

Wiring Diagrams 50 and 60 Hz

INDEX

UNIT 30GT	VOLTAGE	DESCRIPTION	FIG. NO.	LABEL DIAGRAM
225	346, 380 (60 Hz), 380/415 (50 Hz), 460, 575	Fan Power	1	30GT508051
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LEGEND

A — Alarm
BOT — Bottom
C — Contactor Compressor
CB — Circuit Breaker
CCN — Carrier Comfort Network
CGF — Circuit Ground Fault
CH — Crankcase Heater
CHC — Cooler Heater Cable
CHT — Cooler Heater Thermostat
CO — Convenience Outlet
COMM — Communications
COMP — Compressor
CONT — Control
CR — Control Relay
CWFS — Chilled Water Flow Switch
CWP — Chilled Water Pump
CWPI — Chilled Water Pump Interlock
DGT — Discharge Gas Thermostat
DPT — Discharge Pressure Transducer
DSIO EXV — EXV Driver
DSIO LV — Relay Module, Low Voltage
DU — Dummy Terminal
EQUIP — Equipment
EXV — Electronic Expansion Valve
FC — Fan Contactor
FCB — Fan Circuit Breaker

FM — Fan Motor
FU — Fuse
GND, GRD — Ground
HPS — High Pressure Switch
HSIO — Keyboard and Display Module
JB — Junction Box
OPT — Oil Pressure Transducer
PL — Plug Assembly
PRI — Primary
PS — Power Supply
PSIO — Processor Module
PW — Part Wind Start
PWR — Power
RB — Reset Button
RBPL — Relay Board Plug Assy
SEC — Secondary
SN — Sensor (Toroid)
SPT — Suction Pressure Transducer
SW — Switch
T — Thermistor
TB — Terminal Block
TDR — Time Delay Relay
TEMP — Temperature
TRAN — Transformer
VDC — Volts Direct Current

 Terminal Block Connection
 Marked Terminal
 Unmarked Terminal
 Unmarked Splice
 Marked Wire
 Marked Splice
 Factory Wiring
 Field Control Wiring
 Field Power Wiring
 Indicates Common Potential. Does not represent wiring

NOTES

1. Fan motors thermally protected, three-phase fan motors protected against primary single phasing conditions.
2. Replacement of original wires must be with type 105 C wire or its equivalent.
3. Numbers on the right side of label diagrams indicate the line location of applicable contacts. An underlined number signifies normally closed contacts. A plain number denotes normally open contacts. Line numbers are shown on the left side of the diagrams.
4. Factory wiring is in accordance with National Electrical Code (NEC). Field modifications or additions must be in compliance with all applicable codes.
5. Wiring for main field power supply must be rated 75 C minimum. Use copper, copper clad aluminum or aluminum conductors for all units except use copper conductors only for all 346-volt units, the 30GT250 380-volt unit, the 30GT280 380-volt unit, and the 30GT280 460-volt part winding start unit. Maximum incoming wire size for each terminal block is 500 MCM.
6. Power for control circuit should be supplied from a separate source through a field-supplied disconnect with 30 amp maximum protection for 115-volt control circuits and 15 amps maximum protection for 230-volt control circuit. Connect control circuit power to terminals 1 and 2 of TB4. Connect neutral side of supply to terminal 2 of TB4. Control circuit conductors for all units must be copper only.
7. Terminals 7, 8, 9 and 10 of TB7 are for field external interlock connection for remote on-off or CWP interlock. The contacts must be rated for dry circuit application, capable of handling a 5 vdc 1 mA to 20 mA load. Remove jumper between terminals 9 and 10 of TB7 if remote on-off is installed.
8. For part winding start only, time delay relays are wired between  terminals on compressor contactors. Center terminals of time delay relay are then jumpered.
9. Terminals 1, 2, 3, 4 of TB5 are for chilled water pump and remote alarm control functions. The maximum load allowed for the alarm circuit and the chilled water pump circuit is 125 va sealed, 1250 va inrush at 115 or 230 volts.

SAFETY CONSIDERATIONS

Installing, starting up and servicing air conditioning equipment can be hazardous due to system pressures, electrical components and equipment location (roofs, elevated structures, etc.).

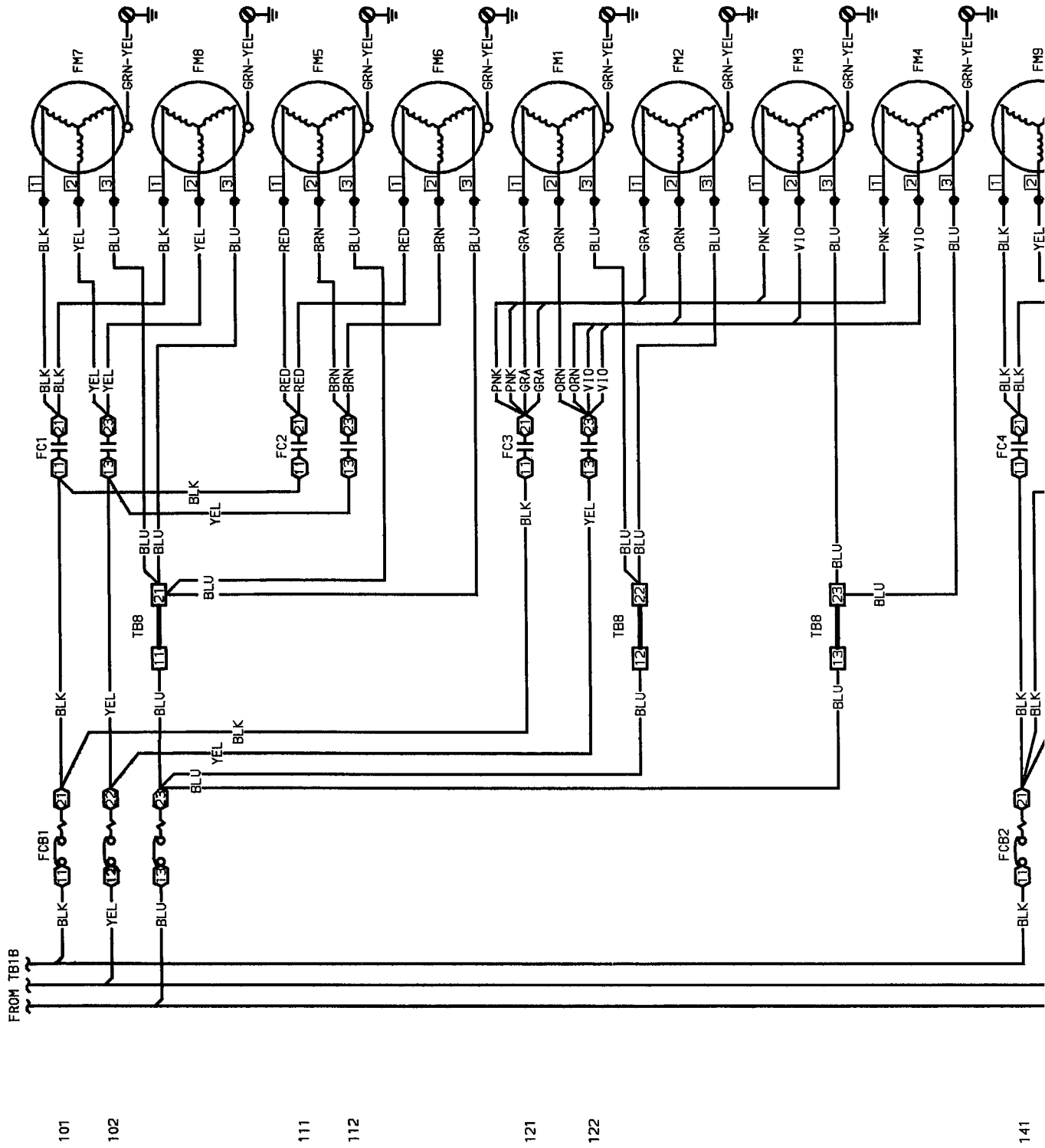
Only trained, qualified installers and service mechanics should install, start up and service this equipment. Untrained personnel can perform basic maintenance functions such as cleaning coils. All other operations should be performed by trained service personnel. When working on the equipment, observe precautions in the literature and on tags, stickers and labels attached to the equipment. Follow all safety codes. Wear safety glasses and work gloves.



