



October, 1980

WIRING DIAGRAMS "Flora-Guard" gas-fired unit heaters

DIAGRAM SELECTION

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

DIAGRAM INTERCHANGEABILITY

The following Model GHG gas-fired unit heater wiring diagrams are for either 230-volt, 60 Hertz, single-phase power, or for 460-volt, 60 Hertz, three-phase electrical service.

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

The 460V / 60Hz / 3 ϕ diagrams may be converted to 208V / 60Hz / 3 ϕ by substituting a 208V / 115V transformer for the 460V / 115V model shown.

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

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

POWER REQUIREMENTS – "FLORA-GUARD" GAS-FIRED UNITS

Motor Voltage	115V/60/1	230V/60/1	200V/60/3	230/60/3	460/60/3
Model	Full Load Amperes				
GHG-240	8.8	4.4	3.4	3.1	1.55
GHG-250	8.8	4.4	3.4	3.1	1.55
GHG-400	8.8	4.4	3.4	3.1	1.55

ABBREVIATIONS AND SYMBOLS

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

XFMR or TR	Transformer
V	Volts
Hz	Cycle or Hertz
ϕ	Phase
LC	Limit Control
THERM or TH	Thermostat
MV	Main Valve
PV	Pilot Valve
SO	Shut Off
RC	Relay Contact or Coil
G	Ground
H	Hot
SW	Switch
EPS	Electric Pilot Switch
Hi	High
Lo	Low
C	Common

"J" Box	Junction Box
H ₁ , H ₂ , etc.	Transformer Primary Terminals
SUM	Summer Contact (Summer-Winter Switch)
WIN	Winter Contact (Summer-Winter Switch)
S-W	Summer-Winter Switch
O.L.C.	Overload Contact
C.S.	Power Venter Centrifugal Switch
FT _c	Fan Timer Contact
SPDT	Single-Pole Double-Throw Switch
VA	Volt Ampere
W	Watts

WIRE COLOR CODING

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

WIRING DIAGRAM SELECTION

A. Field and Submittal Wiring Diagram Selection

Wiring in the field changes little when the controls furnished on the unit heater change. To select correct wiring diagram:

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

B. Service and Trouble Shooting

Because factory wiring may vary with the control manufacturer, the wiring diagrams must be selected with the *series identity number* when servicing or trouble shooting unit heater control systems. Wiring diagrams in this bulletin are for GHG unit heaters manufactured after January 1, 1977 and the series identity number is the 5th thru 7th digits of the unit heater serial number.

Example: Serial No. — 02021010577 has a series identity number of 101.

To select correct wiring diagram:

1. Determine unit heater model and size from the serial plate located on the rear of the unit.
2. Read *Control Code* number in box marked Control Code, on serial plate.
3. Determine *series identity number* from unit heater serial number.
4. Select page number in Page Location Index that corresponds to the series identity number of the unit heater, then proceed with steps 3 and 4 of Field and Submittal Wiring Diagram Selection.

EXAMPLE SELECTION

Select correct single-phase wiring diagram for a GHG-400 with Control Code 28 and having a series identity number of 101.

The Page Location Index shows the page numbers for units having a series identity number of 101. Follow down the column for a GHG-400 until it intersects with the line for control code 28. The wiring diagram for this unit is found on page 7, in the unshaded area for single-phase diagrams. If this example unit also had a power venter, the wiring diagram would be found on page 7a as determined from Table 2.

TWO-IN-ONE DIAGRAMS

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

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

TABLE 1 — CONTROL CODE DESCRIPTIONS

08, 09	Intermittent Pilot Ignition, Non-100% Shut-Off, low voltage thermostat, Natural Gas.
11, 12	Standing Pilot, 100% Shut-Off, low voltage thermostat, Natural Gas.
28, 29	Intermittent Pilot Ignition, 100% Shut-Off, low voltage thermostat, Natural Gas.
78, 79	Intermittent Pilot Ignition, 100% Shut-Off, low voltage thermostat, Propane Gas.
81, 82	Standing Pilot, 100% Shut-Off, low voltage thermostat, Propane Gas.

TABLE 2 — ACCESSORY SUFFIX

Page Suffix	Accessory
a	Power Venter

TABLE 3 / PAGE LOCATION INDEXES

SERIES IDENTITY NO. 101

Control Code	GHG 240	GHG 250	GHG 400
08, 09	*5 6	*5 6	*5 6
11, 12	*3 4	*3 4	*3 4
28, 29	*11 12	*7 8	*7 8
78, 79	*13 14	*9 10	*9 10
81, 82	*3 4	*3 4	*3 4

SERIES IDENTITY NO. 102

Control Code	GHG 240	GHG 250	GHG 400
08, 09	15 16	*5 6	*5 6
11, 12	*3 4	*3 4	*3 4
28, 29	17 18	*11 12	*11 12
78, 79	—	*13 14	*13 14
81, 82	*3 4	*3 4	*3 4

SERIES IDENTITY NO. 103

Control Code	GHG 240	GHG 250	GHG 400
08, 09	19 20	—	15 16
11, 12	21 22	—	21 22
28, 29	19 20	—	17 18
78, 79	23 24	*13 14	*13 14
81, 82	21 22	—	21 22

*Units no longer being manufactured with these control system configurations.

TABLE 3 / PAGE LOCATION INDEXES (Continued)

SERIES IDENTITY NO. 104

Control Code	GHG 240	GHG 400
08, 09	—	19 20
11, 12	21 22	21 22
28, 29	—	19 20
78, 79	23 24	23 24
81, 82	21 22	21 22

SERIES IDENTITY NO. 105

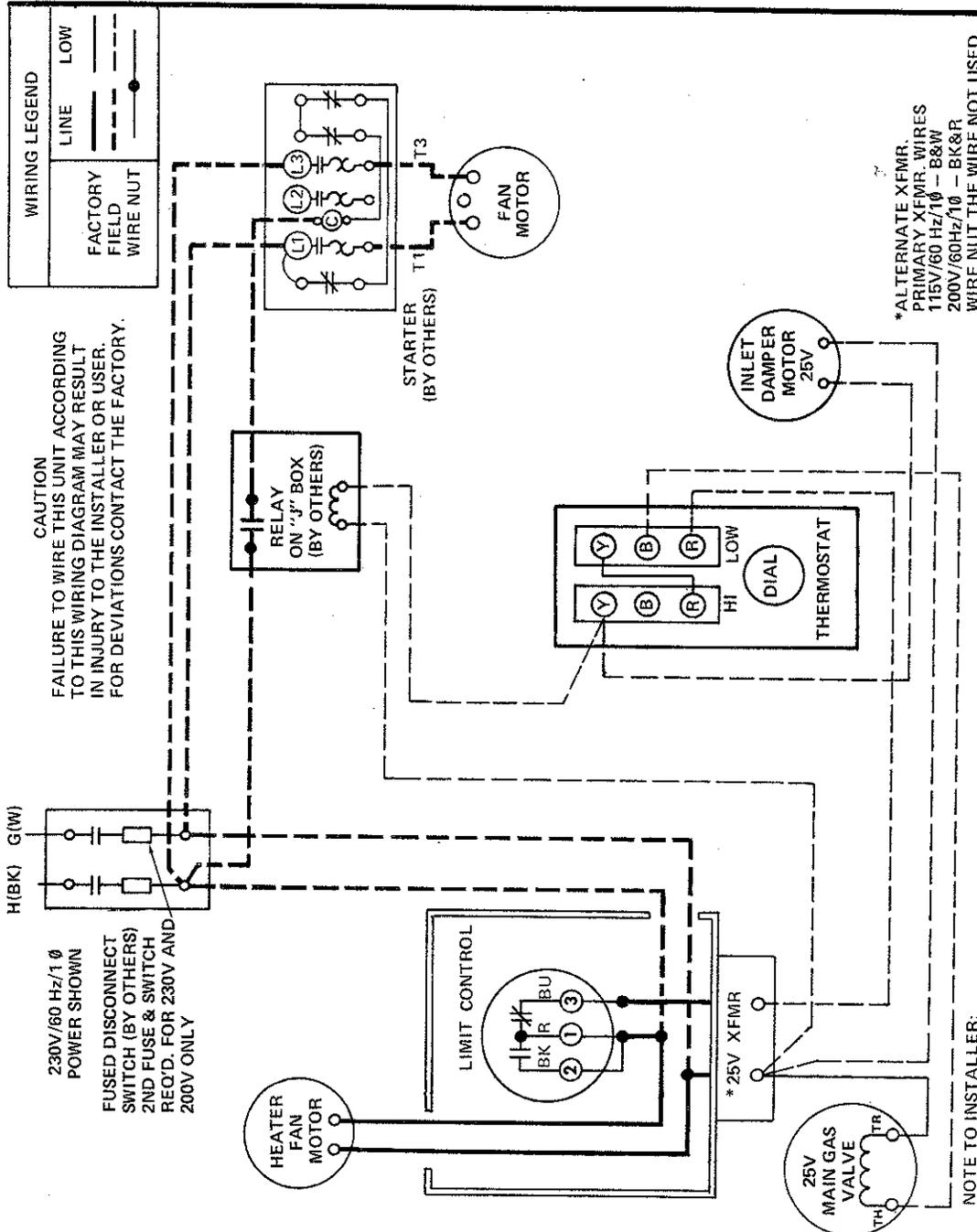
Control Code	GHG 240	GHG 400
08, 09	—	—
11, 12	—	—
28, 29	—	—
78, 79	19 20	23 24
81, 82	—	—

SERIES IDENTITY NO. 106

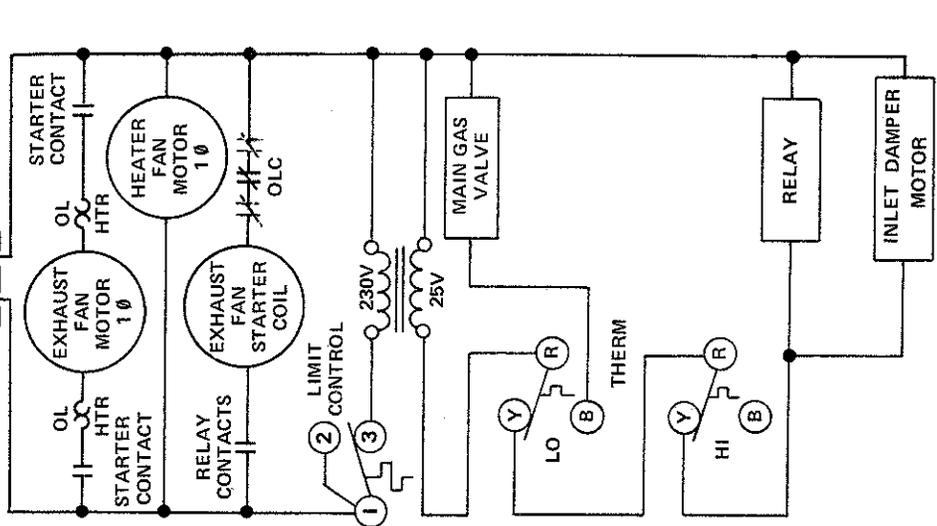
Control Code	GHG 240	GHG 400
08, 09	—	—
11, 12	—	—
28, 29	—	—
78, 79	—	19 20
81, 82	—	—



MODINE 10-410 WIRING DIAGRAM MODEL GHG



230V/60 Hz/1 Ø POWER SHOWN
H(BK) G(W)
FUSED DISCONNECT SWITCH (BY OTHERS) 2ND FUSE & SWITCH REQ'D. FOR 230V AND 200V ONLY



5H70089B2 -- Single-phase, standing pilot, 100% shut-off, line-voltage thermostat. (Rev. H)



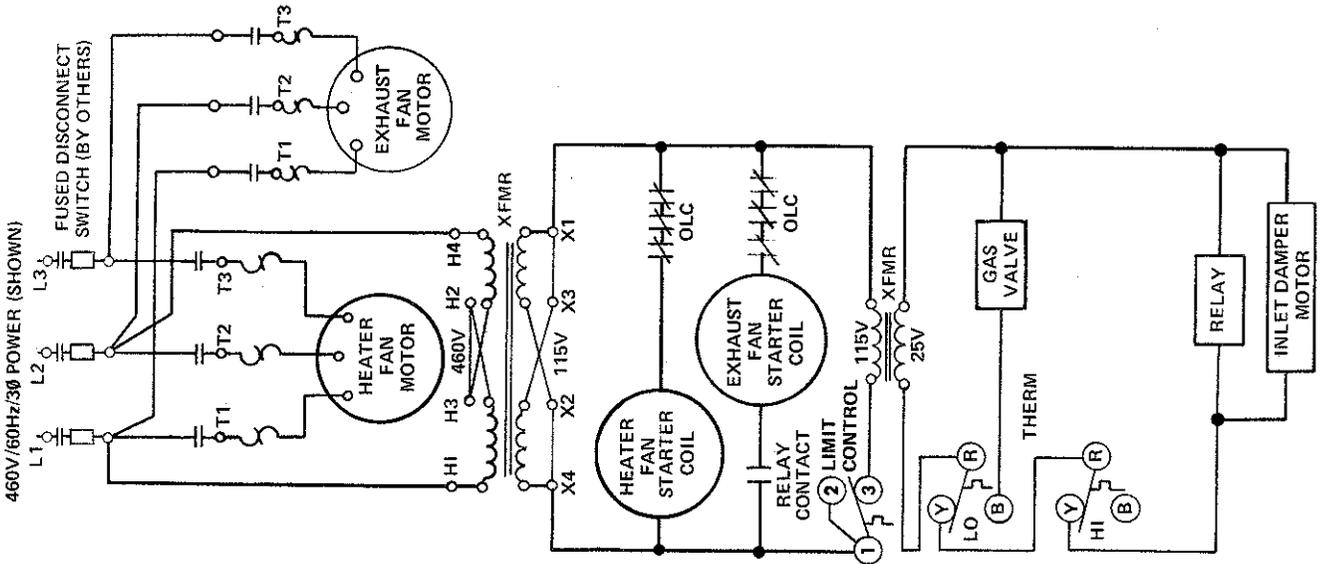
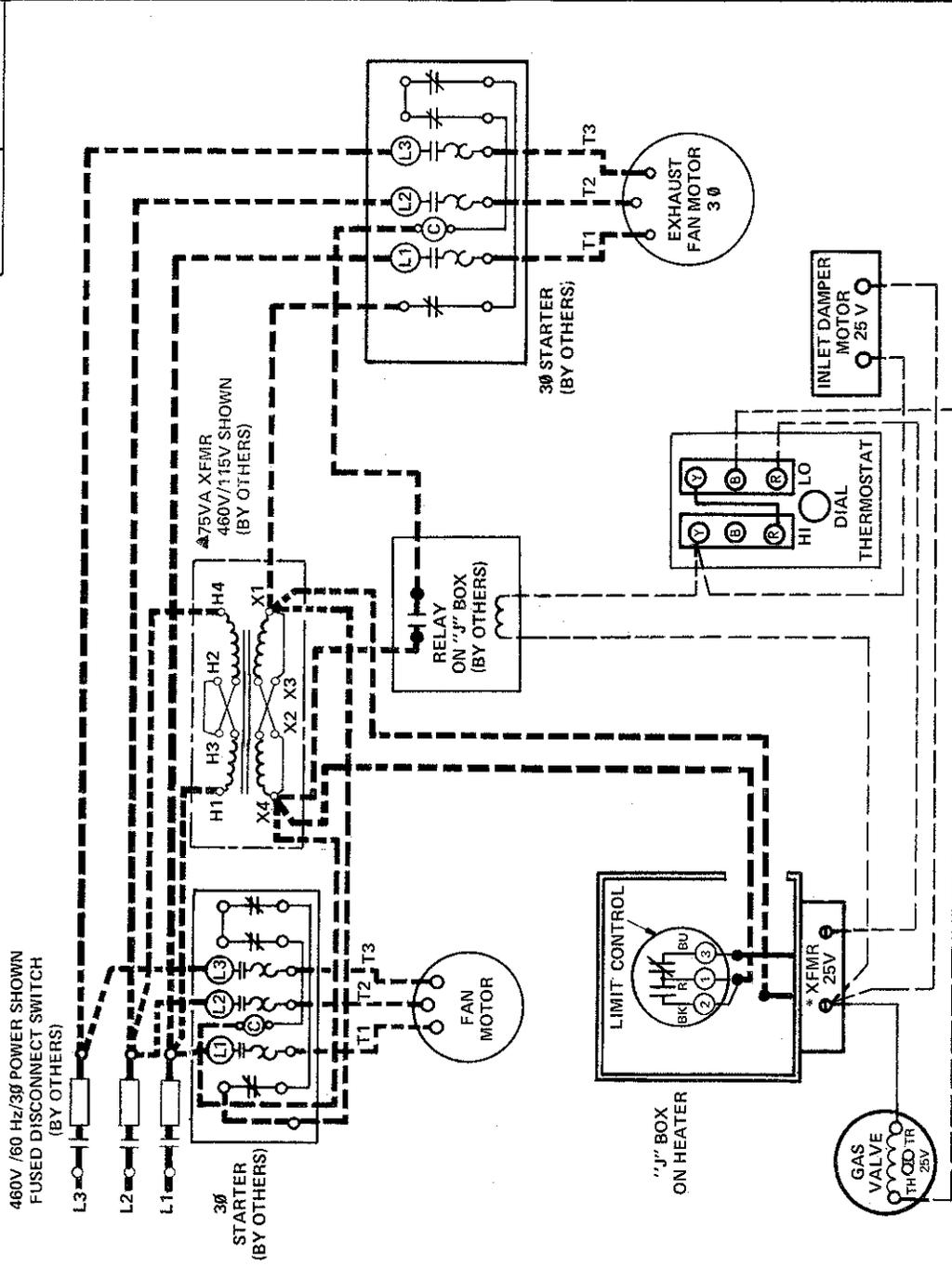
MODINE 10-410 WIRING DIAGRAM MODEL GHG

WITH 230V PRIMARY RECONNECT TRANS. PRIMARY AS SHOWN FOR 230V/115V

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

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

WIRING LEGEND	
FACTORY	LOW
FIELD	---
WIRE NUT	•



ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES
 ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE
 ▲ TRANSFORMER NOT REQUIRED WITH 230V/3Ø POWER SUPPLY AND 230V/25V CONTROL TRANSFORMER

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

5H70089B2 — Three-phase, standing pilot, 100% shut-off, low-voltage thermostat. (Rev. H)



MODINE 10-410 WIRING DIAGRAM MODEL GHG

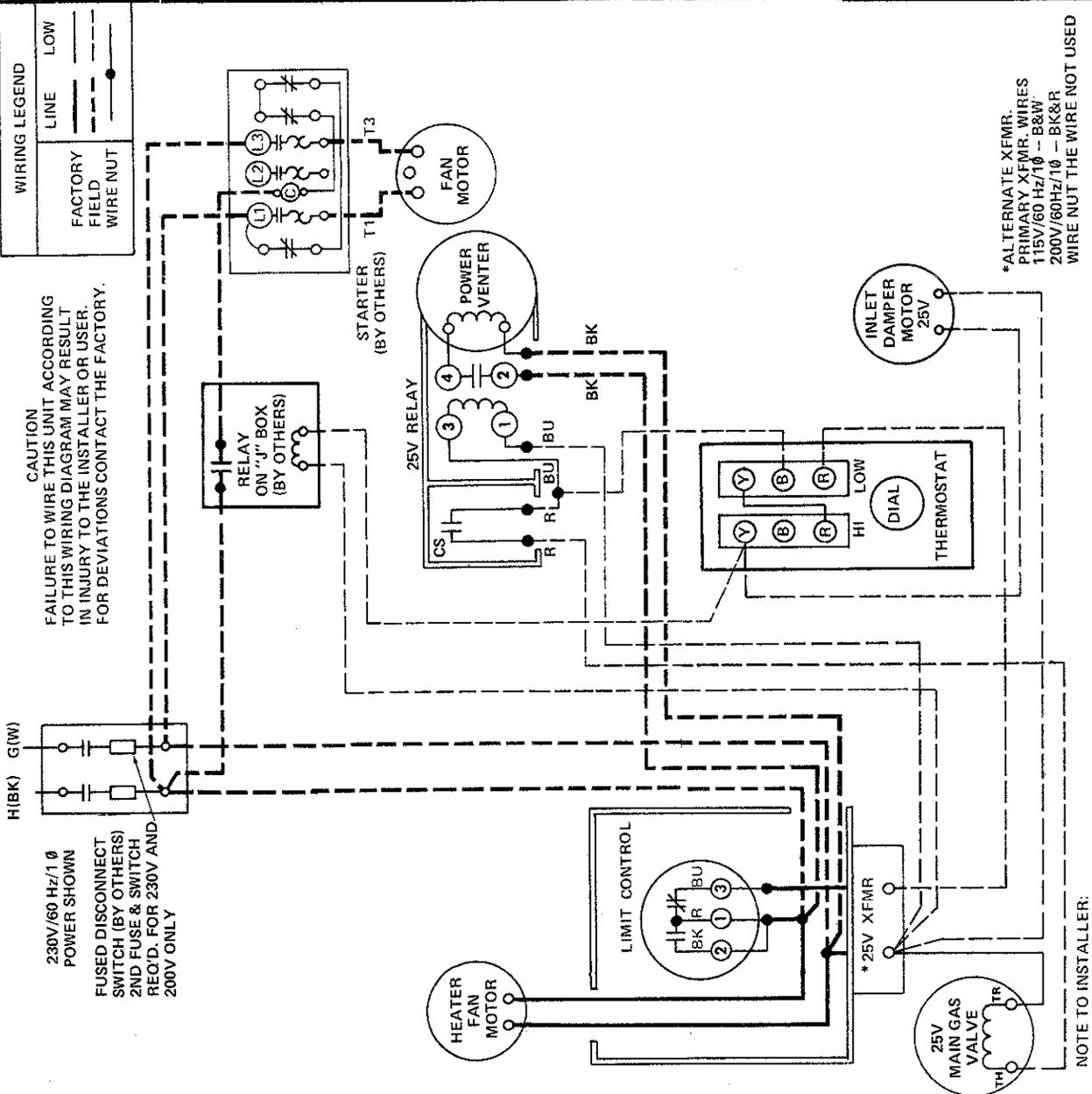
230V/60 Hz/1 Ø
POWER SHOWN

FUSED DISCONNECT
SWITCH (BY OTHERS)
2ND. FUSE & SWITCH
REQ'D. FOR 230V AND
200V ONLY

H(BK) G(W)

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

WIRING LEGEND	
FACTORY	SOLID LINE
FIELD	DASHED LINE
WIRE NUT	DOTTED LINE



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.

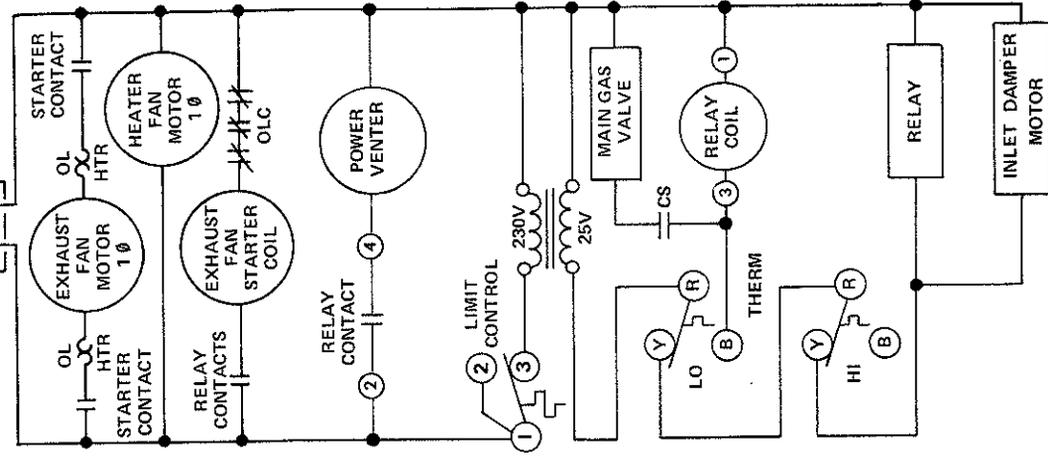
ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENT.

*ALTERNATE XFMR.
PRIMARY XFMR. WIRES
115V/60 Hz/1Ø — B&W
200V/60Hz/1Ø — BK&R
WIRE NUT THE WIRE NOT USED

8H6490B400 — Single-phase, standing pilot, 100% shut-off, low-voltage
thermostat, low-voltage controlled power venter.

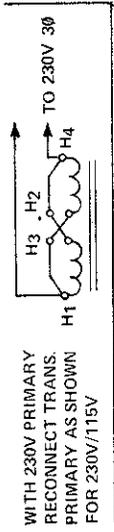
230V/60 Hz/1 Ø POWER SHOWN
H(BK) G(W)

FUSED DISCONNECT
SWITCH (BY OTHERS)
2ND FUSE & SWITCH
REQ'D. FOR 230V AND
200V ONLY



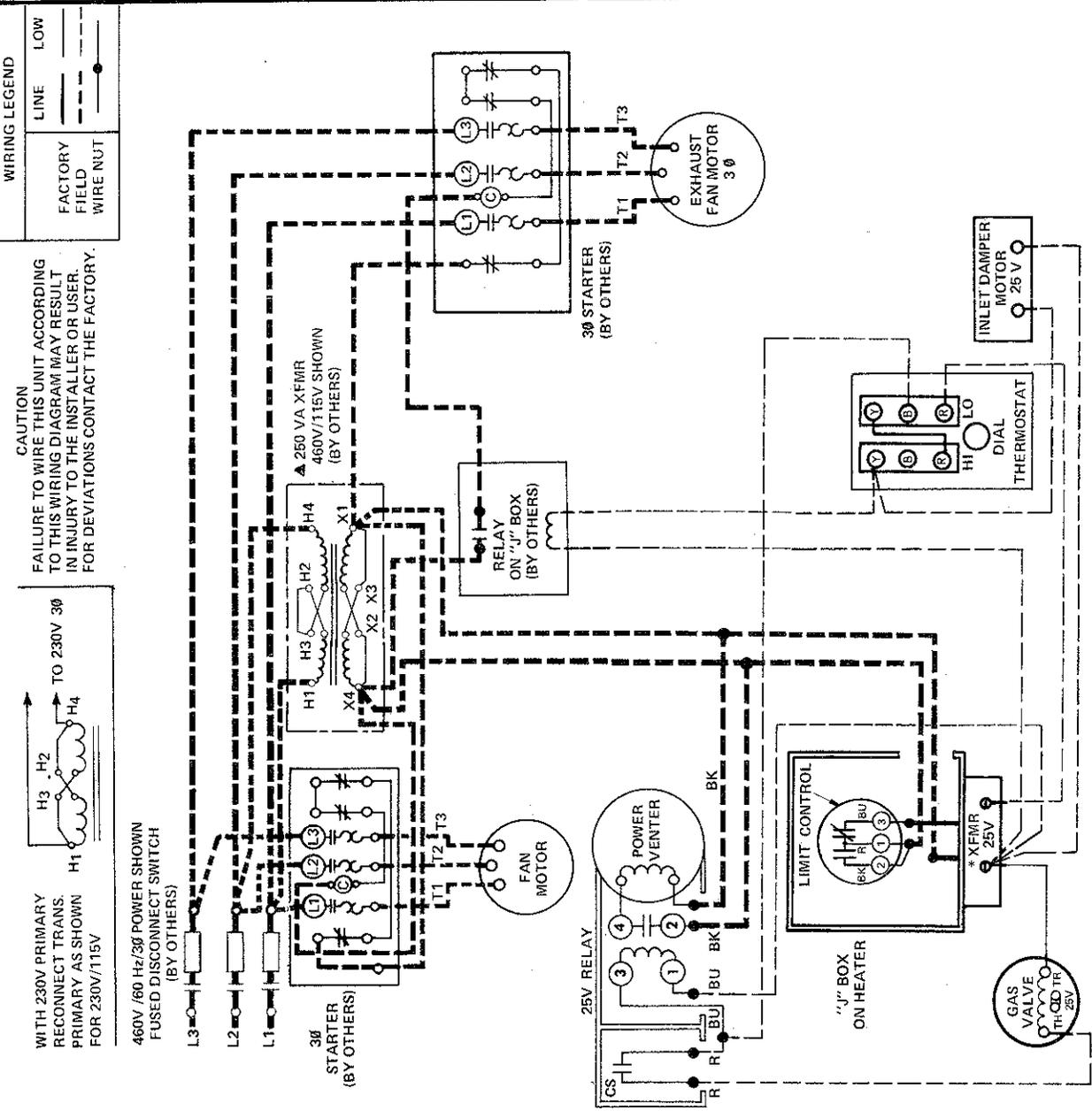
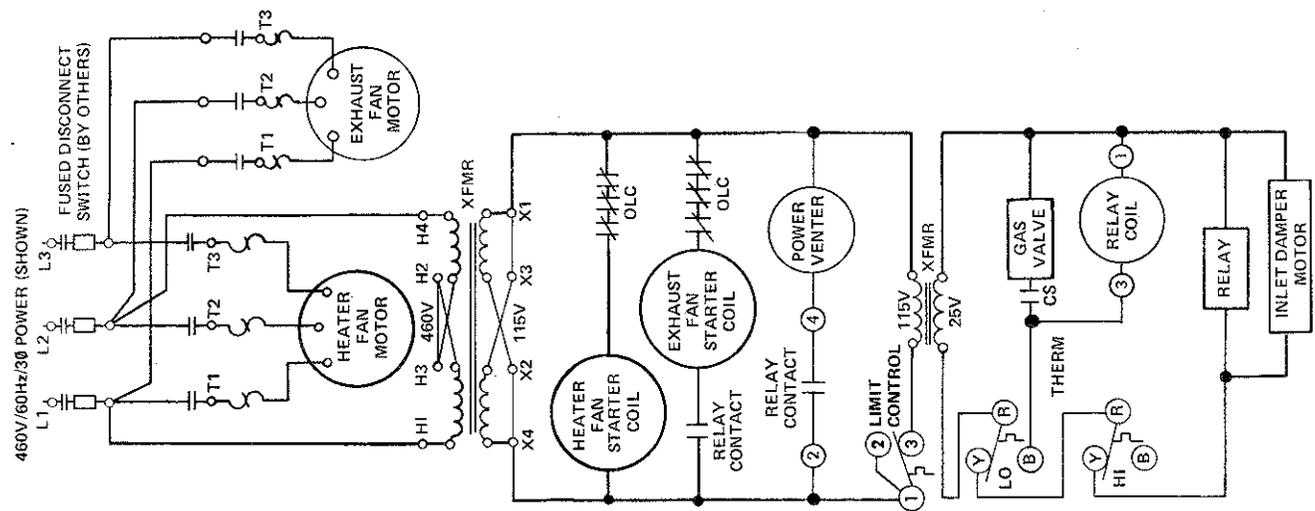


MODINE 10-410 WIRING DIAGRAM MODEL GHG



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

WIRING LEGEND	
FACTORY	LINE
FIELD	LOW
WIRE NUT	



- ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES
- USE 105°C WIRE FOR REPLACEMENT
- NOTE TO INSTALLER: ATTACH THIS DIAGRAM NEAR HEATER
- ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE
- * TRANSFORMER NOT REQUIRED WITH 230V/3Ø POWER SUPPLY AND 230V/25V CONTROL TRANSFORMER
- * ALTERNATE XFMR. PRIMARY XFMR WIRES 230V/60Hz/1Ø - BK&Y 200V/60Hz/1Ø - BK&R WIRE NUT THE WIRE NOT USED

8H649B400 — Three-phase, standing pilot, 100% shut-off, low voltage thermostat, low-voltage controlled power venter.



