



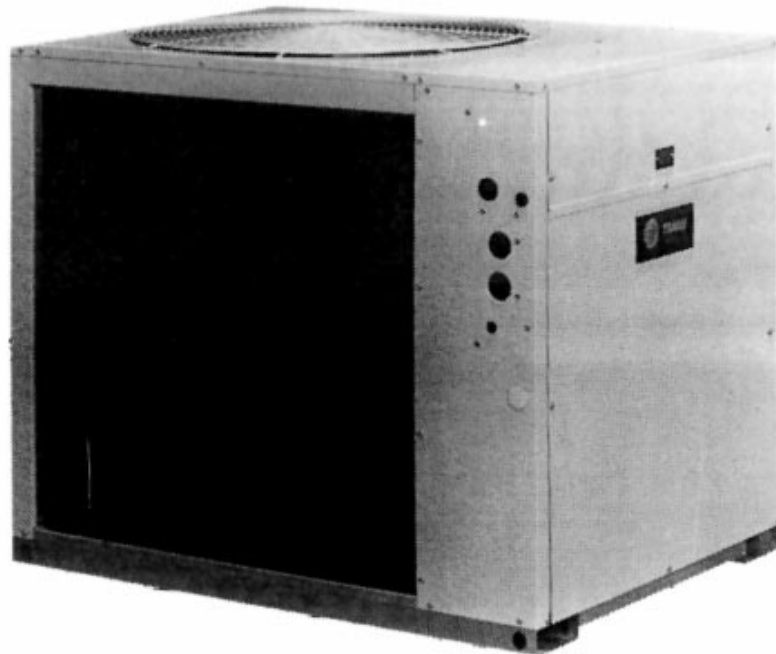
TRANE™

Wiring

CGA-W-4

| | |
|-----------------|--|
| Library | Service Literature |
| Product Section | Refrigeration |
| Product | Recip. Liquid Chillers - A/C Cold Generators |
| Model | CGA |
| Literature Type | Unit Wiring |
| Sequence | 4 |
| Date | October 1998 |
| File No. | SV-RF-CG-CGA-W-4-10/98 |
| Supersedes | New |

10 and 15 ton
Air-Cooled
Cold Generators®



Models

- CGA 120 B ___ D _
- CGA 180 B ___ C _

Since the Trane Company has a policy of continuous product improvement, it reserves the right to change specifications and design without notice. The installation and servicing of the equipment referred to in this booklet should be done by qualified, experienced technicians.

CGA 120B and 180B Unit Wiring Manual

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| | CGA180BW (575V/60/3) Connection |

Literature Change History

CGA-W-3 (July 1994)
Original issue of manual; provides typical field and control panel connection diagrams and electrical schematics for 10 and 15 ton CGA units of "C" design. (See digit 11 of the unit model number.)

Warnings and Cautions

Notice that Warnings and Cautions appear at appropriate intervals throughout this manual.

Warnings are provided to alert installing contractors and operating or service personnel to potential hazards that could result in personal injury or death, while Cautions are intended to alert personnel to conditions, that could result in equipment damage.

Your personal safety and the proper operation of this system depend upon the strict observance of these precautions.

Model Number Description

All standard Trane products are identified by a multiple-character model number that precisely identifies a particular type of unit. An explanation of the alphanumeric identification codes used for CGA units is provided on this page. Its use will enable the owner/operator, installing contractors, and service engineers to define the operation, components and options for any specific unit.

| | | | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <u>C</u> | <u>G</u> | <u>A</u> | <u>1</u> | <u>2</u> | <u>0</u> | <u>B</u> | <u>3</u> | <u>0</u> | <u>0</u> | <u>C</u> | <u>A</u> |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

Digits 1,2,3

Unit Model

CGA = Cold Generator

Digits 4,5,6

Nominal Capacity

120 = 10 Tons

180 = 15 Tons

Digit 7

Form or Configuration

(Number of Refrigerant Circuits/
Number of Compressors)

B = 2 Ref. Ckts/ 2 Compr.

Digit 8

Voltage

1 = 208-230V/60Hz/1 *

3 = 208-230V/60Hz/3

4 = 460V/60Hz/3

W = 575V/60Hz/3

D = 380-415V/50Hz/3

* = Not Available on CGA180 Units

Digit 9

Factory Installed Options

O = No Options

H = Hot Gas Bypass

C = Chromate Coil

K = Hot Gas Bypass
and Chromate Coil

Digit 10

Expansion Valve

O = Standard Expansion Valve

V = Low Leaving Water Temp
Expansion Valve

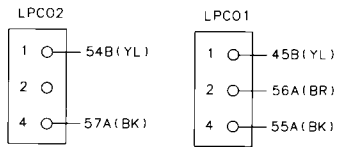
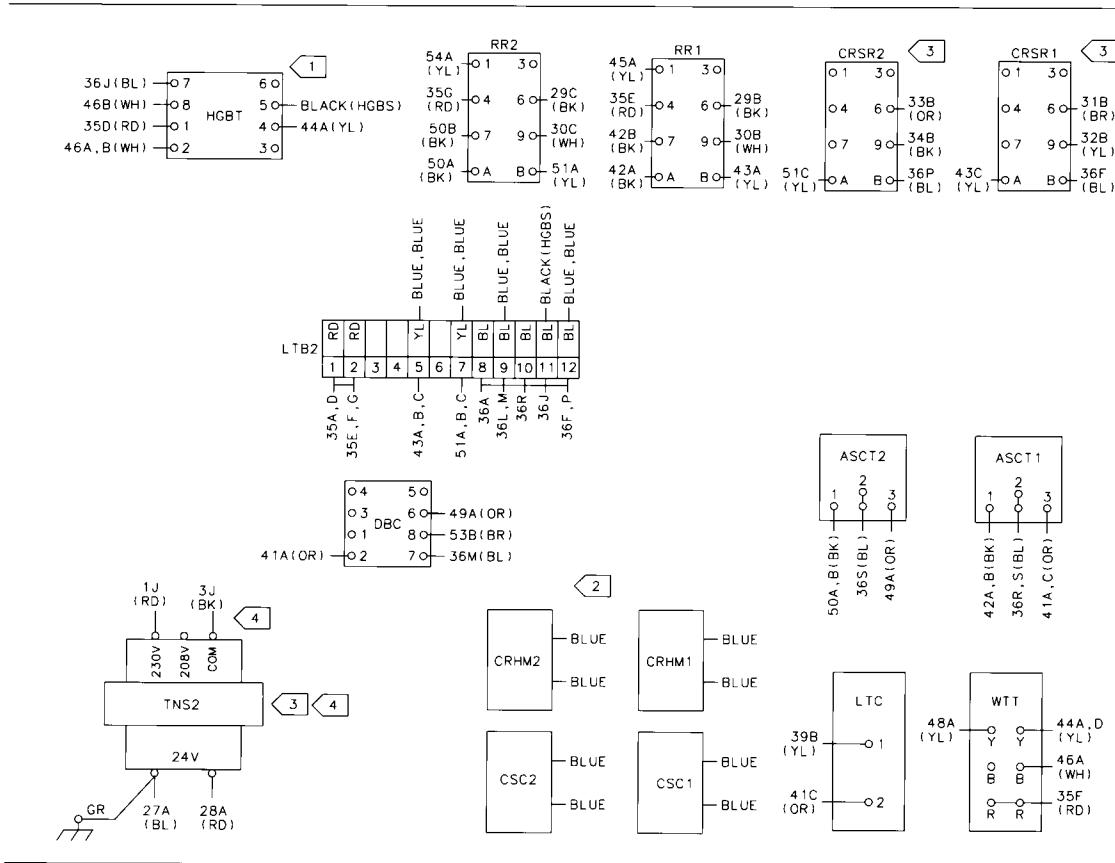
Digit 11

Major Design Change

C

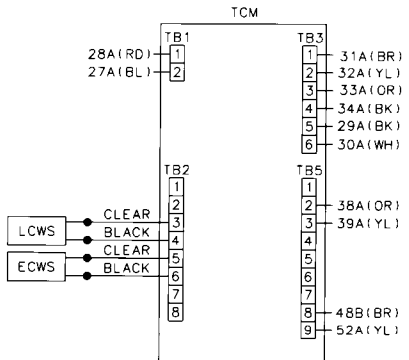
Digit 12

Service Digit/Minor Design Change



NOTES:

