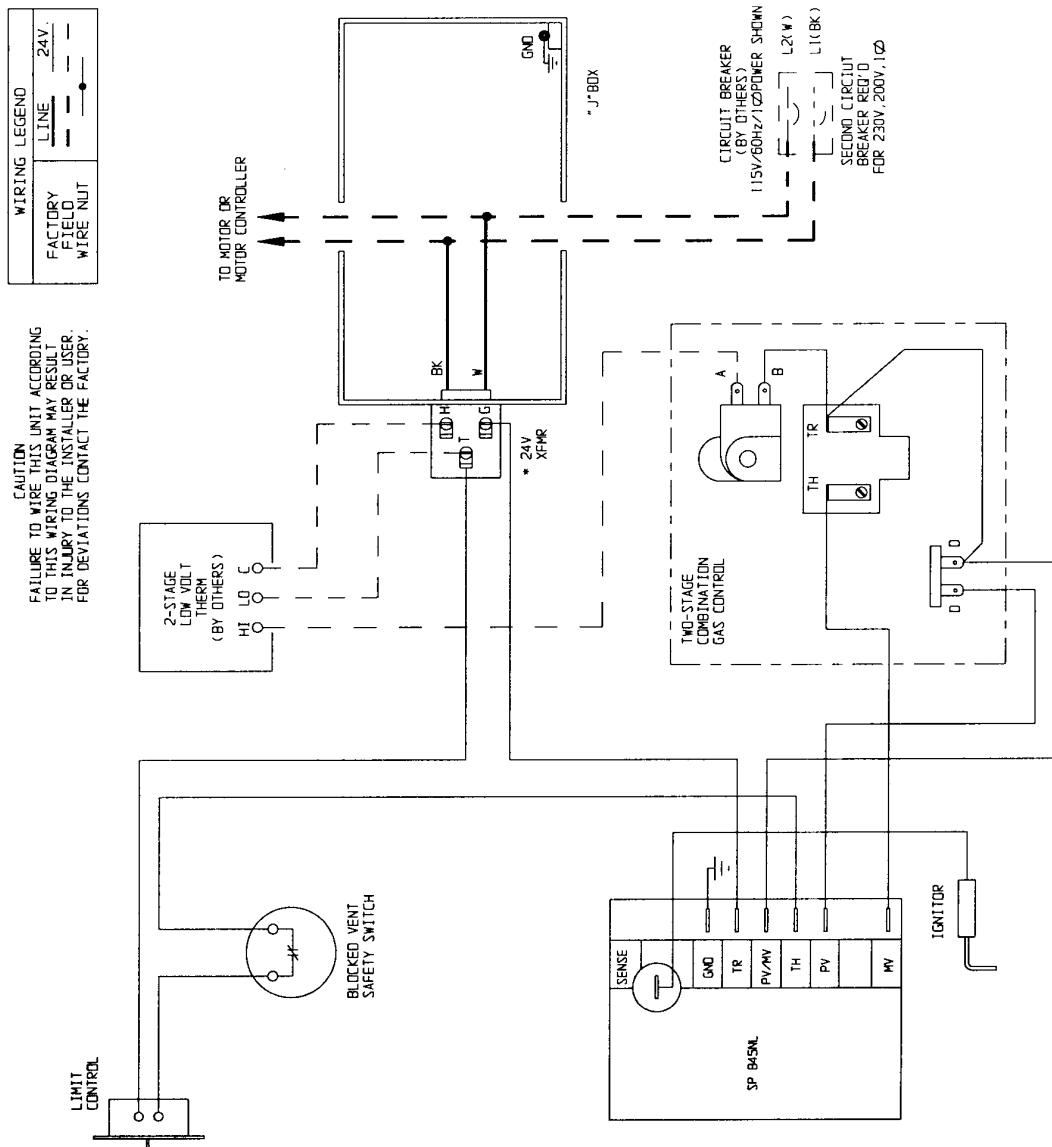
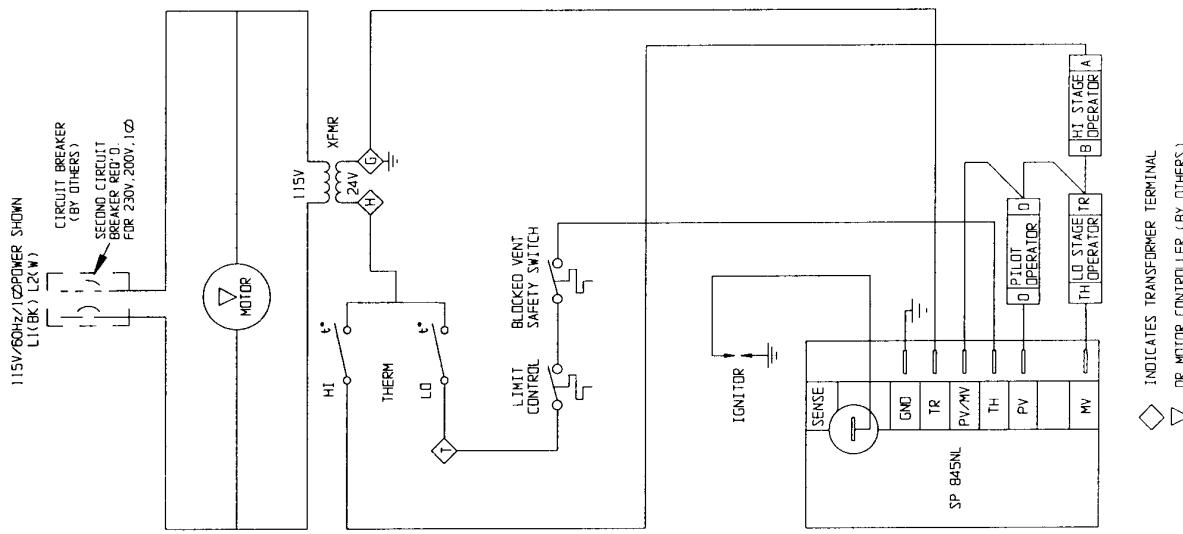
5H74300C02 (Rev. A) Three-phase, mechanical modulation, intermittent pilot ignition, 100% shut-off with continuous retry

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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 XFRM. Primary 200V/60Hz/1COP - BK&R wire nut the wire not used.

5H74300C03 (Rev.)

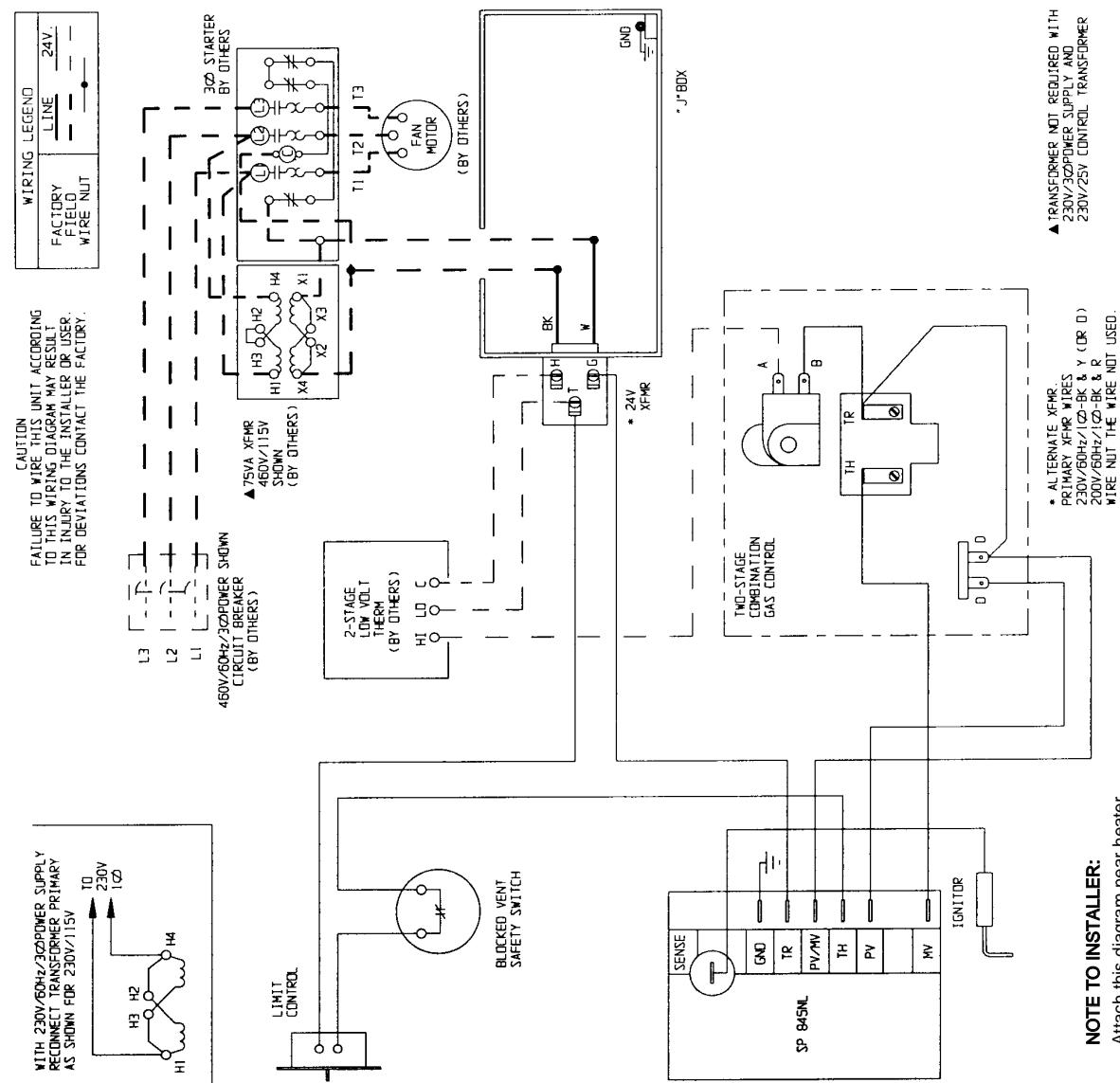
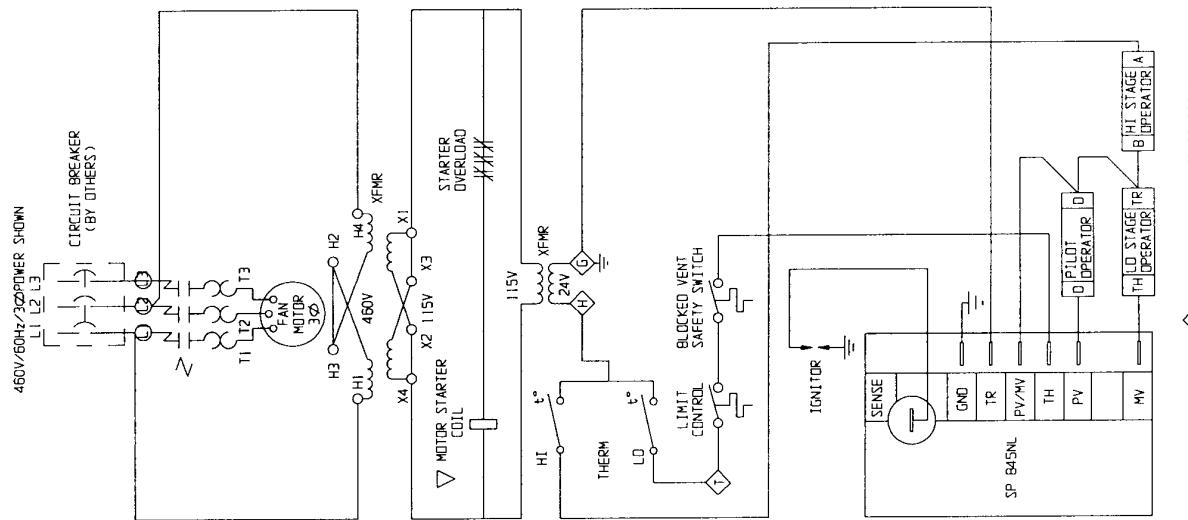
Two-stage, intermittent pilot ignition, 100% shut-off, with continuous retry.
two-stage low-voltage thermostat, single-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B



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 200V/60Hz/1Ø - BK&R wire nut wire not used.

5H74300C03 (Rev.)

Two-stage, intermittent pilot ignition, 100% shut-off, with continuous retry, two-stage low-voltage thermostat, three-phase.

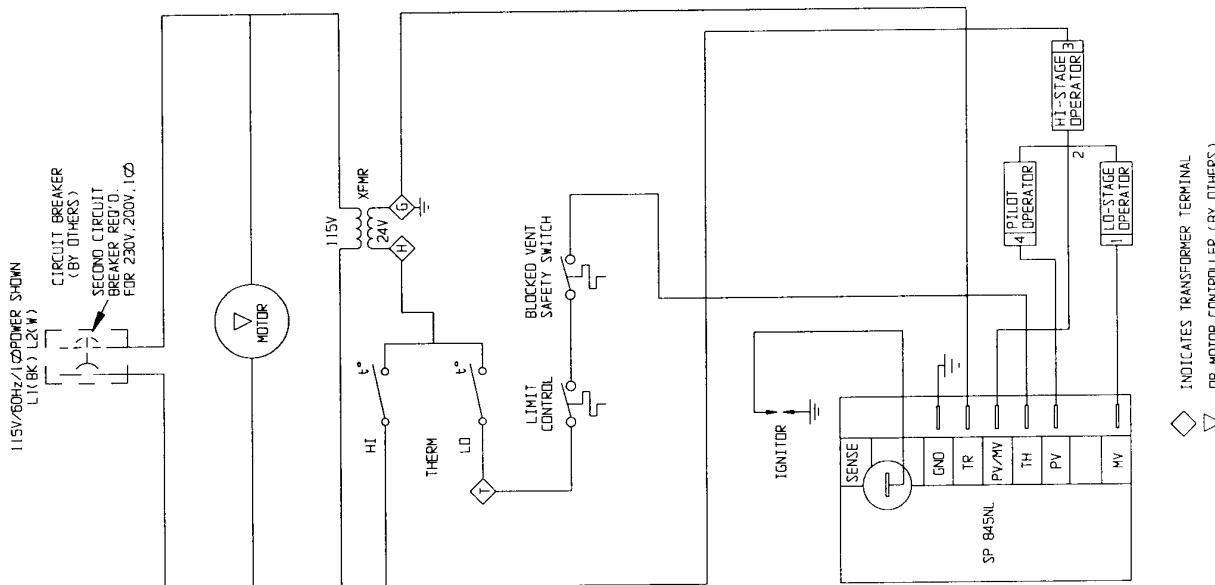
◇ INDICATES TRANSFORMER TERMINAL
▽ INDICATES MOTOR CONTROLLER (BY OTHERS)

