



48HJD,HJE,HJF004-007
50HJ004-007
48/50HM007
Single Package Rooftop Heating/Cooling Units
50/60 Hz



Wiring Diagrams

NOTE: This literature applies to units produced before April 3,1995.

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ELECTRIC HEAT

UNIT (VOLTAGE-PHASE)	UNIT SIZE	ELECTRIC HEATER (kW)	LABEL	FIG. NO.
208/230-1	50HJ004-006	ALL	3-05531	28
208/230-3	50HJ004-007 50HM007	ALL	3-05607	29
460-3	50HJ004-007 50HM007	ALL	3-05532	30

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

ACCESSORIES

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48/50HJ004-007 48/50HM007	Motormaster® Device	31
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OPERATING SEQUENCE – 48HJ UNITS

Cooling, Units Without Economizer — When thermostat calls for cooling, terminals G and Y1 and the compressor contactor (C) are energized. The indoor (evaporator) fan motor (IFM), compressor, and outdoor (condenser) fan motor (OFM) start. The OFM runs continuously while the unit is in cooling. When the thermostat is satisfied, C is deenergized and the compressor and OFM shut off. After a 30-second delay, the IFM shuts off. If the thermostat fan selector switch is in the ON position, the evaporator motor will run continuously.

Cooling, Units With Economizer — When the outdoor-air temperature is above the OAT setting and the room thermostat calls for cooling, the compressor contactor is energized to start the compressor and outdoor (condenser) fan motor (OFM). The indoor (evaporator) fan motor (IFM) is energized and the economizer damper moves to the minimum position. After the thermostat is satisfied, the damper moves to the fully closed position when IFM is deenergized.

When the outdoor-air temperature is below the OAT setting and the thermostat calls for Y1 and G, the economizer damper moves to the minimum position when the indoor fan starts. The first stage of cooling is provided by the economizer. If the supply-air temperature is above 57 F, a switch on the supply-air thermostat is closed between the T2 terminal and the 24 vac terminal. This causes the damper to continue to modulate open until the supply-air temperature falls below 55 F or the damper reaches the fully open position.

When the supply-air temperature is between 55 F and 52 F, the supply-air thermostat has open switches between the T2 and 24 vac terminals and between the T1 and 24 vac terminals. This causes the economizer damper to remain in the intermediate open position.

If the supply-air temperature falls below 52 F, a switch on the supply-air thermostat is closed between the T1 terminal and the 24 vac terminal. This causes the damper to modulate closed until the supply-air temperature rises above 55 F or the damper reaches the minimum position.

When the supply-air temperature is between 55 F and 57 F, the supply-air thermostat has open switches between the T2 and 24 vac terminals. This causes the economizer damper to remain in an intermediate open position.

If the outdoor air alone cannot satisfy the cooling requirements of the conditioned space, economizer cooling is integrated with mechanical cooling, providing second stage cooling. The compressor and outdoor fan will be energized and the position of the economizer damper will be determined by the supply-air temperature.

When the second stage of cooling is satisfied, the compressor and outdoor-fan motor will be deenergized. The damper position will be determined by the supply-air temperature.

When the first stage of cooling is satisfied, the IFM shuts off after a 30-second delay. The damper then moves to fully closed position.

Heating, Units Without Economizer — When the thermostat calls for heating, terminal W1 is energized. The induced-draft motor is energized and the burner ignition sequence begins. The indoor (evaporator) fan motor (IFM) is energized 45 seconds after a flame is ignited. On units equipped for two stages of heat, when additional heat is needed, W2 is energized and the high-fire solenoid on the main gas valve (MGV) is energized. When the thermostat is satisfied and W1 is deenergized, the IFM stops after a 45-second time-off delay.

Heating, Units With Economizer/Two-Position Damper — When the thermostat calls for heating, terminal W1 is energized. The induced-draft motor is energized and the burner ignition sequence begins. The indoor (evaporator) fan motor (IFM) is energized 45 seconds after a flame is ignited and the damper moves to the minimum position. If the two-position damper is used, the outdoor-air damper opens to the minimum position whenever the evaporator fan runs. On units equipped for two stages of heat, when additional heat is needed, W2 is energized and the high-fire solenoid on the main gas valve (MGV) is energized. When the thermostat is satisfied and W1 is deenergized, the IFM stops after a 45-second time off delay. The economizer damper then moves to the fully closed position. When using continuous fan, the damper will remain in the minimum position.

OPERATING SEQUENCE — 50HJ UNITS

Cooling, Units Without Economizer — When the thermostat calls for cooling, terminals G and Y1 are energized. The indoor (evaporator) fan contactor (IFC), and compressor contactor no. 1 (C1) are energized and the indoor (evaporator) fan motor (IFM), compressor no. 1, and outdoor (condenser) fan start. The outdoor (condenser) fan motor (OFM) runs continuously while unit is cooling.

Cooling, Units With Economizer — When the outdoor-air temperature is above the OAT setting and the room thermostat calls for cooling, the compressor contactor is energized to start the compressor and outdoor (condenser) fan motor (OFM). The indoor (evaporator) fan motor (IFM) is energized and the economizer damper moves to the minimum position. After the thermostat is satisfied, the damper moves to the fully closed position when IFM is deenergized.

When the outdoor-air temperature is below the OAT setting and the thermostat calls for Y1 and G (cooling), the economizer damper moves to the minimum position when the indoor (evaporator) fan starts. The first stage of cooling is provided by the economizer. If the supply-air temperature is above 57 F, a switch on the supply-air thermostat is closed between the T2 terminal and the 24 vac terminal. This causes the damper to continue to modulate open until the supply-air temperature falls below 55 F or the damper reaches the fully open position.

When the supply-air temperature is between 55 F and 52 F, the supply-air thermostat has open switches between the T2 and 24 vac terminals and between the T1 and 24 vac terminals. This causes the economizer damper to remain in an intermediate open position.

If the supply-air temperature falls below 52 F, a switch on the supply-air thermostat is closed between the T1 terminal and the 24 vac terminal. This causes the damper to modulate closed until the supply-air temperature rises above 55 F or the damper reaches the minimum position.

When the supply-air temperature is between 55 F and 57 F, the supply-air thermostat has open switches between the T2 and 24 vac terminals. This causes the economizer damper to remain in an intermediate open position.

If the outdoor air alone cannot satisfy the cooling requirements of the conditioned space, economizer cooling is integrated with mechanical cooling, providing second stage cooling. The compressor and outdoor (condenser) fan will be energized and the position of the economizer damper will be determined by the supply-air temperature.

When the second stage of cooling is satisfied, the compressor and OFM will be deenergized. The damper position will be determined by the supply-air temperature.

When the first stage of cooling is satisfied, there is a 30-second delay before the indoor (evaporator) fan shuts off on 004-006 units. The damper will move to fully closed position.

Heating, Units Without Economizer (If Optional or Accessory Heater is Installed) — Upon a call for heating through W1, indoor (evaporator) fan contactor (IFC) and heater contactor no. 1 (HC1) are energized. On units equipped for 2 stages of heat, when additional heat is needed, heater contactor no. 2 is energized through W2.

Heating, Units with Economizer (If Optional or Accessory Heater is Installed) — When the room temperature calls for heat through terminal W1, the indoor (evaporator) fan contactor and heater contactor no. 1 are energized. On units equipped for 2 stages of heat, when additional heat is needed, heater contactor no. 2 is energized

through W2. The economizer damper moves to the minimum position. When the thermostat is satisfied, the damper moves to the fully closed position

OPERATING SEQUENCE — 48HM UNITS

Cooling, Units Without Economizer — When thermostat calls for cooling, terminals G and Y1 are energized. The indoor (evaporator) fan contactor (IFC), compressor contactor no. 1 (C1) and outdoor (condenser) fan contactor (OFC) are energized and evaporator fan motor, compressor no. 1 and condenser fan start. The condenser-fan motor runs continuously while unit is cooling. If the thermostat calls for a second stage of cooling by energizing Y2, compressor contactor no. 2 (C2) is energized and compressor no. 2 starts.

Heating, Units Without Economizer — When thermostat calls for heating, terminal W1 is energized, induced-draft relay (IDR) is energized and burner ignition sequence begins. When time-delay sequence is complete (55 ± 10 seconds after W1 is energized) indoor (evaporator) fan contactor (IFC) is energized and evaporator-fan motor starts. On units equipped for 2 stages of heat, when additional heat is needed, W2 is energized and the high-fire solenoid on the main gas valve is energized.

When the thermostat is satisfied and W1 is deenergized, evaporator-fan motor remains on for 30 to 90 seconds.

Cooling, Units With Economizer — When the outdoor ambient temperature is above the outdoor-air thermostat (OAT) or enthalpy control setting and the thermostat calls for cooling, terminals G and Y1 are energized. The indoor (evaporator) fan contactor (IFC) is energized and the economizer damper blade opens to the minimum position, compressor contactor no. 1 (C1) and outdoor (condenser) fan contactor (OFC) are energized and evaporator-fan motor, compressor no. 1, and condenser fan start. If thermostat calls for a second stage of cooling by energizing Y2, compressor contactor no. 2 (C2) is energized and compressor no. 2 starts.

If the outdoor ambient temperature is below the OAT setting and the thermostat calls for cooling, the IFC is energized, the evaporator fan is started and the economizer modulates open. The economizer acts as the first stage of cooling, providing free cooling with outdoor air. The position of the damper blade is determined by the discharge air thermistor.

If outdoor air alone cannot satisfy the cooling requirements of the conditioned space, Y2 on the thermostat is energized and compressor no. 1 starts. The damper blade opens for 5 seconds and stops for 30 seconds until fully open.

As conditioned space temperature approaches the thermostat's cooling set point, the mechanical cooling stage cycles off. After mechanical cooling shuts off, the economizer modulates to the minimum position.

Heating, Units With Economizer/Two-Position Damper

— Upon a call for heat through W1, the induced-draft relay is energized to start the induced-draft motor. The main burner lights, the IFC energizes to start the evaporator fan, and the economizer damper blade opens to the minimum position. If the two-position damper is used, the outdoor-air damper opens to the minimum position whenever the evaporator fan runs. On units equipped with 2 stages of heat, when additional heat is needed, W2 is energized and the high fire solenoid on the main gas valve is energized.

After W1 is deenergized, the evaporator-fan motor continues to run for 30 to 90 seconds.

As space temperature approaches the heating temperature set point, heating stage cycles off. The economizer or two-position damper returns to a fully closed position when fan shuts off.

OPERATING SEQUENCE — 50HM UNITS

Cooling, Units Without Economizer — When thermostat calls for cooling, terminals G and Y1 are energized. The indoor (evaporator) fan contactor (IFC), and compressor contactor no. 1 (C1) are energized and evaporator-fan motor, compressor no. 1, and condenser fan start. The condenser-fan motor runs continuously while unit is cooling. If the thermostat calls for a second stage of cooling by energizing Y2, compressor contactor no. 2 (C2) is energized and compressor no. 2 starts.

Heating, Units Without Economizer (If Optional or Accessory Heater is Installed)

— Upon a call for heating through terminal W1, IFC and heater contactor no. 1 (HC1) are energized. On units equipped for 2 stages of heat, when additional heat is needed HC2 is energized through W2.

Cooling, Units With Economizer — When the outdoor-air temperature is above the OAT (outdoor-air thermostat) setting and the room thermostat calls for cooling, compressor contactor no. 1 is energized to start compressor no. 1 and the condenser-fan motor. The evaporator-fan motor is energized and the economizer damper moves to the minimum position. Upon a further call for cooling, compressor contactor no. 2 will be energized, starting compressor no. 2. After the thermostat is satisfied, the damper moves to the fully closed position.

When the outdoor-air temperature is below the OAT setting and the thermostat calls for cooling, the economizer dampers move to the minimum position. If the supply-air thermostat (SAT) senses that the supply-air temperature is

above 57 F, switch T2 on the SAT closes. The damper then continues to open until it reaches the fully open position or until the supply-air temperature drops below 57 F.

When the SAT senses that the supply-air temperature falls to between 57 F and 52 F, switches T1 and T2 will open and the damper will remain at an intermediate open position. If the SAT senses that the supply-air temperature falls below 52 F, switch T1 on the SAT will close. The damper will then modulate closed until it reaches the minimum position or until the supply-air temperature is above 52 F. When the thermostat is satisfied and the evaporator fan shuts off, the damper will move to the fully closed position.

If the outdoor air alone cannot satisfy the cooling requirements for the conditioned space, economizer cooling is integrated with mechanical cooling, providing second-stage cooling. Compressor no. 1 and the condenser fan will be energized and the position of the economizer damper will be determined by the supply-air temperature. Compressor no. 2 is locked out.

When the second stage of cooling is satisfied, the compressor and condenser-fan motor will be deenergized. The damper position will be determined by the supply-air temperature.

When the first stage of cooling is satisfied, the damper will move to fully closed position.

Heating, Units With Economizer (If Optional or Accessory Heater is Installed)

— When the room thermostat calls for heat through terminal W1, the evaporator-fan contactor and heater contactor no. 1 are energized and the economizer damper moves to the minimum position. On units equipped for 2 stages of heat, when additional heat is needed, heater contactor no. 2 is energized through W2. When the thermostat is satisfied and the evaporator-fan contactor is deenergized, the damper moves to the fully closed position.

LEGEND FOR FIG. 1-27, 34

AHA — Adjustable Heat Anticipator
APS — Air Pressure Switch
C — Contactor, Compressor
CAP — Capacitor
CB — Circuit Breaker
CC — Cooling Compensator
CH — Crankcase Heater
CLO — Compressor Lockout
COM — Common
COMP — Compressor Motor
CR — Control Relay
D — Diode
EC — Enthalpy Control
ECON — Economizer
EPS — Emergency Power Supply
 (9-volt battery)
EQUIP — Equipment
ER — Economizer Relay
FPT — Freeze-Up Protection Thermostat
FSS — Filter Status Switch
FU — Fuse
GND — Ground
HPS — High-Pressure Switch
HS — Hall Effect Sensor
I — Ignitor
IDM — Induced Draft Motor
IFC — Indoor-Fan Contactor
IFM — Indoor-Fan Motor

IFR — Indoor-Fan Relay
IGC — Integrated Gas Unit Controller
LPS — Low-Pressure Switch
LS — Limit Switch
LSM — Limit Switch (Manual Reset)
MGV — Main Gas Valve
MTR — Motor
OAT — Outdoor-Air Thermostat
OFC — Outdoor-Fan Contactor
OFM — Outdoor-Fan Motor
P — Plug
PL — Plug Assembly
QT — Quadruple Terminal
R — Relay
RS — Rollout Switch
SAT — Supply-Air Thermostat
SEN — Sensor
SW1 — Switch Fully Open
SW2 — Switch Fully Closed
SW3 — Switch Minimum Vent Position
SW4 — Switch Maximum Vent Position
TB — Terminal Block
TC — Thermostat Cooling
TDR — Time-Delay Relay
TG — Time Guard
TH — Thermostat Heating
TRAN — Transformer

 Field Splice
 Marked Wire
 Terminal (Marked)
 Terminal (Unmarked)
 Terminal Block
 Splice
 Splice (Marked)
 Factory Wiring
 Field Control Wiring
 Field Power Wiring
 Accessory or Optional Wiring
 To indicate common potential only,
not to represent wiring

NOTES FOR FIG. 1-27, 34

NOTES FOR FIG. 1 AND 2:

1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Thermostat:
HH07AT170, 172
Subbase:
HH93AZ176, 177, 178 and 179.
3. Set heat anticipator at .14 amp for first stage and .14 amp for second stage.
4. Use copper conductors only.
5. TRAN is wired for 230 V unit. If unit is to be run with 208 V power supply, disconnect BLK wire from 230 V tap (ORN) and connect to 200 V tap (RED). Insulate end of 230 V tap.

NOTES FOR FIG. 3-8:

1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Three-Phase motors are protected under primary single-phasing conditions.
3. Thermostat:
HH07AT170, 172
Subbase:
HH93AZ176, 177, 178 and 179
4. Set heat anticipator at .14 amp for first stage and .14 amp for second stage.
5. Use copper conductors only.
6. For 208/230 volt units only:
TRAN is wired for 230 V unit. If unit is to be run with 208 V power supply, disconnect BLK wire from 230 V tap (ORN) and connect to 200 V tap (RED). Insulate end of 230 V tap.

NOTES FOR FIG. 9 AND 13:

1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Thermostat:
HH07AT170, 172
SUBBASE:
HH93AZ176, 177, 178 and 179.
3. Set heat anticipator at .8 amp for first stage and .3 amp for second stage.
4. Use copper-clad aluminum or aluminum conductors.
5. For 208/230 volt units only:
TRAN is wired for 230 V unit. If unit is to be run with 208 V power supply, disconnect BLK wire from 230 V tap (ORN) and connect to 200 V tap (RED). Insulate end of 230 V tap.