ELECTRIC SHOCK HAZARD.

Turn off all power to unit before performing wiring operations. Tag all disconnects to alert others not to turn on power until work is completed.

IMPORTANT: Before initial start-up and before restarting unit after a prolonged shutdown, compressor crankcase heaters should be energized for 24 hours.



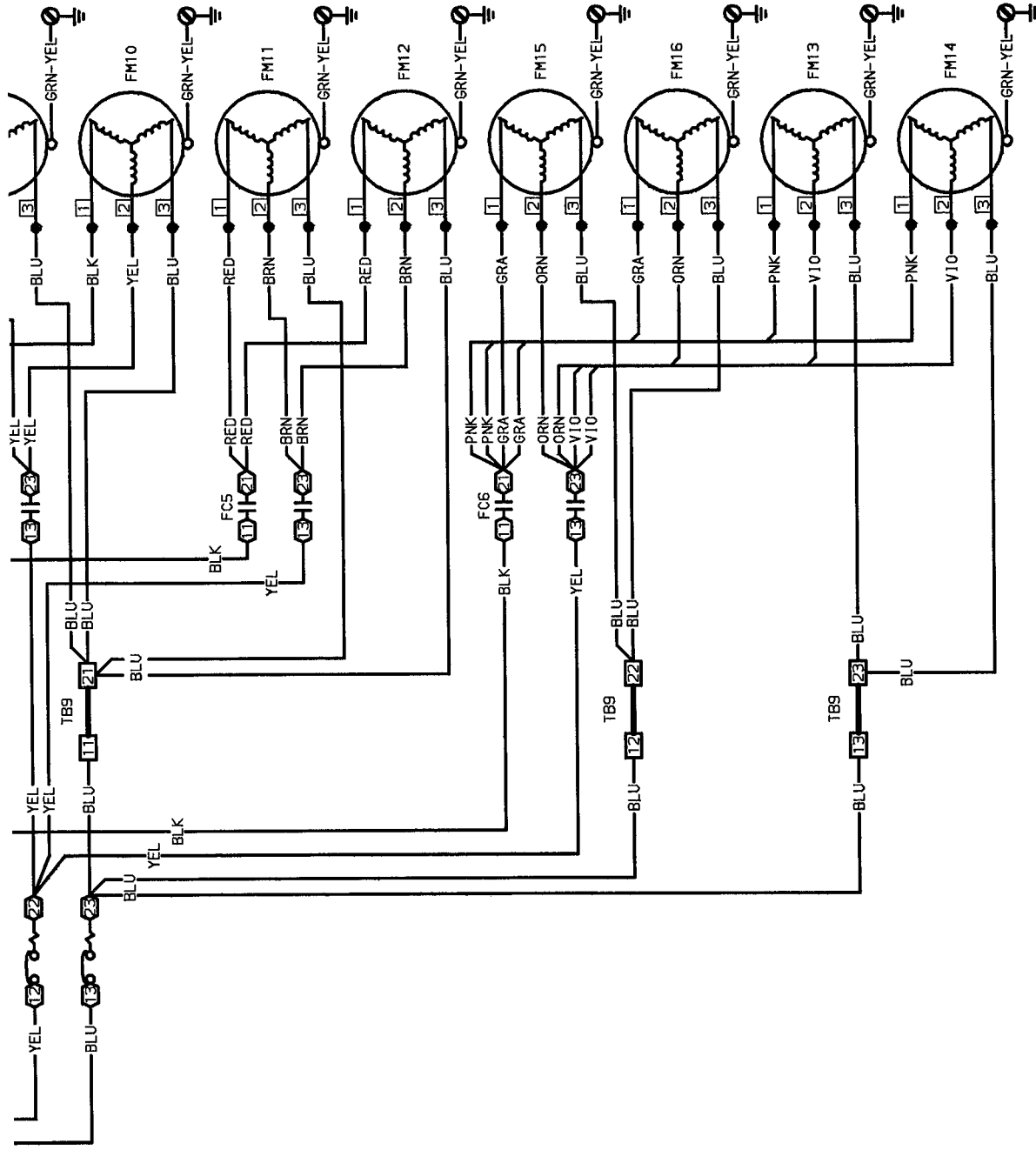


Fig. 1 — 30GT225; Fan Power Wiring Schematic

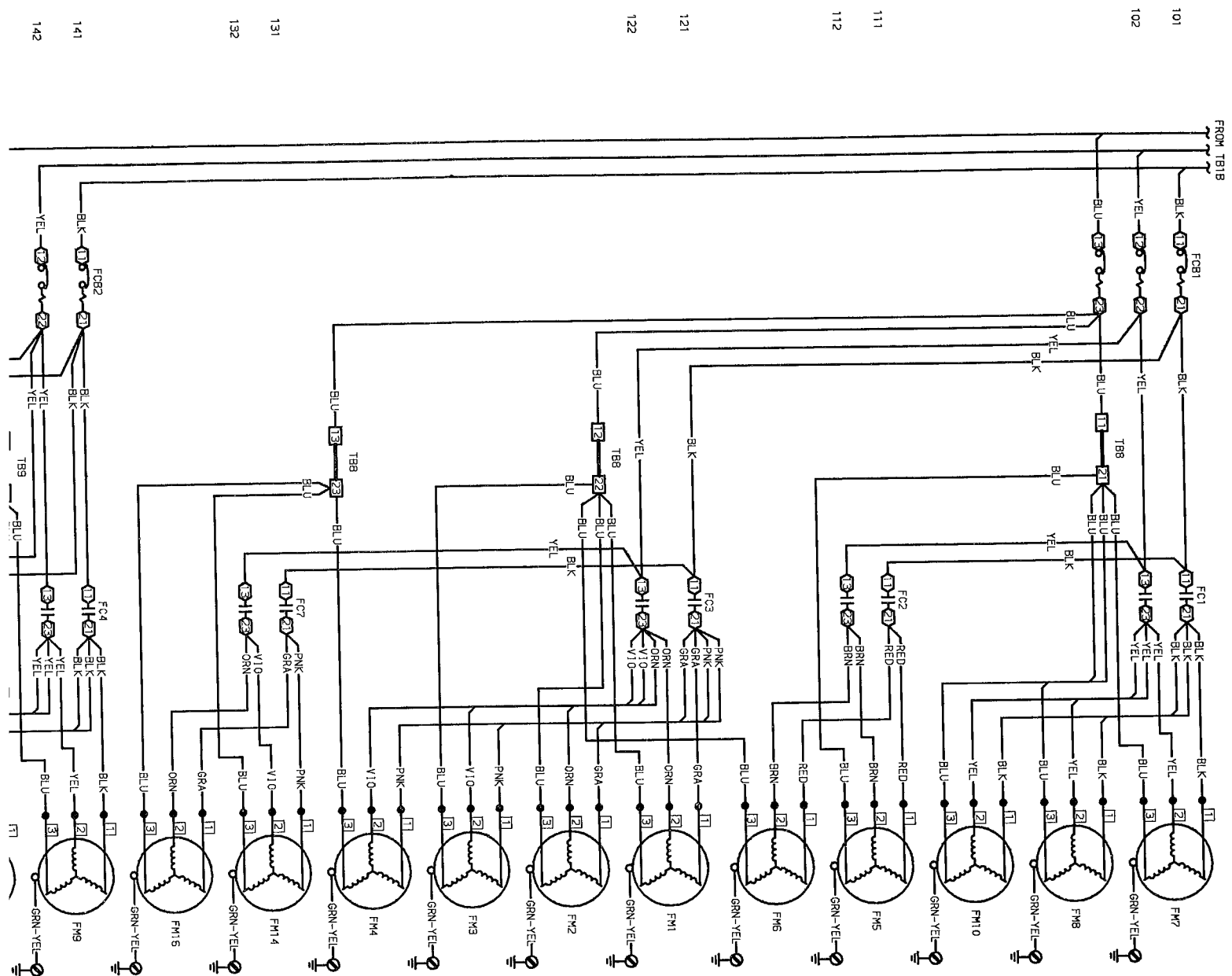
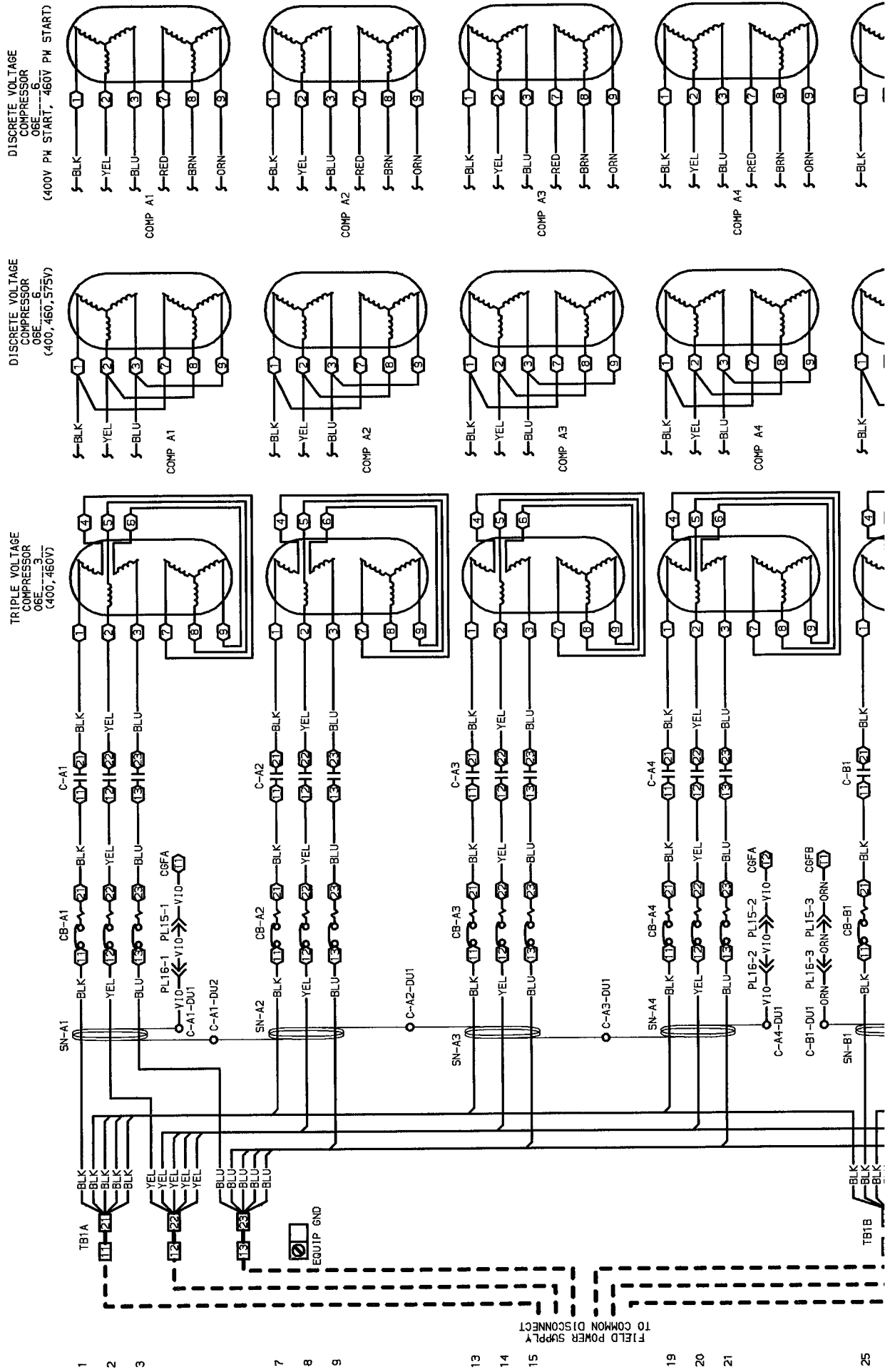