5-450 WIRING DIAGRAM - Models DJE/DHE

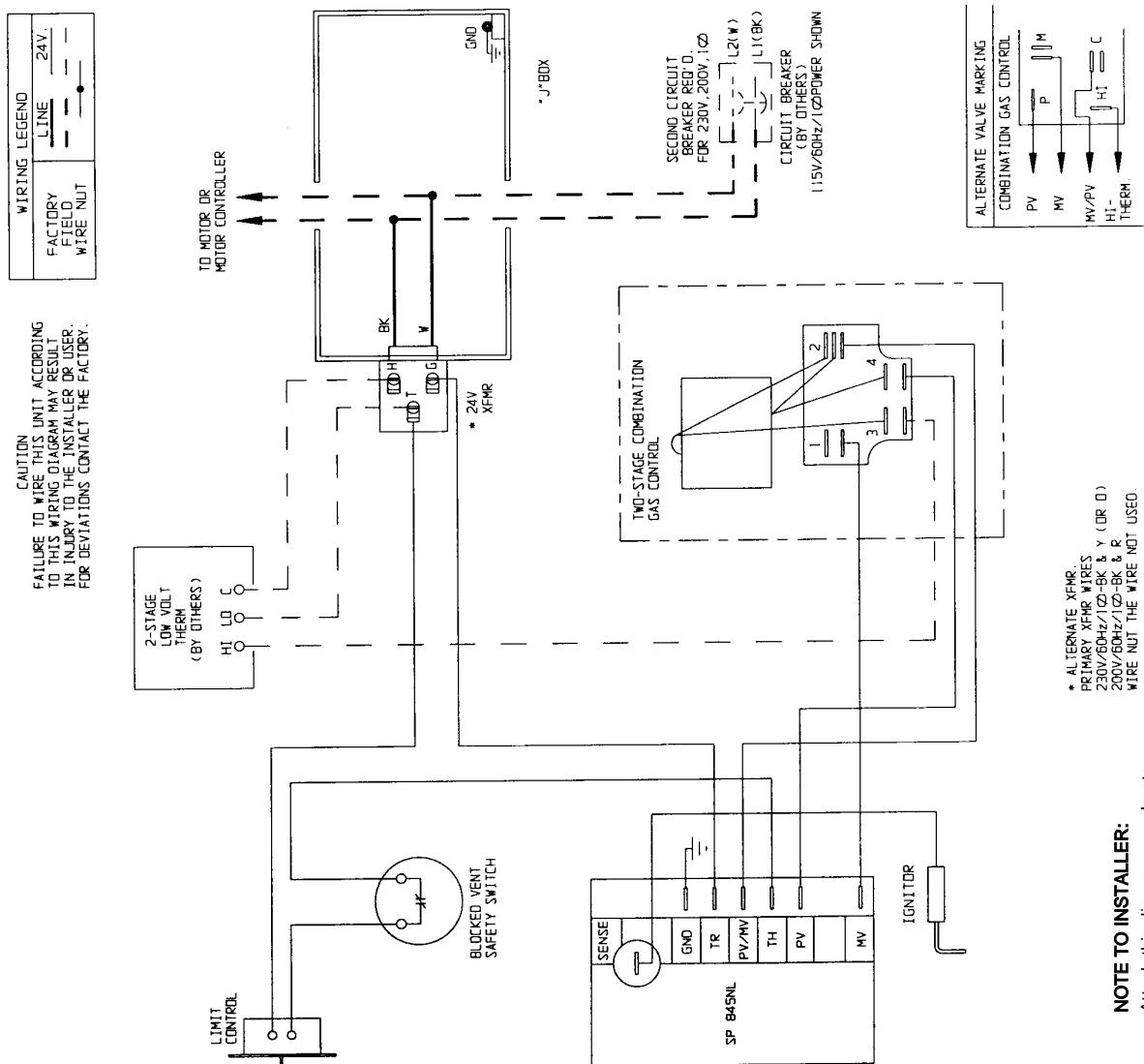


MODINE

Section B



◇ INDICATES TRANSFORMER TERMINAL
▽ DR MOTOR CONTROLLER (BY OTHERS)



5H74300C04 (Rev.)

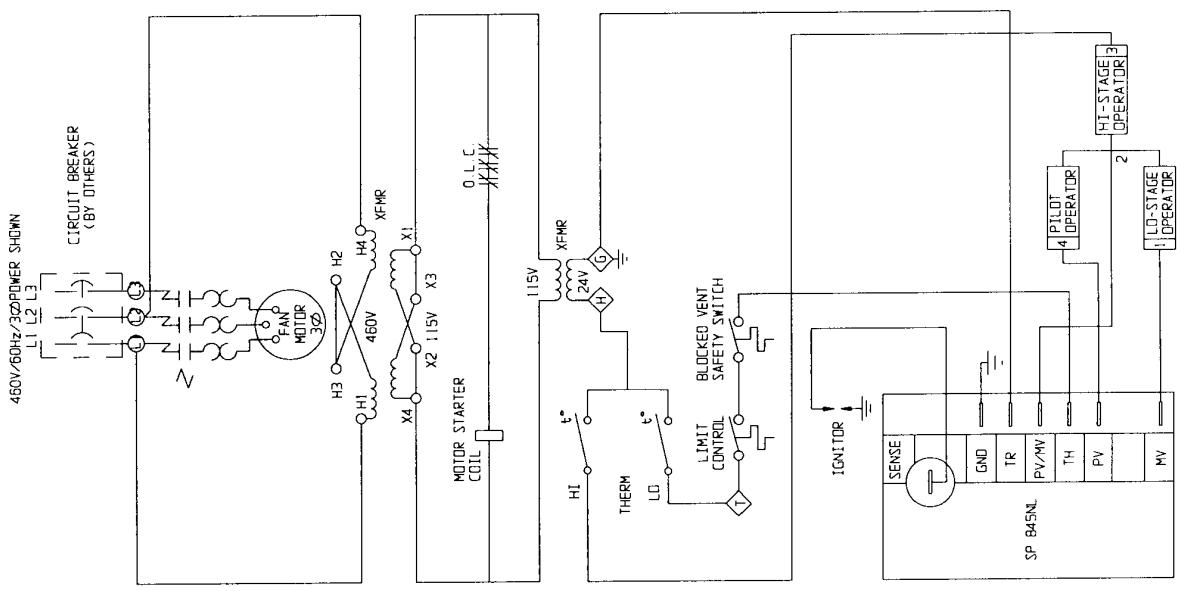
Two-stage, intermittent pilot ignition, 100% shut-off, with continuous retry.
single-phase.

5-450 WIRING DIAGRAM - Models DJE/DHE



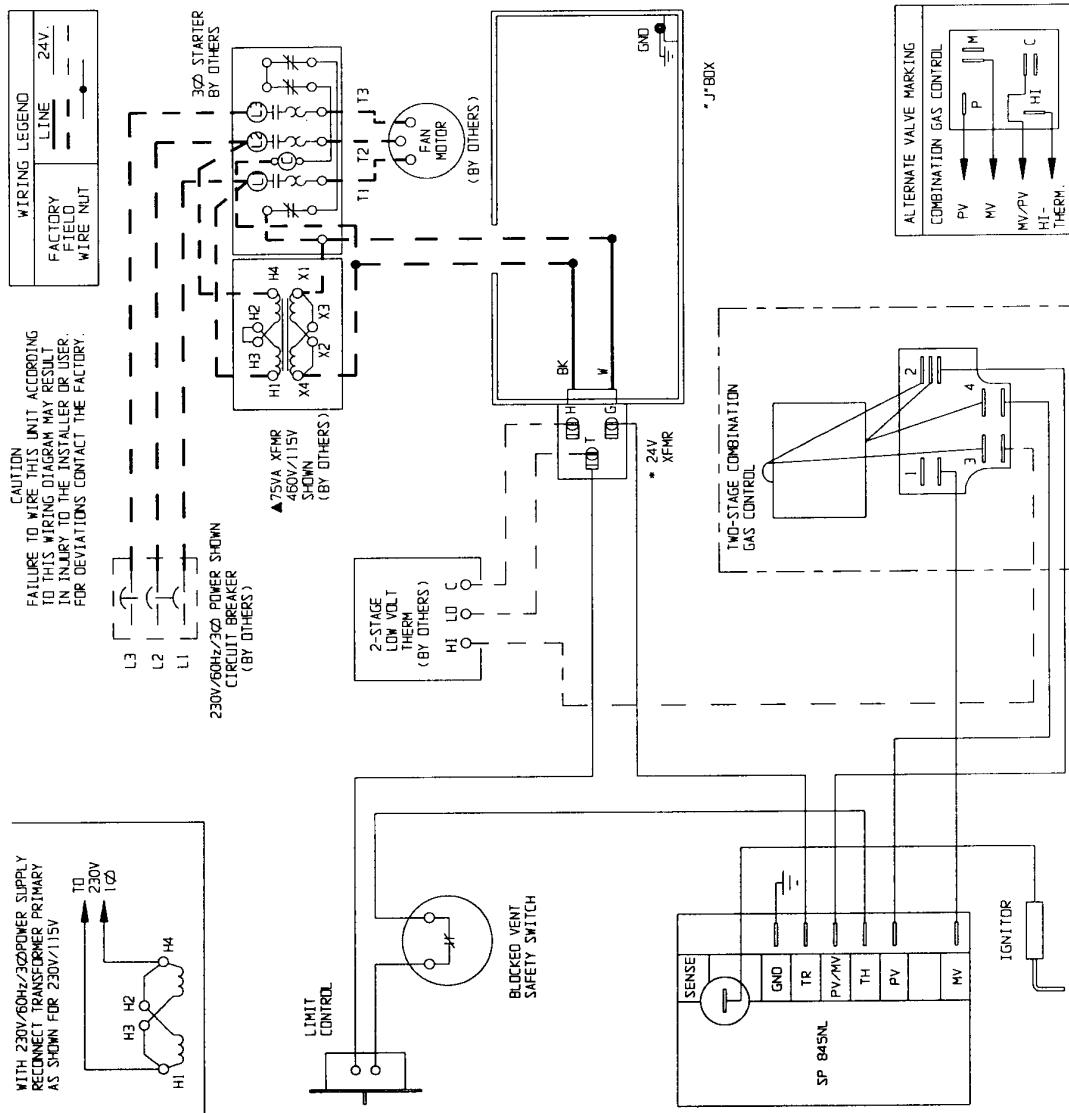
MODINE

Section B



INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)

Two-stage, intermittent pilot ignition, 100% shut-off, with continuous retry,
three-phase.

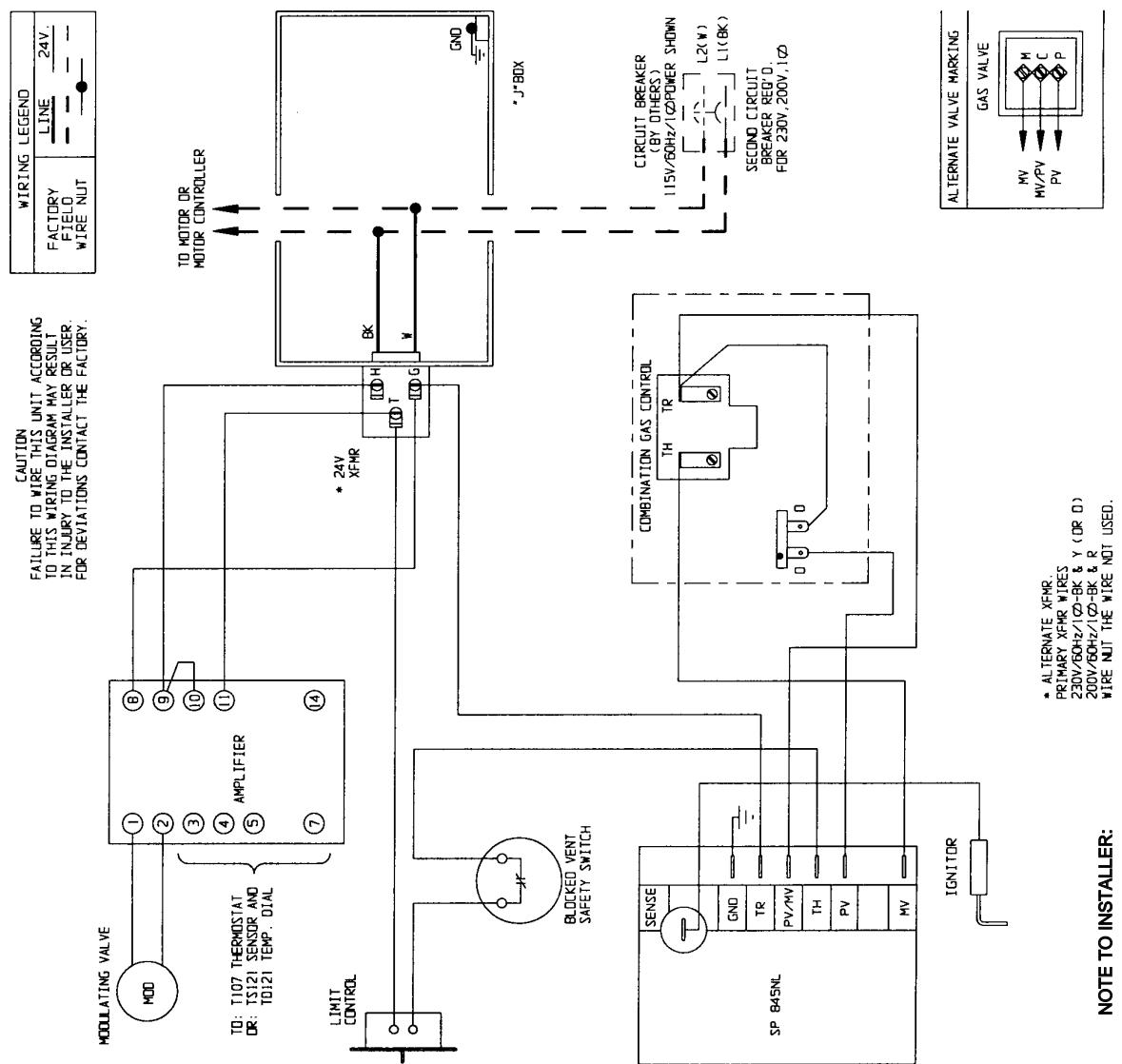
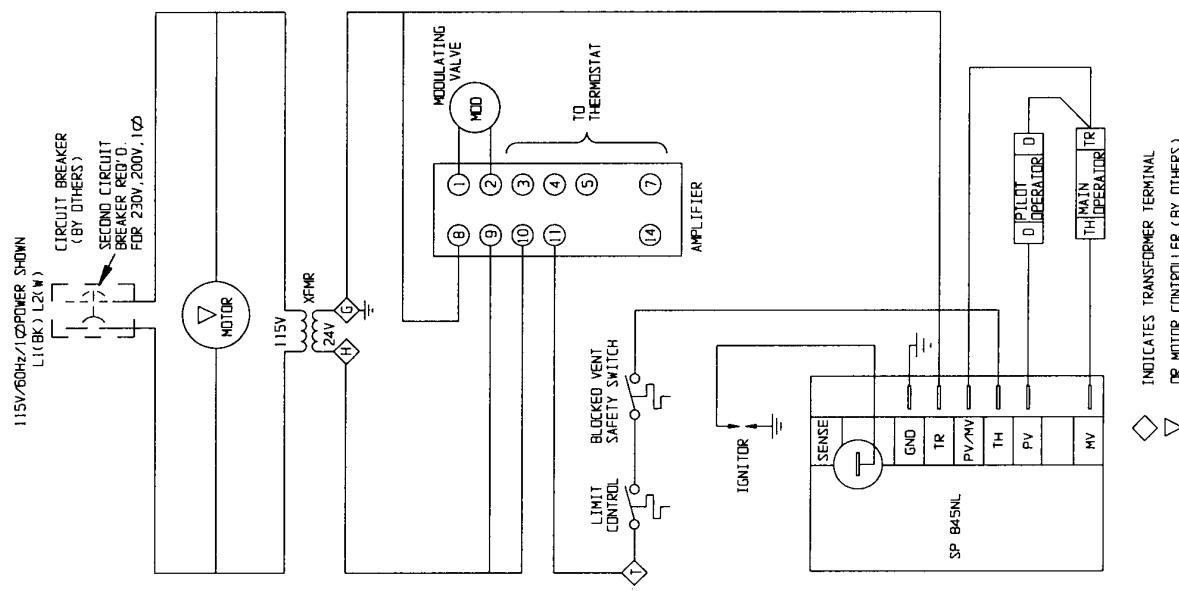