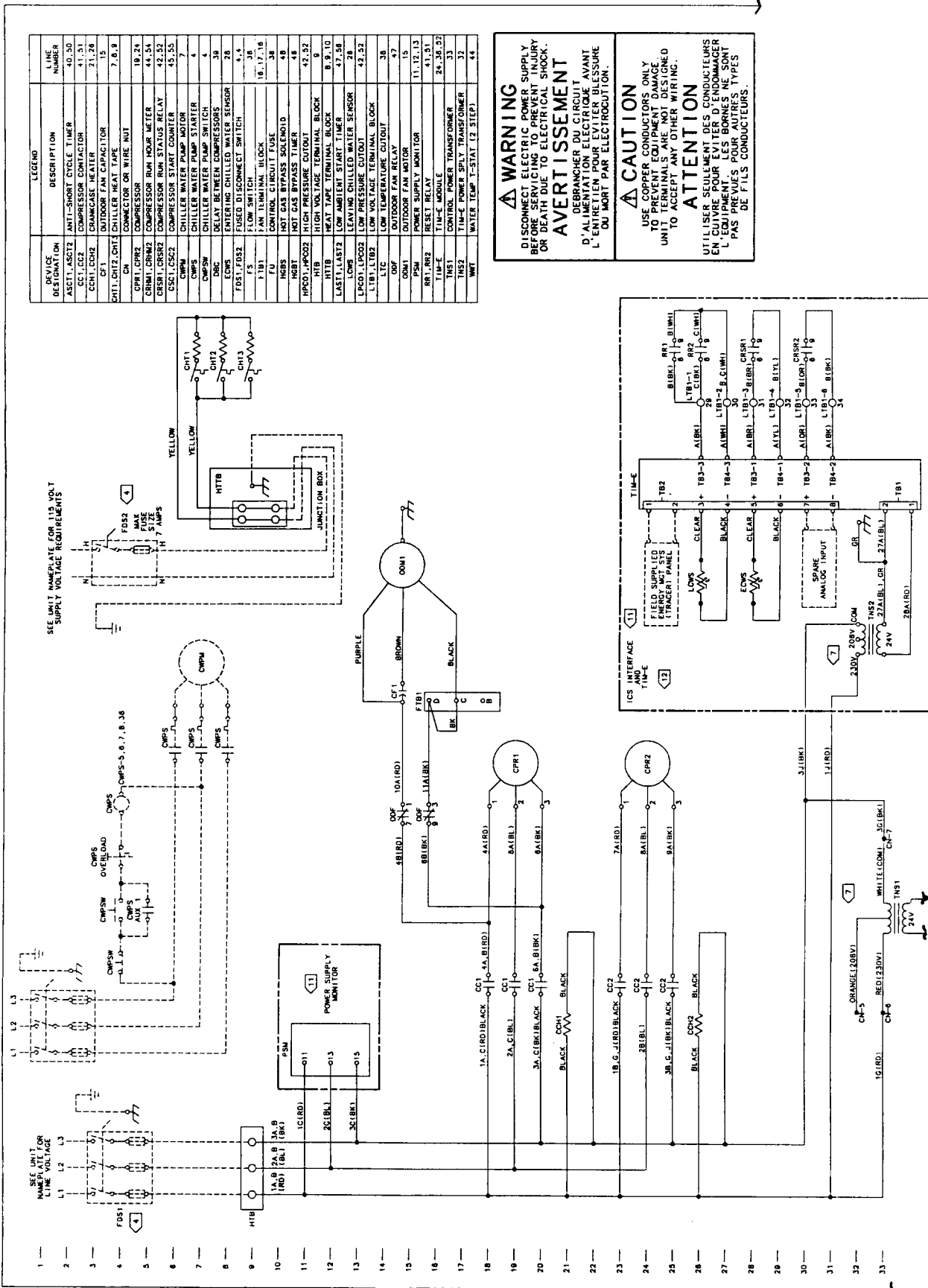
- 1 HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGBT, HGBS AND ASSOCIATED WIRING (FACTORY INSTALLED ONLY).
- 2 FIELD INSTALLED ELAPSED TIME METER AND START COUNTER ACCESSORIES.
- 3 FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTB1-9 & LTB1-10 AND LTB1-11 & LTB1-12 WHEN INSTALLED.
- 4 CONNECTIONS SHOWN ARE FOR 230V OPERATION. WHEN 208V OPERATION IS REQUIRED, SWITCH RED AND ORANGE TRANSFORMER LEADS AROUND AT TRANSFORMER TNS1. INSULATE TNS1 RED WIRE LEAD TO AVOID ACCIDENTLY SHORTING. AT TRANSFORMER TNS2, SWITCH WIRE 1J(RD) FROM TERMINAL 230V TO TERMINAL 208V.



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|---|---|
| <p>⚠ WARNING</p> <p>DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK.</p> <p>AVERTISSEMENT</p> <p>DEBRANCHER DU CIRCUIT D'ALIMENTATION ELECTRIQUE AVANT L'ENTRETIEN POUR EVITER BLESSURE OU MORT PAR ELECTROCUTION.</p> | <p>⚠ CAUTION</p> <p>USE COPPER CONDUCTORS ONLY TO PREVENT EQUIPMENT DAMAGE. UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT ANY OTHER WIRING.</p> <p>ATTENTION</p> <p>UTILISER SEULEMENT DES CONDUCTEURS EN CUIVRE POUR EVITER D'ENDOMMAGER L'EQUIPEMENT. LES BORNES NE SONT PAS PREVUES POUR AUTRES TYPES DE FILS CONDUCTEURS.</p> |
|---|---|

Figure 3
CGA120B3
(208-230V/60/3) Schematic Diagram

(Continued on next page)



| DEVICE DESIGNATION | DESCRIPTION | LINE NUMBER |
|--------------------|---------------------------------|-------------|
| ASCT1, ASC2 | ANTI-SHORT CYCLE TIMER | 40, 30 |
| CC1, CC2 | COMPRESSOR CONTACTOR | 41, 51 |
| CH1, CH2 | CRANKCASE HEATER | 21, 26 |
| CF1 | OUTDOOR FAN CAPACITOR | 15 |
| CHT1, CHT2, CHT3 | CHILLER HEAT TAPE | 7, 8, 9 |
| CH | CONNECTOR OR WIRE NUT | |
| OPR1, OPR2 | COMPRESSOR | 19, 24 |
| CRMT, CRM2 | COMPRESSOR RUN HOUR METER | 44, 54 |
| CSRT1, CSRT2 | COMPRESSOR RUN STATUS RELAY | 42, 52 |
| CSC1, CSC2 | COMPRESSOR START COIL | 45, 55 |
| CWPS | CHILLER WATER PUMP MOTOR | 7 |
| CHWS | CHILLER WATER PUMP STARTER | 4 |
| CSW | CHILLER WATER COMPRESSOR | 6 |
| CSM | CHILLER WATER MOTOR | 3 |
| EWS | ENTER LINE CHILLED WATER SENSOR | 28 |
| F51 | FUSED DISCONNECT SWITCH | 4, 5 |
| F1 | FAN TERMINAL BLOCK | 36 |
| F1B1, F1B2 | FAN TERMINAL BLOCK | 18, 17, 16 |
| FU | CONTROL CIRCUIT FUSE | 38 |
| HGBS | HOT GAS BYPASS SOLENOID | 48 |
| HGBT | HOT GAS BYPASS TIMER | 48 |
| HPCD1, HPCD2 | HIGH PRESSURE OUTOUT | 42, 52 |
| HTB | HIGH VOLTAGE TERMINAL BLOCK | 9 |
| HTB1, LAST2 | LOW AMBIENT START TIMER | 9, 9, 10 |
| LWS | LEAVING CHILLED WATER SENSOR | 28 |
| LPSD1, LPSD2 | LOW PRESSURE OUTOUT | 42, 52 |
| LTB1, LTB2 | LOW TEMPERATURE BLOCK | 28 |
| DOF | OUTDOOR FAN RELAY | 47 |
| ODM | OUTDOOR FAN MOTOR | 15 |
| PSM | POWER SUPPLY MONITOR | 11, 12, 13 |
| RRI1, RRI2 | RESET RELAY | 41, 51 |
| TIM-E | TIME MODULE | 24, 26, 52 |
| TMS1 | CONTROL POWER TRANSFORMER | 33 |
| TMS2 | TIME POWER SPILT TRANSFORMER | 32 |
| WWT | WATER TEMP. T-STAT (12 STEP) | 44 |

⚠ WARNING
 DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK.
AVERTISSEMENT
 DÉBRANCHER DU CIRCUIT ÉLECTRIQUE AVANT DE RÉPARER POUR ÉVITER BLESSURE OU MORT PAR ÉLECTROCUTION.

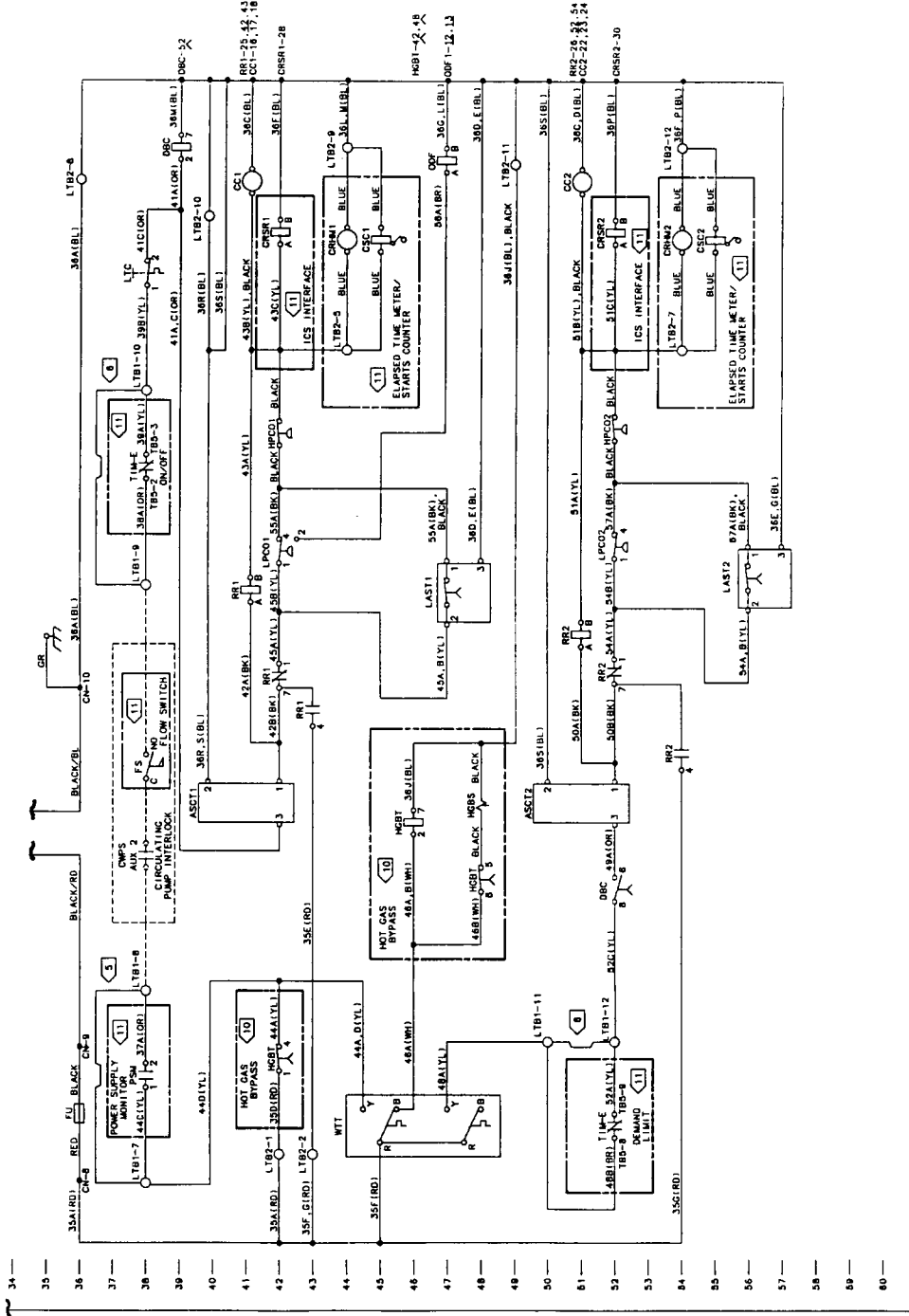
⚠ CAUTION
 USE COPPER CONDUCTORS ONLY TO PREVENT EQUIPMENT DAMAGE. UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT ANY OTHER WIRING.