Fig. 2 — 30GT250, 280; Fan Power Wiring Schematic



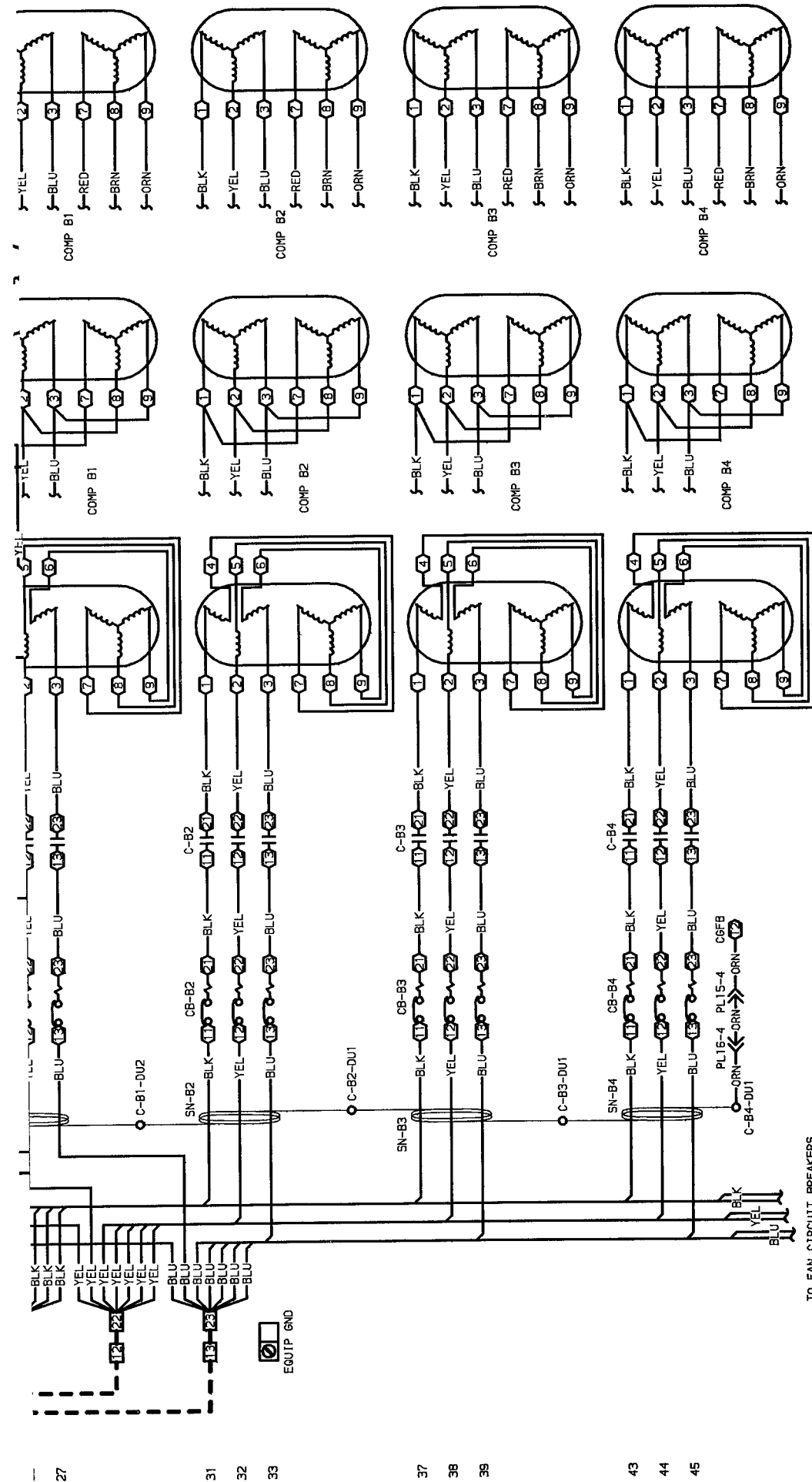


Fig. 3 — 30GT225-280; Compressor Power Wiring Schematic
 380/415 (50 Hz), 460, 575 Volts

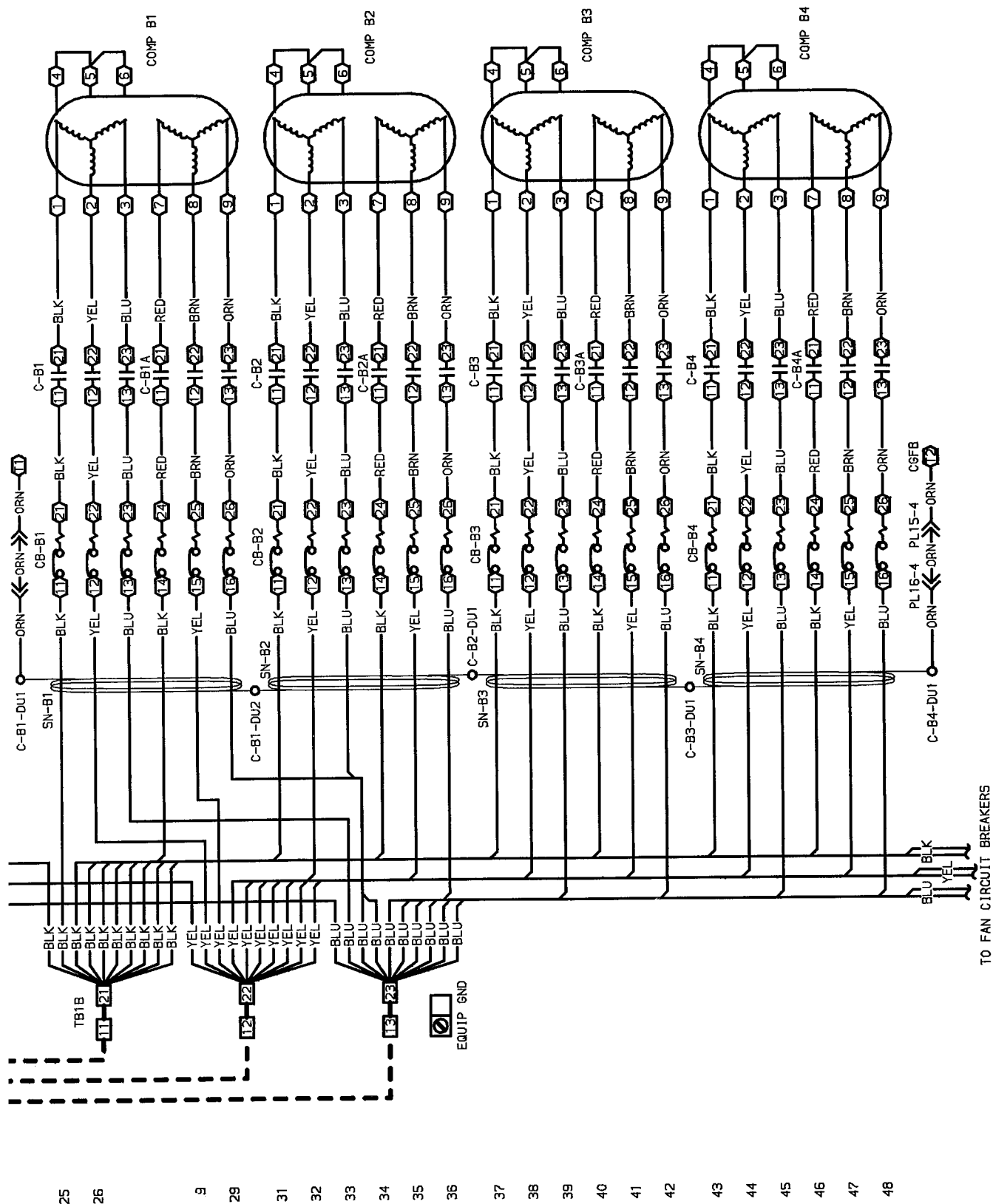
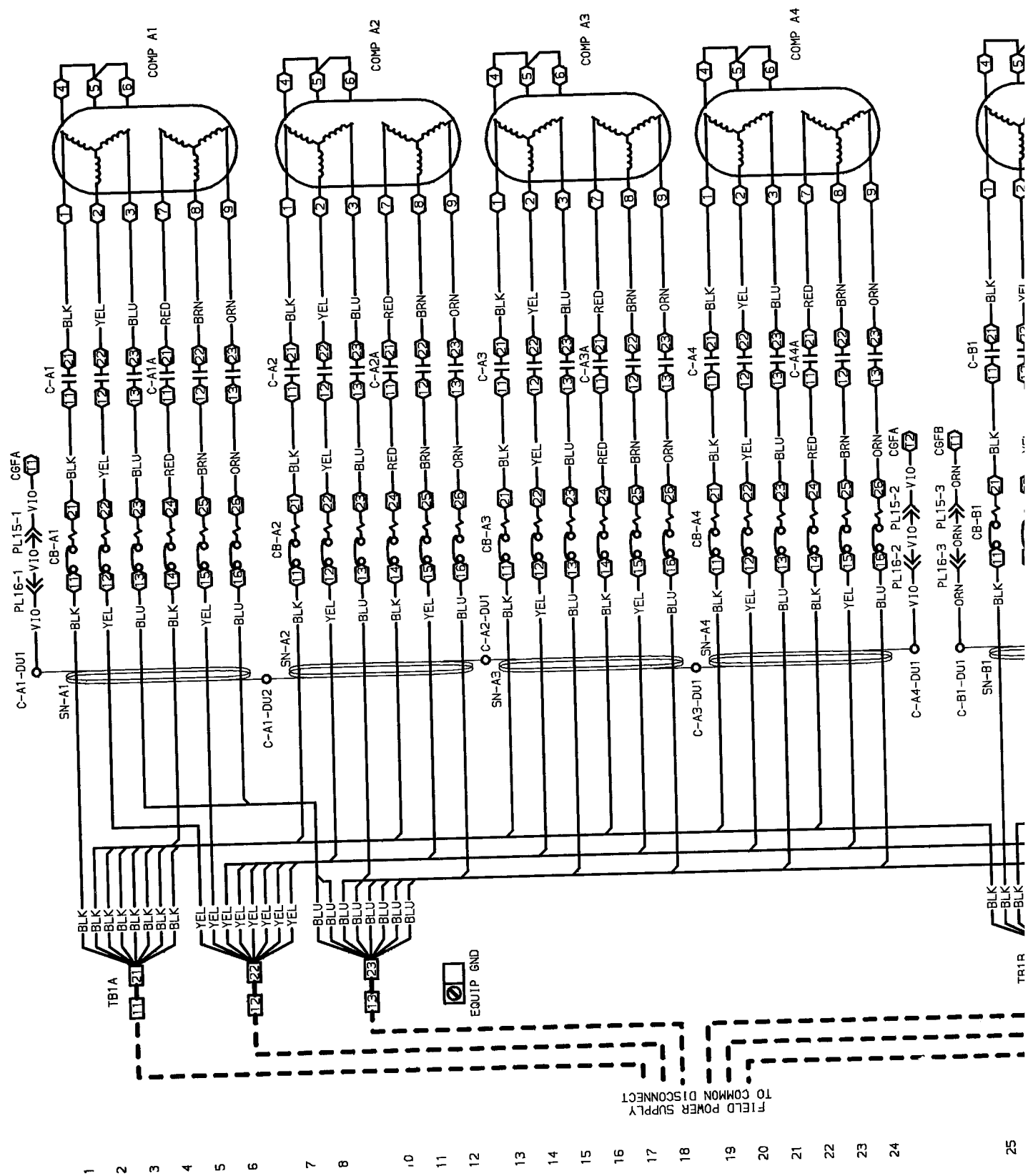


