



***KAN-SUN***®

**CONTINUOUS FLOW  
AND  
AUTOMATIC BATCH DRYER**

**ELECTRICAL  
INFORMATION**



**BUTLER MANUFACTURING COMPANY**  
**AGRI-PRODUCTS DIVISION**  
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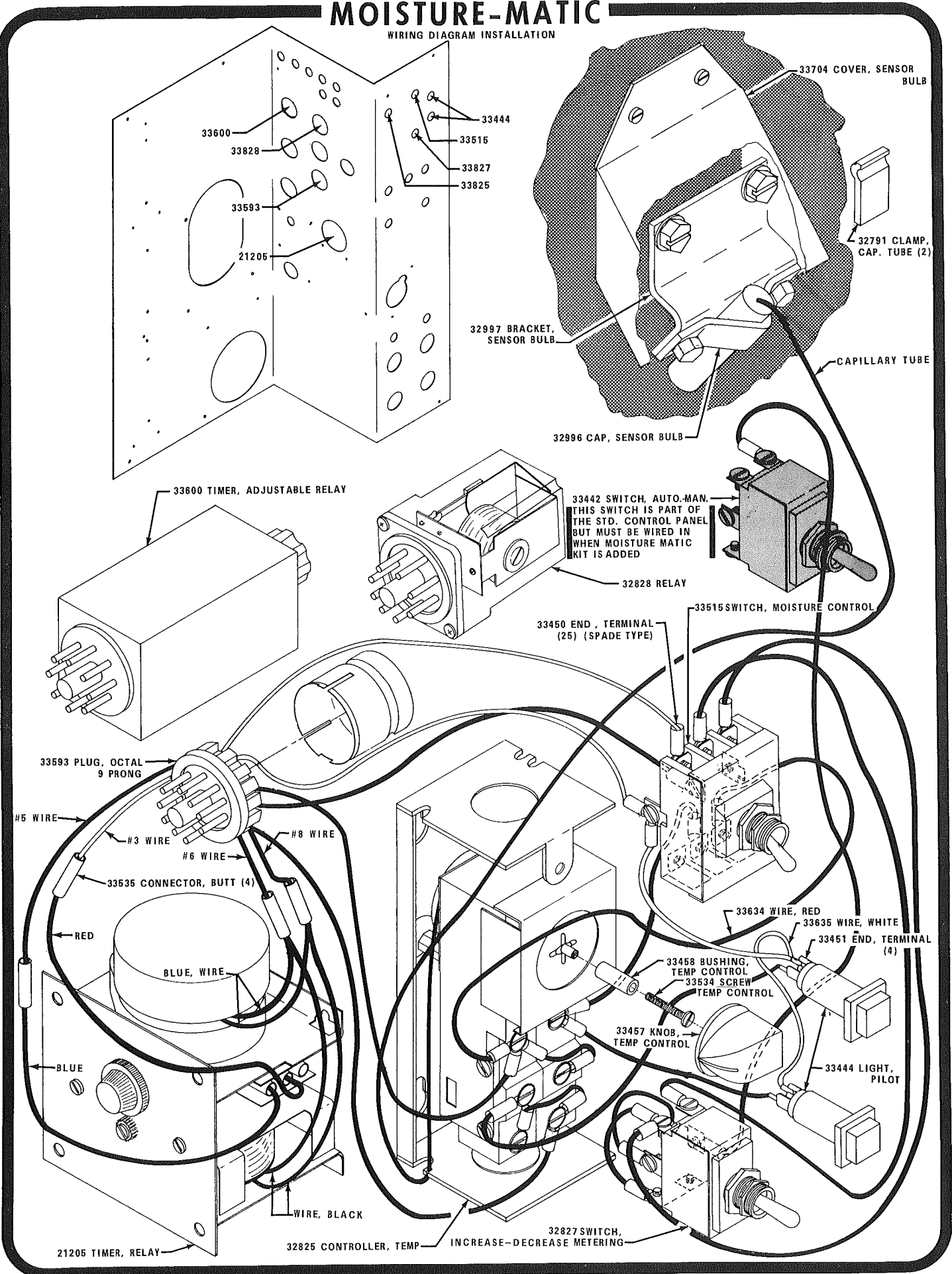
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\*Drawings are the same for 1976 and 1977.

\*\*Use on all updated timer circuits

# MOISTURE-MATIC

WIRING DIAGRAM INSTALLATION

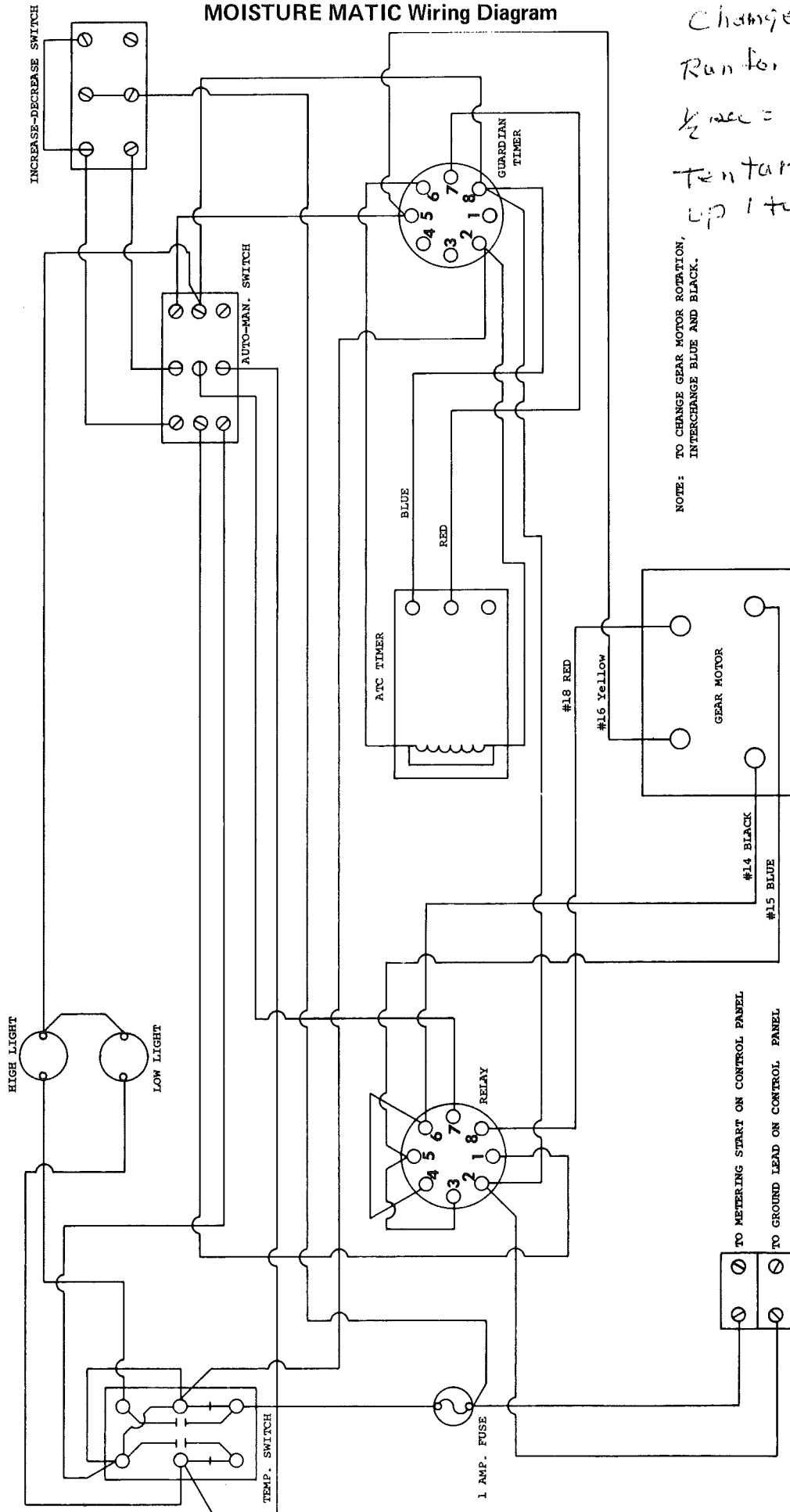




**TROUBLE SHOOTING  
"MOISTURE-MATIC"**

1. Any basic controls fail to function	A. Bulb may be burned out in one of the balance lights	1. Replace bulb
	B. Fuse blown	1. Replace fuse
2. Fuse continues to blow	A. Defective wiring or components in motor circuit (isolate by removing relay)	1. With relay removed and the fuse continues to blow we suggest you contact serviceman
3. Balance lights fail to light—(either both lights fail to light or just one lights) This function is performed in manual position	A. Fuse blown	1. Replace fuse
	B. Light bulb out	1. Replace bulb
	C. Temperature control inoperative	1. Replace control
4. Shifting motor fails for any reason	1. Refer to items 13–14–15–16	

# MOISTURE MATIC Wiring Diagram



NOTE: TO CHANGE GEAR MOTOR ROTATION,  
INTERCHANGE BLUE AND BLACK.

Change Each 2 3 min  
Run for 1/2 sec  
1/2 sec = 1/2 % m  
Turns CCW  
Up 1 turn CW

# SECTION 2

## OPTIONAL EQUIPMENT

### 'MOISTURE-MATIC'

The KAN-SUN "Moisture-Matic" is designed to give accurate, continuous flow crop drying, yet requiring a minimum of operator time for adjusting and sampling. By locating the sensing bulb just above the heating chamber floor at a point where the crop will reach its driest point, the "Moisture-Matic" will accurately measure the exhaust air temperature reading and relay a command to the shifting motor to speed up or slow down the discharge rate. We recommend taking periodic moisture tests with a moisture tester of known accuracy to verify desired results.

#### OPERATION

When first starting the drying operation the "Moisture-Matic" should be set in the manual position. Refer to SECTION 1-OPERATION to start the drying operation. Start the "Moisture-Matic" operation as follows:

1. Before starting the "Moisture-Matic" be certain the grain discharge from the dryer is at the desired moisture content.

2. With the "Moisture-Matic" control in MANUAL position rotate the temperature indicating dial until both the high and low indicator lights are lit. (When the lights are lit the position of the temperature control dial will indicate the approximate temperature moisture balance point for your drying situation.)

3. Put the "Moisture-Matic" control in the AUTOMATIC position. The control should now hold the grain at the desired moisture level. (NOTE: THE MOISTURE LEVEL MAY VARY SLIGHTLY ABOVE OR BELOW THE SET-POINT, HOWEVER, THE AVERAGE WILL BE AT THE DESIRED LEVEL.)

4. Due to varying drying conditions the moisture level of the output grain may run consistently higher or lower than is desired; if higher set the temperature indicating dial higher, approximately two position points for each point of moisture; if lower, set the temperature indicating dial two position points lower for each point of moisture.

5. The following chart may be used as a guide to get started, but this will vary with the affecting drying conditions.

Drying Air Temp.	Temp. Control Setting	Grain Moisture Level
180°	D	16.5%
180°	D-2	15.5%
180°	D-3	14.5%
180°	E-1	13.5%

6. To restart the dryer after shutdown proceed as follows:

1. Put the "Moisture-Matic" control in MANUAL position. Start machine in the normal manner.
2. After the machine has been running for approximately 10 minutes, put the "Moisture-Matic" control in AUTOMATIC.
3. Proceed drying in the normal manner.

#### INDICATOR LIGHTS

Two indicator lights are provided on the control panel for the "Moisture-Matic" system. They will give you visual indication of the direction the system is running, if the high light is lit this means that the next correction will be an increase in the discharge rate, thus increasing the moisture content of the output grain. If the low light is lit it means the discharge rate will decrease, lowering the moisture content of the output grain. **NOTE: IF ONE OF THE LIGHTS SHOULD LIGHT OVER AN EXTENDED PERIOD OF TIME IT IS ADVISABLE TO MAKE A MANUAL CORRECTION IN THE DIRECTION INDICATED BY THE LIGHT, USING THE "INCREASE-DECREASE" SWITCH.**

#### INTERVAL TIMER

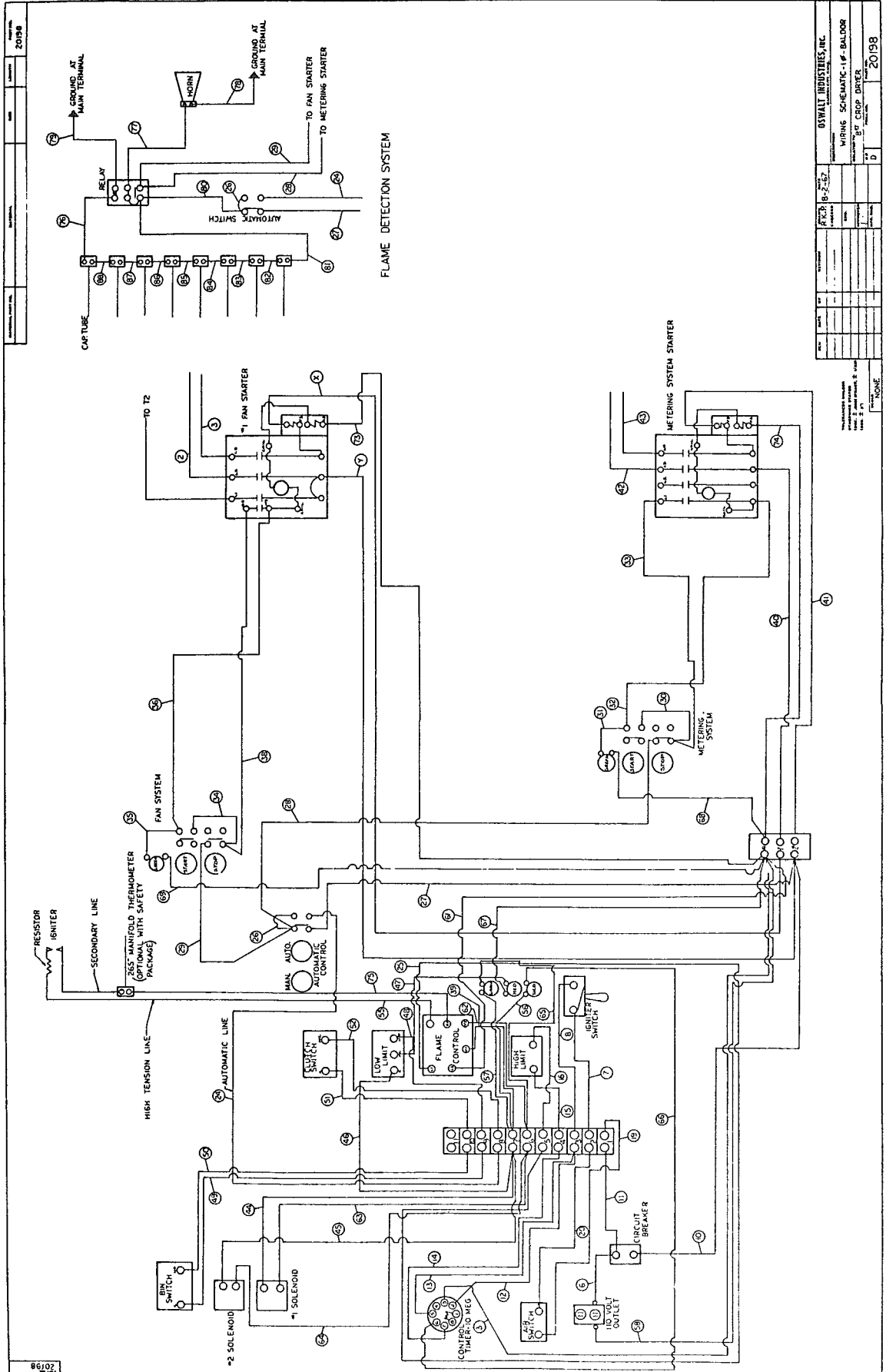
The interval timer is the control that determines when a moisture check is made. Under some drying conditions it may be necessary for you to alter the time setting. Moving the indicating dial to a higher number means that it will be a longer interval between temperature checks and/or corrections by the "Moisture-Matic" system. By moving the indicator dial to a lower number, the temperature checks and/or corrections will be made at shorter intervals.

Since the requirement for moisture checks is directly proportional to the rate of drying, use the chart below as a guide to adjust your interval timer.

#### "MOISTURE-MATIC" TIME SETTINGS

Machine Model	Bushels Per Hour	Time Control Setting
8-14-10	220	24 minutes
8-14-10	320	16 minutes
8-16-15	270	27 minutes
8-15-16	390	19 minutes
10-17-210	335	27 minutes
10-17-210	465	20 minutes
10-21-210	380	39 minutes
10-21-210	520	30 minutes
10-25-215	500	40 minutes
10-25-215	700	29 minutes

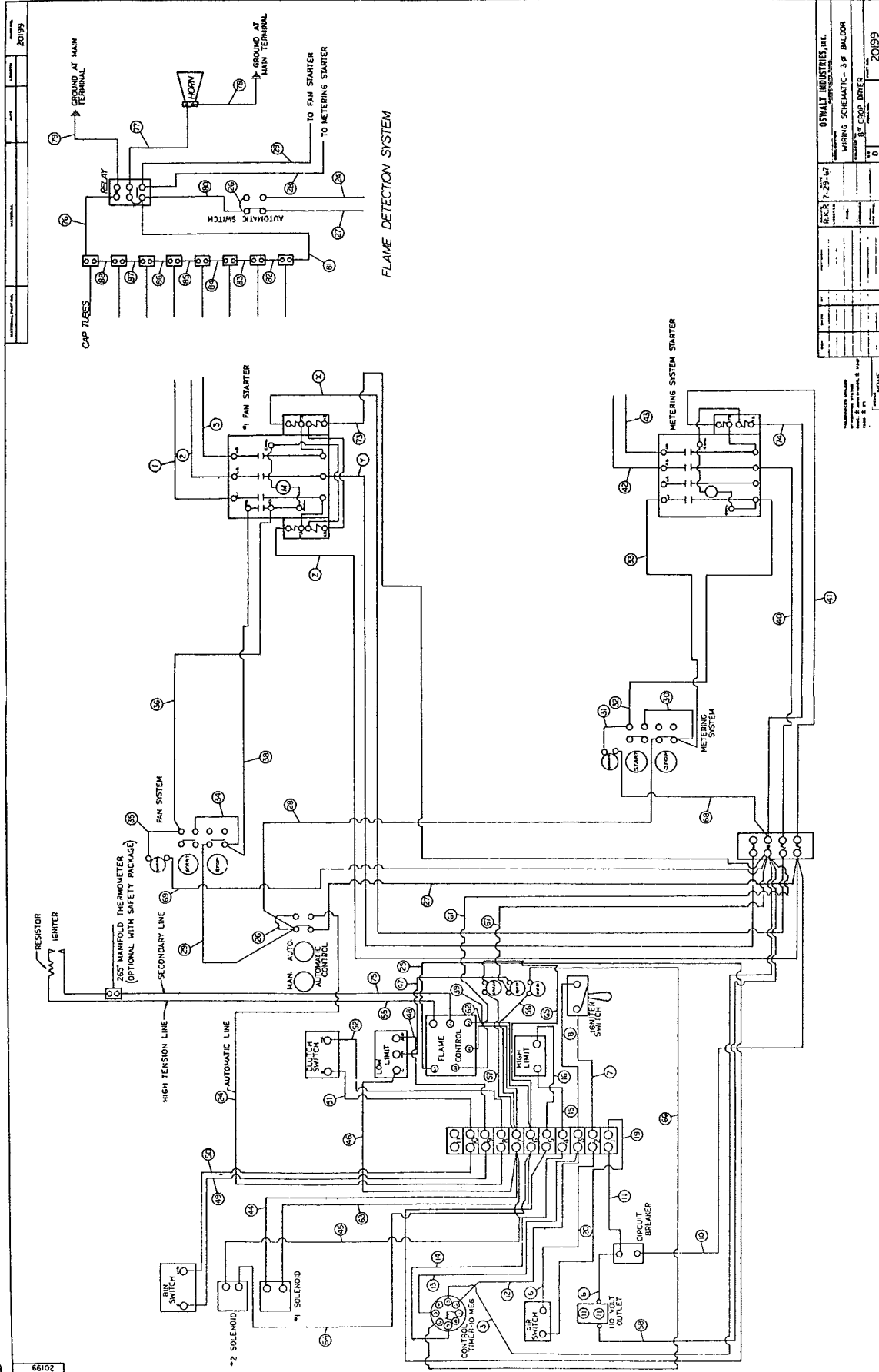
WIRING SCHEMATIC 1Ø - BALDOR 8 Ft. CROP DRYER Part No. 20198



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WIRING SCHEMATIC 3Ø - BALDOR 8 Ft. CROP DRYER Part No. 20199



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OSWALT INDUSTRIES, INC.  
BALDOR 8 Ft. CROP DRYER  
WIRING SCHEMATIC - 3Ø BALDOR  
PART NO. 20199

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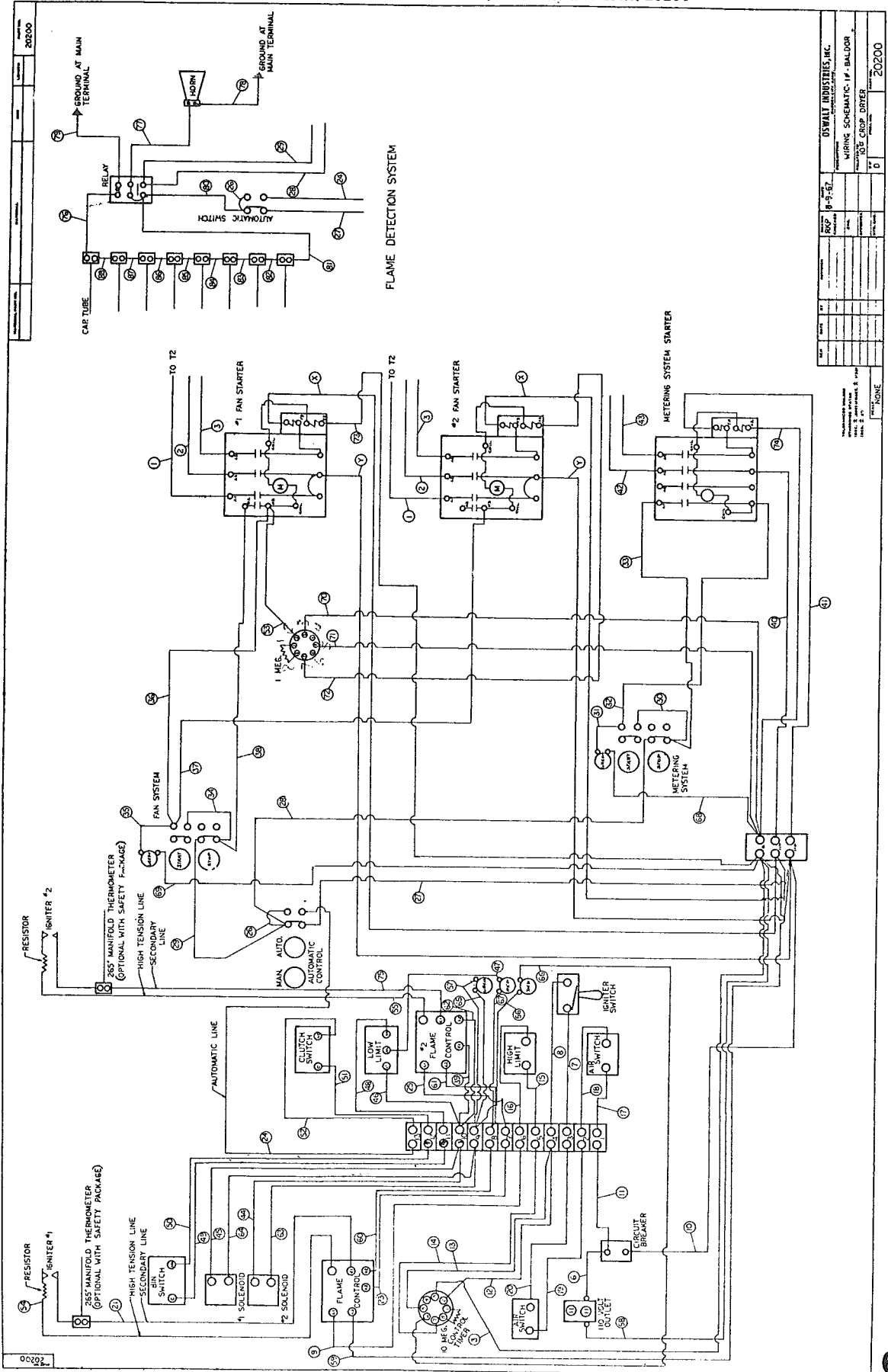
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WIRING SCHEMATIC 1Ø - BALDOR 10 Ft. CROP DRYER Part No. 20200



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OSWALT INDUSTRIES, INC.  
 WIRING SCHEMATIC 1Ø - BALDOR  
 10 FT. CROP DRYER

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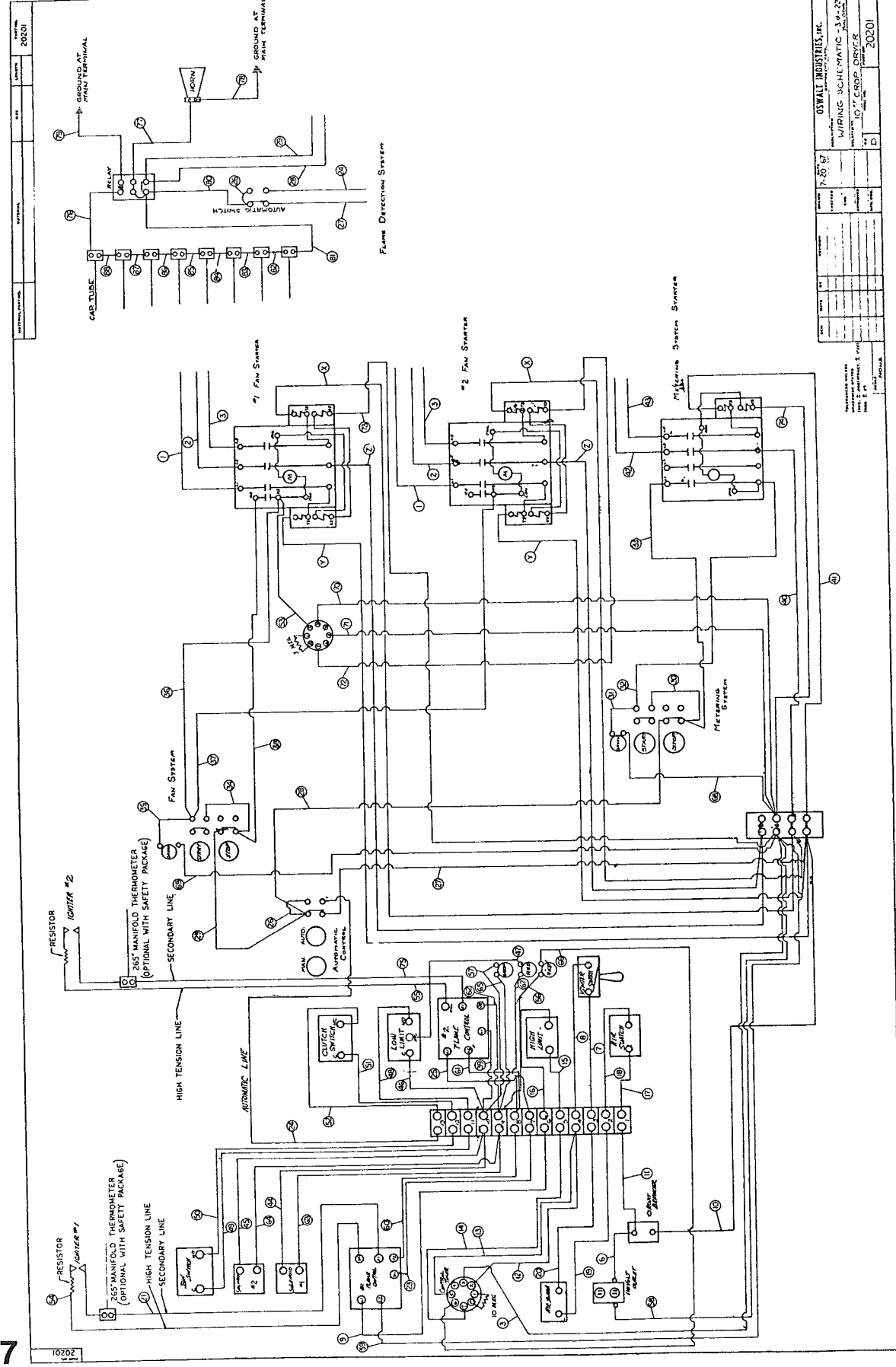
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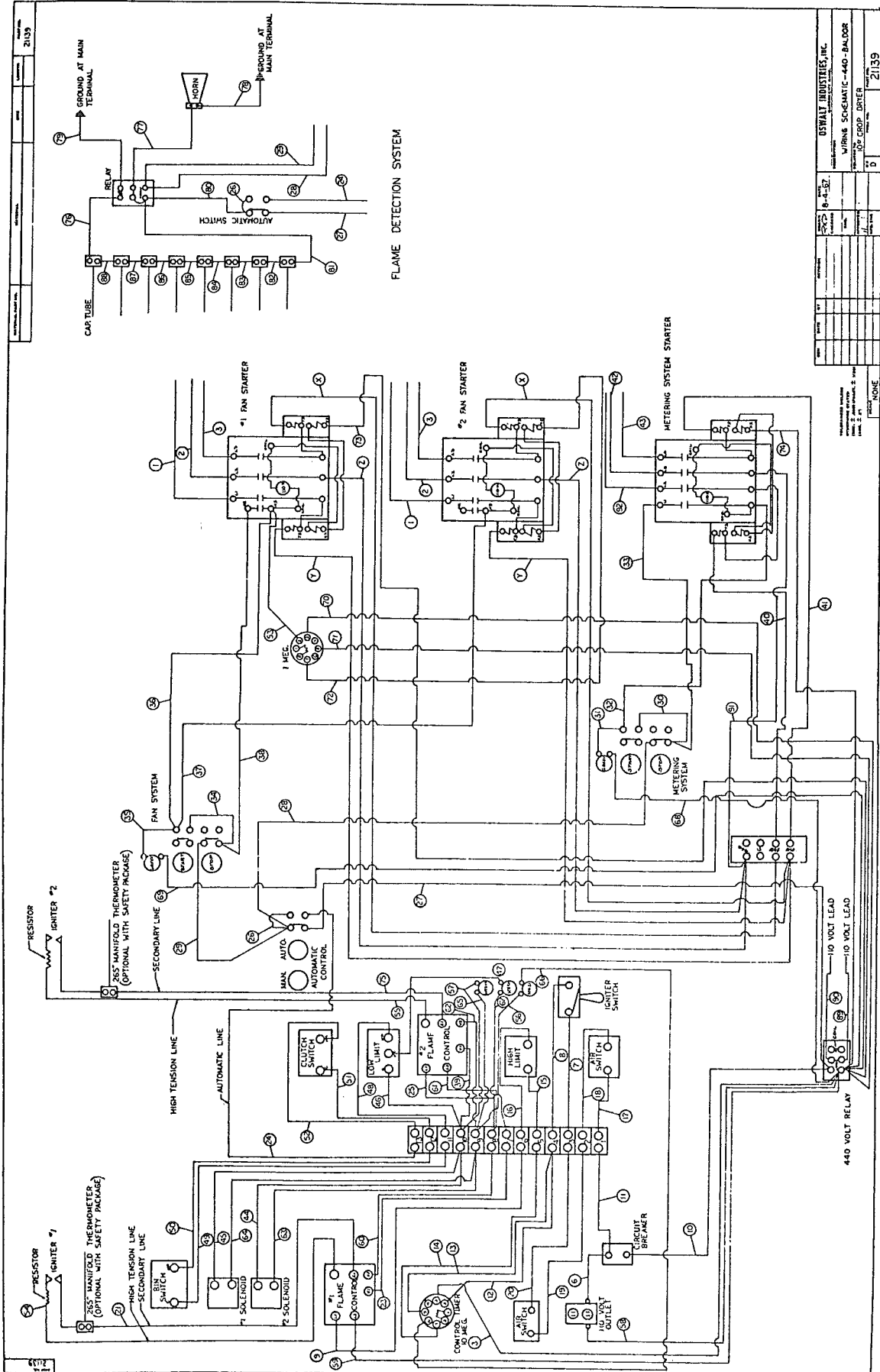
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OSWALT INDUSTRIES, INC.			
WIRING SCHEMATIC - 3Ø - 220			
10 FT. CROP DRYER			
PART NO. 20201			

WIRING SCHEMATIC 440 - BALDOR 10 Ft. CROP DRYER Part No. 21139



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OSWALT INDUSTRIES, INC.  
WIRING SCHEMATIC 440-BALDOR  
10 FT. CROP DRYER  
Part No. 21139





### CIRCUIT OUTLINE – 10' – 1966

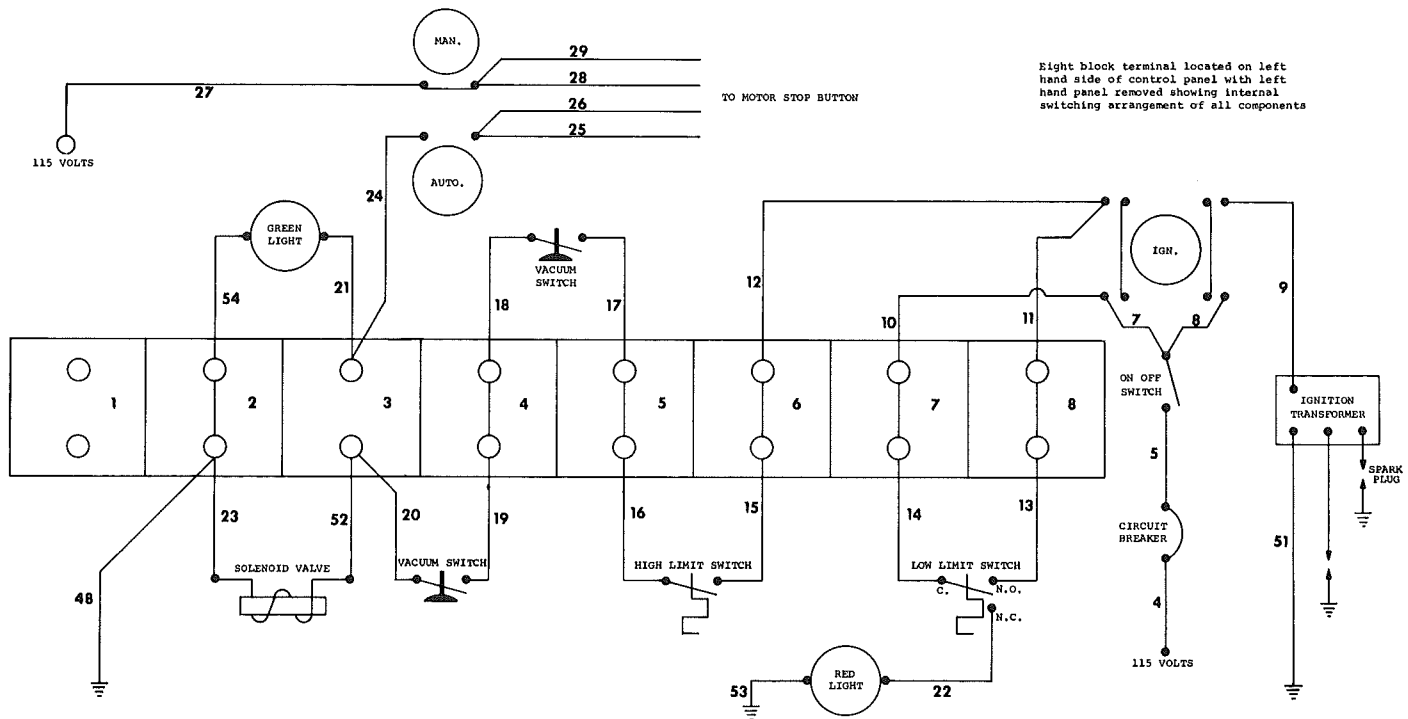
The 1966 model KAN-SUN dryers use the low limit switch as the flame detector. The 115 volt AC current is supplied by wire No. 4 to the circuit breaker. If the circuit breaker is in a closed position, wire No. 5 will supply current to the ON-OFF switch. The switch being in a closed position, feeds current through wires No. 7 and No. 8 to the N.O. contacts of the ignition button. Power is supplied to terminal No. 7 by wire No. 10 from the ignition button. The N.C. terminal of the low limit switch is supplied current by wire No. 14 from terminal No. 7.