NOTES FOR FIG. 10-12 AND 14-20:

1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Three-phase motors are protected under primary single-phasing conditions.
3. Thermostat:
HH07AT170, 172
Subbase:
HH93AZ176, 177, 178 and 179
4. Set heat anticipator at 1 amp.
5. Use copper, copper-clad aluminum, or aluminum conductors.
6. TRAN is wired for 230 V unit. If unit is to be run with 208 V power supply, disconnect BLK wire from 230 V

tap (ORN) and connect to 200 V tap (RED). Insulate end of 230 V tap.

7. For Fig. 19 only:

VOLTAGE RATING	CIRCUIT BREAKER PART NUMBER	MUST TRIP AMPS
24 V	Potter and Brumfield W28X-1024-3.2	3 2

NOTES FOR FIG. 21-23:

1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Three-phase motors are protected under primary single-phasing conditions.
3. Thermostat:
HH07AT172
Subbase:
HH93AZ177 and 179
4. Set heat anticipator at .14 amp for the first stage and .14 amp for second stage.
5. Use copper, copper-clad aluminum, or aluminum conductors.

6.

VOLTAGE RATING	CIRCUIT BREAKER PART NUMBER	MUST TRIP AMPS
24 V	Potter and Brumfield W28X-1024-3 2	3 2

NOTES FOR FIG. 24:

1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Three-phase motors are protected under primary single-phasing conditions.
3. Thermostat:
HH07AT170, 172
Subbase:
HH93AZ176, 177, 178 and 179
4. Set heat anticipator at .8 amp for first stage and .3 amp for second stage.
5. Use copper, copper-clad aluminum, or aluminum conductors.

6.

VOLTAGE RATING	CIRCUIT BREAKER PART NUMBER	MUST TRIP AMPS
24 V	Potter and Brumfield W28X-1024-3 2	3.2

NOTES FOR FIG. 25-27:

1. If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
2. Three-phase motors are protected under primary single-phasing conditions.
3. Thermostat:
HH07AT172
Subbase:
HH93AZ177 and 179
4. Set heat anticipator at .8 amp for first stage and .3 amp for second stage.
5. Use copper, copper-clad aluminum, or aluminum conductors.

6.

VOLTAGE RATING	CIRCUIT BREAKER PART NUMBER	MUST TRIP AMPS
24 V	Potter and Brumfield W28X-1024-3.2	3.2



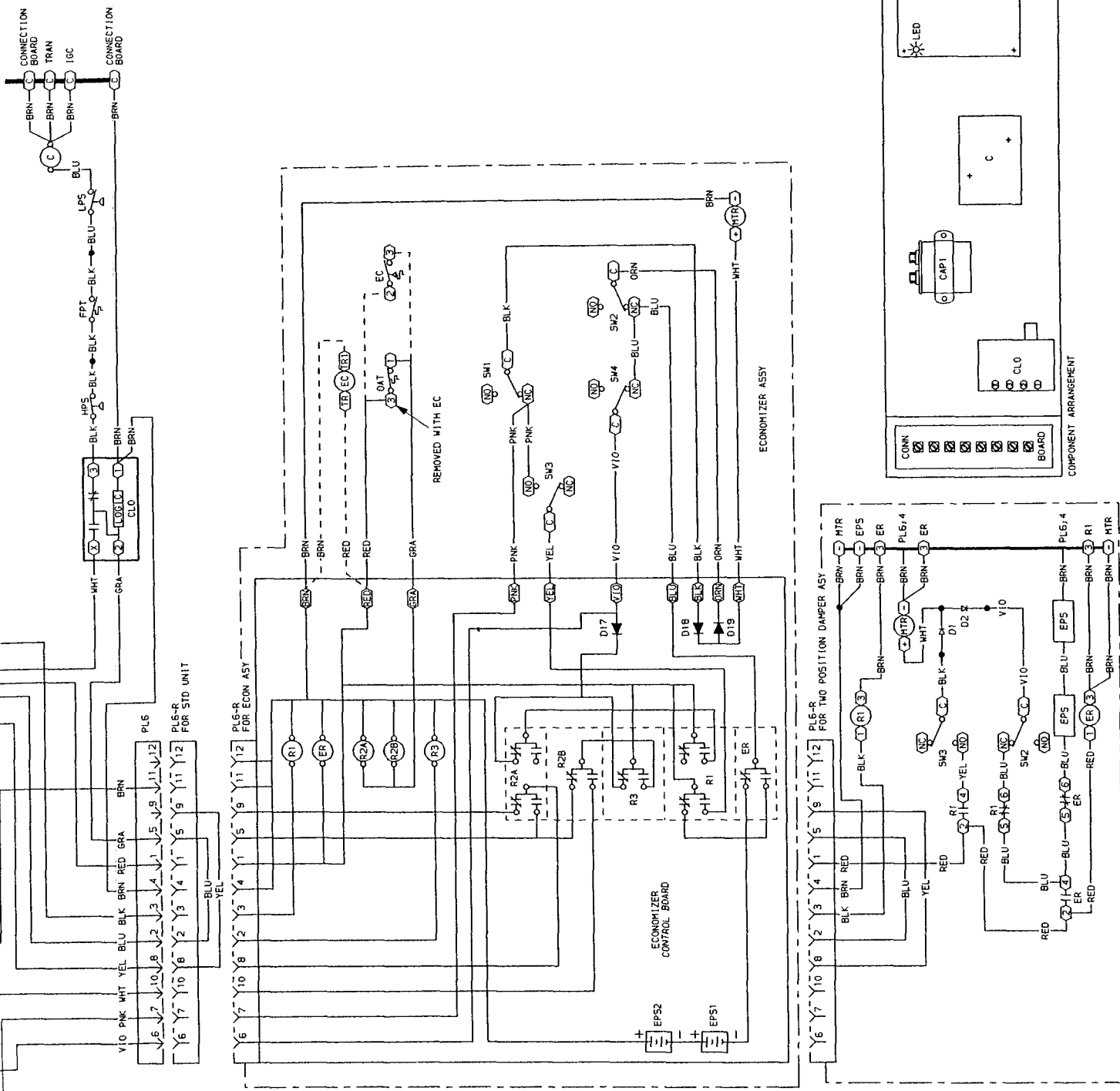
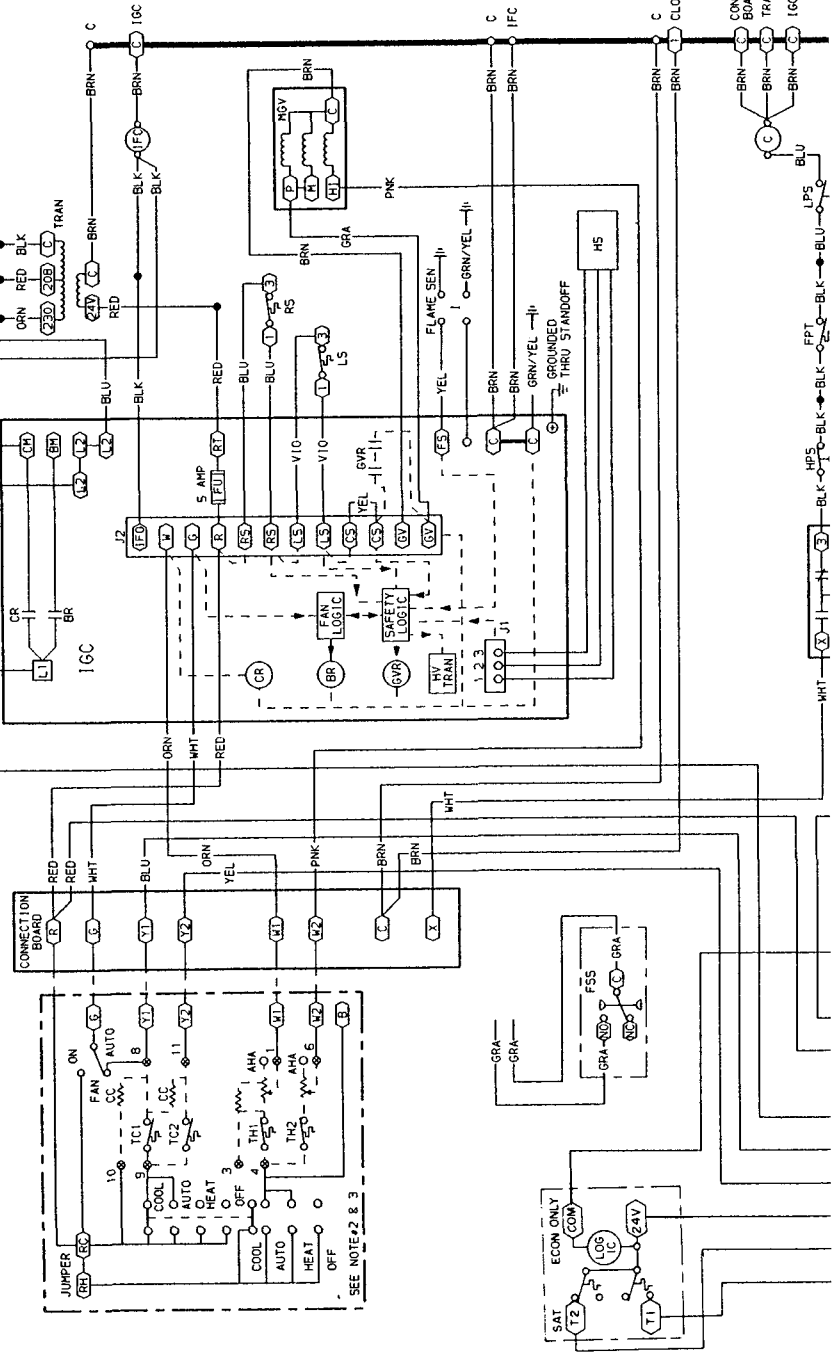
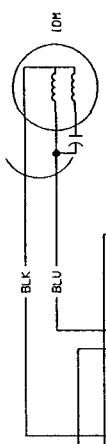


Fig. 1 – Label Diagram, Schematic and Component Arrangement; 48HJ004,005; 208/230-1-60



SEE NOTE #4

EQUIP GND



SEE NOTE #2 & 3

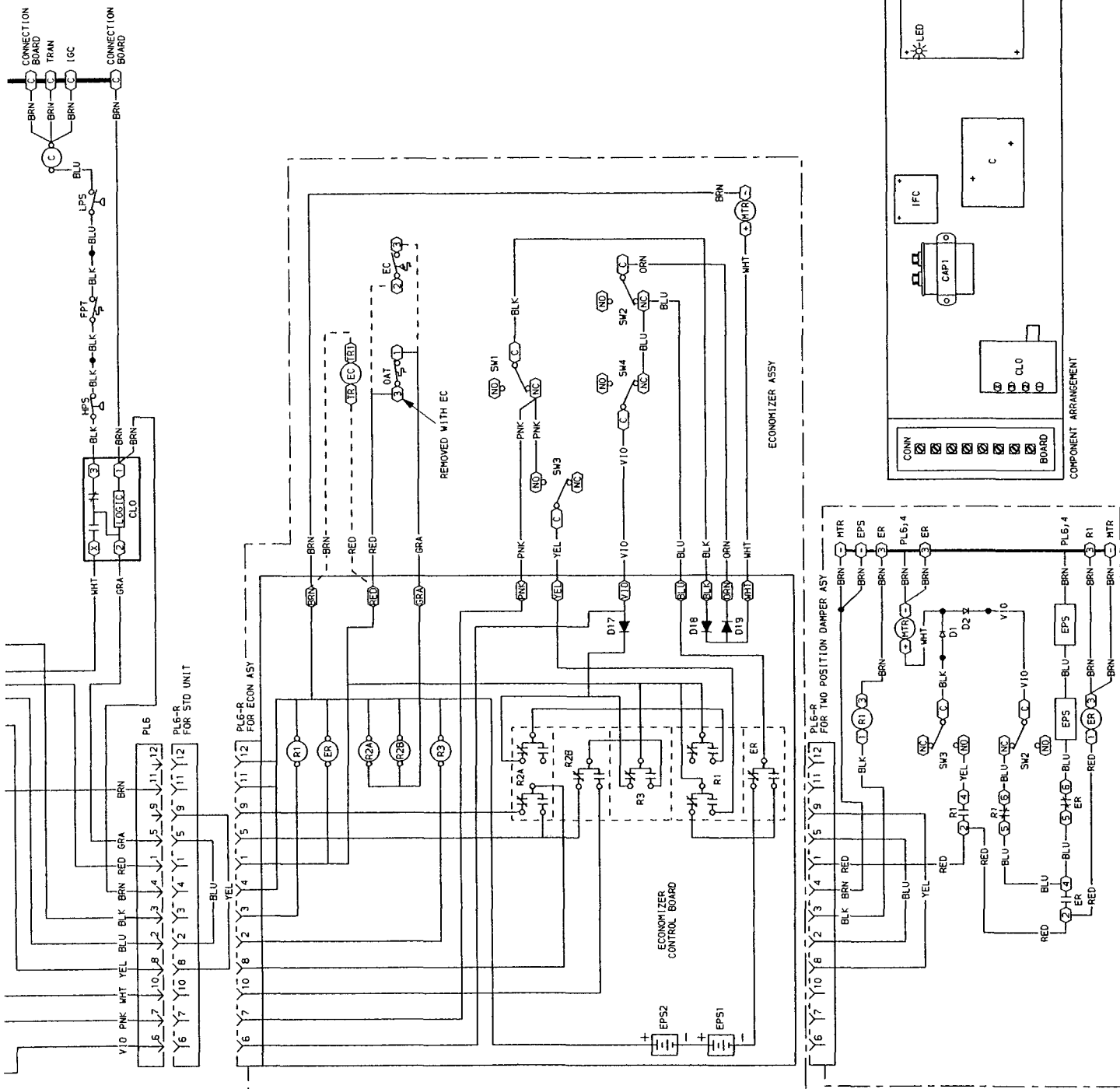


Fig. 2 — Label Diagram, Schematic and Component Arrangement; 48HJ006; 208/230-1-60