Fig. 4 — 30GT225-280; Compressor Power Wiring Schematic;
346, 380 (60 Hz) Volts



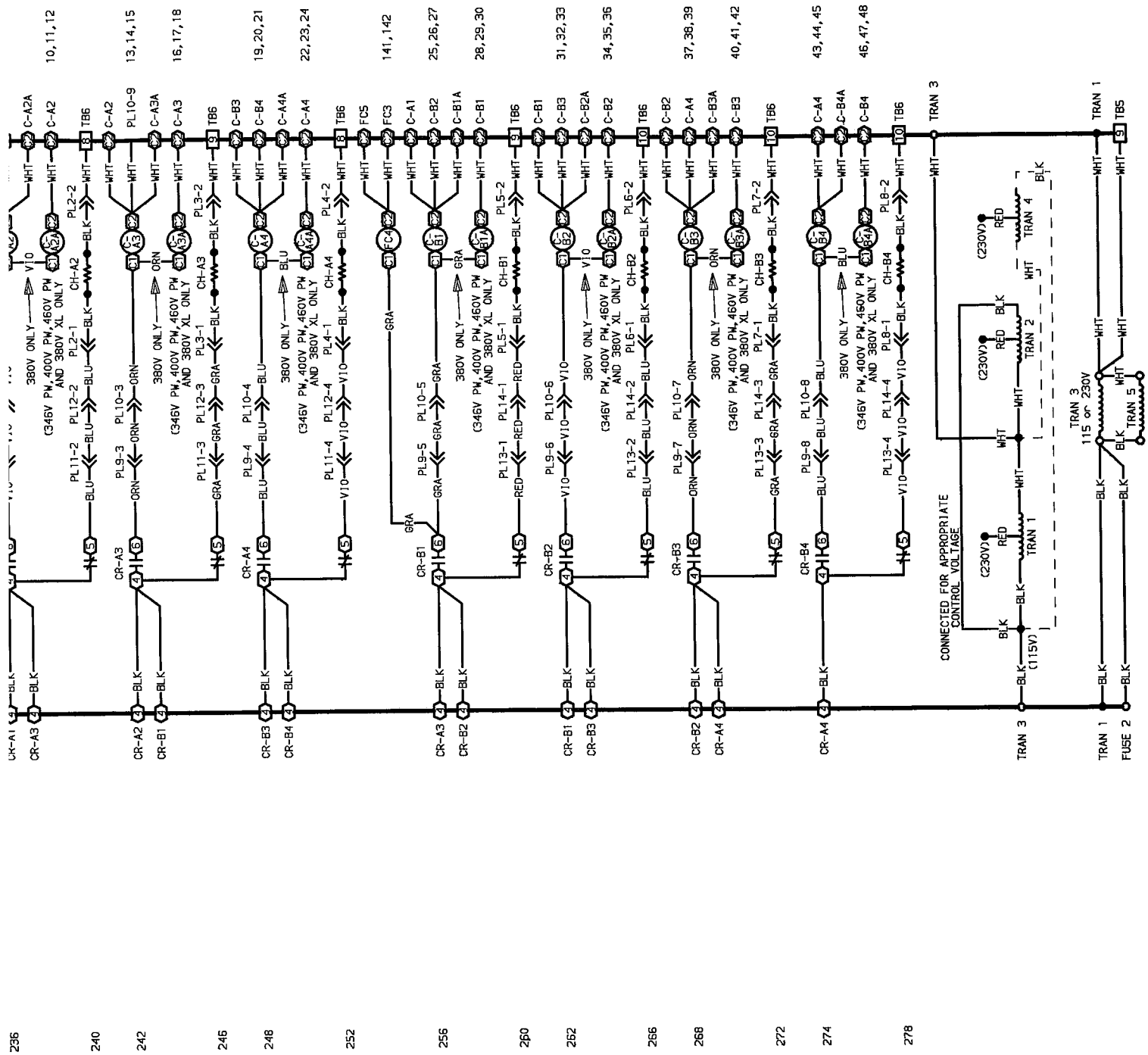
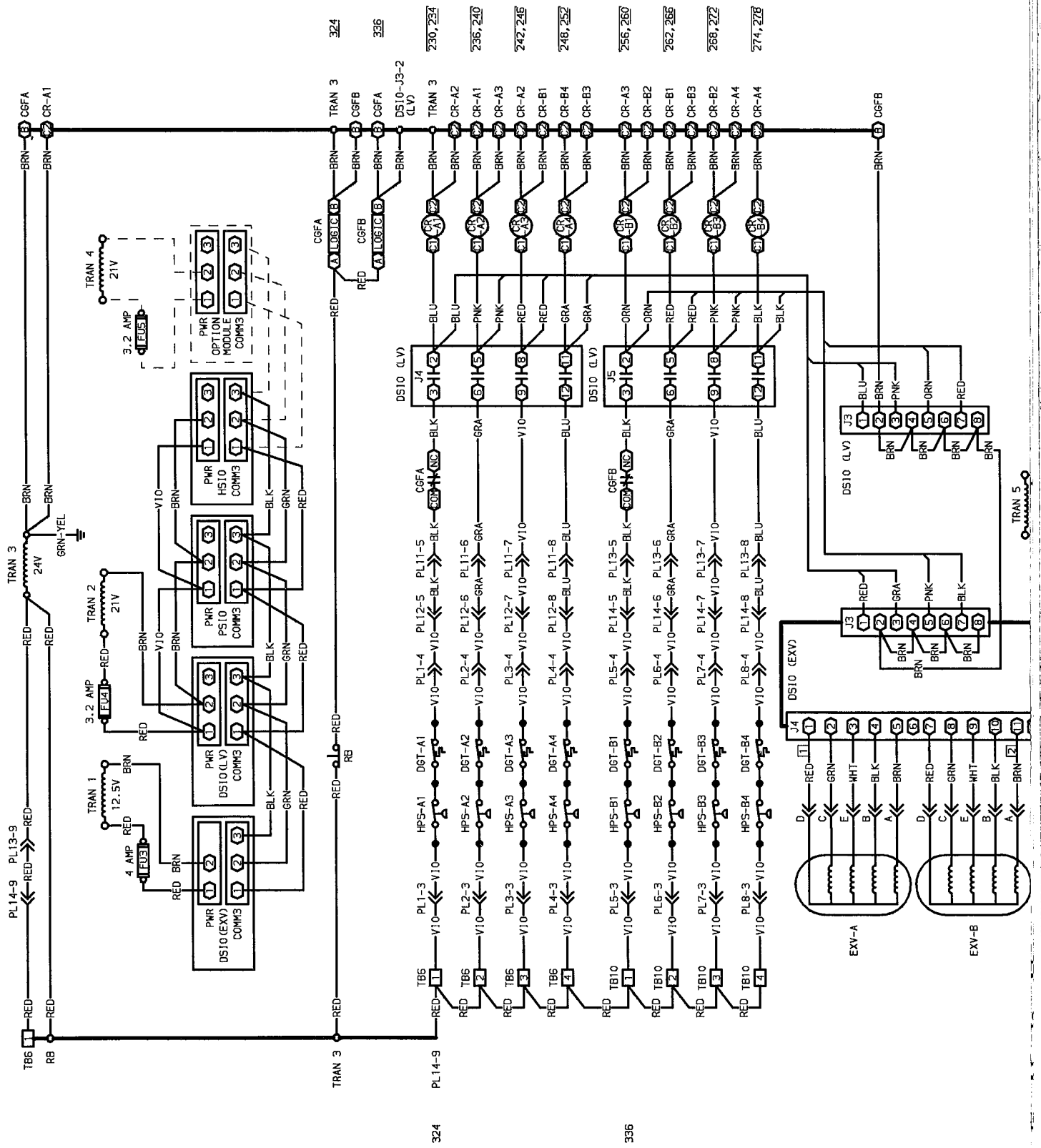