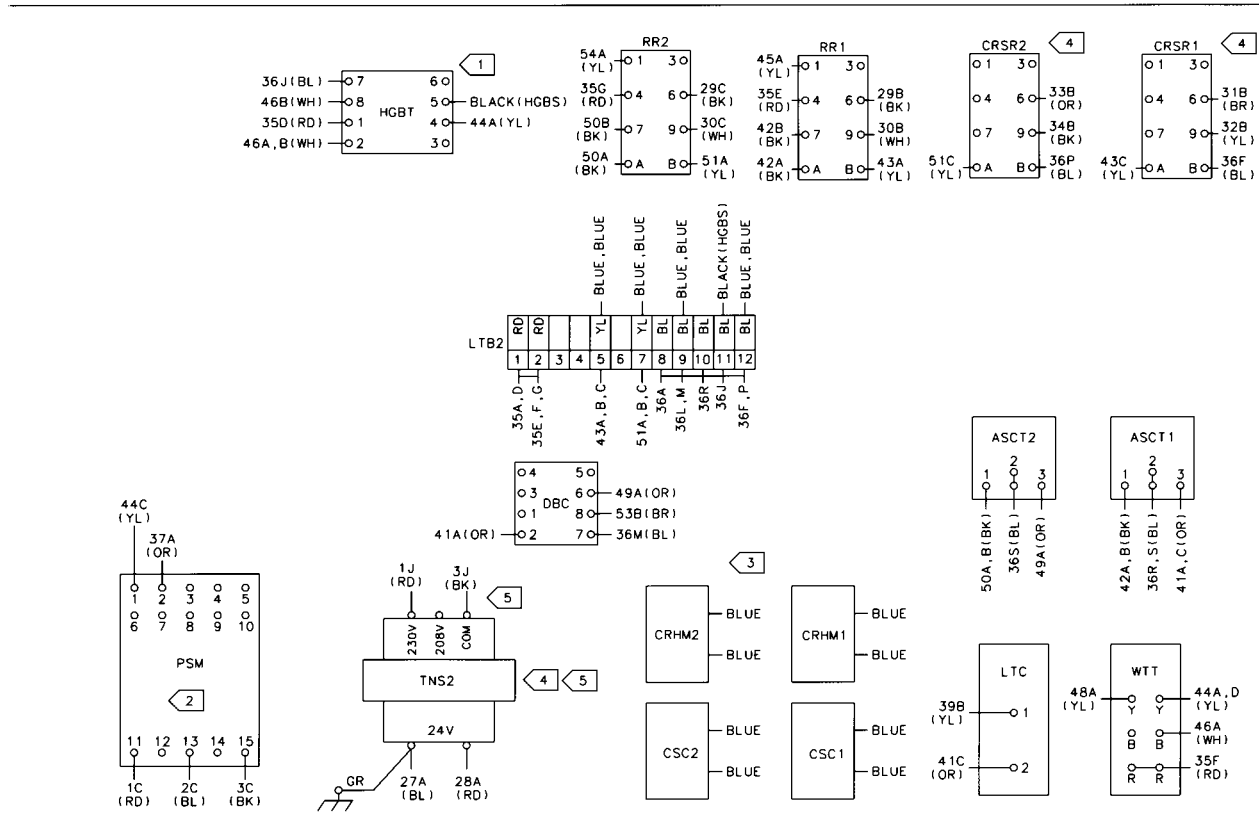
ATTENTION
 UTILISER SEULEMENT DES CONDUCTEURS EN CUivre POUR ÉVITER D'ENDOMMAGER L'ÉQUIPEMENT. LES BORNES NE SONT PAS PRÉVUES POUR AUTRES TYPES DE FILS CONDUCTEURS.

- NOTES:
1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C (77°F) AT ATMOSPHERIC HUMIDITY WITH PRESSURE AT 50% RELATIVE HUMIDITY. AFTER A NORMAL SHUTDOWN HAS OCCURRED.
 2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES INDICATE RECOMMENDED FIELD WIRING COMPONENTS PROVIDED BY THE FIELD. PNEUMATIC LINE ENCLOSURES INDICATE ALTERNATE FIELD INSTALLED ACCESSORIES. SOLID LINE INDICATES WIRING BY FRAME CO.
 3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC INDICATE THE LINE NUMBER UNDER WHICH CONTACTS BY LINE NUMBER CAN UNDERLINE NUMBER INDICATES A NORMALLY CLOSED CONTACT. A LINE NUMBER POINTING UPWARD INDICATES A NORMALLY OPEN CONTACT WHICH BEGINS TIMING WHEN ENERGIZED.

4. LOC CHANGING INSTALLATION (CSA) ONLY. SINGLE POWER SOURCE DISCONNECTING MEANS.
5. WHEN POWER SUPPLY MONITOR ACCESSORY IS INSTALLED, REMOVE JUMPER BETWEEN LTB1-7 AND LTB1-8.
6. WHEN ICS INTERFACE ACCESSORY IS INSTALLED, AND LTB1-11 & 12.
7. CONNECTIONS SHOWN ARE FOR 230V OPERATION. WHEN 208V OPERATION IS REQUIRED, SWITCH RED AND ORANGE TRANSFORMER LEADS AROUND AT THE TERMINAL BOARD TO ACCIDENTLY SHORTING AT THE TERMINAL BOARD TO TERMINAL 208V. TERMINAL 208V.
8. ALL THREE PHASE MOTORS SUPPLIED WITH THE PRIMARY SINGLE PHASE FAILURE CONDITIONS.
9. LOW VOLTAGE WIRING MUST BE 18 AWG MINIMUM.
10. ALTERNATE CONSTRUCTION (FACTORY INSTALLED ONLY).
11. ACCESSORY (FIELD INSTALLED ONLY).
12. TIME IS NOT INCLUDED IN THE ICS INTERFACE ACCESSORY.

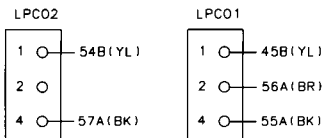
| WIRE COLOR | DESIGNATION |
|------------|-------------|
| BRN | BROWN |
| BLK | BLACK |
| BLU | BLUE |
| BRN | BROWN |
| GRN | GREEN |
| WHI | WHITE |
| YEL | YELLOW |





NOTES:

- ① HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGBT, HGBS AND ASSOCIATED WIRING (FACTORY INSTALLED ONLY).
- ② FIELD INSTALLED POWER SUPPLY MONITOR ACCESSORY. REMOVE JUMPER BETWEEN LTB1-7 AND LTB1-8 WHEN INSTALLED.
- ③ FIELD INSTALLED ELAPSED TIME METERS AND START COUNTER ACCESSORIES.
- ④ FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTB1-9 & LTB1-10 AND LTB1-11 & LTB1-12 WHEN INSTALLED.
- ⑤ CONNECTIONS SHOWN ARE FOR 230V OPERATION. WHEN 208V OPERATION IS REQUIRED, SWITCH RED AND ORANGE TRANSFORMER LEADS AROUND AT TRANSFORMER TNS1. INSULATE TNS1 RED WIRE LEAD TO AVOID ACCIDENTLY SHORTING. AT TRANSFORMER TNS2, SWITCH WIRE 1J(RD) FROM TERMINAL 230V TO TERMINAL 208V.