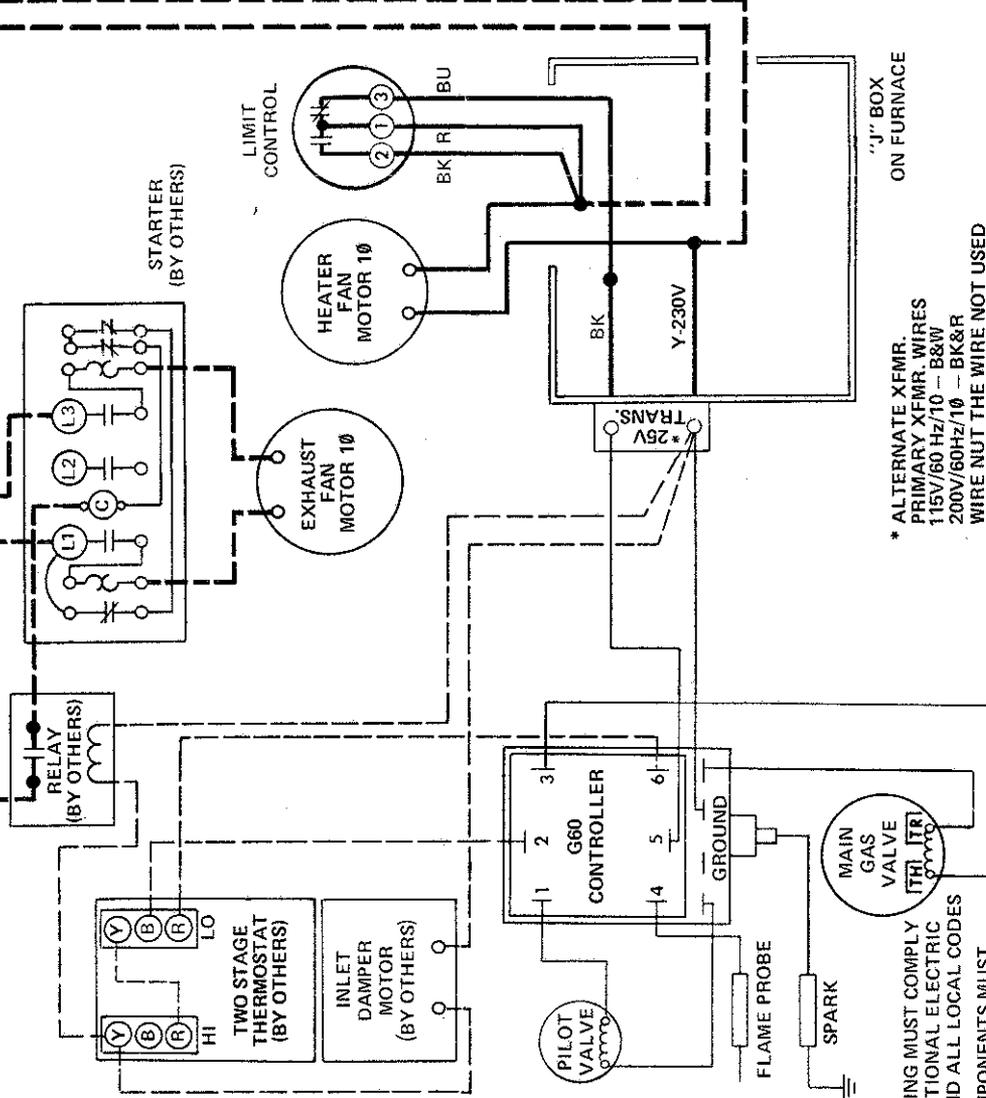
MODINE 10-410 WIRING DIAGRAM MODEL GHG

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.

230V/60Hz/1Ø
G(W) H(BK)

WIRING LEGEND	
FACTORY	LINE
FIELD	LOW
WIRE NUT	

FUSED DISCONNECT BY OTHERS (2ND FUSE & SWITCH REQ'D. ON 230V ONLY)

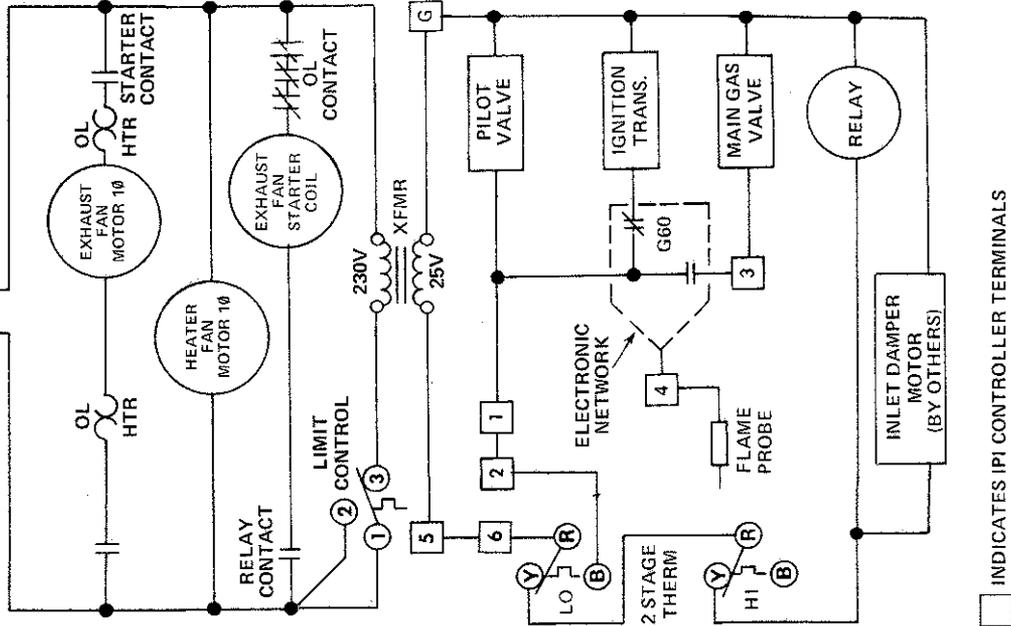


* ALTERNATE XFMR.
PRIMARY XFMR. WIRES
115V/60 Hz/1Ø -- B&W
200V/60Hz/1Ø -- BK&R
WIRE NUT THE WIRE NOT USED

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

230V/60Hz/1Ø
H(BK) G(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
2ND FUSE & SWITCH REQ'D. FOR 230V, 200V ONLY

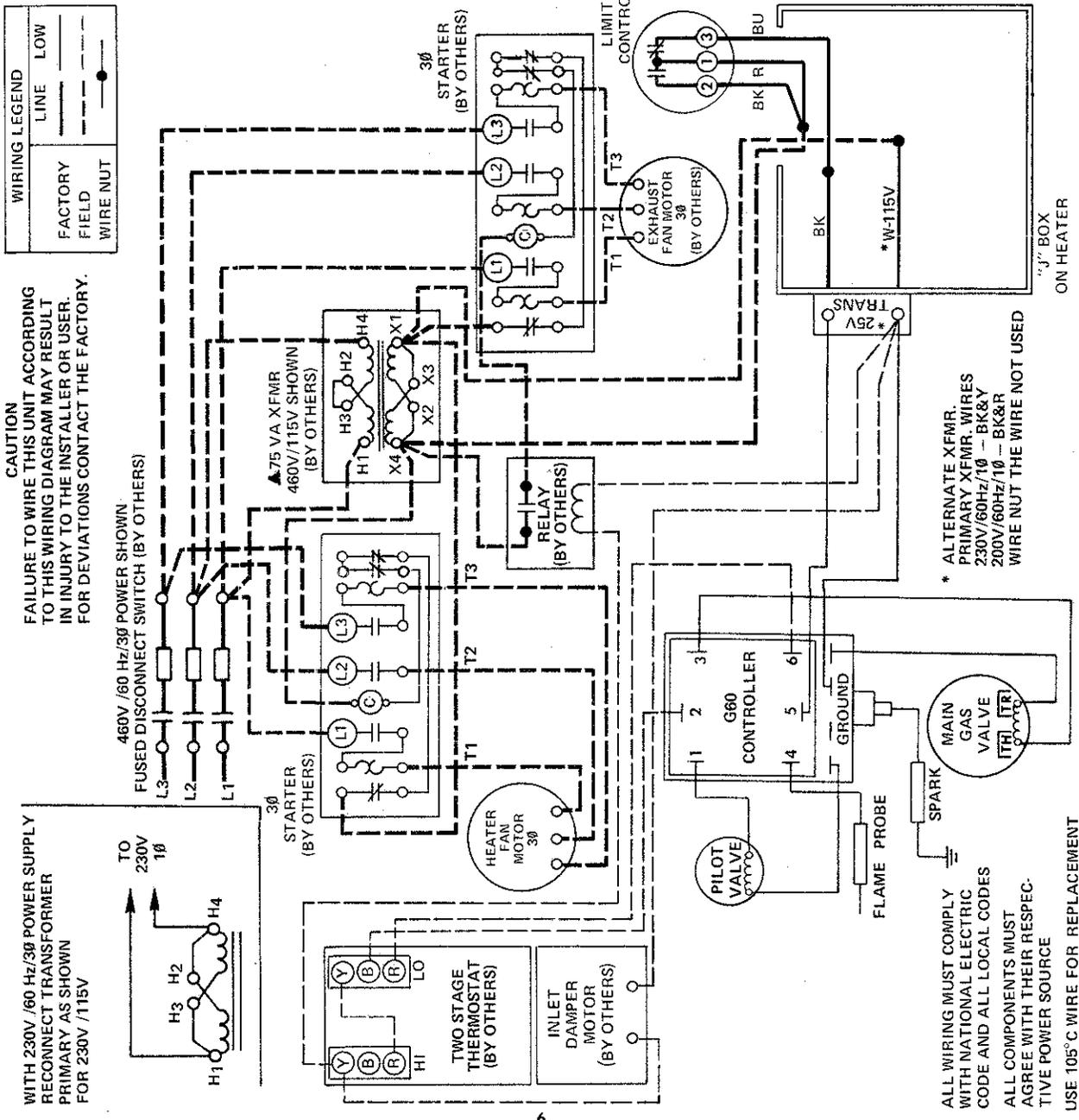


□ INDICATES IPI CONTROLLER TERMINALS

5H70089B5 — Single-phase, intermittent pilot ignition, non-100% shut-off, low-voltage thermostat. (Rev. D)



MODINE 10-410 WIRING DIAGRAM MODEL GHG



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.

460V /60 Hz/3Ø POWER SHOWN

WIRING LEGEND	
FACTORY	LOW
—	---
○	●

460V /60 Hz/3Ø POWER SHOWN

FUSED DISCONNECT SWITCH (BY OTHERS)

HEATER FAN MOTOR 3Ø

EXHAUST FAN MOTOR 3Ø

STARTER (BY OTHERS)

RELAY (BY OTHERS)

LIMIT CONTROL

PILOT VALVE

FLAME PROBE

SPARK

MAIN GAS VALVE

G60 CONTROLLER

GROUND

INLET DAMPER MOTOR (BY OTHERS)

TWO STAGE THERMOSTAT (BY OTHERS)

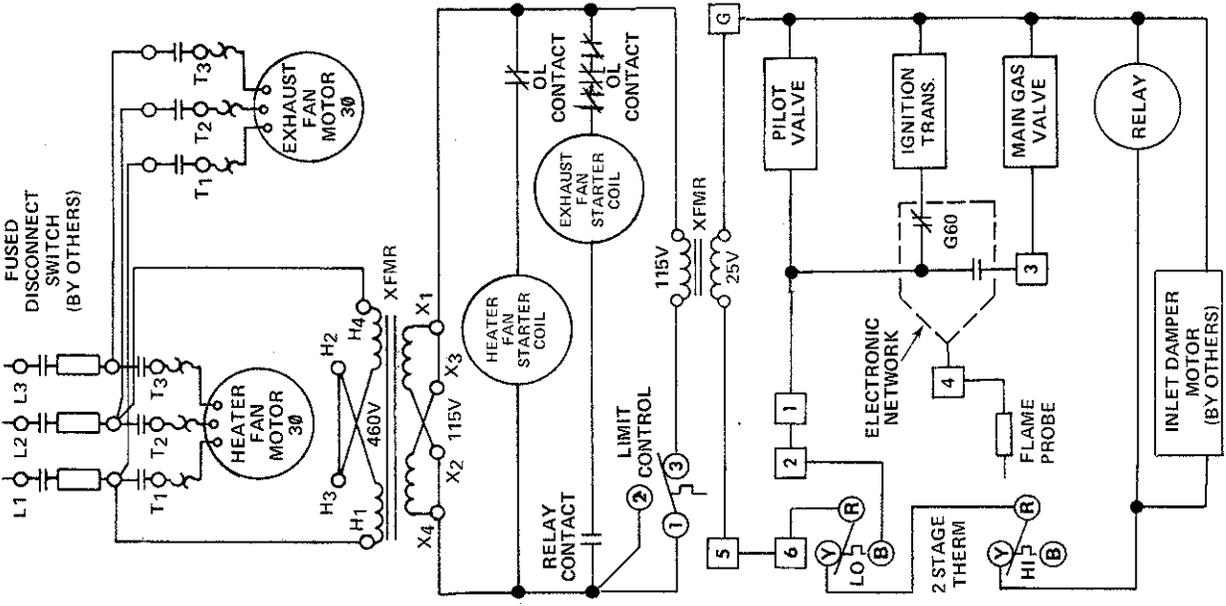
25V TRANS

* W-115V ON HEATER

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

“J” BOX ON HEATER

460V /60 Hz/3Ø POWER SHOWN



□ INDICATES PI CONTROLLER TERMINALS

5H70089B5 — Three-phase, intermittent pilot ignition, non-100% shut-off, low-voltage thermostat. (Rev. D)

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



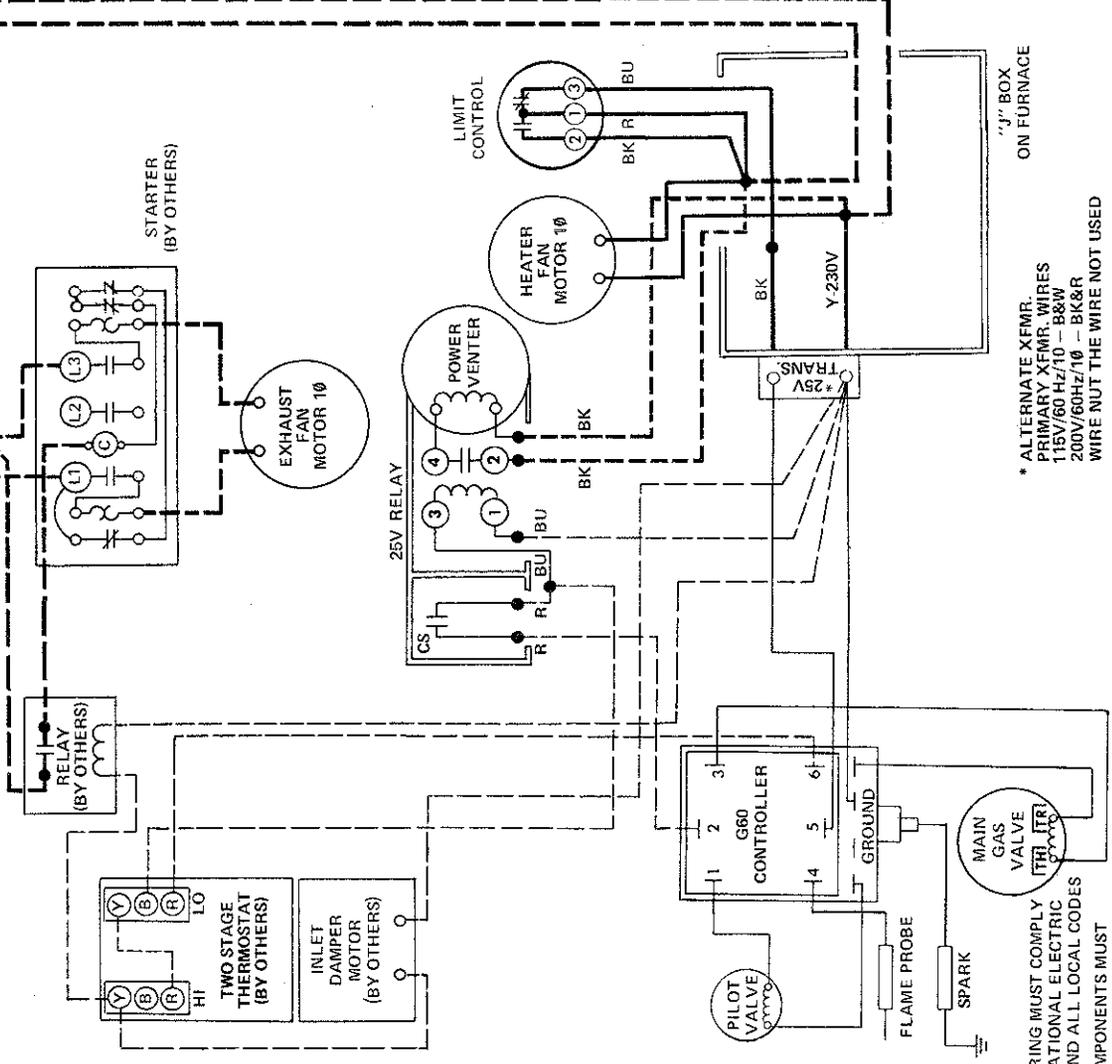
MODINE 10-410 WIRING DIAGRAM MODEL GHG

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.

230V/60Hz/1Ø
G(W) H(BK)

WIRING LEGEND	
FACTORY WIRE NUT	---
FIELD	---
LINE	---
LOW	---

FUSED DISCONNECT BY OTHERS (2ND FUSE & SWITCH REQ'D. FOR 230V ONLY)

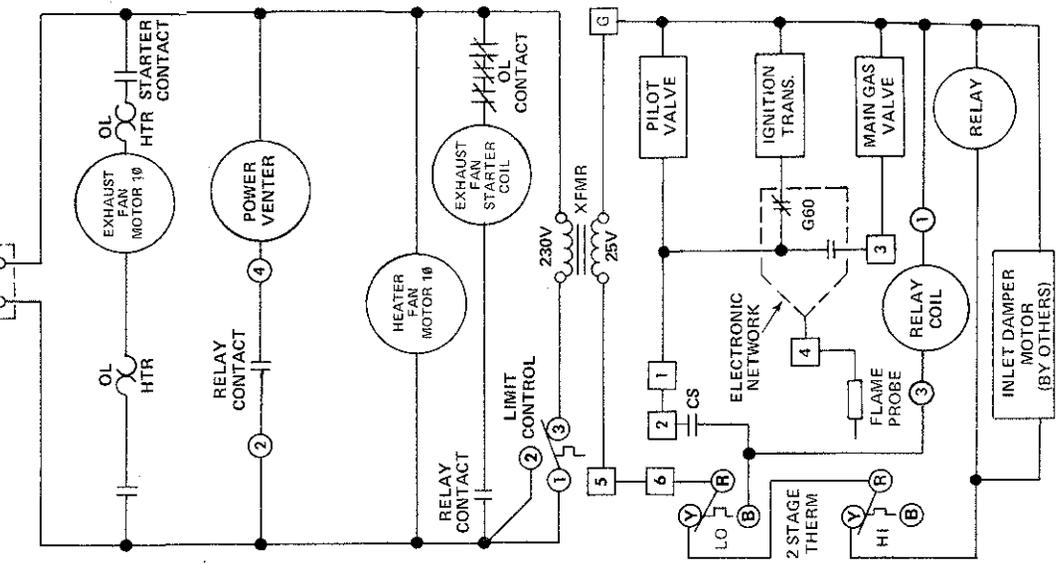


* ALTERNATE XFMR.
PRIMARY XFMR. WIRES
115V/60 Hz/1Ø - B&W
200V/60Hz/1Ø - BK&R
WIRE NUT THE WIRE NOT USED

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

230V/60Hz/1Ø
H(BK) G(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
2ND FUSE & SWITCH REQ'D. FOR 230V, 200V ONLY

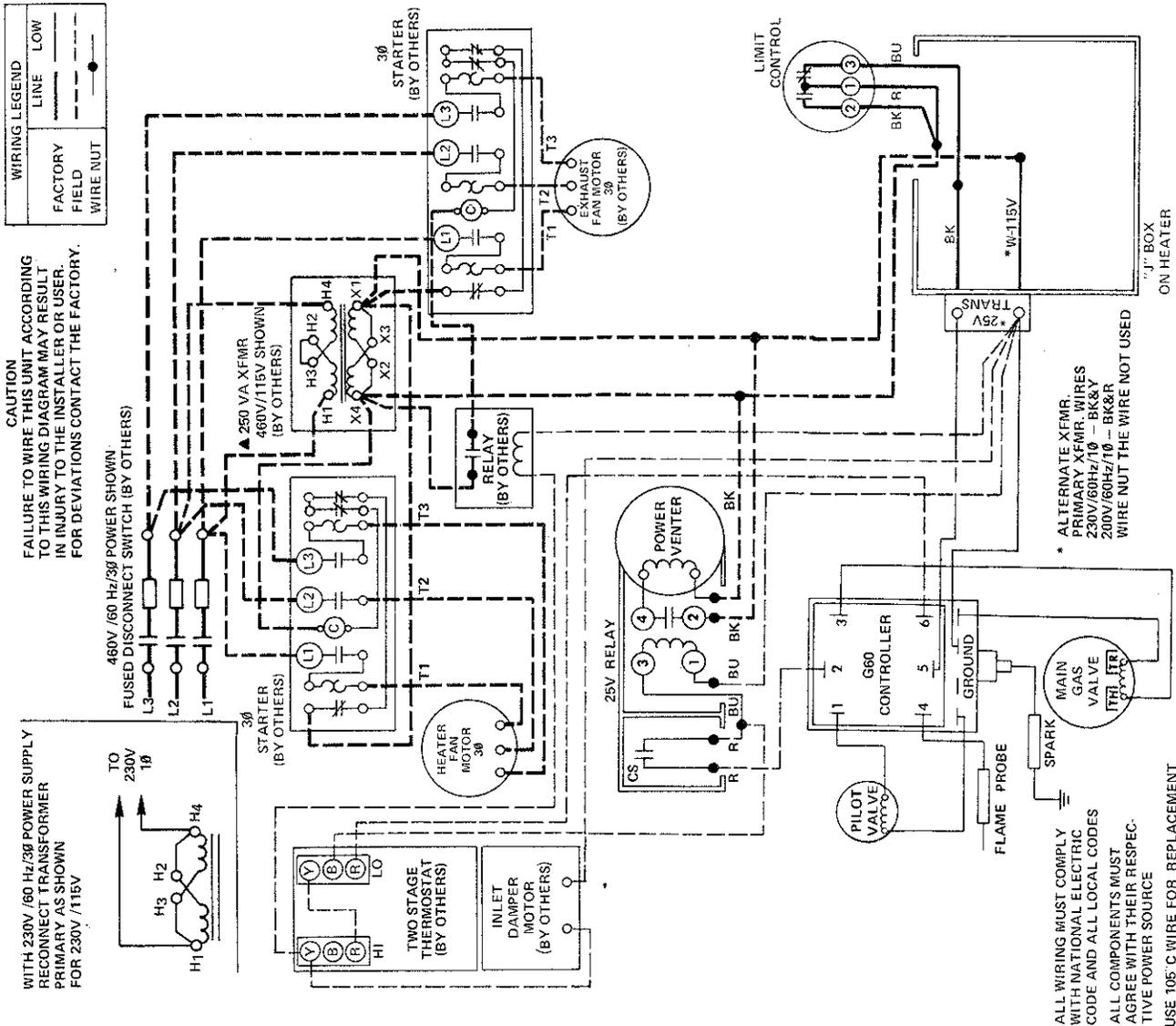


□ INDICATES IPI CONTROLLER TERMINALS

8H6490B401 — Single-phase, intermittent pilot ignition, non-100% shut-off, low voltage thermostat, low voltage controlled power venter.



MODINE 10-410 WIRING DIAGRAM MODEL GHG



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

WIRING LEGEND	
FACTORY	LOW
FIELD	---
WIRE NUT	●

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

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

250 VA XFMR 460V/115V SHOWN (BY OTHERS)

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

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

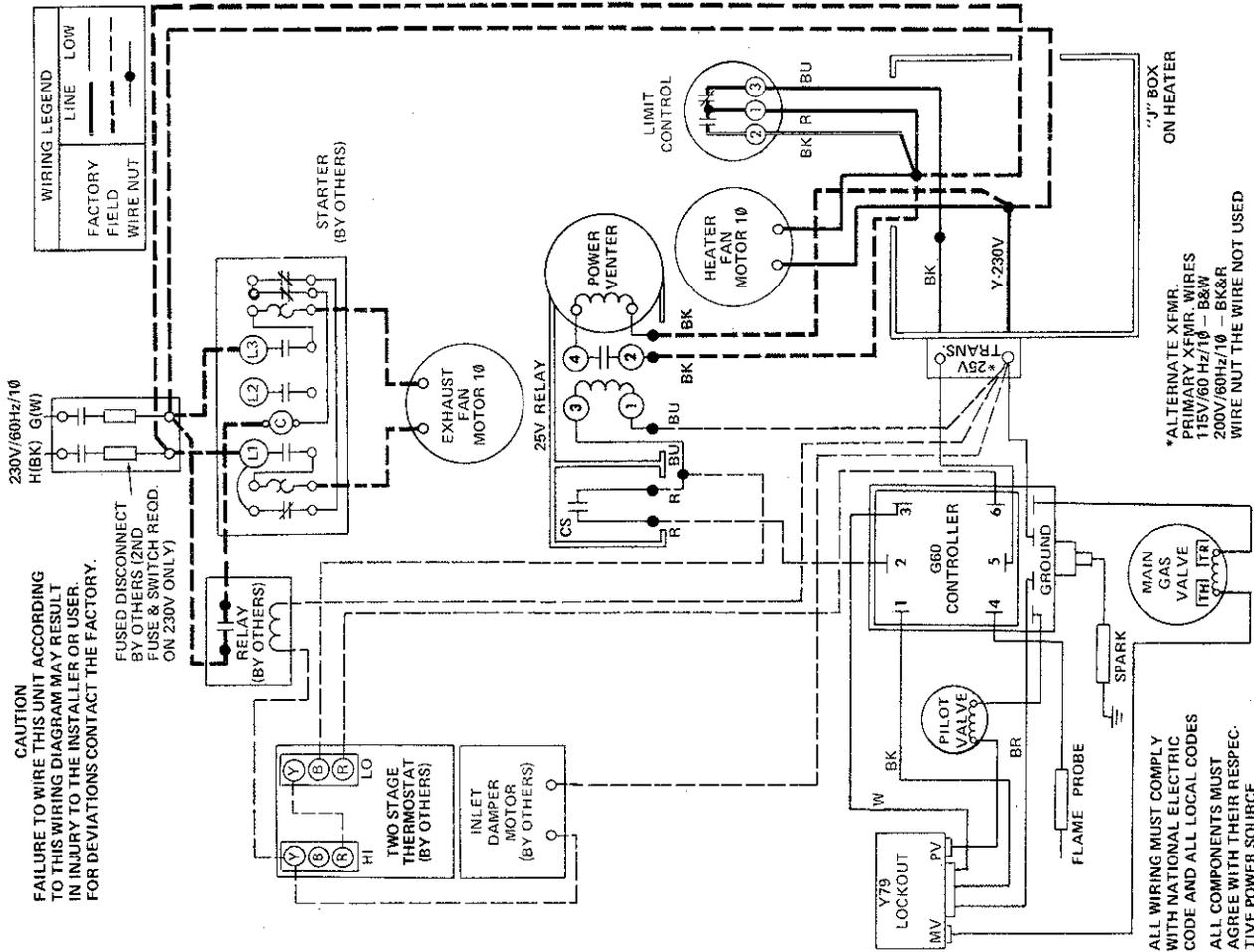
□ INDICATES IPI CONTROLLER TERMINALS

8H6490B401 — Three-phase, intermittent pilot ignition, non-100% shutoff, low voltage thermostat, low-voltage controlled power venter.