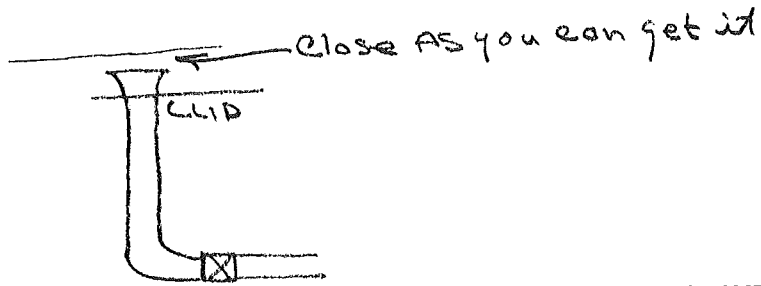
When the ignition button is depressed, 115 volt AC is supplied to wires No. 8, No. 11, and No. 12. Wire No. 9 feeds power to the ignition transformer which supplies the high voltage to the spark plug. Wire No. 12 supplies power to terminal No. 6 which feeds high voltage to the spark plug. Wire No. 12 supplies power to terminal No. 6 which feeds the high limit switch through wire No. 15. The high limit switch, being in closed position, feeds power through wire No. 16 to terminal No. 5. Terminal No. 4 is connected to terminal No. 5 by vacuum switch No. 1 and wires No. 18 and No. 17, terminal No. 3 and No. 4 are connected by the second vacuum switch to wire No. 20 and No. 19 provided, that

the vacuum switches are both in closed positions. The solenoid valve and the green light are supplied current from terminal No. 3 by wires No. 52 and No. 21, respectively. Their ground is supplied through wires No. 23 and No. 54 to terminal No. 2.

When the plenum chamber has reach the temperature setting of the low limit switch, the red indicator light will go out. The ignition button can be released and the flame will be maintained. This is accomplished by feeding power from the N.O. terminal of the low limit switch through wire No. 14 to terminal No. 8 and wire No. 11 to the ignition switch.

The AUTOMATIC button of the AUTOMATIC-MANUAL switch can be pushed to put the dryer in AUTOMATIC. The fans and burner will be maintained by wire No. 24 connected to terminal No. 3 which is the AUTOMATIC circuit terminal. If a malfunction occurs while dryer is in the automatic circuit, the safety controls cause the machine to shut down.





### CIRCUIT OUTLINE - 10' - 1967

The control circuit is supplied 115 volt AC current from the four block terminal by wire No. 10 through the circuit breaker. Terminal No. 1 is supplied current by wire No. 11, if the circuit breaker is closed. The AUTOMATIC-MANUAL switch is fed current by wire No. 27, from either terminal No. 1 or the circuit breaker.

Pressure switch No. 1 is connected to terminal No. 1 by wire No. 17, and if closed, feeds power to terminal No. 2 by wire No. 18. Pressure switch No. 2 is connected to terminals No. 2 and No. 3 by wires No. 19 and No. 20, and if closed, will feed power to terminal 3.

The igniter switch is connected to terminals No. 3 and No. 4 by wires No. 7 and No. 8 and when in the ON position, will feed power to terminal No. 4. Terminal No. 4 feeds power to the purge timer pins No. 2 and No. 5 through wires No. 12 and No. 13. Pin No. 6 of the timer, connected to the red indicator light by wire No. 66, will activate the light to indicate that the 60 second purge cycle has started. Ground for the light is provided by wire No. 56 to terminal No. 9. Pin No. 7 of the timer feeds power, after a one minute delay, through wire No. 14 to terminal No. 5. Failure to do so indicates defective timer.

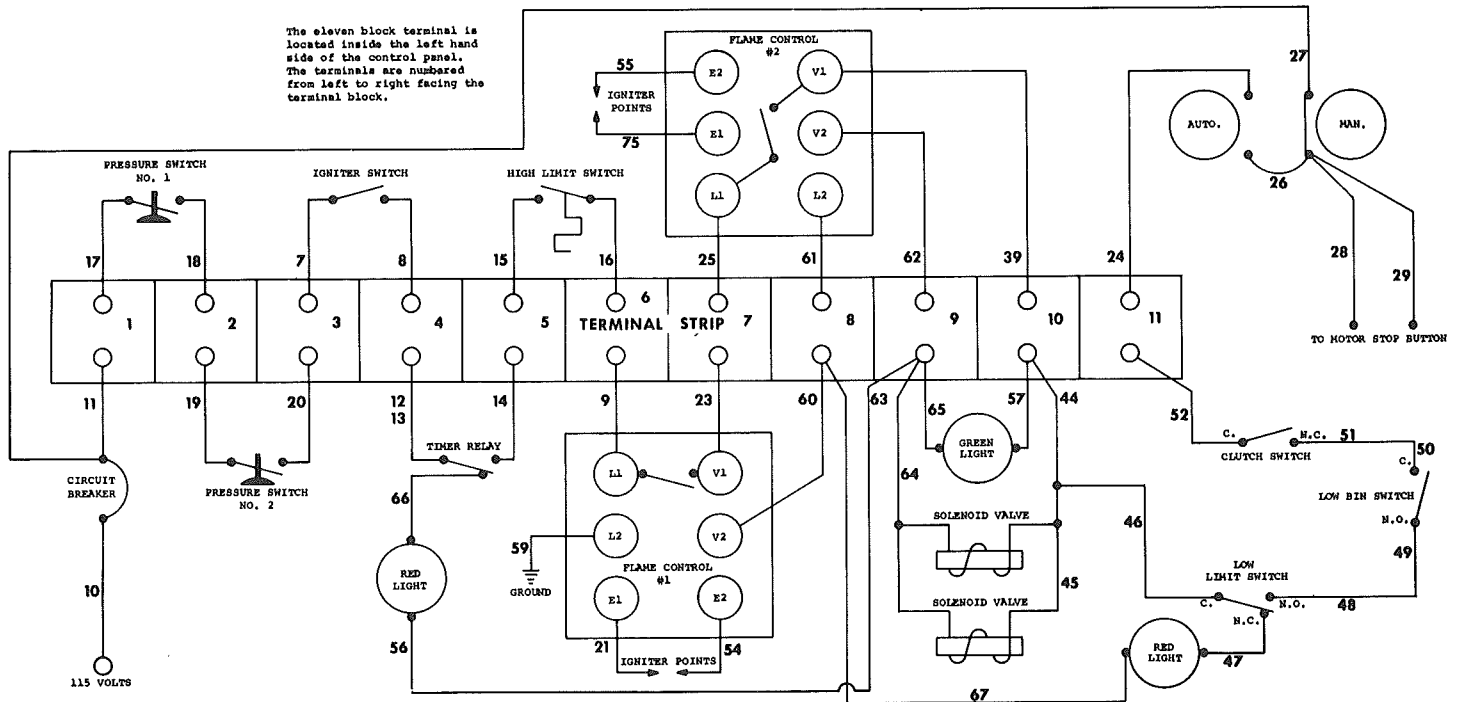
When the high limit switch is closed, it feeds power from terminal No. 5 to terminal No. 7 through wires No. 15 and No. 16. Terminal No. 6 supplies current to the Flame Controller No. 1 through wire No. 9 to terminal L1. Wire No. 59 is the ground terminal L2. Terminals E1 and E2 supply the high voltage to the ignitor points through wires No. 21 and No. 54. V1 is connected by wire No. 23 to terminal No. 7.

Flame Controller No. 2 is fed power from terminal No. 7 by wire No. 25 to terminal L1. L2 is grounded by wire No. 61 at terminal No. 8. As in Flame Controller No. 1, terminals E1 and E2 supply the

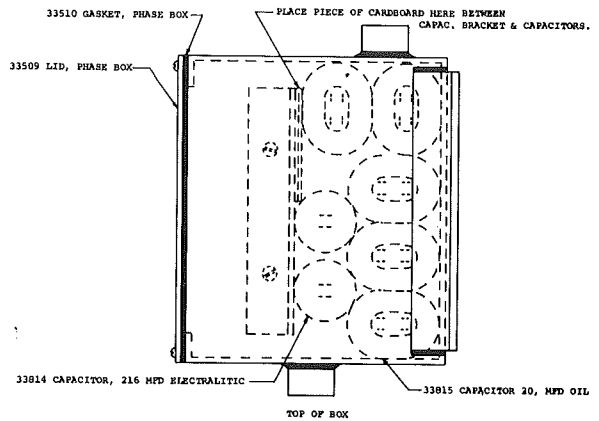
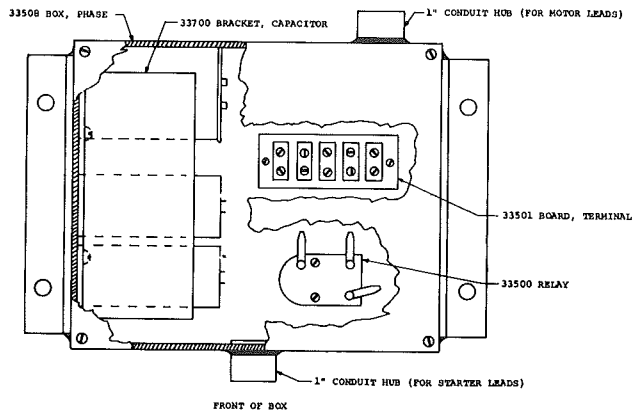
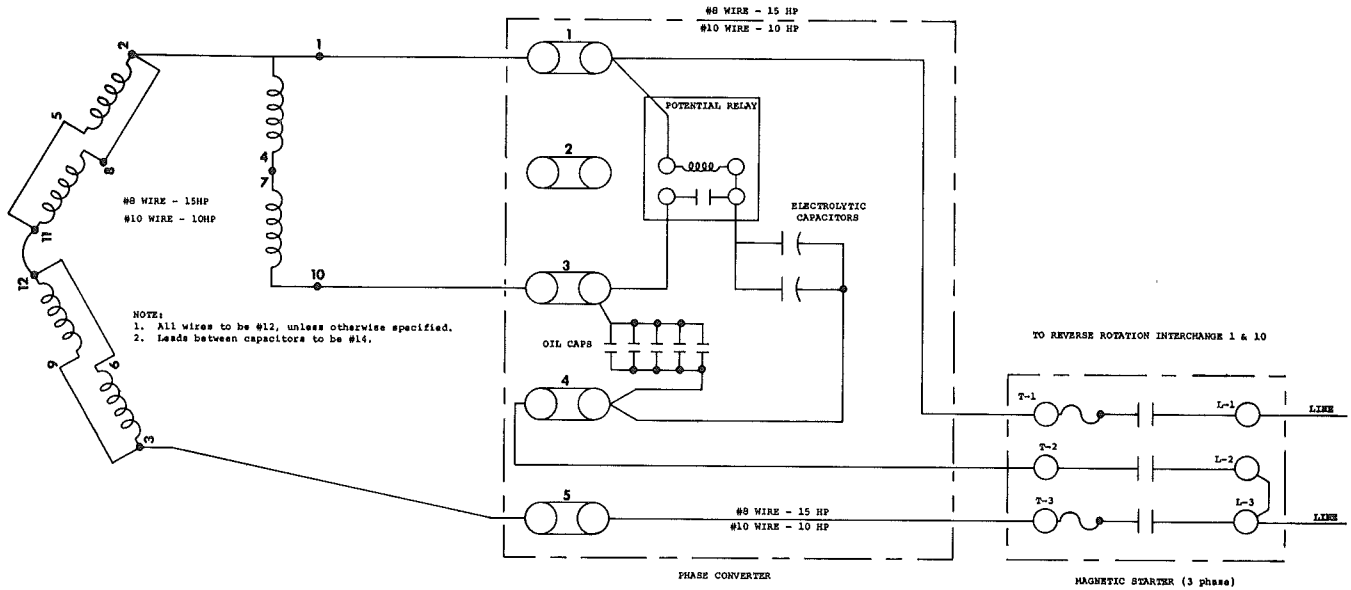
high voltage to the ignitor points of burner No. 1. Terminals V1 and V2 of Flame Controller No. 2 supplies current to the solenoid valves through wires No. 39 and No. 62 connected to terminals No. 10 and No. 9 respectively. Terminals No. 9 and No. 10 are connected to the solenoid valve through wires No. 64 and No. 44. The green indicator light is shown connected to terminals No. 9 and No. 10 by wires No. 65 and No. 57, and when this light is on, indicates the solenoid valves are open.

The low limit switch is supplied power to its "common" terminal by wire No. 46 from terminal No. 10. When the plenum temperature is below the low limit setting, the N.C. terminal of the low limit switch supplies power through wire No. 47 to the red indicator light. Wire No. 67 to terminal No. 8 is the ground for this light. When the plenum temperature exceeds the low limit switch setting, the N.O. terminal of the low limit switch is closed. This terminal is connected with the low bin switch N.O. terminal by spliced wires No. 48 and No. 49. The low bin switch, when under grain pressure, closes the circuit to the "common" terminal to supply power to the clutch switch through spliced wires No. 51 and No. 50. The "common" terminal of the clutch switch is connected to terminal No. 11 by wire No. 52. The AUTOMATIC side of the AUTOMATIC-MANUAL switch is fed power through wire No. 24 from terminal No. 11. When power is thus supplied, the red indicator light ceases to glow, and the dryer can be switched to the AUTOMATIC circuit.

The AUTOMATIC-MANUAL switch is a make-before-break switch. When switching to AUTOMATIC, the AUTOMATIC contact closes before the MANUAL contact opens, providing a new power source through wire No. 24, instead of through wire No. 27. If a malfunction occurs while in automatic circuit, the safety controls cause the machine to shut down.



### 10 hp. PHASE CONVERTER



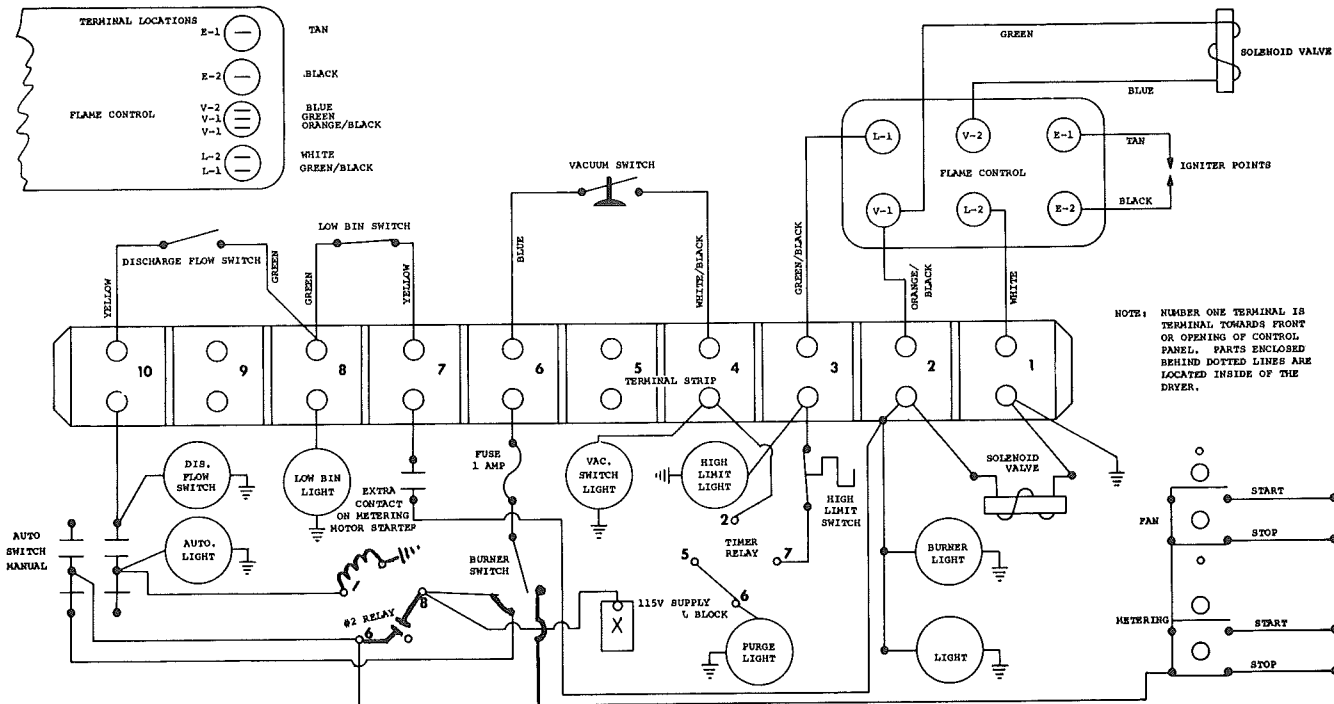
### CIRCUIT OUTLINE - 8'

The control circuit power supply is taken from the 4 pole terminal block at terminal "X". From this terminal 115 volts AC is fed to pin No. 8 of the No. 2 relay. From pin No. 8 of the No. 2 relay, current flows to the burner switch. At this point, 115 volts is supplied to the manual terminal of the AUTOMATIC-MANUAL switch, then to pin No. 6 of No. 2 relay, to the metering and fan stop-start switches. Now returning to burner switch, closing burner switch will allow current to flow through the one AMP fuse to terminal No. 6 through the vacuum switch (provided fan is running) to terminal No. 4.

From terminal No. 4, current flows to the vacuum switch light and pin No. 2 and No. 5 of the timer relay. Timer relay will delay flow of current for one minute, during which time the purge light will glow. At the end of one minute, the timer relay will make contact from pin No. 6 to pin No. 7 of the timer relay and will cause current flow through the high limit switch, if closed, to the high limit light and terminal No. 3, from terminal No. 3 to L1 of the Flame Controller. Terminal V1 of the Flame Controller will furnish power to operate the solenoids located beneath the control panel and in the cooling chamber of the dryer. Terminal No. 2 will also be energized and the burner and ignition lights

will light. Also, a wire will go to the extra contact on the metering motors magnetic starter, then to terminal No. 7. Current flows from terminal No. 7 of the terminal strip to the N.O. terminal of the low bin switch, when closed, to terminal No. 8, then to the low bin light and the grain flow switch. From there, current flows to the AUTOMATIC side of the AUTOMATIC-MANUAL switch and indicator light. At this point, the dryer can be switched to operate in the AUTOMATIC circuit. A ground wire is attached to the metering starter and hydrostatic transmission pressure switch and then to terminal No. 10.

The AUTOMATIC-MANUAL switch is a make-before-break switch. Upon switching the AUTOMATIC-MANUAL switch, the AUTOMATIC contact closes before the MANUAL contact opens, providing a new power source through the switch in the AUTOMATIC position, the MANUAL switch in the AUTOMATIC position, the MANUAL portion of the switch will open and the fan and the metering circuit will now be connected in series with all of the safety controls. If there are any malfunctions sensed by the control components, the fan and metering systems will have their power supply interrupted, causing complete shut down of the electrical and fuel supply.



## CIRCUIT OUTLINE - 10'

The control circuit power supply is taken from the 4 pole terminal block at terminal "X". From this terminal 115 volts AC is fed to pin No. 8 of the No. 2 relay.

From pin No. 8 of the No. 2 relay, current flows to the burner switch. At this point 115 volts is supplied to the MANUAL side of the AUTOMATIC-MANUAL switch, then to pin No. 6 of No. 2 relay, to the metering stop-start switches. By closing the burner switch it will allow current to flow through the 1 AMP fuse to terminal No. 7, through vacuum switch No. 1 (provided fan is running) to terminal No. 6. The vacuum switch light is attached to terminal No. 6 to indicate operation of No. 1 vacuum switch. Vacuum switch No. 2 is attached across terminals No. 6 and No. 5. The indicator light is attached to terminal No. 6 and will light if both vacuum switches are closed.

From terminal No. 5 current passes to pin No. 2 and No. 5 of the No. 2 timer. During the one minute purge period, the timer feeds power from pin No. 6 to the purge light and then switches current flow to pin No. 7 and will supply current to the high limit switch, if closed, to the high limit light and terminal No. 4.

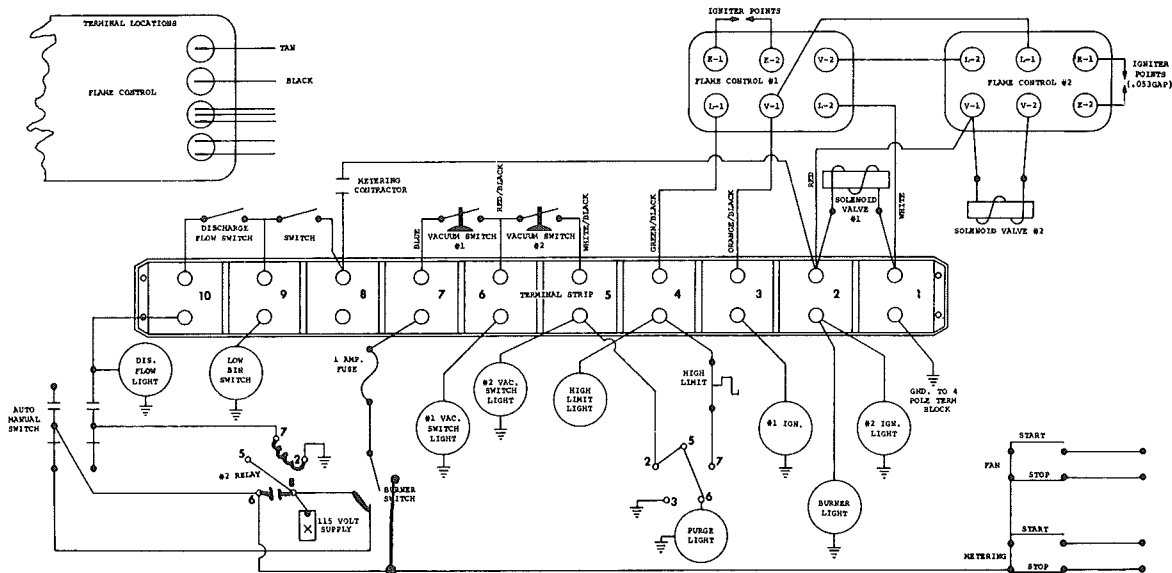
Flame Controller No. 1 is supplied power to terminals L1 and L2 from terminals No. 4 and No. 1, respectively. Terminals E1 and E2 of the Flame Controller are connected to the ignitor points by high tension leads. Terminals V1 and V2 of Flame Controller No. 1 supplies current to terminals L1 and L2 of Flame Controller No. 2, as indicated by No. 1 ignition light.

Terminals E1 and E2 of Flame Controller No. 2 supply the high voltage ignitor points No. 2 as those of Flame Controller No. 1. V1 of Flame Controller No. 2 supplies power to the solenoid valves, terminal

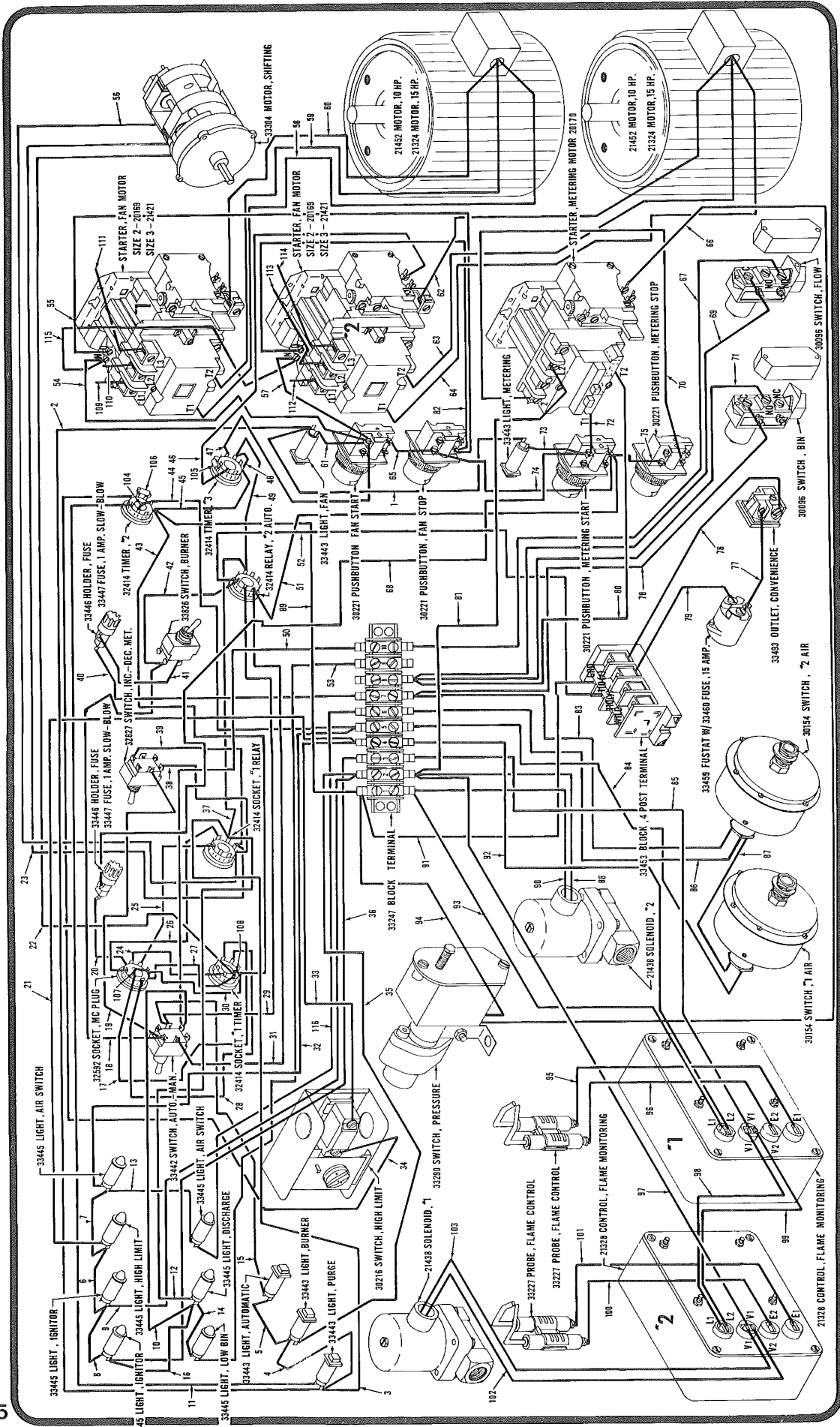
No. 2 and No. 2 ignition and burner lights. Terminal No. 1 provides the ground to solenoid valves No. 1 and terminal L2 of Flame Controller No. 1.

When flame circuit is complete, the wire attached to terminal No. 2 supplies current to the automatic circuit through the contact of the metering starter and terminal No. 8. From terminal No. 8 current flows to the N.O. terminal of the low bin switch and from the common of the bin switch to terminal No. 9. From terminal No. 9 a low bin indicator light is attached to indicate current flow through this switch. Also, from terminal No. 9 the discharge flow switch, when closed, completes the automatic circuit to terminal No. 10 indicated by the discharge flow switch, when closed, completes the automatic circuit to terminal No. 10, feeds power to the automatic side of the flow light. The automatic circuit, when complete to terminal No. 10, feeds power to the automatic side of the AUTOMATIC-MANUAL switch and at this time the dryer can be switched to AUTOMATIC. A ground wire is attached to the metering starter and hydrostatic transmission pressure switch and then to terminal No. 10.

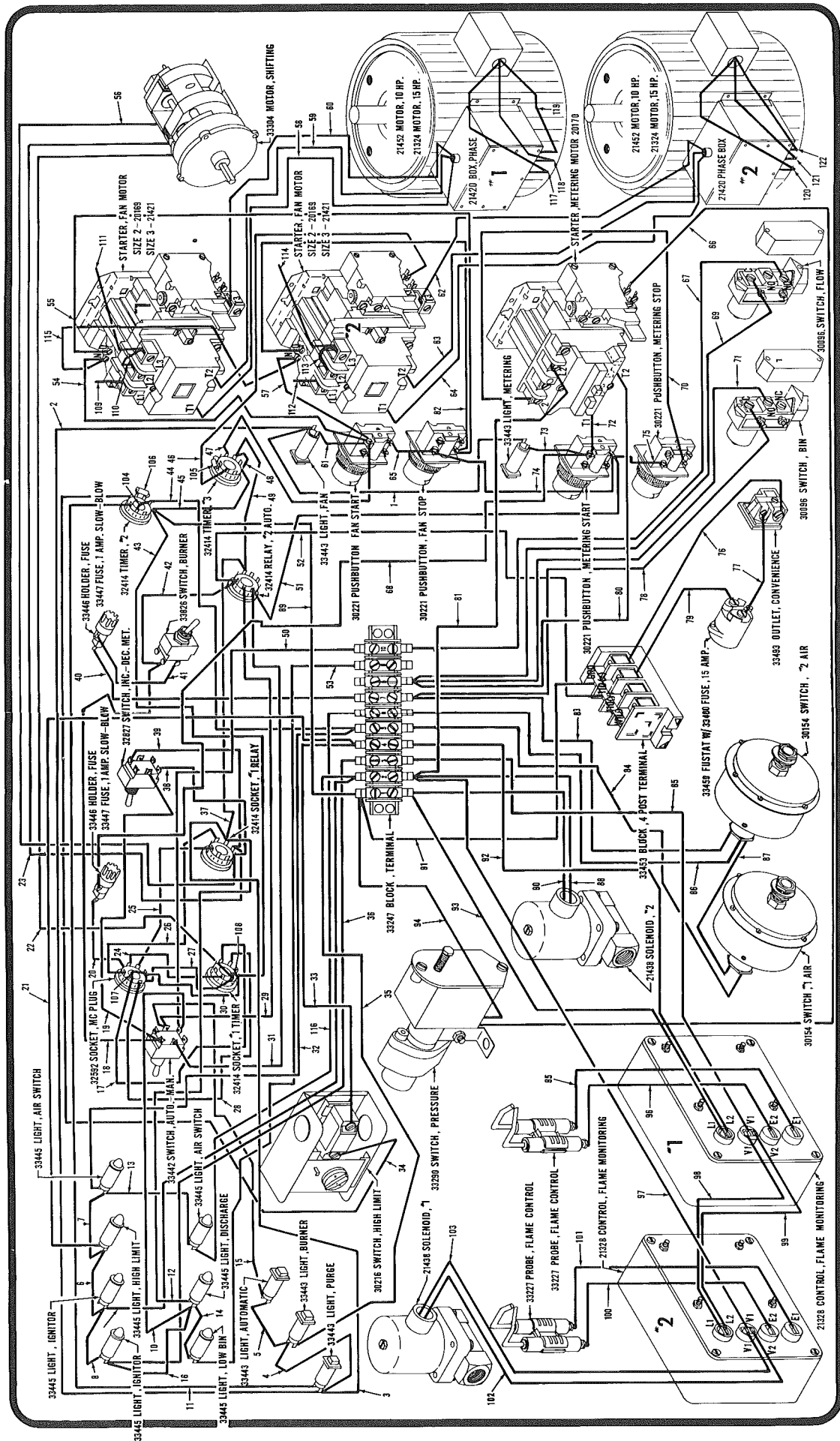
The AUTOMATIC-MANUAL switch is a make-before-break switch. Upon switching the AUTOMATIC-MANUAL switch, the AUTOMATIC contact closes before the MANUAL contact opens, providing a new power source through the AUTOMATIC circuit to the AUTOMATIC light and to pin No. 7 of relay No. 2. With the AUTOMATIC-MANUAL switch in the AUTOMATIC position, the MANUAL portion of the switch will open and the fan and metering circuit will now be connected in series with all of the safety controls. If there are any malfunctions sensed by the control components, the fan and metering systems will have their power supply interrupted, causing complete shut down of the electrical and fuel supply.