BRN- CONNECTION BOARD

CLO

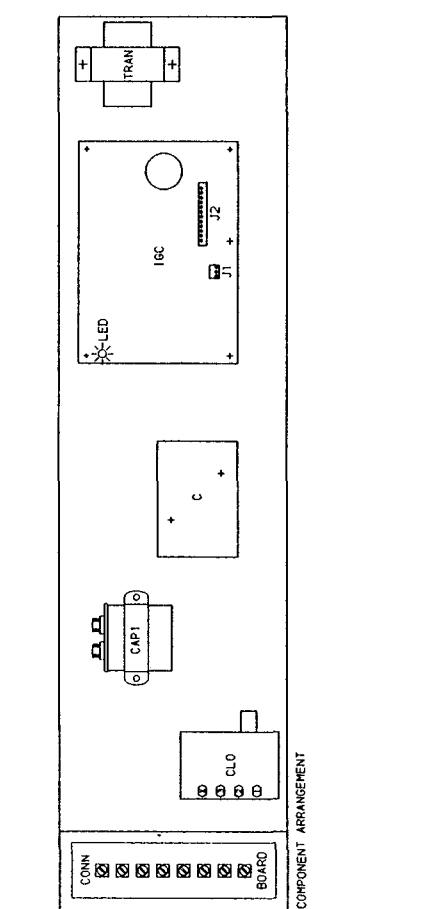
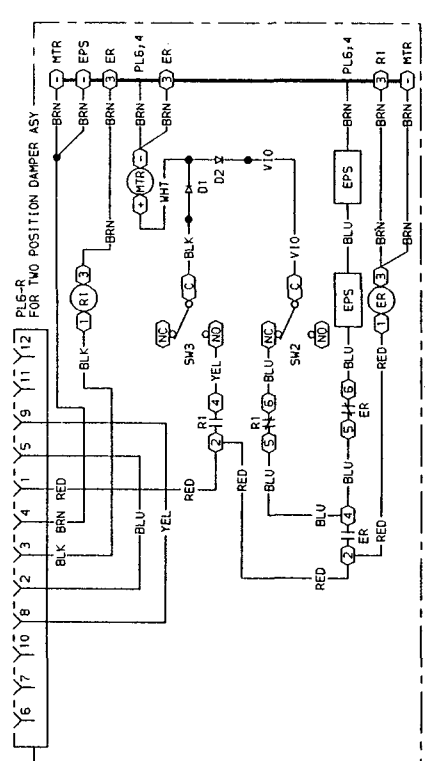
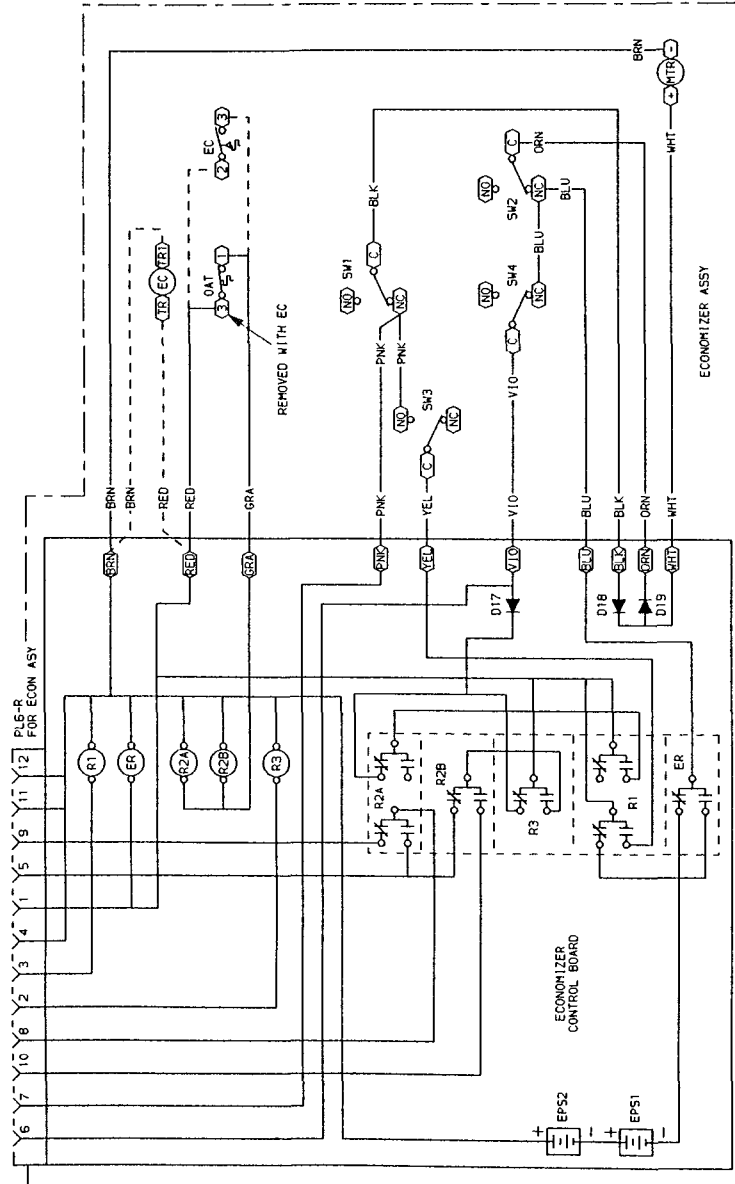
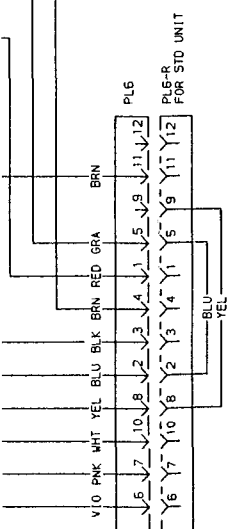
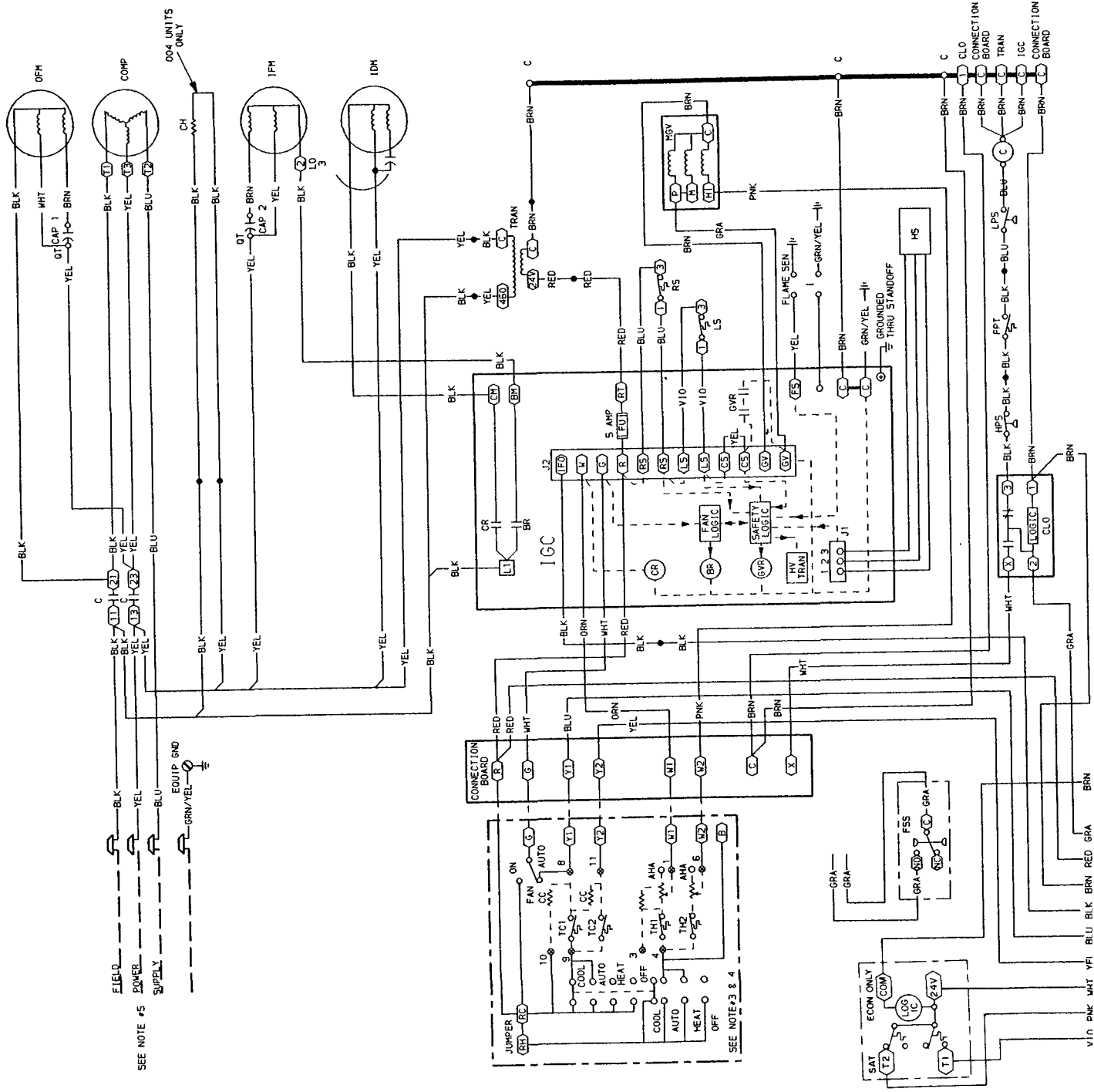


Fig. 3 — Label Diagram, Schematic and Component Arrangement; 48HJ004-006; 208/230-3-60



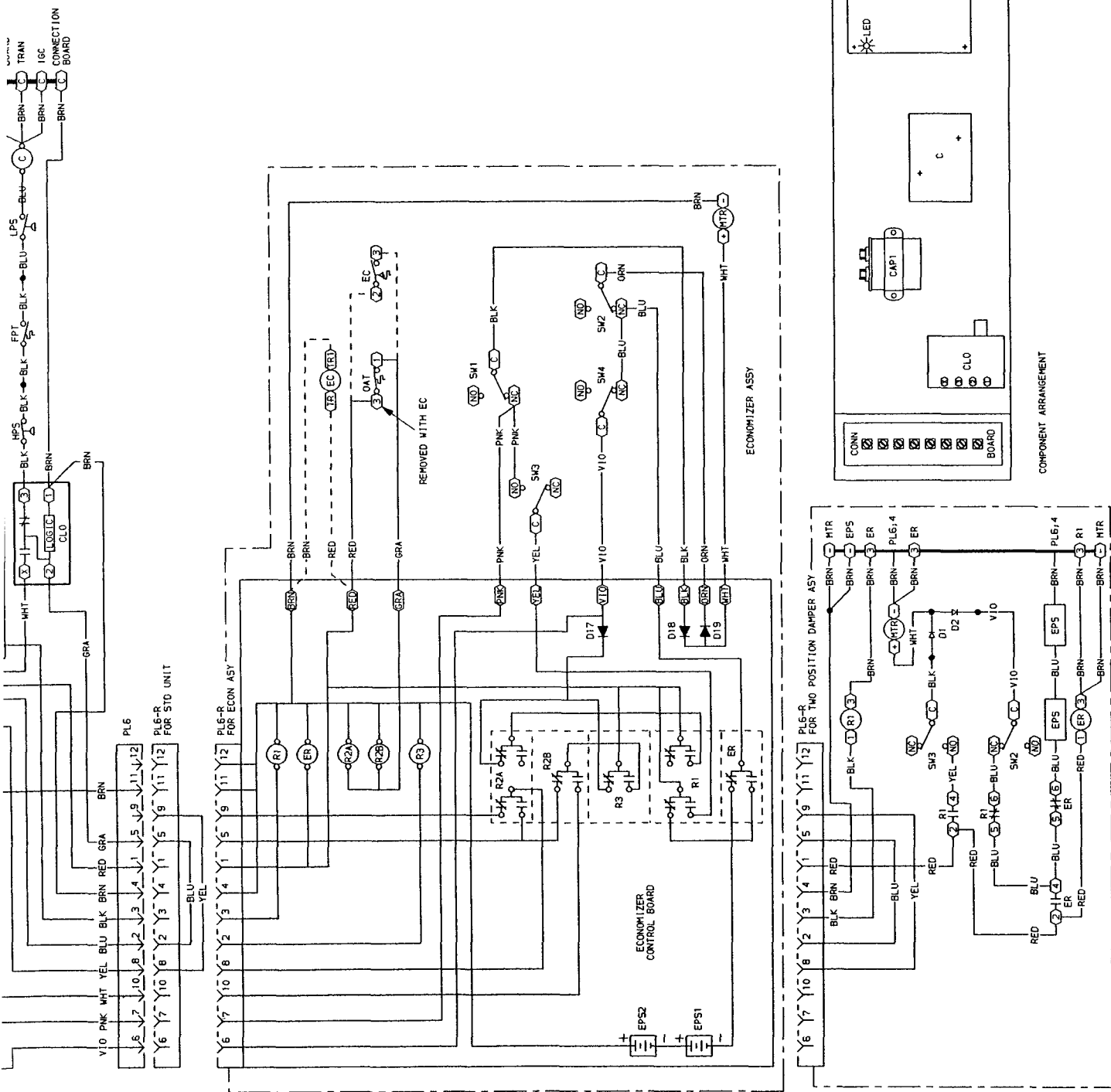


Fig. 4 — Label Diagram, Schematic and Component Arrangement; 48HJ004-006; 460-3-60

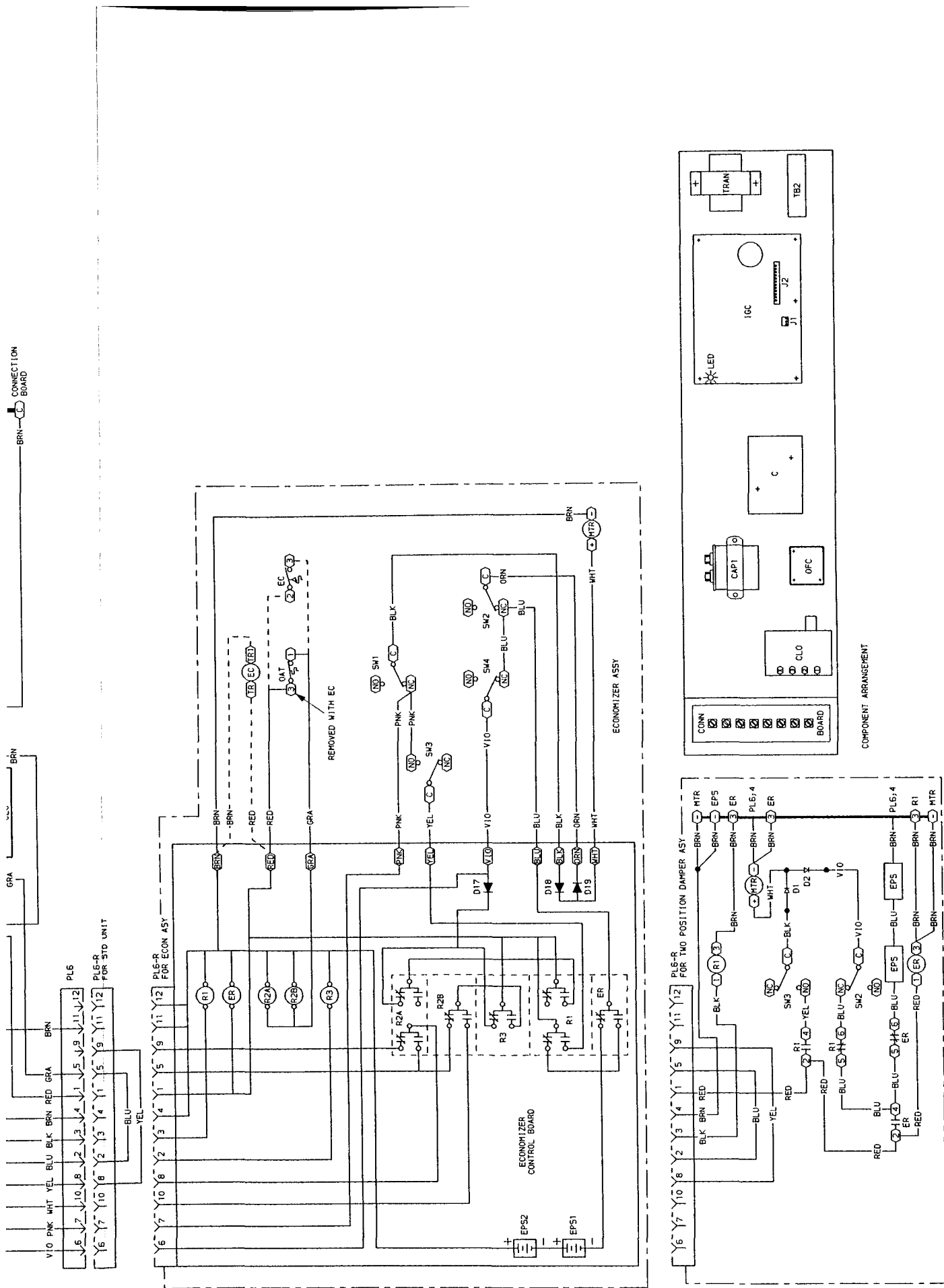
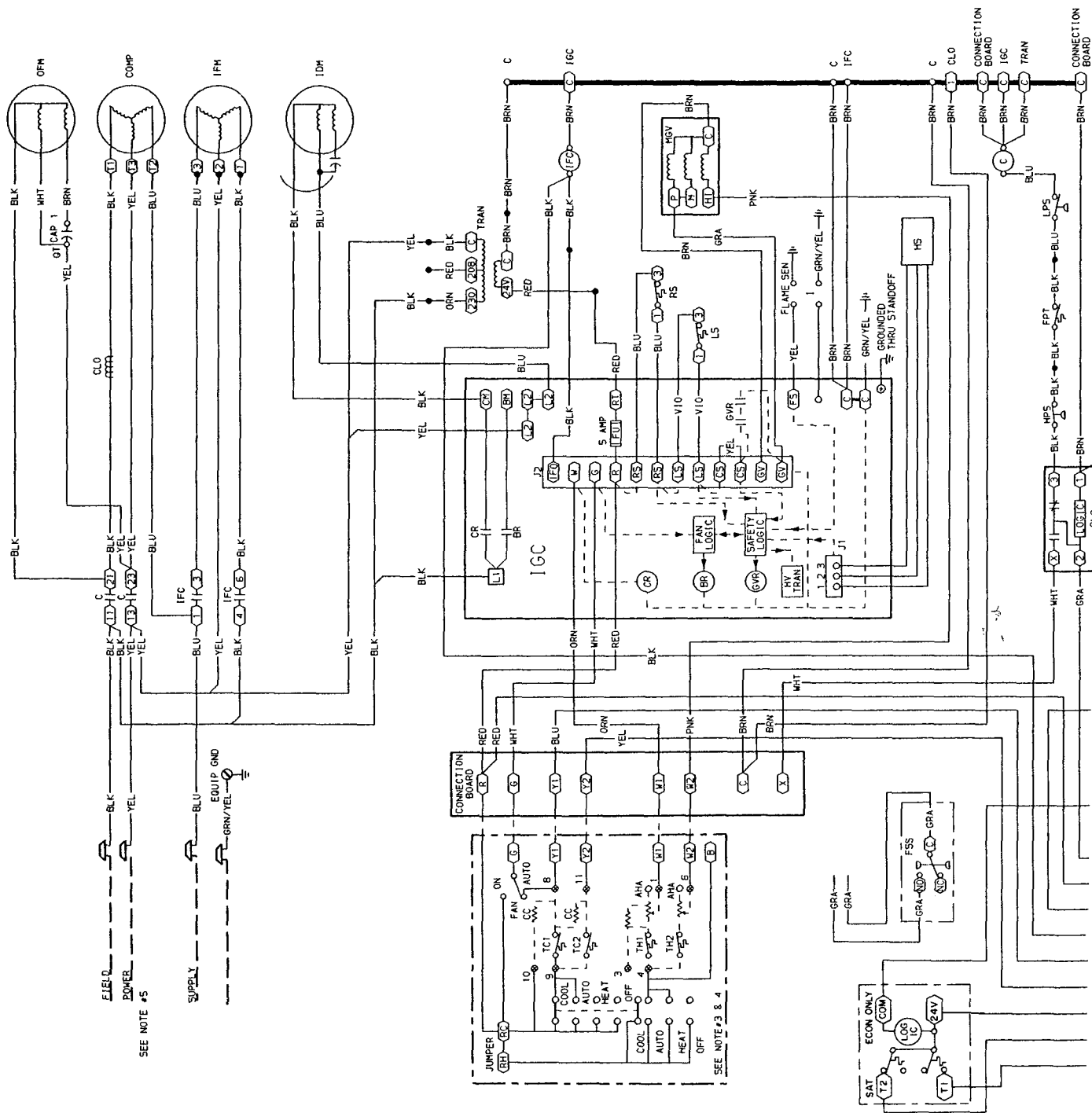