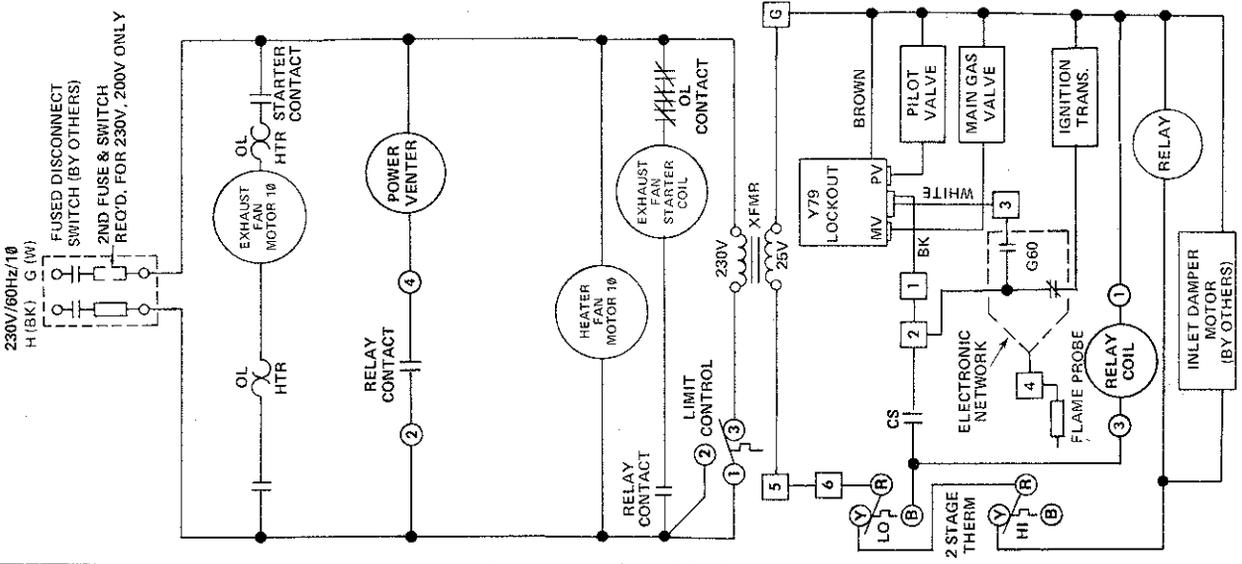
MODINE 10-410 WIRING DIAGRAM MODEL GHG

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
115V/60 Hz/10 — BK&W
200V/60Hz/10 — BK&R
WIRE NUT THE WIRE NOT USED

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



□ INDICATES IPT CONTROLLER TERMINALS

8H6490B402 — Single-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter.

MODINE 10-410 WIRING DIAGRAM MODEL GHG



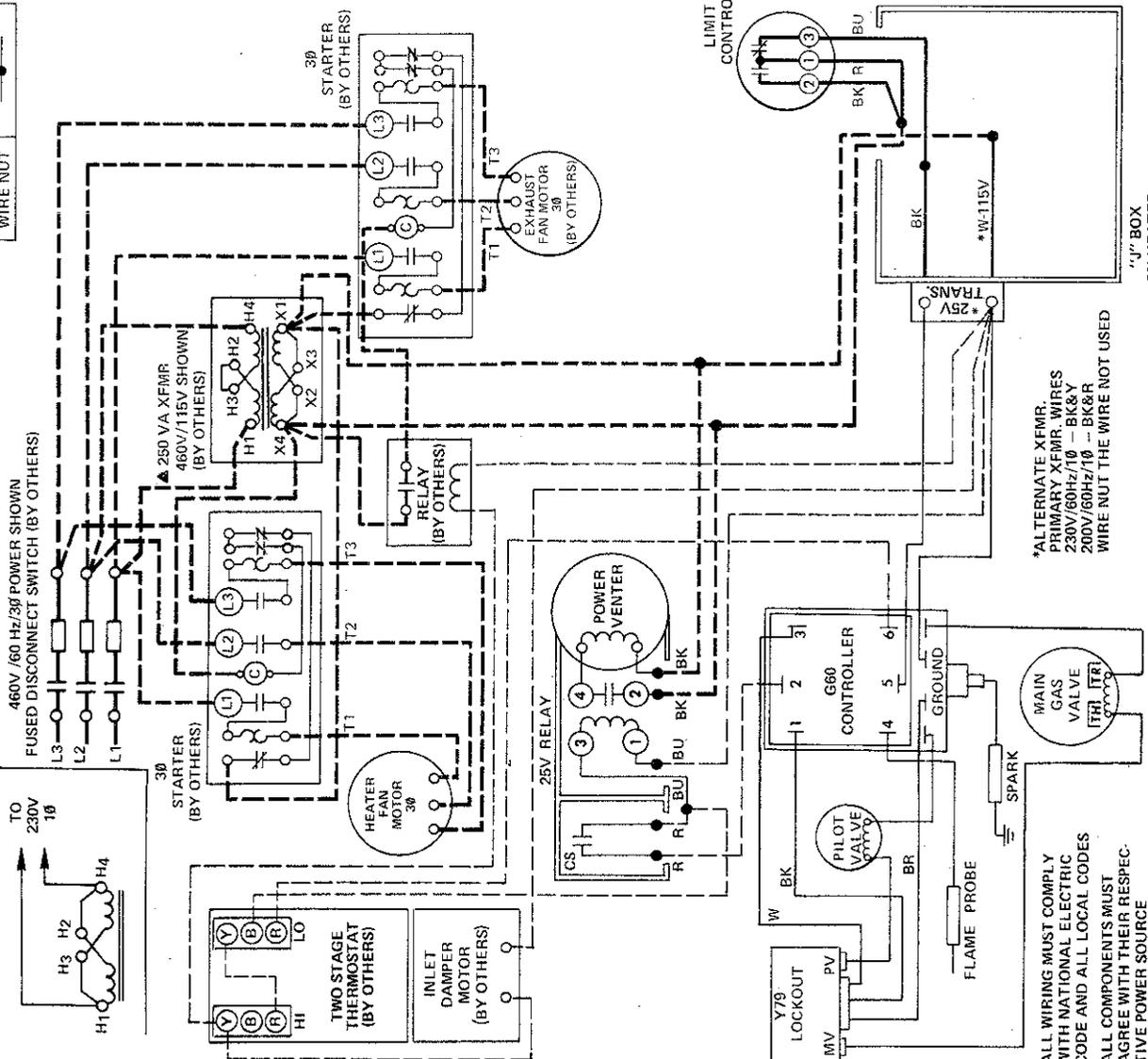
WITH 230V /60 Hz/3Ø POWER SUPPLY RECONNECT TRANSFORMER PRIMARY AS SHOWN FOR 230V /115V

TO 230V
1Ø

WIRING LEGEND	
FACTORY	LOW
FIELD	---
WIRE NUT	●

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.

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



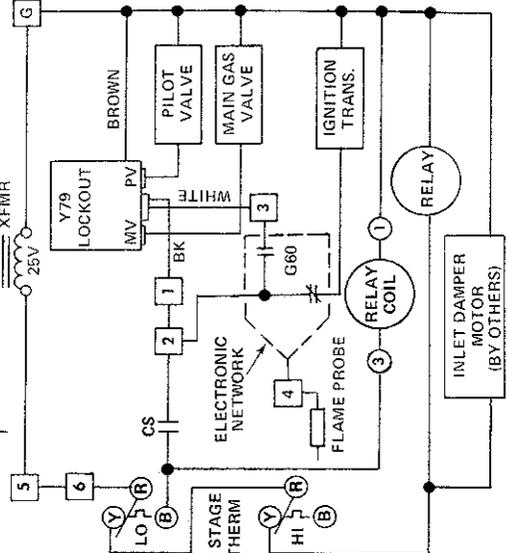
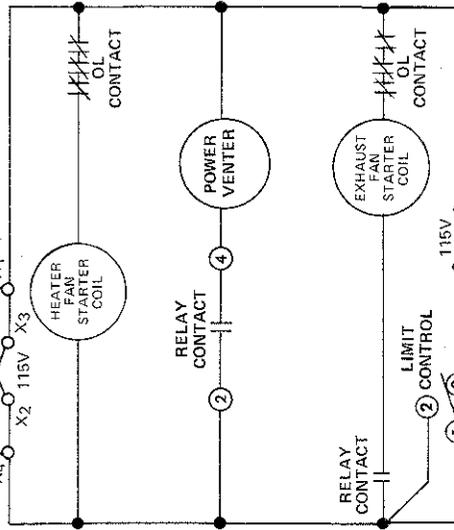
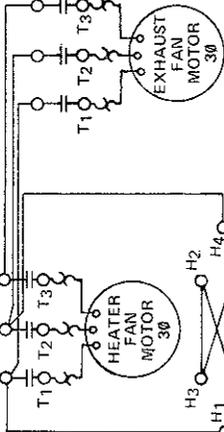
*ALTERNATE XFMR.
PRIMARY XFMR. WIRES
230V/60Hz/1Ø - BK&Y
200V/60Hz/1Ø - BK&R
WIRE NUT THE WIRE NOT USED

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

8H6490B402 — Three-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter.

460V /60 Hz/3Ø POWER SHOWN

FUSED DISCONNECT SWITCH (BY OTHERS)



□ INDICATES IPI CONTROLLER TERMINALS



MODINE 10-410 WIRING DIAGRAM MODEL GHG

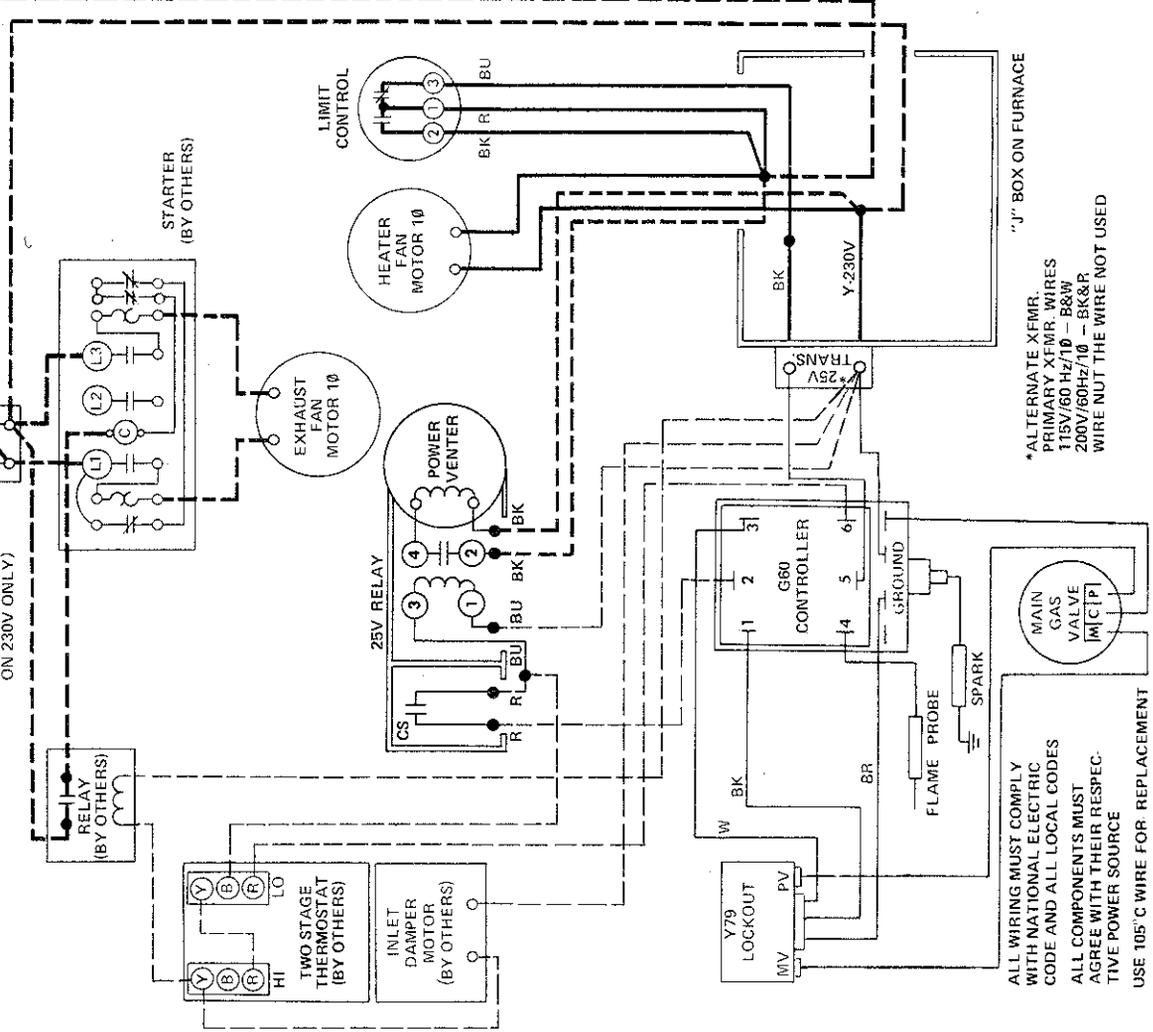
CAUTION

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

230V/60Hz/1Ø
H(BK) G(W)

FUSED DISCONNECT SWITCH (2ND FUSE & SWITCH REQ'D. FOR 230V ONLY)

WIRING LEGEND	
—	LINE
---	LOW
○	FACILITY
○	FIELD
○	WIRE NUT



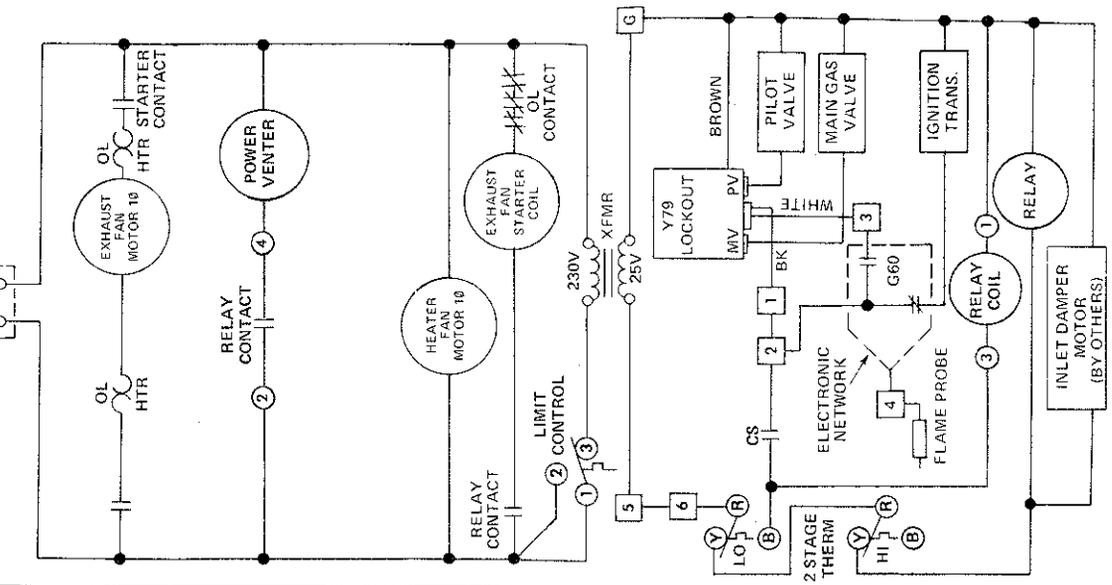
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES. ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE. USE 105°C WIRE FOR REPLACEMENT.

*ALTERNATE XFMR. PRIMARY XFMR. WIRES 115V/60 Hz/1Ø - B&W 200V/60Hz/1Ø - BK&R WIRE NUT THE WIRE NOT USED

"J" BOX ON FURNACE

230V/60Hz/1Ø
H(BK) G(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
2ND FUSE & SWITCH REQ'D. FOR 230V, 200V ONLY



□ INDICATES IPI CONTROLLER TERMINALS

8H6490B403 - Single-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter.

MODINE 10-410 WIRING DIAGRAM MODEL GHG



460V /60 Hz/3Ø POWER SHOWN

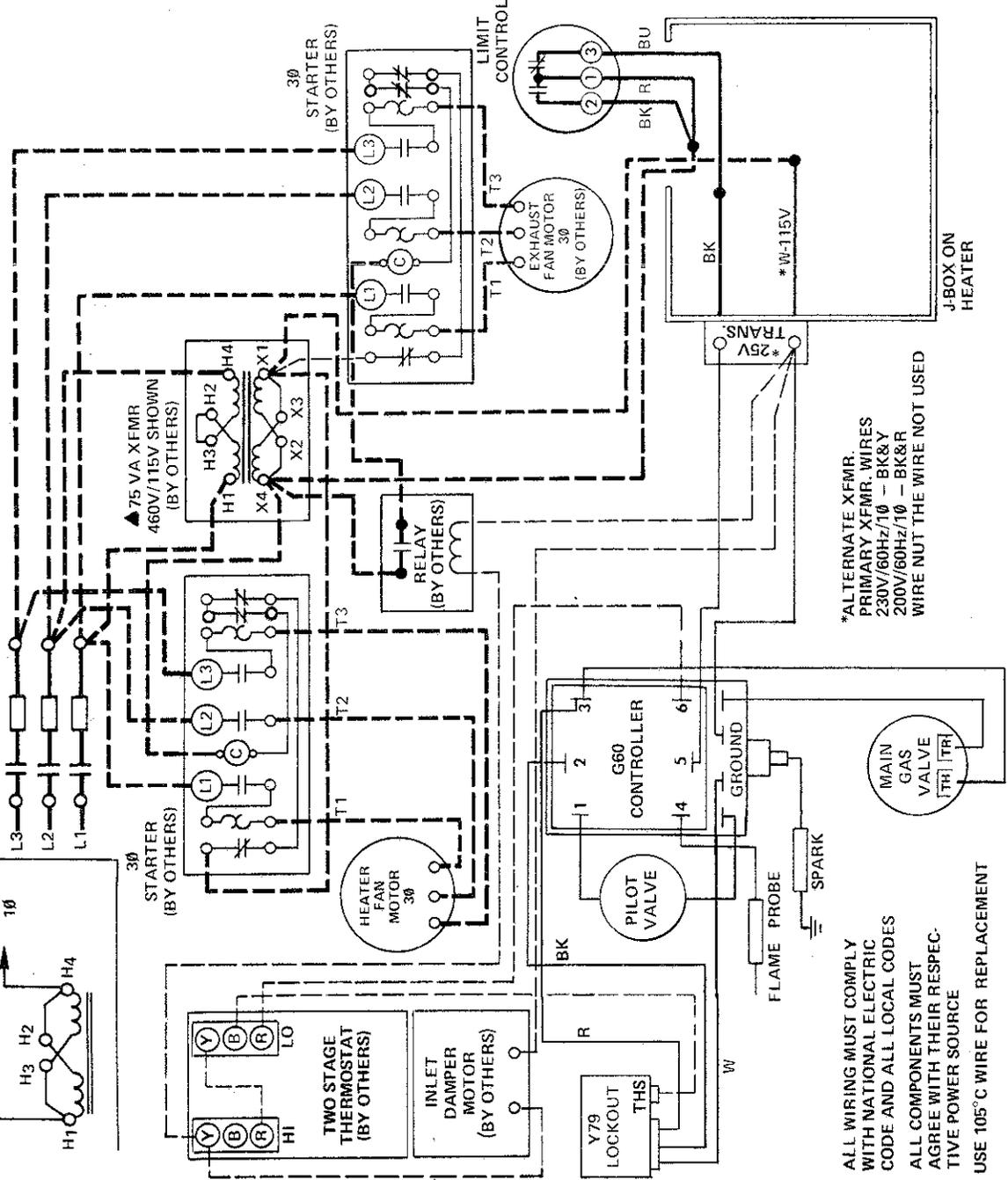
WIRING LEGEND	
FACTORY	LINE
FIELD	LOW
WIRE NUT	

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.

WITH 230V /60 Hz/3Ø POWER SUPPLY RECONNECT TRANSFORMER PRIMARY AS SHOWN FOR 230V /115V CONTROL CODE 08



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



▲ 75 VA XFMR
460V/115V SHOWN
(BY OTHERS)

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

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

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

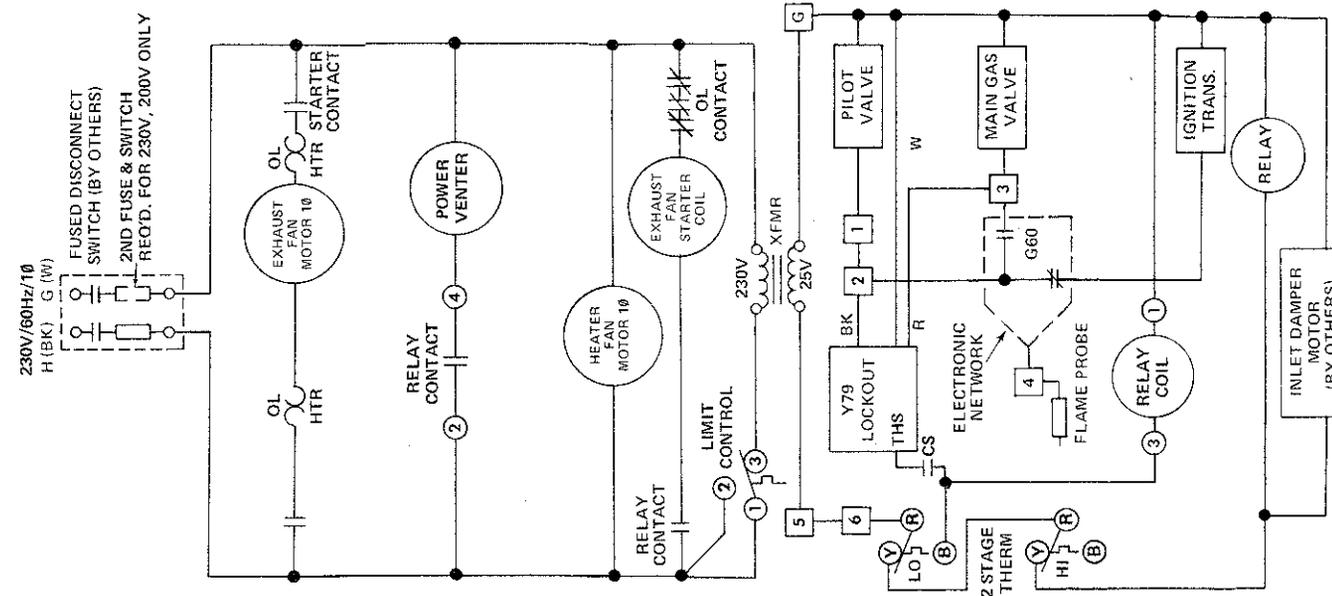
5H70089B 15 — Three-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat. (Rev. B)

□ INDICATES IPI CONTROLLER TERMINALS



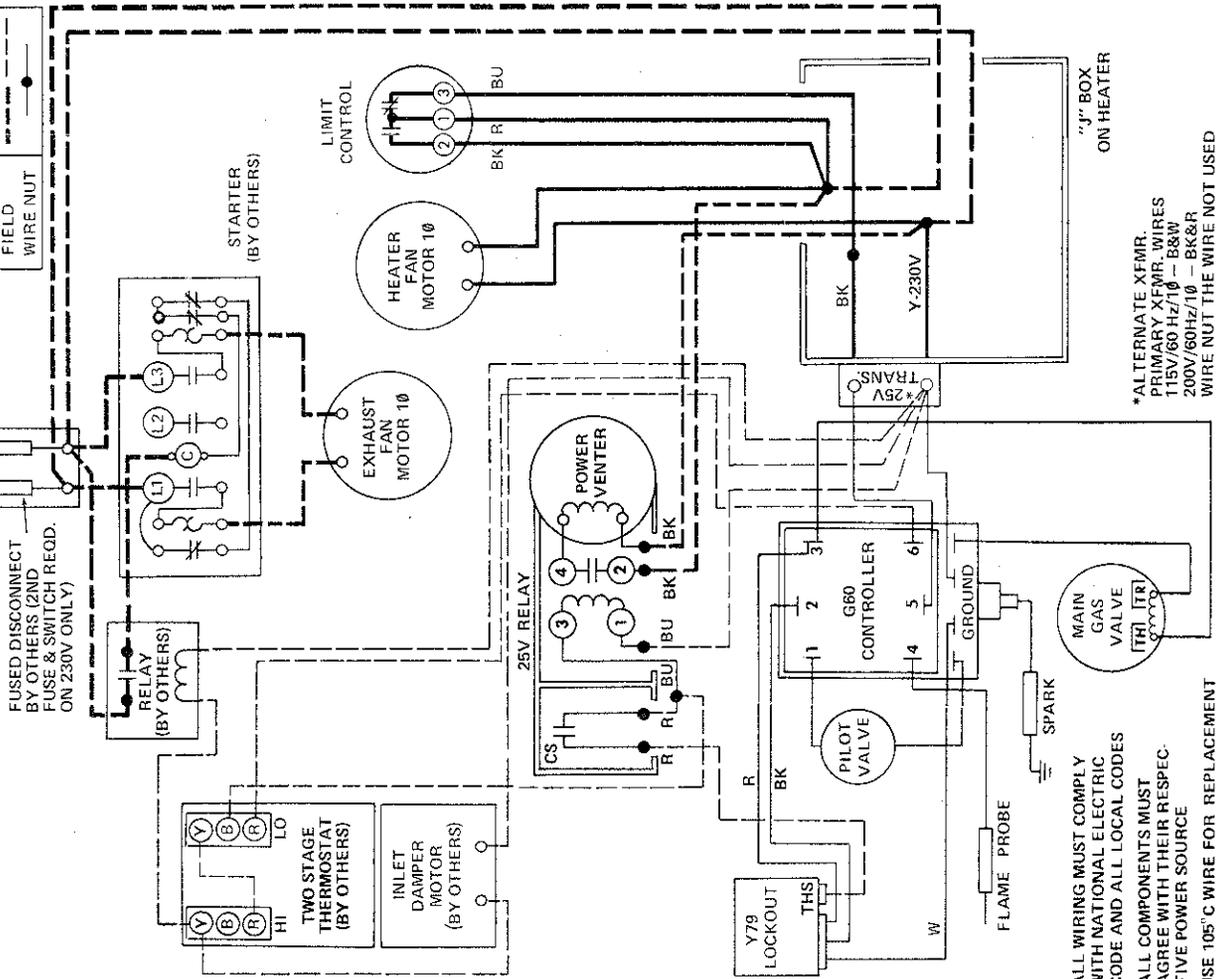
MODINE 10-410 WIRING DIAGRAM MODEL GHG

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.