WIRING SCHEMATIC 10' 30"



# WIRING SCHEMATIC 10' 10





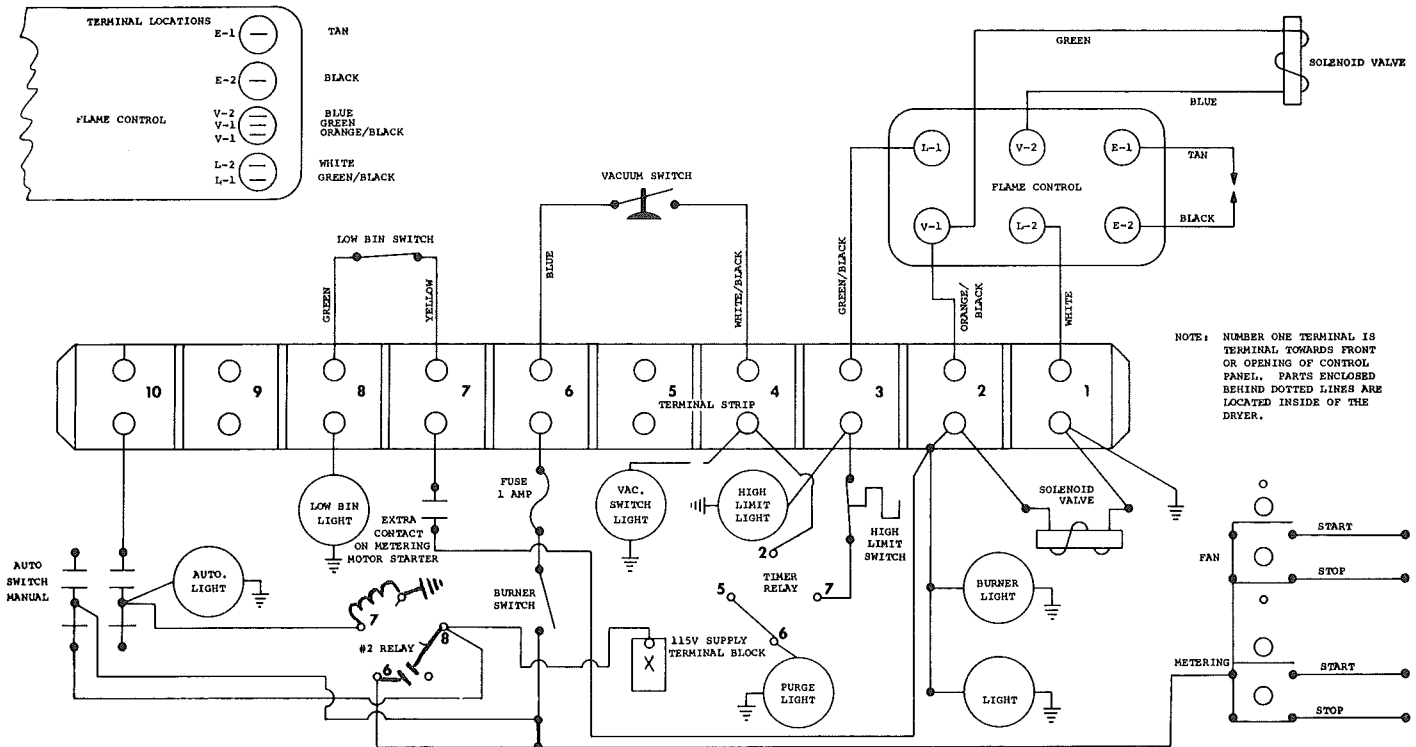
### CIRCUIT OUTLINE - 8'

The control circuit power supply is taken from the 4 pole terminal block at terminal "X". From this terminal 115 volts AC is fed to pin No. 8 of the No. 2 relay. From pin No. 8 of the No. 2 relay, current flows to the automatic-manual switch. At this point, 115 volts is supplied to the manual terminal of the automatic-manual switch. The power goes to the burner switch, on to pin No. 6 of No. 2 relay, to the metering and fan start-stop switches through No. 4 fuse. Returning to burner switch, closing burner switch will allow current to flow through No. 3 fuse to terminal No. 6 (blue) through the air switch (provided fan is running) to terminal No. 4 (black).

From No. 4 (black) terminal, current flows to pin No. 2 and No. 5 of the No. 2 timer from pin No. 2 on No. 2 timer; power goes to air switch light. The timer will delay current flow for approximately 60 seconds, during which time the purge light will glow. At the end of 60 seconds, the timer relay will make contact from pin No. 5 to pin No. 7 causing the current to flow through the high limit switch, if closed, to terminal No. 3 (green), from terminal No. 3 (green) to the high limit light and supplies power to terminal L1 of the Flame Controller. Terminal V1 of the Flame Controller will furnish power to operate the solenoids. Terminal No. 2 (orange) will also be energized and the burner

and ignition lights will light. Terminal No. 2 (orange) supplies power to terminal L2 on the metering motor starter, from terminal T2 on metering starter to terminal No. 7 (brown). Current flows from terminal No. 7 (brown) to the N.O. terminal of the low bin switch, when closed, to terminal No. 8 (pink), to the low bin light from terminal No. 8 (pink) to the bottom right on the automatic-manual switch. When switch is in automatic position current flows to pin No. 7 of No. 2 relay tripping the relay, current then flows to the automatic light. Current flows to pin No. 6 of the No. 2 relay and to the burner switch through No. 3 fuse then flows to terminal No. 6 (blue). Power is supplied to the air switch, back to No. 4 terminal (black). Operations will then continue automatically with machine in the automatic position.

The AUTOMATIC-MANUAL switch is a make-before-break switch. Upon switching the AUTOMATIC-MANUAL switch, the AUTOMATIC contact closes before the MANUAL contact opens, providing a new power source through the AUTOMATIC circuit. The MANUAL portion of the switch will open, and the fan and metering circuit will now be connected in series with all of the safety controls. If there are any malfunctions sensed by the control components, the fan and metering systems will have their power supply interrupted, causing complete shut down of the electrical and fuel supply.



### CIRCUIT OUTLINE - 10'

The control circuit power supply is taken from the 4 pole terminal block at terminal "X". From this terminal 115 volts AC is fed to pin No. 8 of the No. 2 relay.

From pin No. 8 of the No. 2 relay, current flows to the burner switch. At this point 115 volts is supplied to the MANUAL side of the AUTOMATIC-MANUAL switch, then to pin No. 6 of No. 2 relay, to the metering stop-start switches. By closing the burner switch it will allow current to flow through the 1 AMP fuse to terminal No. 7, through vacuum switch No. 1 (provided fan is running) to terminal No. 6. The vacuum switch light is attached to terminal No. 6 to indicate operation of No. 1 vacuum switch. Vacuum switch No. 2 is attached across terminals No. 6 and No. 5. The indicator light is attached to terminal No. 6 and will light if both vacuum switches are closed.

From terminal No. 5 current passes to pin No. 2 and No. 5 of the No. 2 timer. During the one minute purge period, the timer feeds power from pin No. 6 to the purge light and then switches current flow to pin No. 7 and will supply current to the high limit switch, if closed, to the high limit light and terminal No. 4.

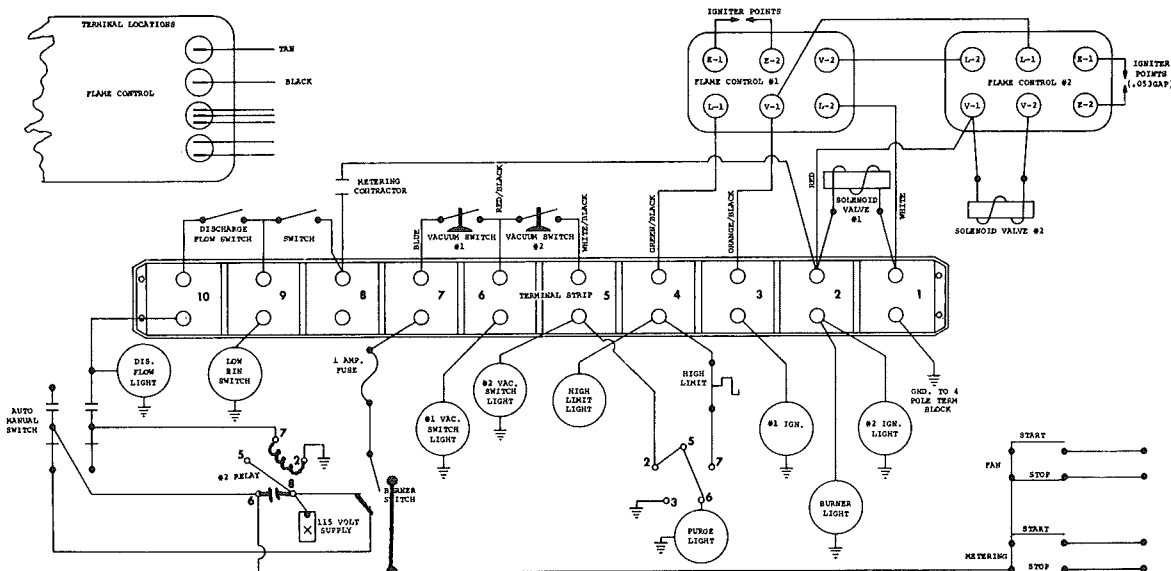
Flame Controller No. 1 is supplied power to terminals L1 and L2 from terminals No. 4 and No. 1, respectively. Terminals E1 and E2 of the Flame Controller are connected to the ignitor points by high tension leads. Terminals V1 and V2 of Flame Controller No. 1 supplies current to terminals L1 and L2 of Flame Controller No. 2, as indicated by No. 1 ignition light.

Terminals E1 and E2 of Flame Controller No. 2 supply the high voltage ignitor points No. 2 as those of Flame Controller No. 1. V1 of Flame Controller No. 2 supplies power to the solenoid valves, terminal

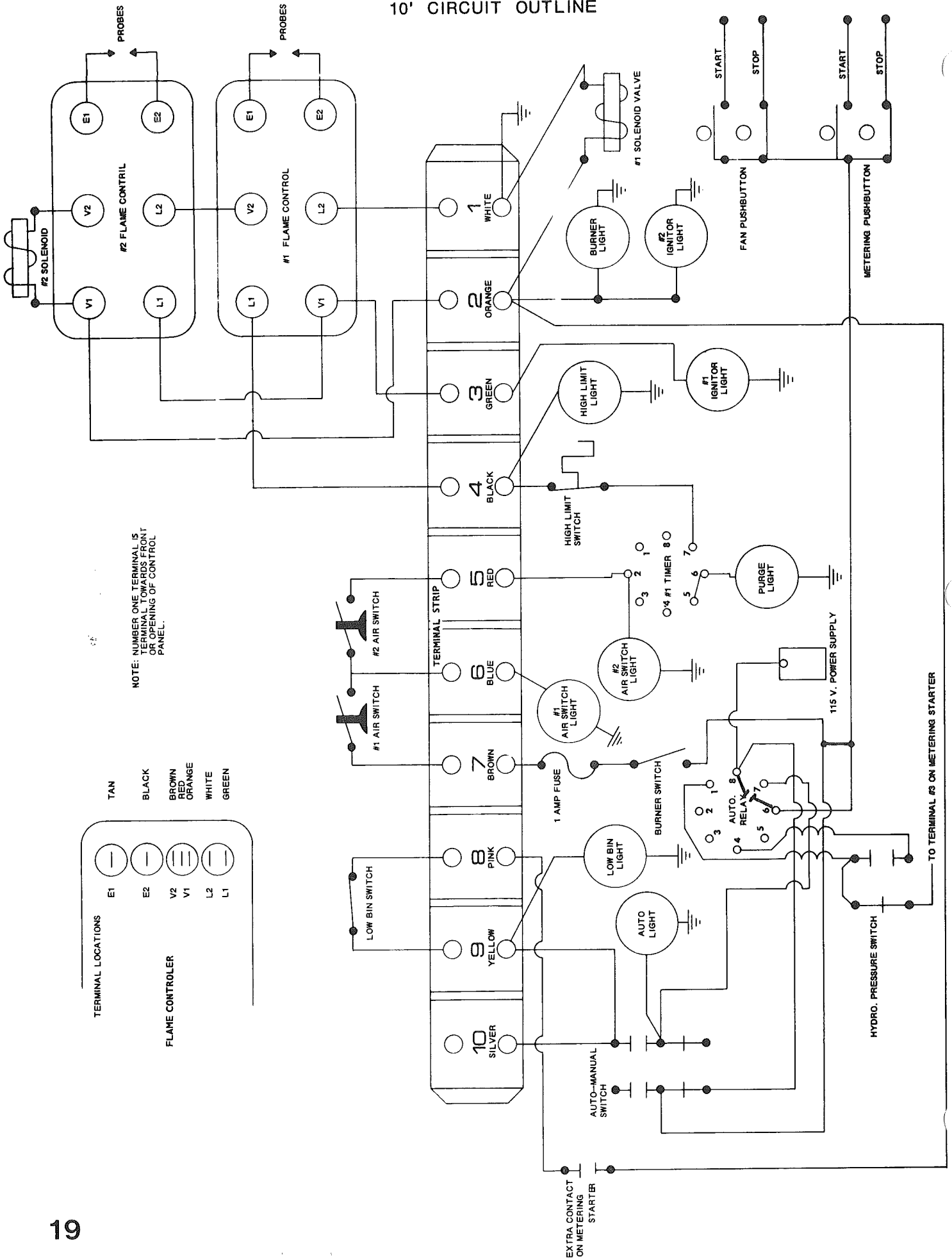
No. 2 and No. 2 ignition and burner lights. Terminal No. 1 provides the ground to solenoid valves No. 1 and terminal L2 of Flame Controller No. 1.

When flame circuit is complete, the wire attached to terminal No. 2 supplies current to the automatic circuit through the contact of the metering starter and terminal No. 8. From terminal No. 8 current flows to the N.O. terminal of the low bin switch and from the common of the bin switch to terminal No. 9. From terminal No. 9 a low bin indicator light is attached to indicate current flow through this switch. Also, from terminal No. 9 the discharge flow switch, when closed, completes the automatic circuit to terminal No. 10 indicated by the discharge flow switch, when closed, completes the automatic circuit to terminal No. 10, feeds power to the automatic side of the flow light. The automatic circuit, when complete to terminal No. 10, feeds power to the automatic side of the AUTOMATIC-MANUAL switch and at this time the dryer can be switched to AUTOMATIC. A ground wire is attached to the metering starter and hydrostatic transmission pressure switch and then to terminal No. 10.

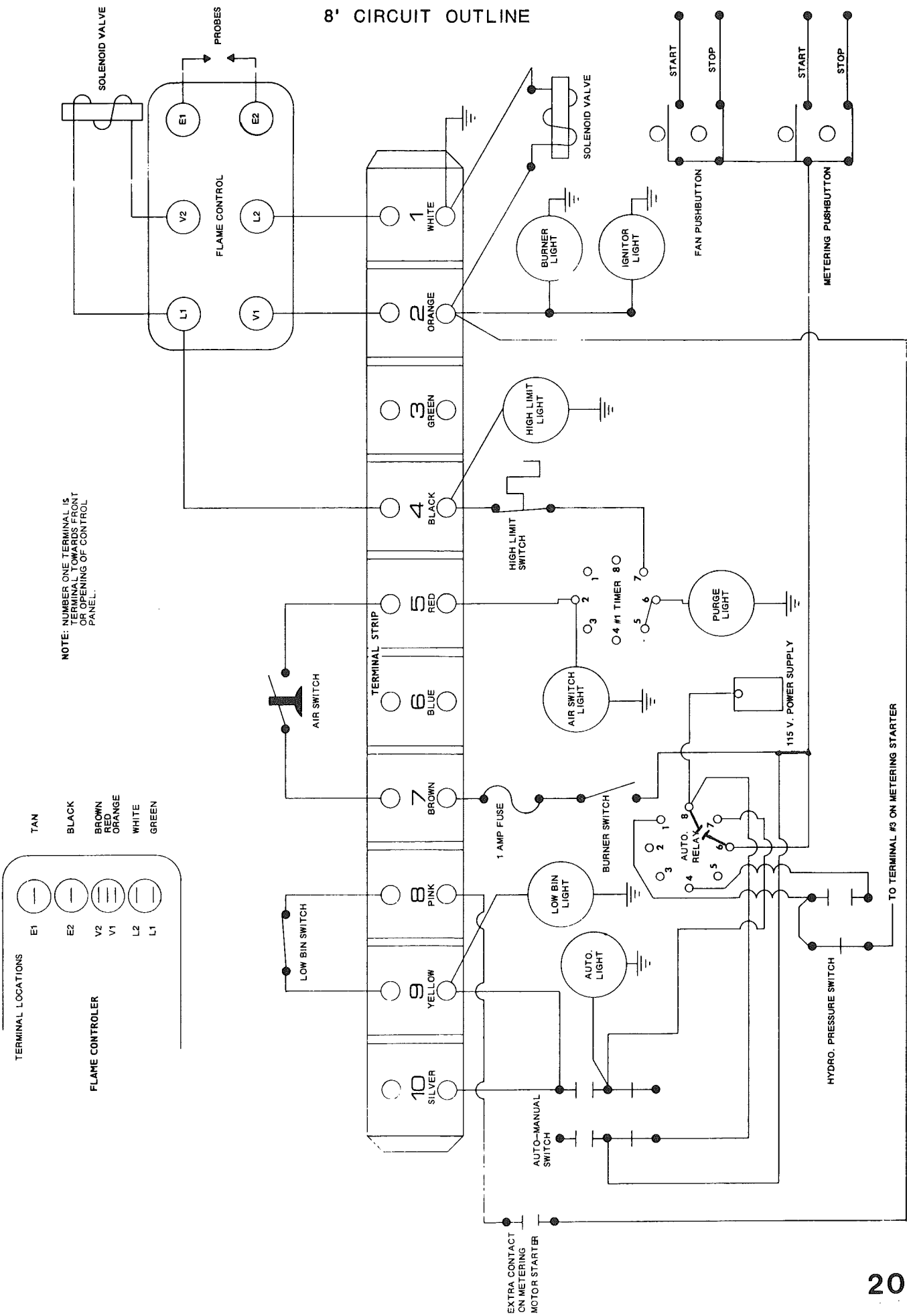
The AUTOMATIC-MANUAL switch is a make-before-break switch. Upon switching the AUTOMATIC-MANUAL switch, the AUTOMATIC contact closes before the MANUAL contact opens, providing a new power source through the AUTOMATIC circuit to the AUTOMATIC light and to pin No. 7 of relay No. 2. With the AUTOMATIC-MANUAL switch in the AUTOMATIC position, the MANUAL portion of the switch will open and the fan and metering circuit will now be connected in series with all of the safety controls. If there are any malfunctions sensed by the control components, the fan and metering systems will have their power supply interrupted, causing complete shut down of the electrical and fuel supply.



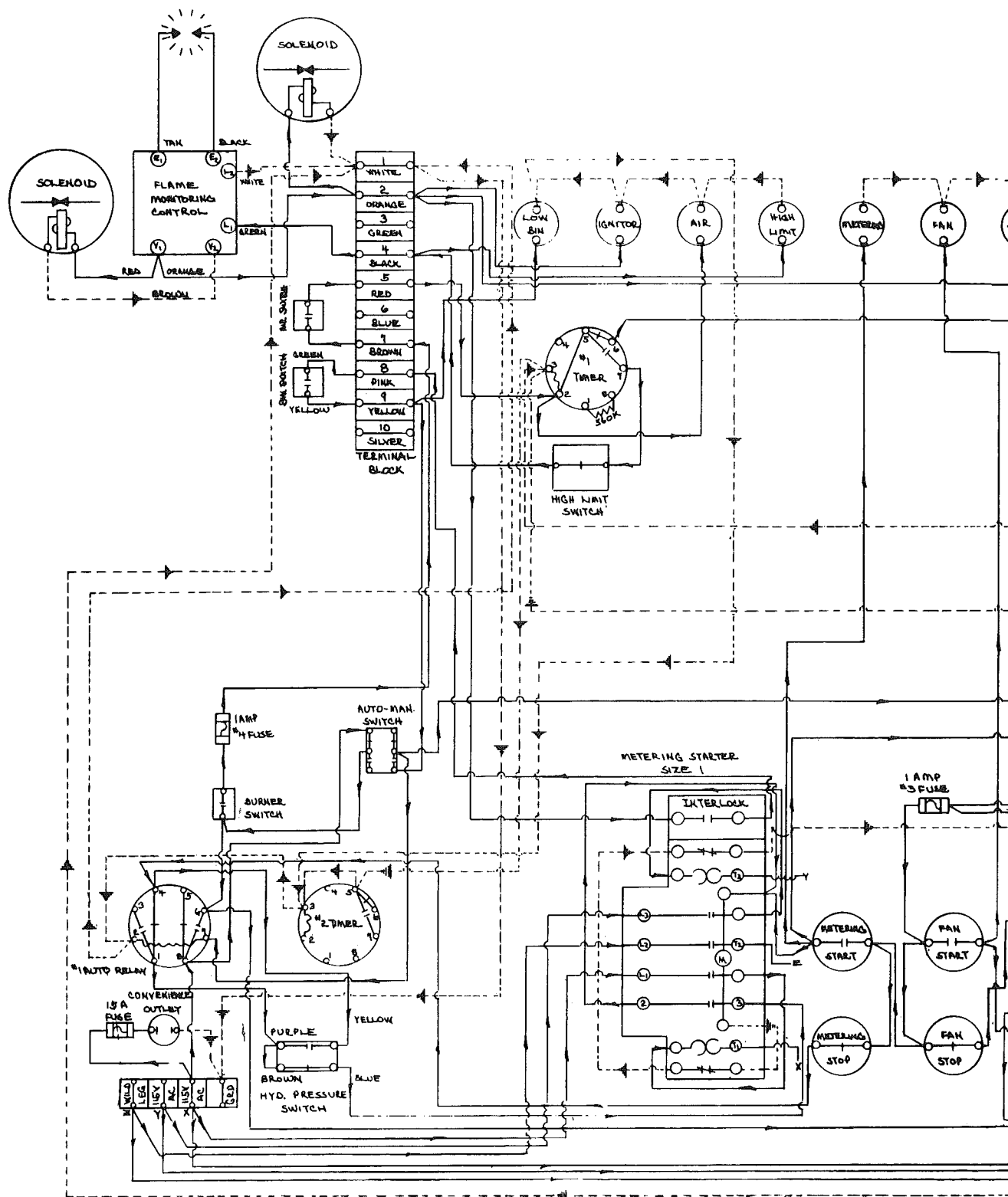
# 10' CIRCUIT OUTLINE

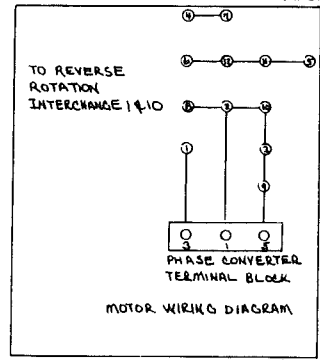
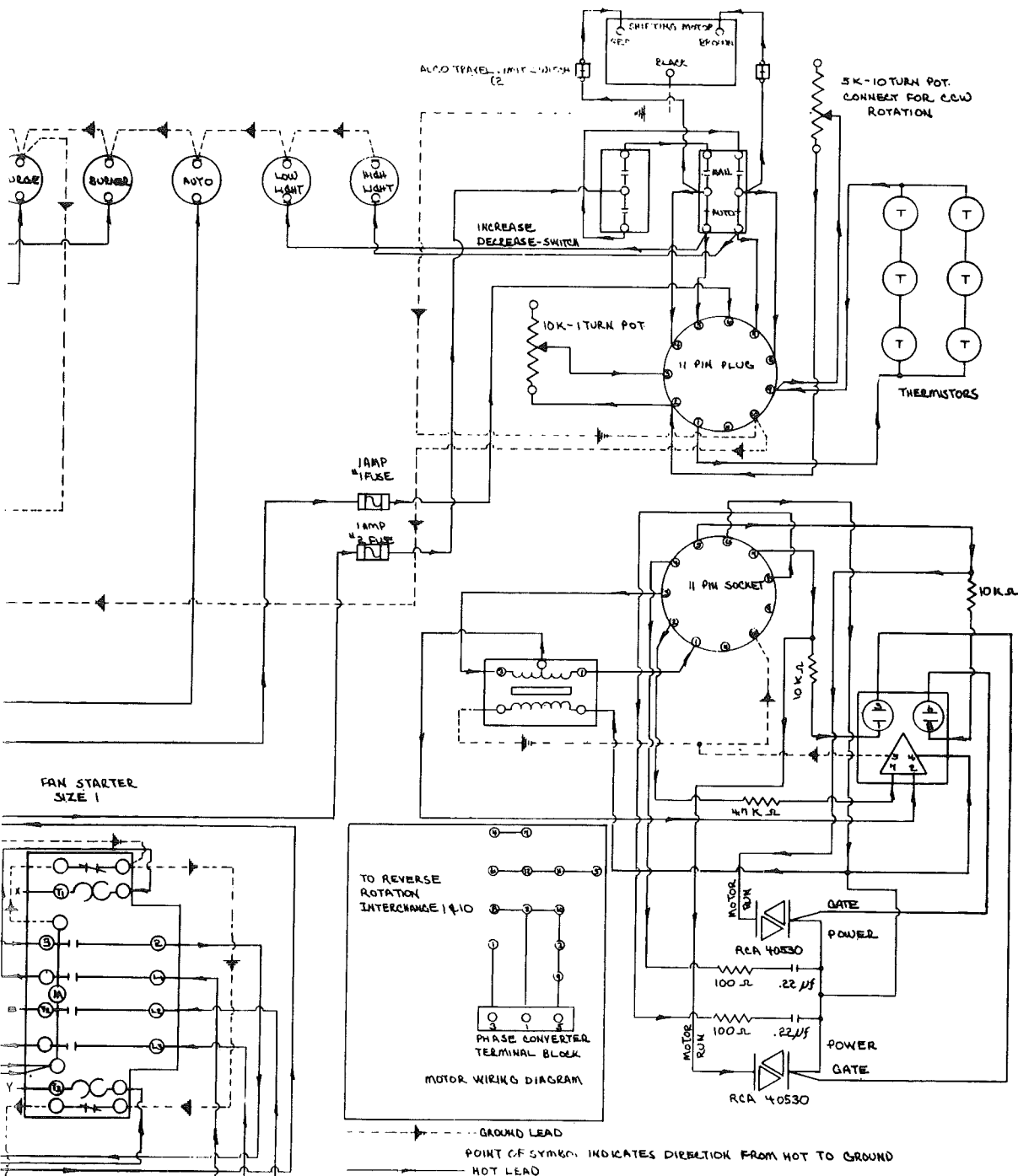


# 8' CIRCUIT OUTLINE

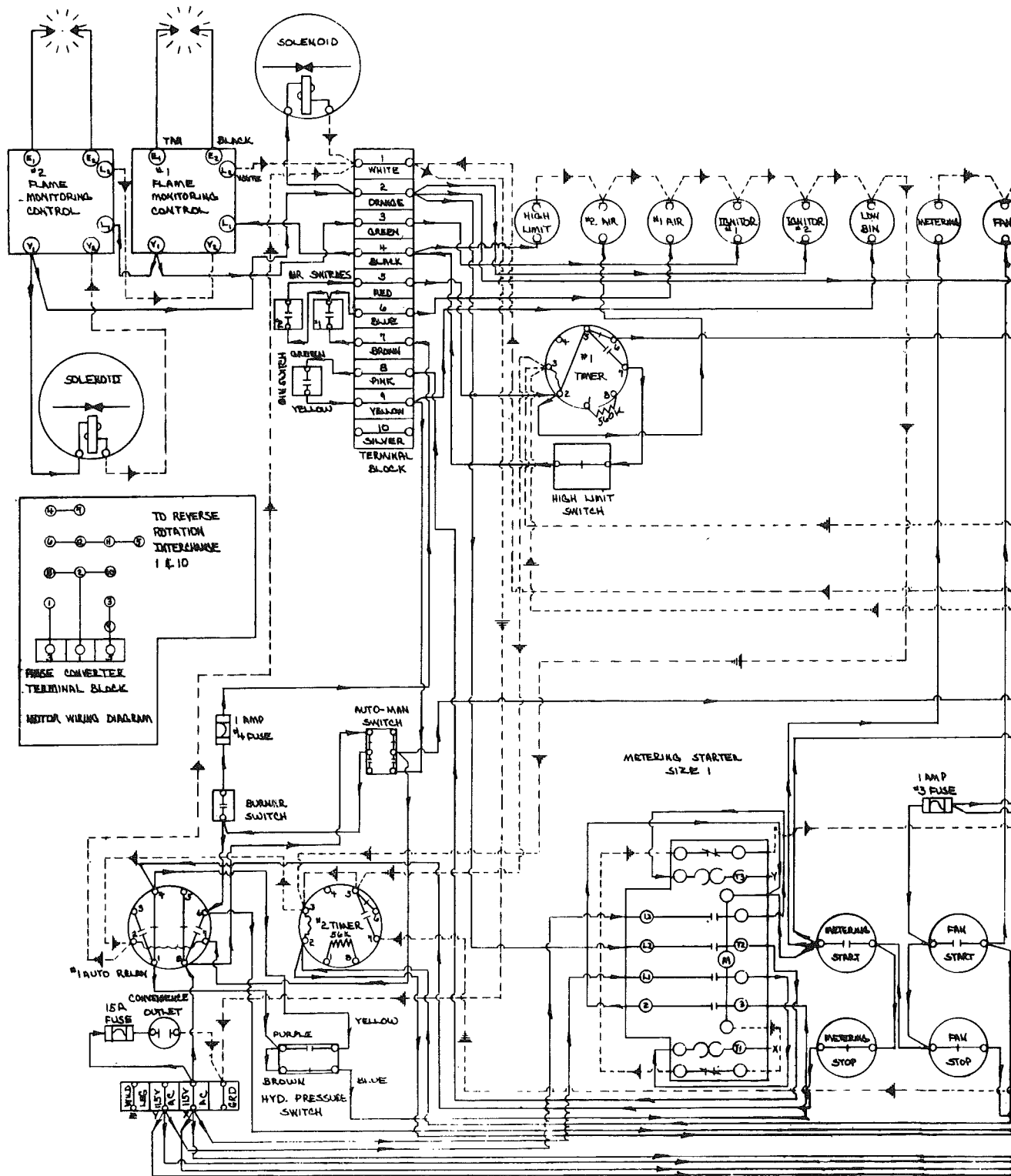




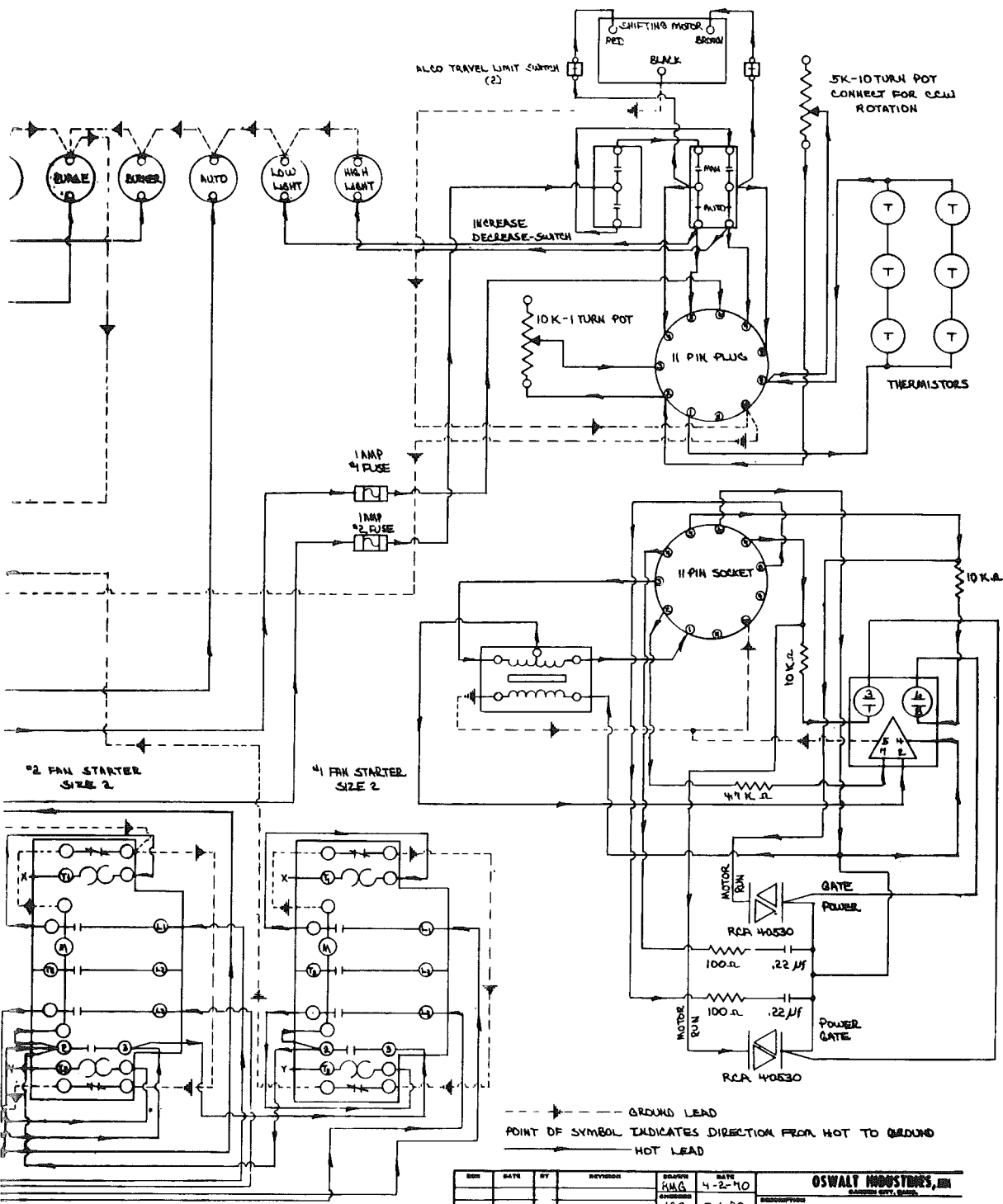




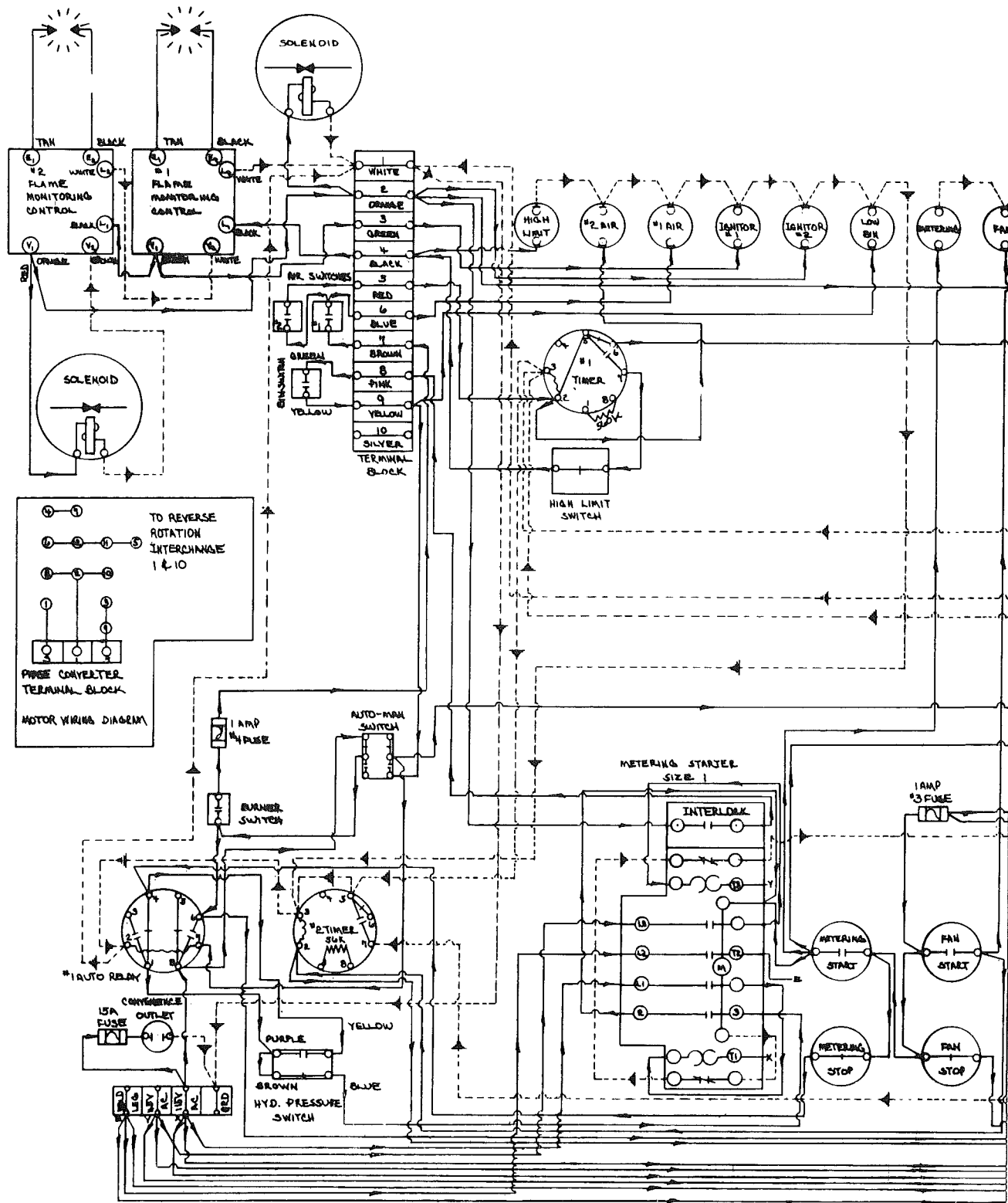
REV	DATE	BY	REVISION	DRAWN	DATE	OSWALT INDUSTRIES, INC.	
				RAK	4-21-70	GARDEN CITY, N.Y.	
				CHASCO	5-4-70	DESCRIPTION	
				JAB	5-5-70	WIRING DIAGRAM	
				SPR		RELATED TO	
				J111		1010 B P20 VAL-3B-10HP CROP DRYER	
				APPROVED		FIG. NO.	PART NO.
				2571		D	2186
				10K			