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| <p>WARNING</p> <p>DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK.</p> <p>AVERTISSEMENT</p> <p>DEBRANCHER DU CIRCUIT D'ALIMENTATION ELECTRIQUE AVANT L'ENTRETIEN POUR EVITER BLESSURE OU MORT PAR ELECTROCUTION.</p> | <p>CAUTION</p> <p>USE COPPER CONDUCTORS ONLY TO PREVENT EQUIPMENT DAMAGE. UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT ANY OTHER WIRING.</p> <p>ATTENTION</p> <p>UTILISER SEULEMENT DES CONDUCTEURS EN CUIVRE POUR EVITER D'ENDOMMAGER L'EQUIPEMENT. LES BORNES NE SONT PAS PREVUES POUR AUTRES TYPES DE FILS CONDUCTEURS.</p> |
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Figure 5
CGA120B4 (460V/60/3) and
CGA120BW (575V/60/3) Schematic Diagram

(Continued on next page)

| DEVICE | DESCRIPTION | LINE NUMBER |
|------------------|---|-------------|
| ASCL1,ASCL2 | ANTI-SHORT CYCLE TIMER | 40,50 |
| CC1,CC2 | COMPRESSOR CONTACTOR | 41,51 |
| CCHL,CCCL | COMPRESSOR HEATER | 21,26 |
| CF1 | OUTDOOR FAN CAPACITOR | 15 |
| CHLL,CHLLZ,CHLL1 | CHILLER HEAT TAP | 7,8,9 |
| CHLL | CHILLER HEAT TAP CONNECTION ON WIRE NUT | 18,24 |
| CPM1,CPM2 | COMPRESSOR RUN HOUR METER | 44,54 |
| CPM1,CPM2 | COMPRESSOR RUN STATUS RELAY | 42,52 |
| CSM1,CSM2 | COMPRESSOR START COUNTER | 40,55 |
| CWPA | CHILLER WATER PUMP MOTOR | 7 |
| CWPSW | CHILLER WATER PUMP STARTER | 4 |
| CWPSW | CHILLER WATER PUMP SWITCH | 4 |
| DBSC | DELAY BETWEEN COMPRESSORS | 38 |
| EWS | ENTERING CHILLED WATER SENSOR | 28 |
| FDS1,FDS2 | FUSED DISCONNECT SWITCH | 4,4 |
| FS | FAN SWITCH | 38 |
| FTB1 | FAN TERMINAL BLOCK | 16,17,18 |
| FU | CONTROL CIRCUIT FUSE | 38 |
| HGBS | HOT GAS BYPASS SOLENOID | 49 |
| HGBT | HOT GAS BYPASS TIMER | 46 |
| HPD01,HPD02 | HIGH PRESSURE OUTOUT | 47,53 |
| HTB | HEAT TAP TERMINAL BLOCK | 8,9,10 |
| HTB | HEAT TAP TERMINAL BLOCK | 9,9,10 |
| LAST1,LAST2 | LOW AMBIENT START TIMER | 49,50 |
| LPC1,LPC2 | LOW PRESSURE CUTOUT | 25 |
| LPC1,LPC2 | LOW PRESSURE CUTOUT | 42,52 |
| LTC | LOW VOLTAGE TERMINAL BLOCK | 38 |
| LTC | LOW TEMPERATURE CUTOUT | 38 |
| ODF | OUTDOOR FAN RELAY | 47 |
| ODM1 | OUTDOOR FAN MOTOR | 15 |
| PSM | POWER SUPPLY MONITOR | 11,12,13 |
| RR1,RR2 | RESET RELAY | 41,51 |
| TM-E | TIME-E MODULE | 24,38,52 |
| TMS1 | CONTROL POWER TRANSFORMER | 33 |
| TMS2 | TIME-P TEMP 1-STAT 12-STEP1 | 32 |
| WTT | WATER TEMP 1-STAT 12-STEP1 | 44 |

⚠ WARNING
 DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK.

⚠ AVERTISSEMENT
 DÉBRANCHER L'ÉQUIPEMENT ÉLECTRIQUE AVANT L'ENTRETIEN POUR ÉVITER BLESSURE OU MORT PAR ÉLECTROCUTION.

⚠ CAUTION
 USE COPPER CONDUCTORS ONLY TO PREVENT EQUIPMENT DAMAGE. UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT ANY OTHER WIRING.

⚠ ATTENTION
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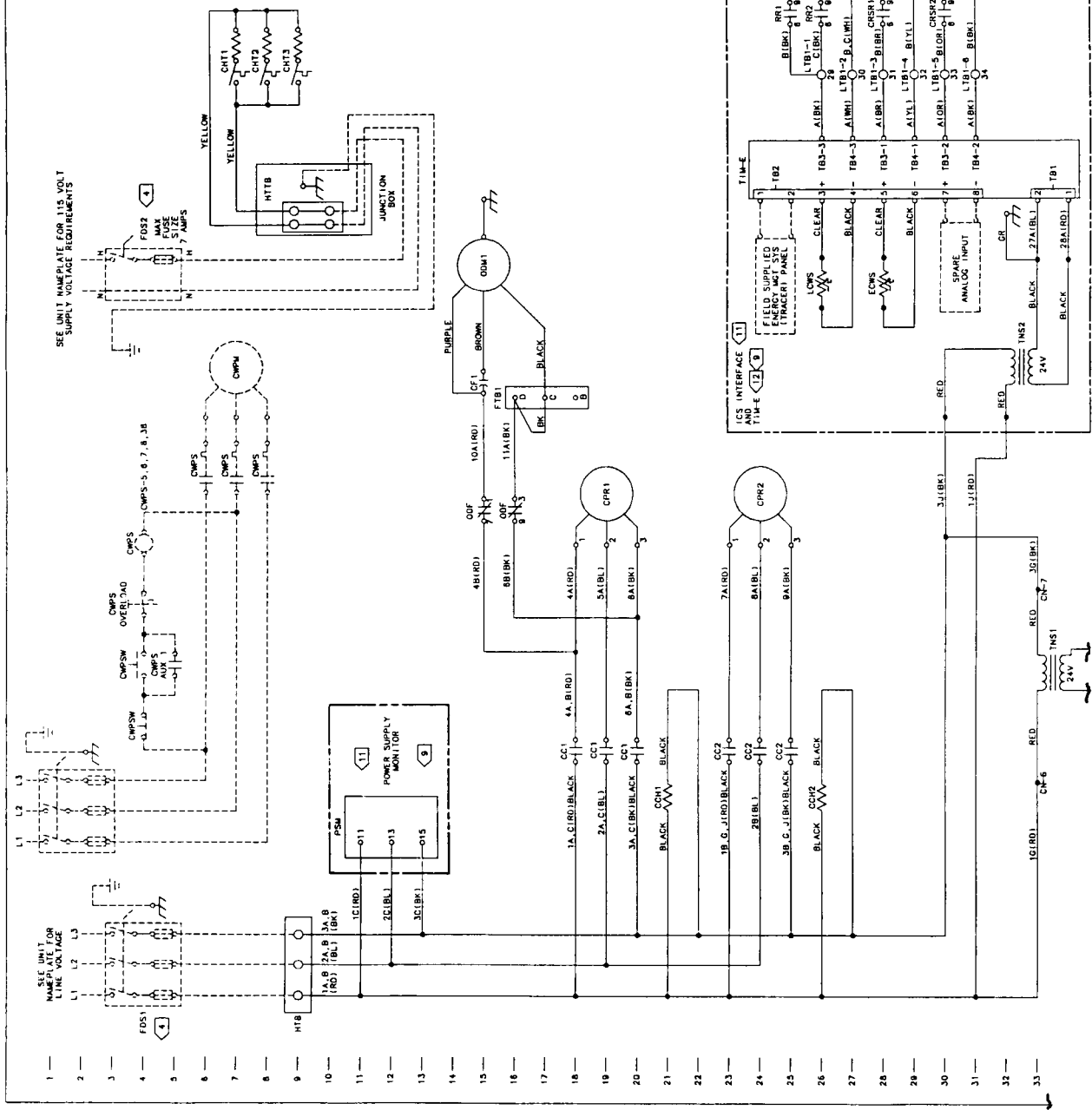
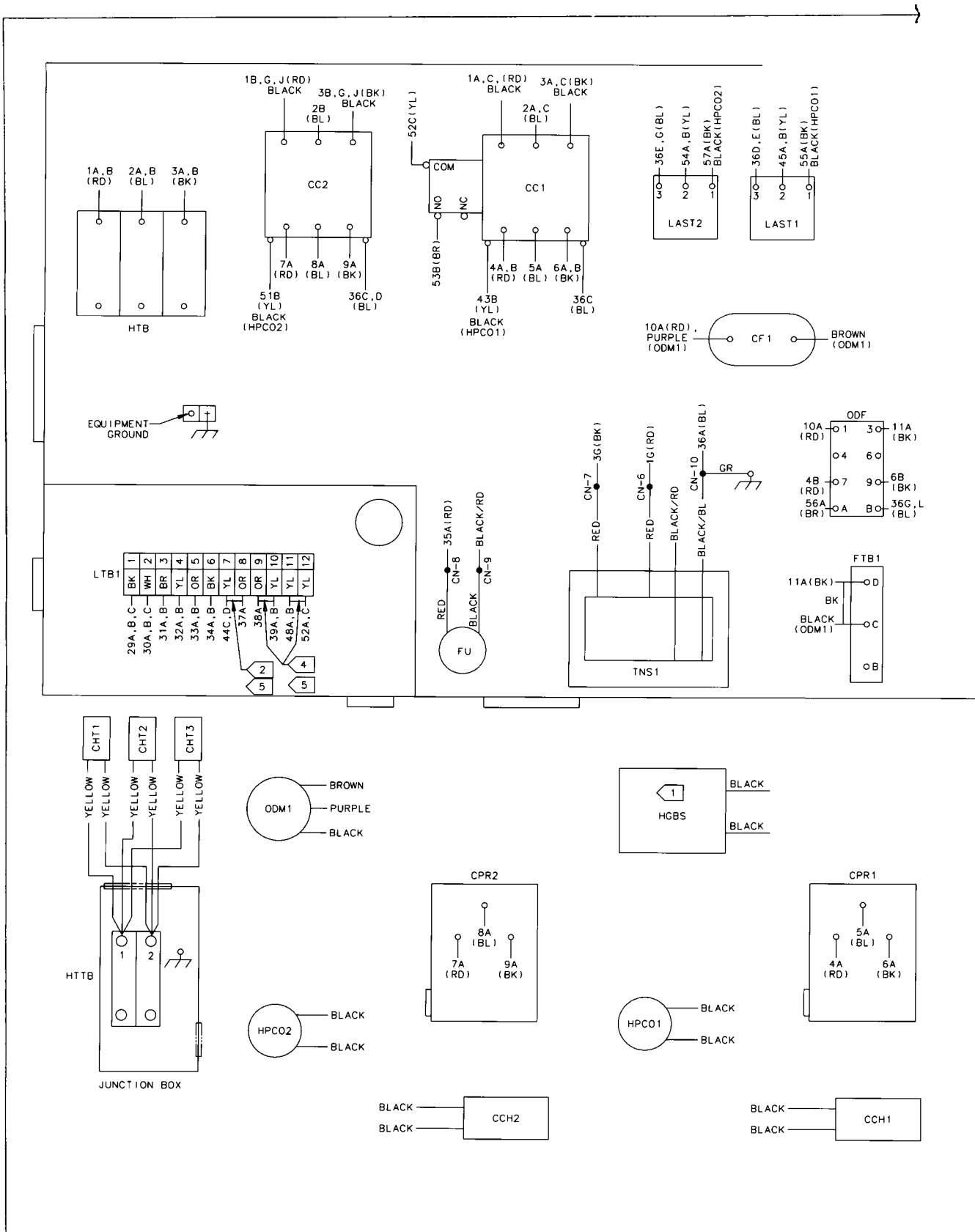
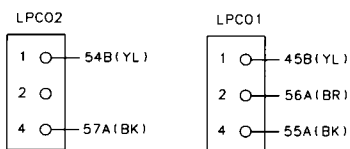
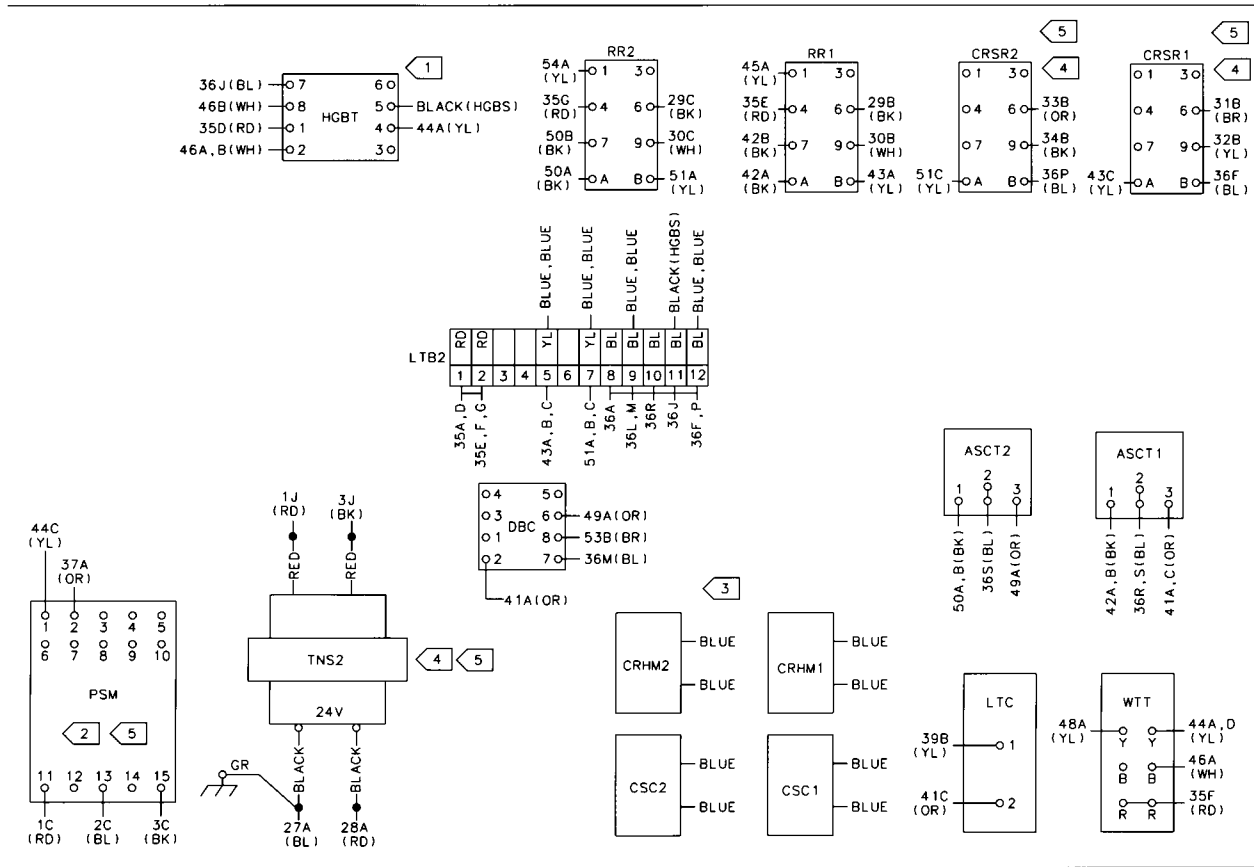