230V/60Hz/1Ø
H(BK) G(W)

WIRING LEGEND	
FACTORY FIELD WIRE NUT	LOW
FUSED DISCONNECT SWITCH (BY OTHERS)	2ND FUSE & SWITCH REQ'D. FOR 230V, 200V ONLY



*ALTERNATE XFMR
PRIMARY XFMR WIRES
115V/60 Hz/1Ø - BK&W
200V/60Hz/1Ø - BK&R
WIRE NOT THE WIRE NOT USED

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

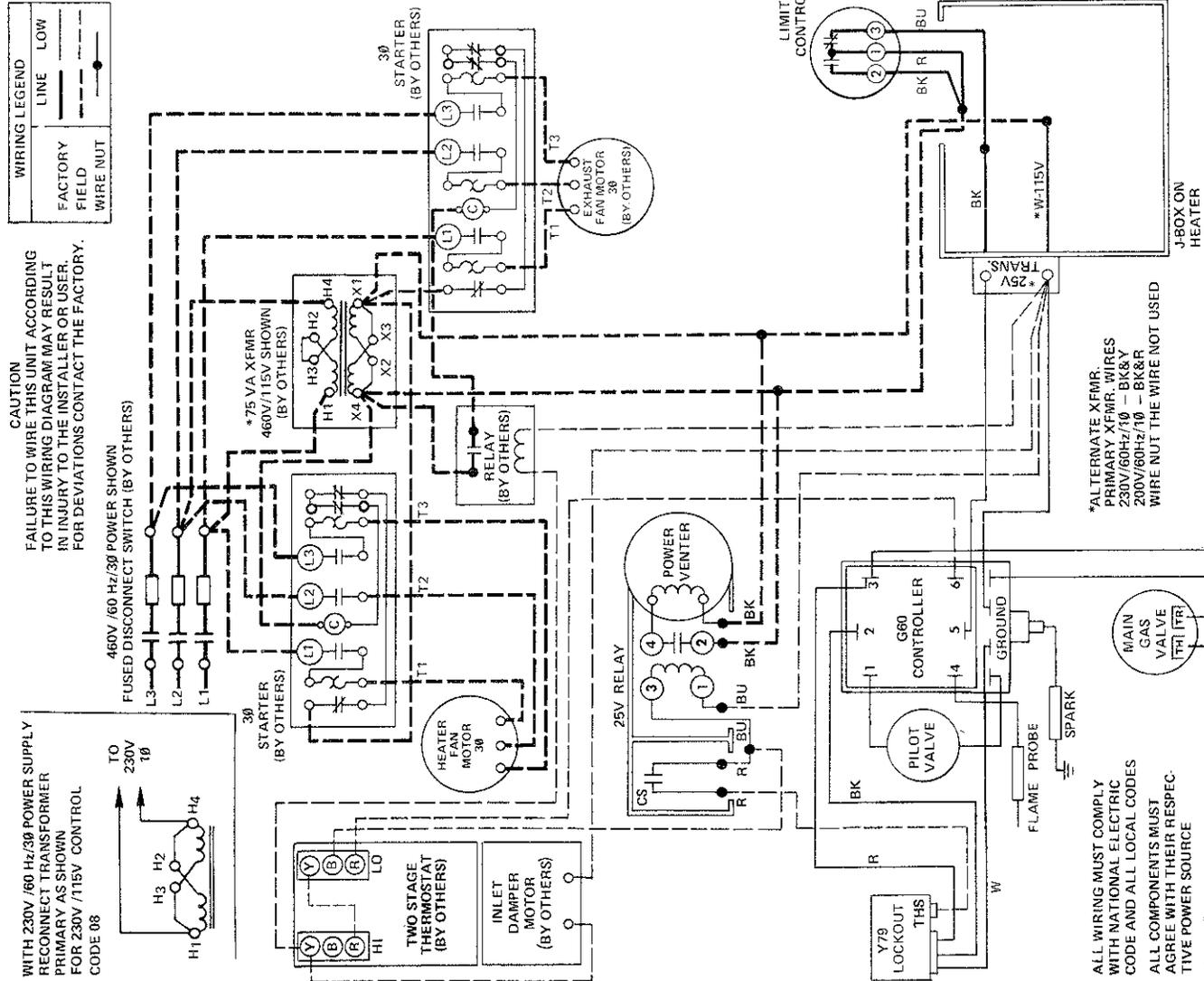
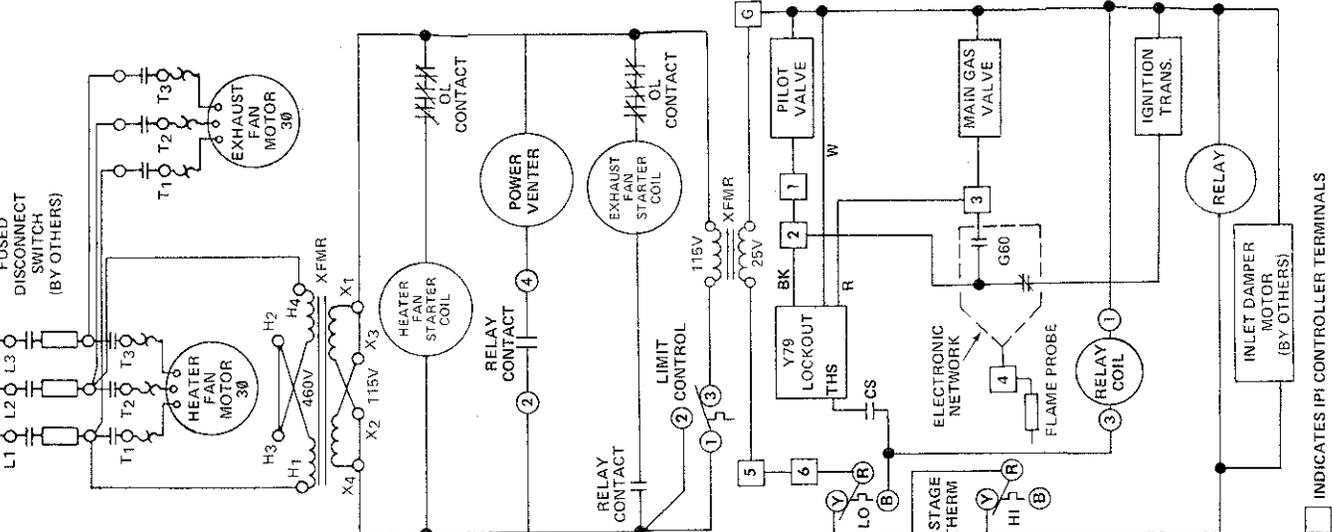
8H8490B404 — Single-phase, intermittent pilot ignition, 100% shut-off, low voltage thermostat, low-voltage controlled power venter.

□ INDICATES IPI CONTROLLER TERMINALS



MODINE 10-410 WIRING DIAGRAM MODEL GHG

460V /60 Hz/3Ø POWER SHOWN



8H8490B404 — Three-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter.



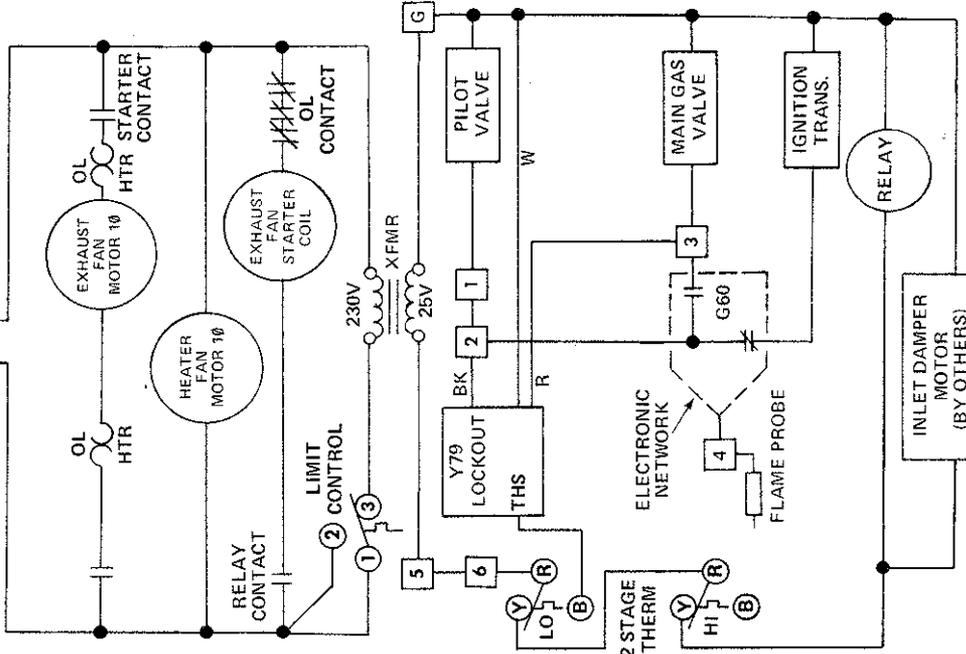
MODINE 10-410 WIRING DIAGRAM MODEL GHG

230V/60Hz/10
H(BK) G(W)

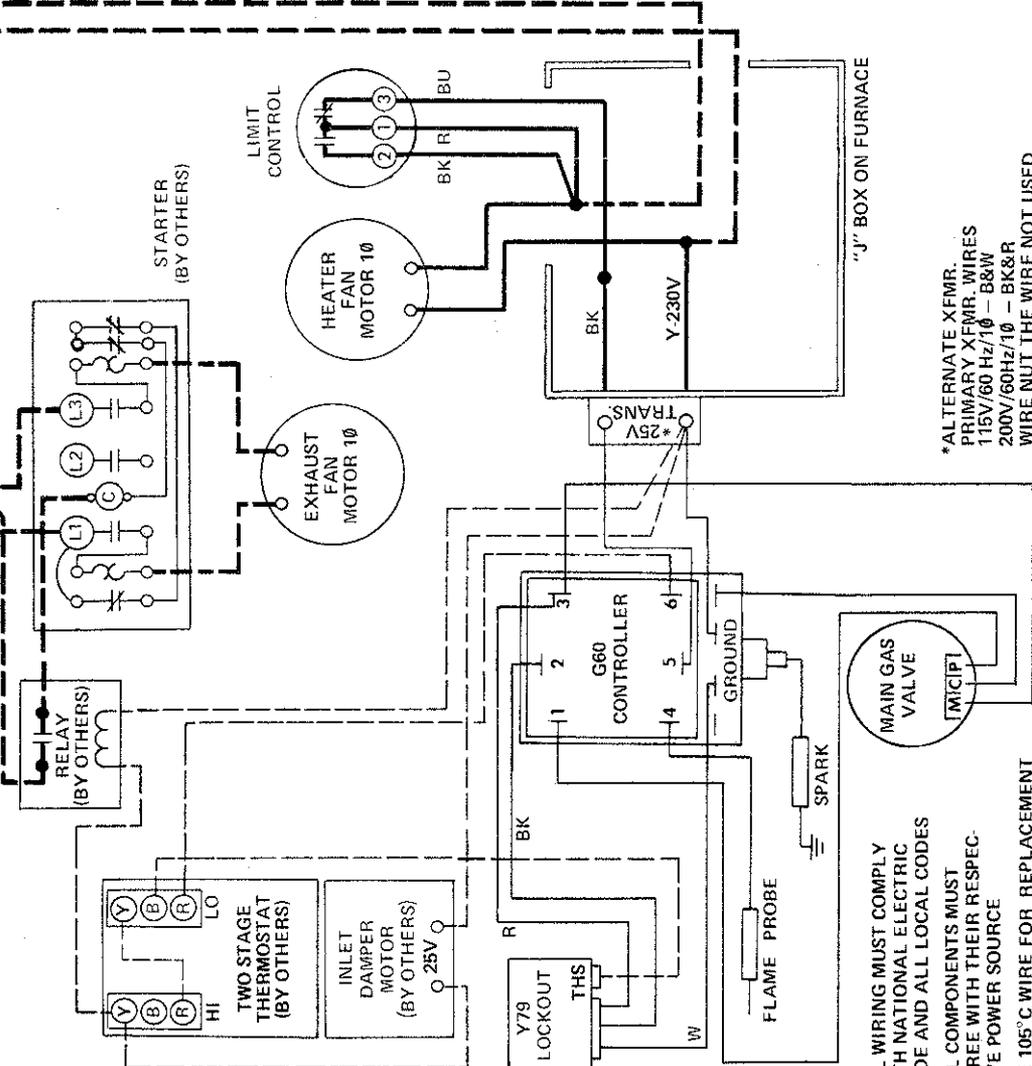
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING
TO THIS WIRING DIAGRAM MAY RESULT
IN INJURY TO THE INSTALLER OR USER.
FOR DEVIATIONS CONTACT THE FACTORY.

FUSED DISCONNECT
BY OTHERS (2ND
FUSE & SWITCH RECD.
ON 230V ONLY)

WIRING LEGEND	
FACTORY	LINE
FIELD	LOW
WIRE NUT	



□ INDICATES IPI CONTROLLER TERMINALS



ALL WIRING MUST COMPLY
WITH NATIONAL ELECTRIC
CODE AND ALL LOCAL CODES
ALL COMPONENTS MUST
AGREE WITH THEIR RESPEC-
TIVE POWER SOURCE
USE 105°C WIRE FOR REPLACEMENT

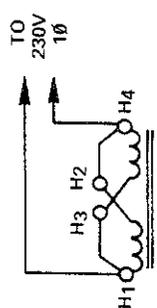
*ALTERNATE XFMR.
PRIMARY XFMR. WIRES
115V/60 Hz/10 - B&W
200V/60Hz/10 - BK&R
WIRE NUT THE WIRE NOT USED

5H70089B17 - Single-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat. (Rev. C)



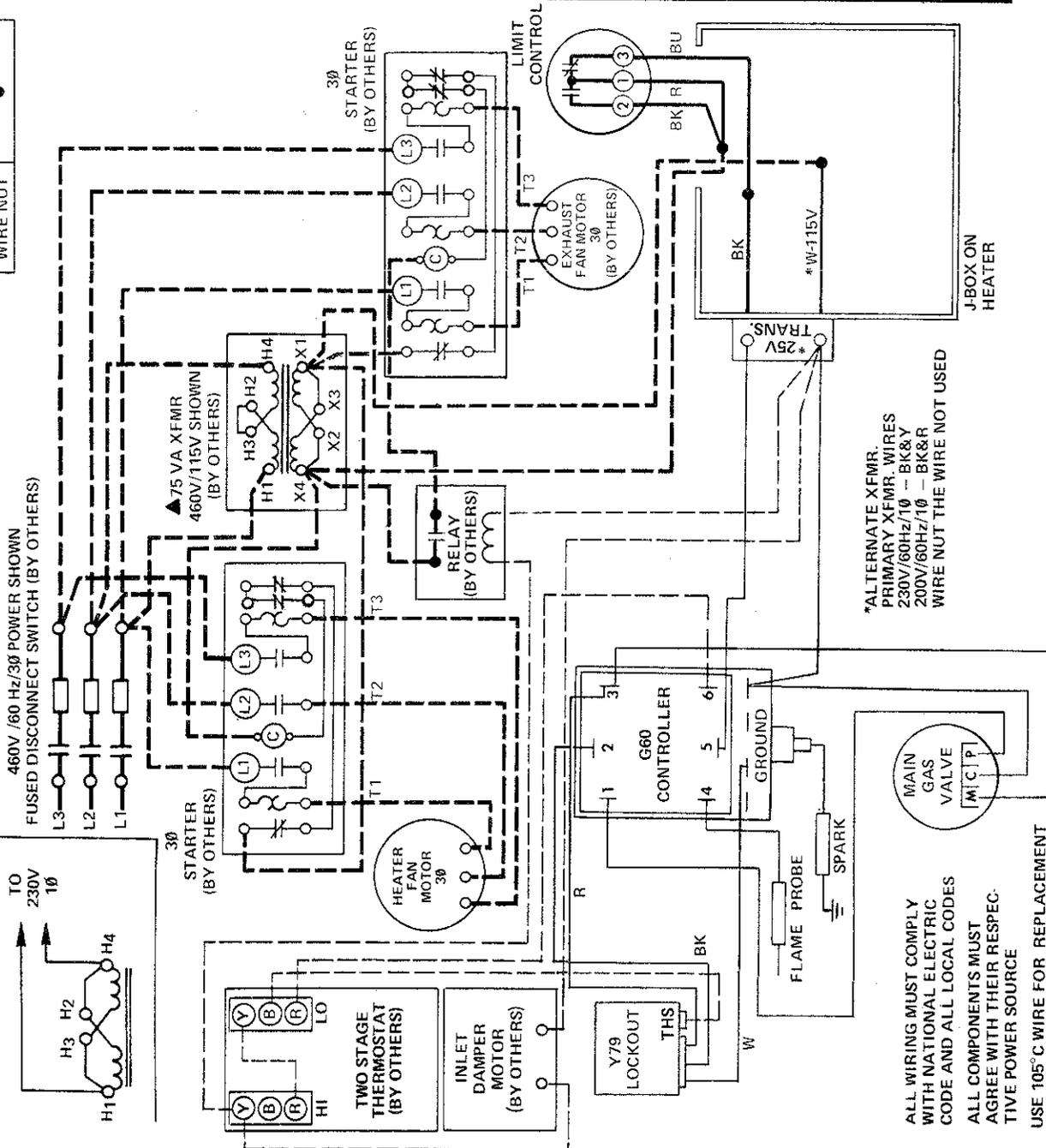
MODINE 10-410 WIRING DIAGRAM MODEL GHG

WITH 230V /60 HZ/3Ø POWER SUPPLY RECONNECT TRANSFORMER PRIMARY AS SHOWN FOR 230V /115V CONTROL CODE 08



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

WIRING LEGEND	
FACTORY	LINE
FIELD	LOW
WIRE NUT	



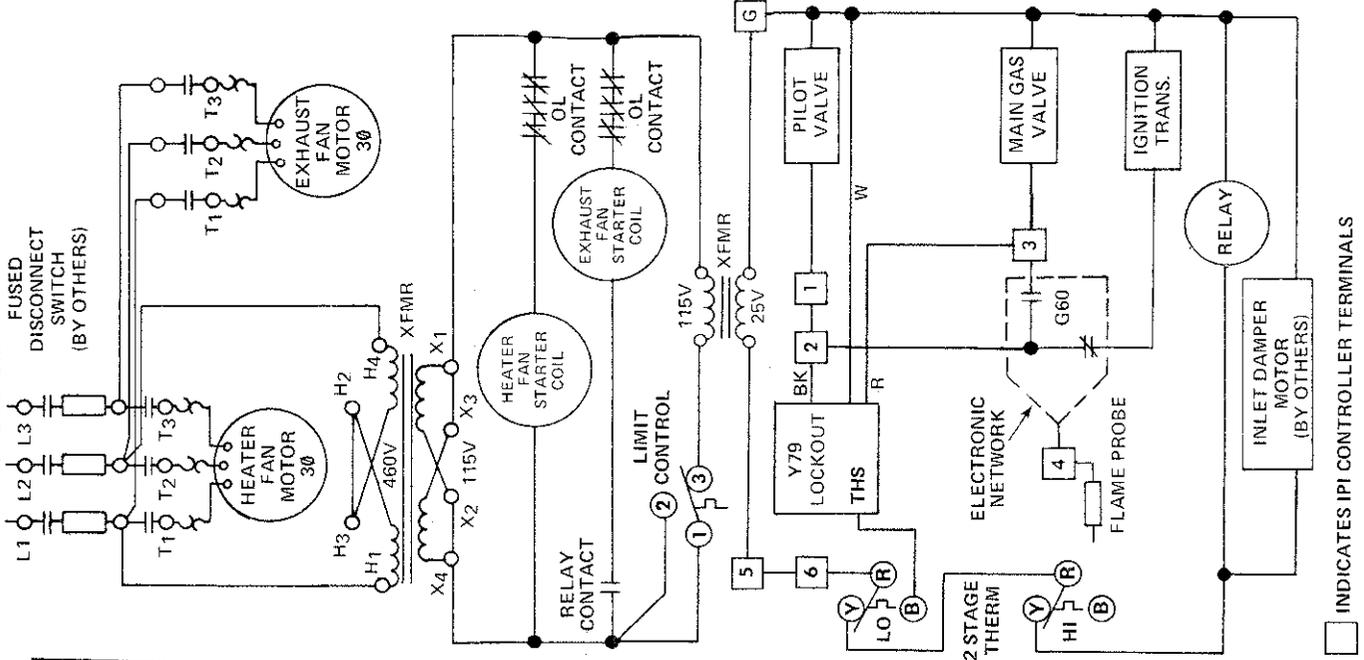
*ALTERNATE XFMR.
PRIMARY XFMR. WIRES
230V/60Hz/1Ø - BK&Y
200V/60Hz/1Ø - BK&R
WIRE NUT THE WIRE NOT USED

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.

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

5H70089B17 — Three-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat. (Rev. C)

460V /60 Hz/3Ø POWER SHOWN



□ INDICATES IPI CONTROLLER TERMINALS



MODINE 10-410 WIRING DIAGRAM MODEL GHG

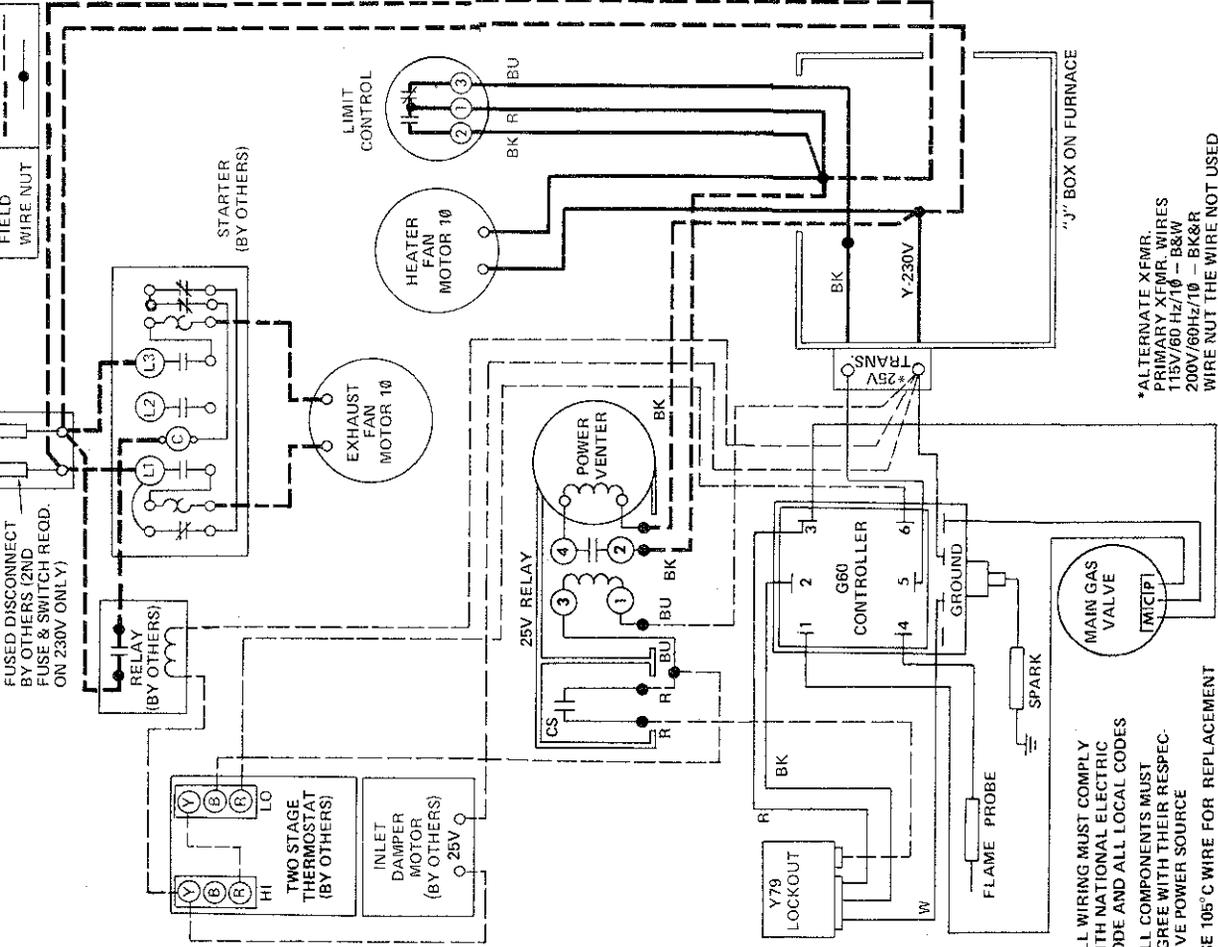
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

230V/60Hz/1Ø
H(BK) G(W)

WIRING LEGEND

FACTORY	LINE	LOW
FIELD	---	---
WIRE NUT	•	•

FUSED DISCONNECT BY OTHERS (2ND FUSE & SWITCH REQ'D. ON 230V ONLY)



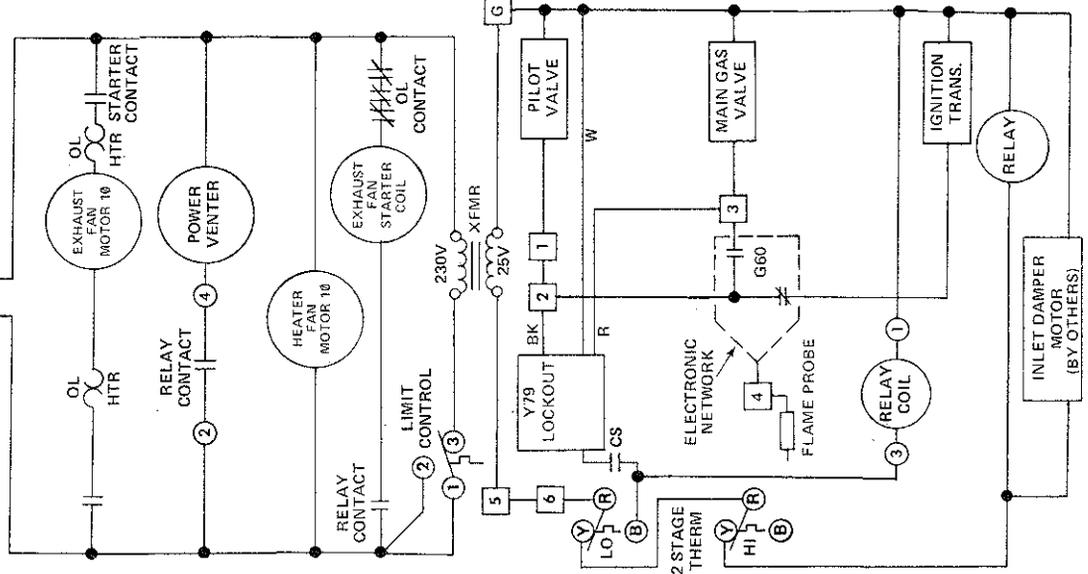
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE
USE 105°C WIRE FOR REPLACEMENT

*ALTERNATE XFMR.
PRIMARY XFMR. WIRES
115V/60 Hz/1Ø — BK&W
200V/60Hz/1Ø — BK&R
WIRE NUT THE WIRE NOT USED

8H8490B405 — Single-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter.

230V/60Hz/1Ø
H(BK) G(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
2ND FUSE & SWITCH REQ'D. FOR 230V, 200V ONLY

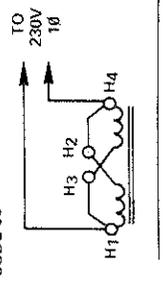


□ INDICATES IPI CONTROLLER TERMINALS



MODINE 10-410 WIRING DIAGRAM MODEL GHG

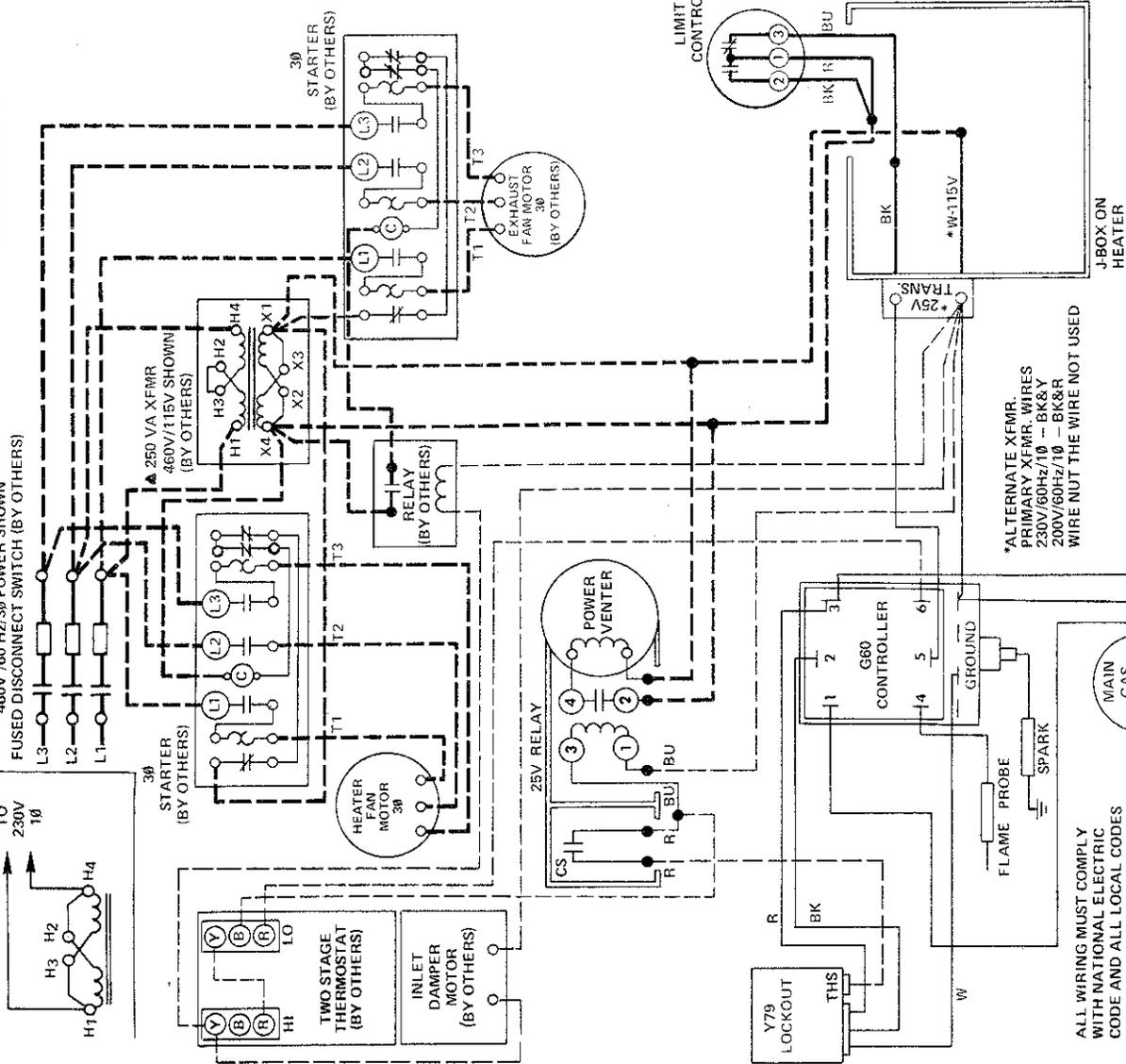
WITH 230V /60 HZ/3Ø POWER SUPPLY
 RECONNECT TRANSFORMER
 PRIMARY AS SHOWN
 FOR 230V /115V CONTROL
 CODE 08



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.