Fig. 5 — Label Diagram, Schematic and Component Arrangement; 48HJ004-006; 575-3-60



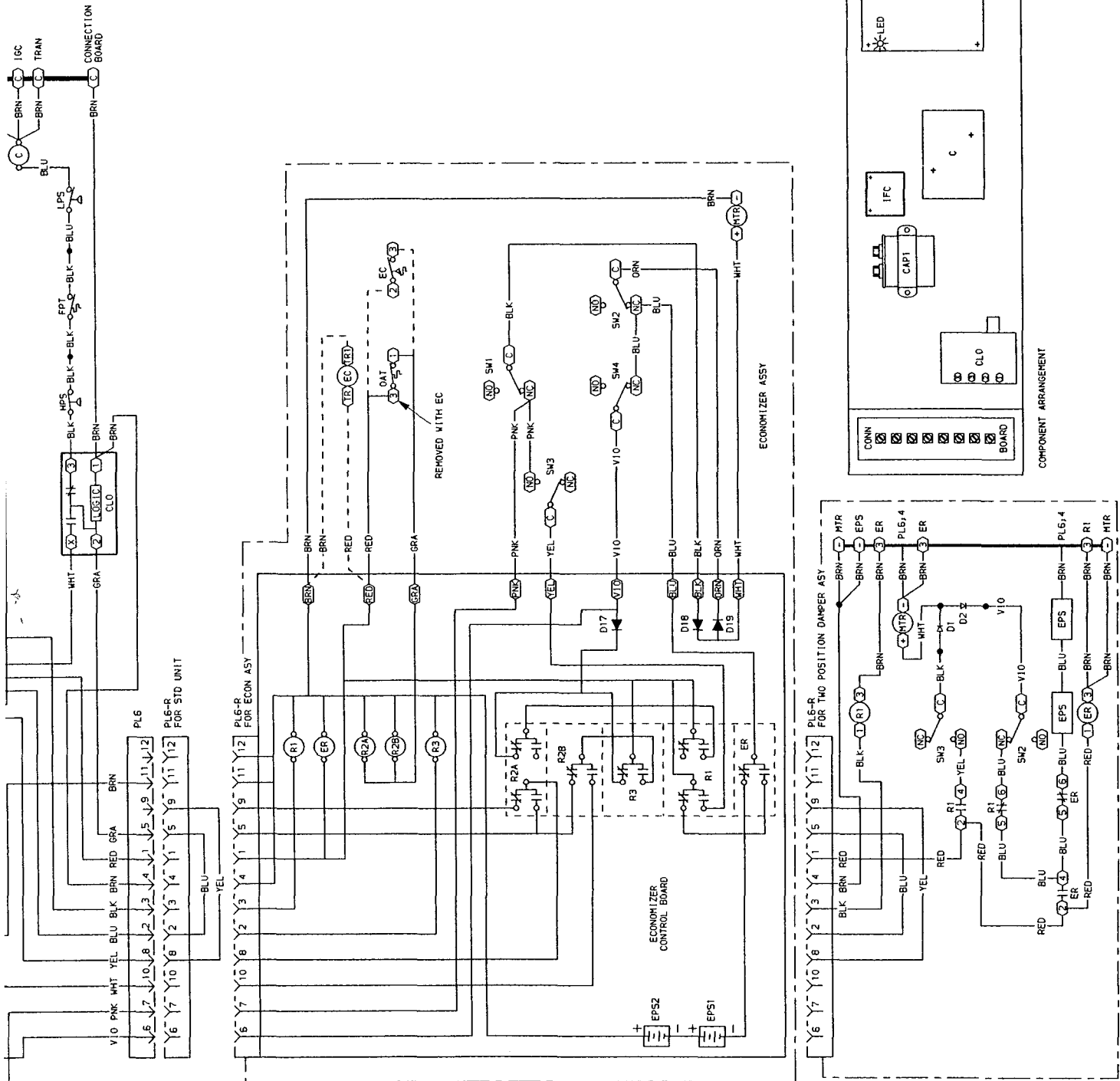
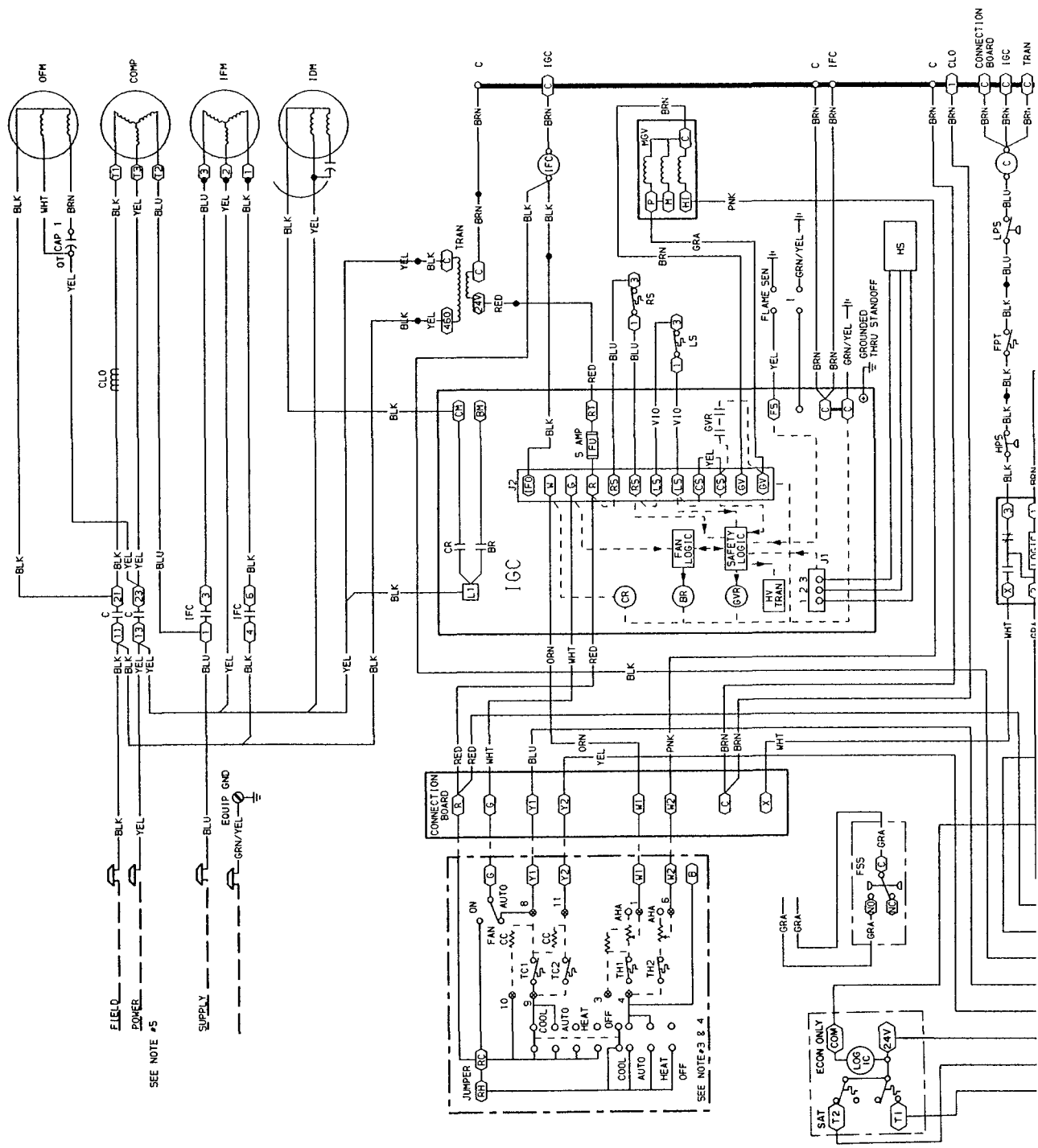


Fig. 6 – Label Diagram, Schematic and Component Arrangement; 48HJ007; 208/230-3-60



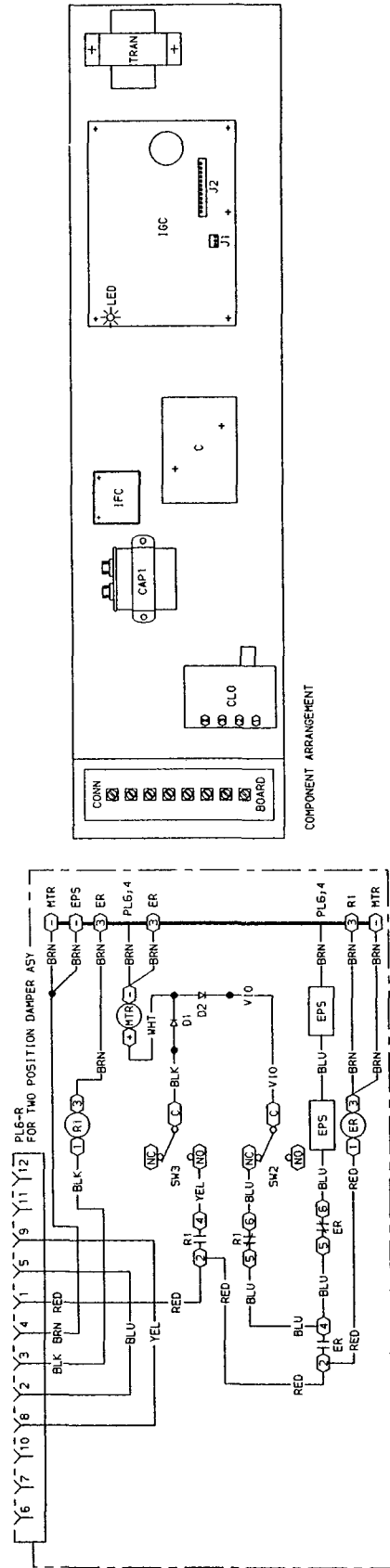
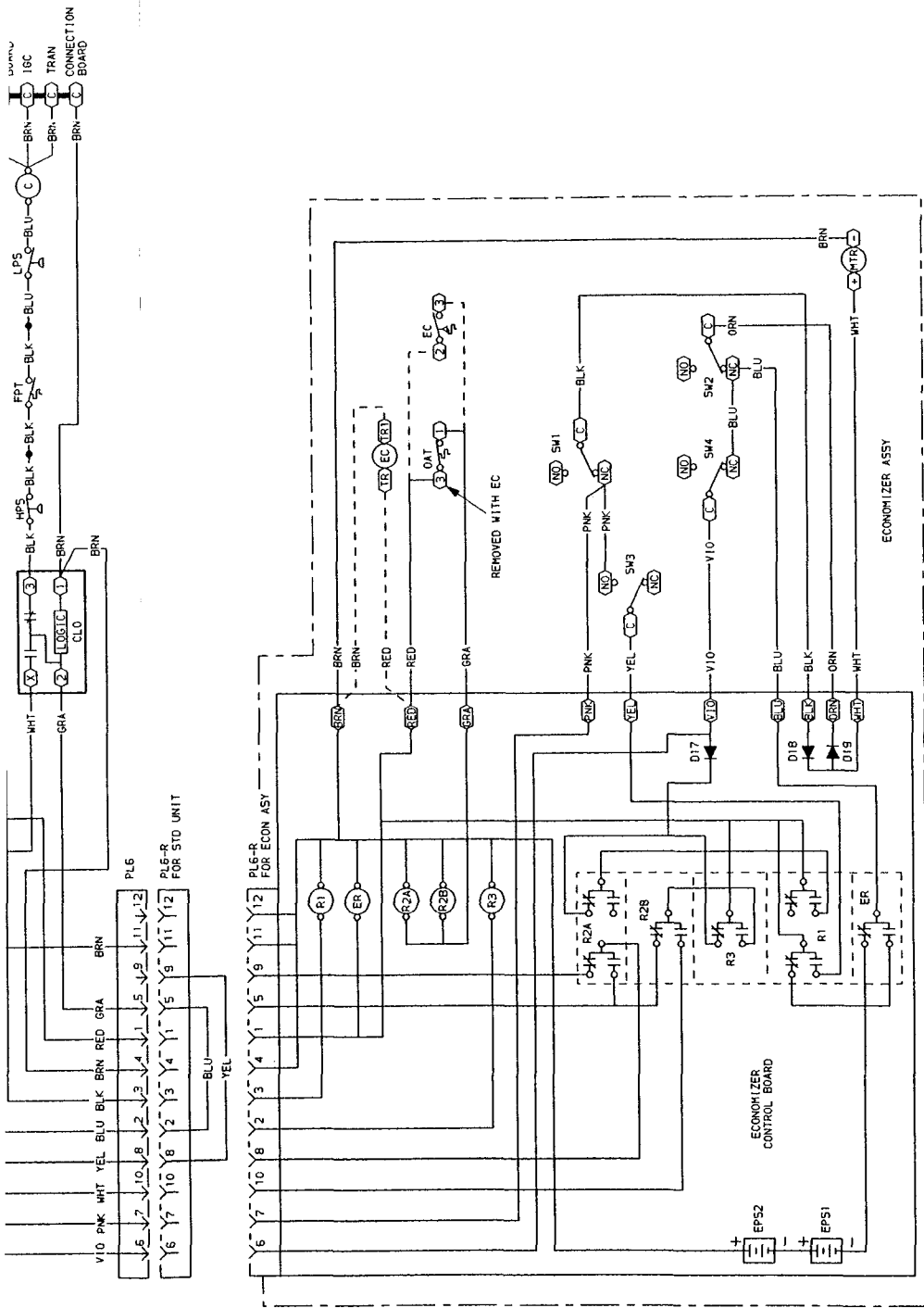
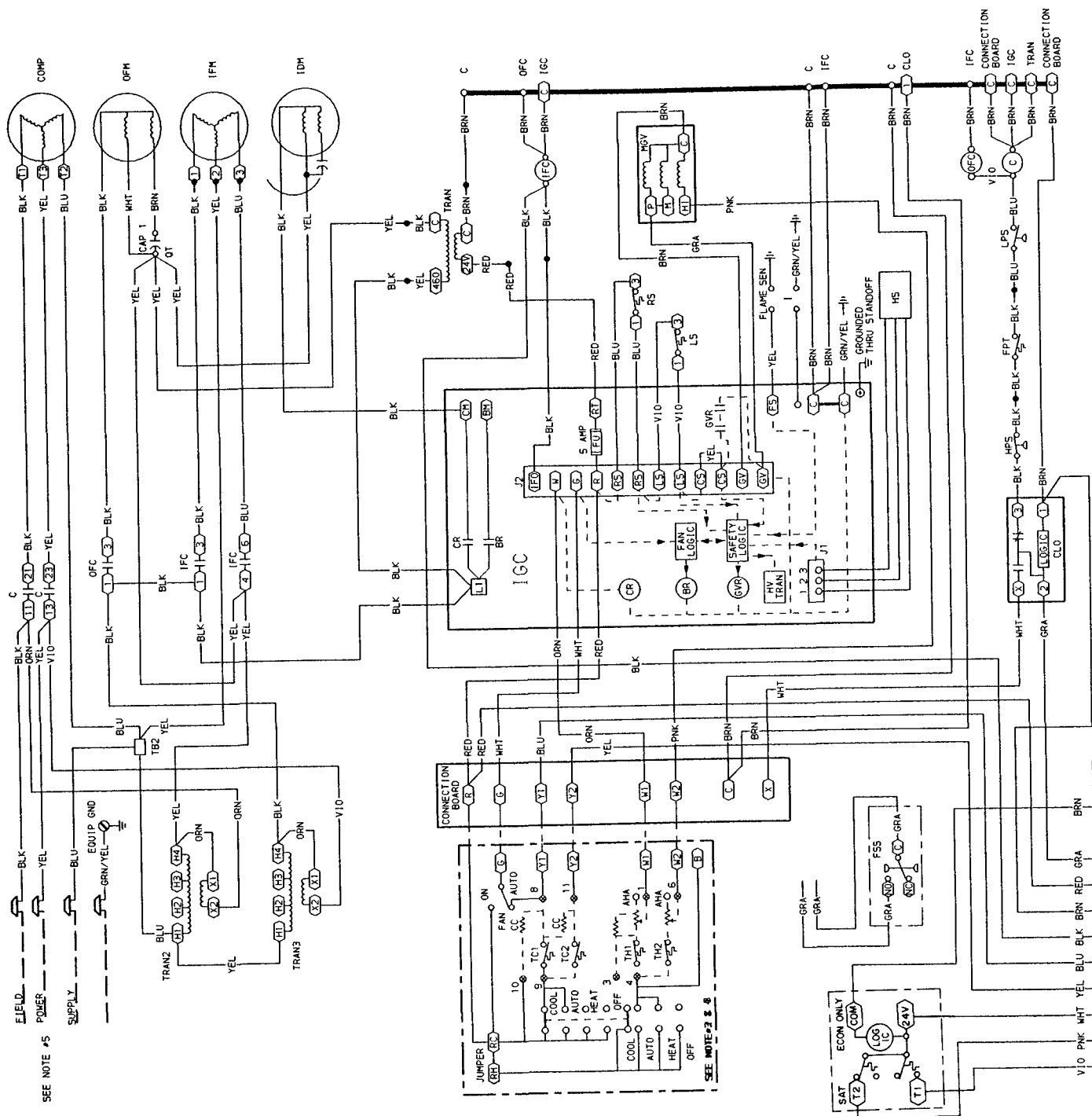