Figure 6
CGA120B4 (460V/60/3) and
CGA120BW (575V/60/3) Connection Diagram

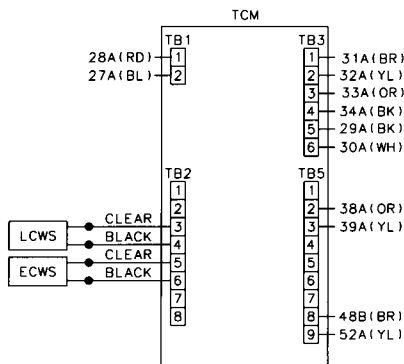
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NOTES:

- 1 HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGBT, HGBS AND ASSOCIATED WIRING (FACTORY INSTALLED ONLY).
- 2 FIELD INSTALLED POWER SUPPLY MONITOR ACCESSORY. REMOVE JUMPER BETWEEN LTB1-7 AND LTB1-8 WHEN INSTALLED.
- 3 FIELD INSTALLED ELAPSED TIME METER AND START COUNTER ACCESSORIES.
- 4 FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTB1-9 & LTB1-10 AND LTB1-11 & LTB1-12 WHEN INSTALLED.
- 5 THIS ACCESSORY NOT AVAILABLE FOR 380-415V./50 HZ./3 PHASE UNIT APPLICATION.



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| <p>⚠ WARNING</p> <p>DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK.</p> <p>AVERTISSEMENT</p> <p>DEBRANCHER DU CIRCUIT D'ALIMENTATION ELECTRIQUE AVANT L'ENTRETIEN POUR EVITER BLESSURE OU MORT PAR ELECTROCUTION.</p> | <p>⚠ CAUTION</p> <p>USE COPPER CONDUCTORS ONLY TO PREVENT EQUIPMENT DAMAGE. UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT ANY OTHER WIRING.</p> <p>ATTENTION</p> <p>UTILISER SEULEMENT DES CONDUCTEURS EN CUIVRE POUR EVITER D'ENDOMMAGER L'EQUIPEMENT. LES BORNES NE SONT PAS PREVUES POUR AUTRES TYPES DE FILS CONDUCTEURS.</p> |
|---|---|

Figure 7
CGA180B3
(208-230V/60/3) Schematic Diagram

(Continued on next page)

| SYMBOL | LEGEND | DESCRIPTION | WIRING |
|--------|--------|----------------------------|--------|
| AS1T | AS1T | ANTI-SHORT CYCLE TIMER | 40-50 |
| CC1 | CC1 | COMPRESSION CONTACTOR | 41-51 |
| CM1 | CM1 | CONDENSATE METER | 18 |
| CF1 | CF1 | OUTDOOR FAN EXPANDER | 12-18 |
| CH1 | CH1 | CHILLER RELEASER | 8-9 |
| CP1 | CP1 | COMPRESSOR OR WIRE UNIT | 17-23 |
| CR1 | CR1 | COMPRESSOR RUN POWER RELAY | 44-54 |
| CS1 | CS1 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS2 | CS2 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS3 | CS3 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS4 | CS4 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS5 | CS5 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS6 | CS6 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS7 | CS7 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS8 | CS8 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS9 | CS9 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS10 | CS10 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS11 | CS11 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS12 | CS12 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS13 | CS13 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS14 | CS14 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS15 | CS15 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS16 | CS16 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS17 | CS17 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS18 | CS18 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS19 | CS19 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS20 | CS20 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS21 | CS21 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS22 | CS22 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS23 | CS23 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS24 | CS24 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS25 | CS25 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS26 | CS26 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS27 | CS27 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS28 | CS28 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS29 | CS29 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS30 | CS30 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS31 | CS31 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS32 | CS32 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS33 | CS33 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS34 | CS34 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS35 | CS35 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS36 | CS36 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS37 | CS37 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS38 | CS38 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS39 | CS39 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS40 | CS40 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS41 | CS41 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS42 | CS42 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS43 | CS43 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS44 | CS44 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS45 | CS45 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS46 | CS46 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS47 | CS47 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS48 | CS48 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS49 | CS49 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS50 | CS50 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS51 | CS51 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS52 | CS52 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS53 | CS53 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS54 | CS54 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS55 | CS55 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS56 | CS56 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS57 | CS57 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS58 | CS58 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS59 | CS59 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS60 | CS60 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS61 | CS61 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS62 | CS62 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS63 | CS63 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS64 | CS64 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS65 | CS65 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS66 | CS66 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS67 | CS67 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS68 | CS68 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS69 | CS69 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS70 | CS70 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS71 | CS71 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS72 | CS72 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS73 | CS73 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS74 | CS74 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS75 | CS75 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS76 | CS76 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS77 | CS77 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS78 | CS78 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS79 | CS79 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS80 | CS80 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS81 | CS81 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS82 | CS82 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS83 | CS83 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS84 | CS84 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS85 | CS85 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS86 | CS86 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS87 | CS87 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS88 | CS88 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS89 | CS89 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS90 | CS90 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS91 | CS91 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS92 | CS92 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS93 | CS93 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS94 | CS94 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS95 | CS95 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS96 | CS96 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS97 | CS97 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS98 | CS98 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS99 | CS99 | CHILLER WATER PUMP MOTOR | 42-52 |
| CS100 | CS100 | CHILLER WATER PUMP MOTOR | 42-52 |

WARNING
DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK.