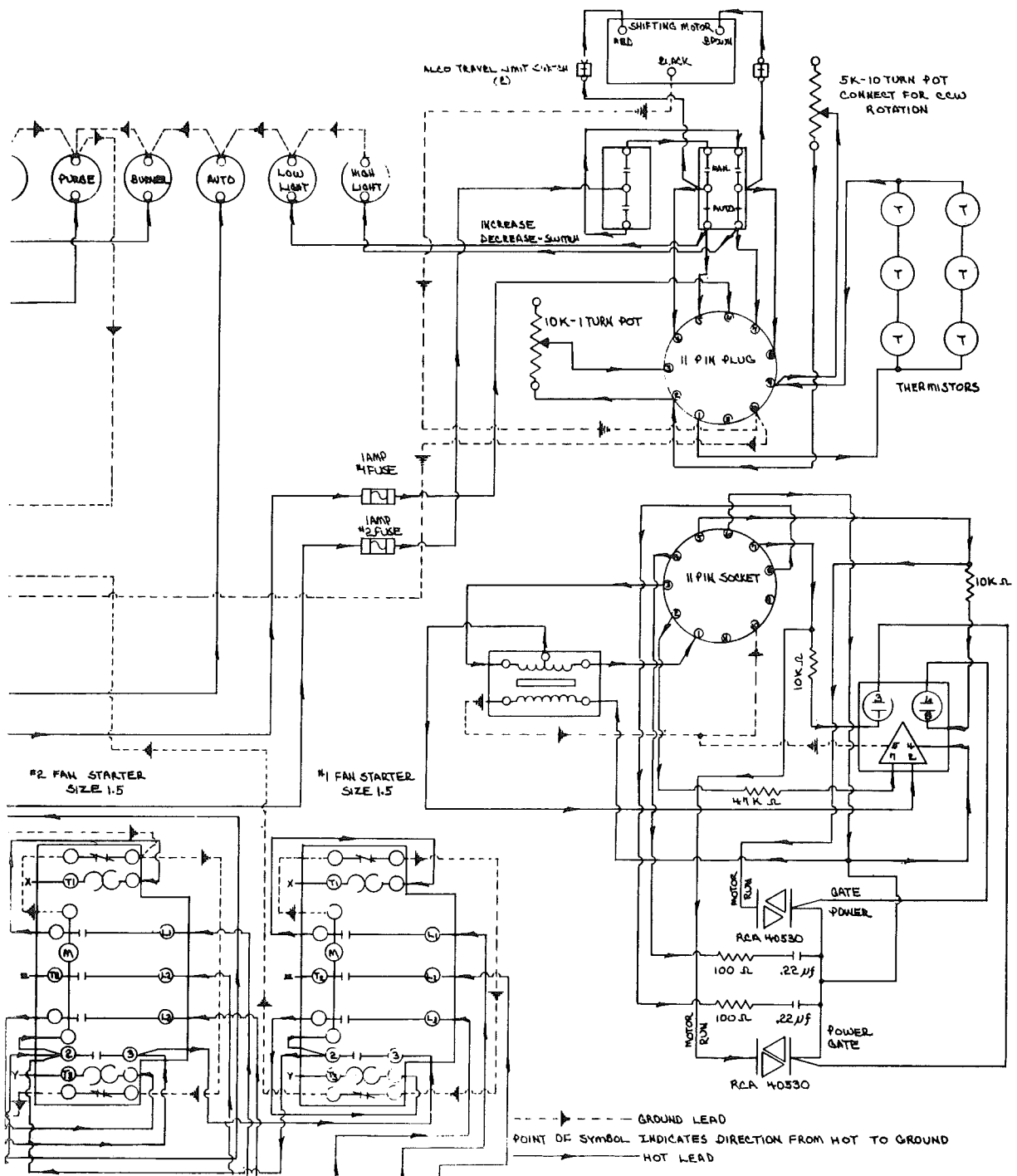






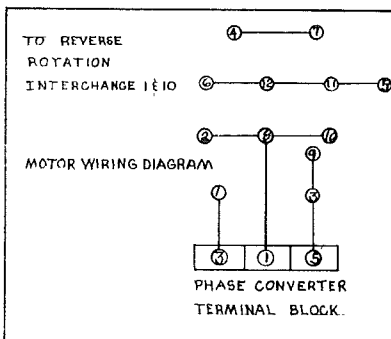
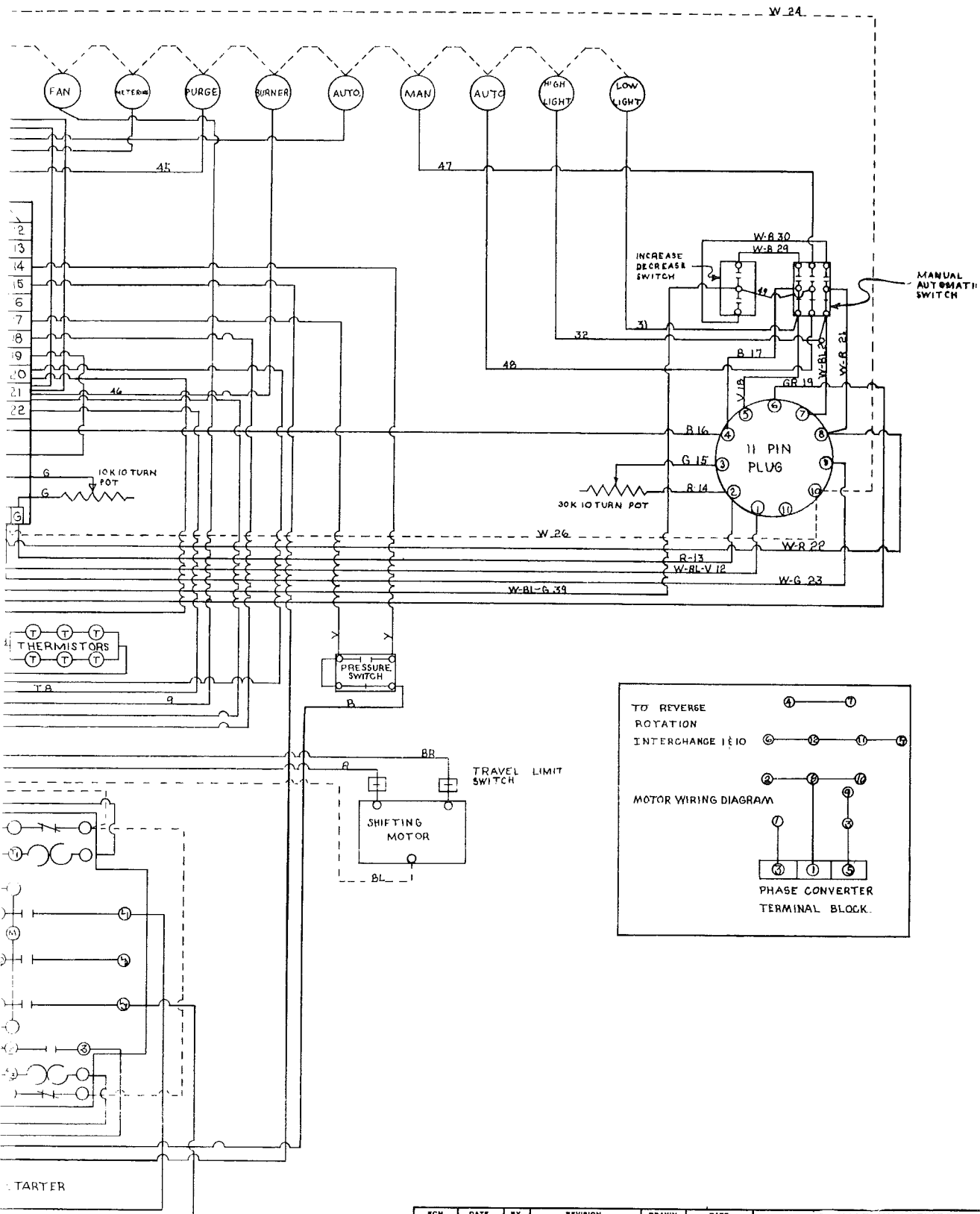
REV	DATE	BY	REVISION	DESIGNER	DATE	OSWALT INDUSTRIES, INC.
				SMG	4-2-70	OSWALT DIV., BOSTON
				JAB	5-4-70	DESCRIPTION
				JAB	5-5-70	WIRING DIAGRAM
				WHT		RELATED TO
				WHT		WID-10-220VAC 1Ø-1ØA 1Ø-1ØA LEAD CIRCUIT
				WHT		FIG. NO.
						21958





REV	DATE	BY	REVISION	DESIGNED	DATE	OSWALT INDUSTRIES, INC.
				RMS	4-3-70	GREENSBORO, N.C.
				CHECKED	5-4-70	WIRING DIAGRAM
				APP. FOR	5-5-70	DESIGNED BY
				DATE		1970-10-22 VOL. 3 Q. 15HP ENDP DRYER
				DATE		PAGE NO.
				DATE		PART NO.
				DATE		21890

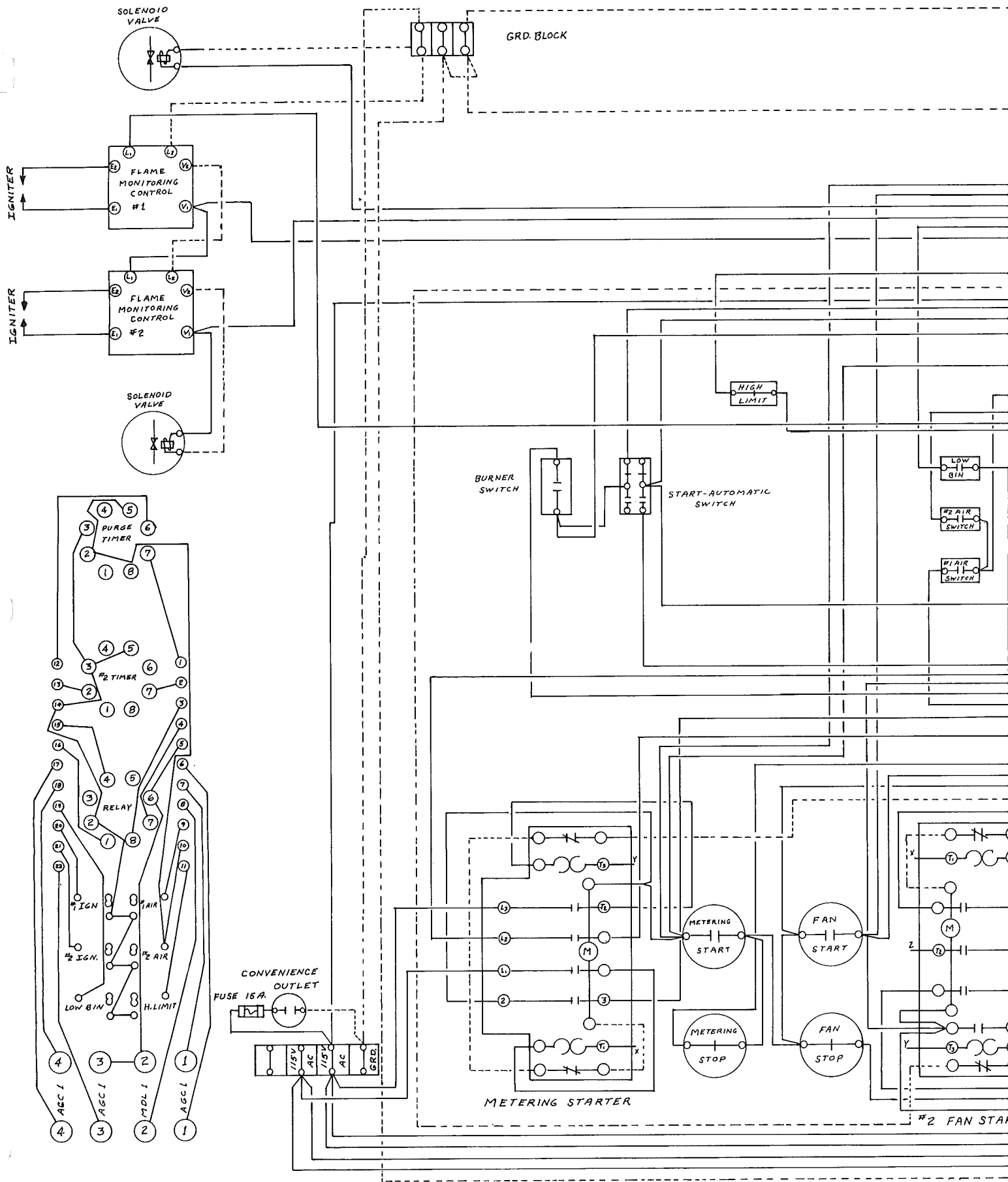


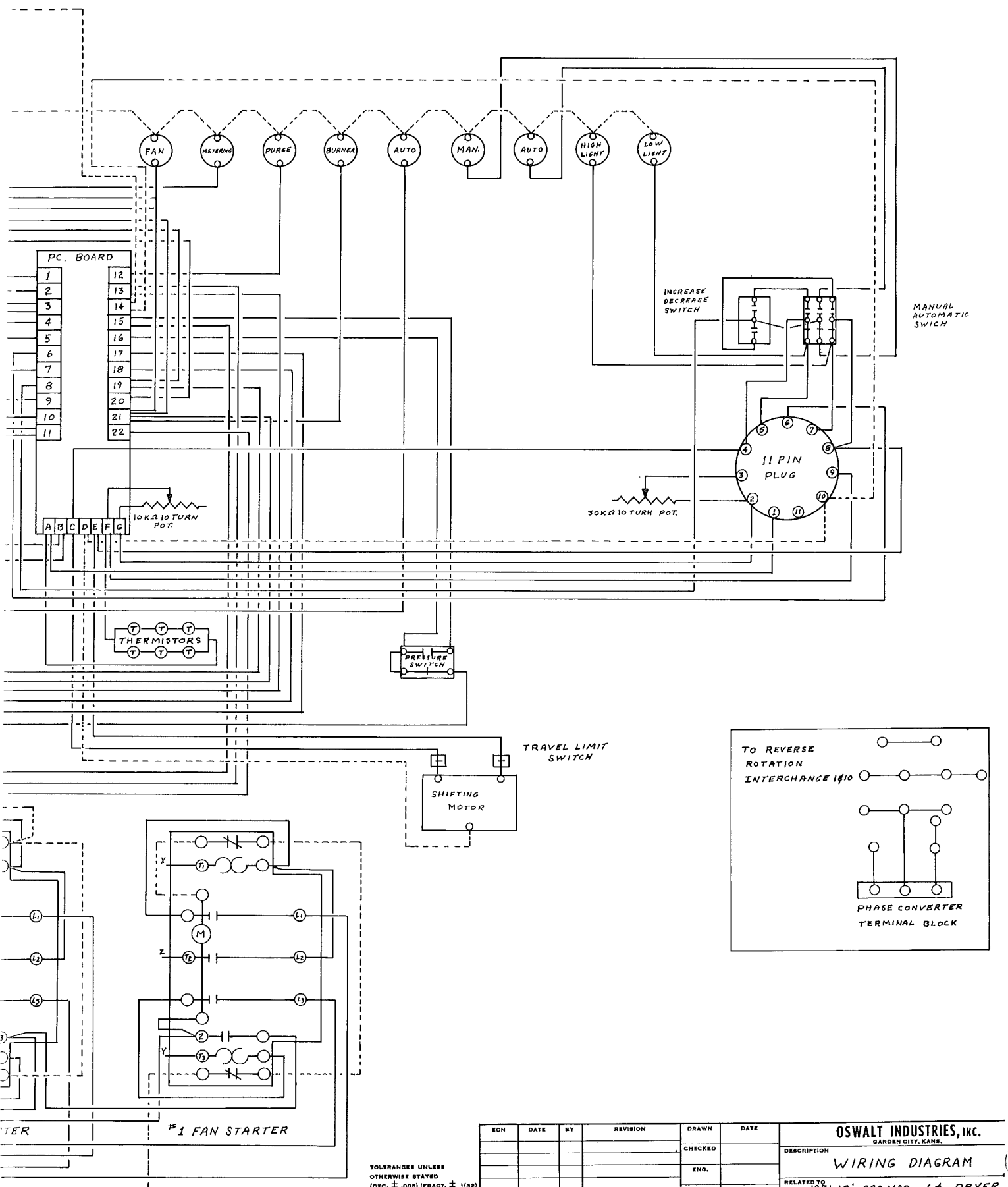


TOLERANCES UNLESS OTHERWISE STATED  
 (DEC. ± .008) (FRAC. ± 1/32)  
 (DEC. ± .2)

SCALE NONE

ECN	DATE	BY	REVISION	DRAWN	DATE	DESCRIPTION
				TDH	5-12-71	OSWALT INDUSTRIES, INC. GARDEN CITY, KANS.
				CHECKED		WIRING DIAGRAM
				ENG.		RELATED TO 1971-8' 220 VAC 18 CROP DRYER
				APPROVED		PROJ. NO. PART NO.
				MFG. ENG.		2233A



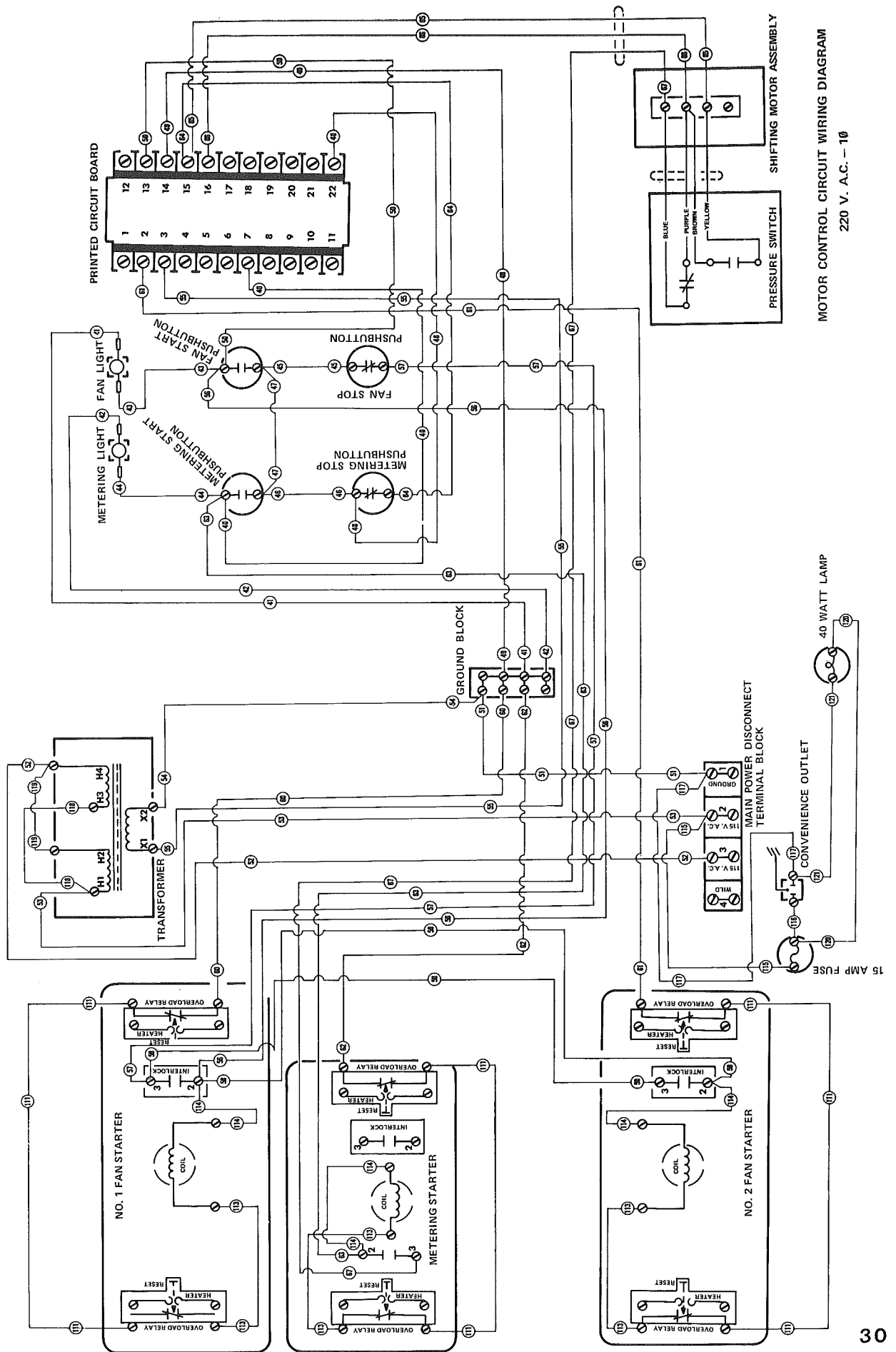


TOLERANCES UNLESS OTHERWISE STATED  
 (DEC. ± .008) (FRAC. ± 1/32)  
 (DEC. ± .2)

SCALE

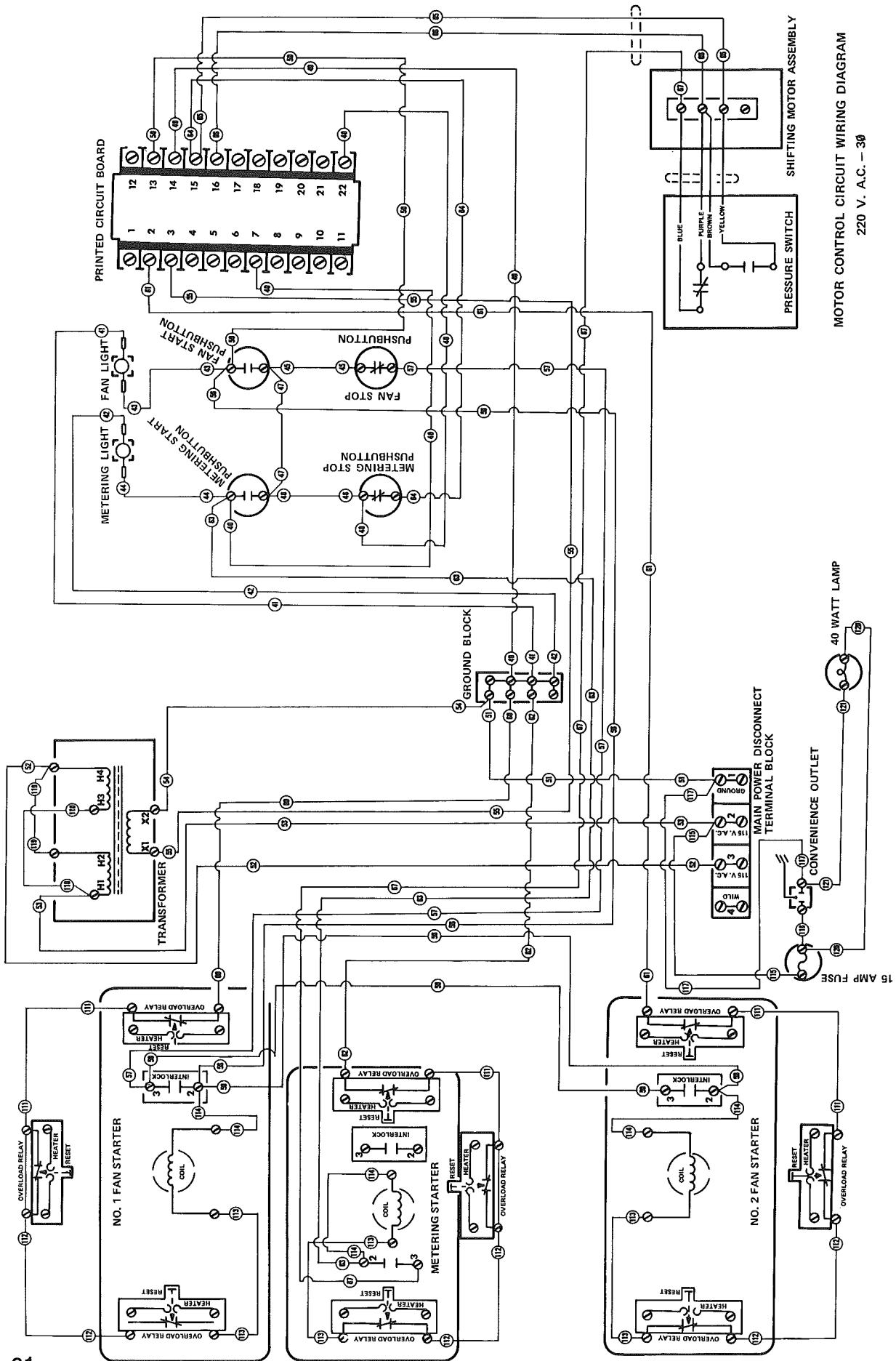
ECN	DATE	BY	REVISION	DRAWN	DATE
				CHECKED	
				ENG.	
				APPROVED	
				MFG. ENG.	

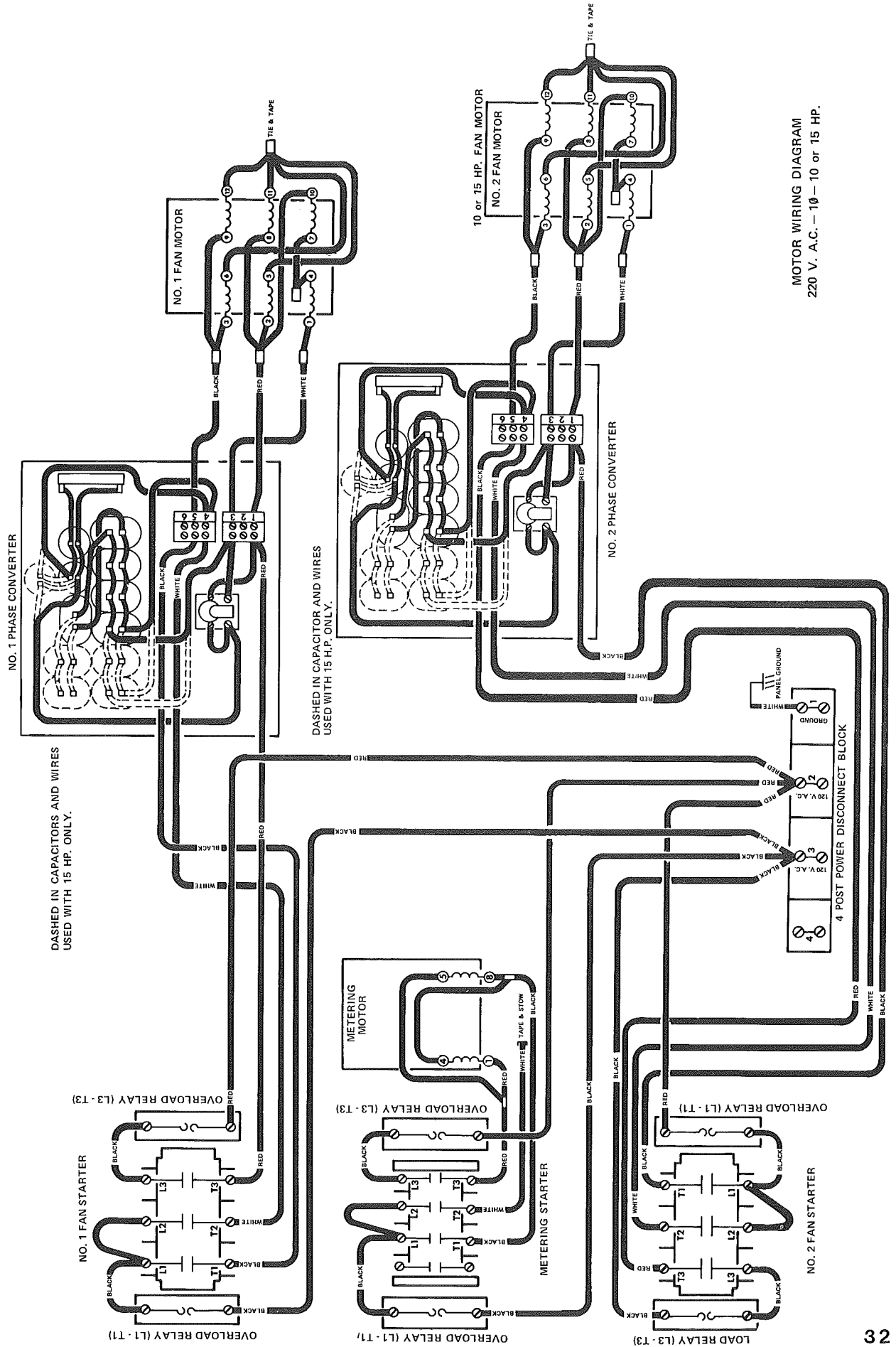
<b>OSWALT INDUSTRIES, INC.</b> GARDEN CITY, KANS.	
DESCRIPTION <b>WIRING DIAGRAM</b>	
RELATED TO 1971 10' 220 VAC 1φ DRYER	PROJ. NO.
REV. NO. D	PART NO. 22336



MOTOR CONTROL CIRCUIT WIRING DIAGRAM  
220 V. A.C. - 1Ø



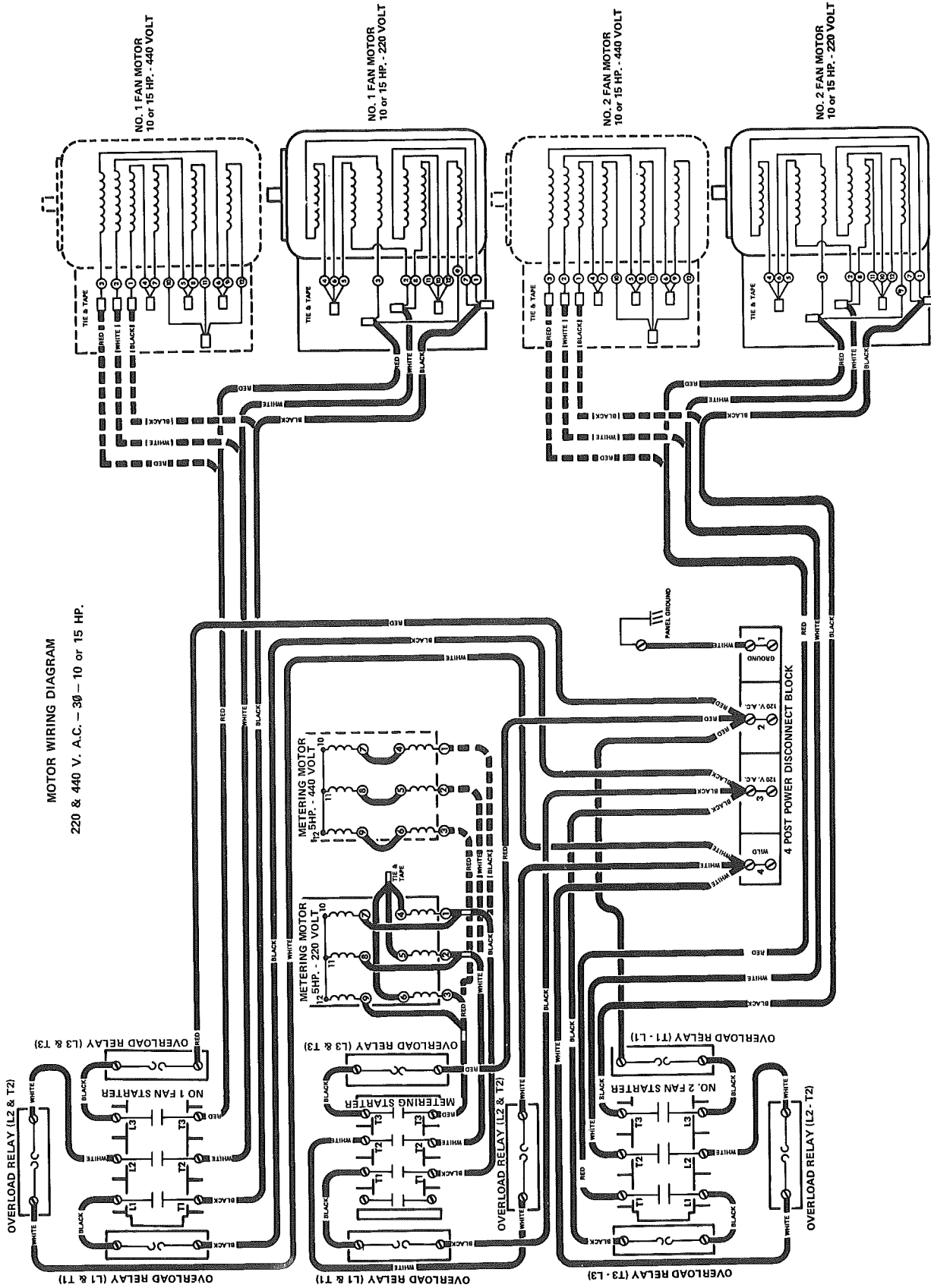




MOTOR WIRING DIAGRAM  
220 V. A.C. - 10 - 10 or 15 HP.