Fig. 5 — 30GT225-280; Control Power Wiring Schematic; 115, 230 Volts



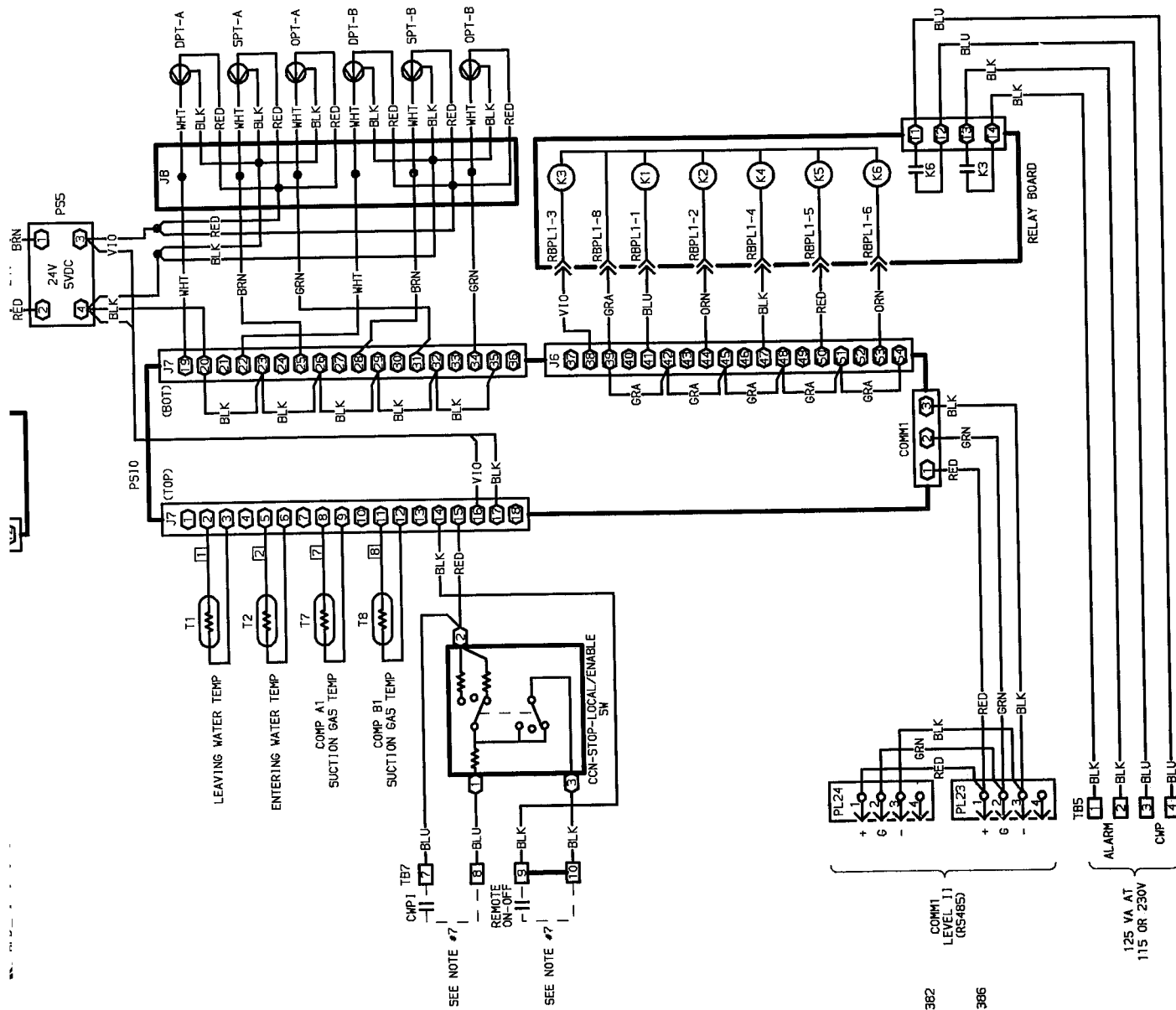
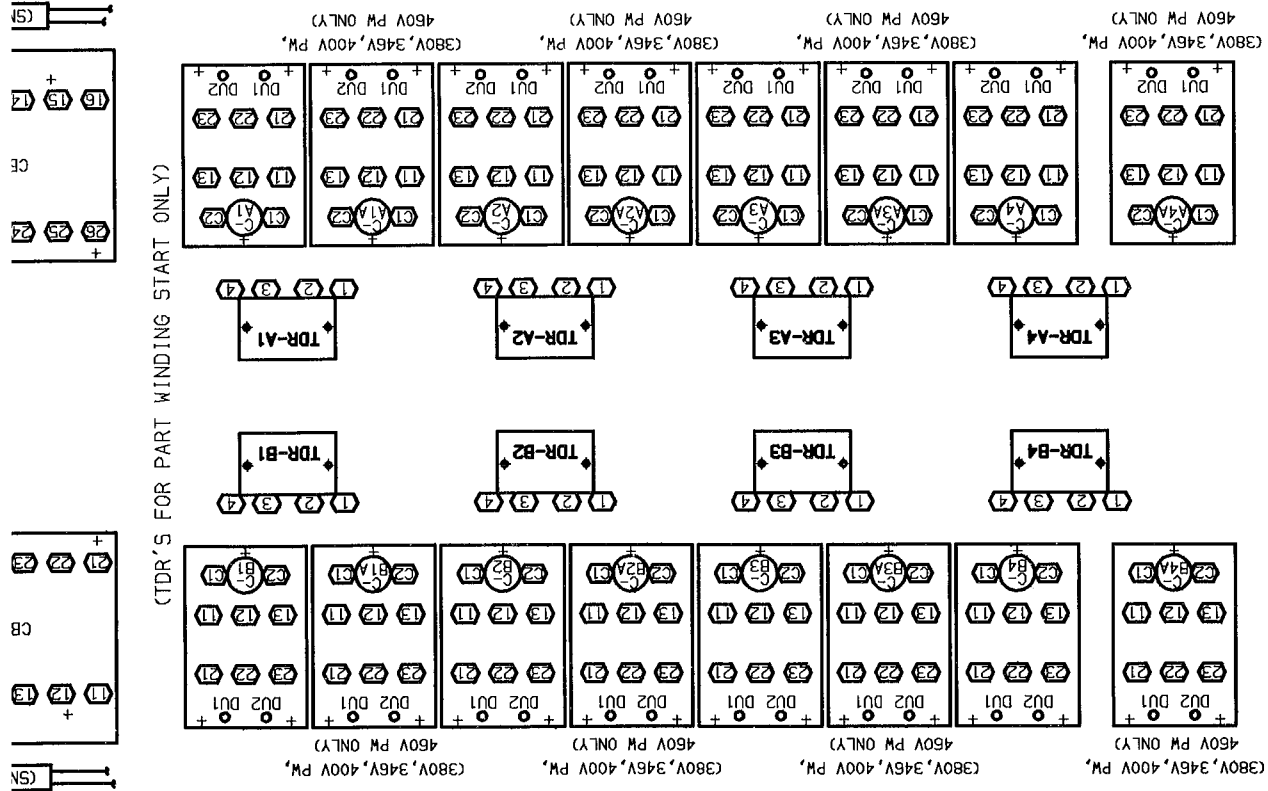