5-450 WIRING DIAGRAM - Models DJE/DHE



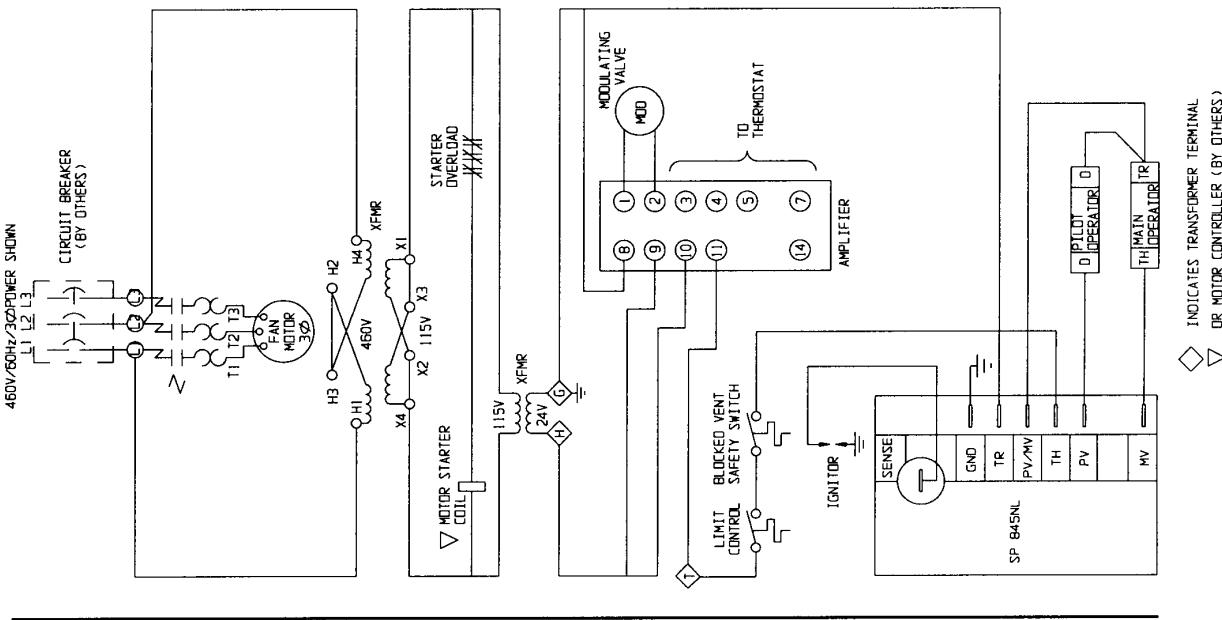
MODINE

Section B

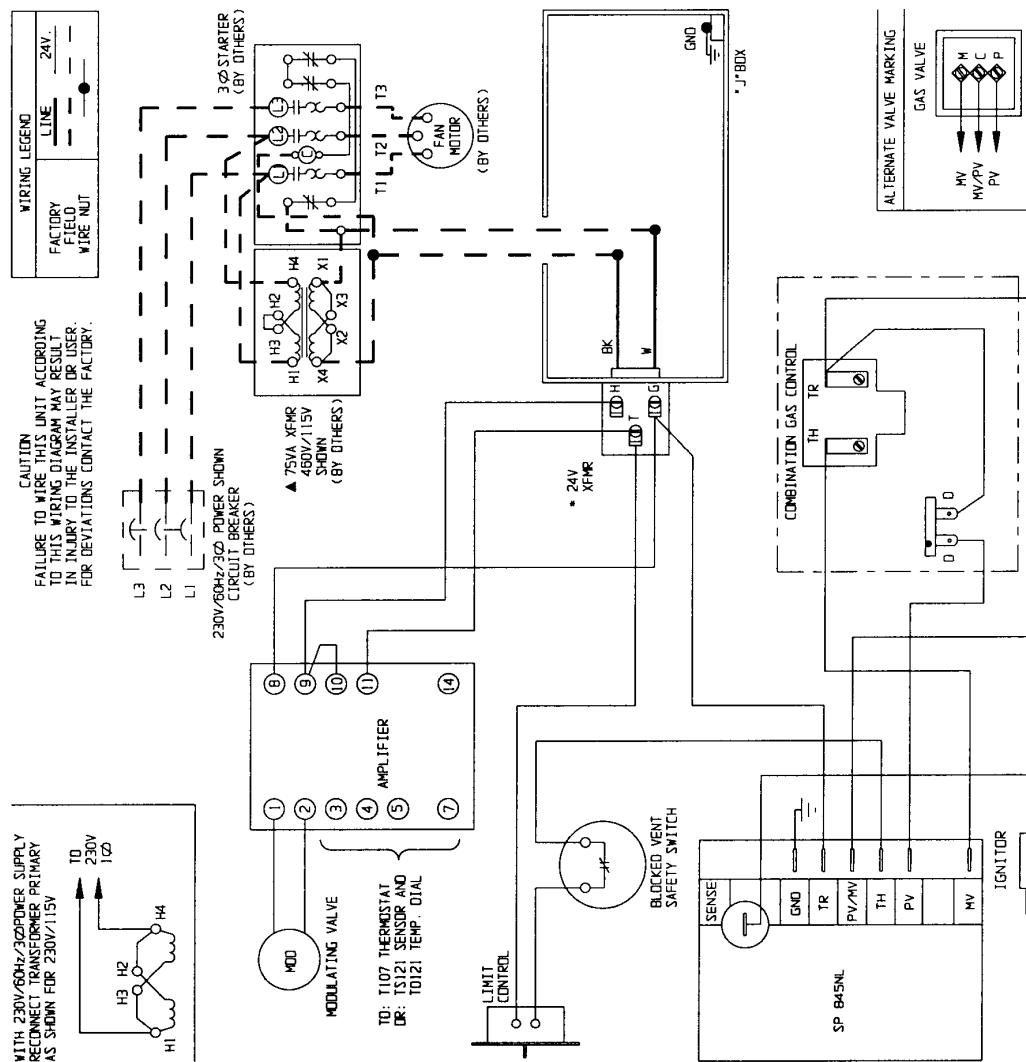


5H74300C05 (Rev. A)

Single-phase, intermittent pilot ignition, 100% shut-off with continuous retry, electronic modulation.



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.



* ALTERNATE XFMR.
PRIMARY XFMR WIRES
1230V/60Hz/1Q-BK & Y
1200V/60Hz/1Q-BK & R
WIRE NUT THE WIRE NO

**TRANSFORMER NOT REQUIRED WITH
230V/300W POWER SUPPLY AND
230V/25W CONTROL TRANSFORMER**

INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROL FOR (BY OTHERS)
TH MAIN OPERATOR

5H74300C05 (Rev A)

Three-phase, intermittent pilot ignition, 100% shut-off, with continuous reiv electronic modulation

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.

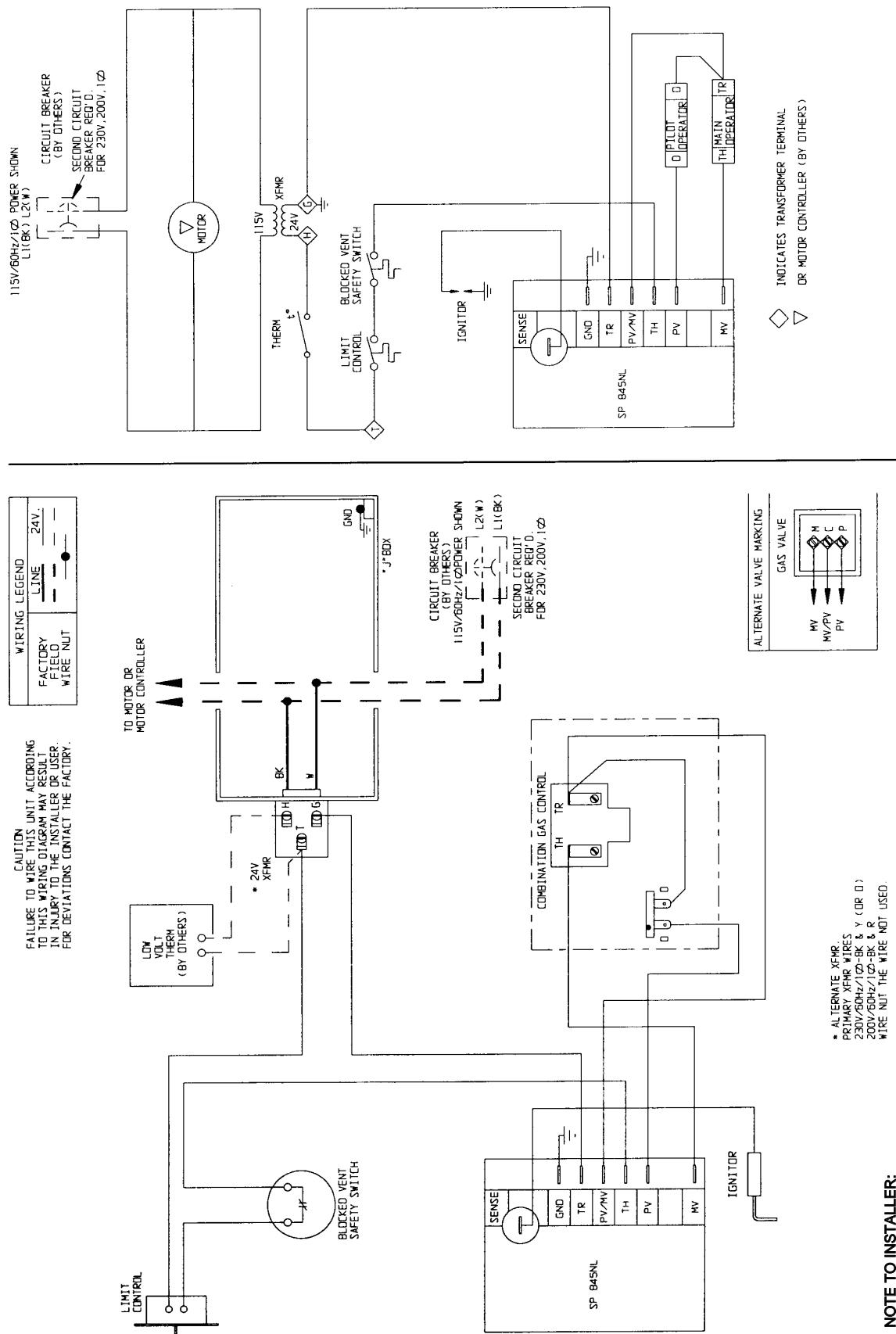
Use 105°C wire for replacements.
*Alternate XFMR. Primary 200V/60Hz/1φ -
BK&R wire not the wire not used

5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section B

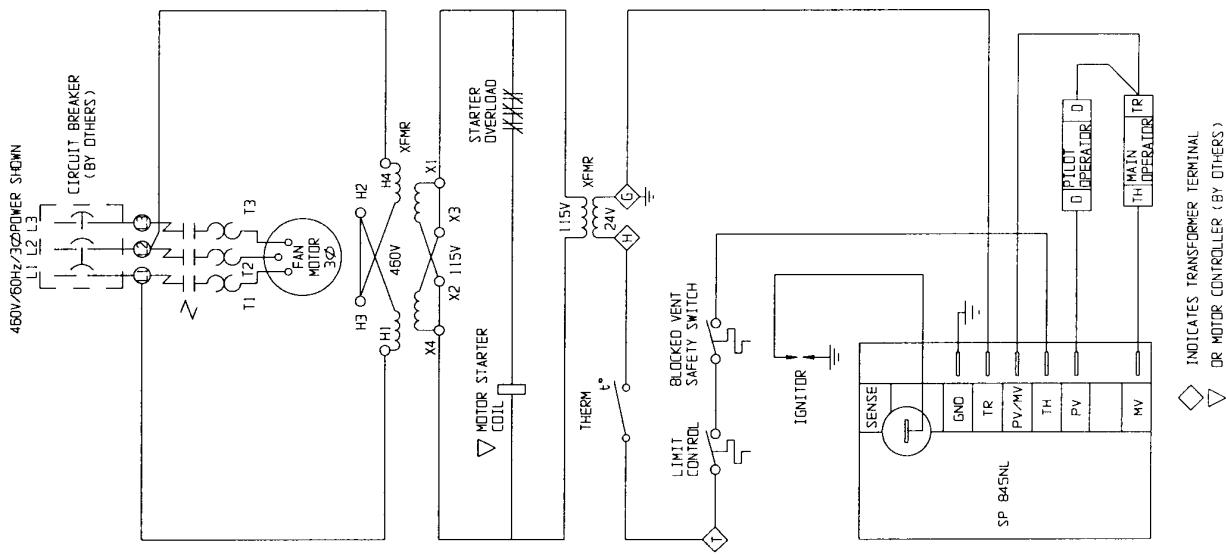


Single-stage, intermittent pilot ignition, 100% shut-off, with continuous retry, single-phase.