MOTOR WIRING DIAGRAM

220 & 440 V. A.C. - 3Ø - 1Ø or 15 HP.



NO. 1 FAN MOTOR  
10 or 15 HP. - 220 VOLT

NO. 1 FAN MOTOR  
10 or 15 HP. - 220 VOLT

NO. 2 FAN MOTOR  
10 or 15 HP. - 440 VOLT

NO. 2 FAN MOTOR  
10 or 15 HP. - 220 VOLT

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

NO. 1 FAN STARTER

OVERLOAD RELAY (L3 & T3)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

METERING MOTOR

NO. 2 FAN STARTER

OVERLOAD RELAY (L3 & T3)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

OVERLOAD RELAY (L3 & T3)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

OVERLOAD RELAY (L3 & T3)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

OVERLOAD RELAY (L3 & T3)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

OVERLOAD RELAY (L2 & T2)

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OVERLOAD RELAY (L3 & T3)

OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

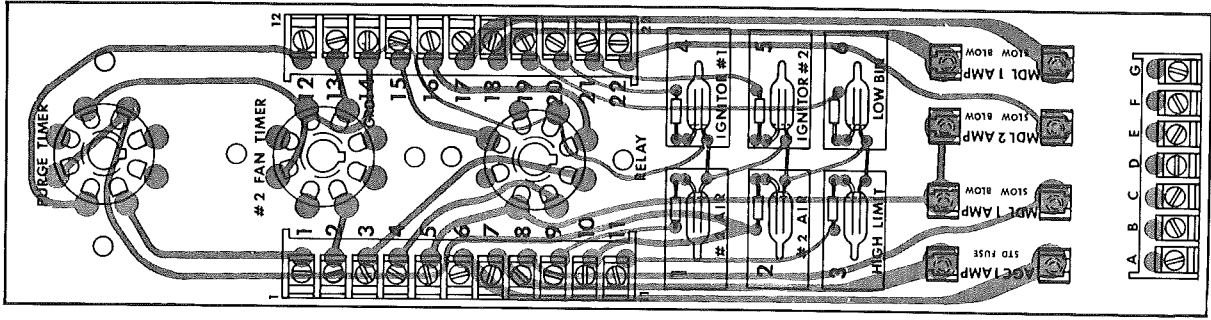
OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

OVERLOAD RELAY (L3 & T3)

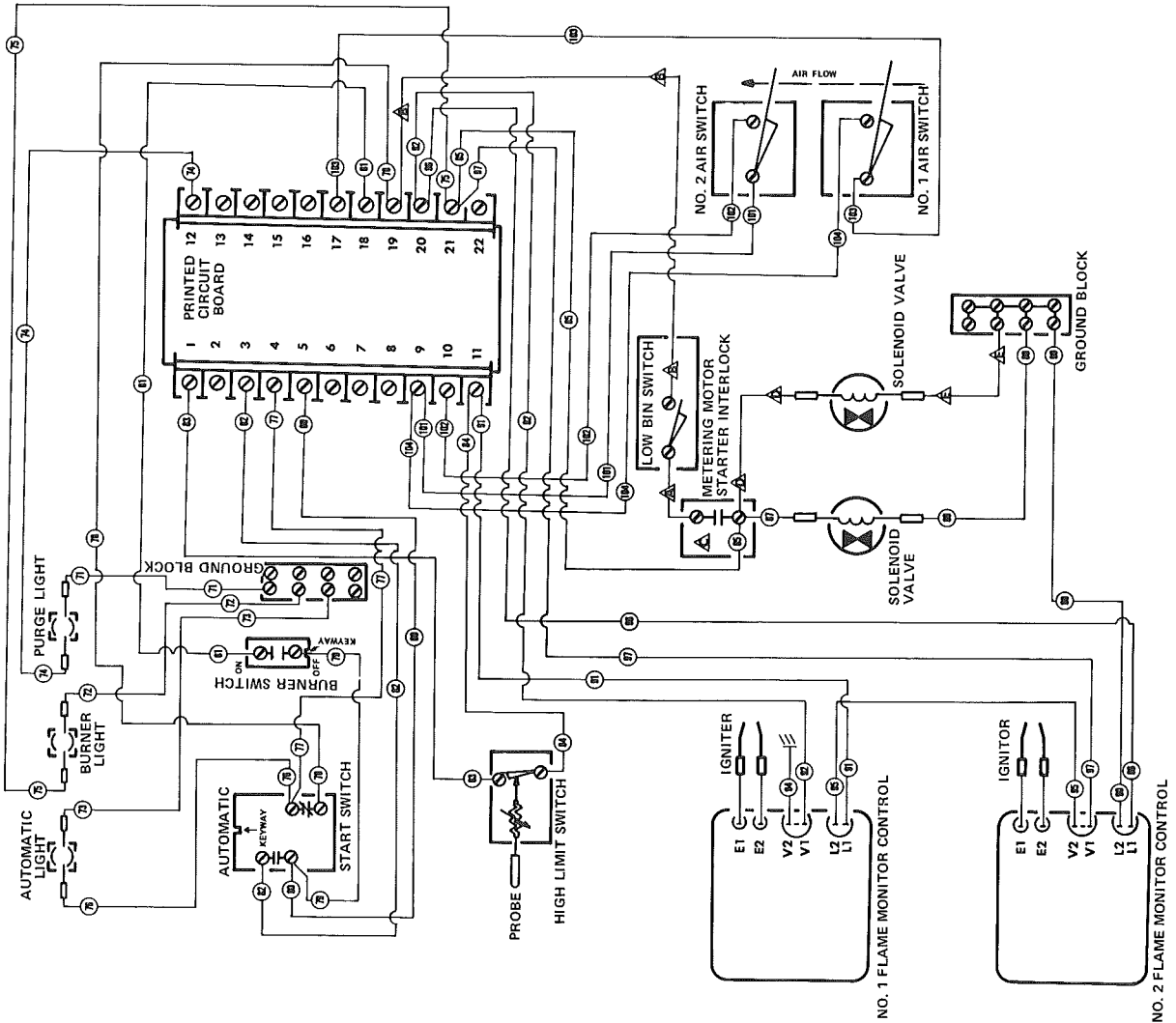
OVERLOAD RELAY (L2 & T2)

OVERLOAD RELAY (L1 & T1)

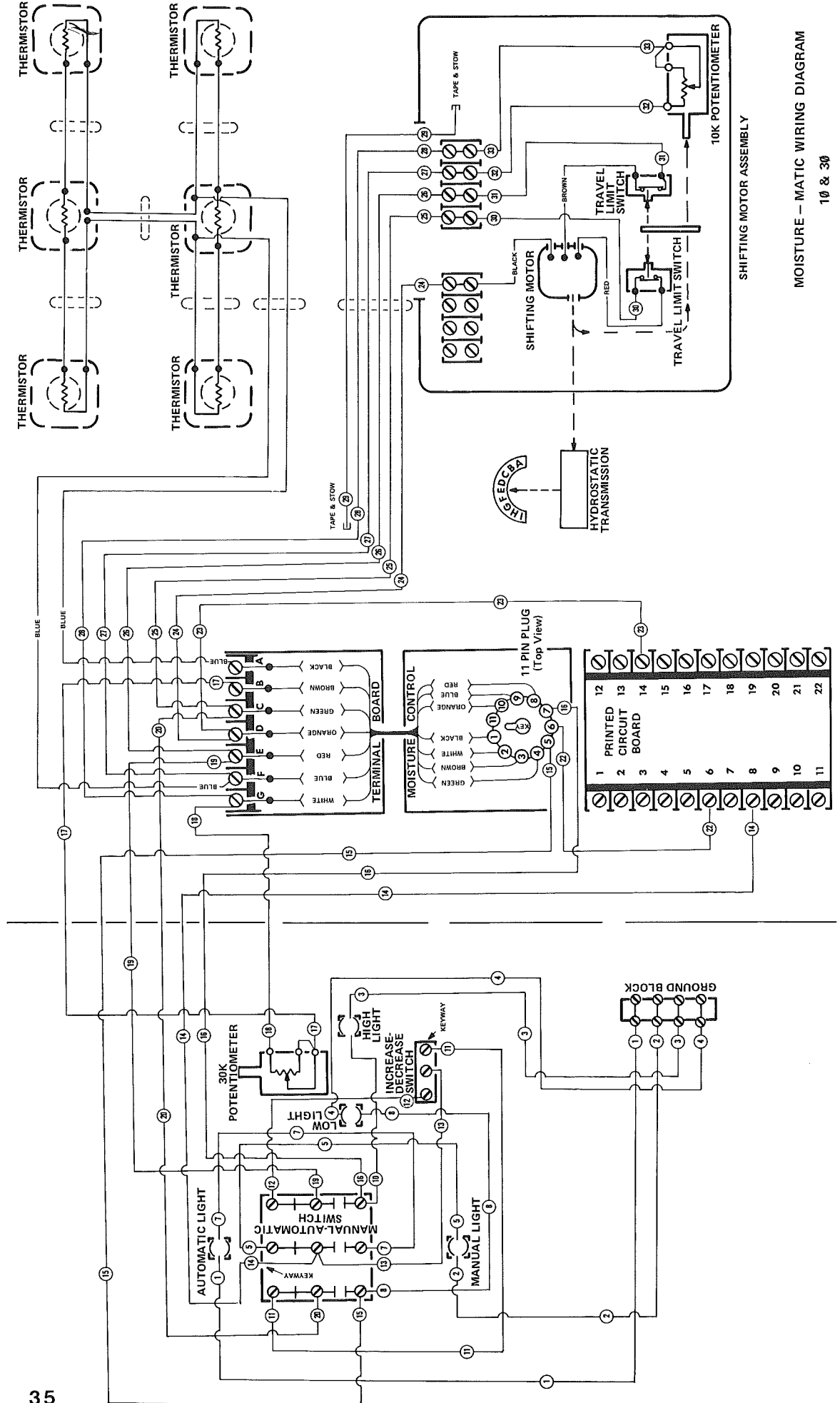


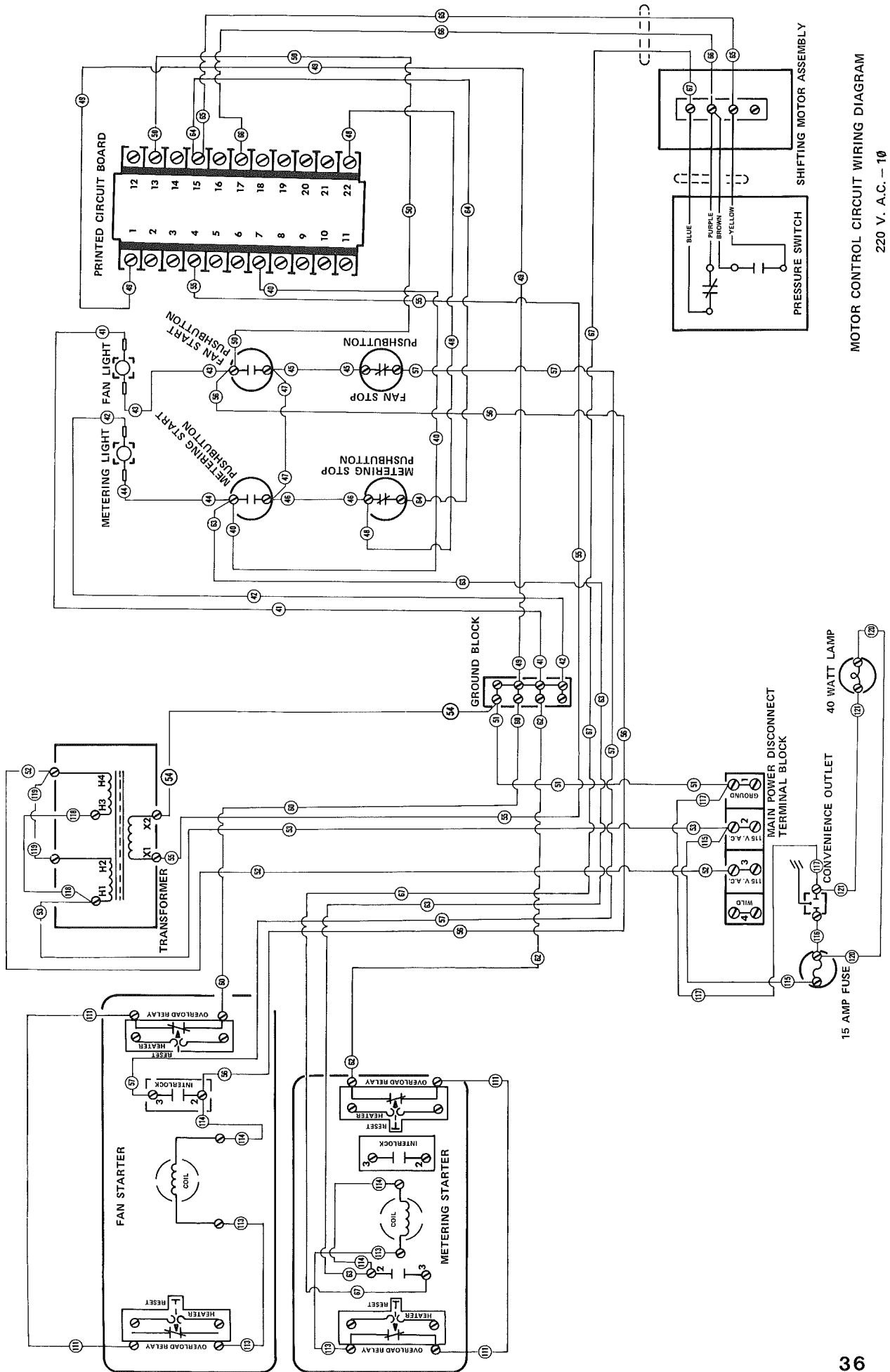
BURNER CONTROL CIRCUIT WIRING DIAGRAM

10 & 30

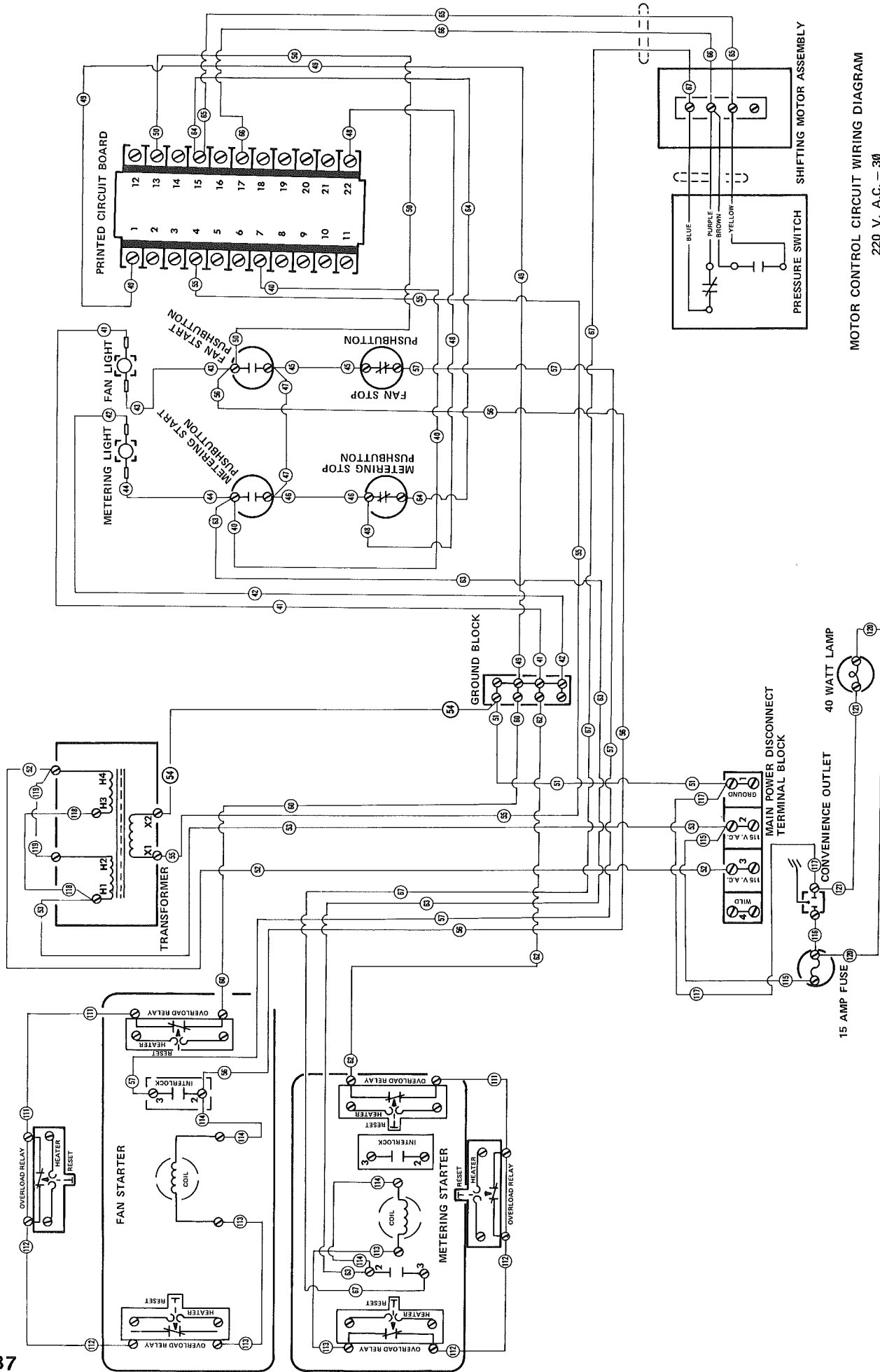


- A** WIRE CODE FOR 8-15 (99) 8-17 (105) 10-21 (107) 10-25 (110)
- B** WIRE CODE FOR 8-15 (100) 8-17 (106) 10-21 (108) 10-25 (109)
- C** REFER TO POWER WIRE CONTROL DIAGRAM FOR COMPLETE WIRE INTERFACE OF STARTER.
- D** WIRE CODE (86) FOR L.P. DRYER
- E** WIRE CODE (130) FOR N.G. DRYER
- F** WIRE CODE (88) FOR L.P. DRYER
- G** WIRE CODE (131) FOR N.G. DRYER

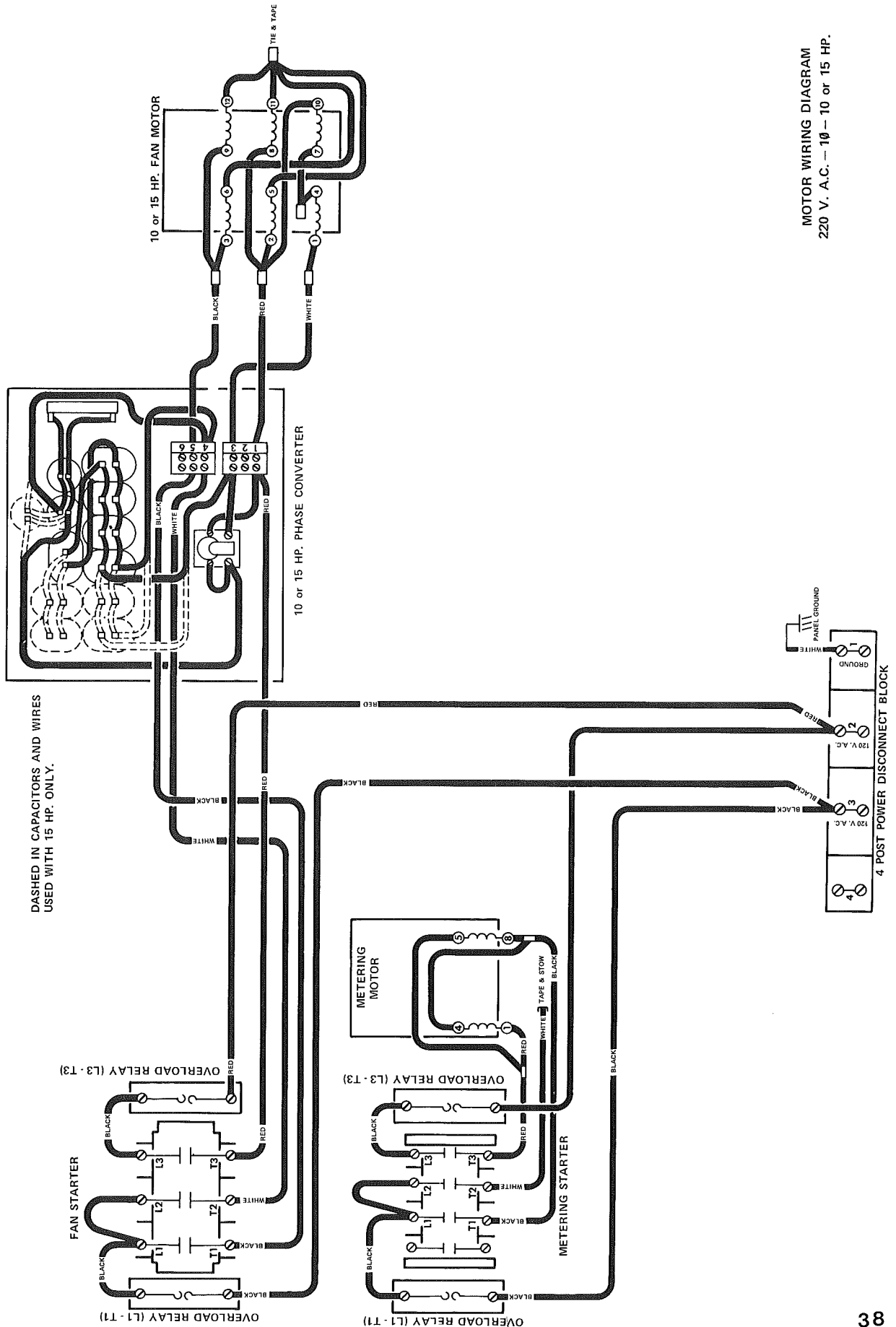




MOTOR CONTROL CIRCUIT WIRING DIAGRAM  
220 V. A.C. - 1Ø

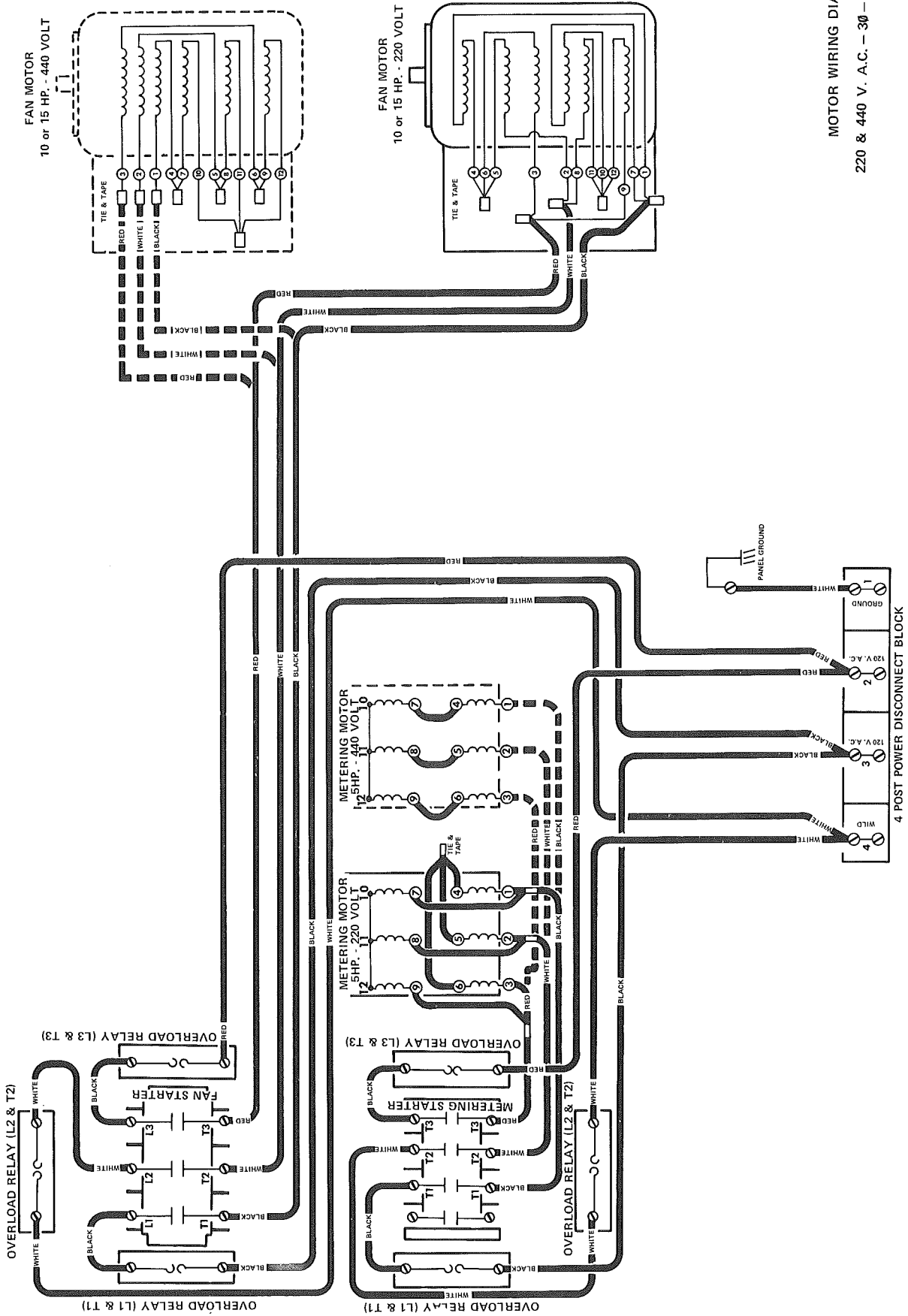


MOTOR CONTROL CIRCUIT WIRING DIAGRAM  
220 V. A.C. - 3Ø



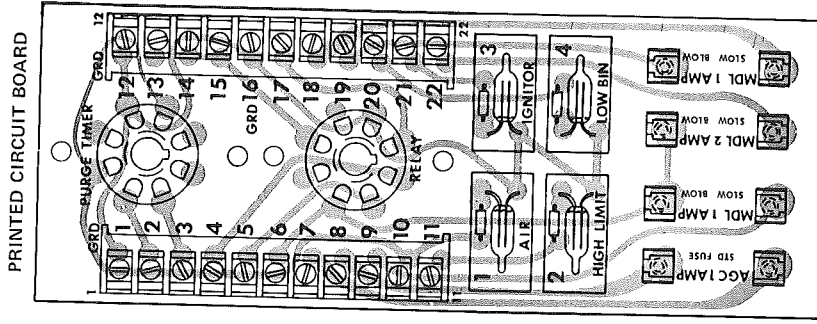
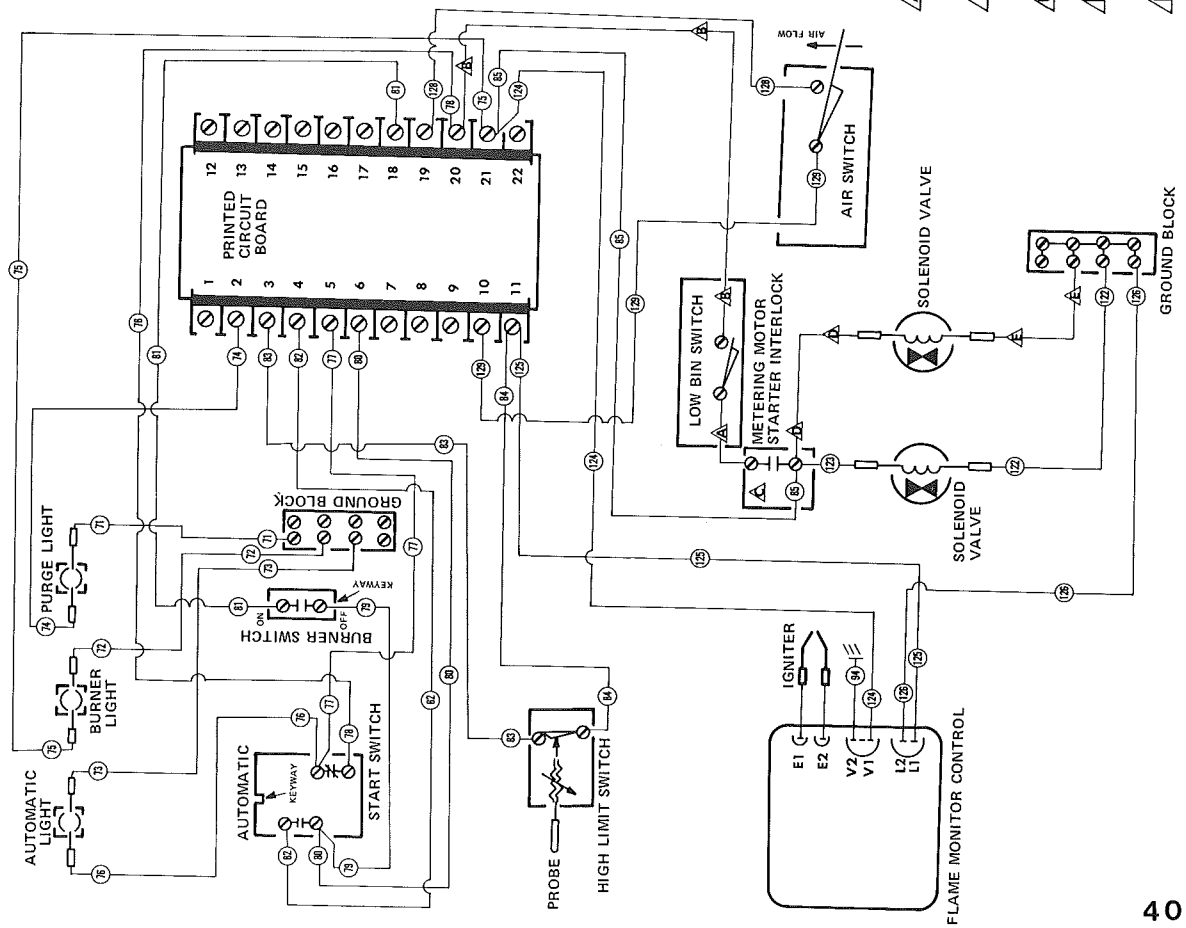
MOTOR WIRING DIAGRAM  
220 V. A.C. — 10 — 10 or 15 HP.