460V /60 HZ/3Ø POWER SHOWN

WIRING LEGEND	
—	LINE
---	LOW
—	FACILITY
---	FIELD
—	WIRE IN UT



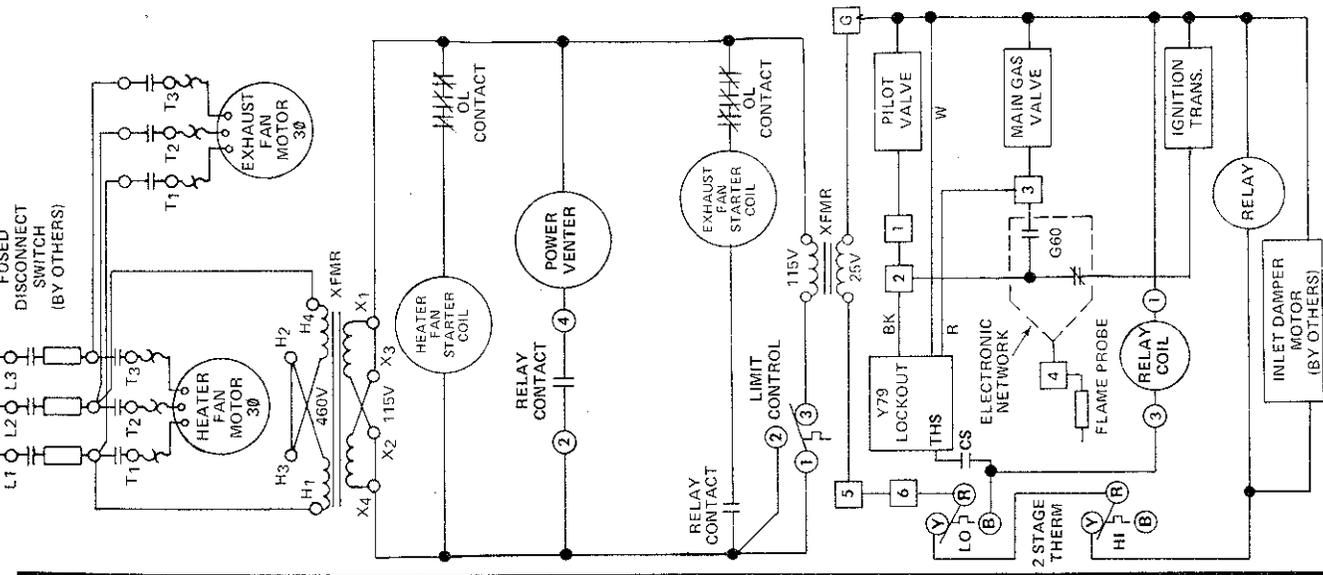
*ALTERNATE XFMR.
 PRIMARY XFMR. WIRES
 230V/60HZ/1Ø - BK&Y
 200V/60HZ/1Ø - BK&R
 WIRE NUT THE WIRE NOT USED

ALL WIRING MUST COMPLY
 WITH NATIONAL ELECTRIC
 CODE AND ALL LOCAL CODES
 ALL COMPONENTS MUST
 AGREE WITH THEIR RESPEC
 TIVE POWER SOURCE
 USE 105°C WIRE FOR REPLACEMENT

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

8H8490B405 — Three-phase, intermittent pilot ignition, 100% shut-off,
 low-voltage thermostat, low-voltage controlled power
 venter.

460V /60 HZ/3Ø POWER SHOWN



□ INDICATES IPI CONTROLLER TERMINALS

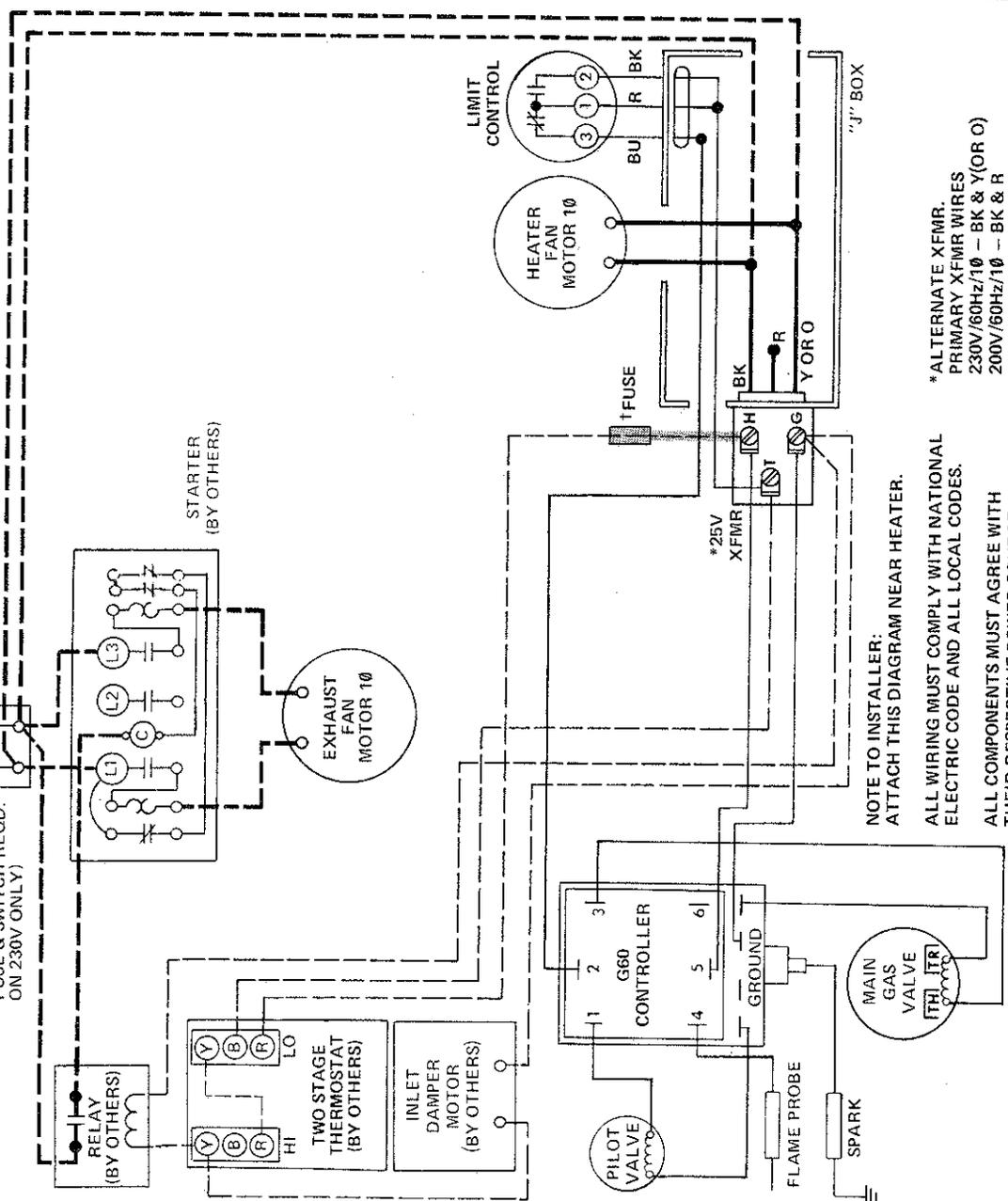


MODINE 10-410 WIRING DIAGRAM MODEL GHG

WIRING LEGEND	
FACTORY	LINE
FIELD	LOW
WIRE NUT	

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.

230V/60Hz/10
FUSED DISCONNECT BY OTHERS (2ND FUSE & SWITCH REQ'D. FOR 230V ONLY)



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

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

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

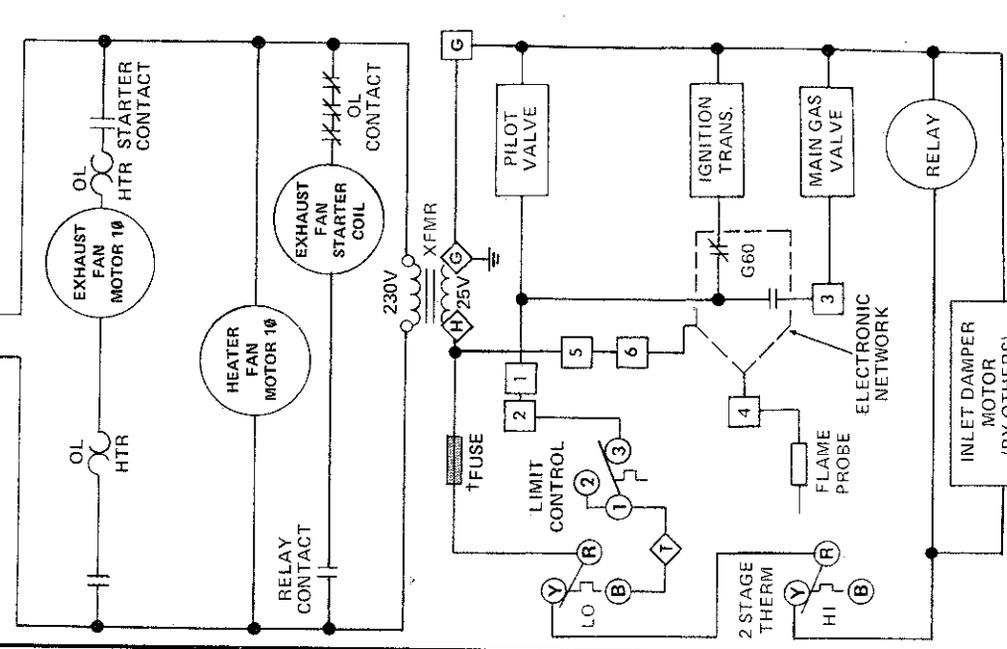
USE 105° C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR.
PRIMARY XFMR WIRES
230V/60Hz/10 - BK & Y (OR O)
200V/60Hz/10 - BK & R
WIRE NUT THE WIRE NOT USED.

† FOR CANADIAN UNITS ONLY.

5H70089B19 - Single-phase, intermittent pilot ignition, non-100% shut-off, low-voltage thermostat

230V/60Hz/10
H (BK) G (W)
FUSED DISCONNECT SWITCH (BY OTHERS)
2ND FUSE & SWITCH REQ'D. FOR 230V, 200V ONLY



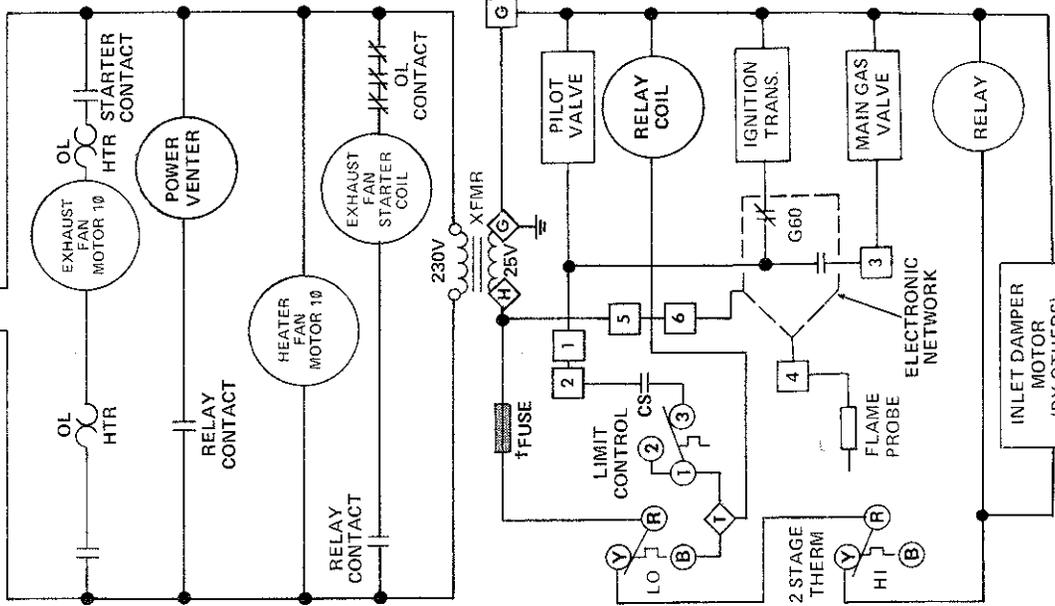
□ INDICATES IPI CONTROLLER TERMINAL
◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY.



MODINE 10-410 WIRING DIAGRAM MODEL GHG

230V/60Hz/1Ø
H(BK) G(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
2ND FUSE & SWITCH REQ'D. FOR 230V, 200V ONLY

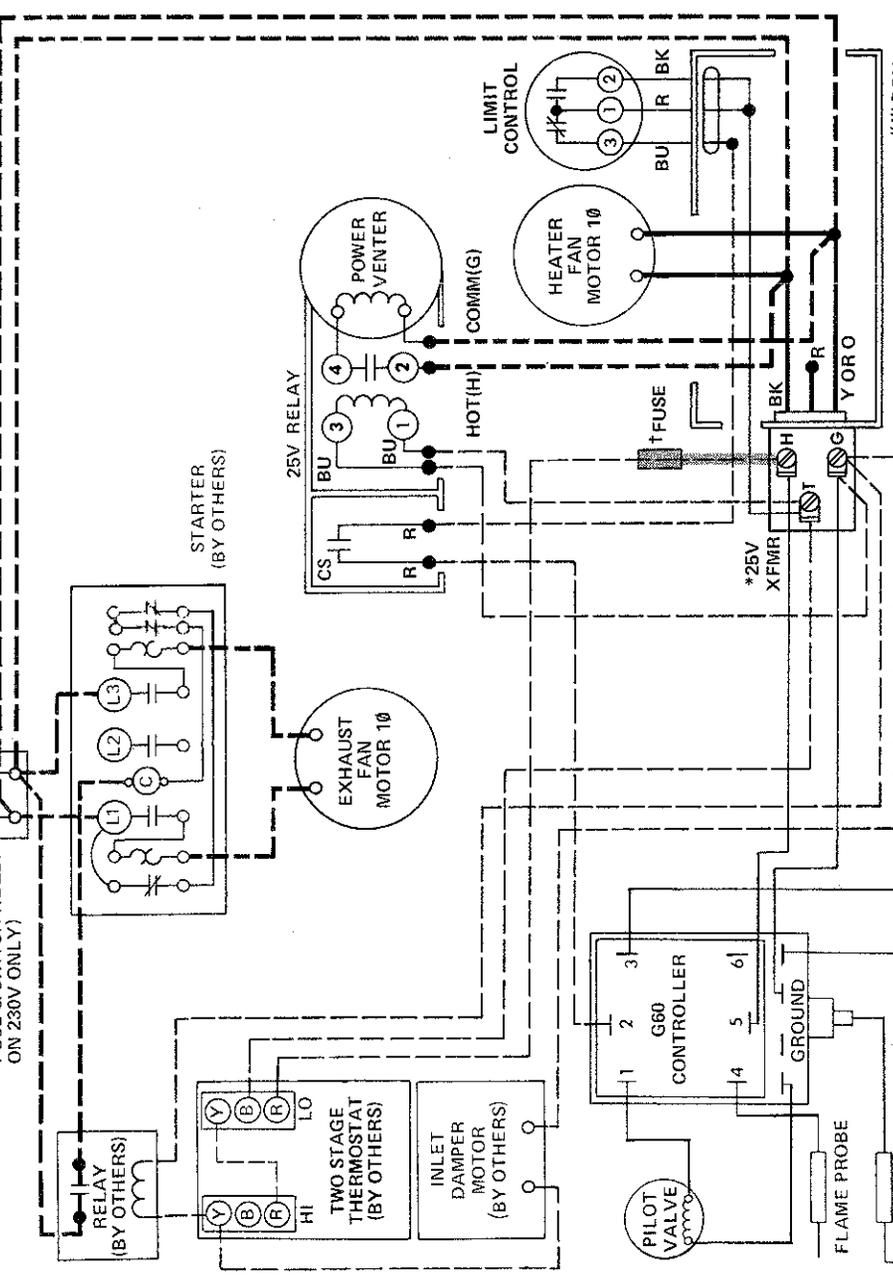


□ INDICATES IPT CONTROLLER TERMINAL
◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY.

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

WIRING LEGEND	
FACTORY	LOW
FIELD	---
WIRE NUT	●

230V/60Hz/1Ø
FUSED DISCONNECT BY OTHERS (2ND FUSE & SWITCH REQ'D. ON 230V ONLY)



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

† FOR CANADIAN UNITS ONLY.

USE 105° C WIRE FOR REPLACEMENTS.

8H6490B406 — Single-phase, intermittent pilot ignition, non-100% shut-off, low-voltage thermostat, low-voltage controlled power venter

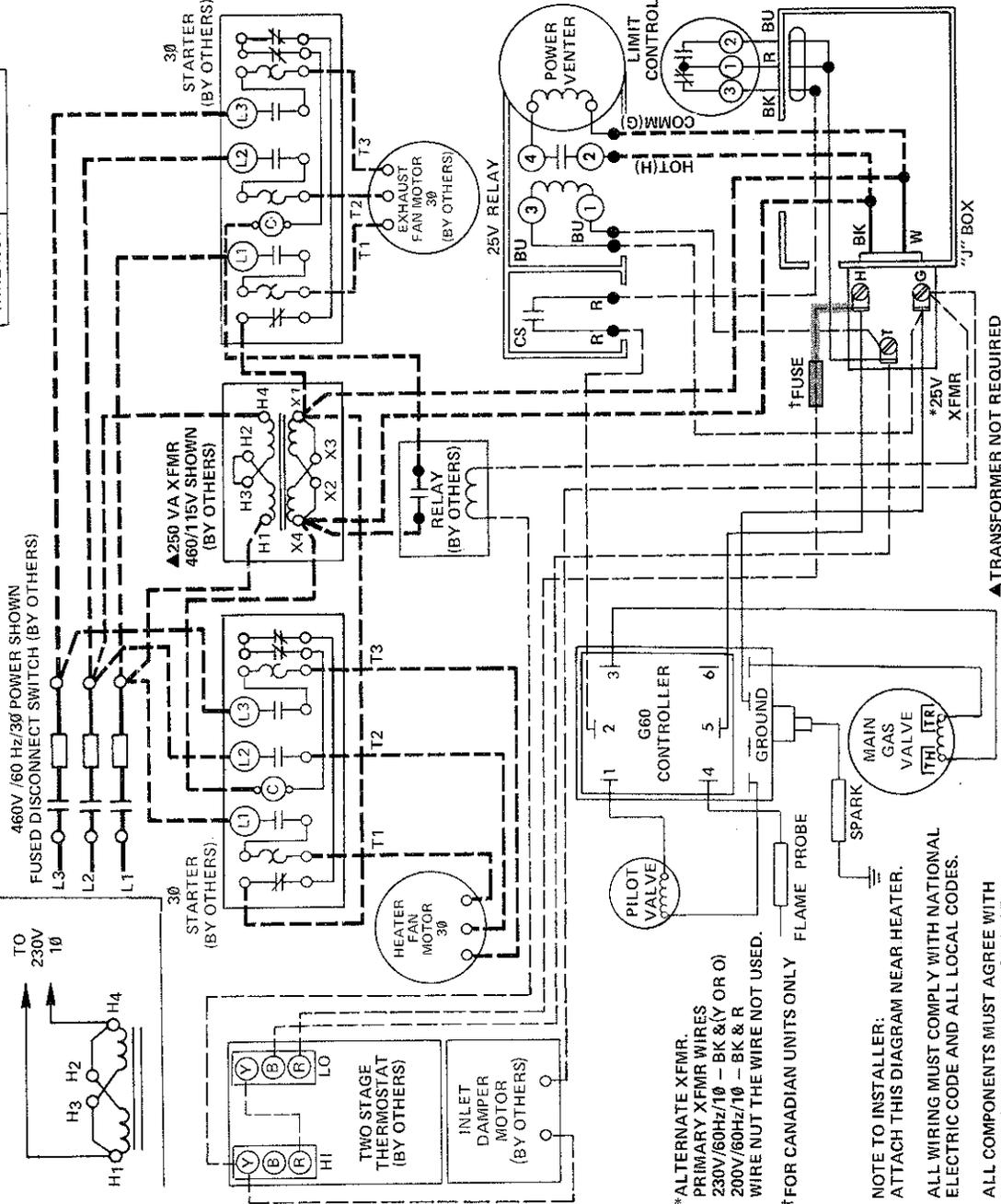


MODINE 10-410 WIRING DIAGRAM MODEL GHG

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

WIRING LEGEND	
—	LINE
---	LOW
---	FACTORY
---	FIELD
●	WIRE NUT

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



TO 230V /10

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

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

† FOR CANADIAN UNITS ONLY

NOTE TO INSTALLER: ATTACH THIS DIAGRAM NEAR HEATER.

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

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105° C WIRE FOR REPLACEMENTS.

460V /60 Hz/3Ø POWER SHOWN

FUSED DISCONNECT SWITCH (BY OTHERS)

HEATER FAN MOTOR 3Ø

EXHAUST FAN MOTOR 3Ø

HEATER STARTER COIL

EXHAUST STARTER COIL

POWER VENTER

25V RELAY

25V RELAY

PILOT VALVE

RELAY COIL

IGNITION TRANS.

MAIN GAS VALVE

RELAY

INLET DAMPER MOTOR (BY OTHERS)

2-STAGE THERM

FLAME PROBE

ELECTRONIC NETWORK

INDICATES IPI CONTROLLER TERMINAL

INDICATES TRANSFORMER TERMINAL

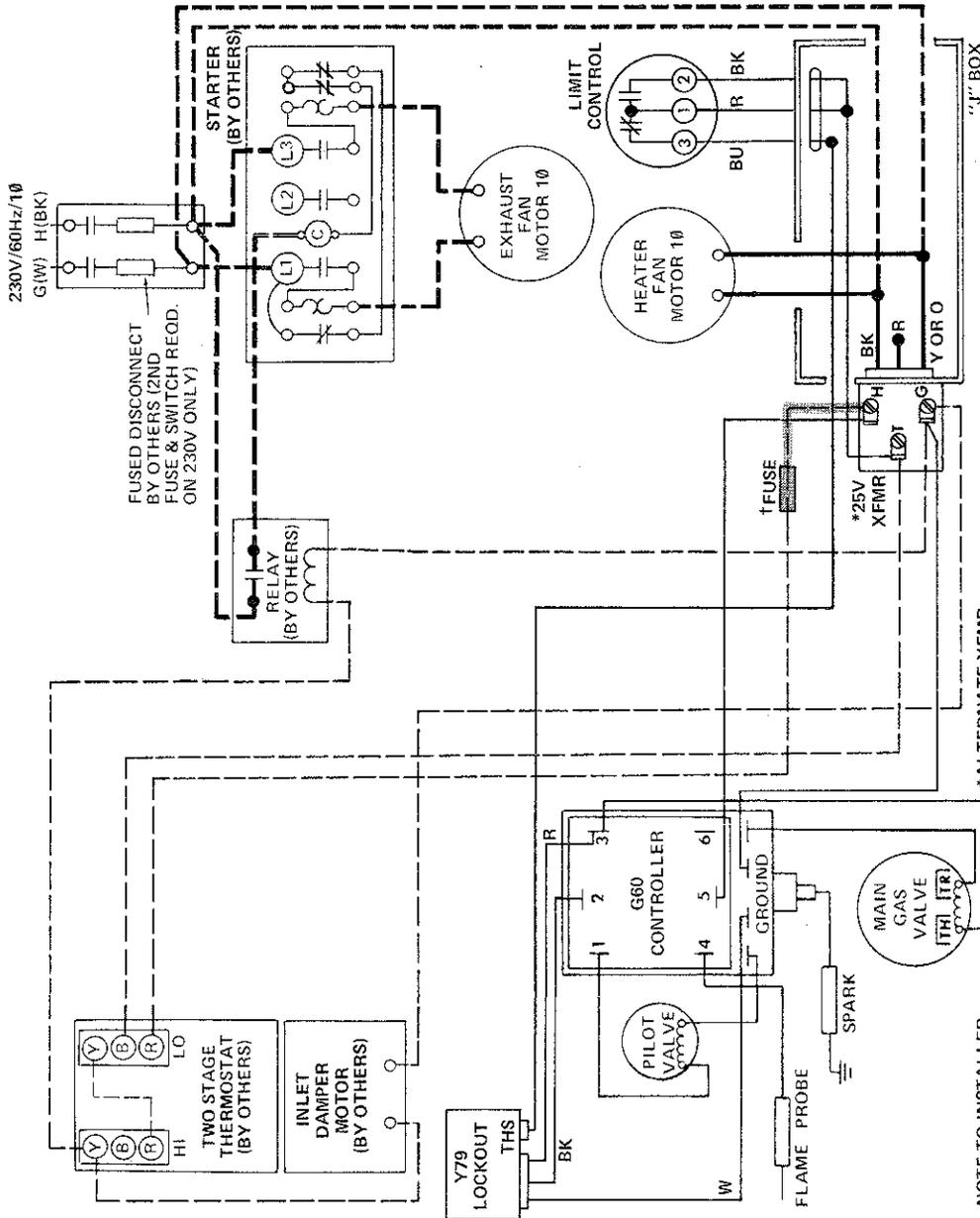
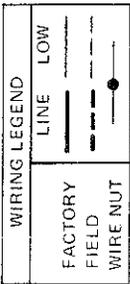
† FOR CANADIAN UNITS ONLY

8H6490B406 — Three-phase, intermittent pilot ignition, non-100% shut-off, low-voltage thermostat, low-voltage controlled power venter



MODINE 10-410 WIRING DIAGRAM MODEL GHG

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



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

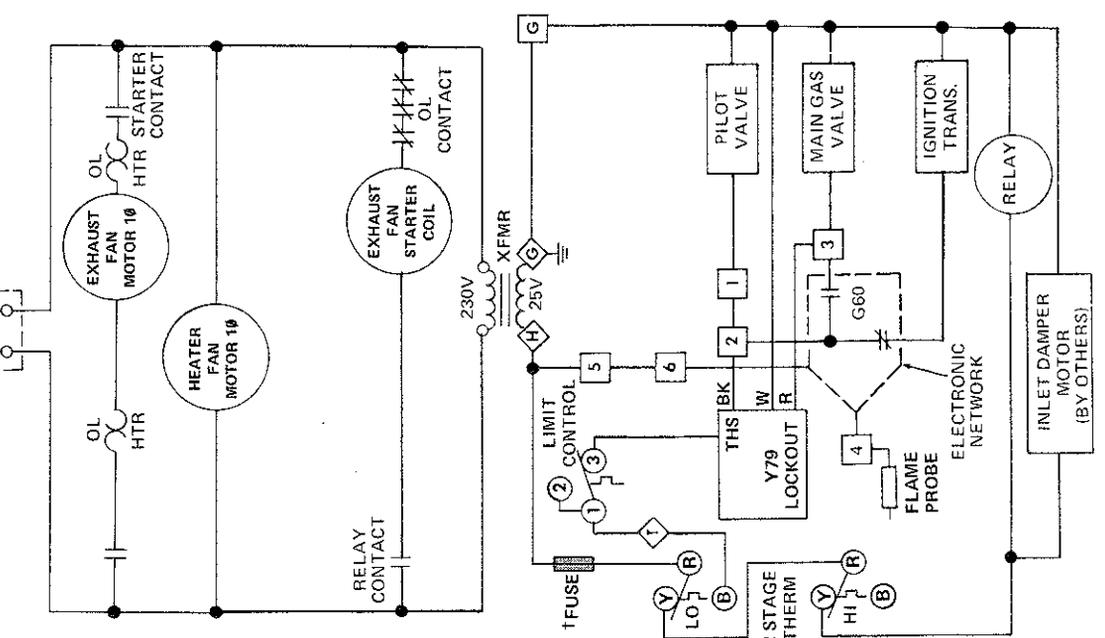
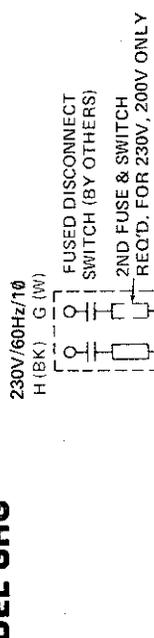
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105° C WIRE FOR REPLACEMENTS.

* ALTERNATE XFMR. PRIMARY XFMR WIRES 230V/60Hz/10 - BK & Y (OR O) 200V/60Hz/10 - BK & R WIRE NUT THE WIRE NOT USED.

† FOR CANADIAN UNITS ONLY.



□ INDICATES IP1 CONTROLLER TERMINALS

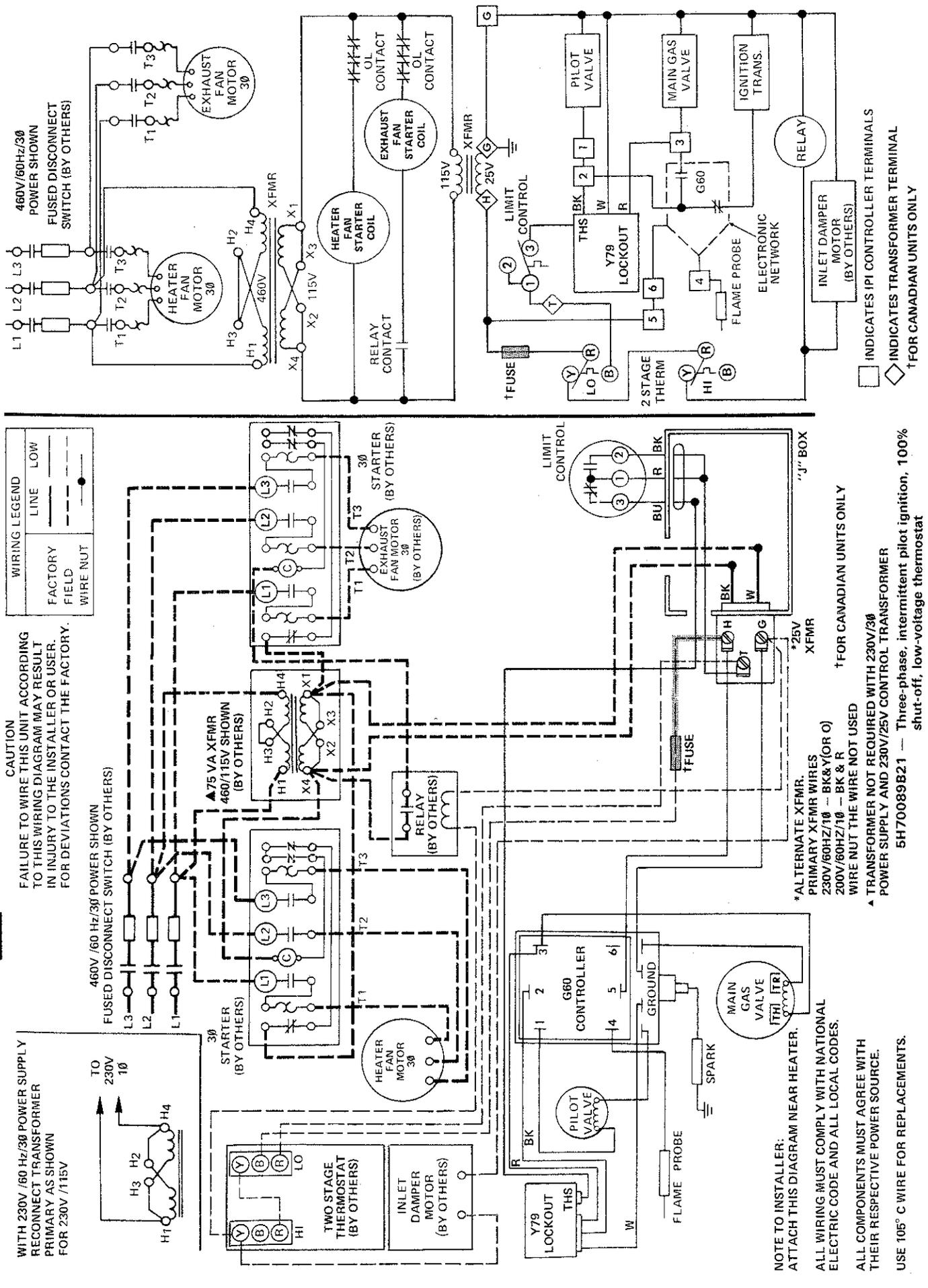
◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

5H70089B21 — Single-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat



MODINE 10-410 WIRING DIAGRAM MODEL GHG



WIRING LEGEND

LINE	LOW
FACTORY	FIELD
WIRE NUT	

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.