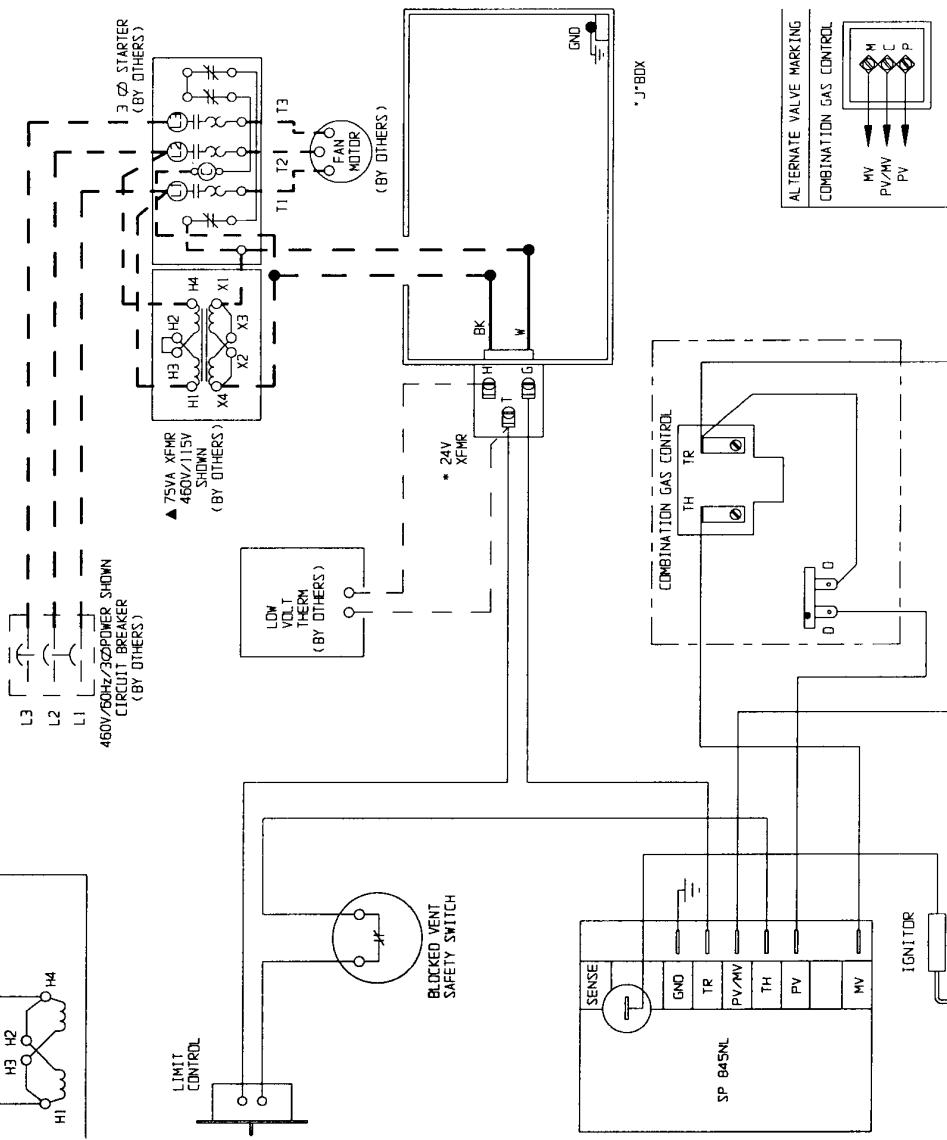
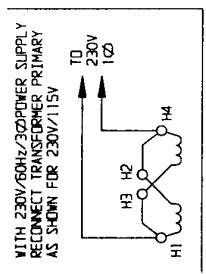
5H74300C06 (Rev.)

Single-stage, intermittent pilot ignition, 100% shut-off, with continuous

Section B



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.



* * ALTERNATE XFMR.
PRIMARY XFMR WIRE
230V/60Hz/1Ø-BK
200V/60Hz/1Ø-BK
WIRE NUT THE WIRE
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Elect

heater.
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N A A

**▲ TRANSFORMER NOT REQUIRED WITH
230V/250V POWER SUPPLY AND
230V/25V CONTROL TRANSFORMER**

5H74300C06 (Rev.)

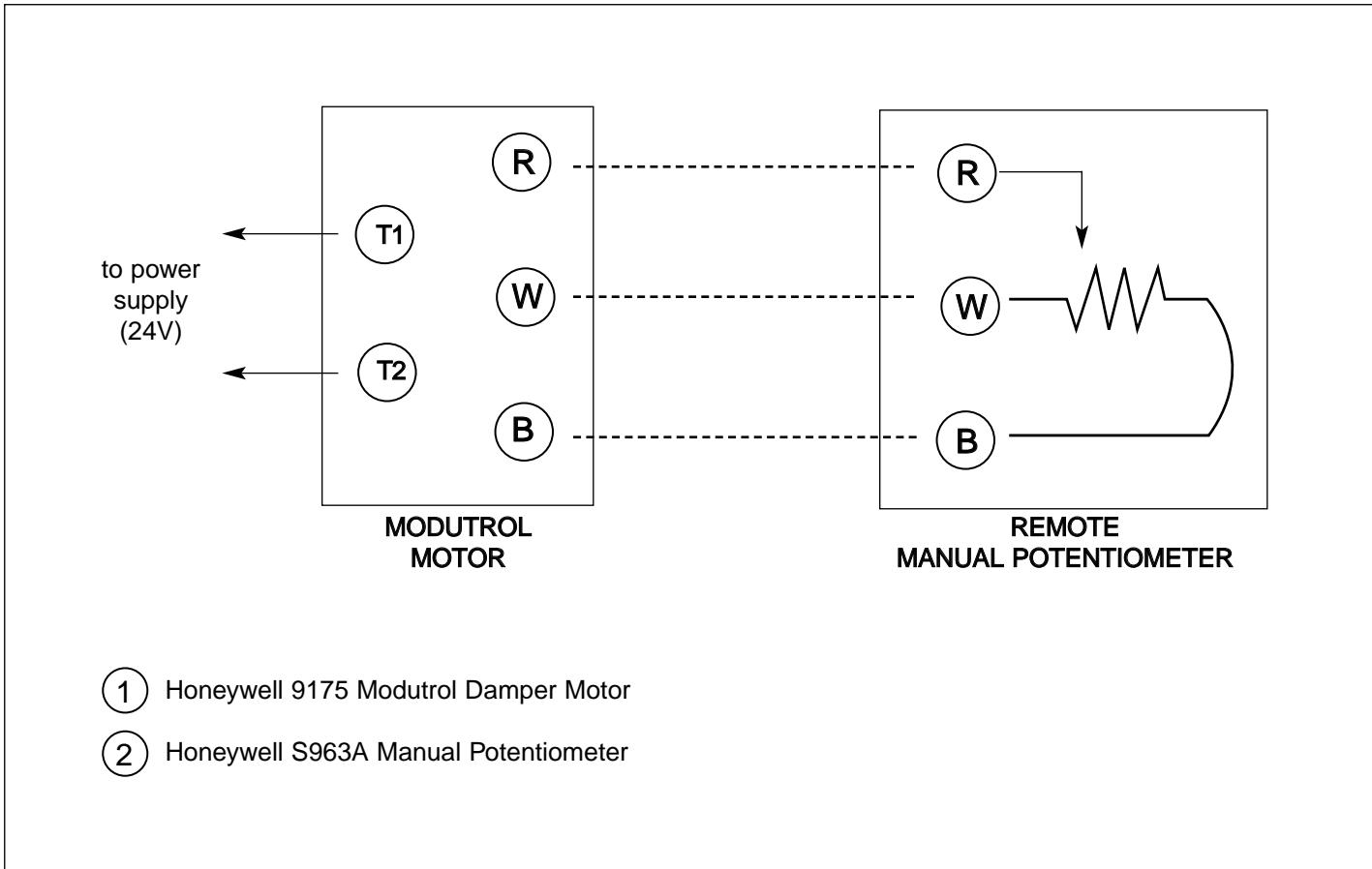
Single-stage intermittent pilot ignition 100% shut-off with continuous

INDICATES TRANSFORMER TERMINAL
OR MOTOR CONTROLLER (BY OTHERS)



Section C

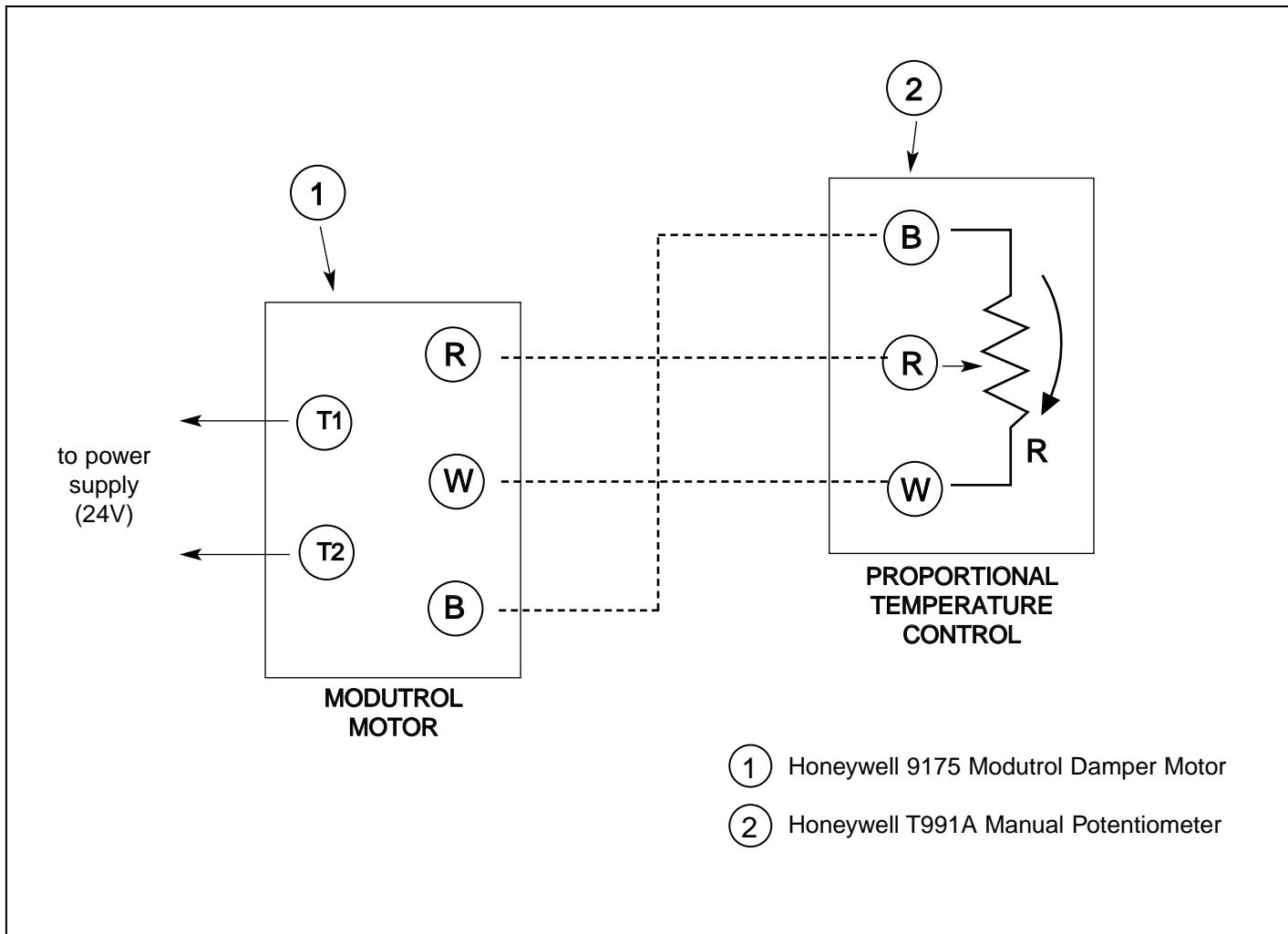
**Fresh and Return Air Modulating Dampers
with Remote Manual Potentiometer**



The above schematic shows the components required for manual control of the modulating dampers. The remote manual potentiometer controls the position of the dampers and allows the dampers to be set anywhere from the fully closed position to the fully open position, or positions in between. As an example, the fresh air damper can be set at 20% open and the return air damper at 80%. When power is supplied to the

damper motor the dampers will open to this preset position. The damper motor has built in spring return and if power is interrupted the dampers will return to the fully closed position. This system is usually used when the fresh air and return air dampers are to be set at a position other than fully opened or fully closed and the setting is to be made remotely from the unit.

Section C

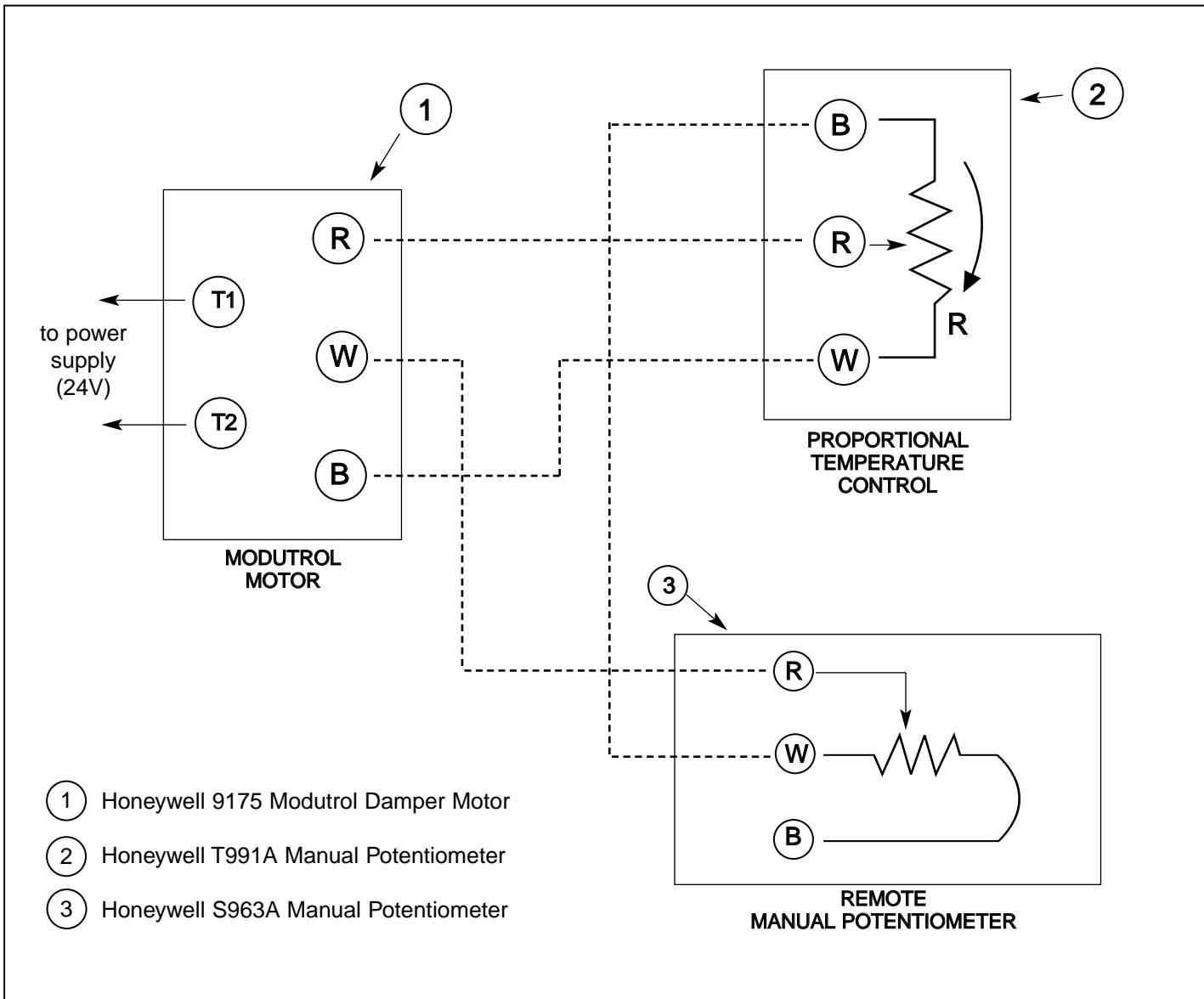
**Fresh and Return Air Modulating Dampers
with Proportional Mixed Air Temperature Controller**


The above schematic shows the components required for controlling modulating dampers using a mixed air proportional temperature controller. The T991A proportional temperature controller has a temperature sensing element which is placed in the fresh and return air stream and senses the temperature of this mixed air. The controller will maintain the desired mixed air temperature to the heating unit by modulating the fresh and

return air dampers between the fully opened and fully closed positions. When power is supplied to the damper motor the dampers will open to the required position to maintain the desired mixed air temperature. The damper motor has a built in spring return and if power is interrupted to the damper motor the dampers will return to the fully closed position.