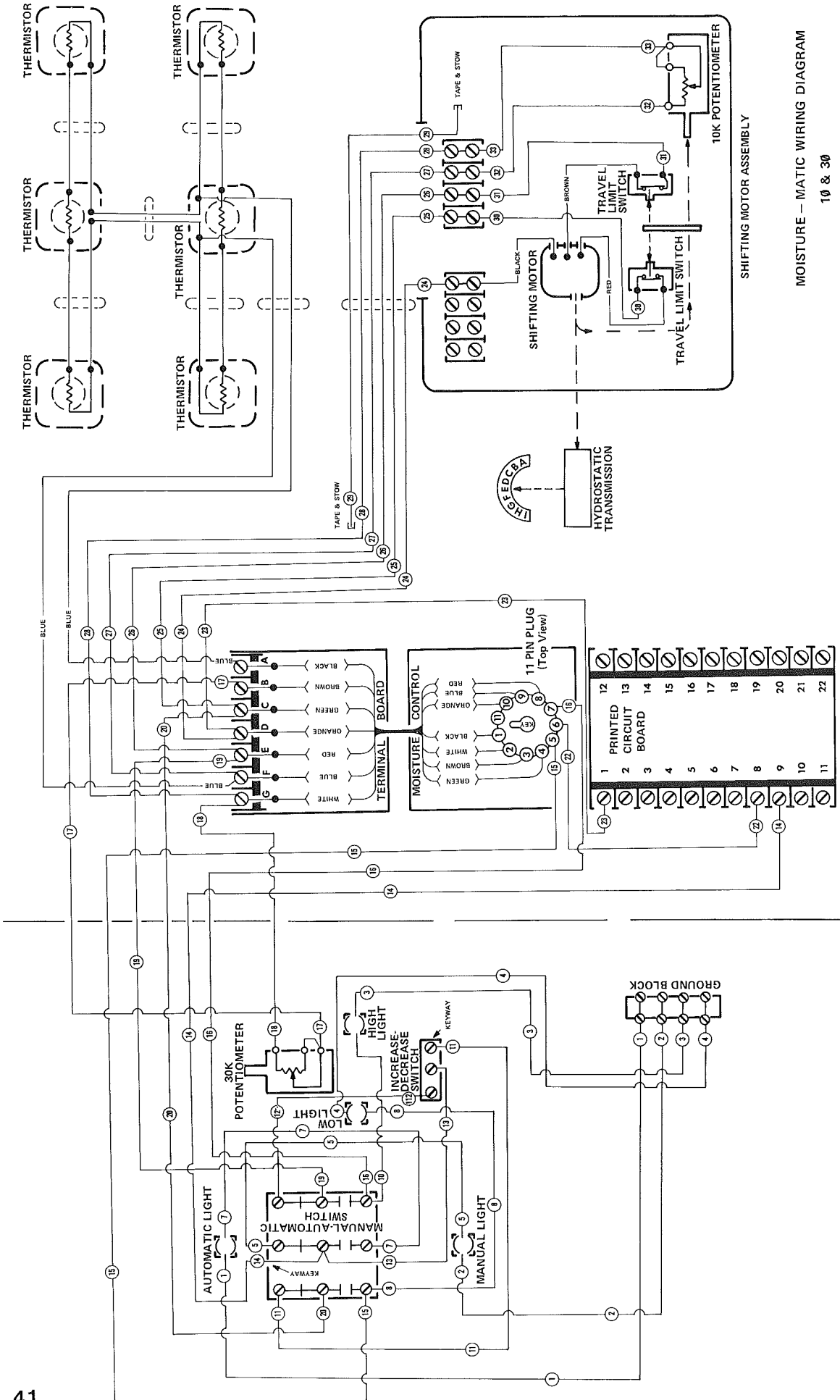


MOTOR WIRING DIAGRAM

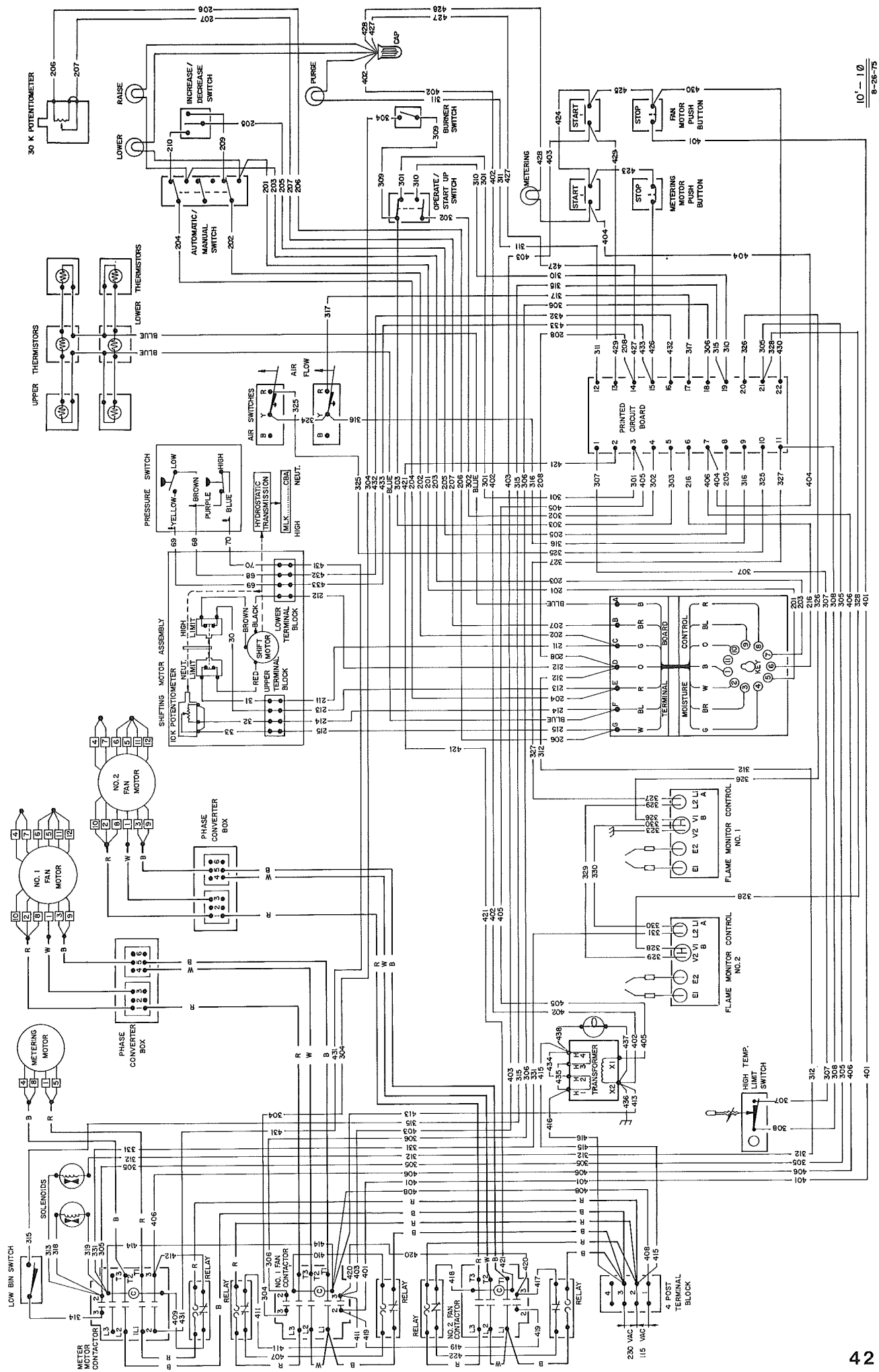
220 & 440 V. A.C. - 3Ø - 10 or 15 HP.



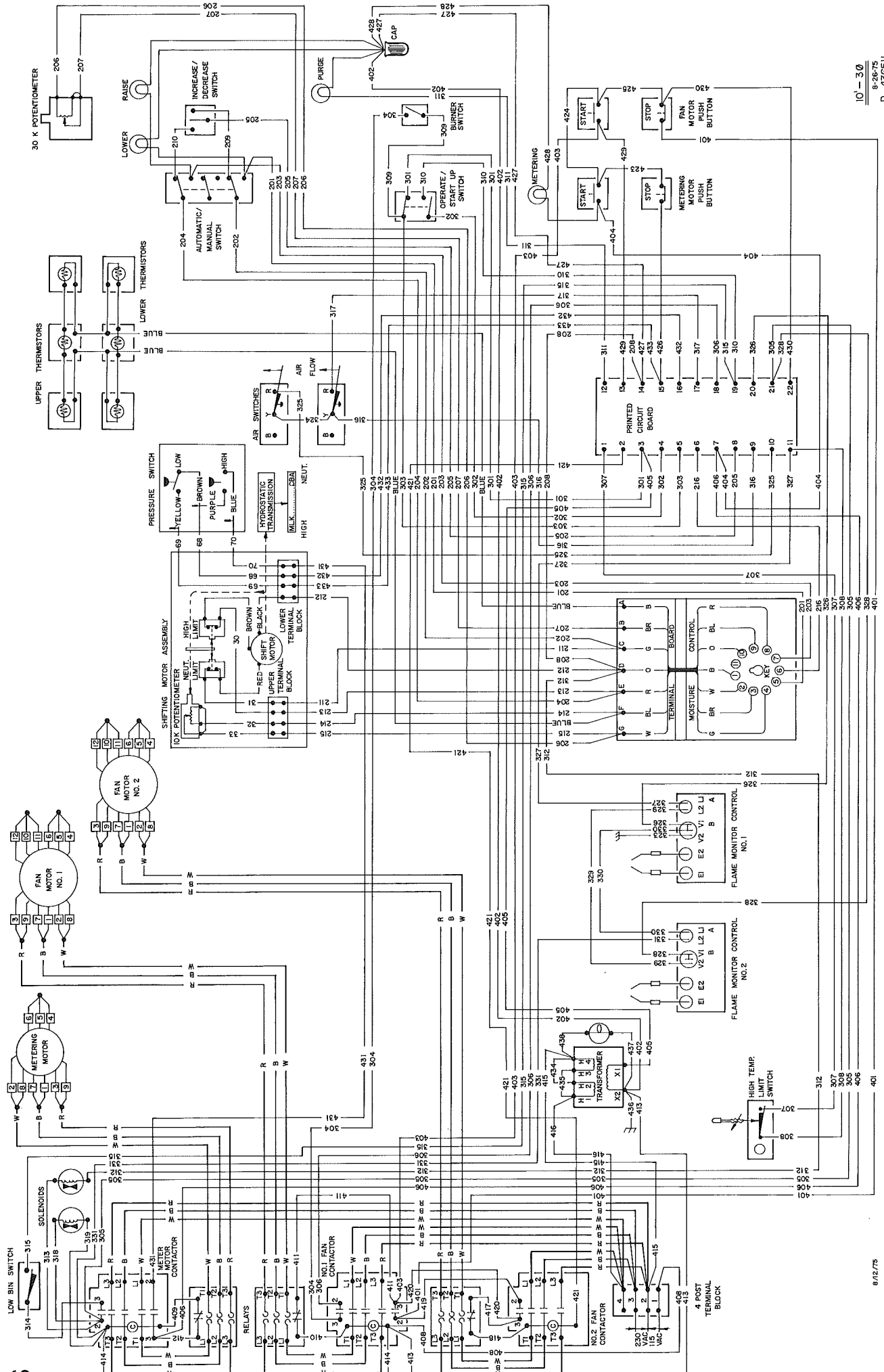
- A** WIRE CODE FOR 8-15 (99) 8-17 (105) 10-21 (107) 10-25 (110)
- B** WIRE CODE FOR 8-15 (100) 8-17 (106) 10-21 (108) 10-25 (109)
- C** REFER TO POWER WIRE CONTROL DIAGRAM FOR COMPLETE WIRE INTERFACE OF STARTER.
- D** WIRE CODE (86) FOR L.P. DRYER
- E** WIRE CODE (130) FOR N.G. DRYER
- F** WIRE CODE (88) FOR L.P. DRYER
- G** WIRE CODE (131) FOR N.G. DRYER



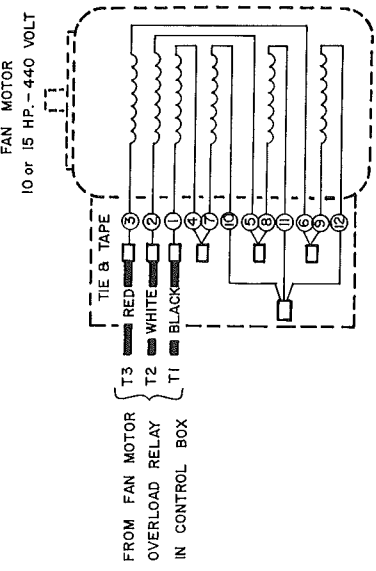
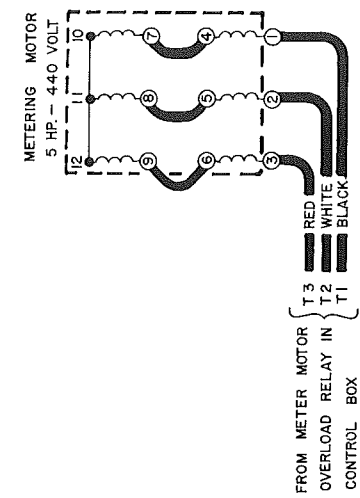
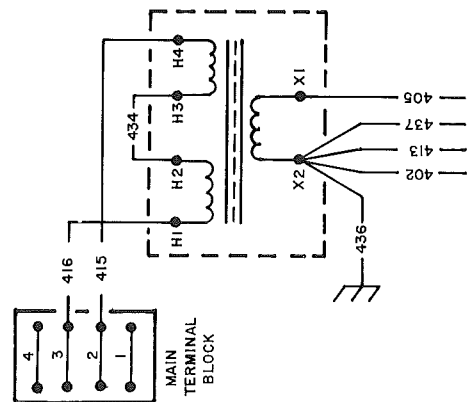
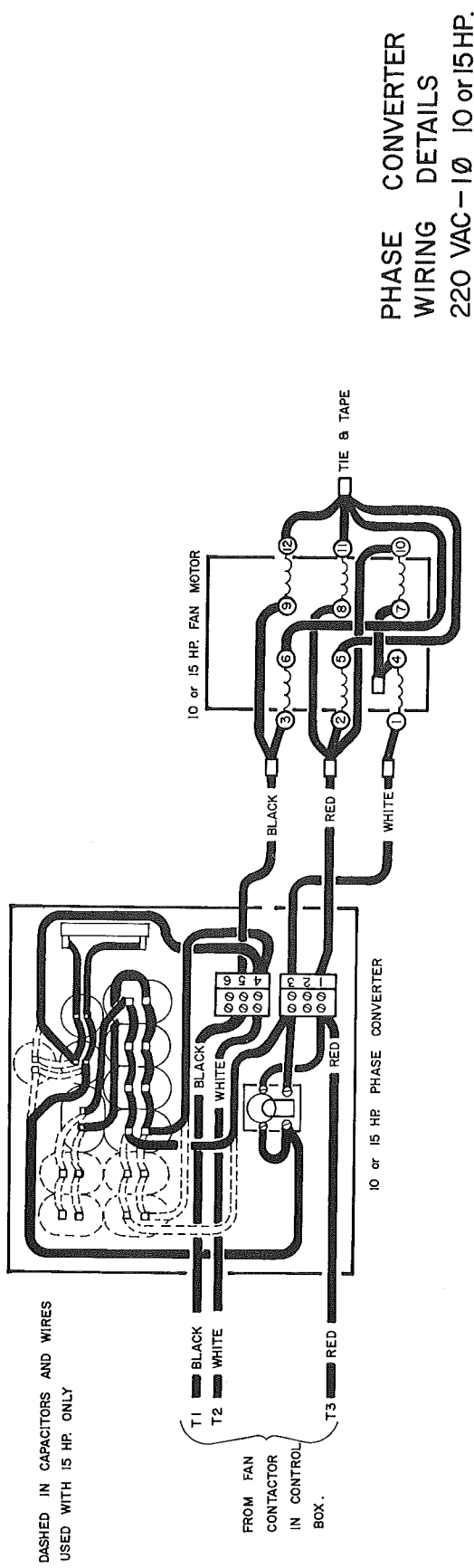
MOISTURE — MATIC WIRING DIAGRAM  
10 & 30



10'-110  
8-28-75  
D-456512



10-30  
 9-28-75  
 D-436511

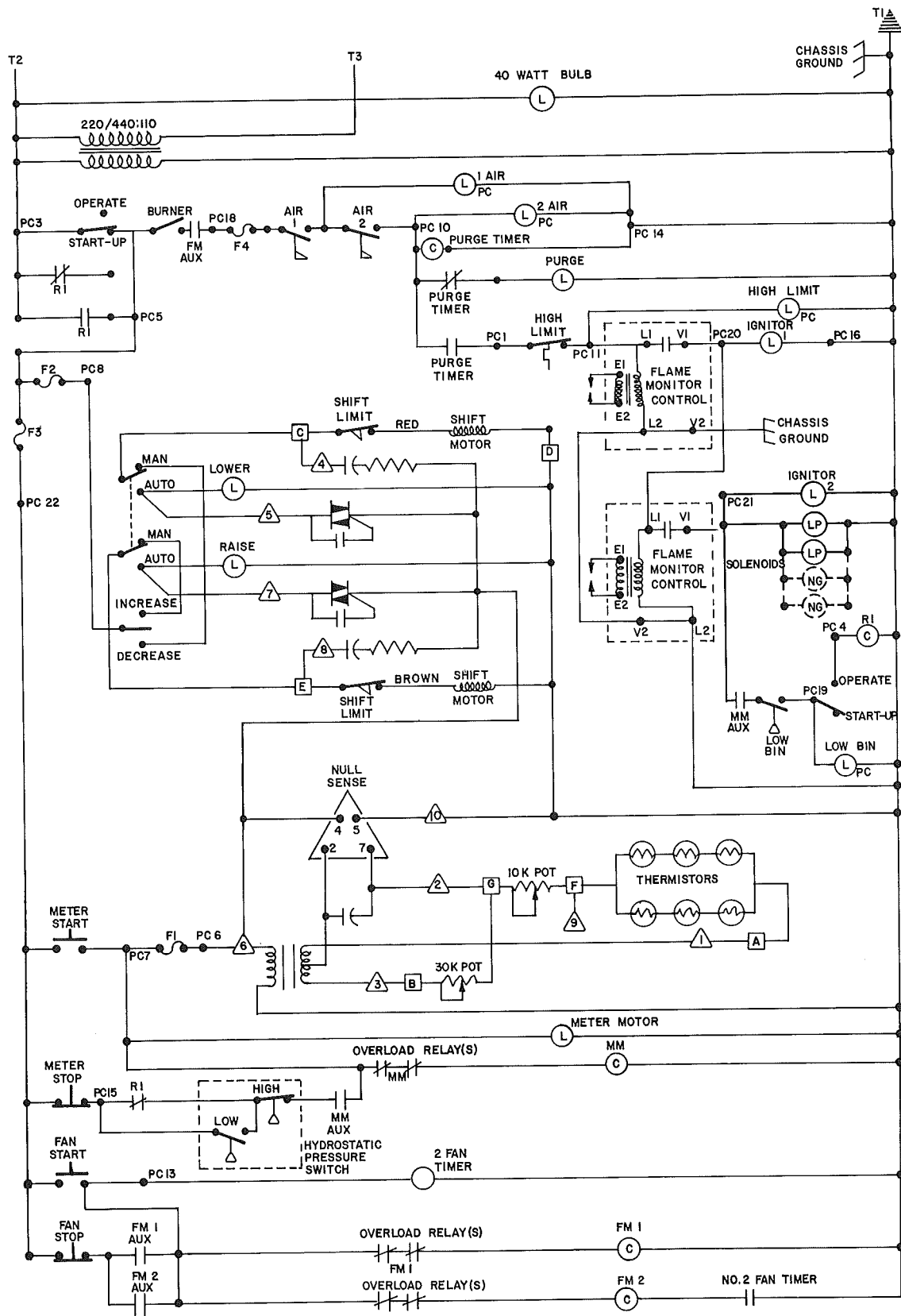


**TRANSFORMER**  
440 VAC - 3Ø

**METER MOTOR**  
440 VAC - 3Ø

**FAN MOTOR**  
440 VAC - 3Ø

**MOTOR / TRANSFORMER  
WIRING DETAILS  
440 VAC - 3Ø 10 or 15 HP.**

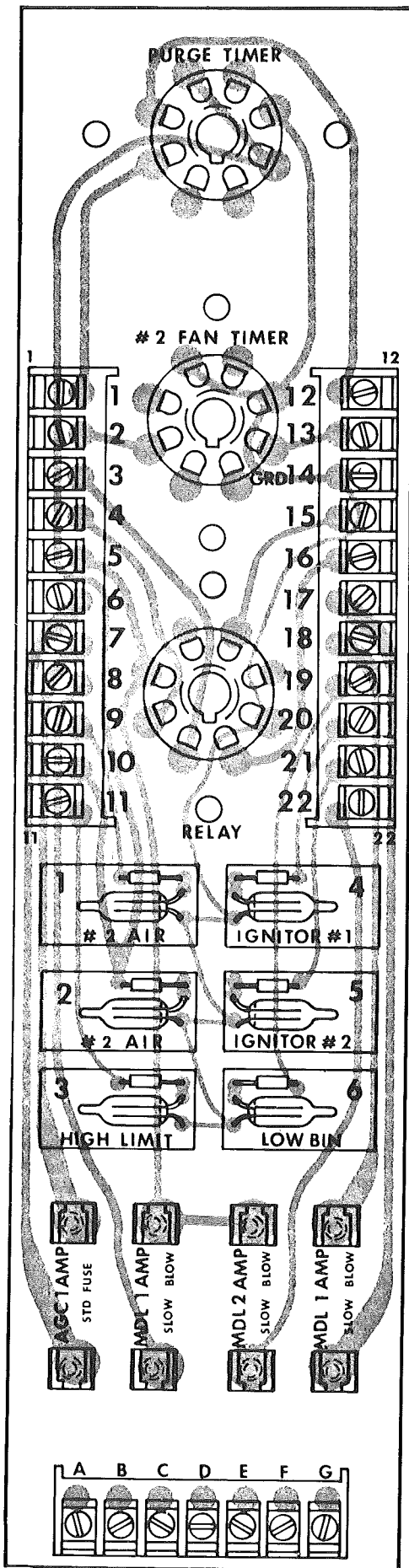


- FM - FAN MOTOR CONTACTOR
- MM - METER MOTOR CONTACTOR
- (L) - LAMP
- (C) - COIL
- △ - 11 PIN PLUG NUMBER
- - TERMINAL BOARD LETTERS
- PC - PRINTED CIRCUIT BOARD TERM. NO.
- T - MAIN TERMINAL BLOCK NO.