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

TO 230V 1Ø

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

75 VA XFMR 460/115V SHOWN (BY OTHERS)

25V XFMR

ALTERNATE XFMR PRIMARY XFMR WIRES 230V/60HZ/1Ø - BK&Y(OR O) 200V/60HZ/1Ø - BK & R WIRE NUT THE WIRE NOT USED TRANSFORMER NOT REQUIRED WITH 230V/3Ø POWER SUPPLY AND 230V/25V CONTROL TRANSFORMER

NOTE TO INSTALLER: ATTACH THIS DIAGRAM NEAR HEATER.

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

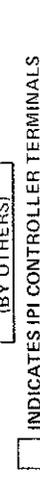
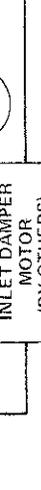
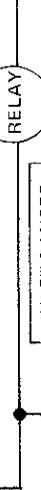
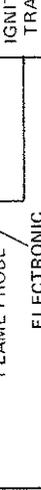
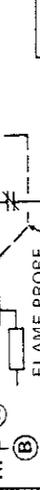
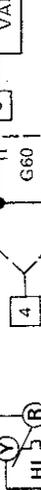
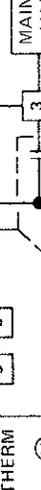
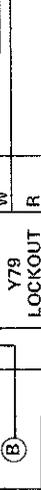
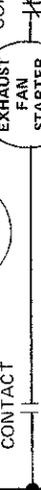
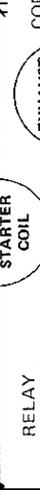
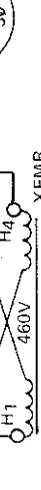
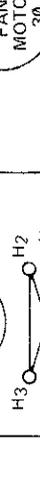
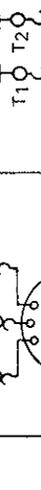
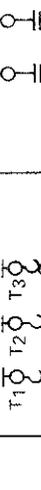
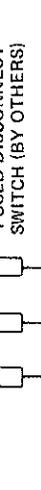
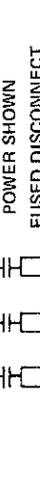
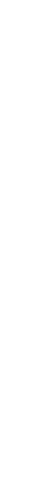
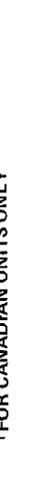
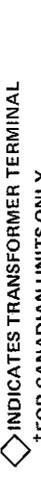
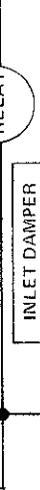
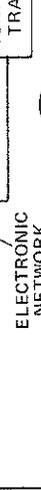
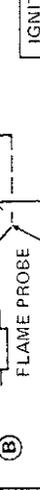
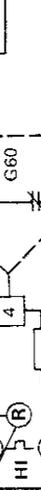
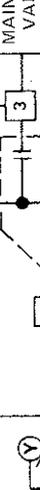
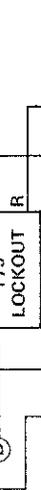
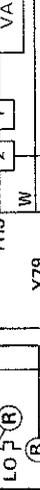
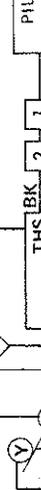
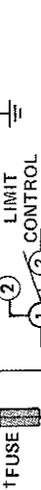
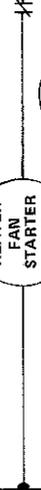
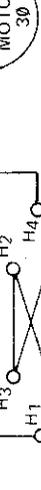
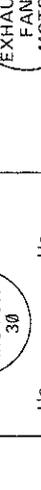
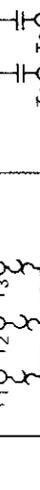
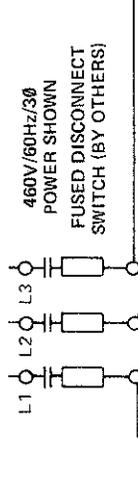
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105° C WIRE FOR REPLACEMENTS.

*FOR CANADIAN UNITS ONLY

†FOR CANADIAN UNITS ONLY

‡THREE-PHASE, INTERMITTENT PILOT IGNITION, 100% SHUT-OFF, LOW-VOLTAGE THERMOSTAT

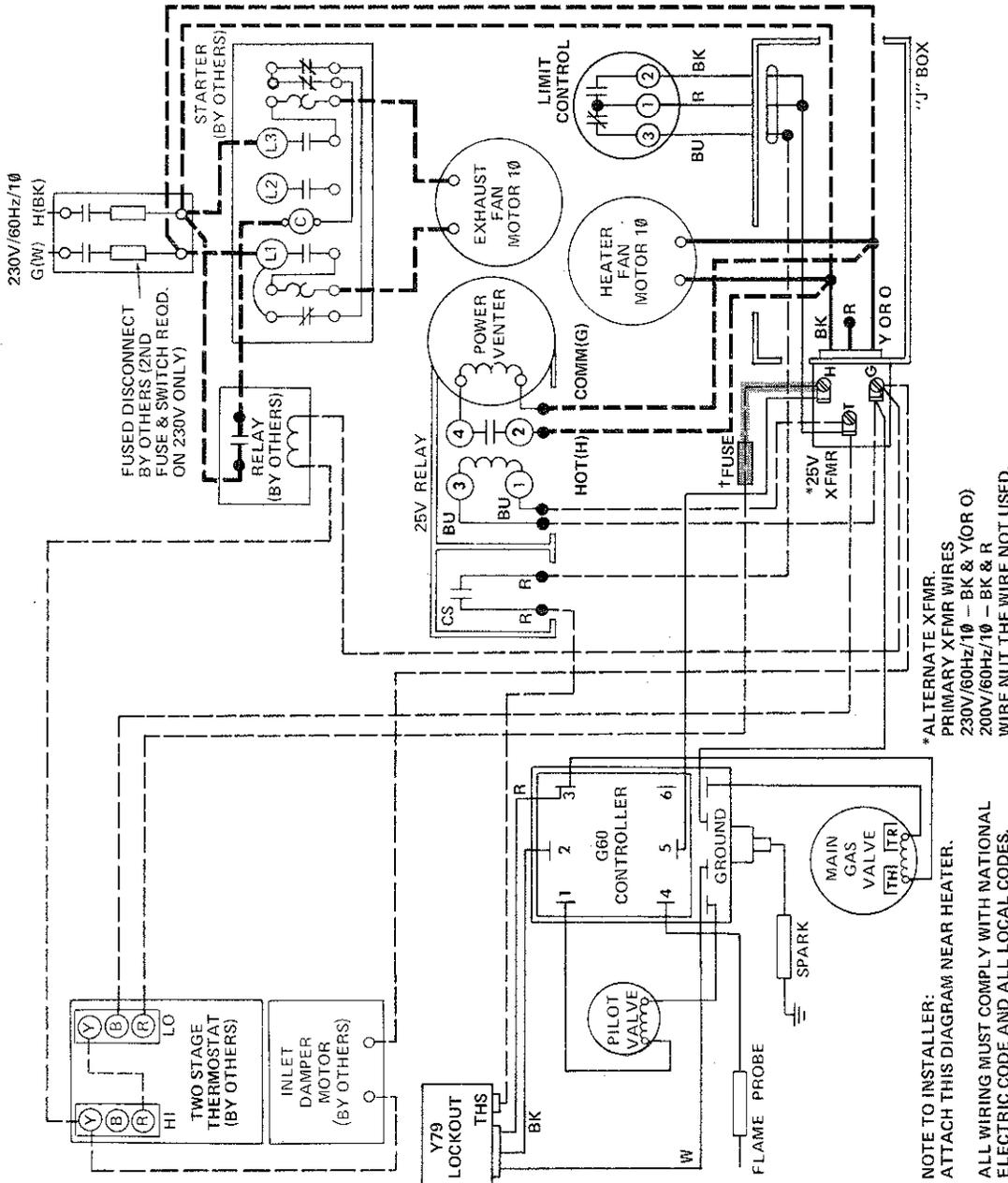




MODINE 10-410 WIRING DIAGRAM MODEL GHG

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.

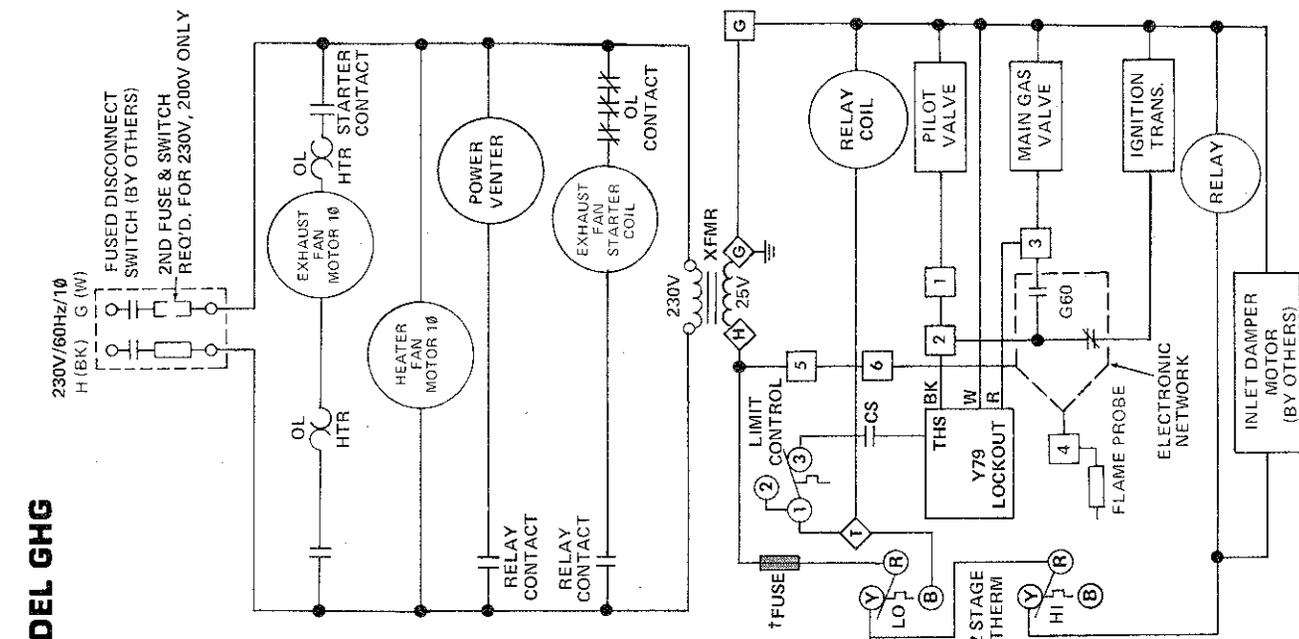


*ALTERNATE XFMR.
 PRIMARY XFMR WIRES
 230V/60Hz/10 - BK & Y (OR O)
 200V/60Hz/10 - BK & R
 WIRE NUT THE WIRE NOT USED.
 †FOR CANADIAN UNITS ONLY.

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

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

8H6490B407 — Single-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter





MODINE 10-410 WIRING DIAGRAM MODEL GHG

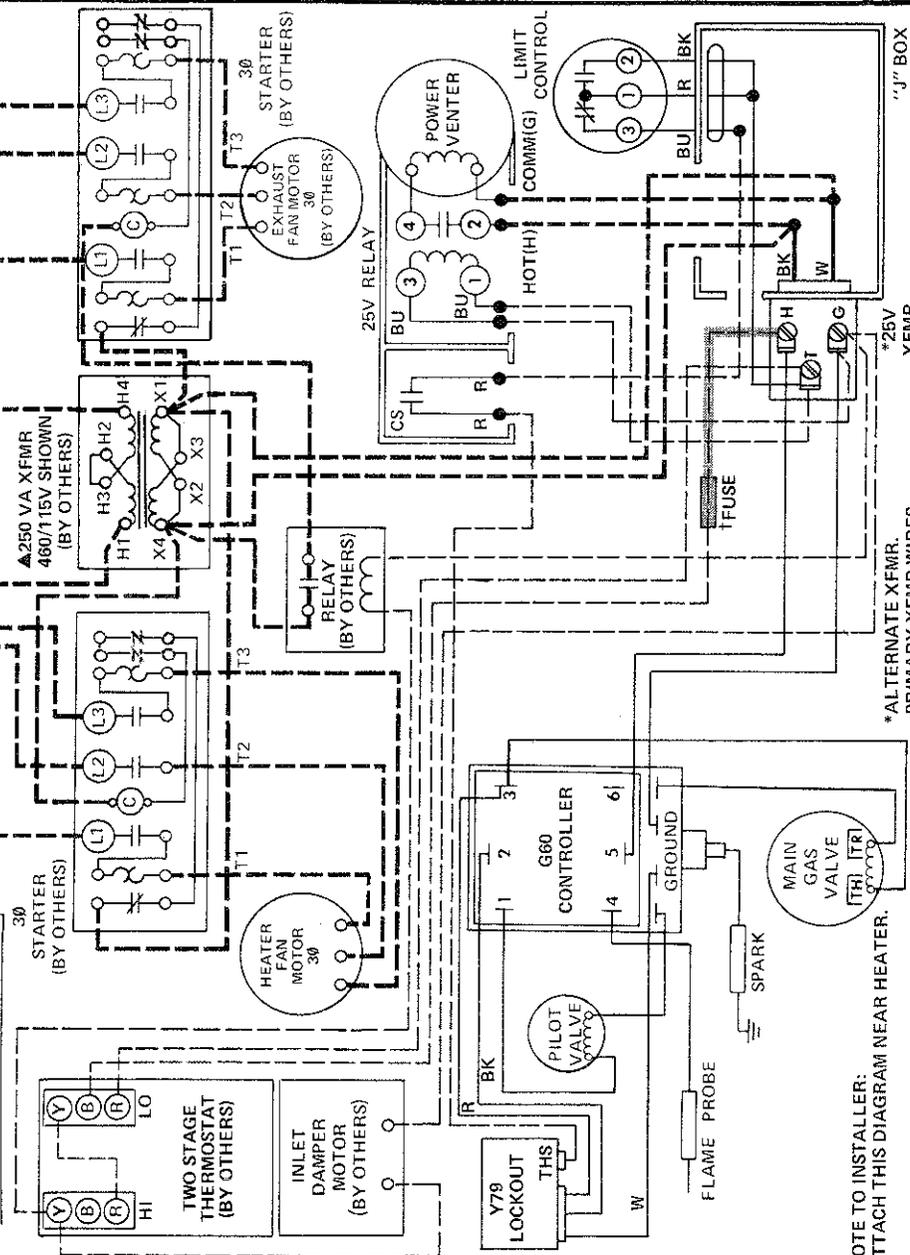
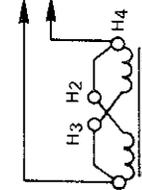
WITH 230V /60 Hz/3Ø POWER SUPPLY RECONNECT TRANSFORMER PRIMARY AS SHOWN FOR 230V /115V

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.

WIRING LEGEND	
—	LINE
- - -	LOW
□	FACTORY
○	FIELD
●	WIRE NUT

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



NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

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

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

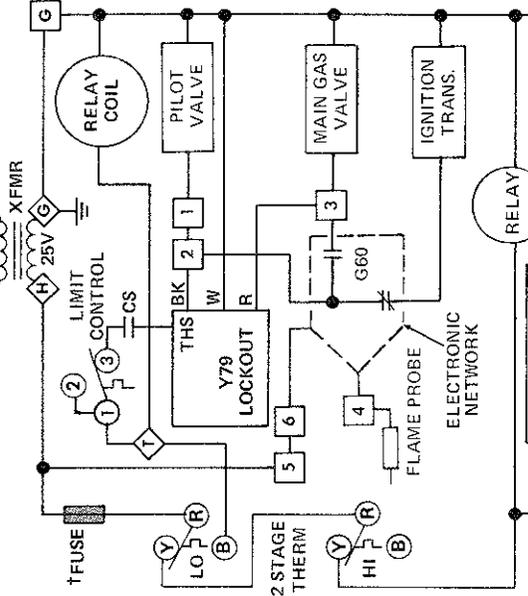
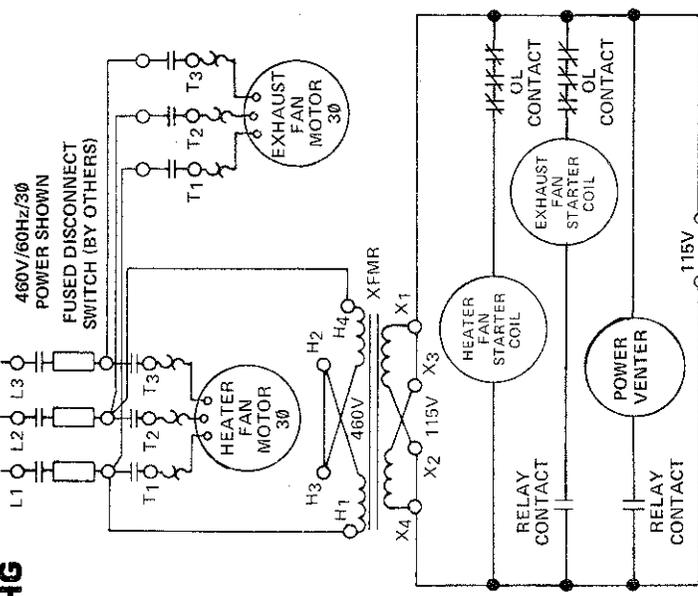
USE 105° C WIRE FOR REPLACEMENTS.

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

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

† FOR CANADIAN UNITS ONLY

8H6490B407 — Three-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter

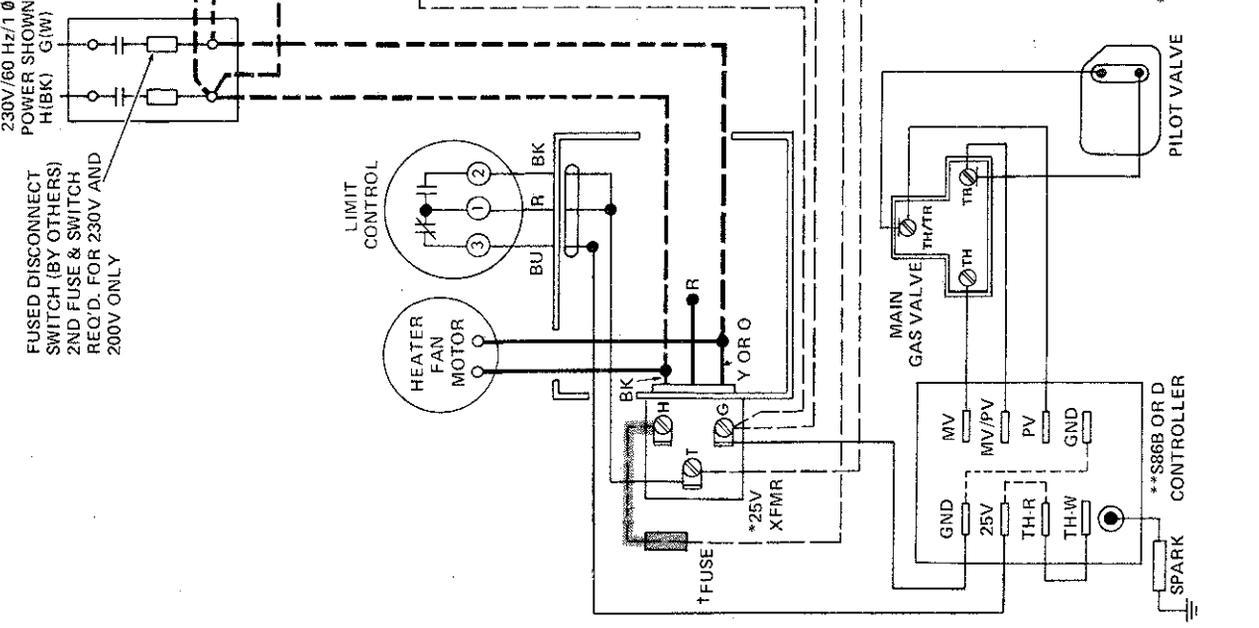
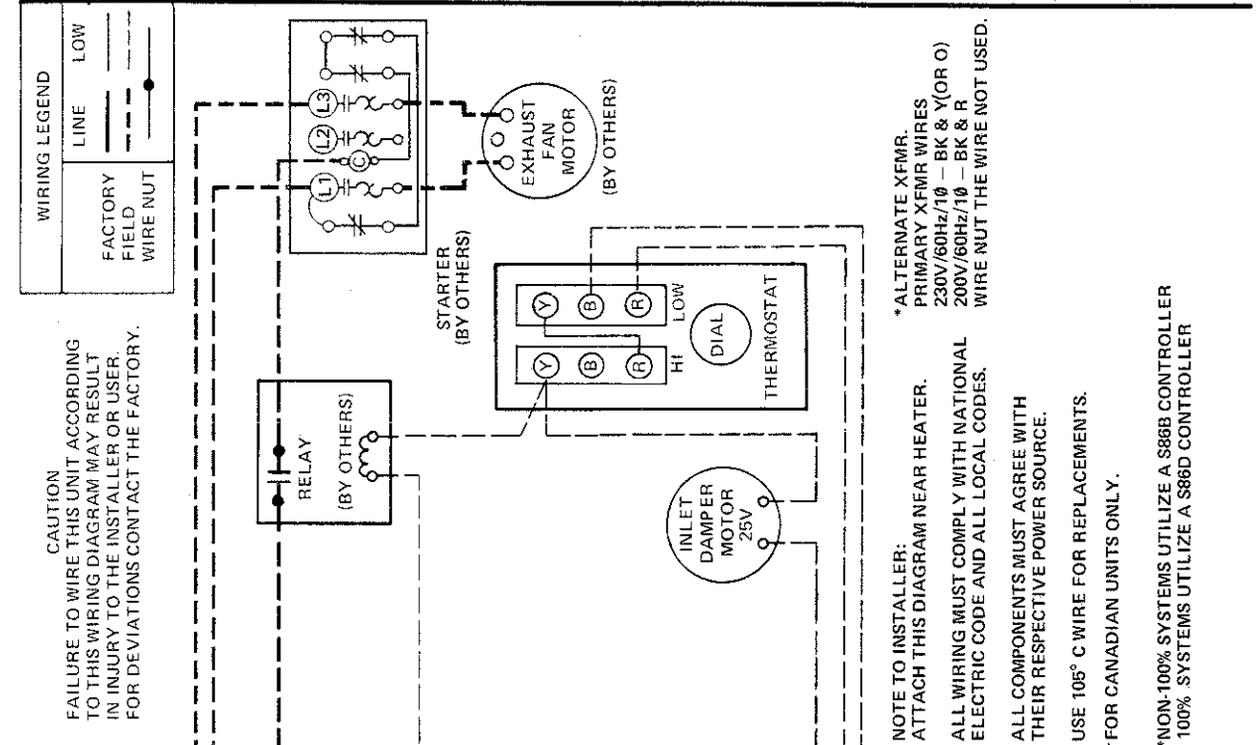
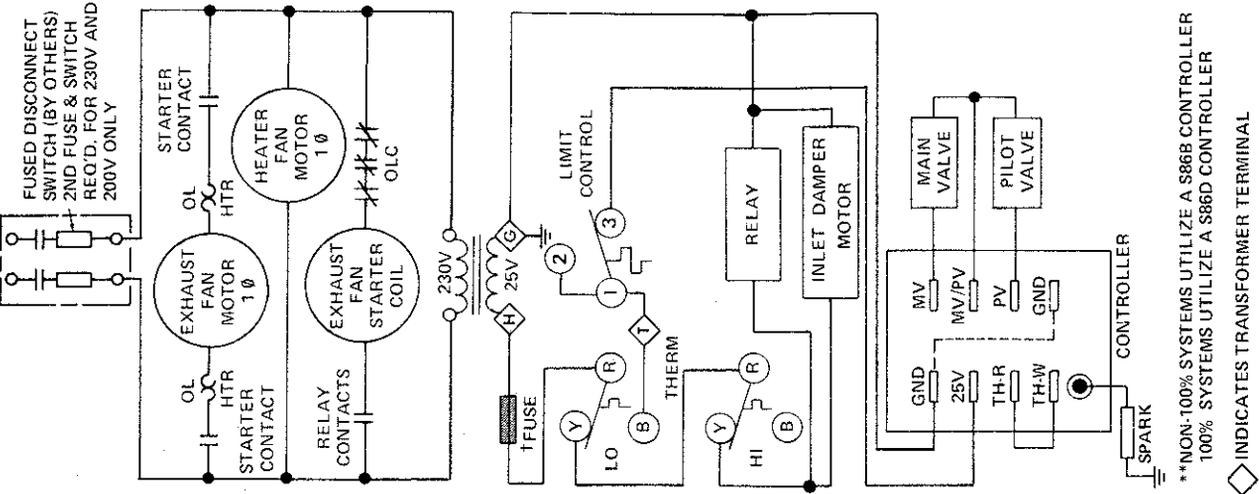


□ INDICATES IPT CONTROLLER TERMINALS
◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY



MODINE 10-410 WIRING DIAGRAM MODEL GHG

230V/60 Hz/1 Ø POWER SHOWN
H(BK)J(G(W))



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

FUSED DISCONNECT
SWITCH (BY OTHERS)
2ND FUSE & SWITCH
REQ'D. FOR 230V AND
200V ONLY

230V/60 Hz/1 Ø
POWER SHOWN
H(BK) J(G(W))

WIRING LEGEND

LINE	LOW
FACTORY	FIELD
WIRE NUT	

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

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

**NON-100% SYSTEMS UTILIZE A S86B CONTROLLER
100% SYSTEMS UTILIZE A S86D CONTROLLER

5H70089B18 — Single-phase, intermittent pilot ignition, non-100%
(and 100%) shut-off, low-voltage thermostat**

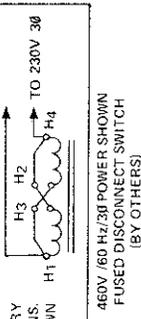
**NON-100% SYSTEMS UTILIZE A S86B CONTROLLER
100% SYSTEMS UTILIZE A S86D CONTROLLER

◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY



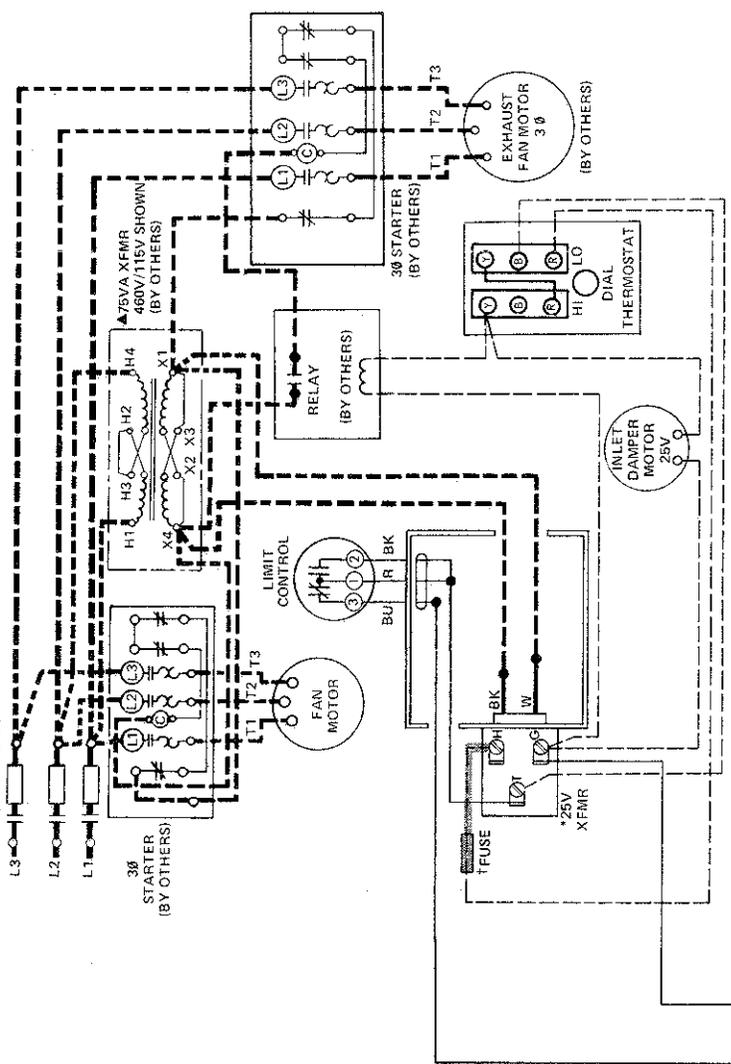
MODINE 10-410 WIRING DIAGRAM MODEL GHG

WITH 230V PRIMARY RECONNECT TRANS. 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.