Fig. 6 — 30GT225-280; Control Power Wiring Schematic; 24 Volts

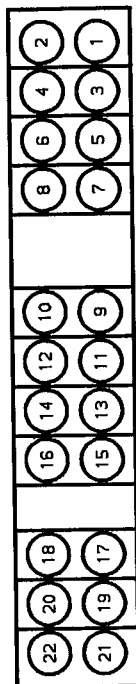
TDR'S FOR PART WINDING START ONLY



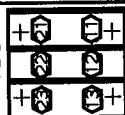
UNIT SIZE	VOLTAGE	COMP #	COMP CB	MUST TRIP
306T225600	460	A1-A3, B1-B3	HEINEMANN	AMPS
306T225600	460	A4, B4	CF3-Z33-25	219-3-2600-432
306T225600	460	A1-A3, B1-B3	CF3-Z33-4	219-3-2600-405
306T225600	460	A4, B4	CF6-Z3-26	219-6-2601-670
306T225100	575	A1-A3, B1-B3	CF6-Z3-27	219-6-2601-671
306T225200	380	A4, B4	CF3-Z33-23	219-3-2600-424
306T225200	380	A1-A3, B1-B3	CF3-Z33-30	219-3-2600-434
306T225900	400	A4, B4	CF6-Z3-14	219-6-2601-656
306T225900	400	A1	CF6-Z3-24	219-6-2601-668
306T225900	400	A2-A4, B1-B4	CF3-Z33-25	219-3-2600-432
306T225900	400	A1	CF3-Z33-4	219-3-2600-405
306T225900	400	A2-A4, B1-B4	CF6-Z3-26	219-6-2601-670
306T225300	346	A1	CF6-Z3-27	219-6-2601-671
306T250600	460	A2-A4, B1-B4	CF6-Z3-4	219-6-2601-612
306T250600	460	A1	CF6-Z3-25	219-6-2601-669
306T250600	460	A1, A2, B1, B2	CF3-Z33-25	219-3-2600-432
306T250600	460	A3, A4, B3, B4	CF3-Z33-4	219-3-2600-405
306T250600	460	A1, A2, B1, B2	CF6-Z3-26	219-6-2601-670
306T250600	460	A3, A4, B3, B4	CF6-Z3-27	219-6-2601-671
306T250100	575	A1, A2, B1, B2	CF3-Z33-23	219-3-2600-424
306T250100	575	A3, A4, B3, B4	CF3-Z33-30	219-3-2600-434
306T250200	380	A1, A2, B1, B2	CF6-Z3-14	219-6-2601-656
306T250200	380	A3, A4, B3, B4	CF6-Z3-24	219-6-2601-668
306T250900	400	ALL	CF3-Z33-4	219-3-2600-405
306T250900	400	ALL	CF6-Z3-27	219-6-2601-671
306T250300	346	ALL	CF6-Z3-25	219-6-2601-669
306T280600	460	ALL	CF3-Z33-4	219-3-2600-405
306T280600	460	ALL	CF6-Z3-27	219-6-2601-671
306T280100	575	ALL	CF3-Z33-30	219-3-2600-434
306T280200	380	ALL	CF6-Z3-24	219-6-2601-668

MOTOR-COMPRESSOR THERMALLY PROTECTED SYSTEM.
CB MUST TRIP AMPS ARE LESS THAN OR EQUAL TO 156% RLA.

FAN ARRANGEMENT



TB9



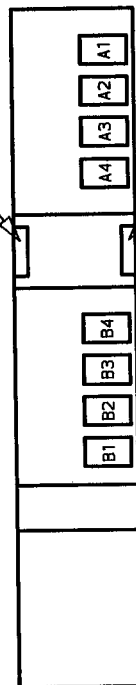
(250, 280 ONLY)

TB8

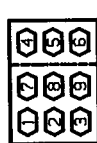


CONTROL BOX
(CONTROL)

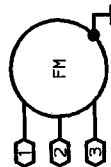
COMPRESSOR ARRANGEMENT



CONTROL BOX
(POWER)



COMP-A1 THRU A4
COMP-B1 THRU B4

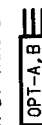


EXV-A & B

280 FM1-22
250 FM1-20
225 FM1-16



CH-A1 THRU A4
CH-B1 THRU B4



OPT-A, B



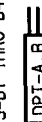
DGT-A1 THRU A4
DGT-B1 THRU B4



SPT-A, B



HPS-A1 THRU A4
HPS-B1 THRU B4

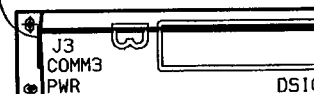
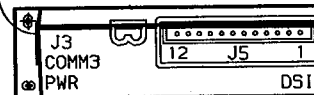
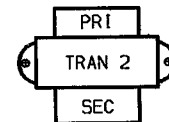
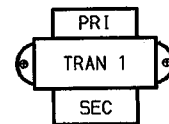
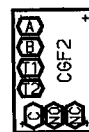
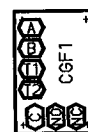
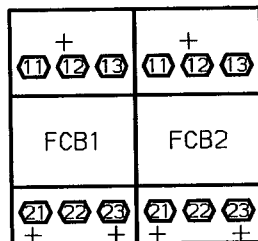