**SCHEMATIC-10' CONTROLS**

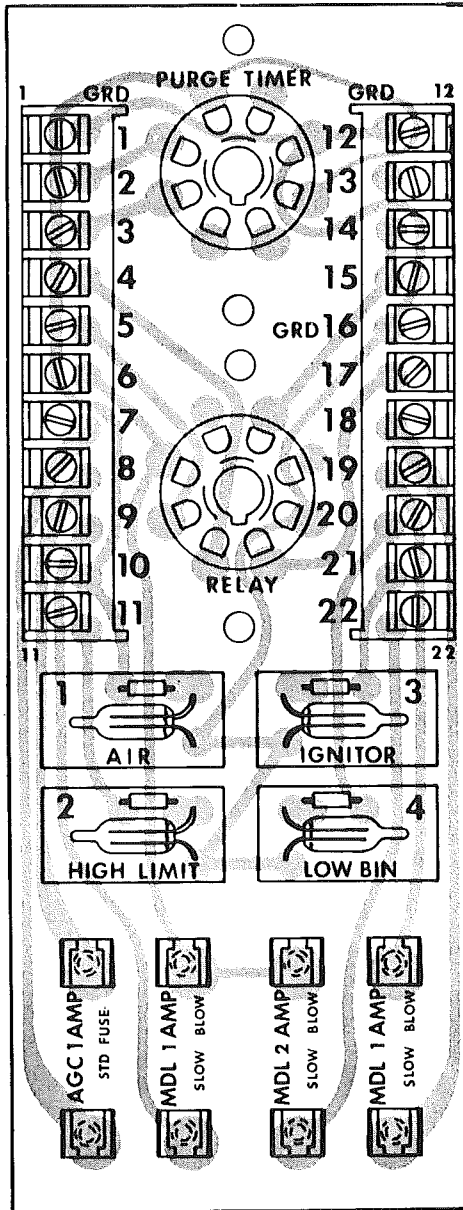
1 / 13 / 76

B- 436738 R-1

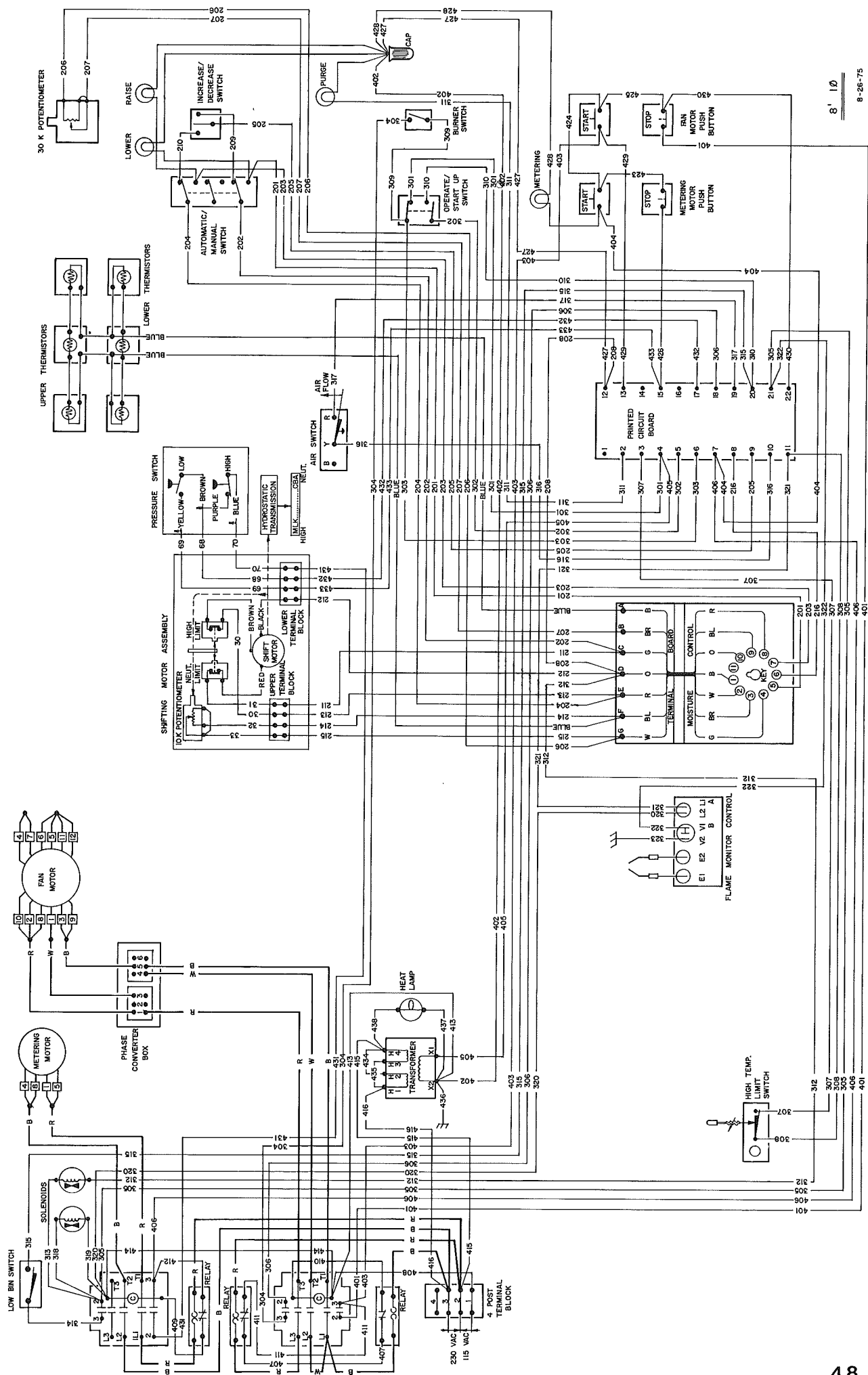


10' PRINTED CIRCUIT BOARD DETAIL

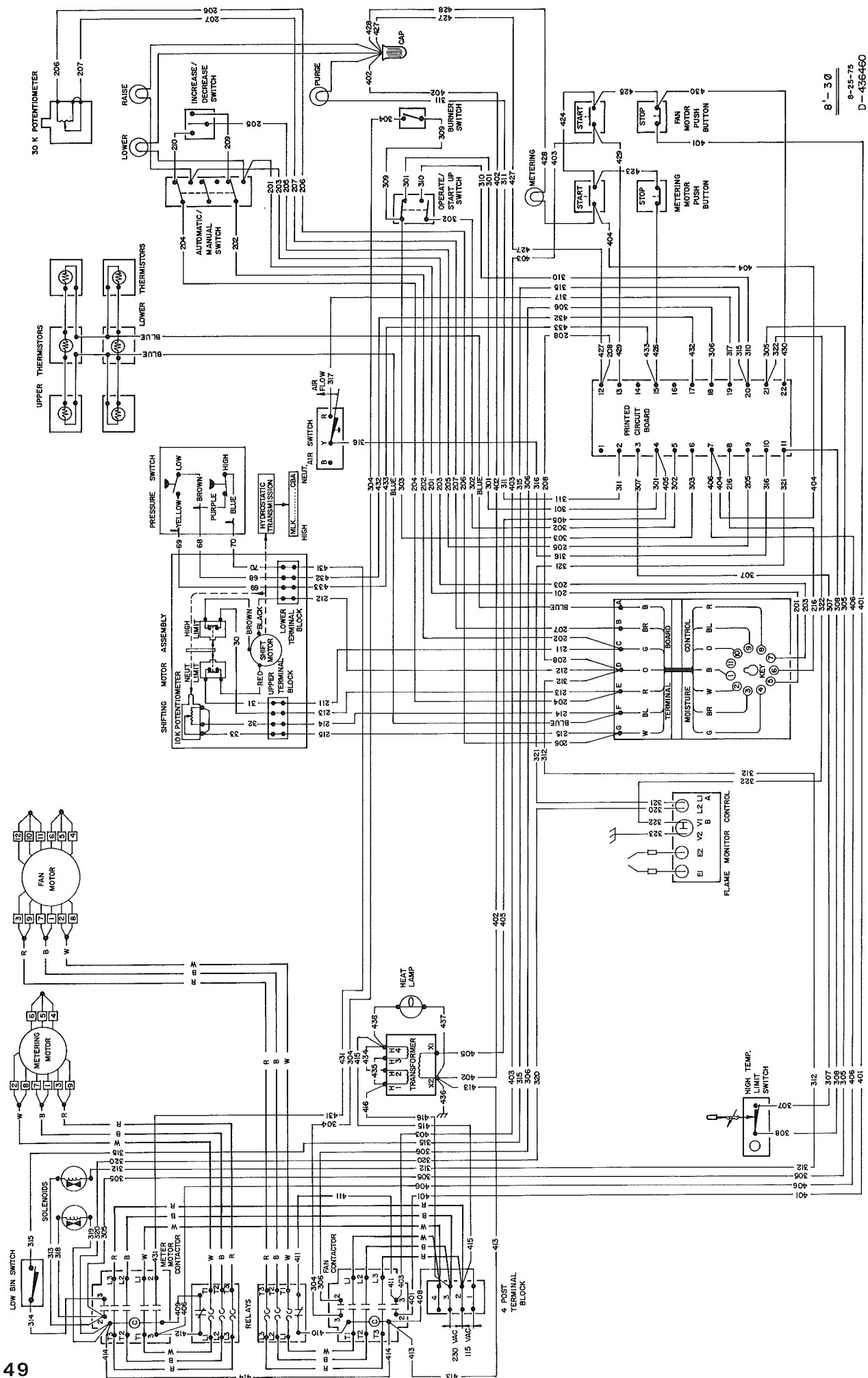




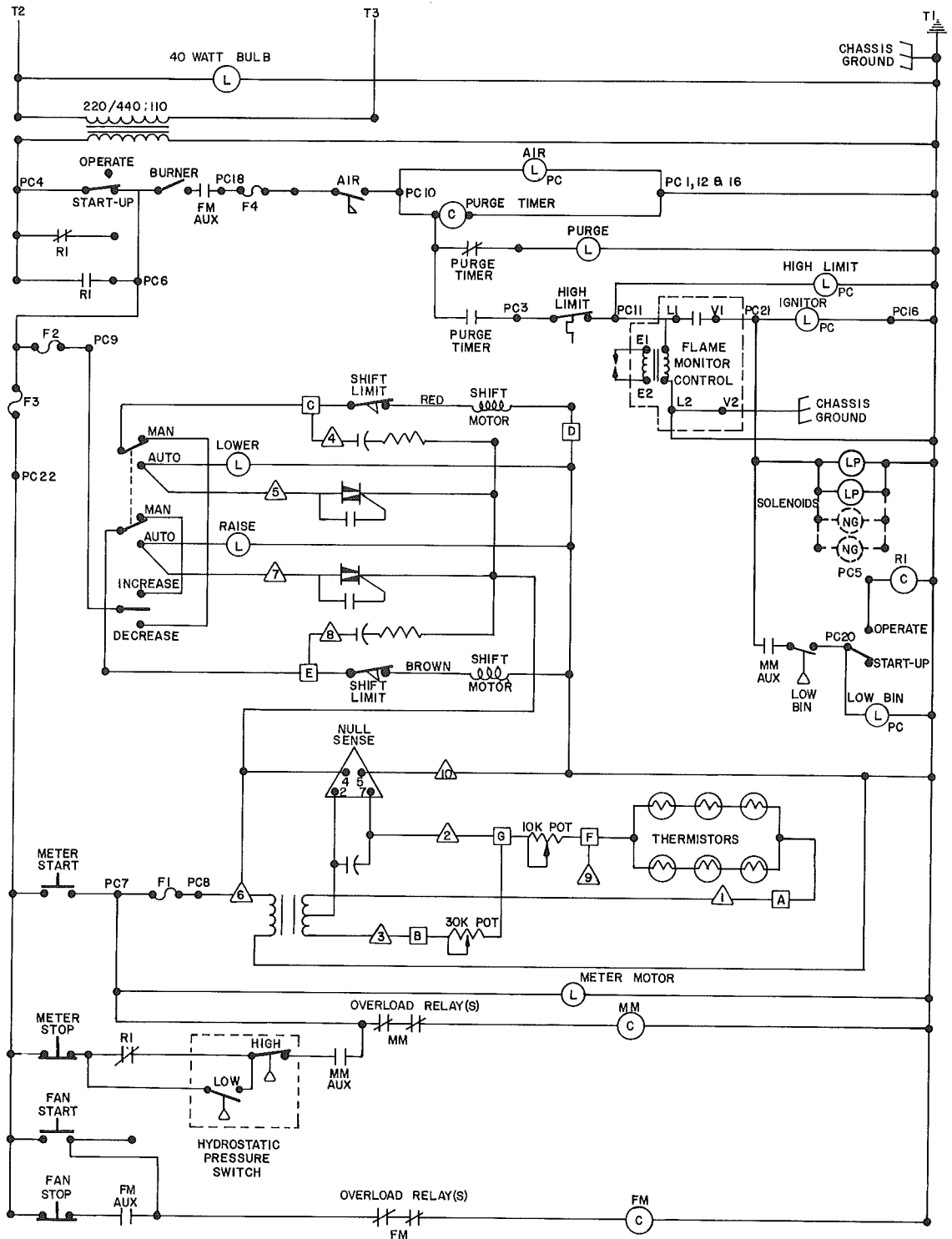
8' PRINTED CIRCUIT BOARD DETAIL



8' 10  
 8-26-75  
 D-436459



8-30  
 8-25-75  
 D-4356460



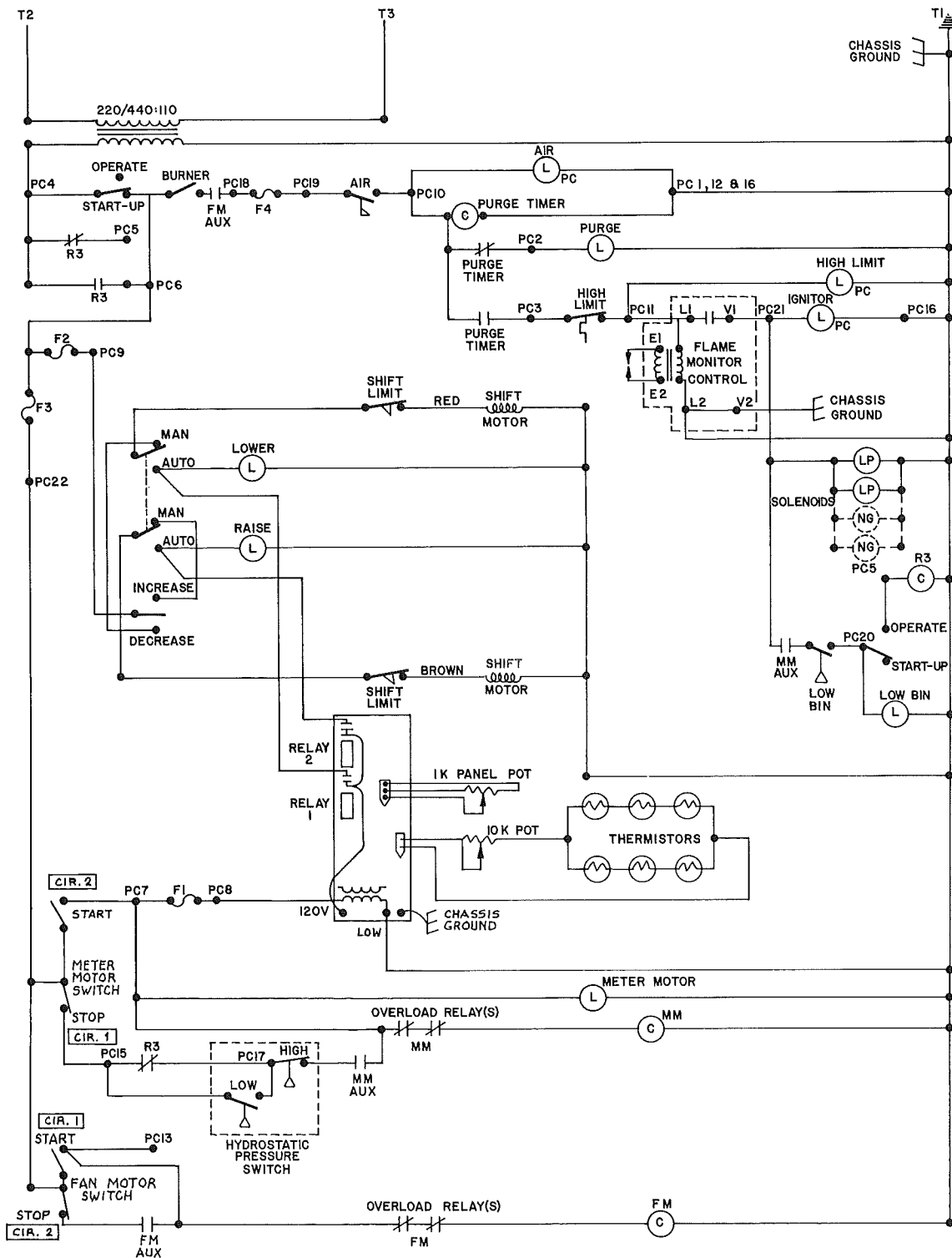
**SCHEMATIC - 8' CONTROLS**

1/13/76

B - 436737 R-1

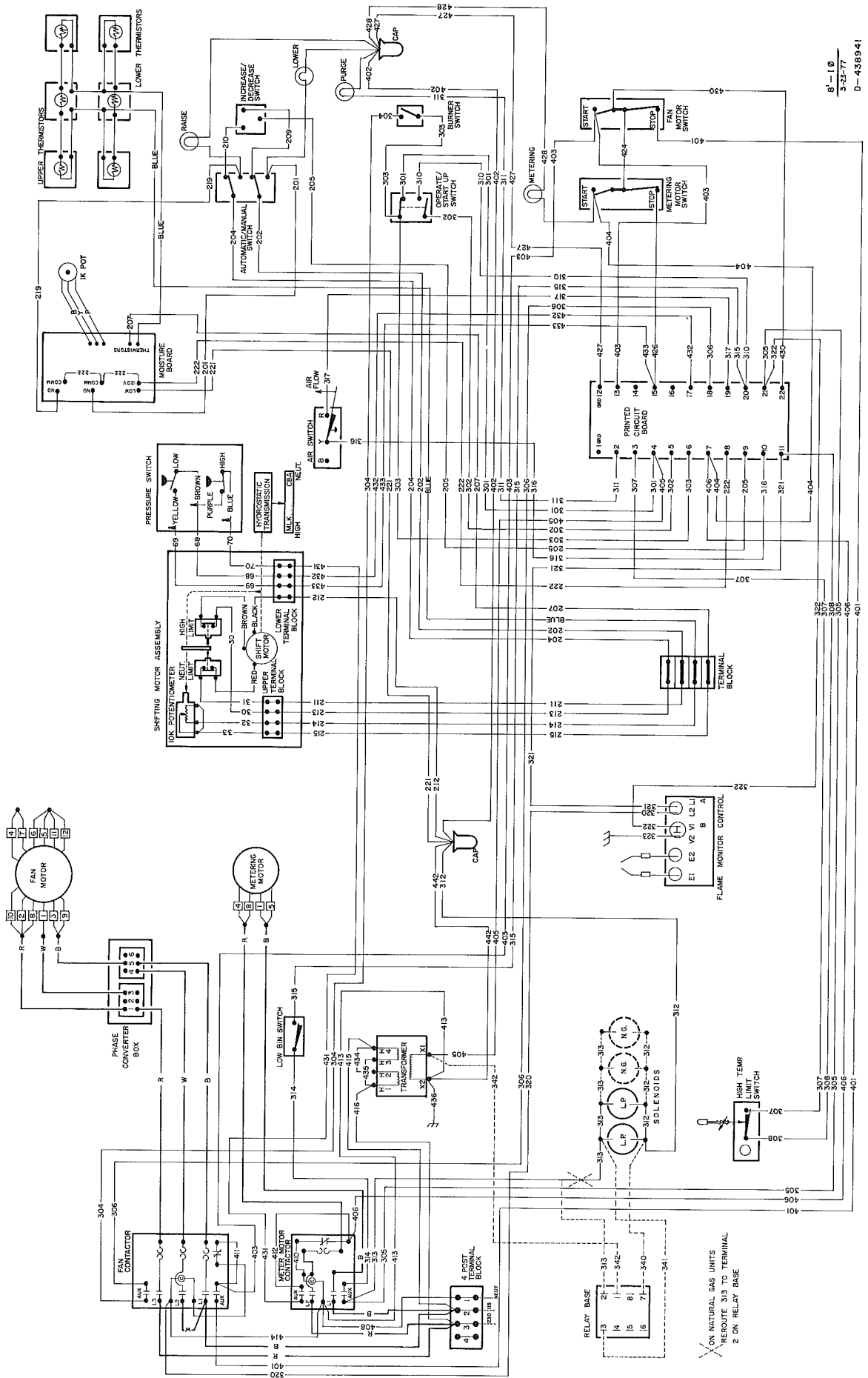
- FM - FAN MOTOR CONTACTOR
- MM - METER MOTOR CONTACTOR
- (L) - LAMP
- (C) - COIL

- △ - 11 PIN PLUG NUMBER
- - TERMINAL BOARD LETTERS
- PC - PRINTED CIRCUIT BOARD TERM. NO.
- T - MAIN TERMINAL BLOCK NO.

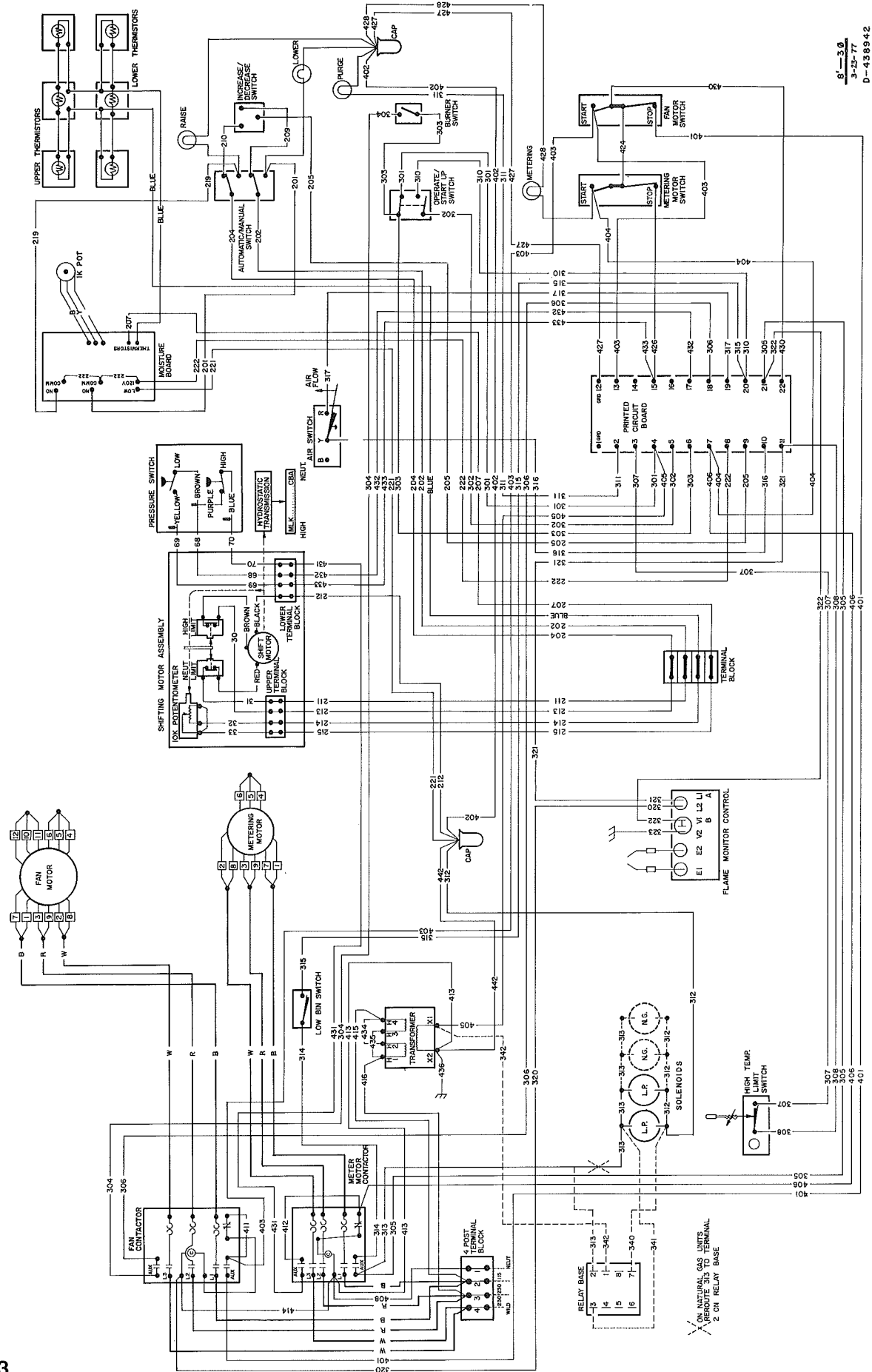


- FM - FAN MOTOR CONTACTOR
- MM - METER MOTOR CONTACTOR
- PC - PRINTED CIRCUIT BOARD TERM. NO.
- T - MAIN TERMINAL BLOCK NO.
- (L) - LAMP
- (C) - COIL

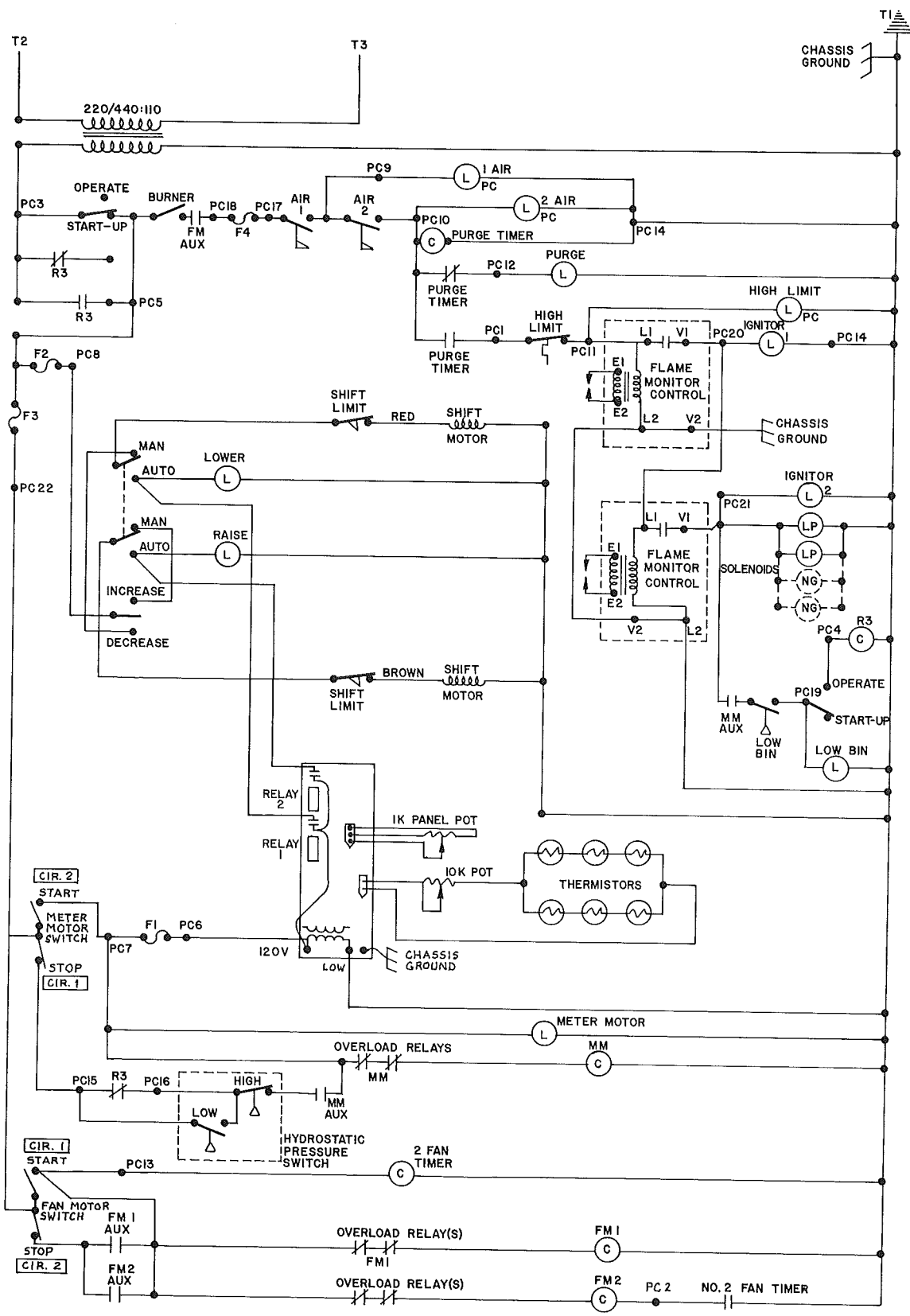
**SCHEMATIC - 8' CONTROLS**



81-10  
3-35-77  
D-438941



81-30  
3-23-77  
D-438942

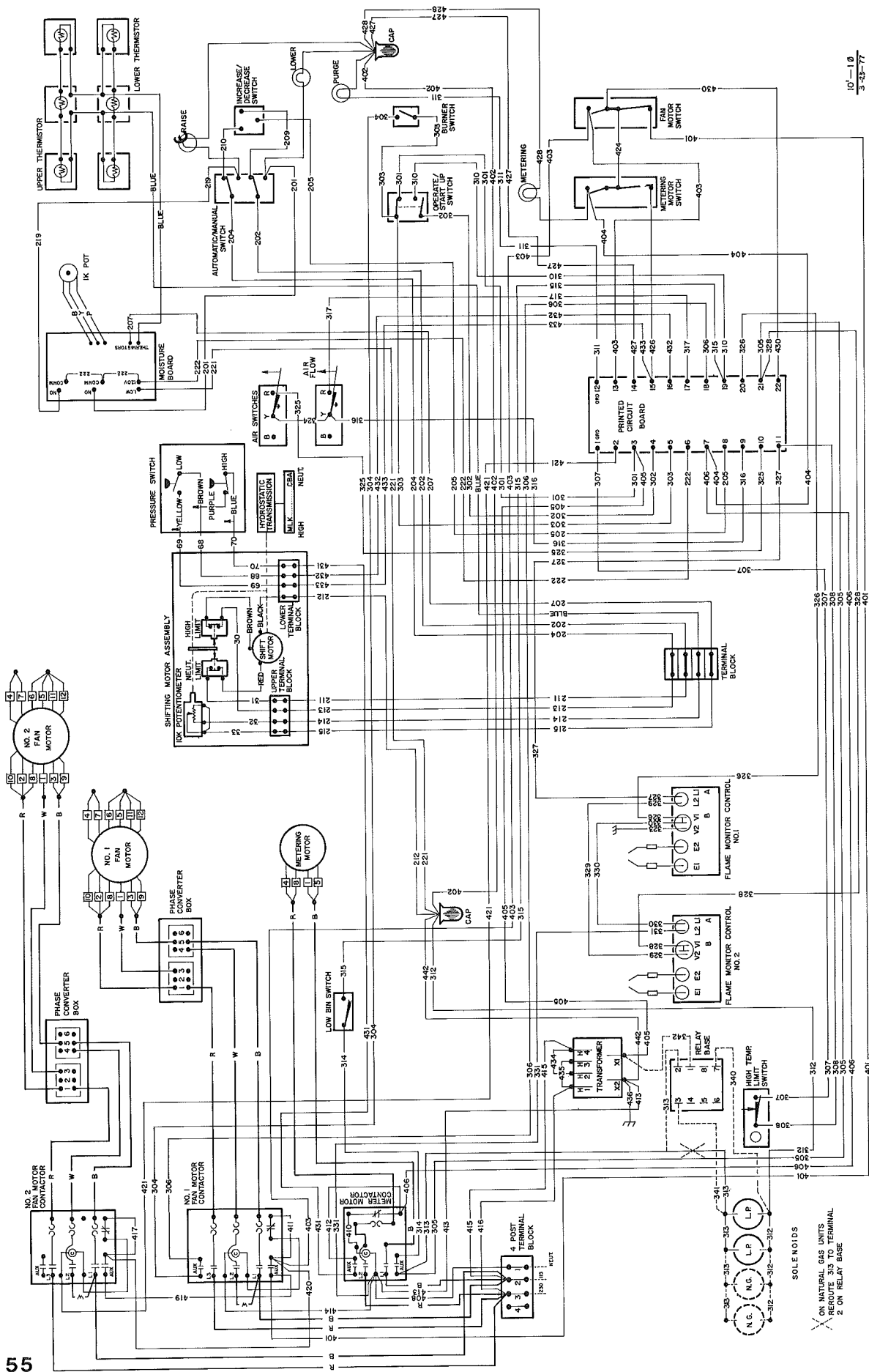


- FM - FAN MOTOR CONTACTOR
- MM - METER MOTOR CONTACTOR
- T - MAIN TERMINAL BLOCK NO.
- PC - PRINTED CIRCUIT BOARD TERM. NO.
- (L) - LAMP
- (C) - COIL

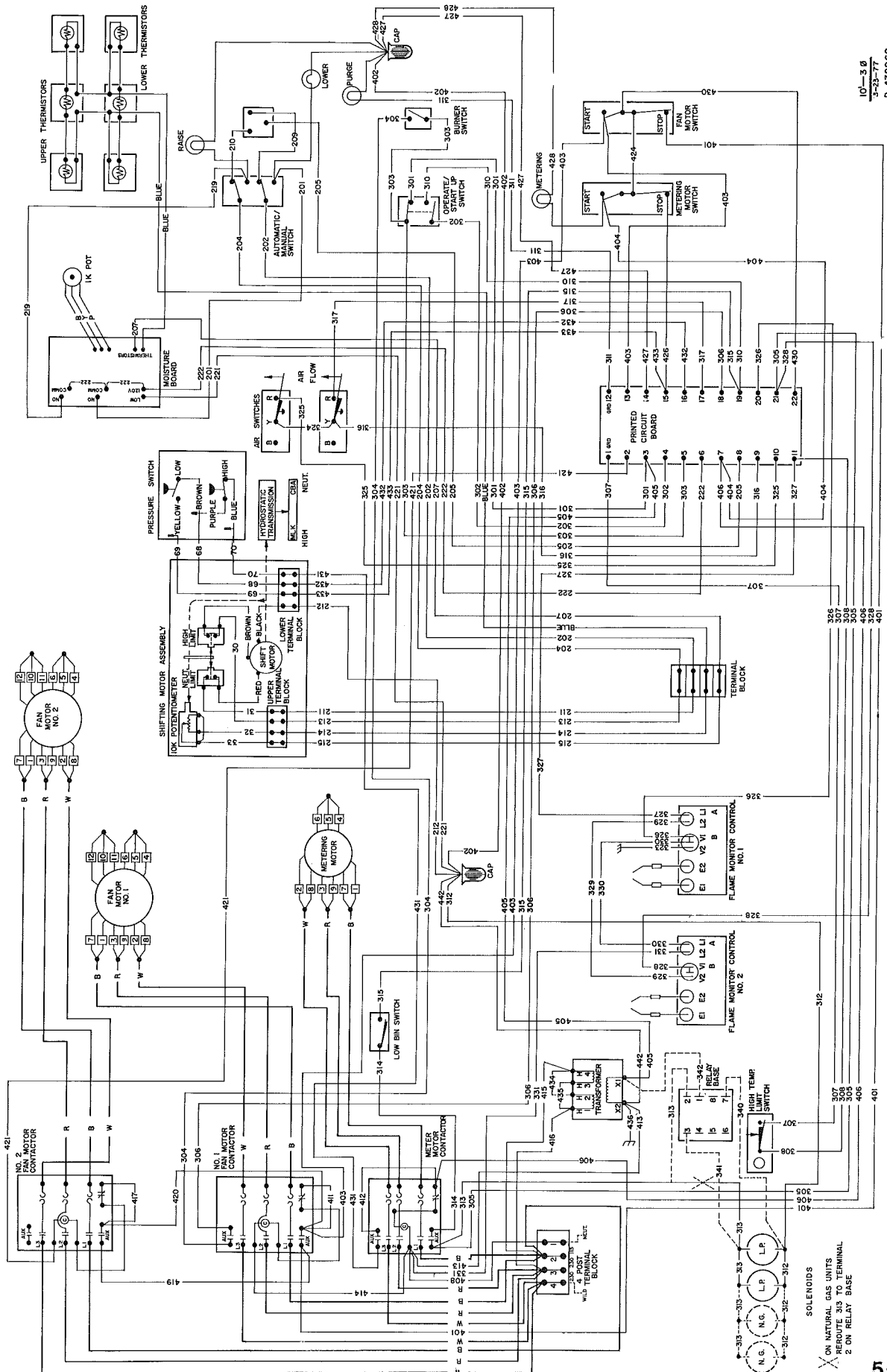
**SCHEMATIC IO-CONTROLS**

4-11-77  
 B-439026



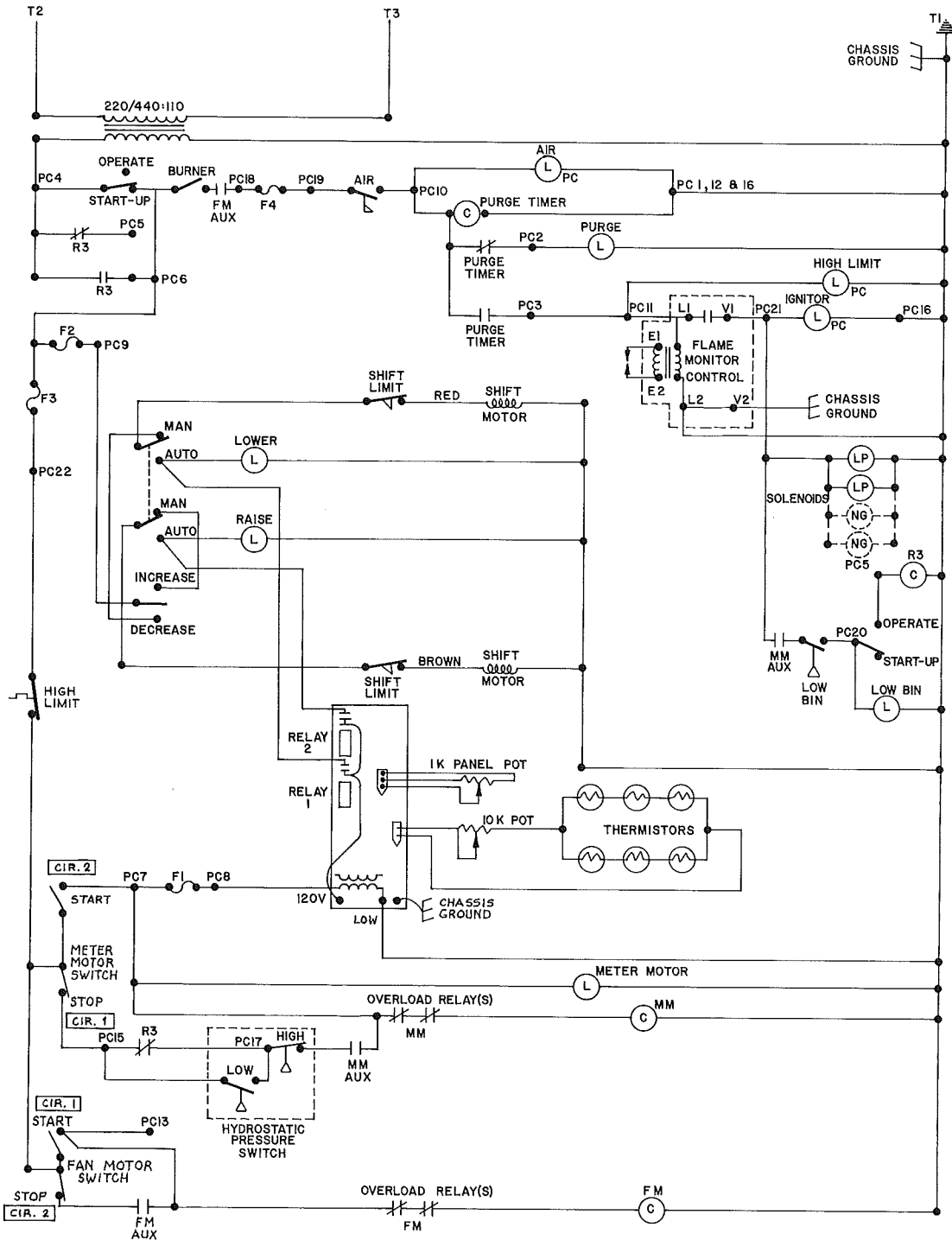


101-110  
 3-43-77  
 D-438959



10-30  
3-23-77  
D-436960

SOLENOIDS  
 X ON NATURAL GAS UNITS  
 REROUTE 33 TO TERMINAL  
 2 ON RELAY BASE

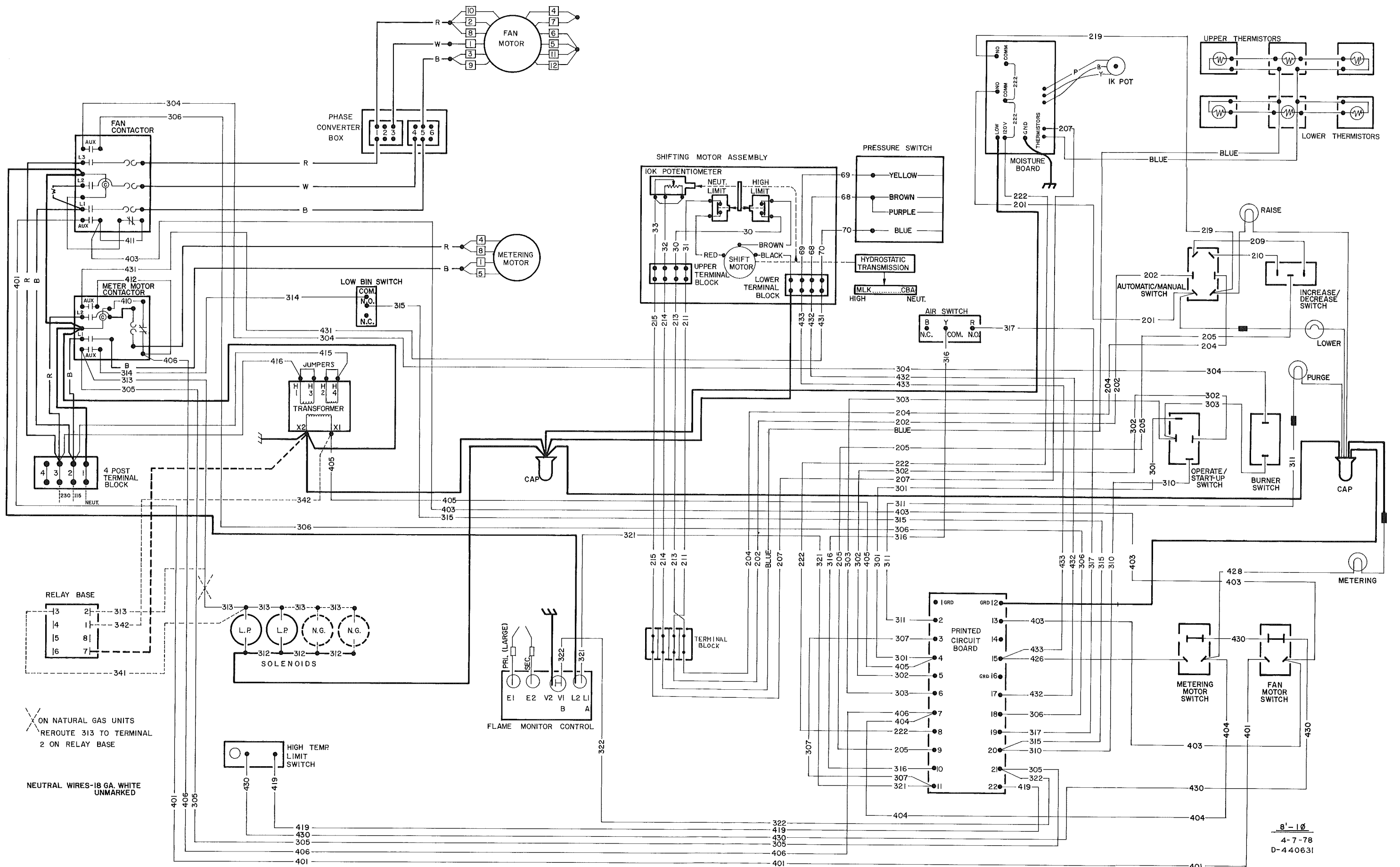


- FM - FAN MOTOR CONTACTOR
- MM - METER MOTOR CONTACTOR
- (L) - LAMP
- (C) - COIL
- PC - PRINTED CIRCUIT BOARD TERM. NO.
- T - MAIN TERMINAL BLOCK NO.