Fig. 7 - Label Diagram, Schematic and Component Arrangement; 48HJ007; 460-3-60



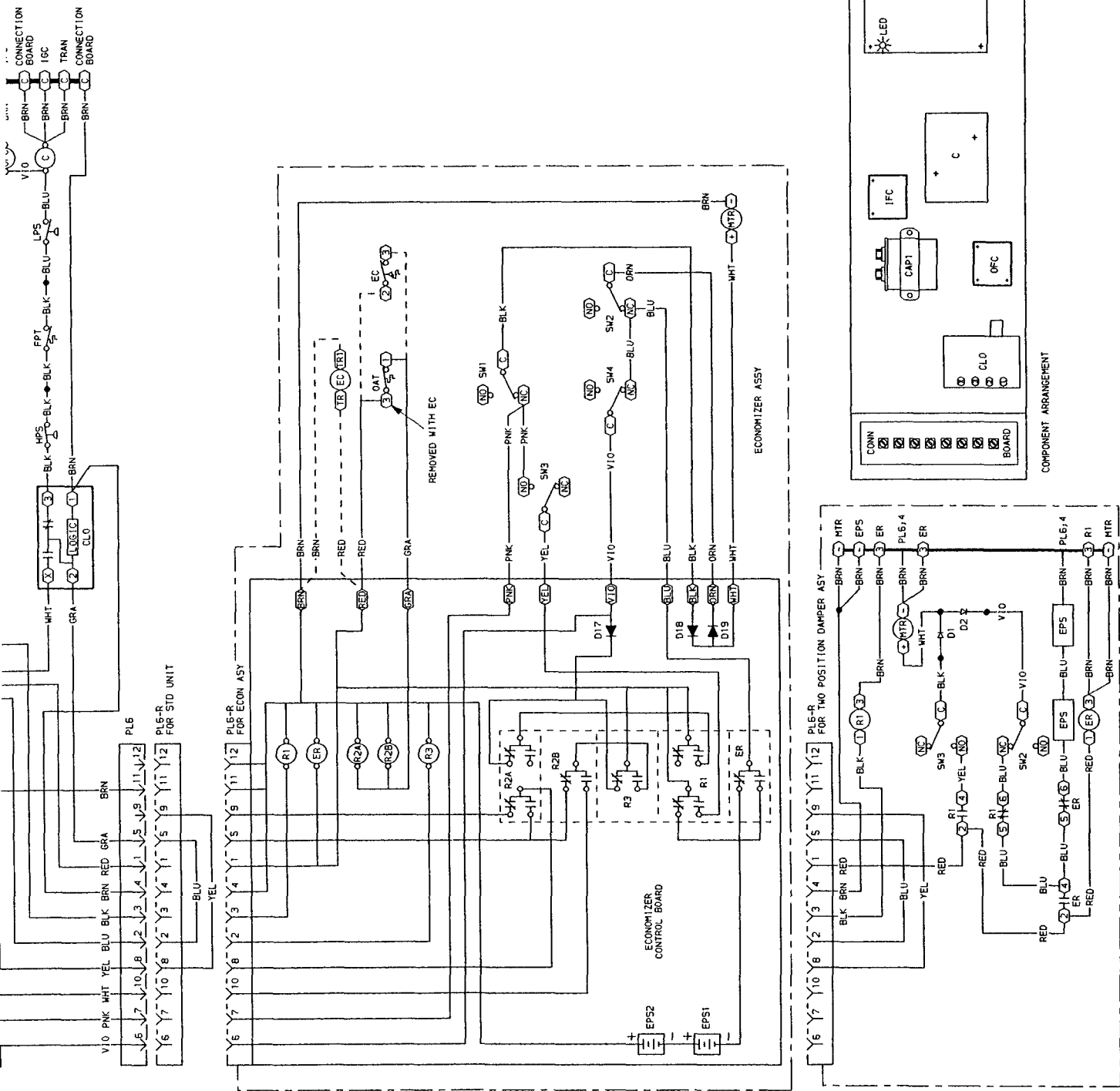


Fig. 8 — Label Diagram, Schematic and Component Arrangement; 48HJ007; 575-3-60

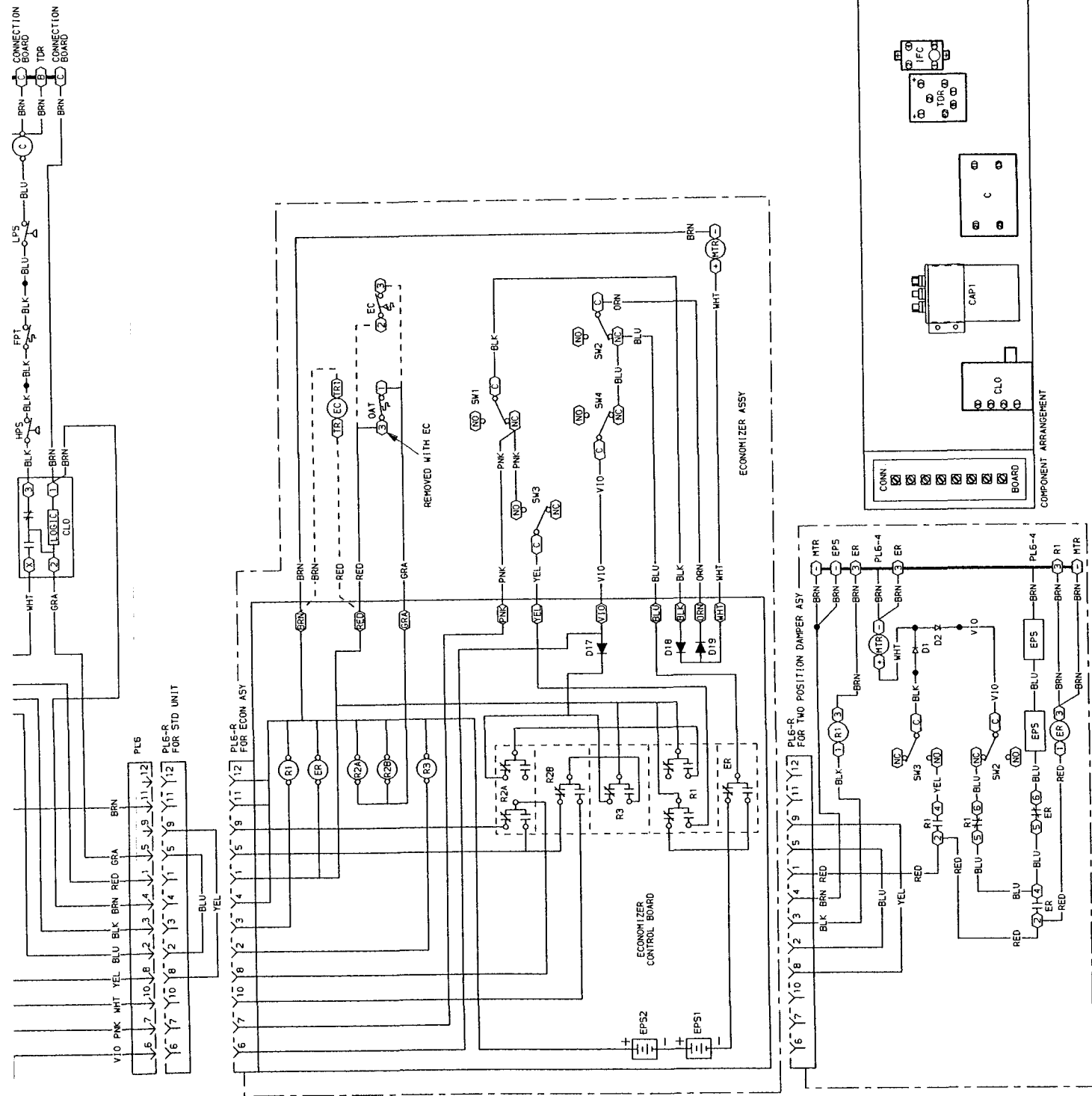
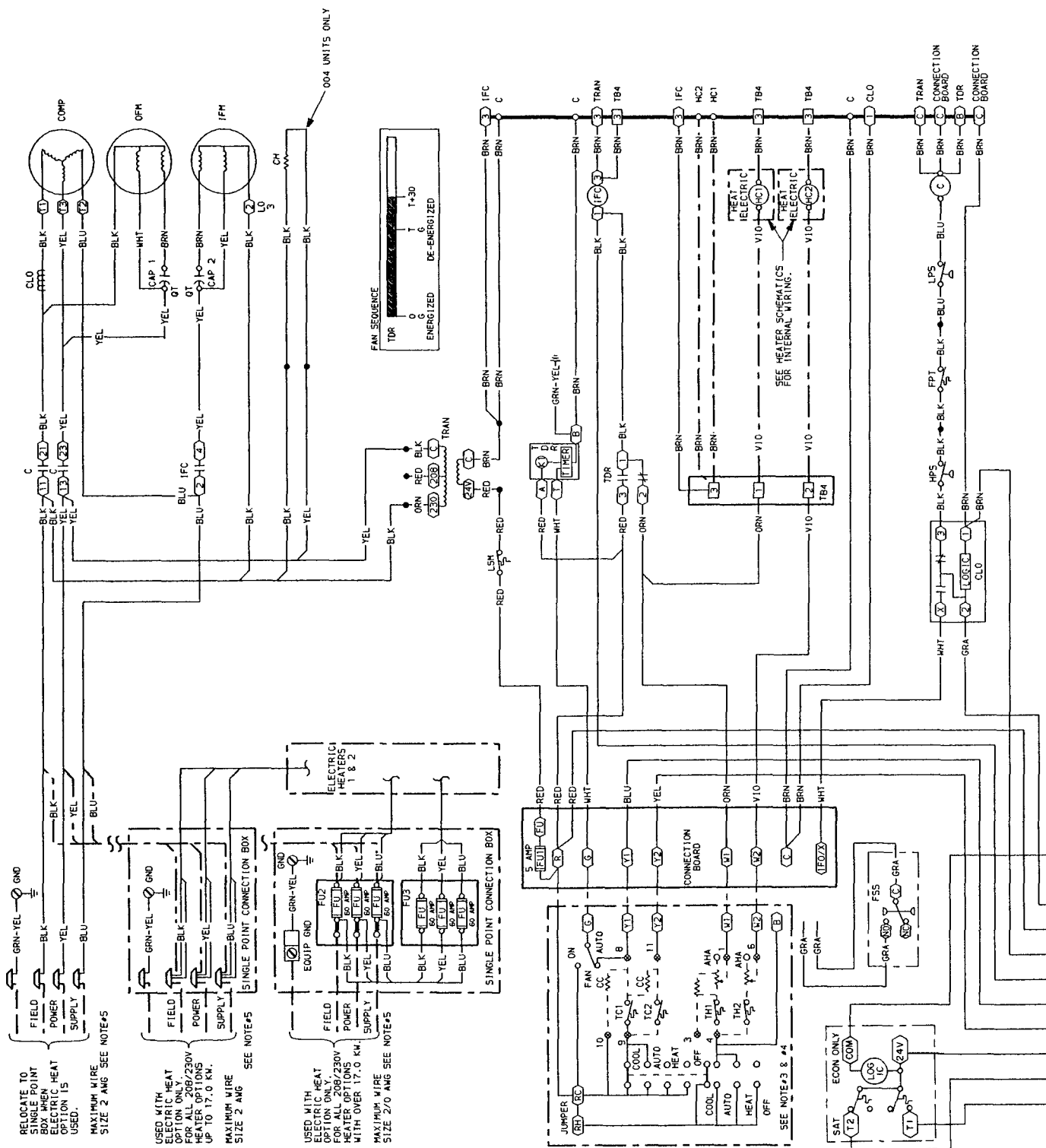


Fig. 9 — Label Diagram, Schematic and Component Arrangement; 50HJ004,005; 208/230-1-60



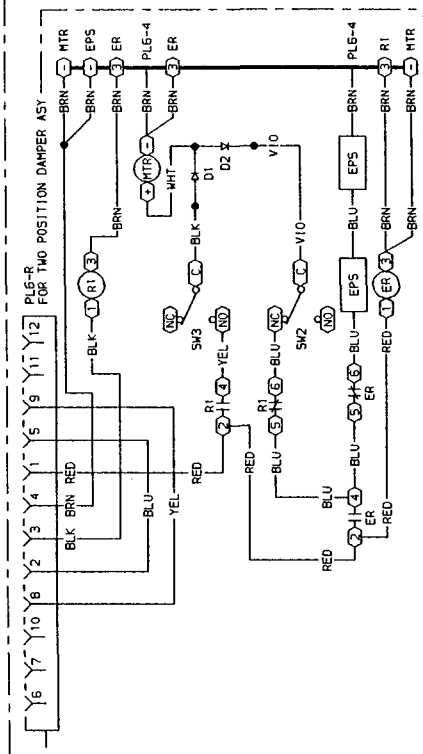
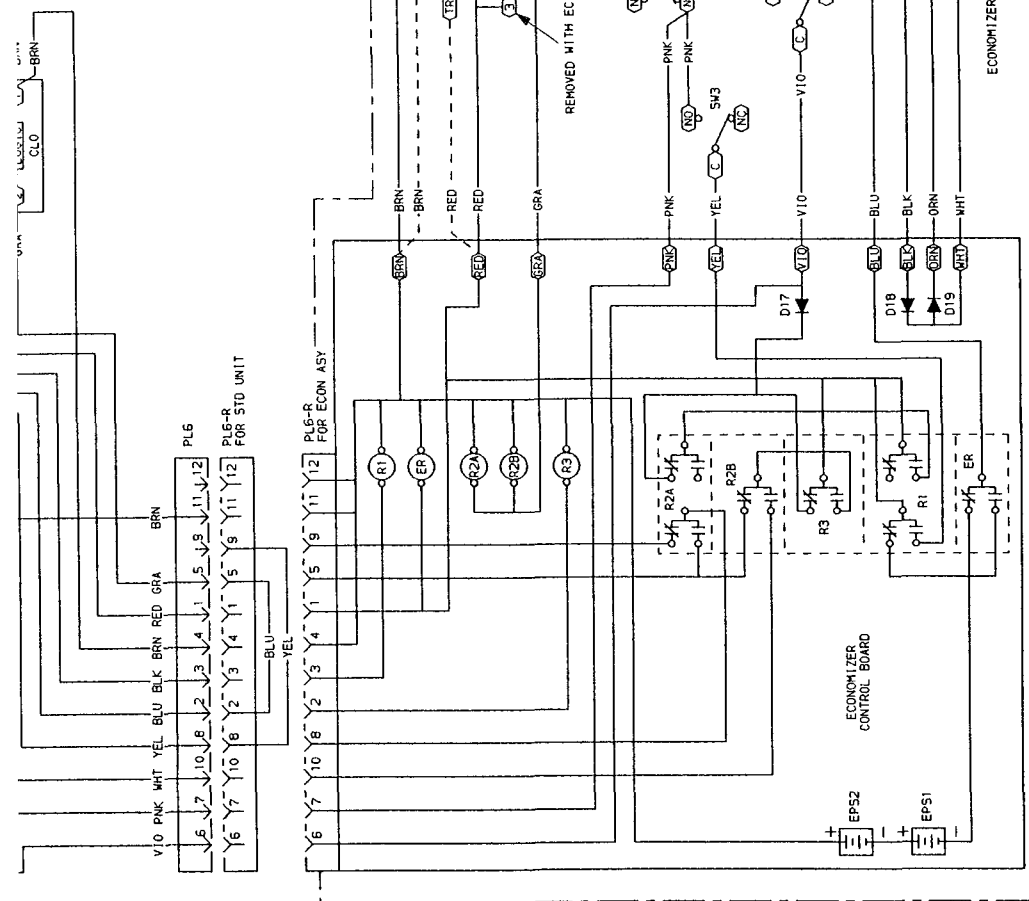