Section C

Fresh and Return Air Modulating Dampers
with Remote Proportional Mixed Air Temperature Controller and
Manual Remote Minimum Position Potentiometer



The above schematic shows the components required for controlling modulating dampers using a mixed air proportional temperature controller and a remote minimum position potentiometer. The T991A proportional temperature controller has a temperature sensing element which is placed in the fresh and return air stream and senses the temperature of the mixed air. The controller will maintain the desired mixed air temperature to the heating unit by modulating the fresh and return air dampers between the fully opened and fully closed positions. In addition a remote minimum position potentiometer

is used to maintain the fresh air dampers at a predetermined minimum open position. This system is used when mixed air temperature is the determining factor of the damper position, but in addition where codes may require that a minimum amount of fresh air be introduced at all times. The manual potentiometer is used to set the minimum damper position and overrides the proportional temperature controller when the proportional controller is operating in a range below the desired minimum fresh air position.

5-450 WIRING DIAGRAM - Models DJE/DHE



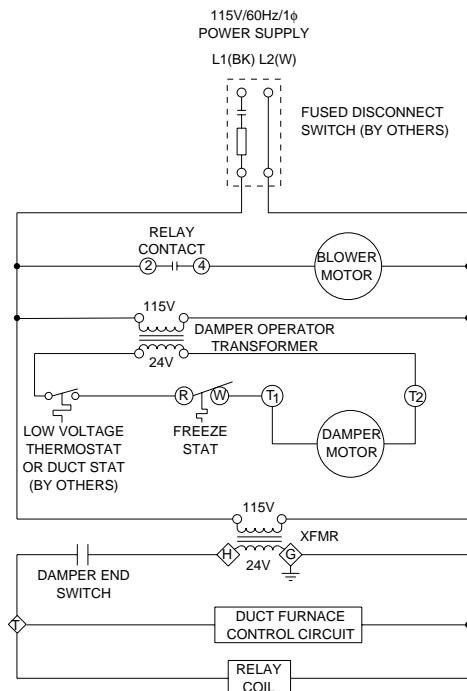
MODINE

Section C

Accessory Wiring Diagrams, Indoor Duct Furnace/Make-Up Air Units
Freeze Stat Wiring Diagrams

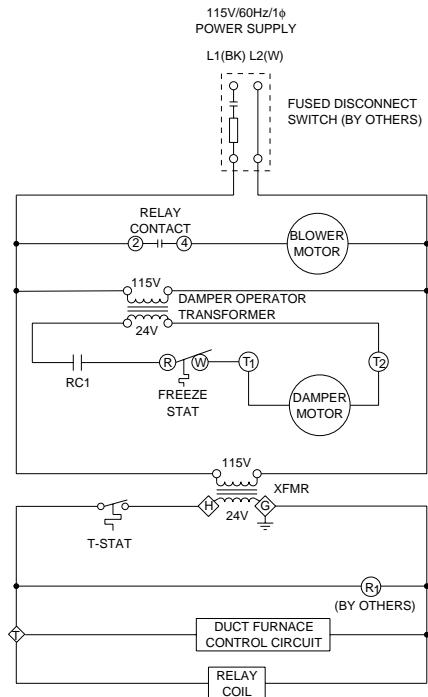
Make-up Air Units

Single Phase - 8H6555B2



◇ INDICATES TRANSFORMER TERMINAL

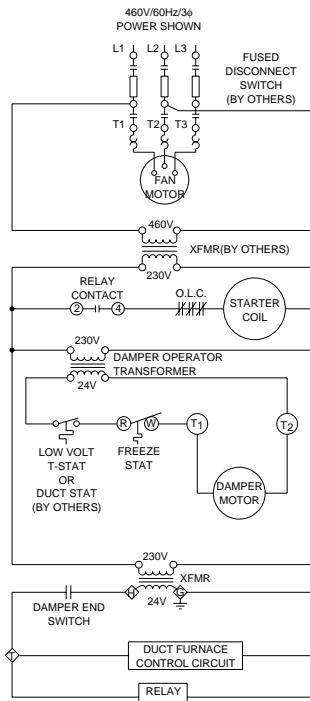
Heating and Recirculating Units
Single Phase - 8H6555B2



◇ INDICATES TRANSFORMER TERMINAL

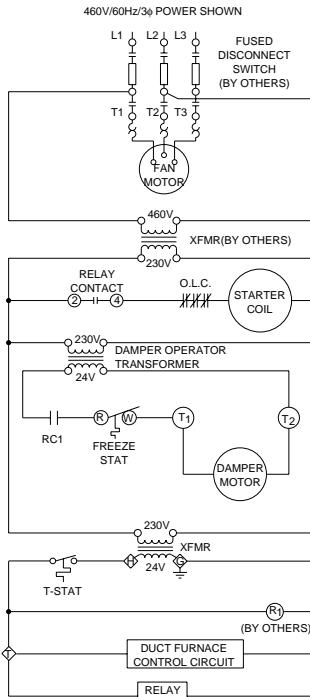
Make-up Air Units

Three Phase - 8H6555B2



◇ INDICATES TRANSFORMER TERMINAL

Heating and Recirculating Units
Three Phase - 8H6555B2



◇ INDICATES TRANSFORMER TERMINAL

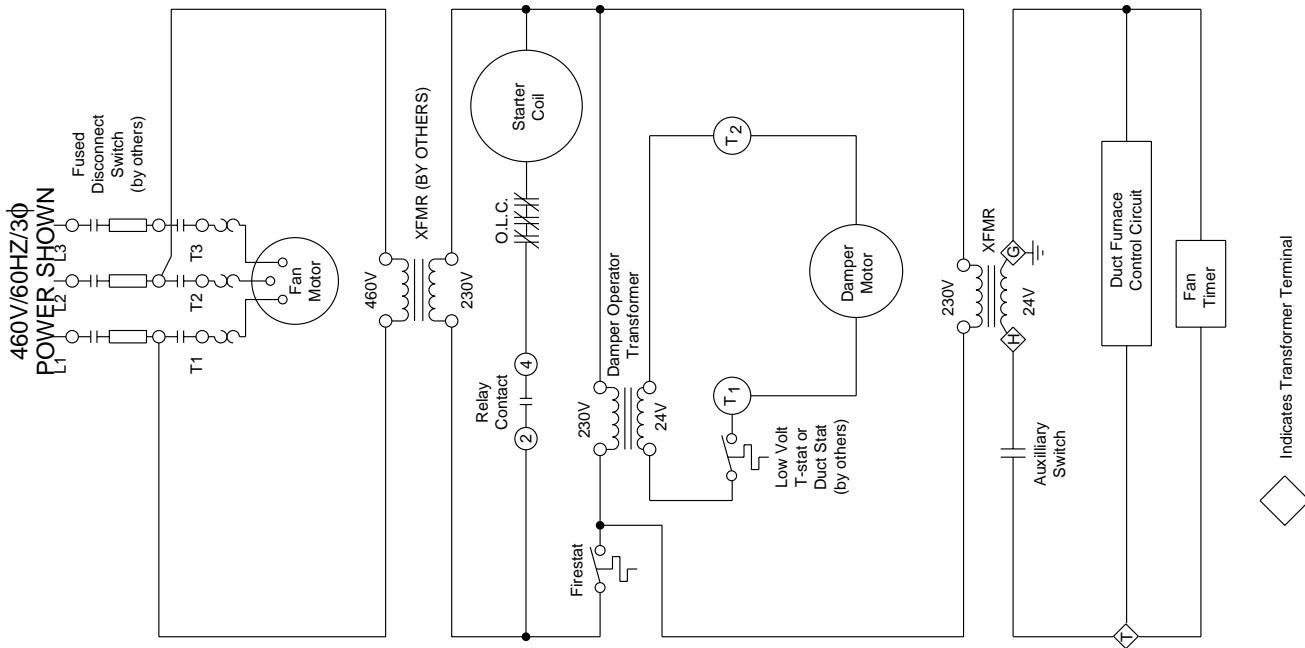
5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

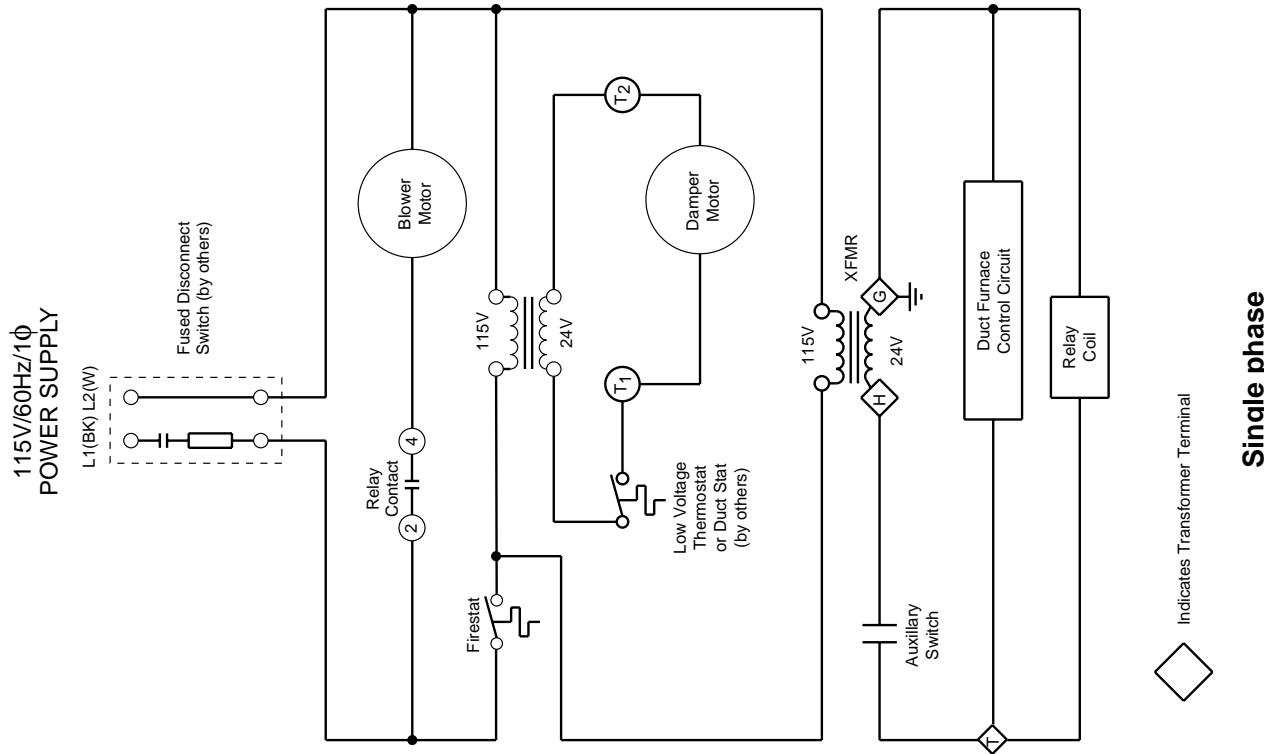
Section C

Accessory Wiring Diagrams, Indoor Duct Furnace/Make-Up Air Units
Fire Stat Wiring Diagrams