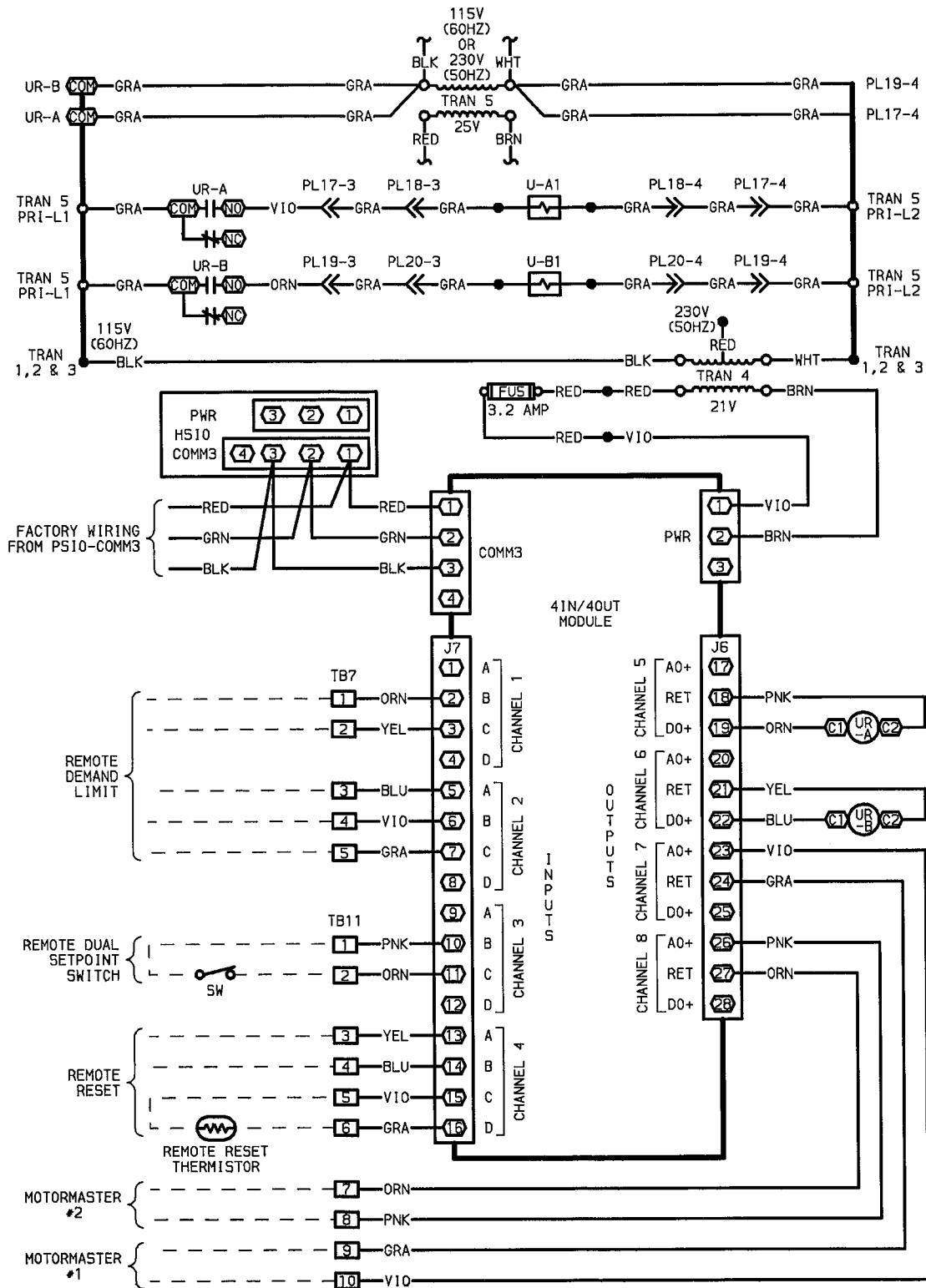
DPT-A, B



CHC-1, 2, 3, 4

CHC-1, 2, 3, 4





LEGEND

AO	— Analog Output	PWR	— Power
COM	— Common	RET	— Return (Common)
COMM	— Communications	SW	— Switch
DO	— Digital Output	TRAN	— Transformer
FU	— Fuse	U	— Unloader
PL	— Plug	UR	— Unloader Relay
PSIO	— Processor Module		

Fig. 9 — 30GT225-280; Accessory Options Module Wiring Schematic

SIZE EACH CIRCUIT AT 1/2 OF THE UNIT MINIMUM CIRCUIT AMPS

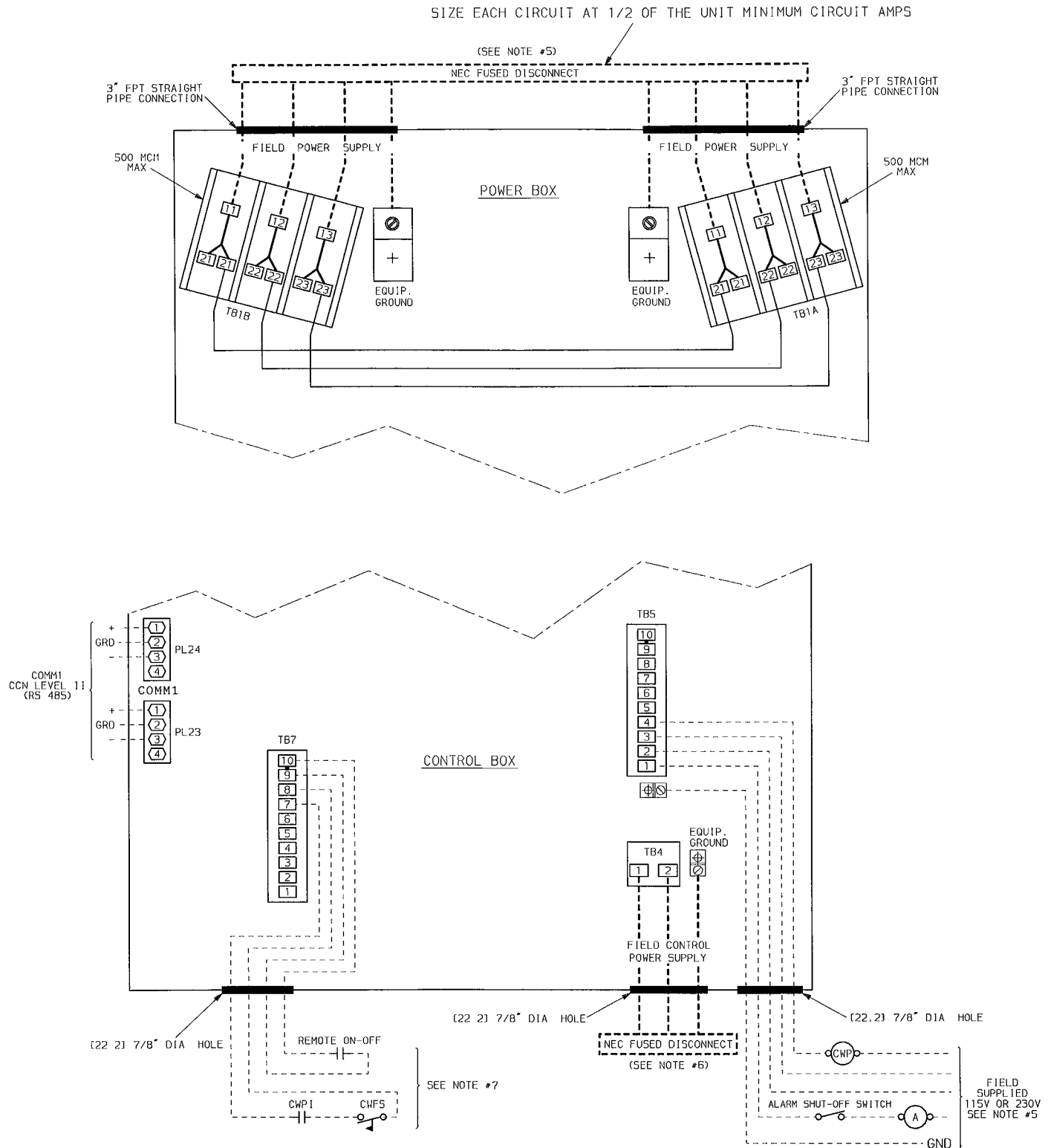


**Fig. 10 — 30GT225-280; Field Wiring Diagram;
346, 380 (60 Hz), 380/415 (50 Hz), 460, 575 Volts**