Fig. 10 — Label Diagram, Schematic and Component Arrangement; 50HJ004,005; 208/230-3-60

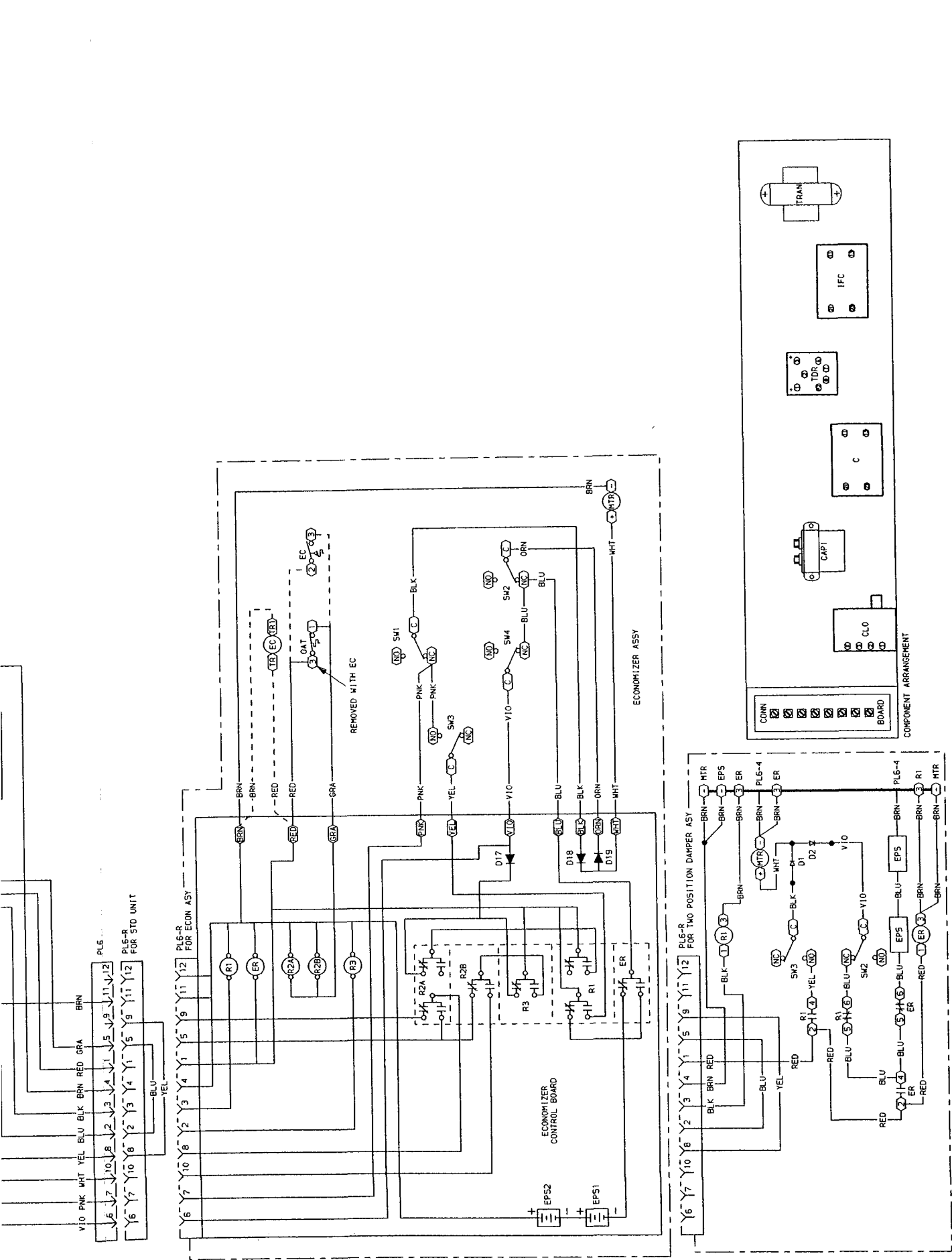
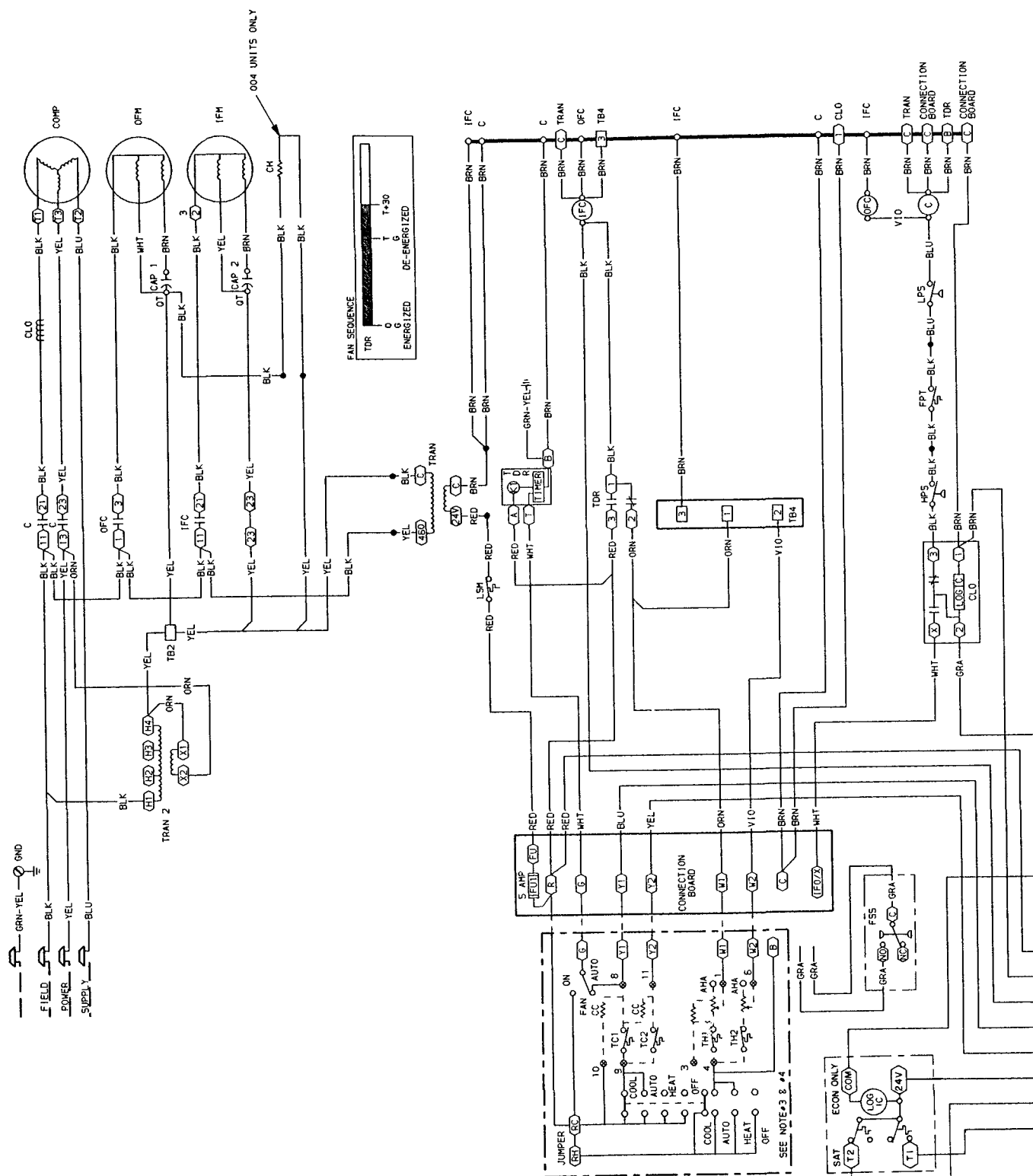


Fig. 11 — Label Diagram, Schematic and Component Arrangement; 50HJ004,005; 460-3-60



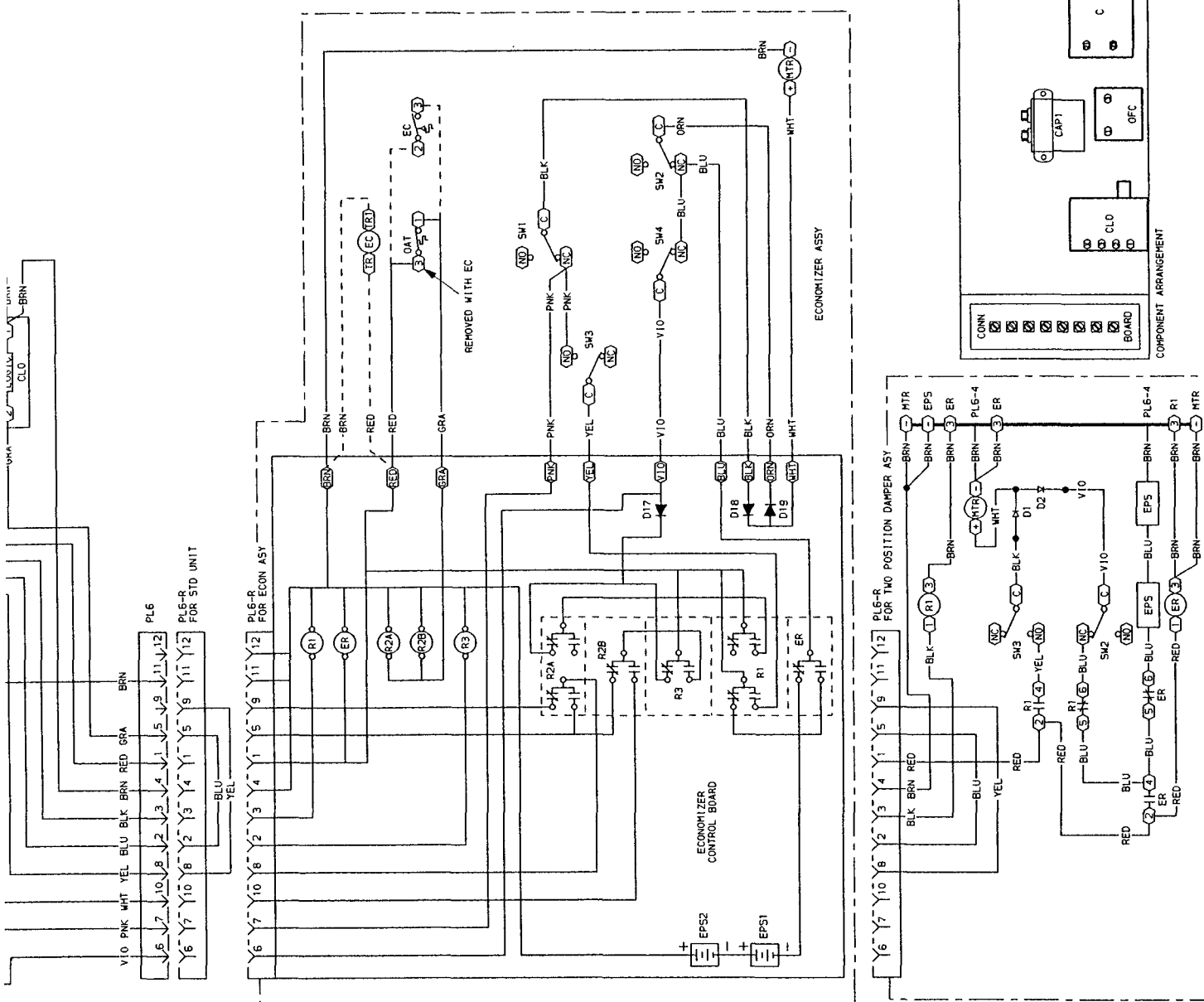


Fig. 12 — Label Diagram, Schematic and Component Arrangement; 50HJ004,005; 575-3-60



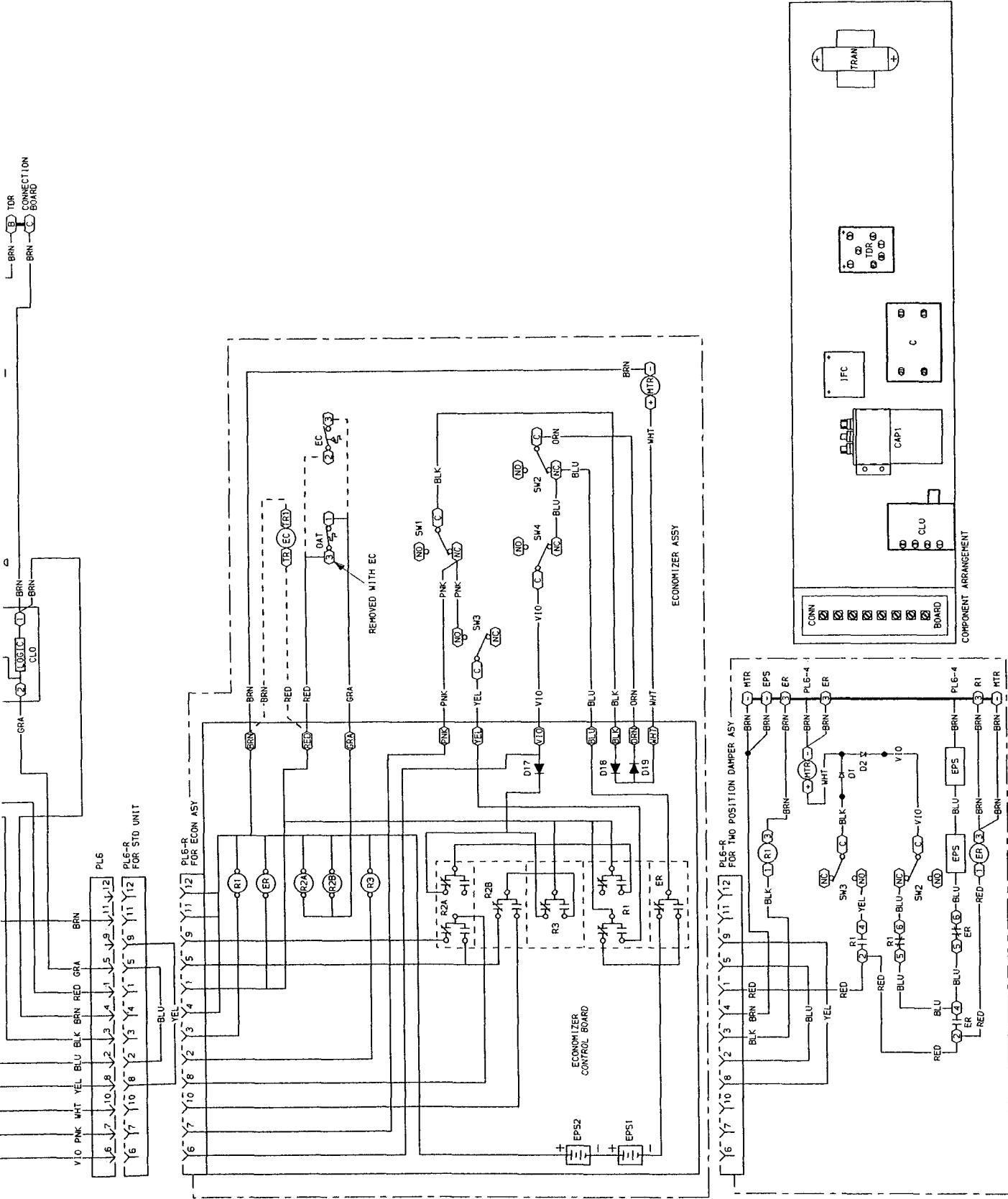
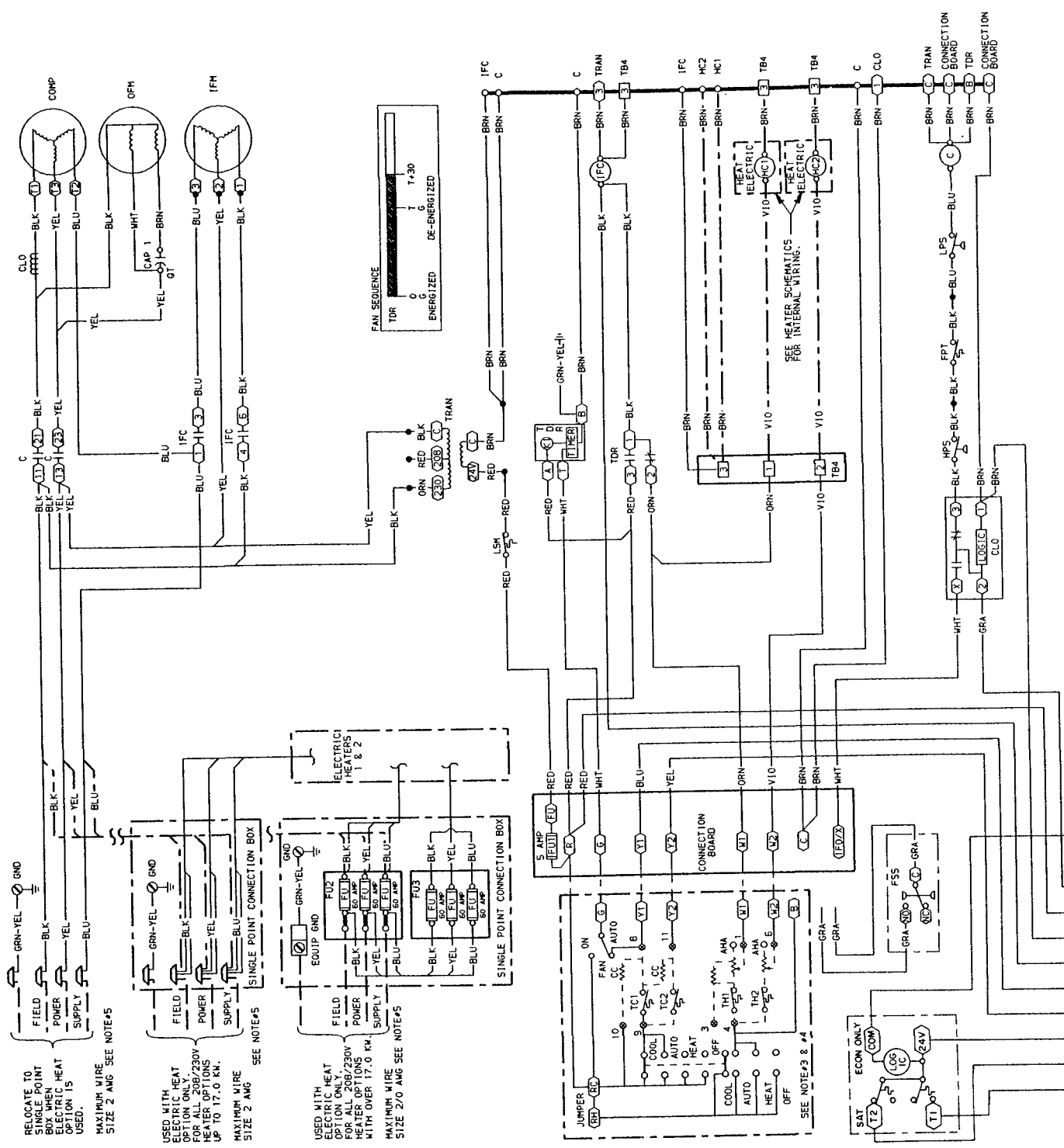