Three phase

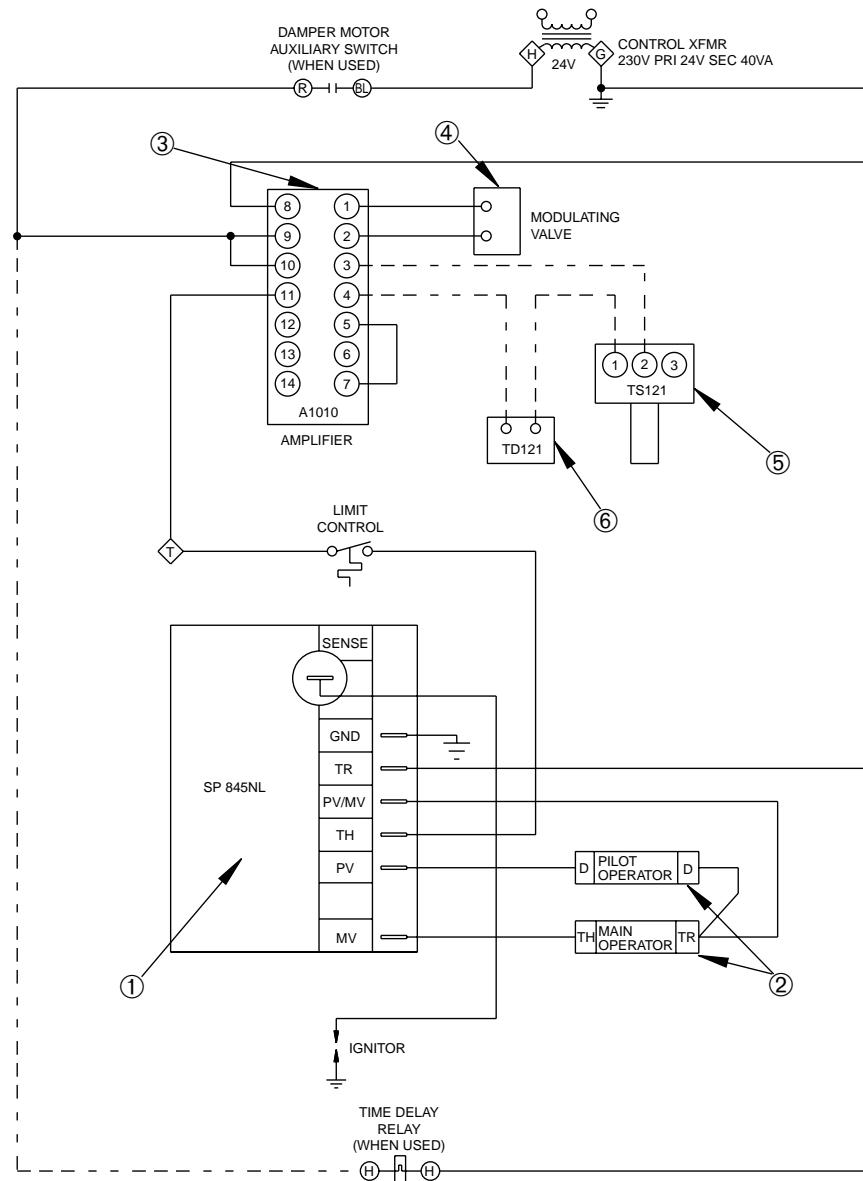
Indicates Transformer Terminal



Single phase

Indicates Transformer Terminal

Section C

**Electronic Modulation with Duct Sensing
(Control Codes 39-40-41-42-43-44)**


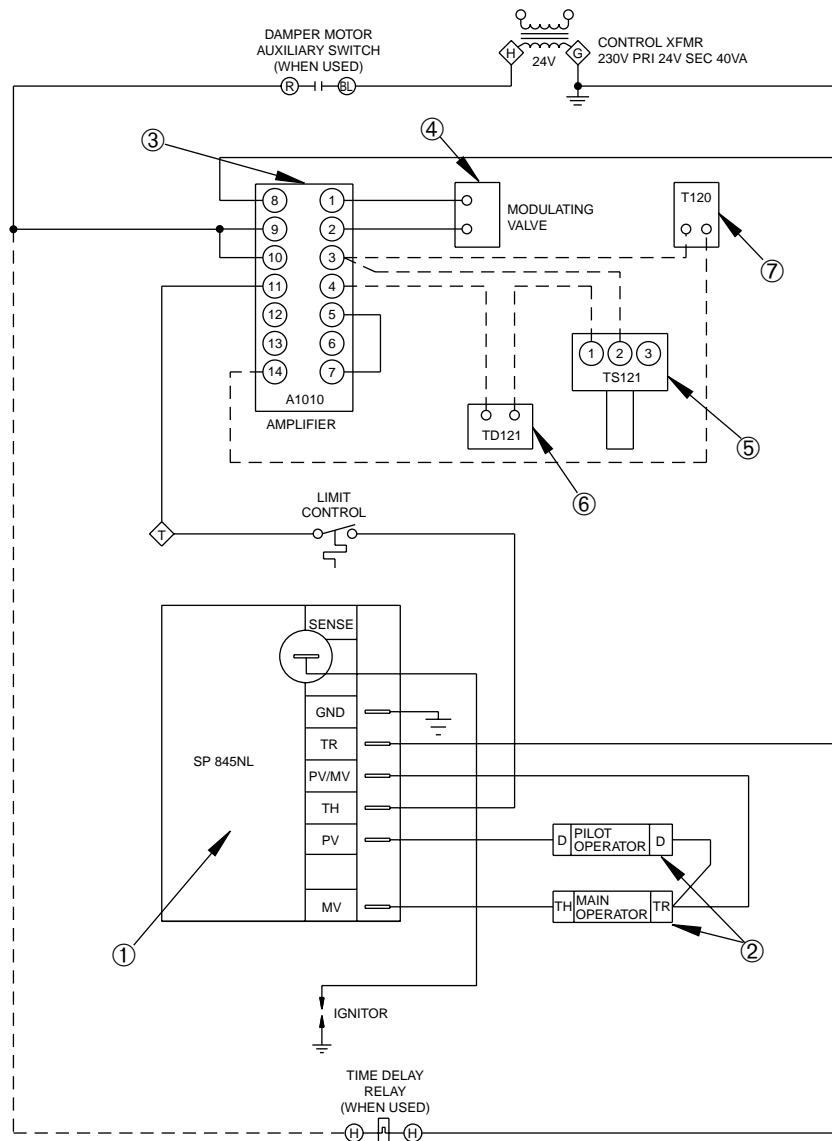
- ① IGNITION CONTROLLER
- ② COMBINATION MAIN/PILOT GAS VALVE
- ③ ELECTRONIC MODULATING AMPLIFIER, MAXITROL A1010A
- ④ ELECTRONIC MODULATING GAS VALVE
- ⑤ DISCHARGE AIR SENSOR, MAXITROL TS121, 55-91°F
- ⑥ REMOTE TEMPERATURE SELECTOR, MAXITROL TD121, 55-90°F

The above schematic shows the components for electronic modulation, Codes 39-40-41-42-43-44, with the addition of a duct sensing system. The Maxitrol TS121 Discharge Air Sensor controls the modulating valve based on the temperature of the

discharge air from the unit. The Maxitrol TD121 Remote Temperature Selector is used to set the desired discharge air temperature to be maintained.



Section C

**Electronic Modulation with Duct Sensing and Room Temperature Override
(Control Codes 39-40-41-42-43-44)**


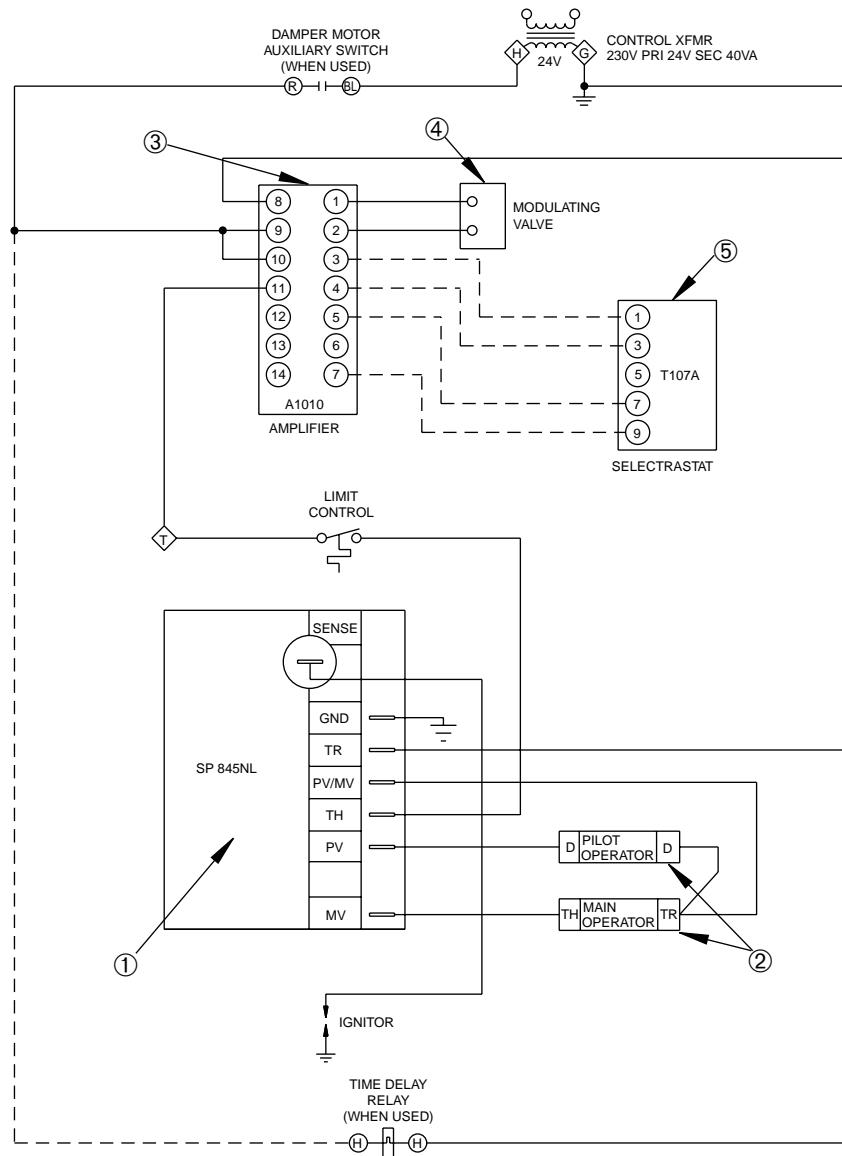
- ① IGNITION CONTROLLER
- ② COMBINATION MAIN/PILOT GAS VALVE
- ③ ELECTRONIC MODULATING AMPLIFIER, MAXITROL A101A
- ④ ELECTRONIC MODULATING GAS VALVE
- ⑤ DISCHARGE AIR SENSOR, MAXITROL TS121, 55-91°F
- ⑥ REMOTE TEMPERATURE SELECTOR, MAXITROL TD 121, 55-90°F
- ⑦ ROOM TEMPERATUER OVERRIDE STAT, MAXITROL T120, 50-90°F

The above schematic shows the components for electronic modulation, Codes 39-40-41-42-43-44, with the addition of a duct sensing system and a room temperature override thermostat. The Maxitrol TS121 Discharge Air Sensor controls the modulating valve based on the temperature of the discharge air from the unit. The Maxitrol TD121 Remote Temperature Selector is used to set the desired discharge air

temperature to be maintained. In addition, a Maxitrol T120 Room Temperature Override Stat is used to monitor the room temperature. Should the room temperature fall below set point of the override stat, the override stat will fire the burner as necessary to bring the room back up to temperature regardless of whether or not the duct sensor set point is satisfied.



Section C

**Electronic Modulation with Room Sensing
(Control Codes 39-40-41-42-43-44)**


- ① IGNITION CONTROLLER
- ② COMBINATION MAIN/PILOT GAS VALVE
- ③ ELECTRONIC MODULATING AMPLIFIER, MAXITROL A1010A
- ④ MODULATING GAS VALVE
- ⑤ ELECTRONIC MODULATING ROOM THERMOSTAT, MAXITROL T107A SELECTRA-STAT, 60-85°F

The above schematic shows the components for electronic modulation, Codes 39-40-41-42-43-44, with the addition of a room temperature control. The room thermostat is a Maxitrol T107A Selectra-stat and allows the modulating valve to be temperature controlled.

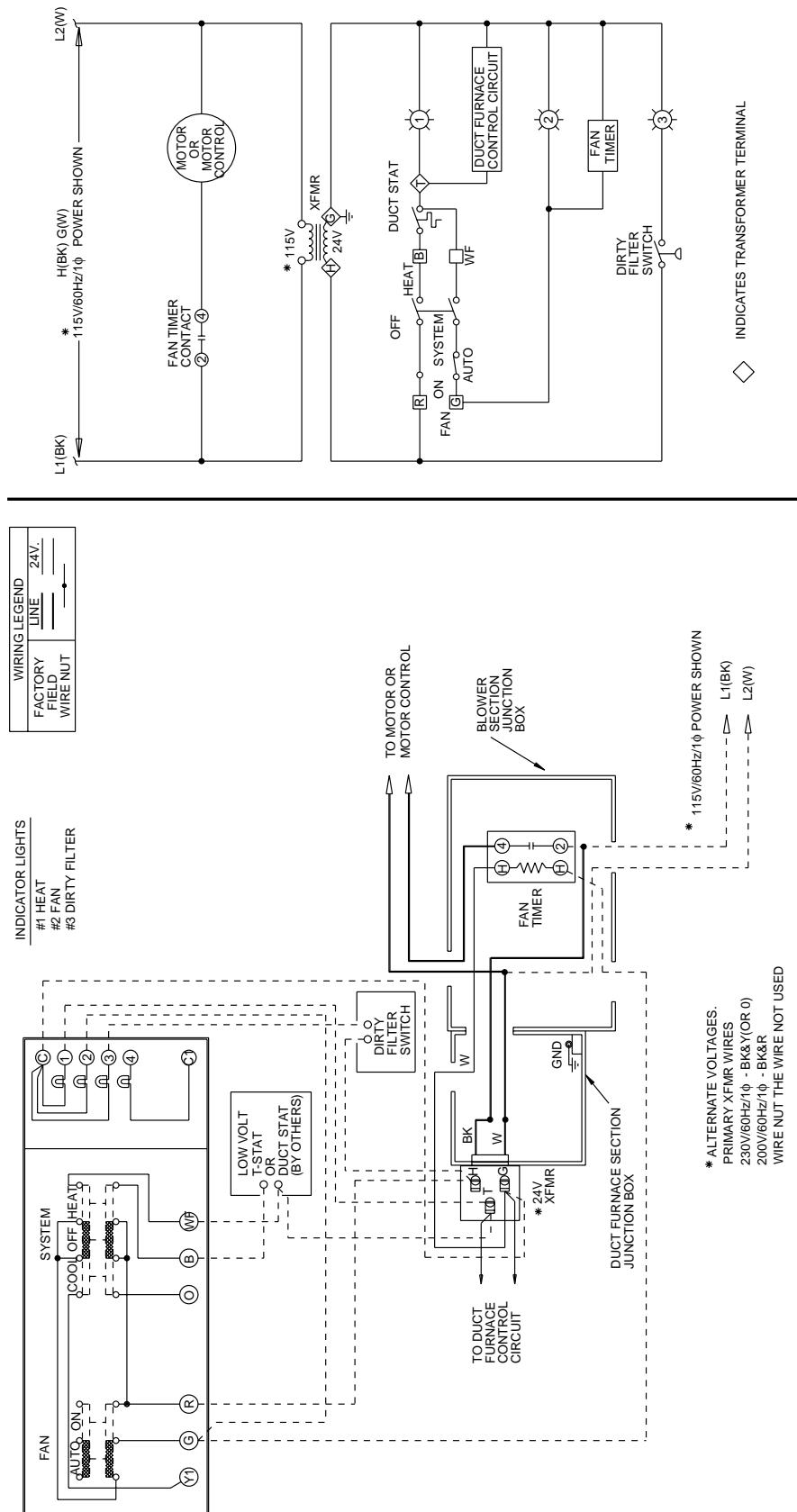
5-450 WIRING DIAGRAM - Models DJE/DHE



MODINE

Section C

Remote Monitoring Panel Units without Dampers



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.

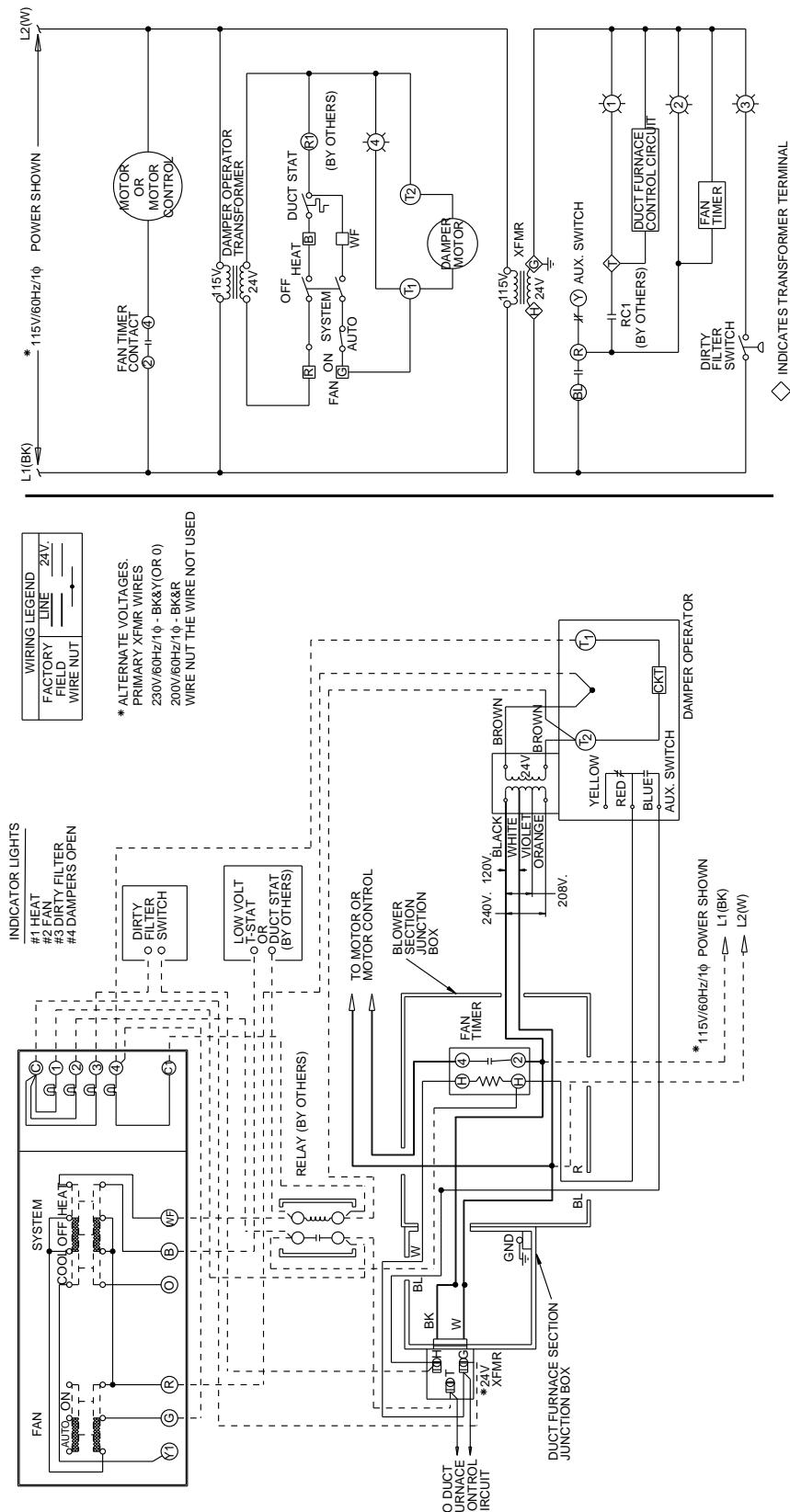
All components must agree with their respective power source.