AVERTISSEMENT
DÉBRANCHER LE CORDON D'ÉLECTRICITÉ AVANT D'ENTREPRENDRE DES TRAVAUX DE RÉPARATION POUR ÉVITER BLESSURES OU MORT PAR ÉLECTROCUTION.

CAUTION
USE COPPER CONDUCTORS ONLY IF THE WIRING IS NOT OTHERWISE SPECIFIED IN THE WIRING DIAGRAM. DO NOT ACCEPT ANY OTHER WIRING.

ATTENTION
UTILISER SEULEMENT DES CONDUCTEURS EN LAITON POUR LES BRANCHES DE MONTAGE À MOINS QUE LES AUTRES TYPES DE FILS CONDUCTEURS.

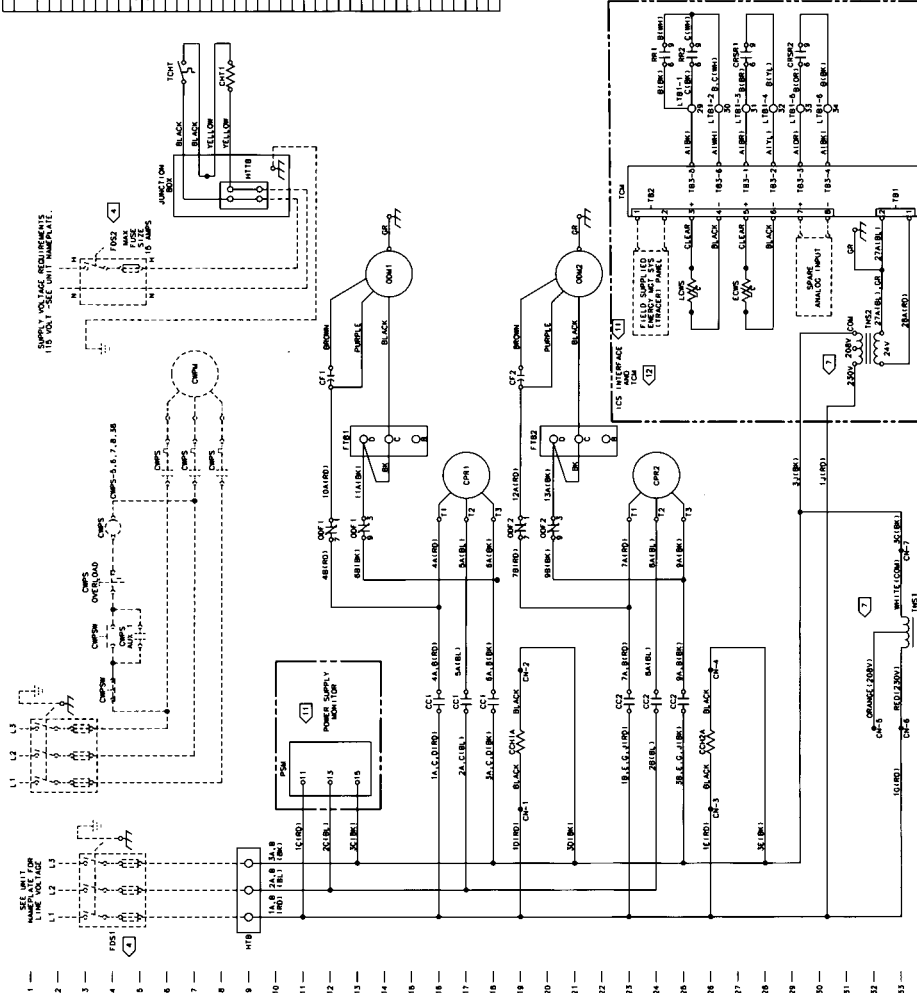
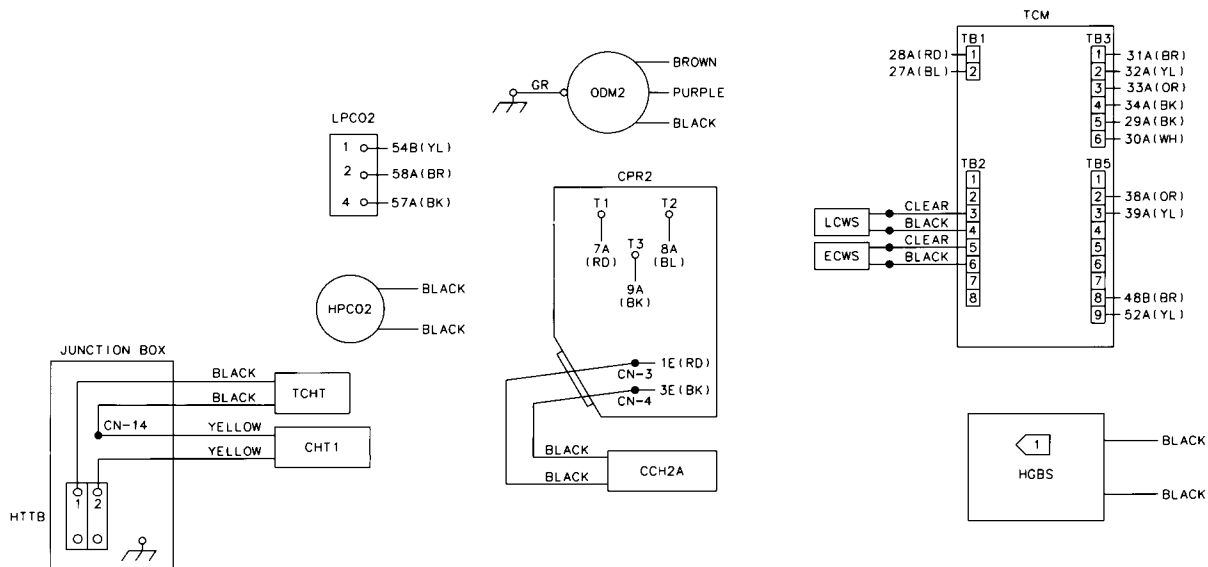
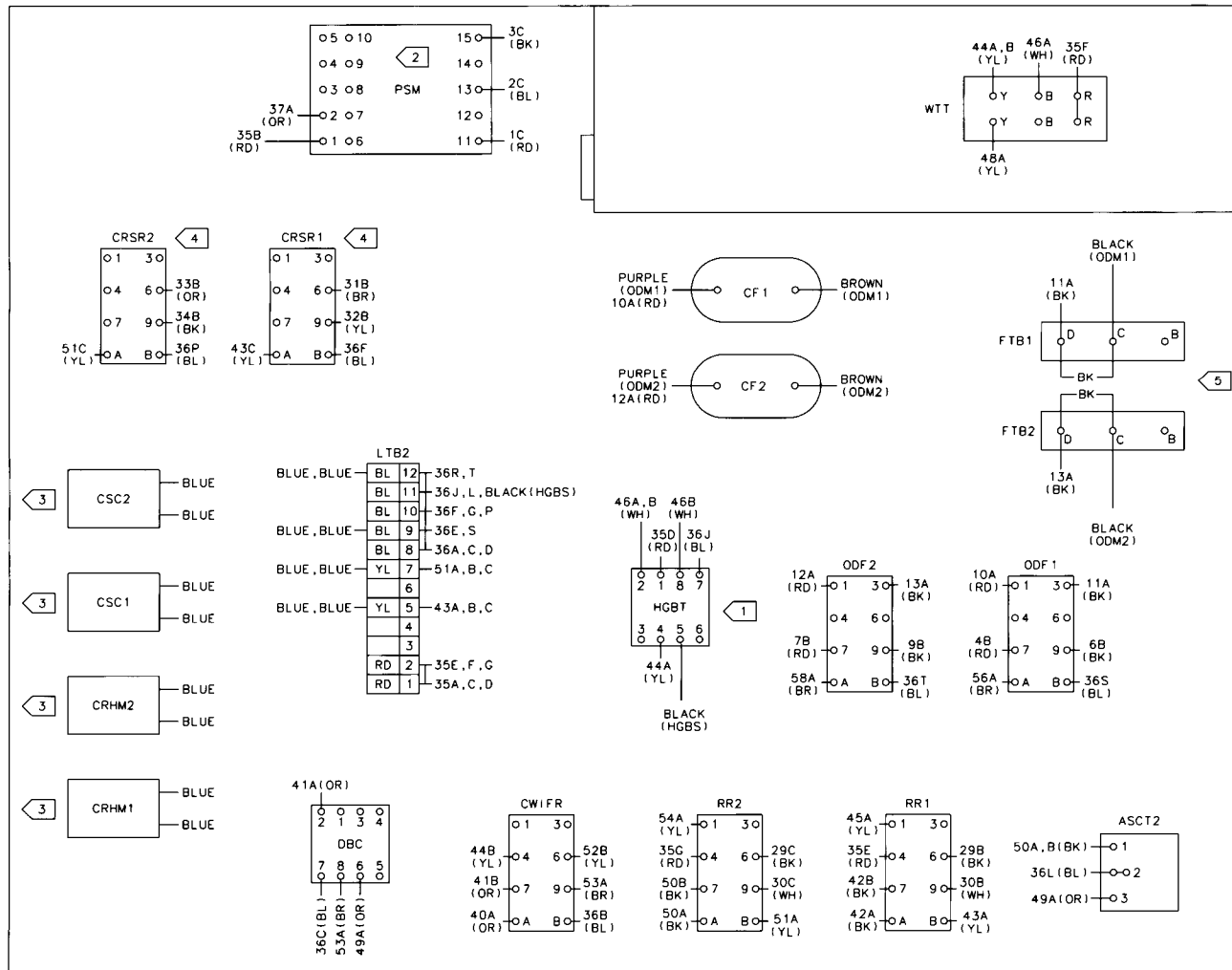
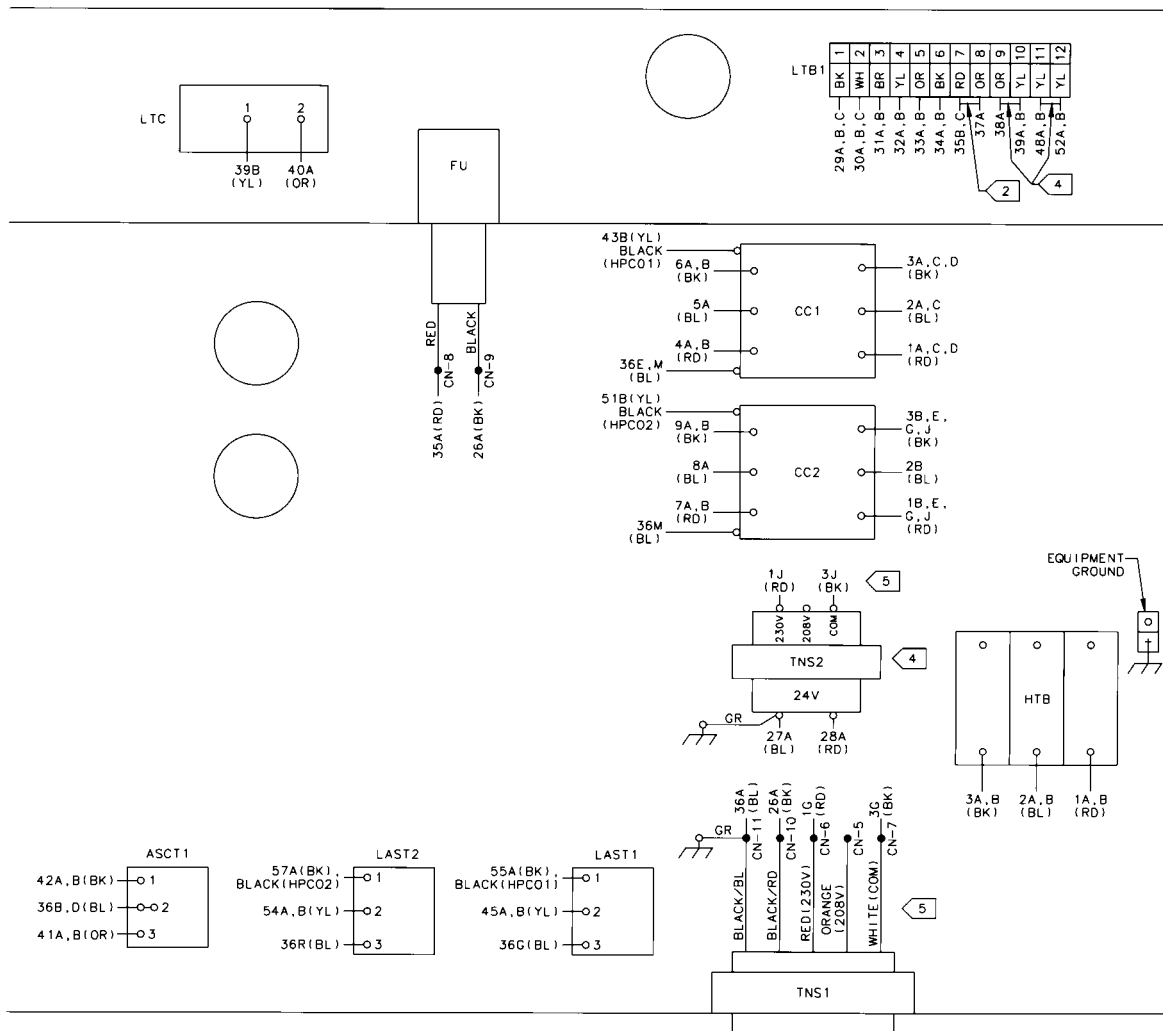