WIRING LEGEND	
—	LINE
- - -	LOW
□	FACTORY FIELD
•	WIRE NUT



NOTE TO INSTALLER: ATTACH THIS DIAGRAM NEAR HEATER.

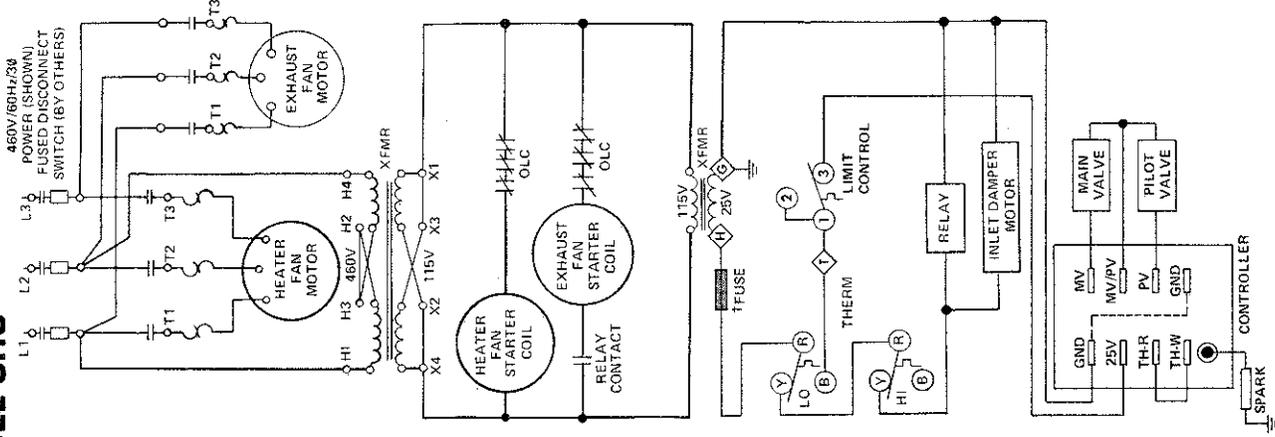
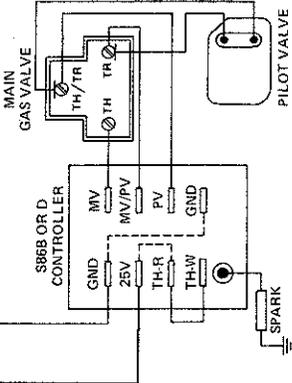
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105° C WIRE FOR REPLACEMENTS.

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

**NON-100% SYSTEMS UTILIZE A S86B CONTROLLER 100% SYSTEMS UTILIZE A S86D CONTROLLER



*ALTERNATE XFMR. PRIMARY XFMR WIRES 230V/60Hz/1Ø - BK & R 200V/60Hz/1Ø - BK & R WIRE NUT THE WIRE NOT USED.

†FOR CANADIAN UNITS ONLY

**NON-100% SYSTEMS UTILIZE A S86B CONTROLLER 100% SYSTEMS UTILIZE A S86D CONTROLLER

◆ INDICATES TRANSFORMER TERMINAL

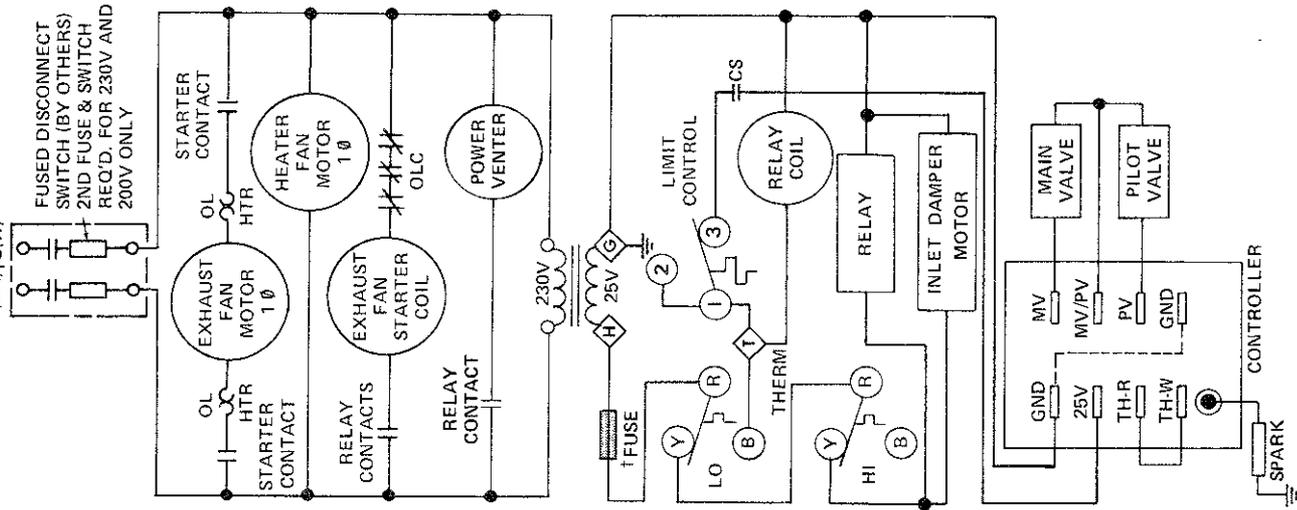
†FOR CANADIAN UNITS ONLY

5H70089B18 — Three-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, low-voltage thermostat**

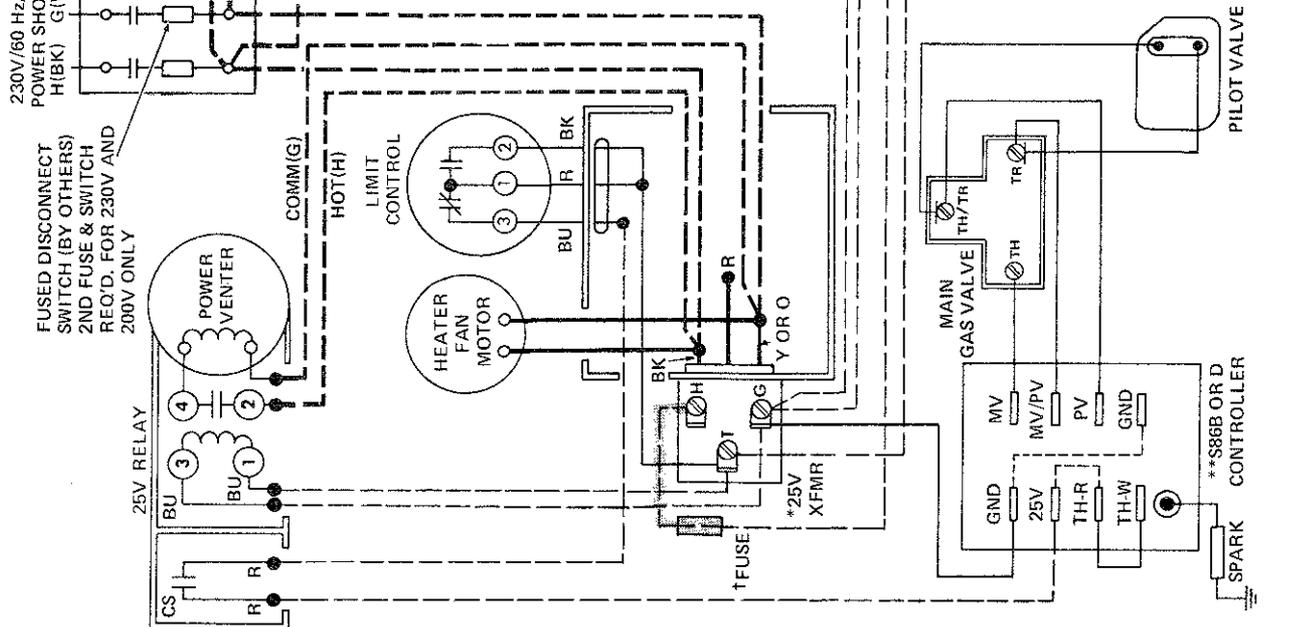
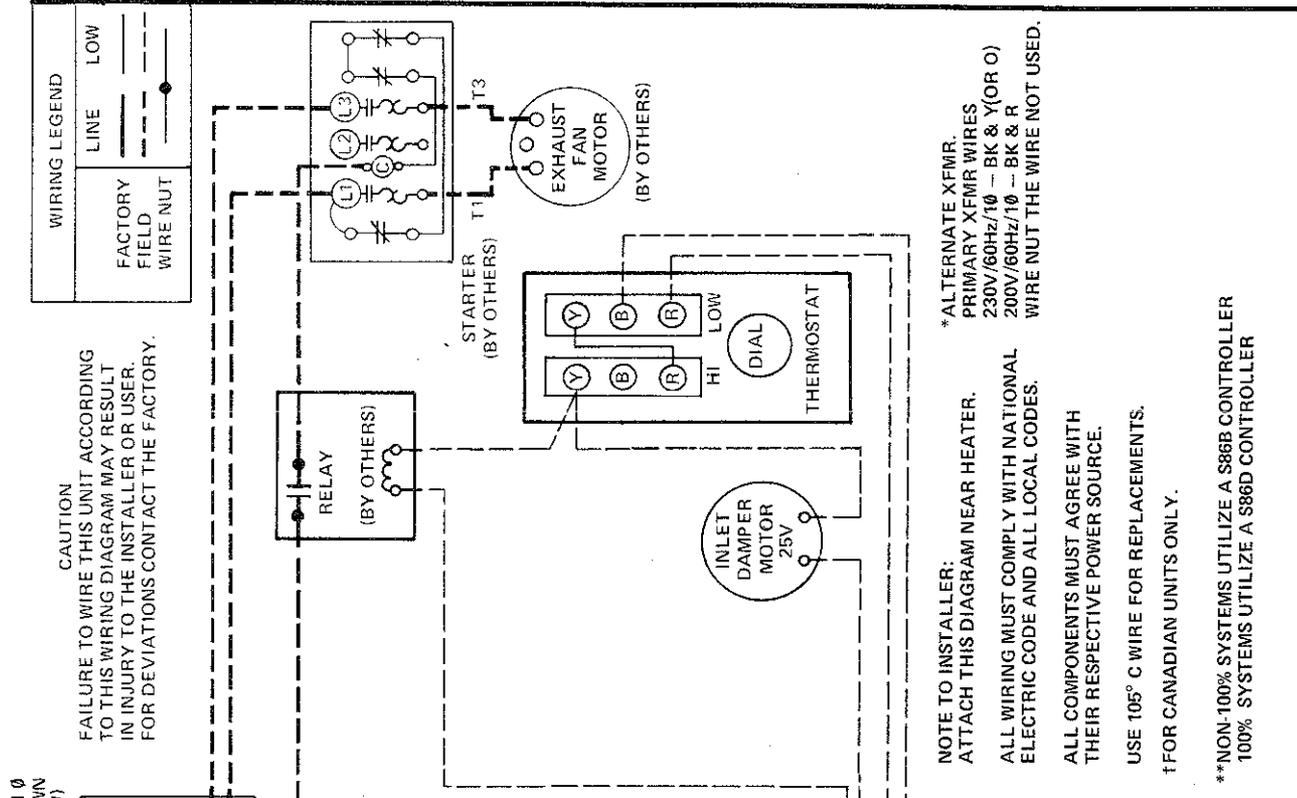


MODINE 10-410 WIRING DIAGRAM MODEL GHG

230V/60 Hz/1 Ø POWER SHOWN
H(BK)J(GW)



**NON-100% SYSTEMS UTILIZE A S86B CONTROLLER
 100% SYSTEMS UTILIZE A S86D CONTROLLER
 ◇ INDICATES TRANSFORMER TERMINAL
 †FOR CANADIAN UNITS ONLY



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

WIRING LEGEND

FACTORY FIELD WIRE NUT	LINE	LOW
	---	---

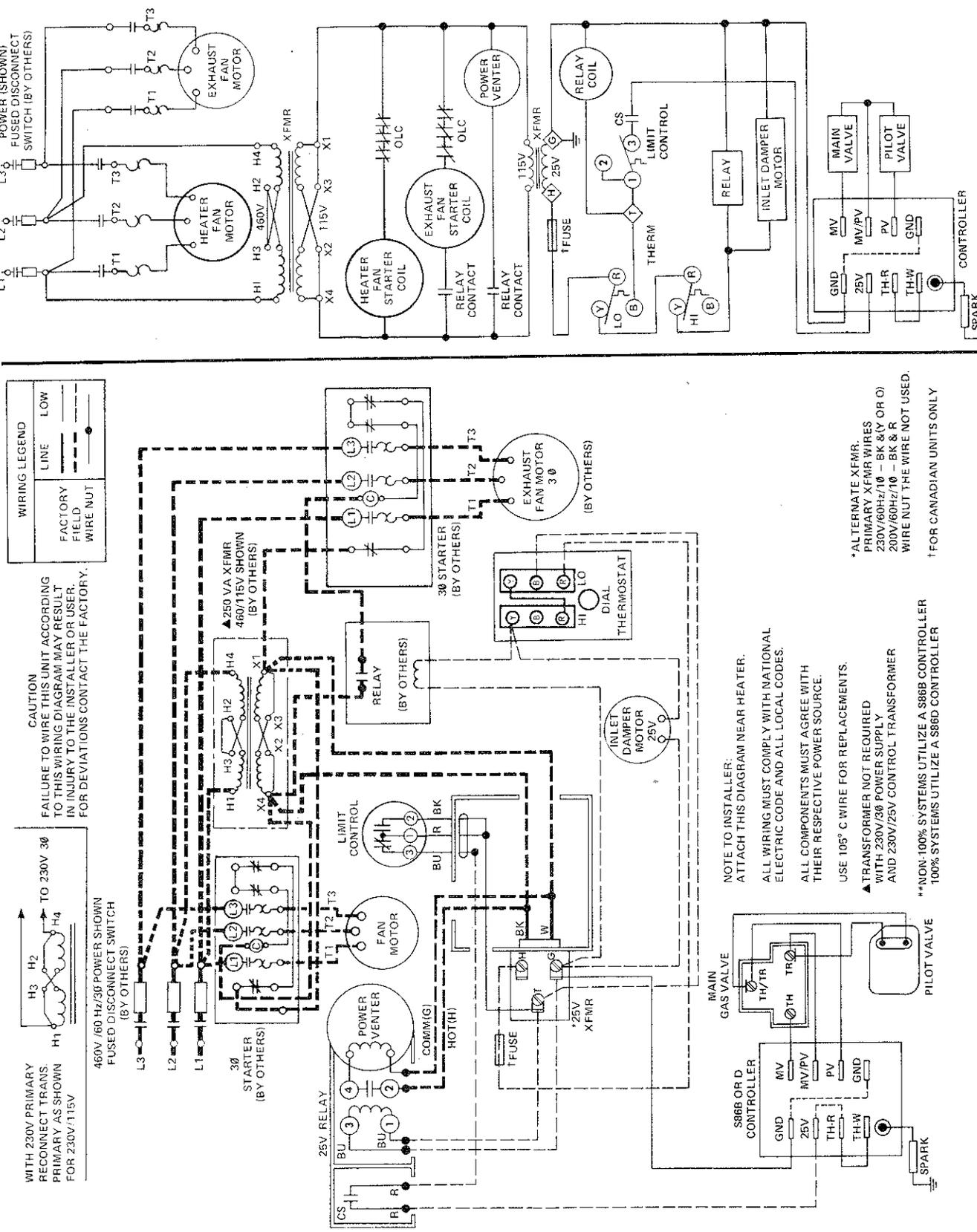
NOTE TO INSTALLER:
 ATTACH THIS DIAGRAM NEAR HEATER.
 ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
 ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
 USE 105° C WIRE FOR REPLACEMENTS.
 †FOR CANADIAN UNITS ONLY.

**NON-100% SYSTEMS UTILIZE A S86B CONTROLLER
 100% SYSTEMS UTILIZE A S86D CONTROLLER

8H6490B408 --- Single-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, low-voltage thermostat, low-voltage controlled power venter**



MODINE 10-410 WIRING DIAGRAM MODEL GHG



WIRING LEGEND

FACTORY FIELD WIRE NUT	---
LINE	---
LOW	---

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.

WITH 230V PRIMARY RECONNECT TRANS. PRIMARY AS SHOWN FOR 230V/115V

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

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.

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

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105° C WIRE FOR REPLACEMENTS.

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

**NON-100% SYSTEMS UTILIZE A S86B CONTROLLER 100% SYSTEMS UTILIZE A S86D CONTROLLER

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

† FOR CANADIAN UNITS ONLY

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

**NON-100% SYSTEMS UTILIZE A S86B CONTROLLER 100% SYSTEMS UTILIZE A S86D CONTROLLER

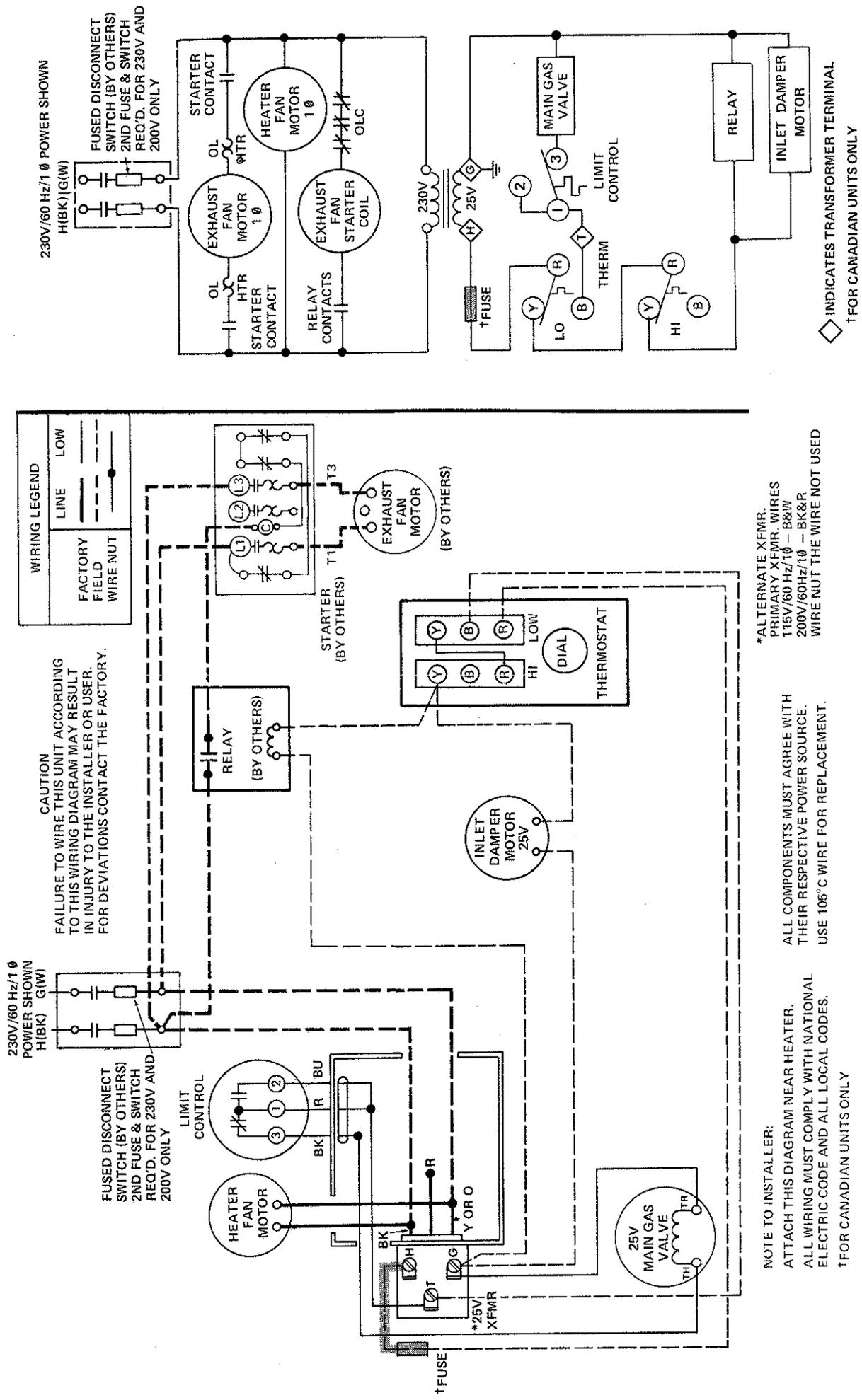
◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY

8H6490B408 — Three-phase, intermittent pilot ignition, non-100% (and 100%) shut-off, low-voltage thermostat, low-voltage controlled power venter**



MODINE 10-410 WIRING DIAGRAM MODEL GHG



230V/60 Hz/1 ϕ
POWER SHOWN
H(BK) G(W)

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

FUSED DISCONNECT
SWITCH (BY OTHERS)
2ND FUSE & SWITCH
REQ'D. FOR 230V AND
200V ONLY

WIRING LEGEND	
FACTORY FIELD WIRE NUT	---
LINE	---
LOW	---

230V/60 Hz/1 ϕ POWER SHOWN
H(BK) G(W)

FUSED DISCONNECT
SWITCH (BY OTHERS)
2ND FUSE & SWITCH
REQ'D. FOR 230V AND
200V ONLY

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL
ELECTRIC CODE AND ALL LOCAL CODES.
†FOR CANADIAN UNITS ONLY

ALL COMPONENTS MUST AGREE WITH
THEIR RESPECTIVE POWER SOURCE.
USE 105°C WIRE FOR REPLACEMENT.

*ALTERNATE XFMR.
PRIMARY XFMR. WIRES
115V/60 Hz/1 ϕ - BK&W
200V/60Hz/1 ϕ - BK&R
WIRE NUT THE WIRE NOT USED

◇ INDICATES TRANSFORMER TERMINAL
†FOR CANADIAN UNITS ONLY

5H70089B20 — Single-phase, standing pilot, 100% shut-off, low-voltage thermostat



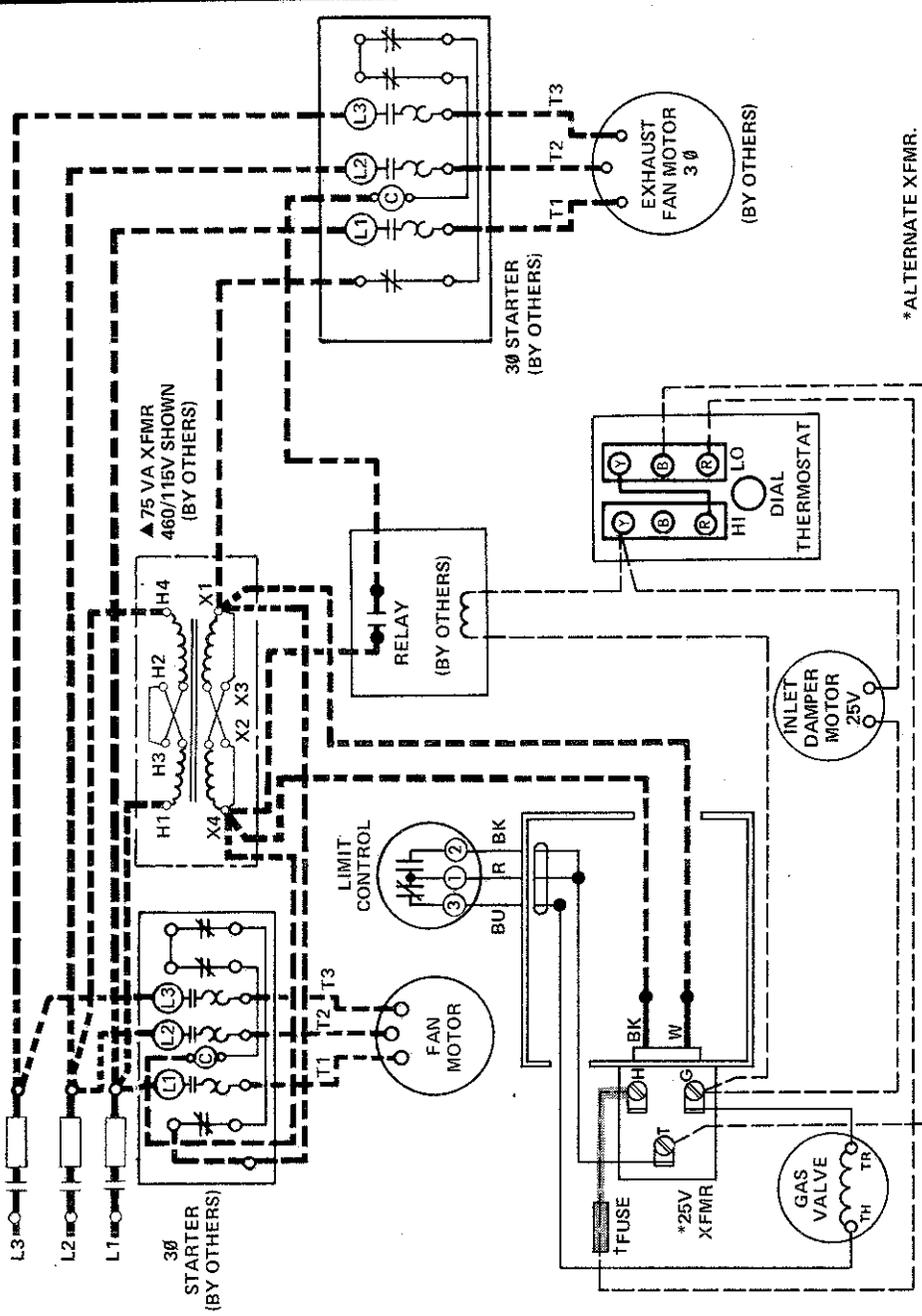
MODINE 10-410 WIRING DIAGRAM MODEL GHG

WITH 230V PRIMARY RECONNECT TRANS. PRIMARY AS SHOWN FOR 230V/115V

460V /60 Hz/30 POWER SHOWN FUSED DISCONNECT SWITCH (BY OTHERS)

WIRING LEGEND	
FACTORY FIELD WIRE NUT	—
LINE	---
LOW	- - -

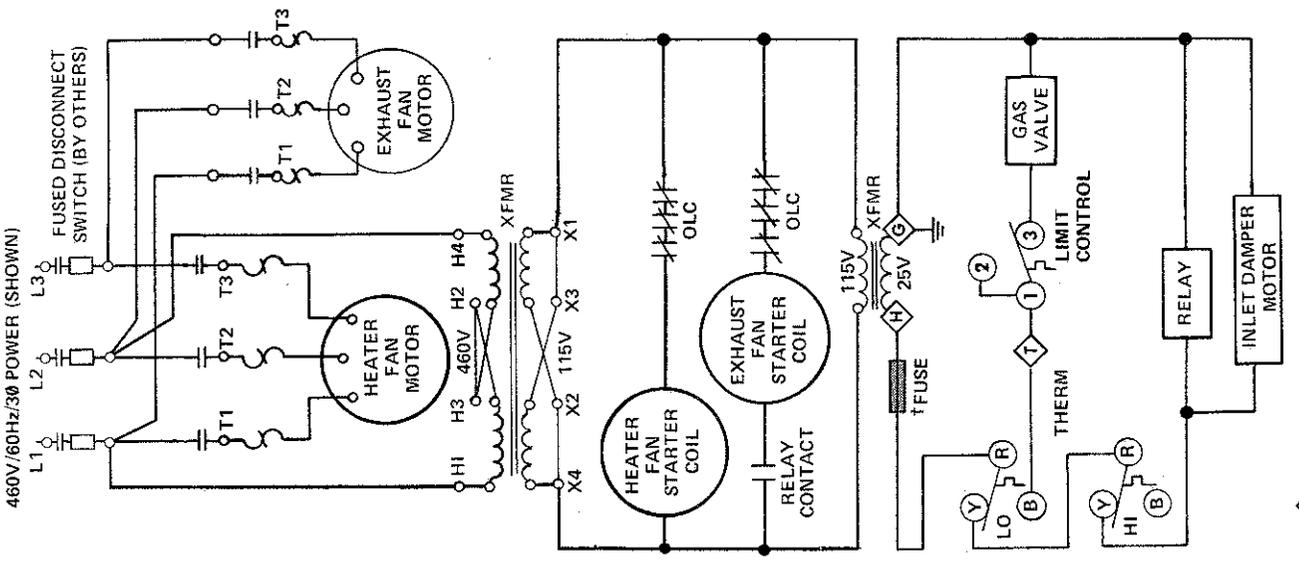
CAUTION
FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.



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.