Use 105°C wire for replacements



Section C

Remote Monitoring Panel Units with Two-position Dampers



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.

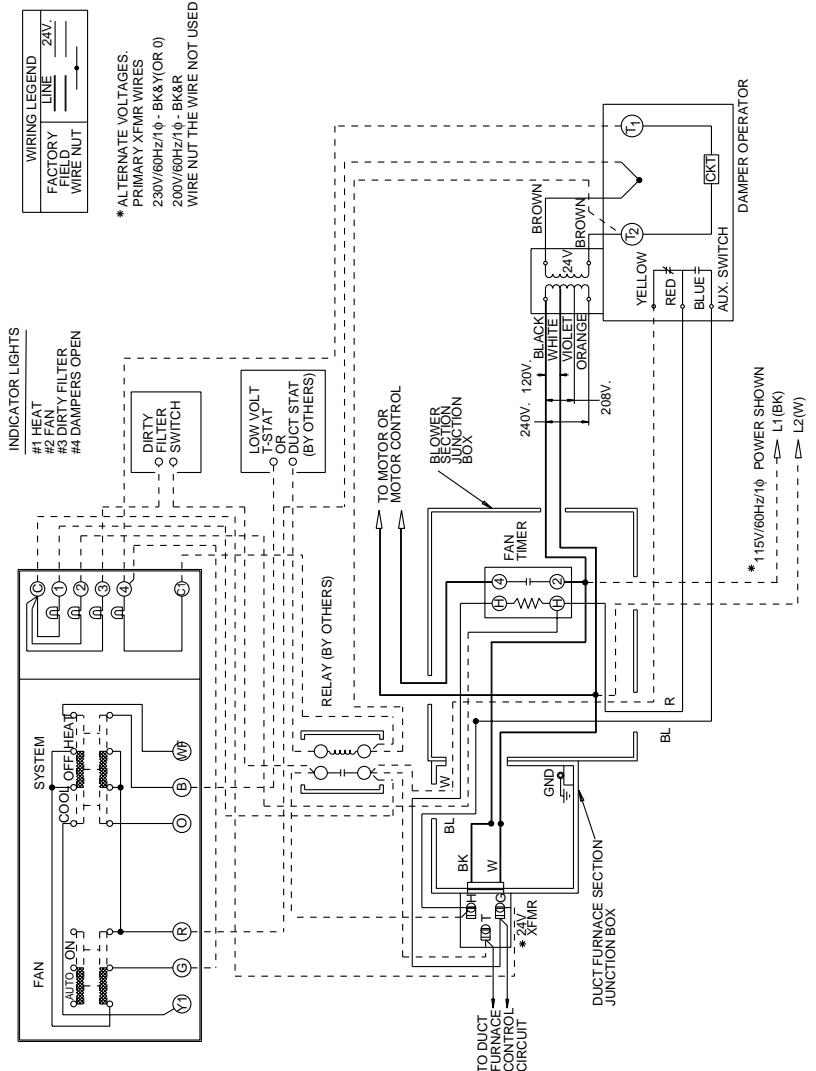
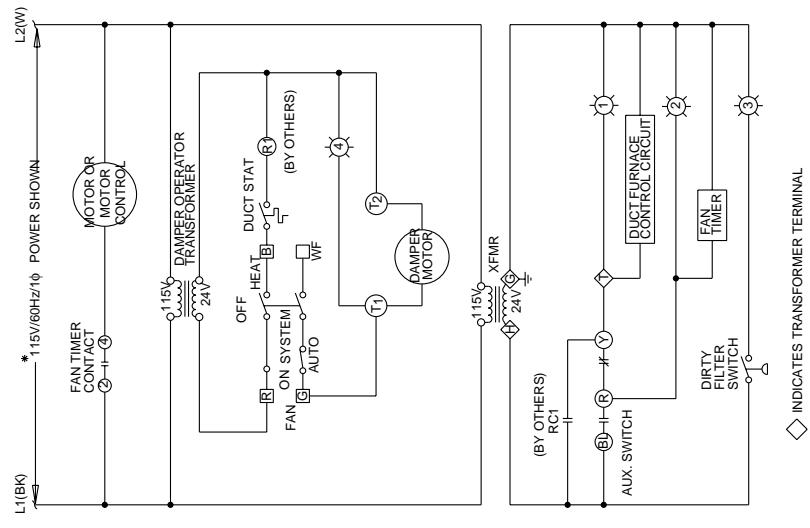
NOTE TO INSTALLER:

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



Section C

Remote Monitoring Panel
Units with Two-position Dampers and Summer / Winter Switching


A 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:

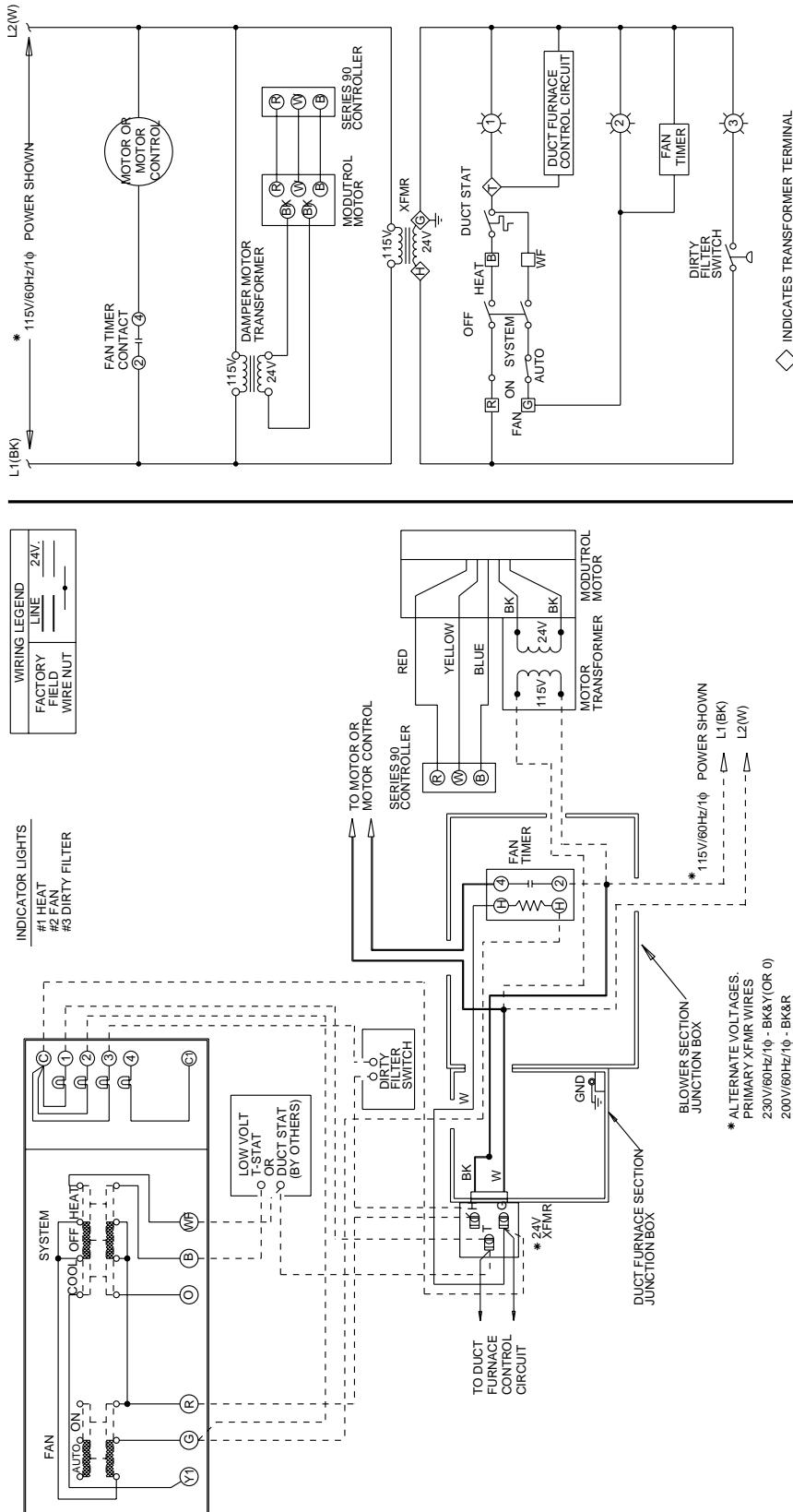
Attach this diagram near heater.

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



Section C

Remote Monitoring Panel Units with Modulating Dampers



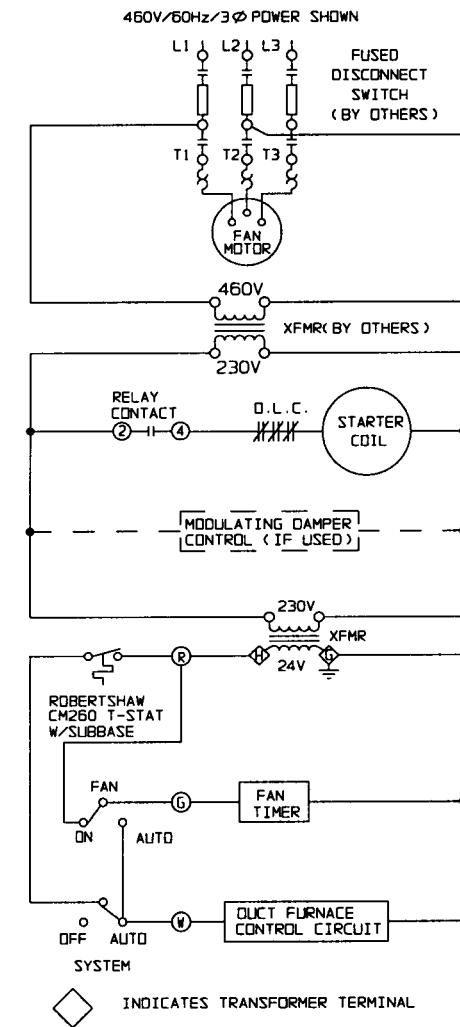
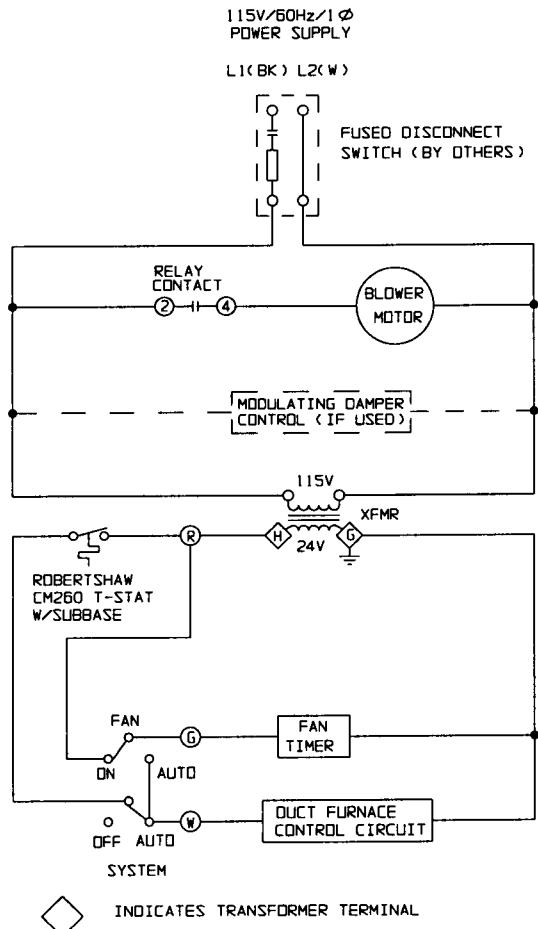
CAUTION

Failure to wire this unit according to this wiring diagram may result in injury to the installer or user. For deviations contact the factory.



Section C

Robertshaw CM260 Thermostat with Subbase
Units Less Dampers or with Modulating Dampers

**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:

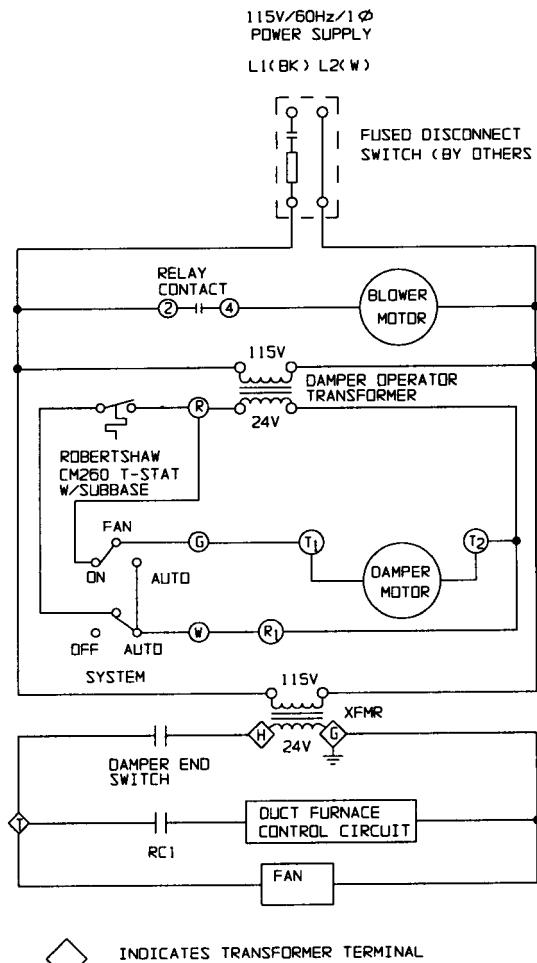
Attach this diagram near heater.

All wiring must comply with national electric code and all local codes.
All components must agree with their respective power source.