**SCHEMATIC - 8' CONTROLS**

4- 7 -78

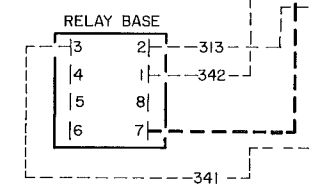
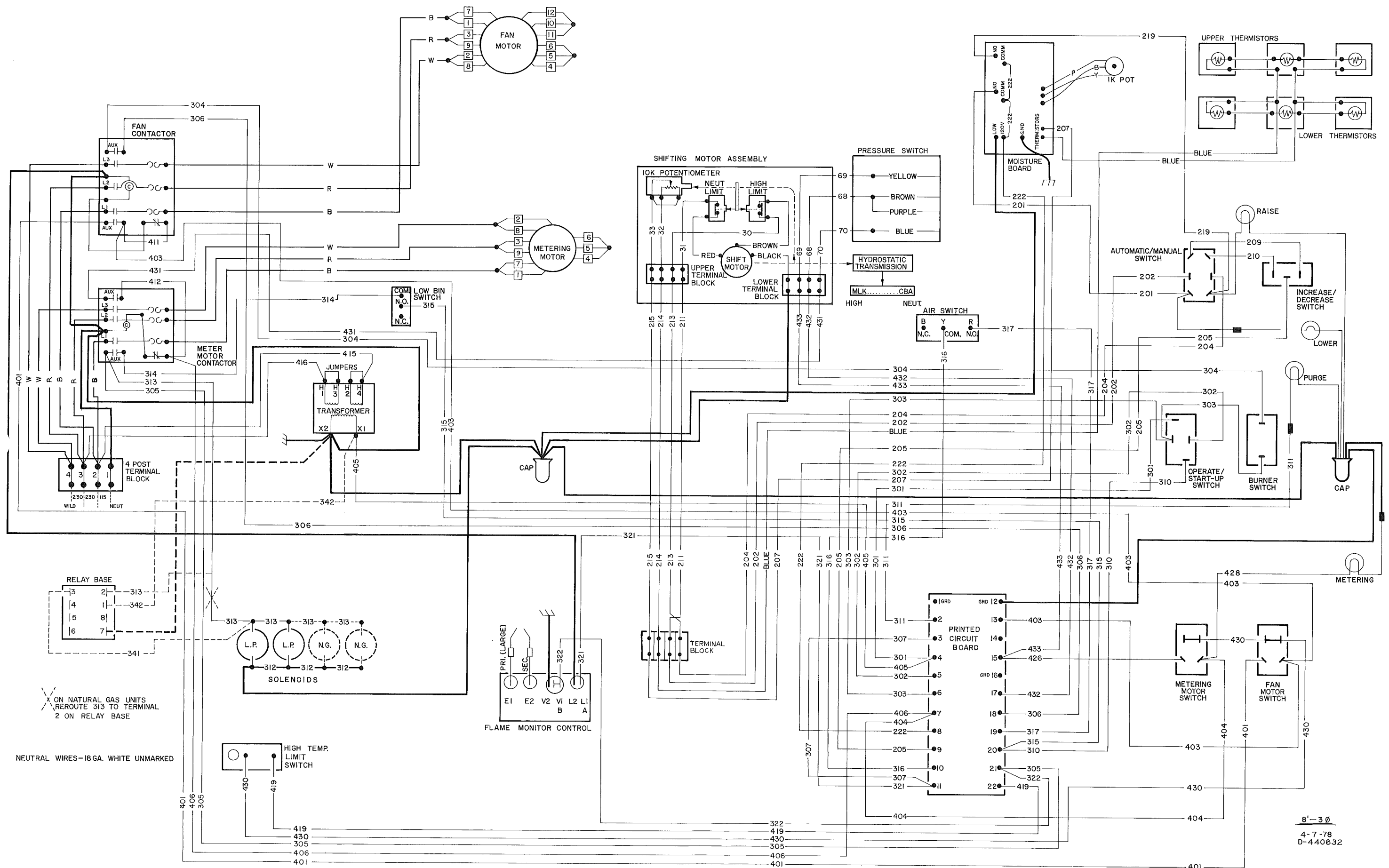
B-440637



ON NATURAL GAS UNITS  
REROUTE 313 TO TERMINAL  
2 ON RELAY BASE

NEUTRAL WIRES-18 GA. WHITE  
UNMARKED

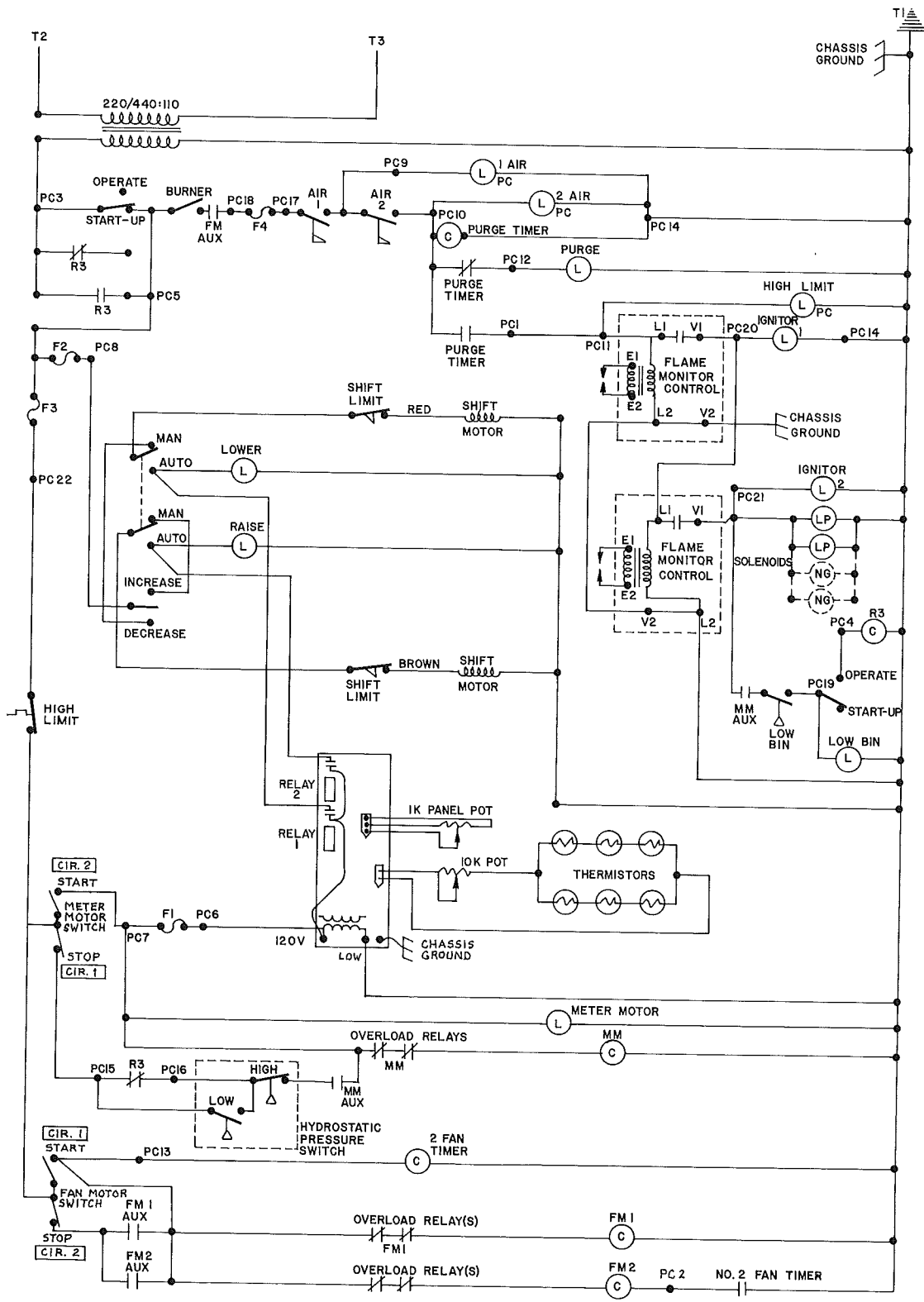
8-10  
4-7-78  
D-440631



ON NATURAL GAS UNITS  
REROUTE 313 TO TERMINAL  
2 ON RELAY BASE

NEUTRAL WIRES—18 GA. WHITE UNMARKED

8'-3 Ø  
4-7-78  
D-440632

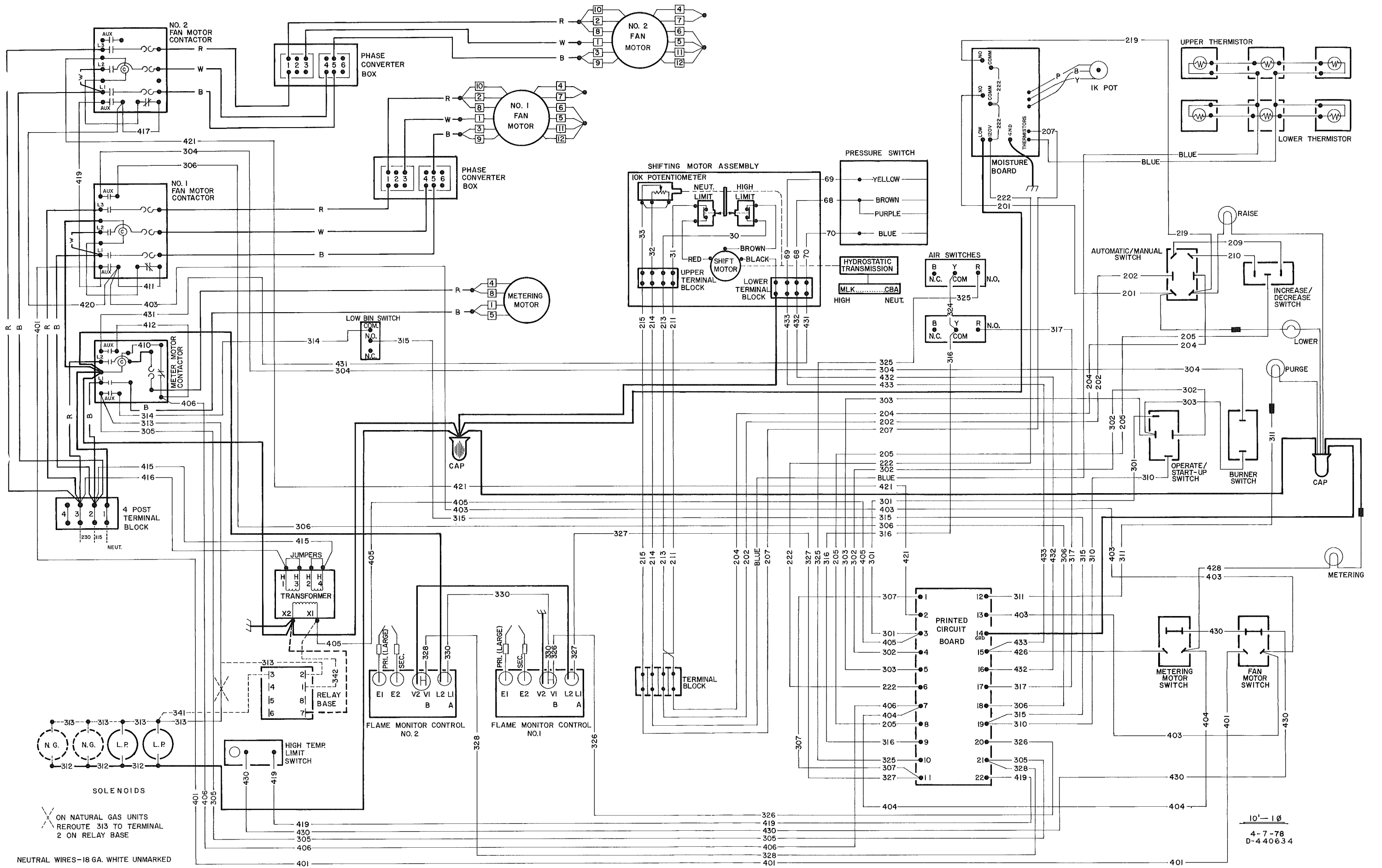


FM - FAN MOTOR CONTACTOR      PC - PRINTED CIRCUIT BOARD TERM NO.  
 MM - METER MOTOR CONTACTOR    T - MAIN TERMINAL BLOCK NO.

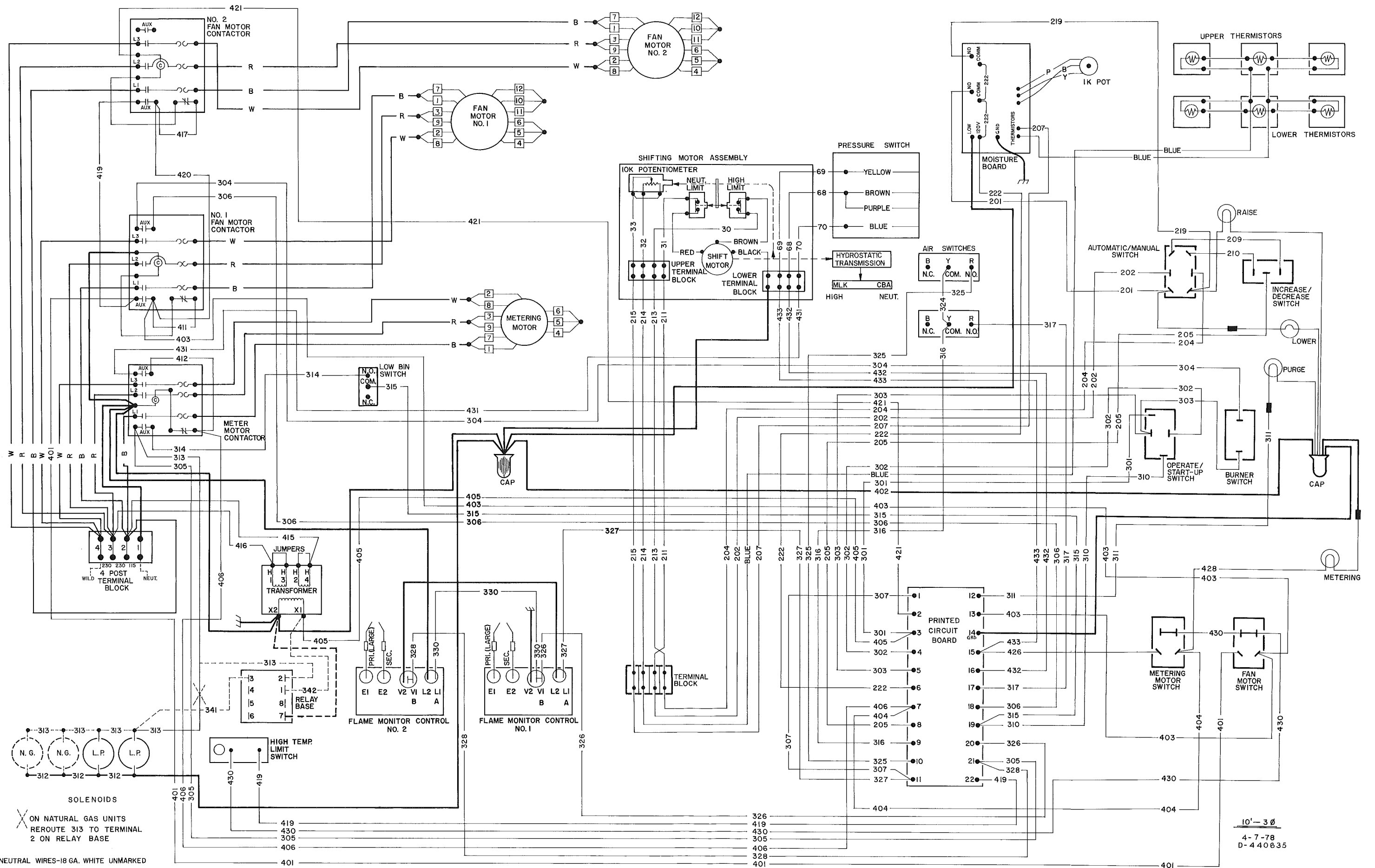
(L) - LAMP  
 (C) - COIL

**SCHEMATIC IO<sup>1</sup>-CONTROLS**

4- 7 -78  
 B- 4 40638



Z. Morris



X ON NATURAL GAS UNITS  
 REROUTE 313 TO TERMINAL  
 2 ON RELAY BASE

NEUTRAL WIRES-18 GA. WHITE UNMARKED

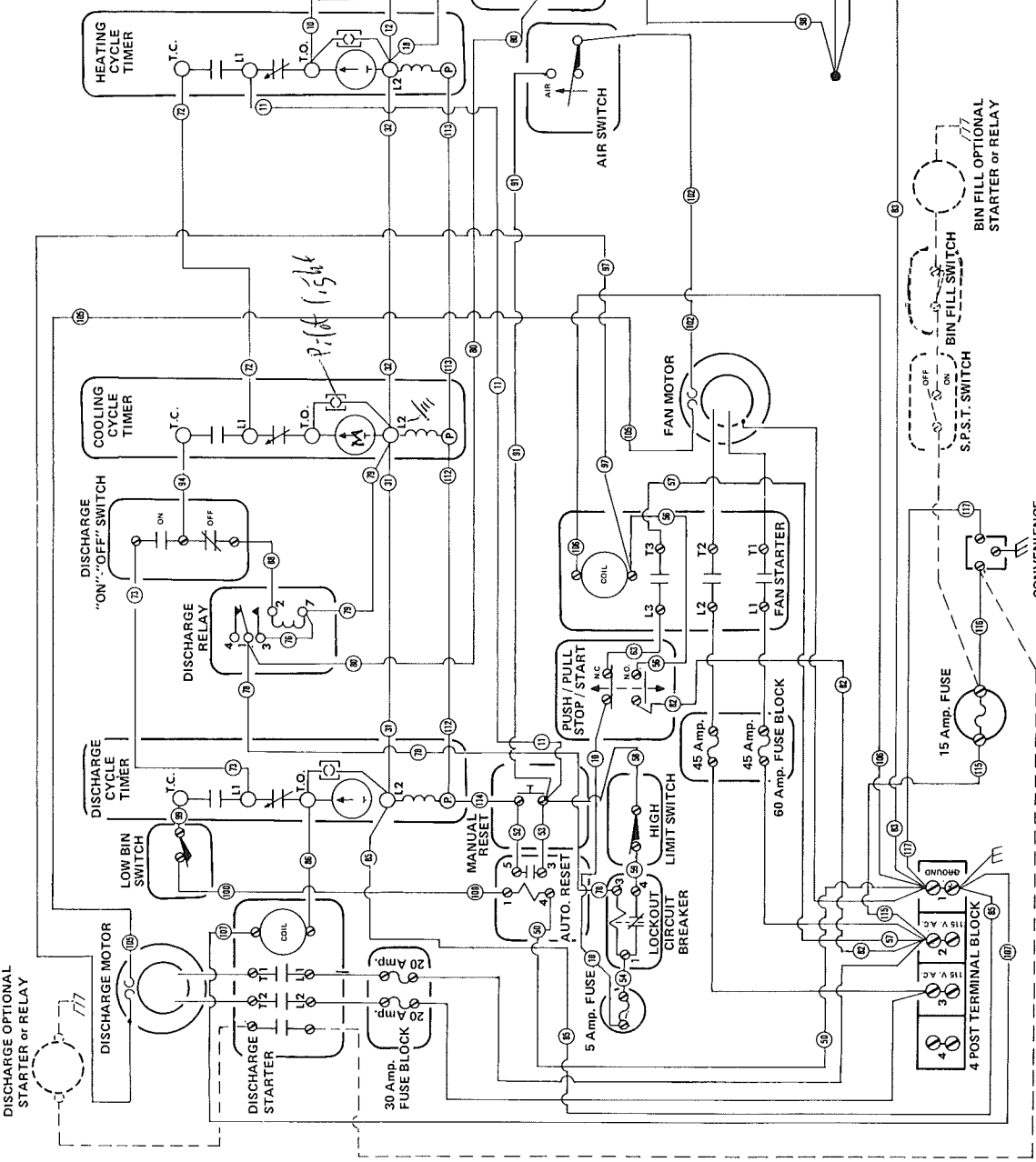
10' - 3 Ø  
 4-7-78  
 D-440635



# AUTOMATIC BATCH DRYER

8 - 13 - 7.5 - 220 V. A.C. - 1Ø

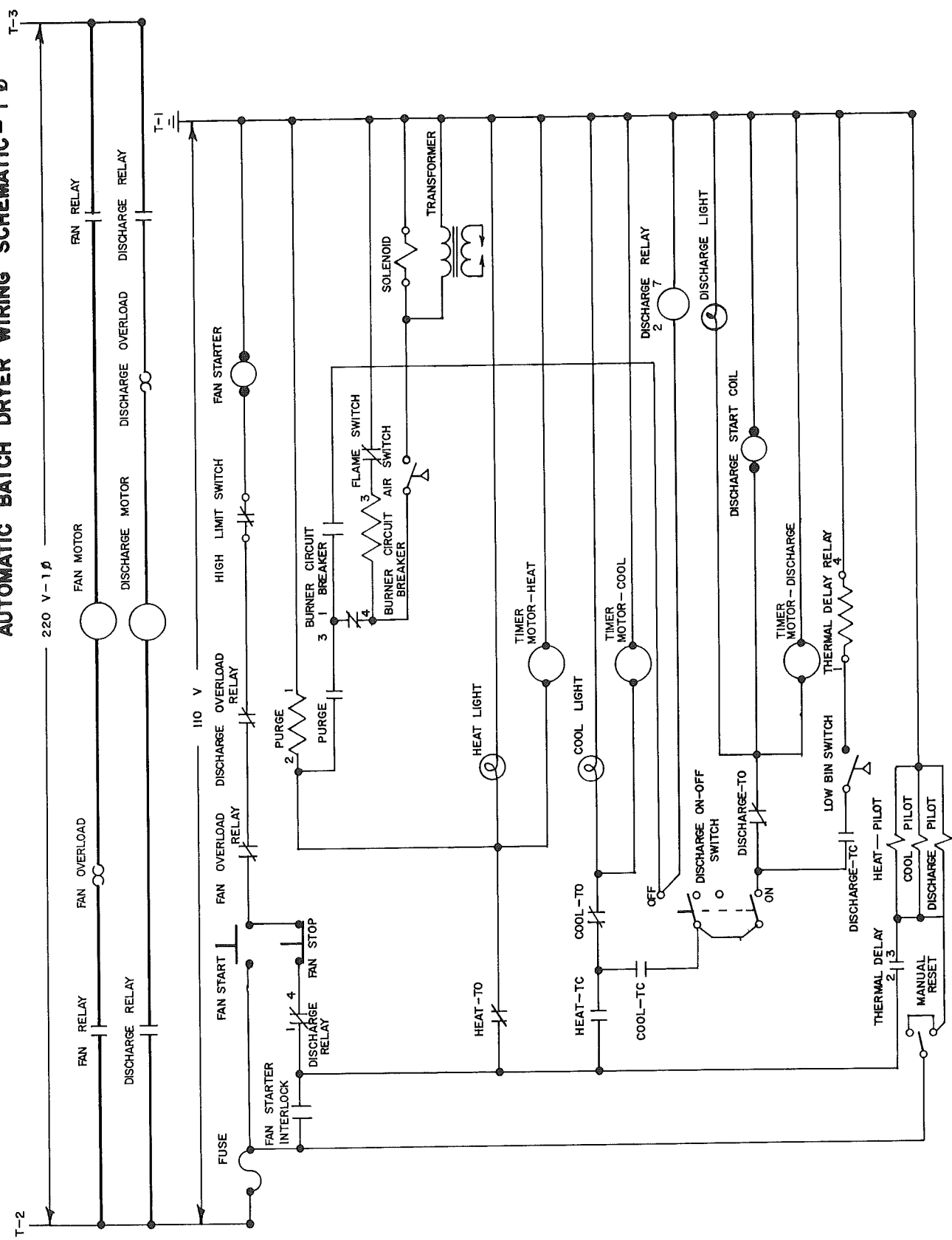
RED 14 Ga.	115	BLUE 18 Ga.	72	91
	116		73	94
	117		76	97
			78	98
			79	99
			80	100
			82	101
			83	102
			85	103
			86	104
			87	105
			88	106
			89	107



NOTE: Dashed Lines are Auxiliary Equipment.

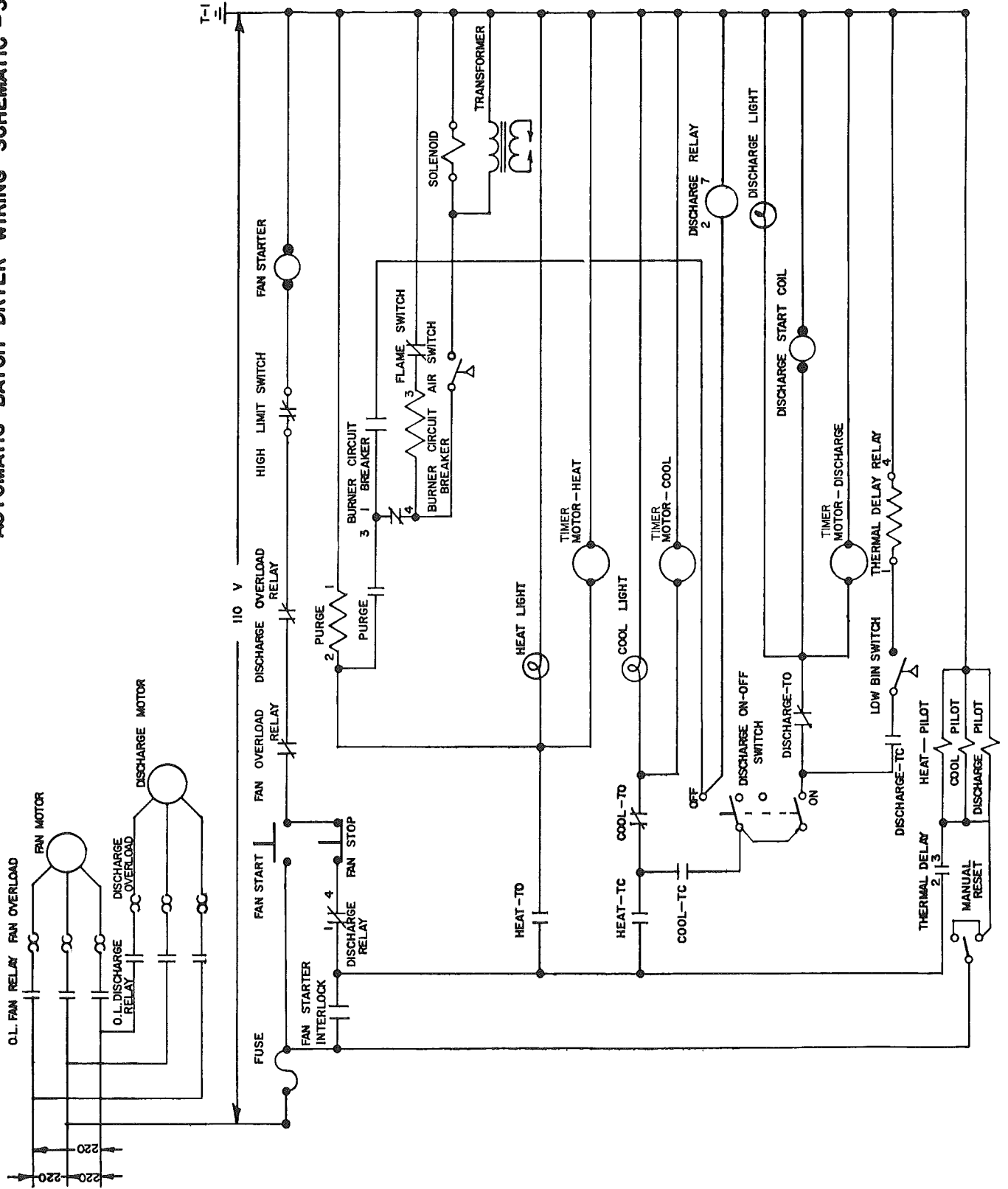
**AUTOMATIC BATCH DRYER WIRING SCHEMATIC - I Ø**

**B-2**

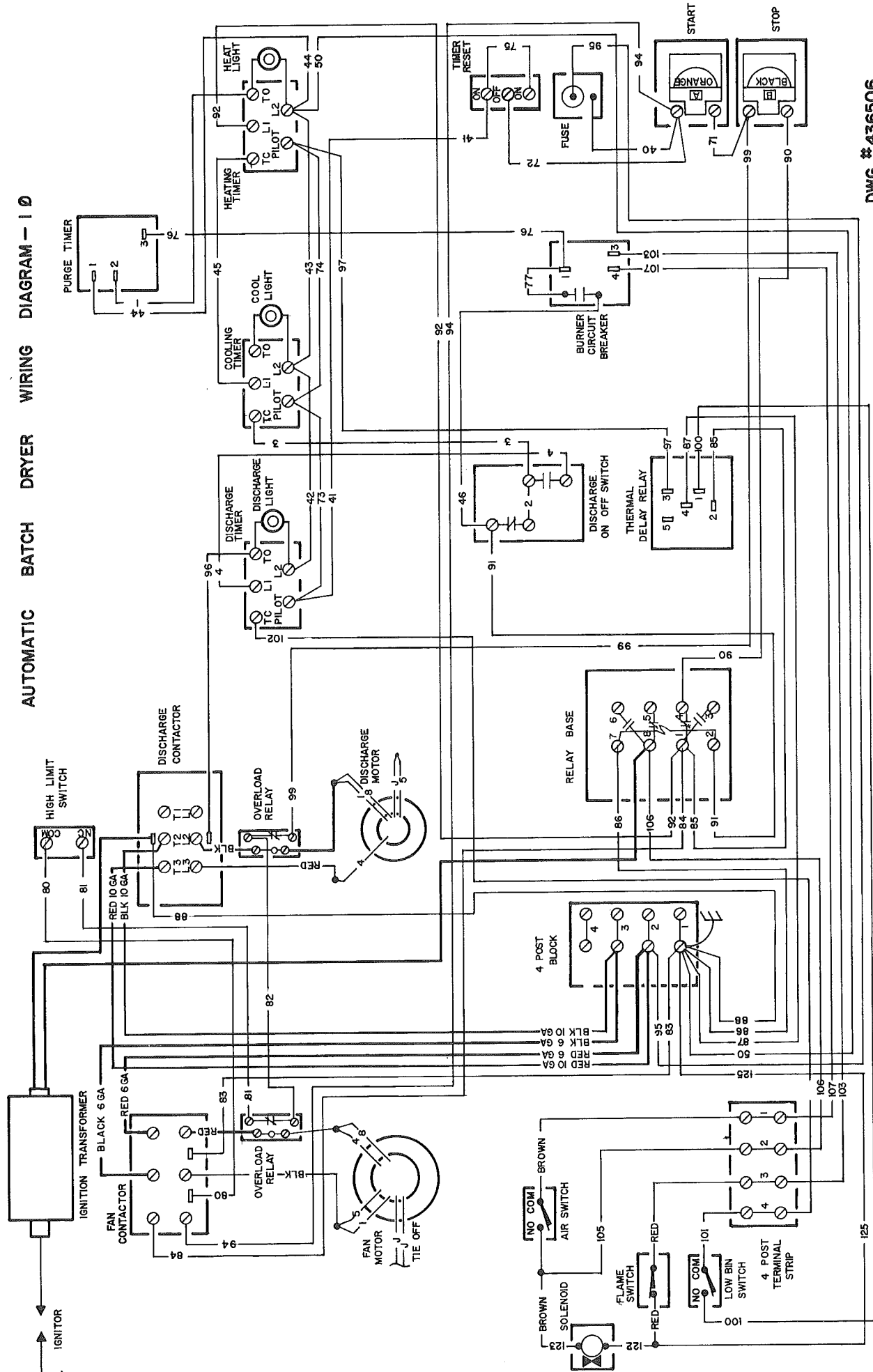


**DWG # 436504**

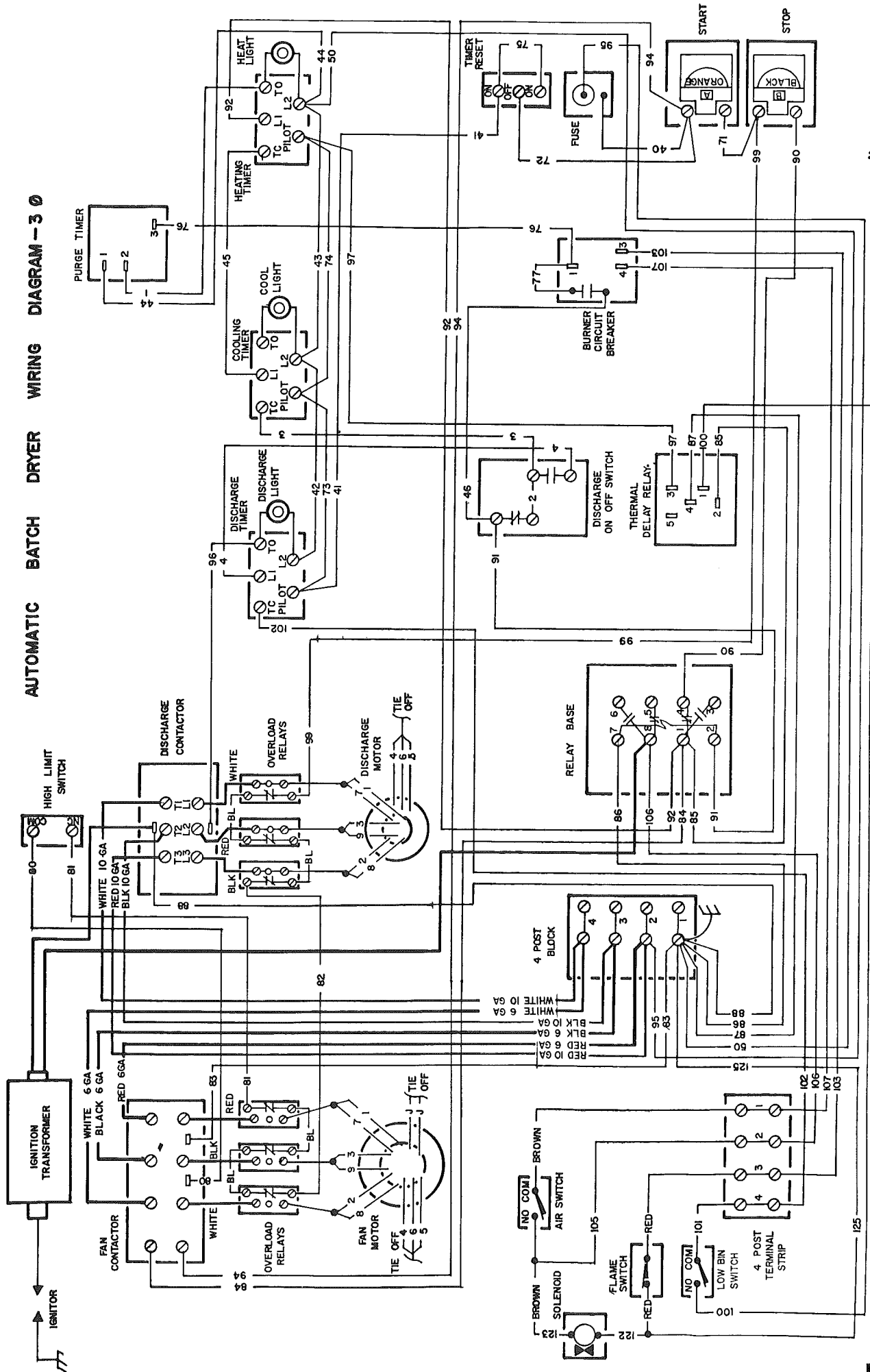
**AUTOMATIC BATCH DRYER WIRING SCHEMATIC - 3 Ø**



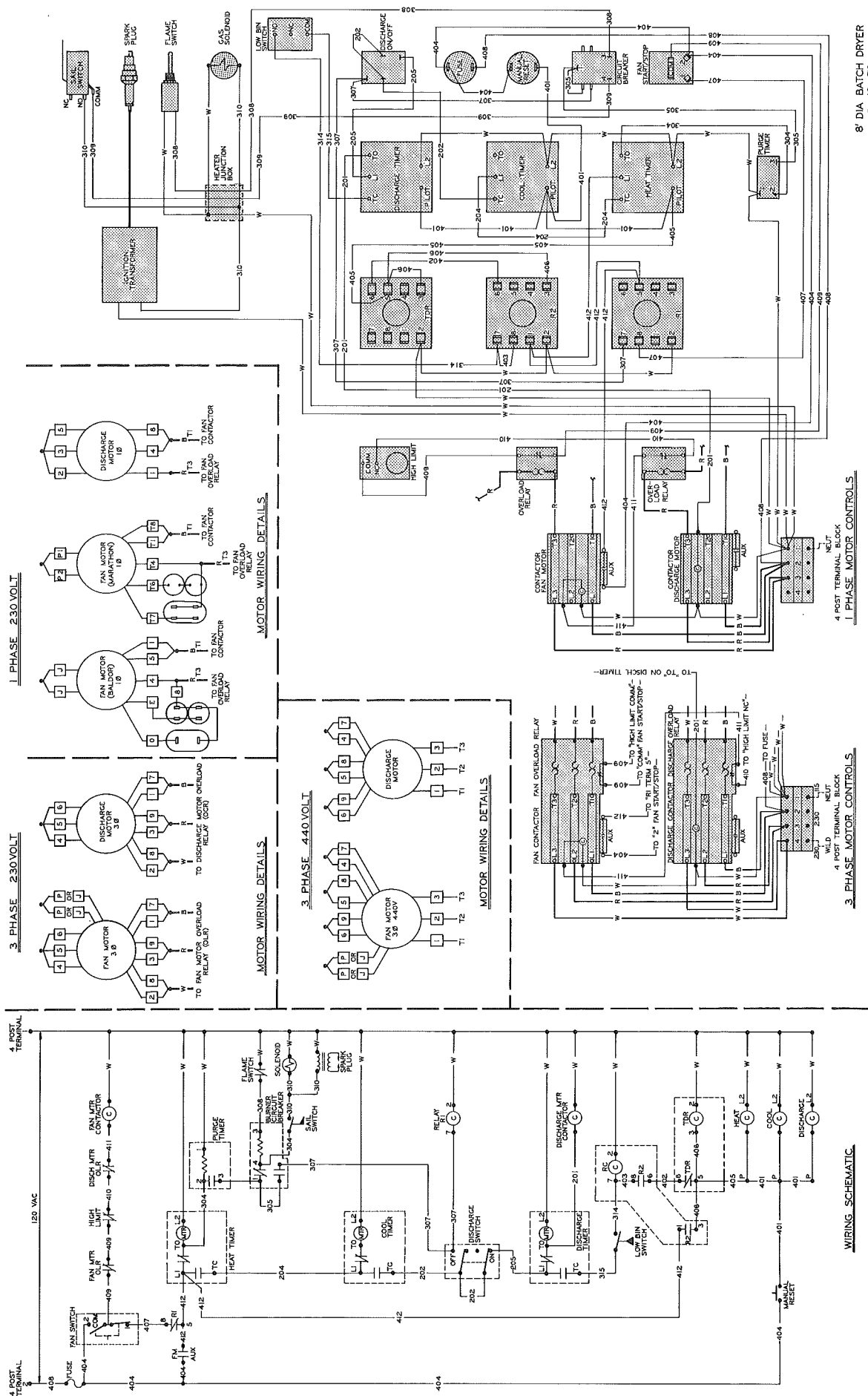
AUTOMATIC BATCH DRYER WIRING DIAGRAM - I Ø



**AUTOMATIC BATCH DRYER WIRING DIAGRAM - 3**



DWG # 436507



8 DIA BATCH DRYER  
2-18-78

D-440184