▲ TRANSFORMER NOT REQUIRED WITH 230V/30 POWER SUPPLY AND 230V/25V CONTROL TRANSFORMER

* ALTERNATE XFMR. PRIMARY XFMR WIRES 230V/60Hz/1Ø - BK & (Y OR O) 200V/60Hz/1Ø - BK & R WIRE NUT THE WIRE NOT USED.
† FOR CANADIAN UNITS ONLY

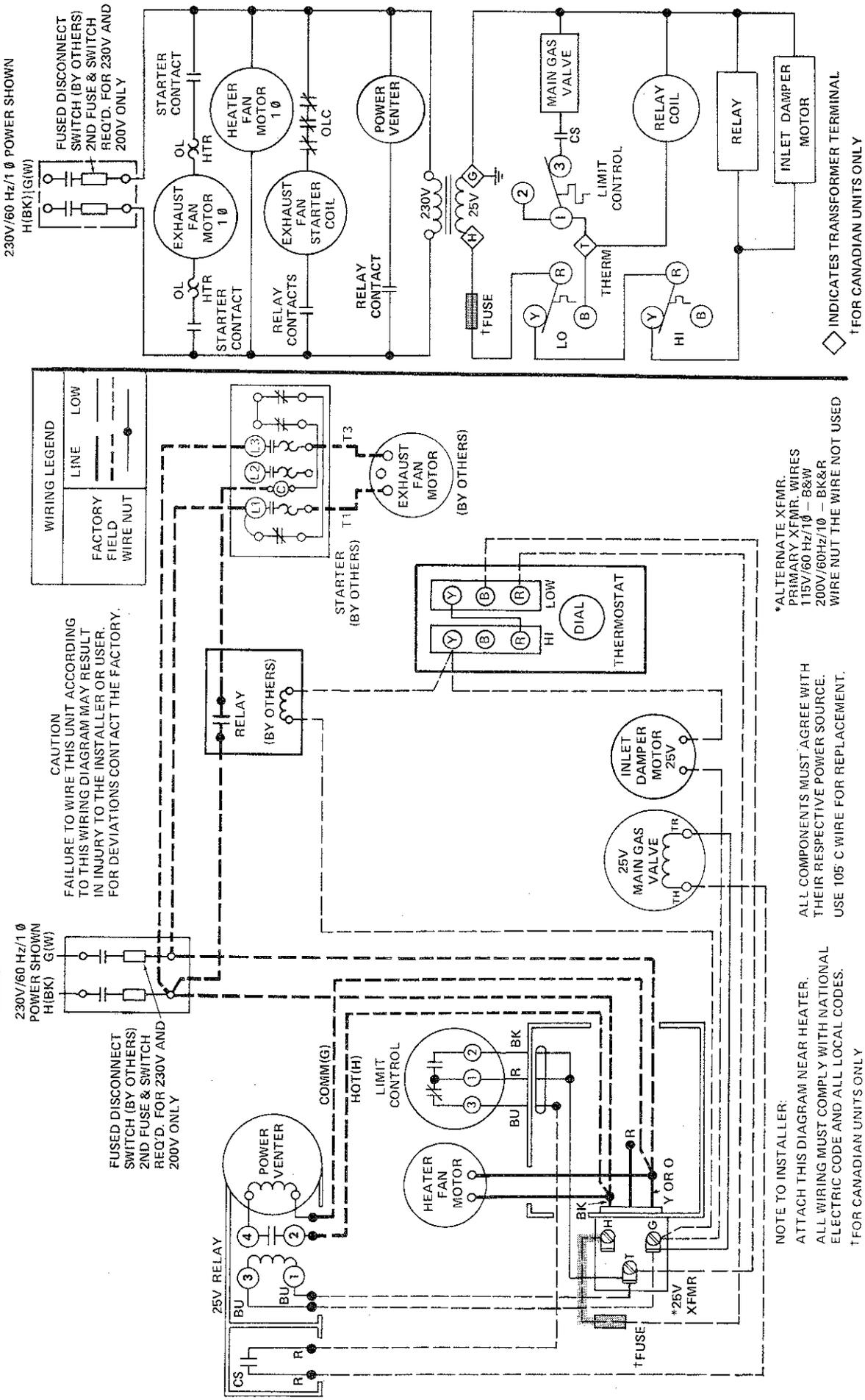


◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

5H70089B20 — Three-phase, standing pilot, 100% shut-off, low-voltage thermostat



MODINE 10-410 WIRING DIAGRAM MODEL GHG



230V/60 Hz/1 Ø POWER SHOWN
H(BK)†(G(W))

WIRING LEGEND

FACTORY	LOW
FIELD	---
WIRE NUT	—•—

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.

FUSED DISCONNECT SWITCH (BY OTHERS) 2ND FUSE & SWITCH REQ'D. FOR 230V AND 200V ONLY

*ALTERNATE XFMR. PRIMARY XFMR. WIRES 115V/60 Hz/1Ø — 8&W 200V/60Hz/1Ø — BK&R WIRE NUT THE WIRE NOT USED

ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE. USE 105 C WIRE FOR REPLACEMENT.

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER. ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES. †FOR CANADIAN UNITS ONLY

◇ INDICATES TRANSFORMER TERMINAL
†FOR CANADIAN UNITS ONLY

8H6490B409 — Single-phase, standing pilot, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter

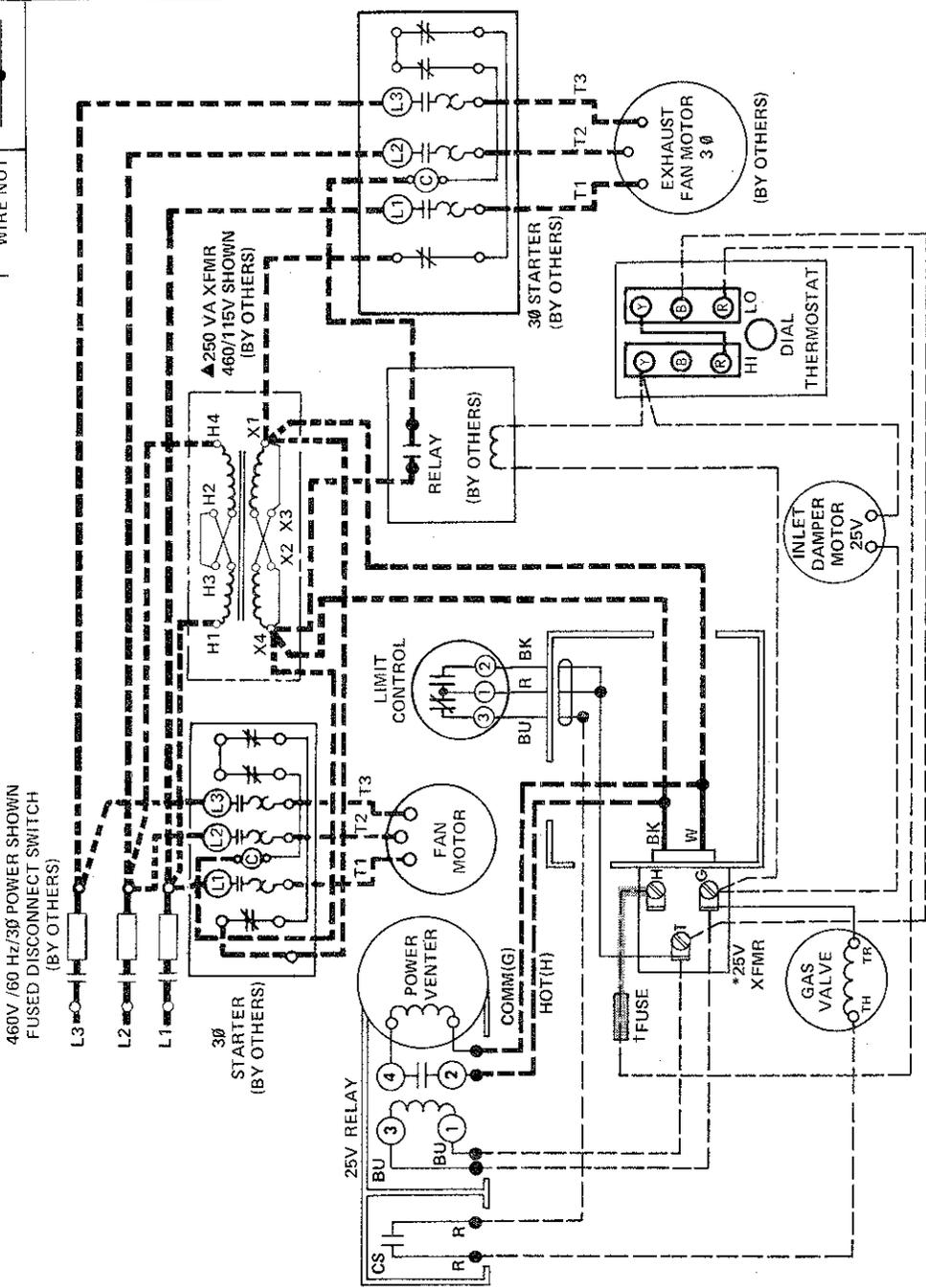


MODINE 10-410 WIRING DIAGRAM MODEL GHG

WITH 230V PRIMARY RECONNECT TRANS. 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.

WIRING LEGEND	
—	LINE
---	LOW
—	FACTORY
---	FIELD
—	WIRE NUT

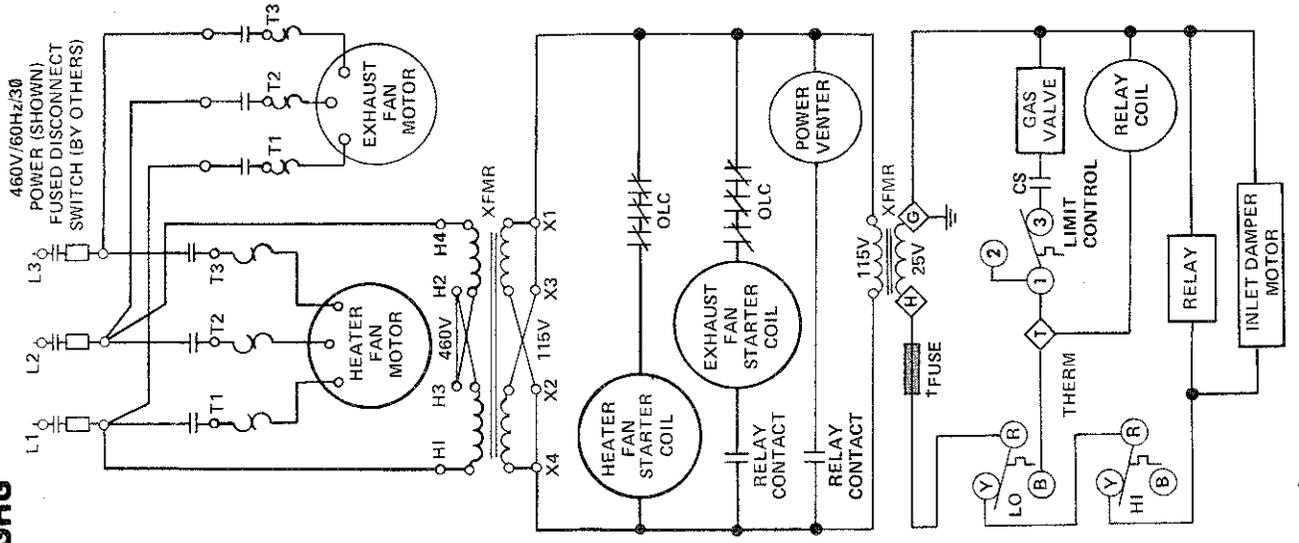


NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.
USE 105° C WIRE FOR REPLACEMENTS.

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

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

† FOR CANADIAN UNITS ONLY



◇ INDICATES TRANSFORMER TERMINAL
† FOR CANADIAN UNITS ONLY

8H6490B409 — Three-phase, standing pilot, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter

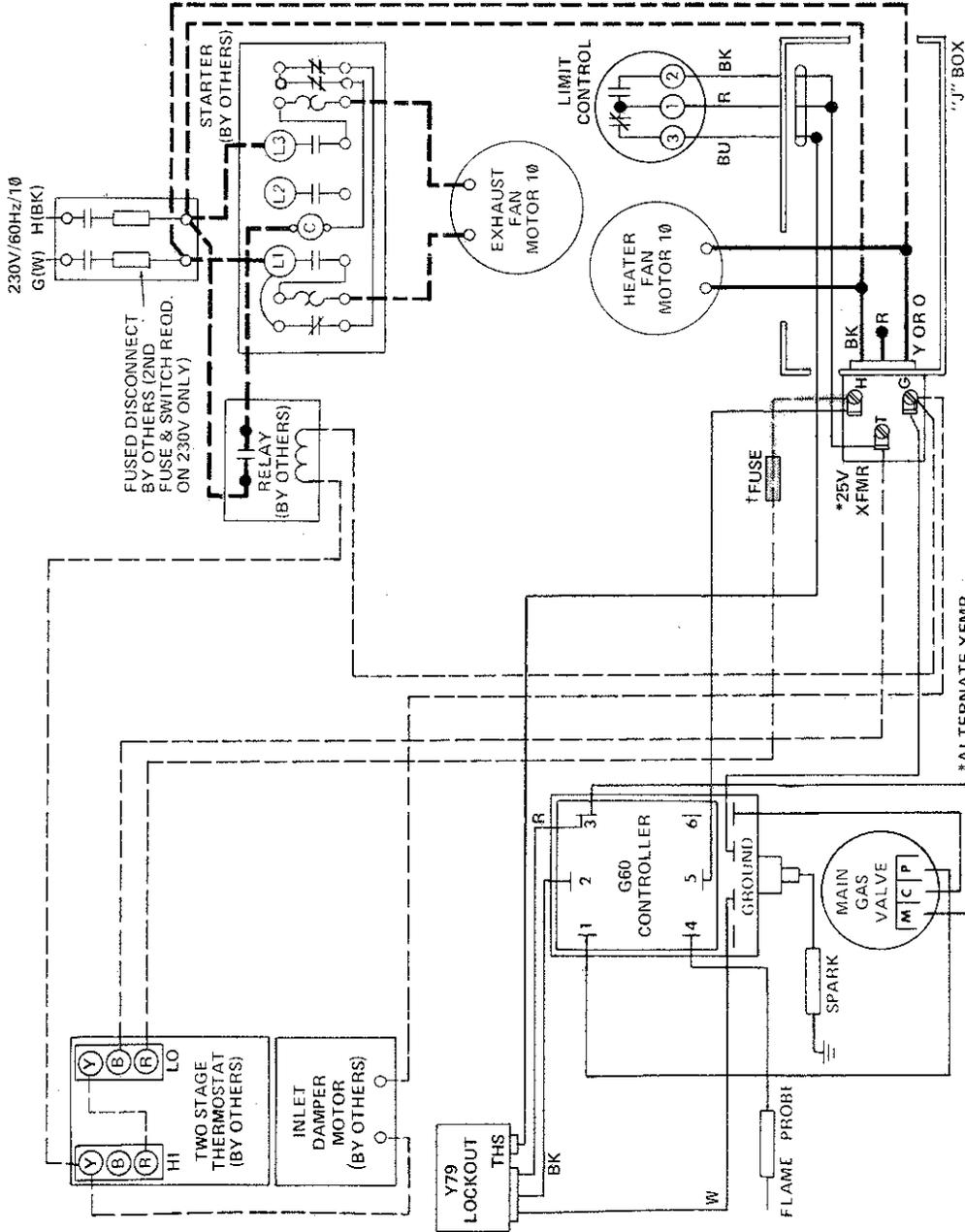


MODINE 10-410 WIRING DIAGRAM MODEL GHG

CAUTION

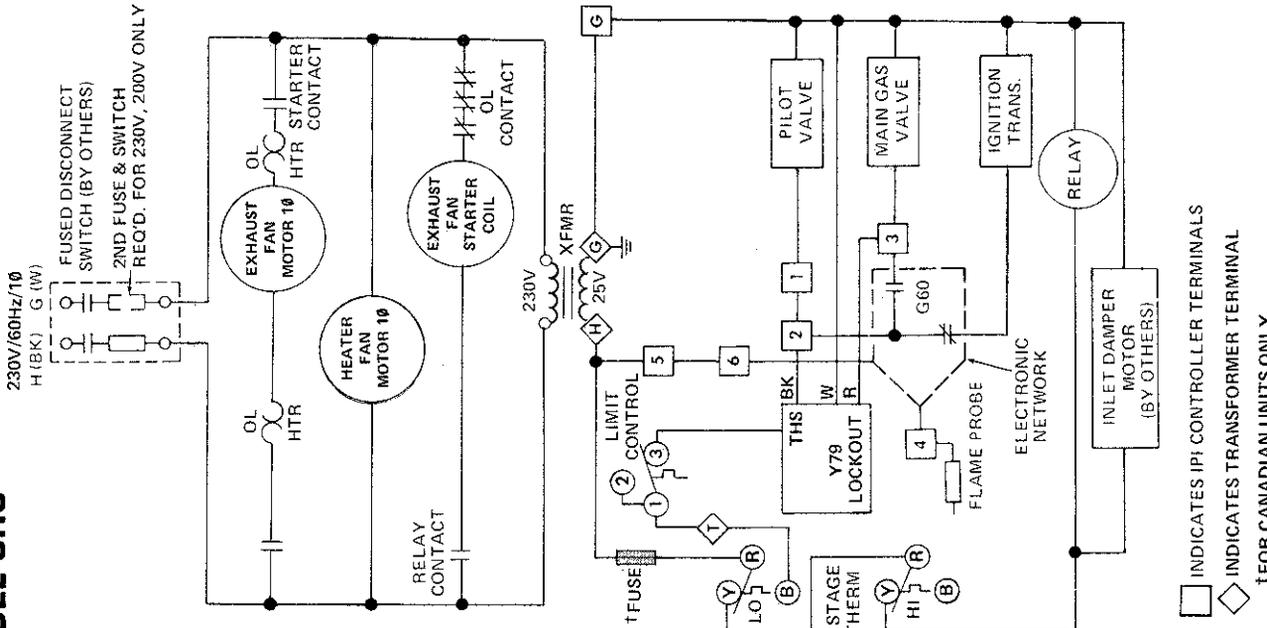
FAILURE TO WIRE THIS UNIT ACCORDING TO THIS WIRING DIAGRAM MAY RESULT IN INJURY TO THE INSTALLER OR USER. FOR DEVIATIONS CONTACT THE FACTORY.

WIRING LEGEND	
FACTORY	LOW
FIELD	---
WIRE NUT	●



*ALTERNATE XFMR.
 PRIMARY XFMR WIRES
 230V/60Hz/10 -- BK & Y(OR O)
 200V/60Hz/10 -- BK & R
 WIRE NUT THE WIRE NOT USED.
 †FOR CANADIAN UNITS ONLY.

NOTE TO INSTALLER:
 ATTACH THIS DIAGRAM NEAR HEATER.
 ALL WIRING MUST COMPLY WITH NATIONAL
 ELECTRIC CODE AND ALL LOCAL CODES.
 ALL COMPONENTS MUST AGREE WITH
 THEIR RESPECTIVE POWER SOURCE.



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



MODINE 10-410 WIRING DIAGRAM MODEL GHG

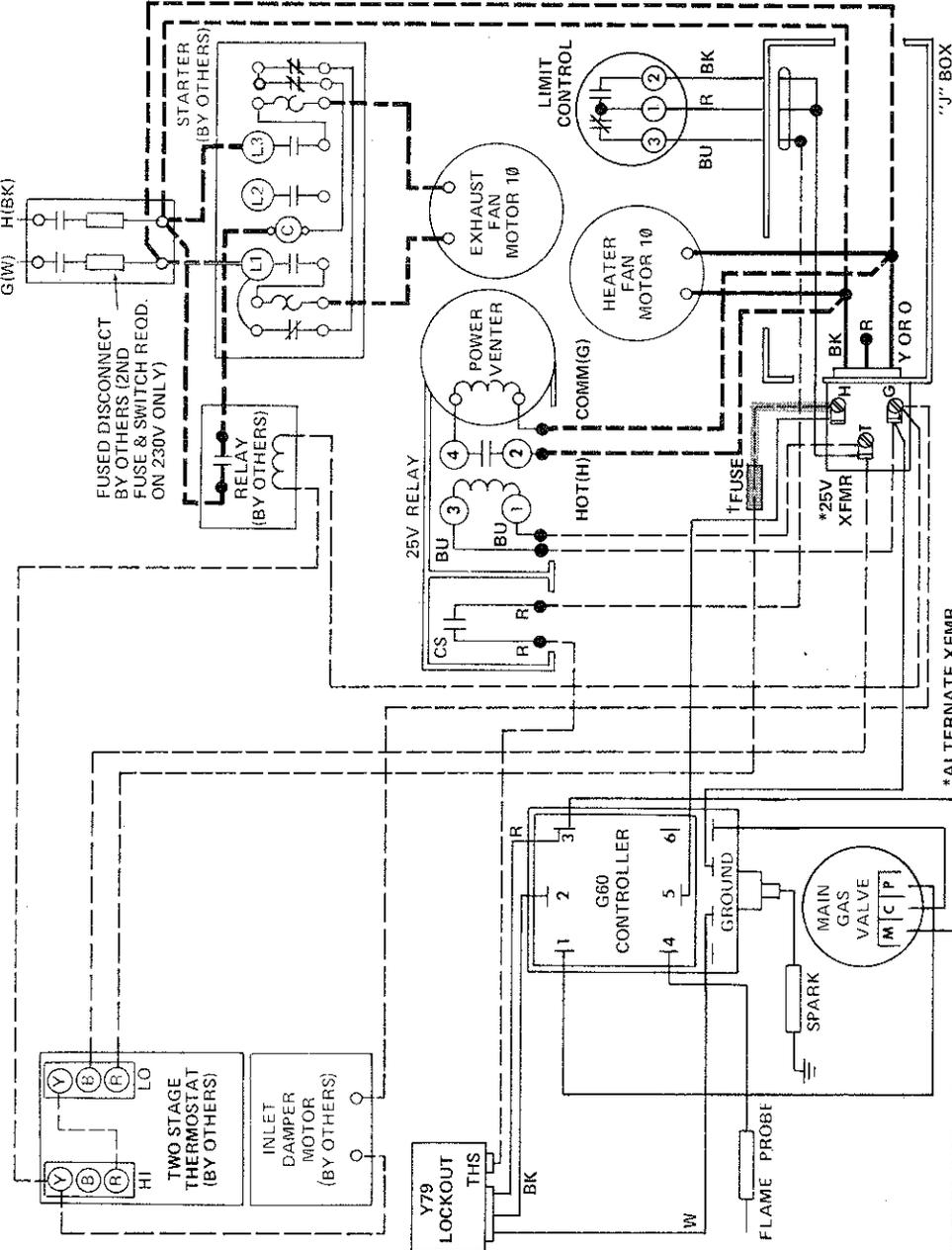
CAUTION

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

WIRING LEGEND	
FACTORY	LINE
FIELD	LOW
WIRE NUT	

230V/60Hz/1Ø
G(W) H(BK)

FUSED DISCONNECT BY OTHERS (2ND FUSE & SWITCH REQ'D. ON 230V ONLY)



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

†FOR CANADIAN UNITS ONLY.

NOTE TO INSTALLER:
ATTACH THIS DIAGRAM NEAR HEATER.
ALL WIRING MUST COMPLY WITH NATIONAL ELECTRIC CODE AND ALL LOCAL CODES.

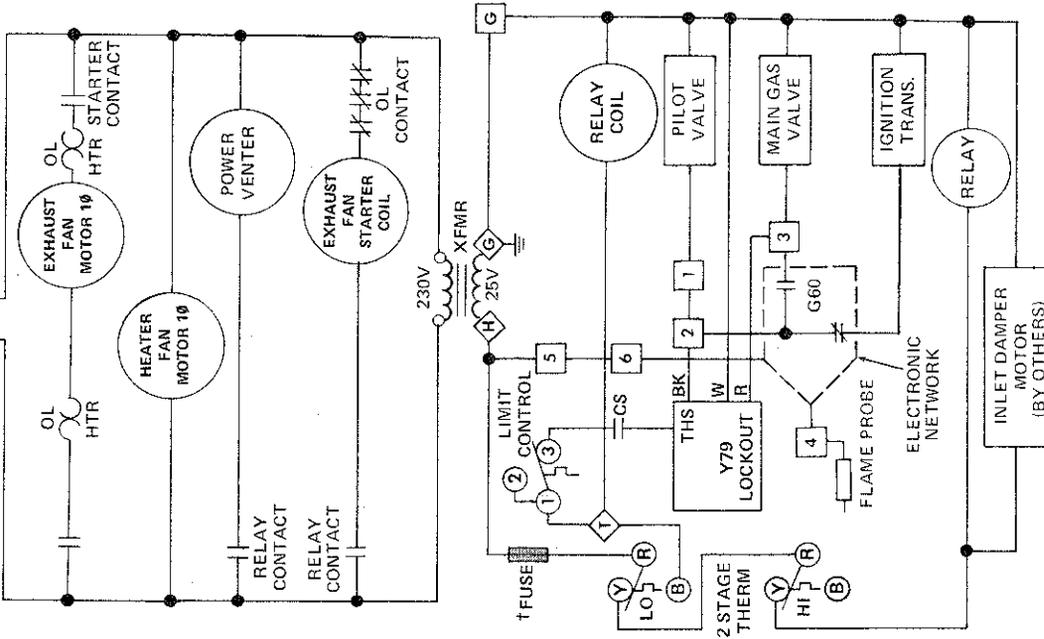
ALL COMPONENTS MUST AGREE WITH THEIR RESPECTIVE POWER SOURCE.

USE 105° C WIRE FOR REPLACEMENTS.

8H6490B410 - Single-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter

230V/60Hz/1Ø
H(BK) G(W)

FUSED DISCONNECT SWITCH (BY OTHERS)
2ND FUSE & SWITCH REQ'D. FOR 230V, 200V ONLY



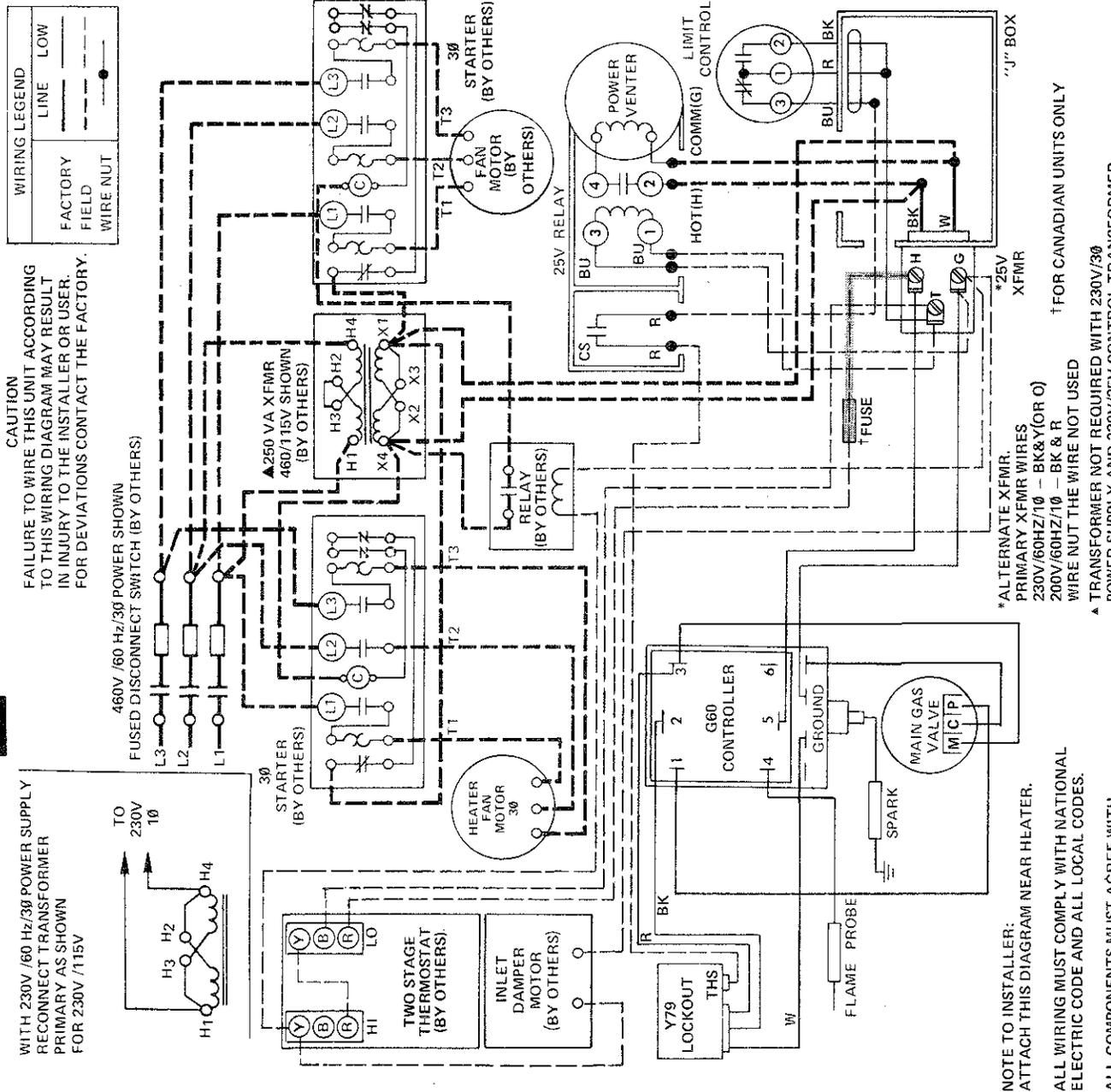
□ INDICATES IPI CONTROLLER TERMINALS

◇ INDICATES TRANSFORMER TERMINAL

† FOR CANADIAN UNITS ONLY



MODINE 10-410 WIRING DIAGRAM MODEL GHG



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

WIRING LEGEND	
FACTORY	LINE
FIELD	LOW
WIRE NUT	

WITH 230V /60 Hz/30 POWER SUPPLY RECONNECT TRANSFORMER PRIMARY AS SHOWN FOR 230V /115V

TO 230V 10

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/10 — BK&Y(O R)
200V/60HZ/10 — BK & R
WIRE NUT THE WIRE NOT USED
† TRANSFORMER NOT REQUIRED WITH 230V/30 POWER SUPPLY AND 230V/25V CONTROL TRANSFORMER
‡ FOR CANADIAN UNITS ONLY

8H6490B410 — Three-phase, intermittent pilot ignition, 100% shut-off, low-voltage thermostat, low-voltage controlled power venter

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