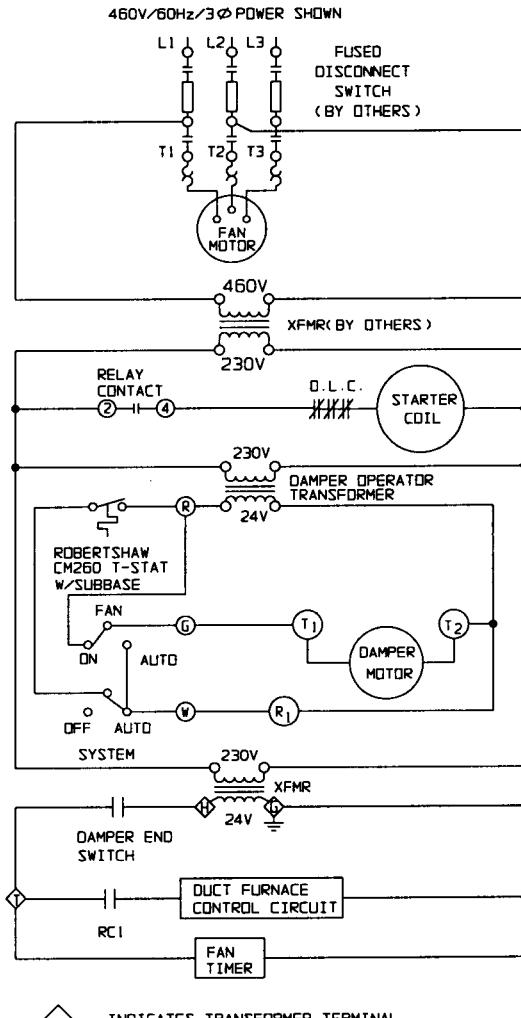


Section C

Robertshaw CM260 Thermostat with Subbase Units with Two-position Dampers



Single Phase



Three Phase

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.

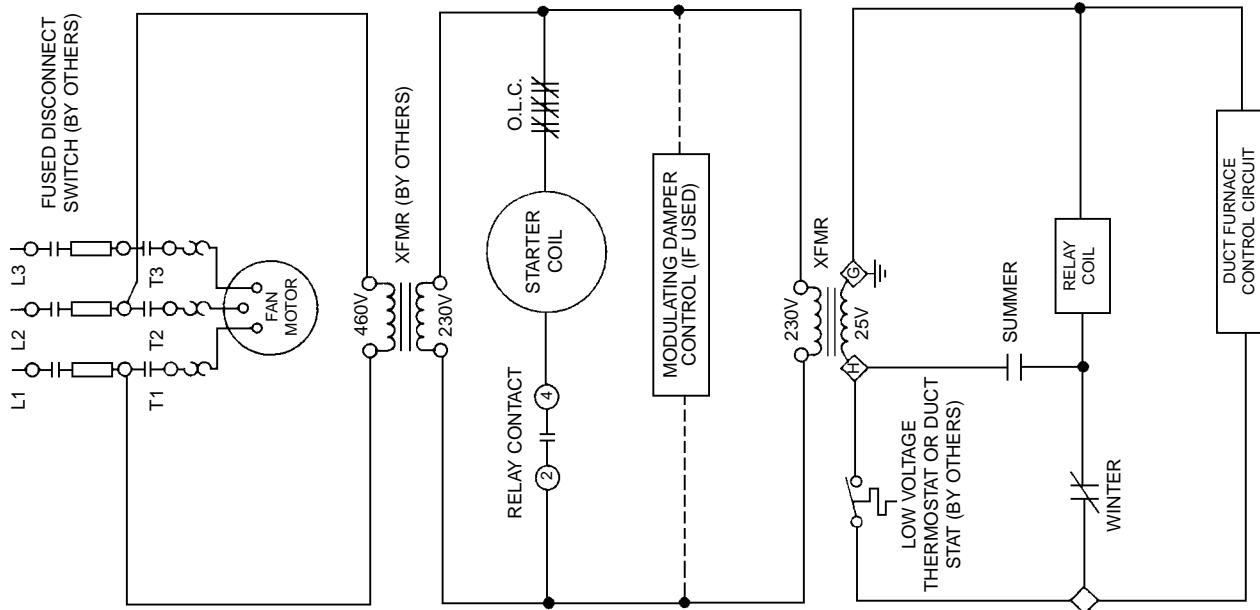
NOTE TO INSTALLER:

Attach this diagram near heater.

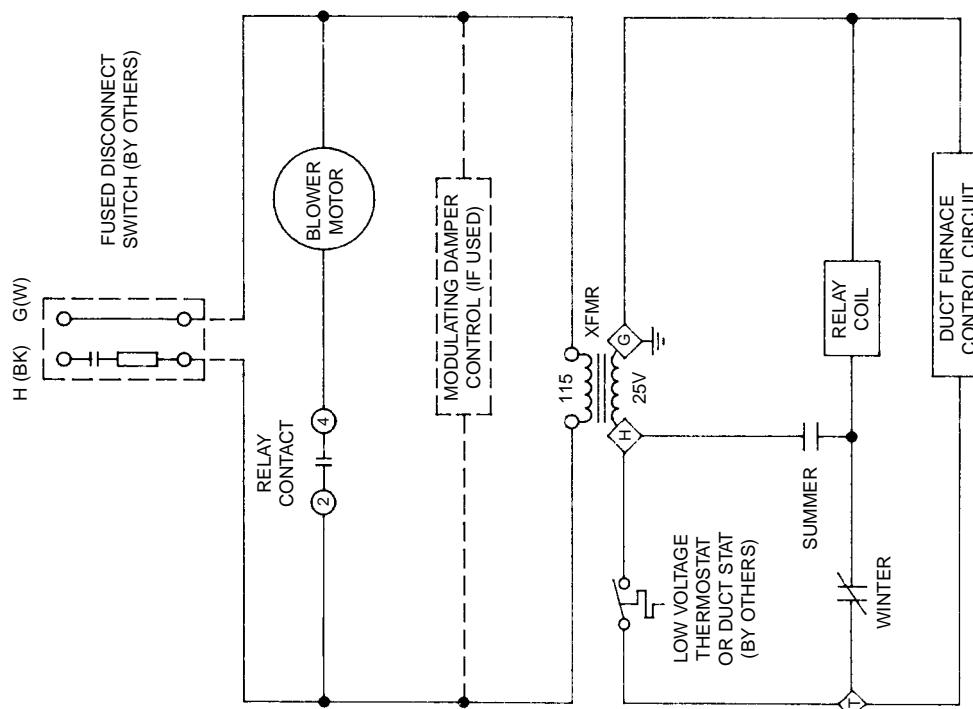
All wiring must comply with national electric code and all local codes.
All components must agree with their respective power source.



Section C

Summer / Winter Switch Wiring
Units Less Dampers or with Modulating Damper Controls


Diamond symbol indicates TRANSFORMER TERMINAL



Diamond symbol indicates TRANSFORMER TERMINAL

NOTE TO INSTALLER:

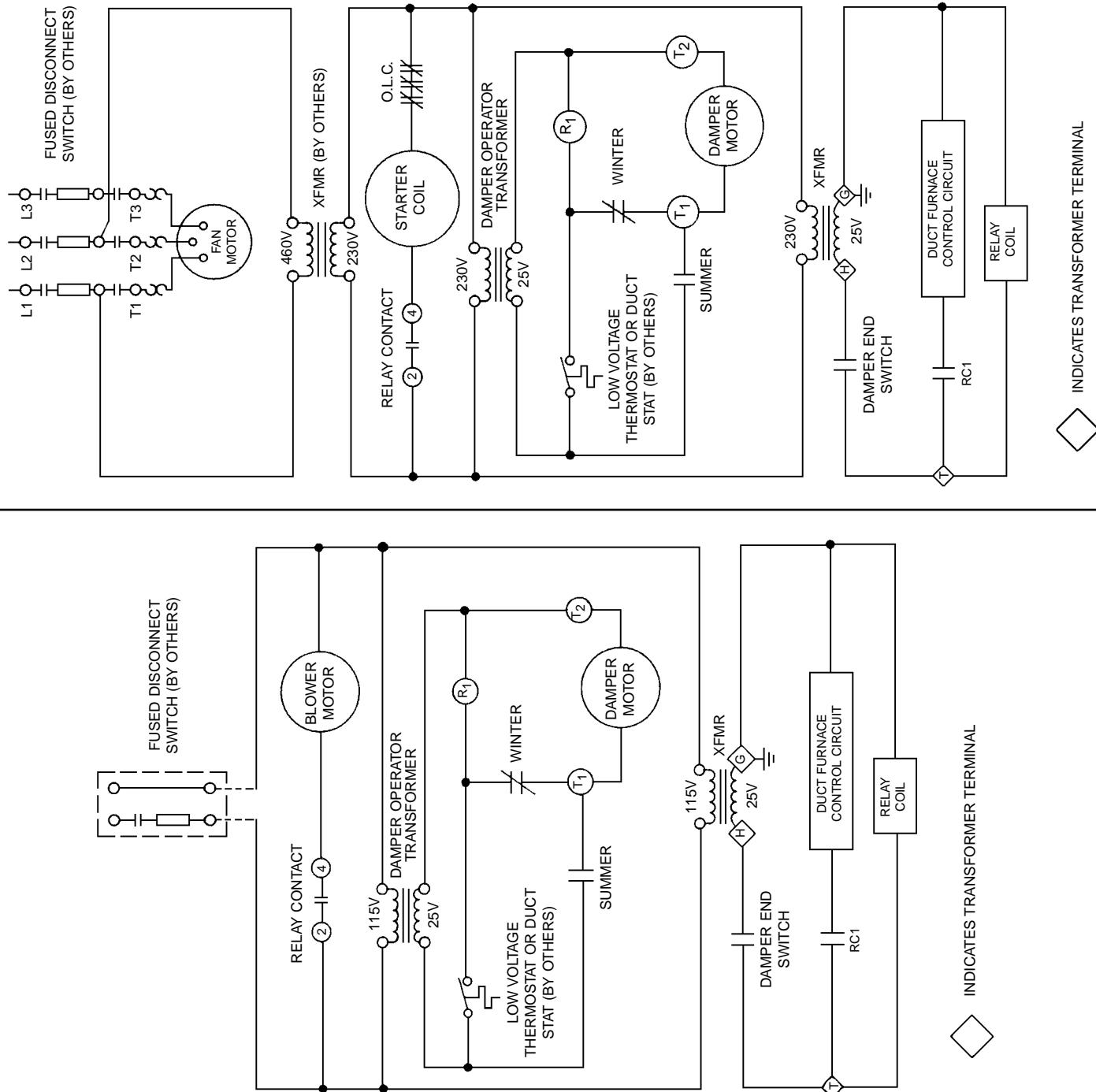
Attach this diagram near heater. All wiring must comply with national electric code and all local codes. All components must agree with their respective power source.

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.



Section C

**Summer / Winter Switch Wiring
Units with Two-position Dampers**
**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.

**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.

⚠ WARNING

Possible electrical shock hazard. Turn off electric supply before installing power exhaust.

⚠ 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.

Typical Power Exhauster Wiring Models DJE/DHE

All wiring must comply with national electric code and all local codes.

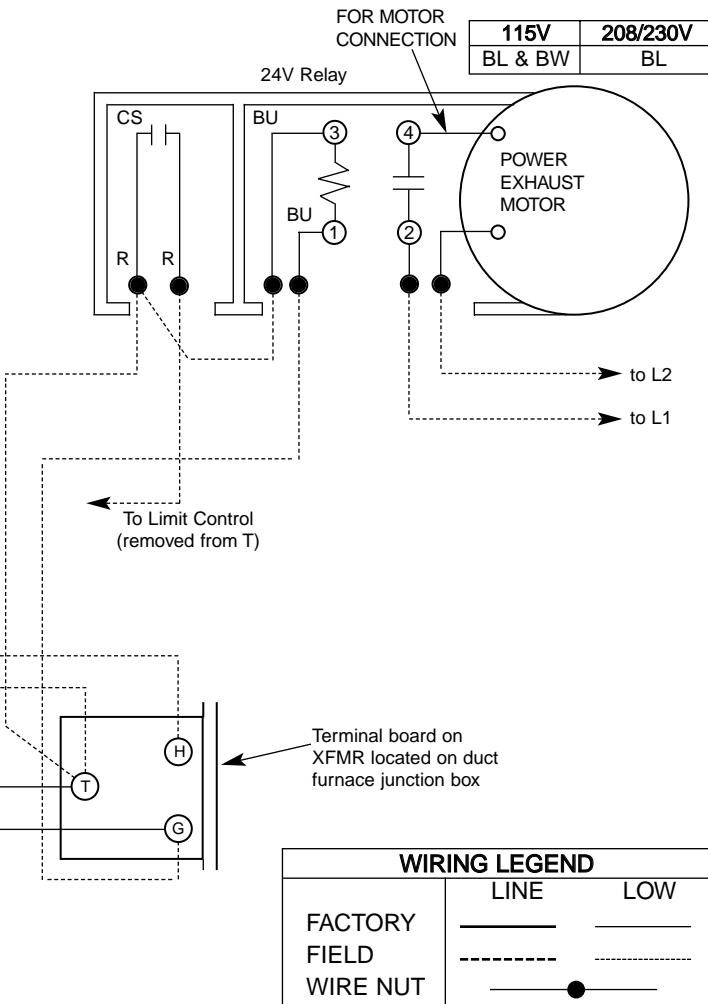
All components must agree with their respective power source.

Use 105°C wire for replacement

NOTE TO INSTALLER: Attach this diagram near unit heater.

⚠ WARNING

Possible fire or explosion hazard. Turn off gas supply before installing power exhaust.



IMPORTANT: After installing the power exhauster and adapter kit and wiring the power exhauster shown above for DJE and DHE models, use the following check-out procedure to check final installation.

Check-Out Procedure

With the power and gas supply turned off, set the thermostat to its lowest setting.

- If the unit has a standing pilot, turn on the gas supply only and light the pilot according to the instructions on the unit's serial plate, then proceed with Step 2. If the unit is equipped with an intermittent pilot ignition system, turn on the gas supply to unit and proceed with Step 2.
- Turn on power supply to unit. Nothing should happen.
- Turn up the thermostat to call for heat. The power exhaust motor should start, the centrifugal switch of the power exhaust should close, and the main burner should light.
- Turn the thermostat down again. The main burner and power exhauster motor should shut off.
- Check the power exhaust centrifugal switch for proper function. To do this, remove the centrifugal switch lead from terminal "T" on the transformer terminal board. Turn up the thermostat to call for heat. The power exhaust motor should run, but the main burner should not light.
- Turn down the thermostat and allow the power exhaust motor to stop running. Reconnect the centrifugal switch lead to terminal "T" on the transformer terminal board. Recycle the unit as described in Steps 3 and 4.

If the unit does not operate in the sequence described above, recheck all wiring until the necessary correction to the wiring is found and corrected. Set the thermostat to the desired set point. The unit is now ready for use.



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Salt Lake City, UT
(801) 364-1926

VIRGINIA

L.A. Prillaman Co., Inc.
Ashland, VA
(804) 798-1455

WASHINGTON, DC

Marva Sales
Leesburg, VA
(540) 338-2009

WISCONSIN

C & S Hydronics, Inc.
Delafield, WI
(414) 646-6325