Figure 8
CGA180B3
(208-230V/60/3) Connection Diagram

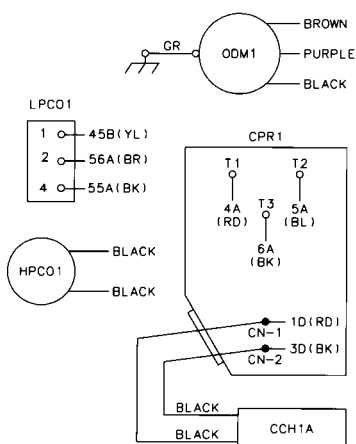
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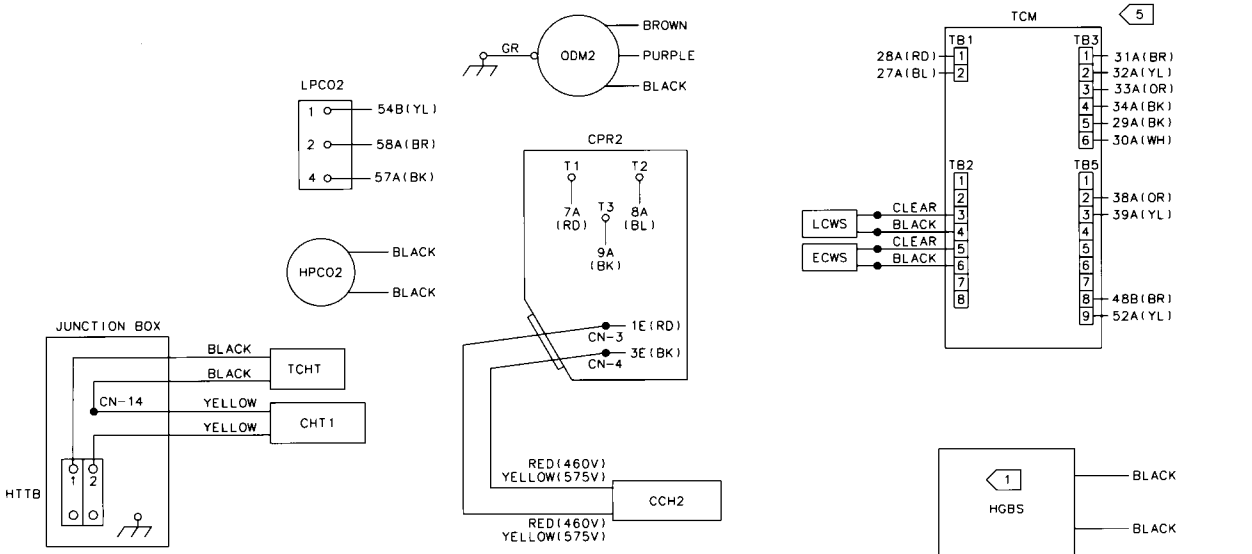
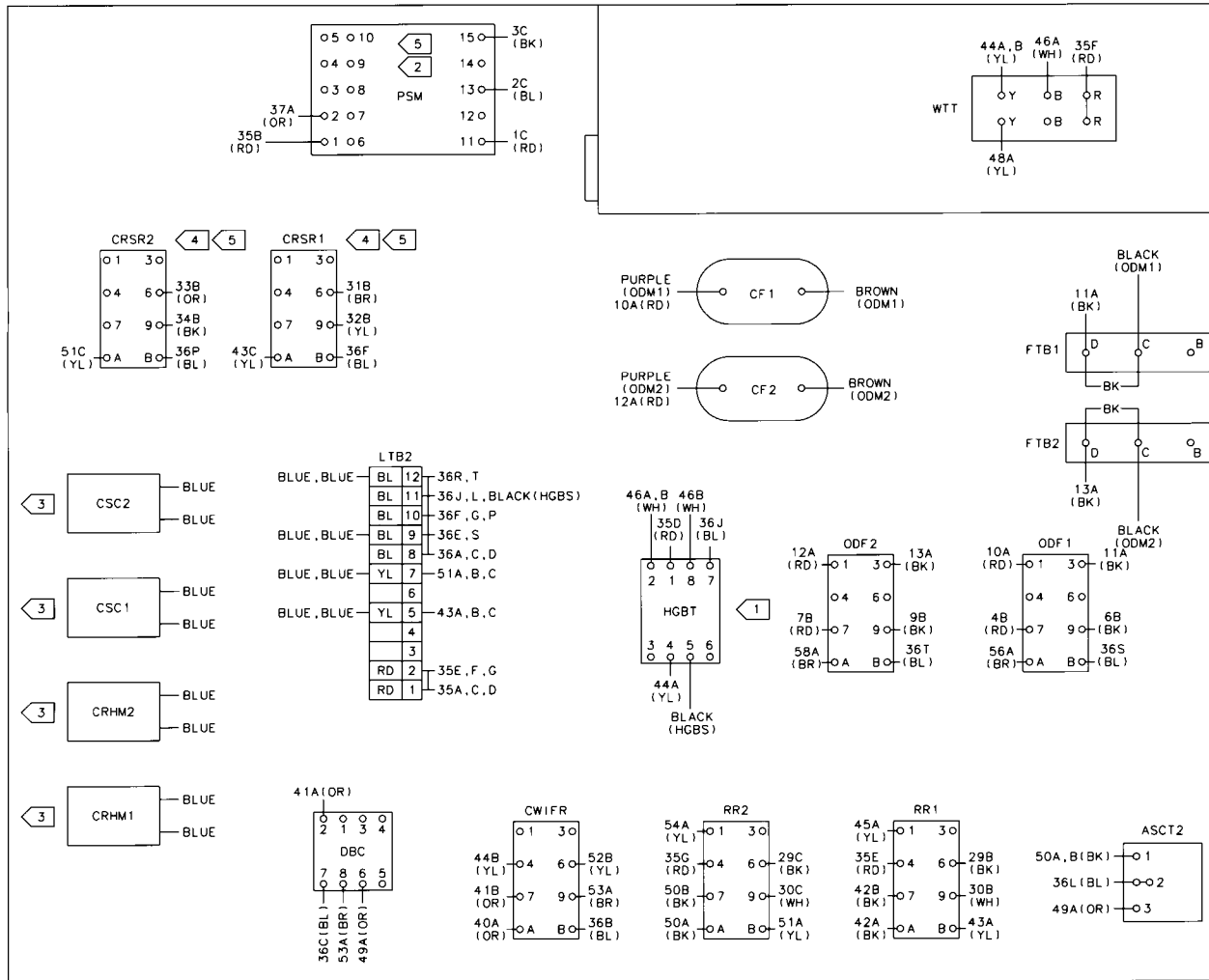
- 1 HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGBT, HGBS AND ASSOCIATED WIRING.-(FACTORY INSTALLED ONLY).
- 2 FIELD INSTALLED POWER SUPPLY MONITOR ACCESSORY. REMOVE JUMPER BETWEEN LTB1-7 AND LTB1-8 WHEN INSTALLED.
- 3 FIELD INSTALLED ELAPSED TIME METER/ STARTS COUNTER ACCESSORY.
- 4 FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTB1-9 & LTB1-10 AND LTB1-11 & LTB1-12 WHEN INSTALLED.
- 5 CONNECTIONS SHOWN ARE FOR 230V OPERATION. WHEN 208V OPERATION IS REQUIRED, REMOVE WIRE 11A(BK) FROM FTB1-D AND CONNECT TO FTB1-B AND REMOVE WIRE 13A(BK) FROM FTB2-D AND CONNECT TO FTB2-B. AT TRANSFORMER TNS1, SWITCH RED AND ORANGE TRANSFORMER LEADS AROUND. INSULATE TNS1 RED WIRE LEAD TO AVOID ACCIDENTLY SHORTING. AT TRANSFORMER TNS2, SWITCH WIRE 1J(RD) FROM TERMINAL 230V TO TERMINAL 208V.