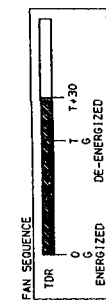
Fig. 13 — Label Diagram, Schematic and Component Arrangement; 50HJ006; 208/230-1-60



RELOCATE TO
SINGLE POINT
BOX WHEN HEAT
OPTION IS
USED.
MAXIMUM WIRE
SIZE 2 AWG SEE NOTE#5

USED WITH
ELECTRIC HEAT
OPTION ONLY.
FOR ALL 208/230V
HEATER OPTIONS
UP TO 17.0 KW.
MAXIMUM WIRE
SIZE 2 AWG SEE NOTE#5

USED WITH
ELECTRIC HEAT
OPTION ONLY.
FOR ALL 208/230V
HEATER OPTIONS
WITH OVER 17.0 KW.
MAXIMUM WIRE
SIZE 2/0 AWG SEE NOTE#5



SEE HEATER SCHEMATICS
FOR INTERNAL WIRING.

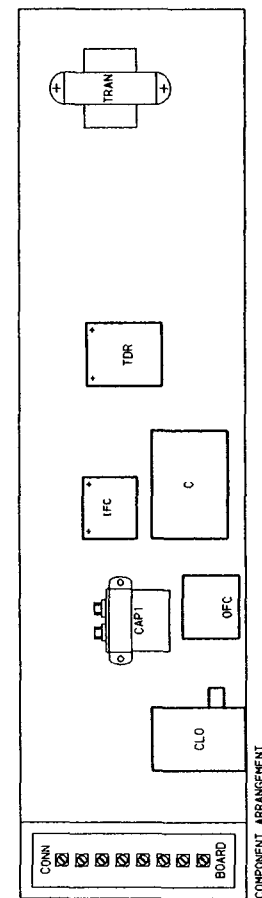
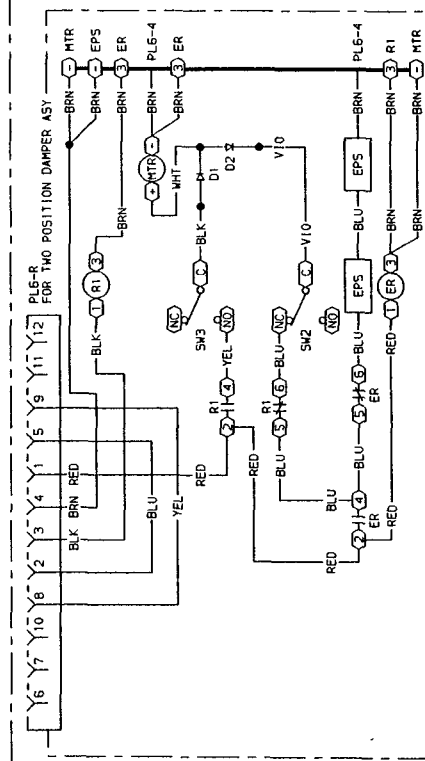
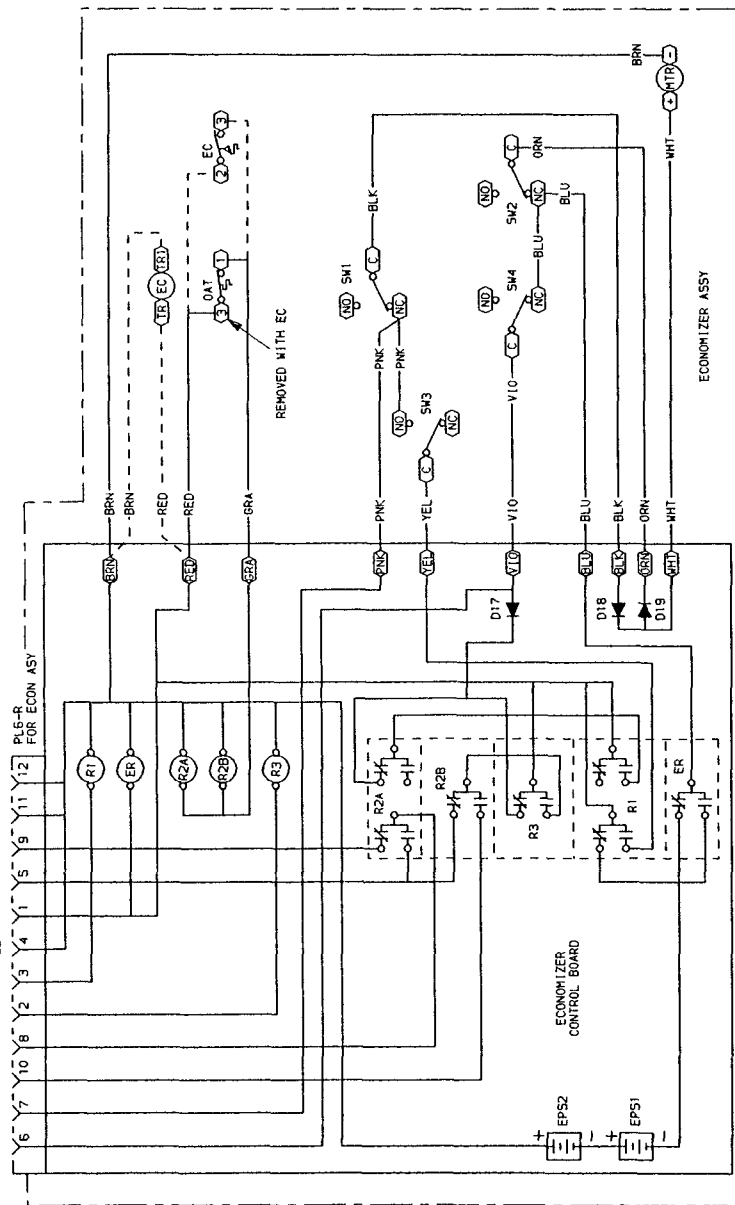
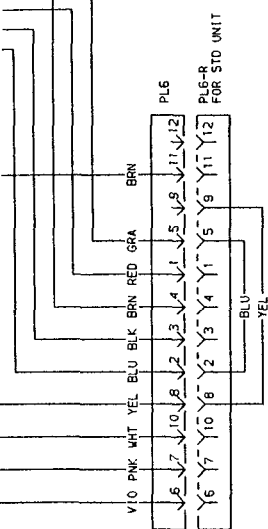


Fig. 14 — Label Diagram, Schematic and Component Arrangement; 50HJ006; 208/230-3-60



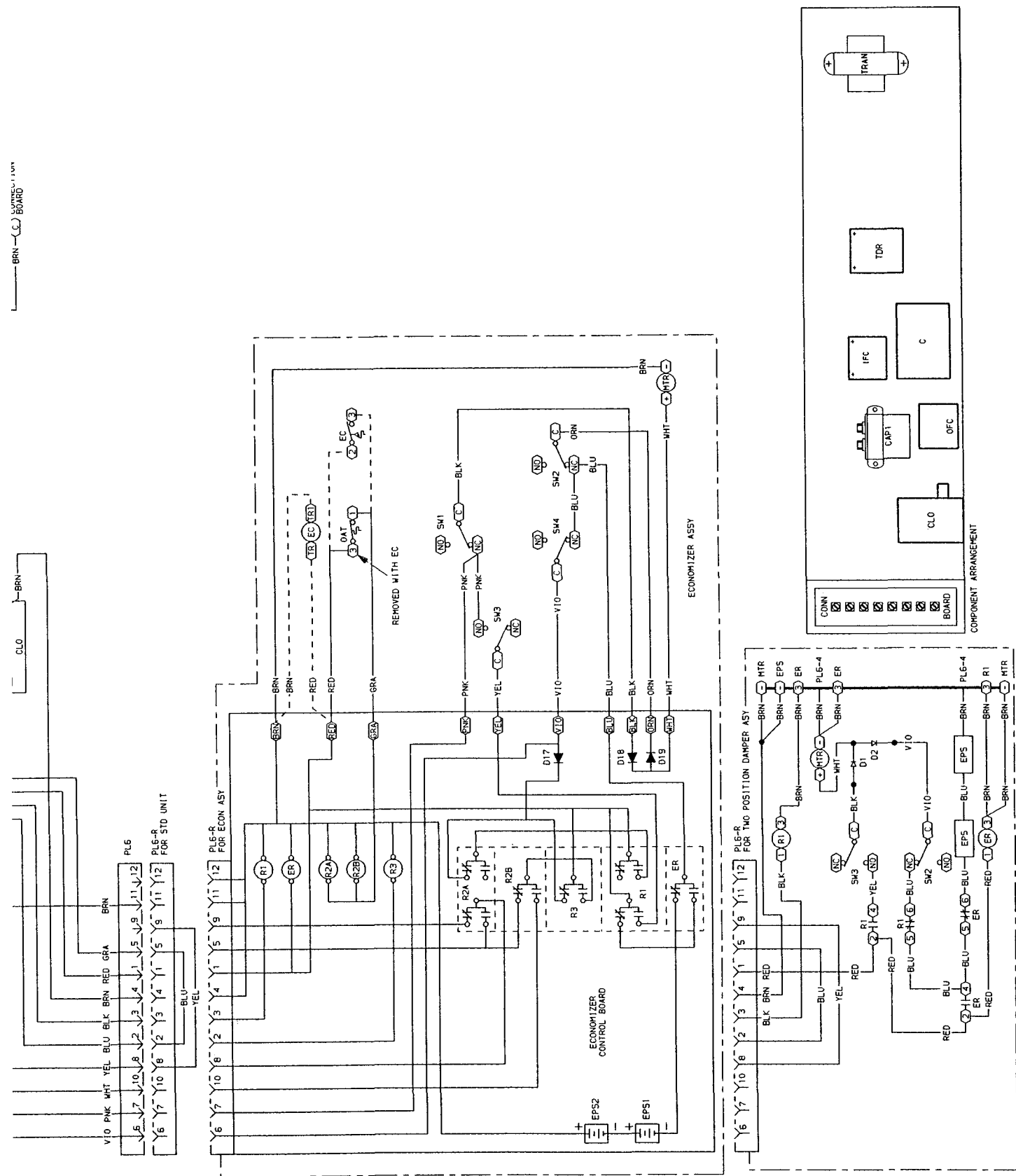
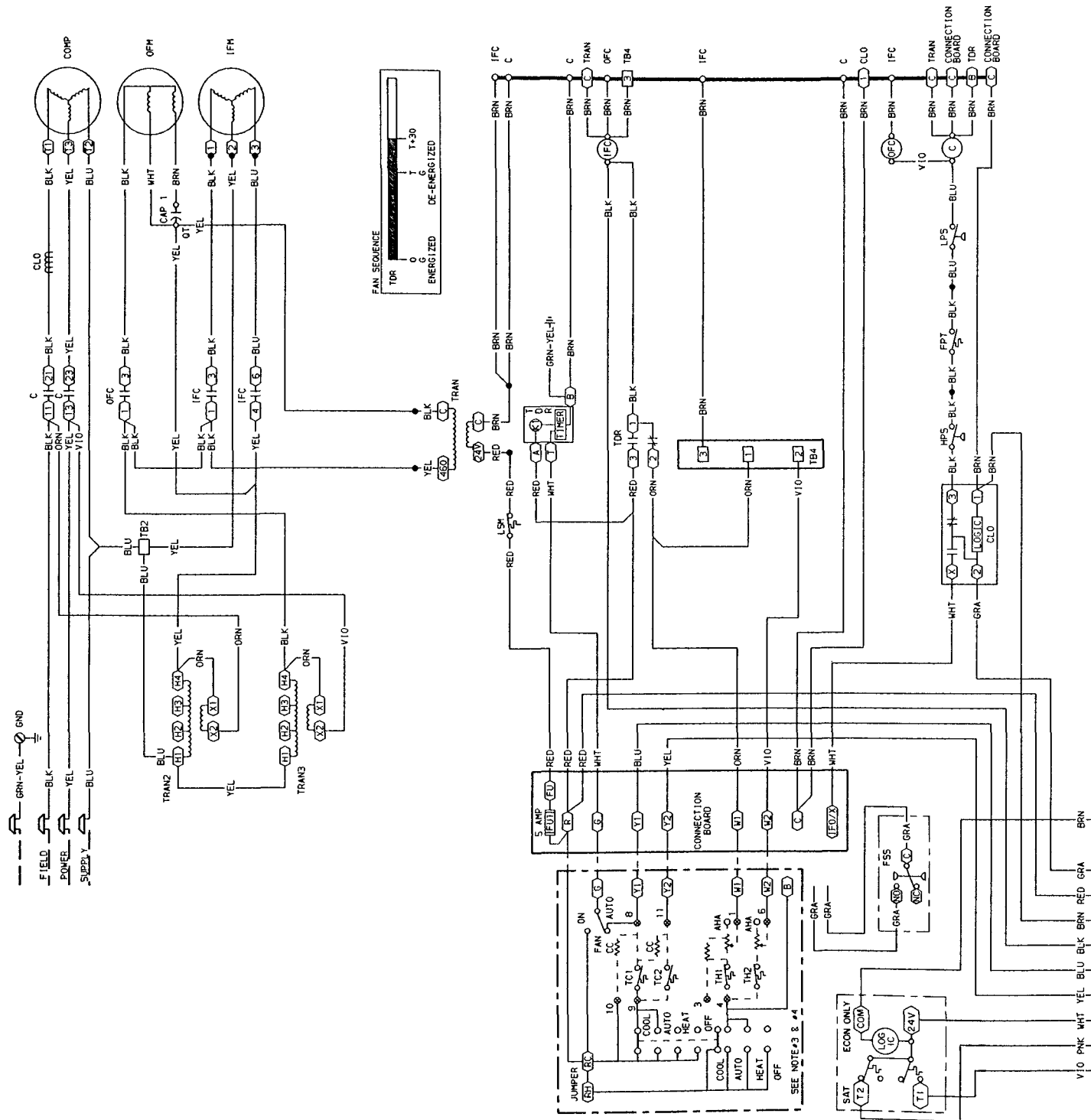