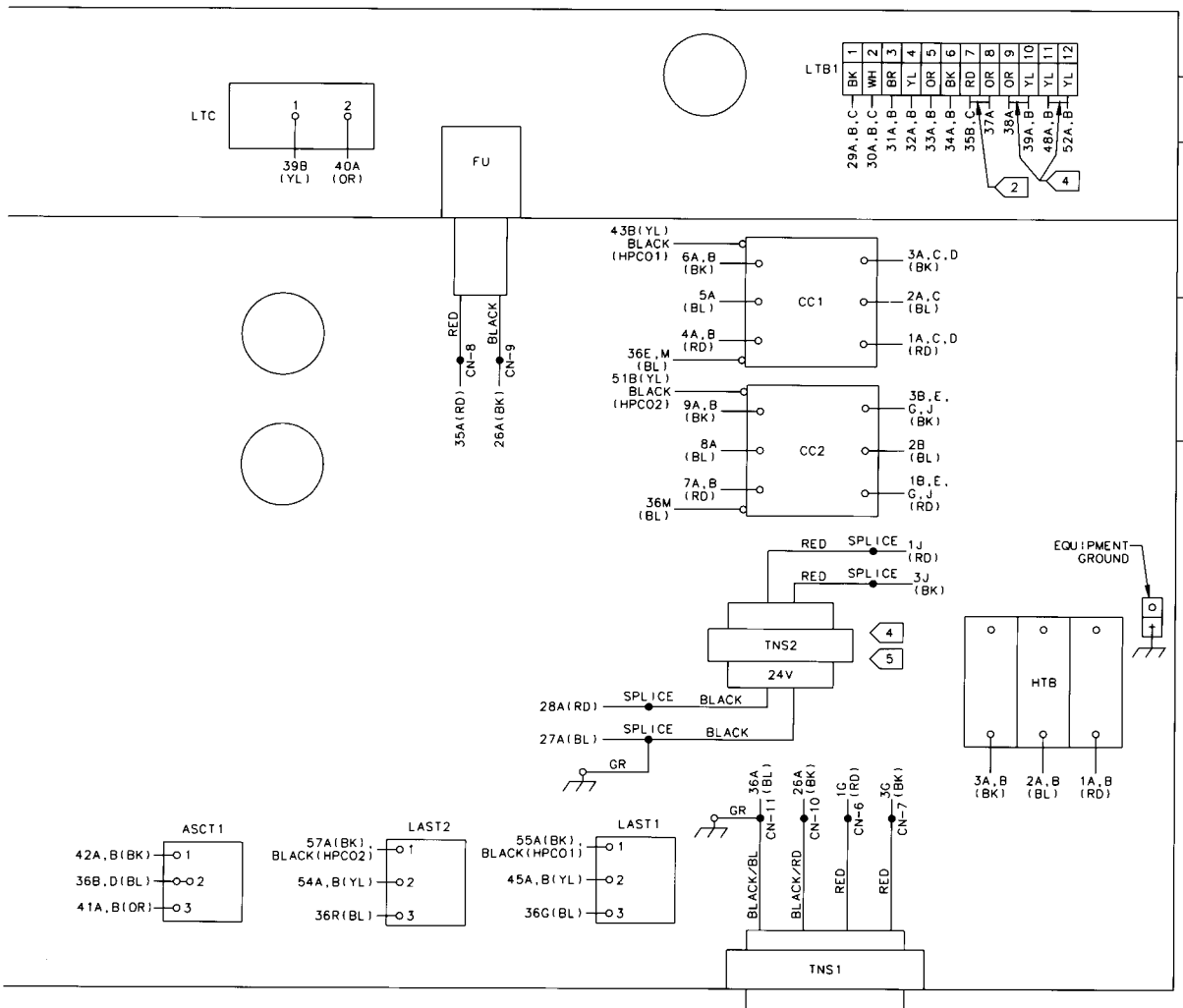
| | |
|---|---|
| <p>⚠ WARNING</p> <p>DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK.</p> <p>AVERTISSEMENT</p> <p>DEBRANCHER DU CIRCUIT D'ALIMENTATION ELECTRIQUE AVANT L'ENTRETIEN POUR EVITER BLESSURE OU MORT PAR ELECTROCUTION.</p> | <p>⚠ CAUTION</p> <p>USE COPPER CONDUCTORS ONLY TO PREVENT EQUIPMENT DAMAGE. UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT ANY OTHER WIRING.</p> <p>ATTENTION</p> <p>UTILISER SEULEMENT DES CONDUCTEURS EN CUIVRE POUR EVITER D'ENDOMMAGER L'EQUIPEMENT. LES BORNES NE SONT PAS PREVUES POUR AUTRES TYPES DE FILS CONDUCTEURS.</p> |
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Figure 10
CGA180B4 (460V/60/3) and
CGA180BW (575V/60/3) Connection Diagram

(Continued on next page)

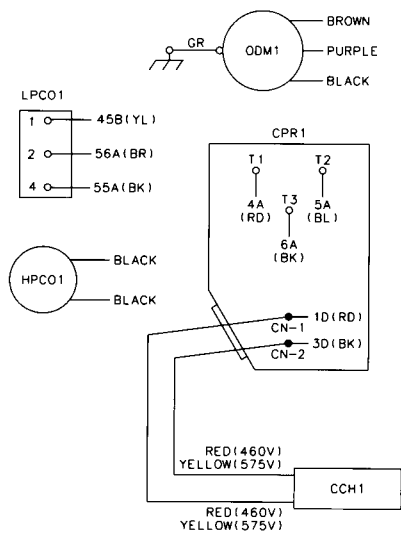


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NOTES:

- 1 HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGBT, HGBS AND ASSOCIATED WIRING.—(FACTORY INSTALLED ONLY).
- 2 FIELD INSTALLED POWER SUPPLY MONITOR ACCESSORY. REMOVE JUMPER BETWEEN LTB1-7 AND LTB1-8 WHEN INSTALLED.
- 3 FIELD INSTALLED ELAPSED TIME METER/ STARTS COUNTER ACCESSORY.
- 4 FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTB1-9 & LTB1-10 AND LTB1-11 & LTB1-12 WHEN INSTALLED.
- 5 THIS ACCESSORY NOT AVAILABLE FOR 380-415V/50 HZ/3 PH UNIT APPLICATION.



| | |
|---|---|
| <p>⚠ WARNING</p> <p>DISCONNECT ELECTRIC POWER SUPPLY BEFORE SERVICING TO PREVENT INJURY OR DEATH DUE TO ELECTRICAL SHOCK.</p> <p>AVERTISSEMENT</p> <p>DEBRANCHER DU CIRCUIT D'ALIMENTATION ELECTRIQUE AVANT L'ENTRETIEN POUR EVITER BLESSURE OU MORT PAR ELECTROCUTION.</p> | <p>⚠ CAUTION</p> <p>USE COPPER CONDUCTORS ONLY TO PREVENT EQUIPMENT DAMAGE. UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT ANY OTHER WIRING.</p> <p>ATTENTION</p> <p>UTILISER SEULEMENT DES CONDUCTEURS EN CUIVRE POUR EVITER D'ENDOMMAGER L'EQUIPEMENT. LES BORNES NE SONT PAS PREVUES POUR AUTRES TYPES DE FILS CONDUCTEURS.</p> |
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