Fig. 15 — Label Diagram, Schematic and Component Arrangement; 50HJ006; 460-3-60



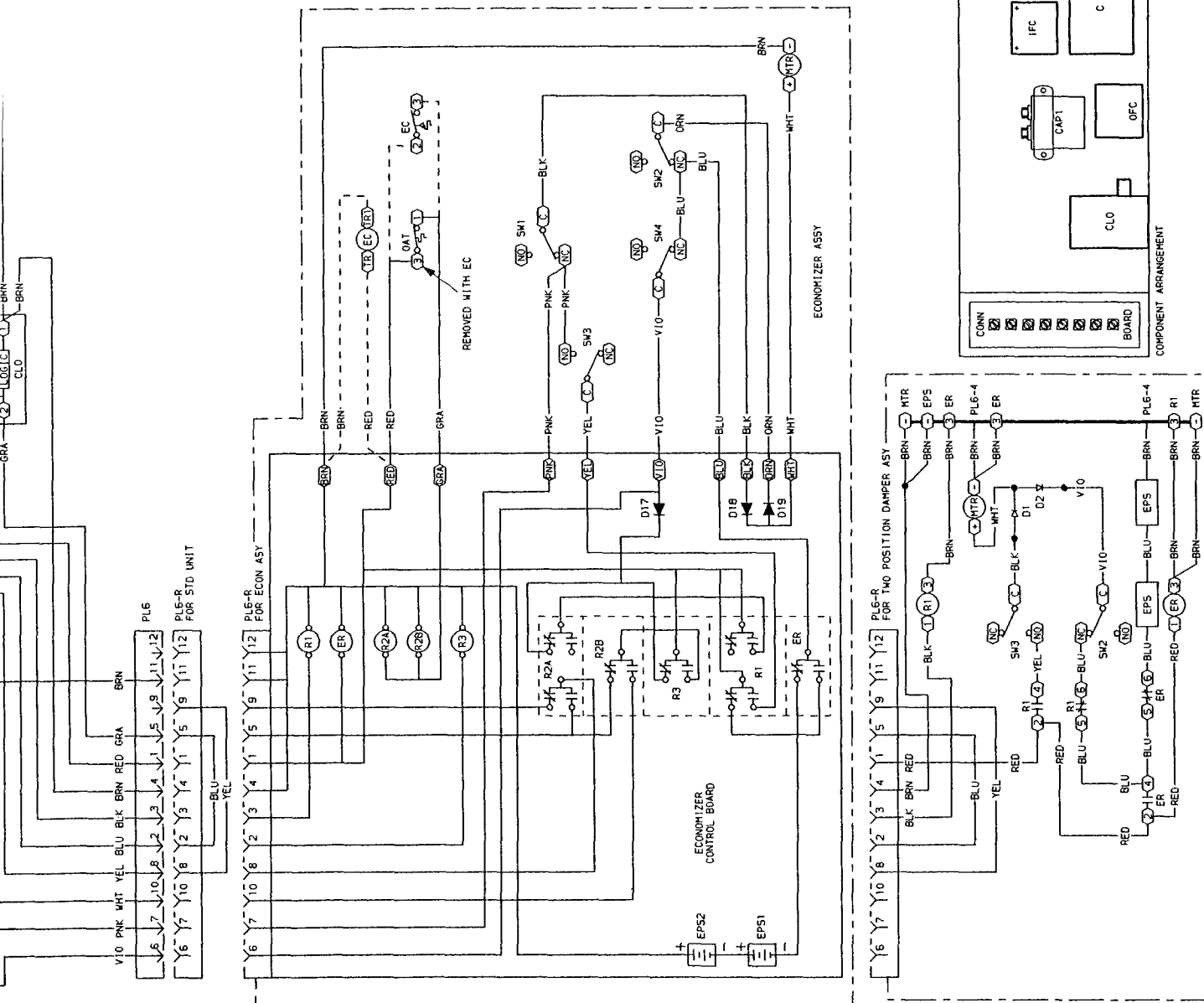
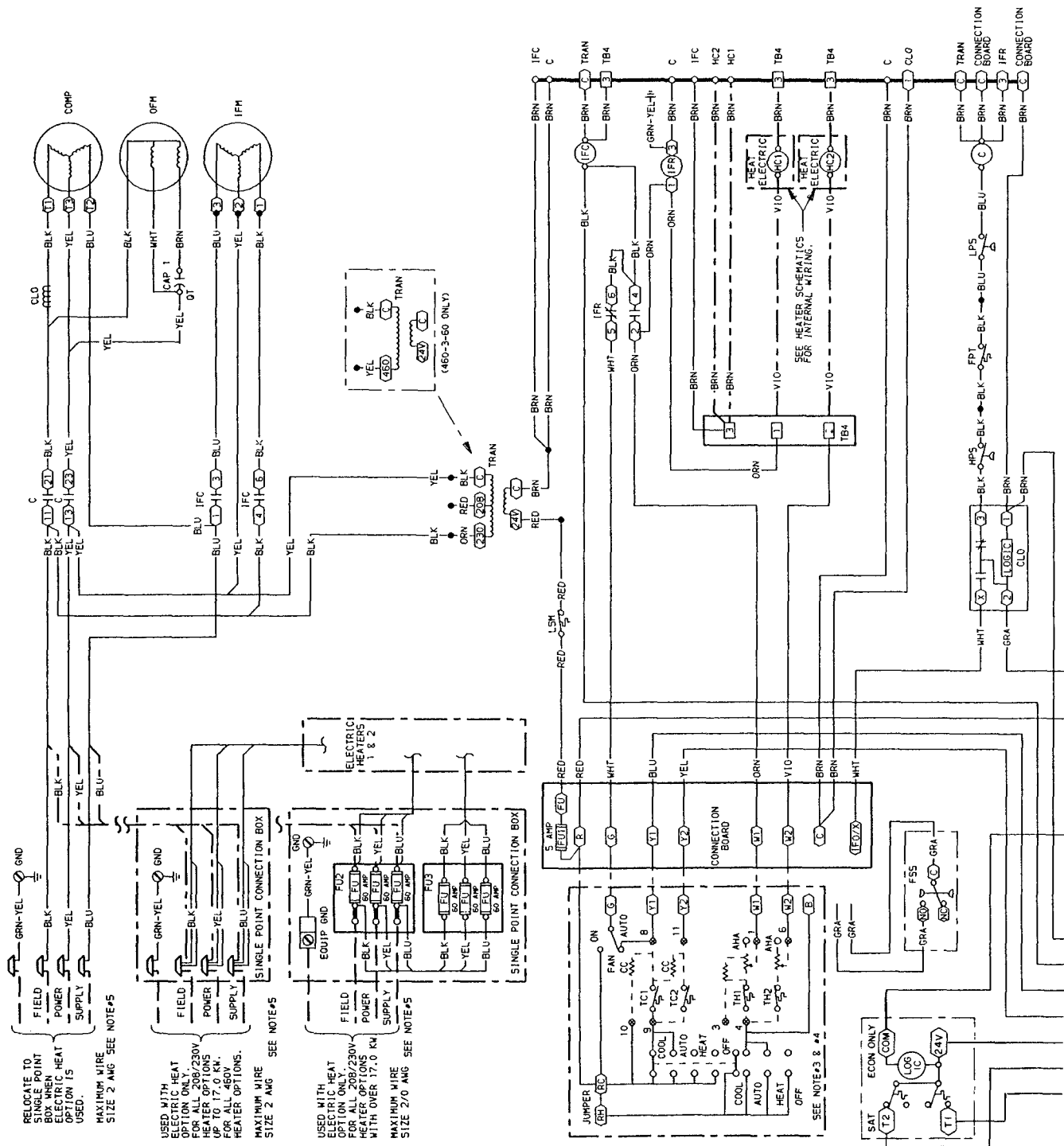


Fig. 16 — Label Diagram, Schematic and Component Arrangement; 50HJ006; 575-3-60



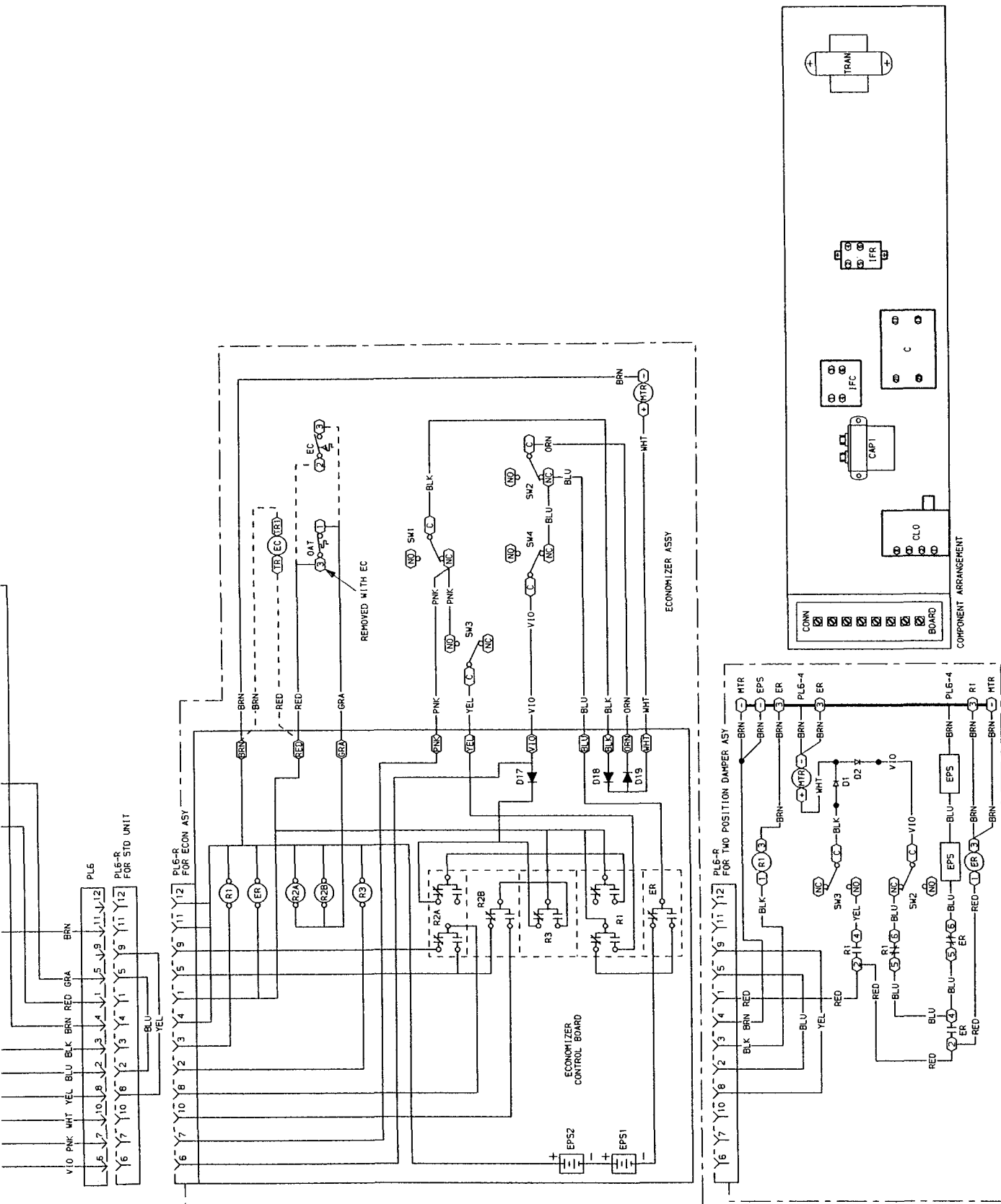
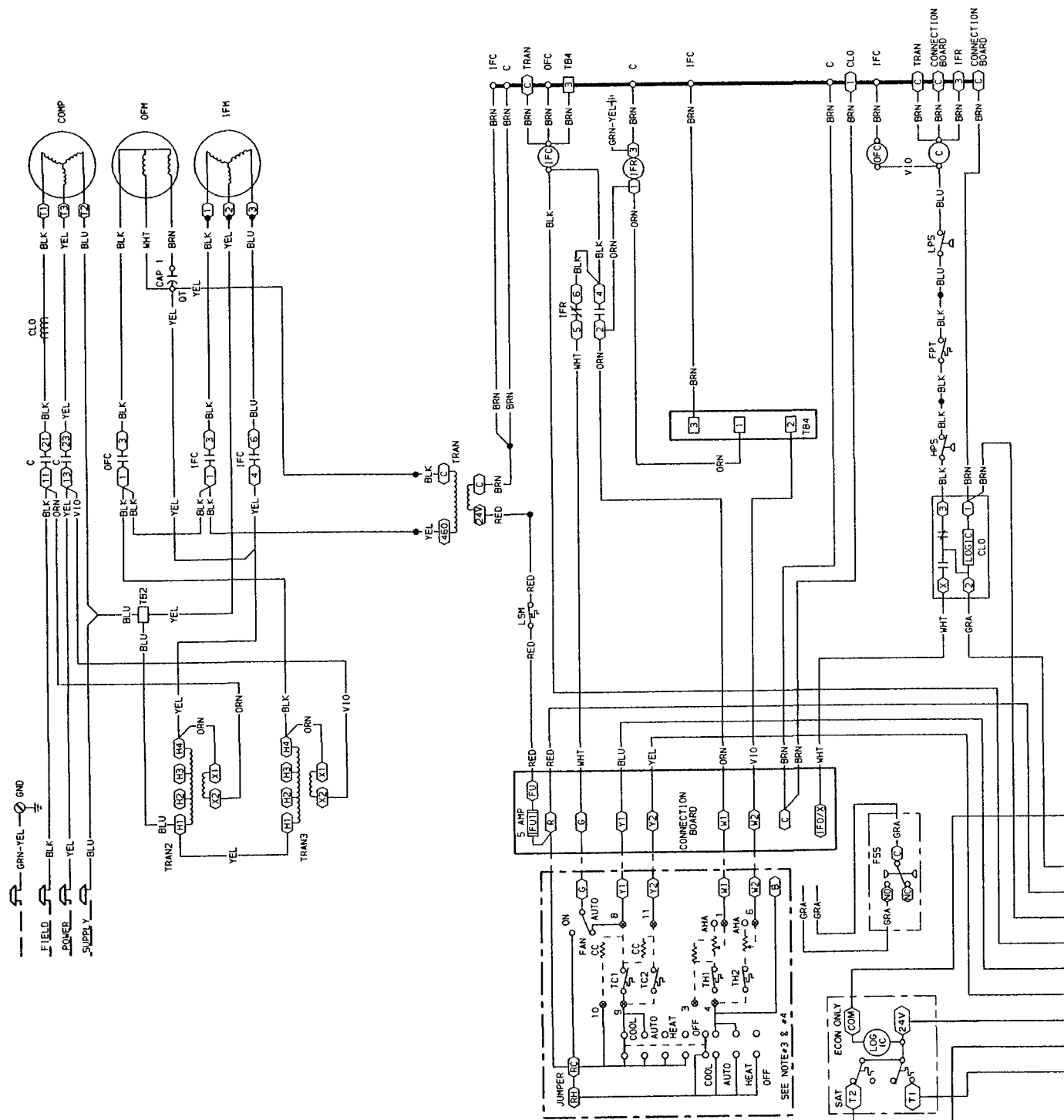


Fig. 17 — Label Diagram, Schematic and Component Arrangement; 50HJ007; 208/230-3-60, 460-3-60



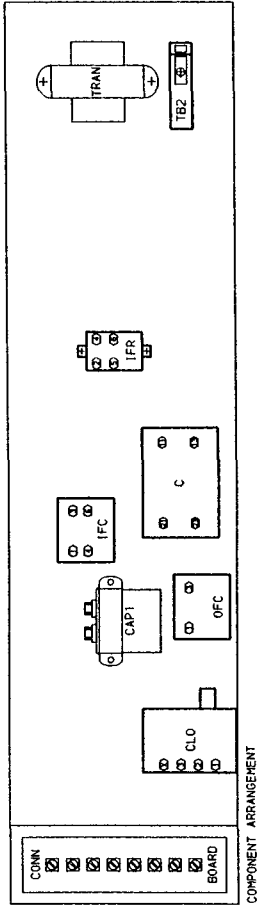
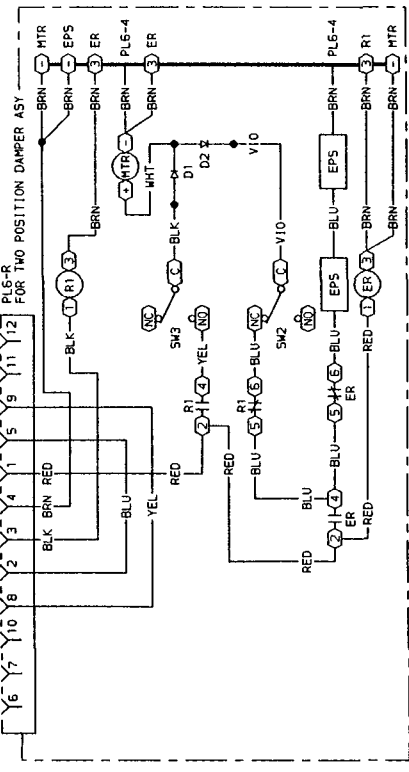
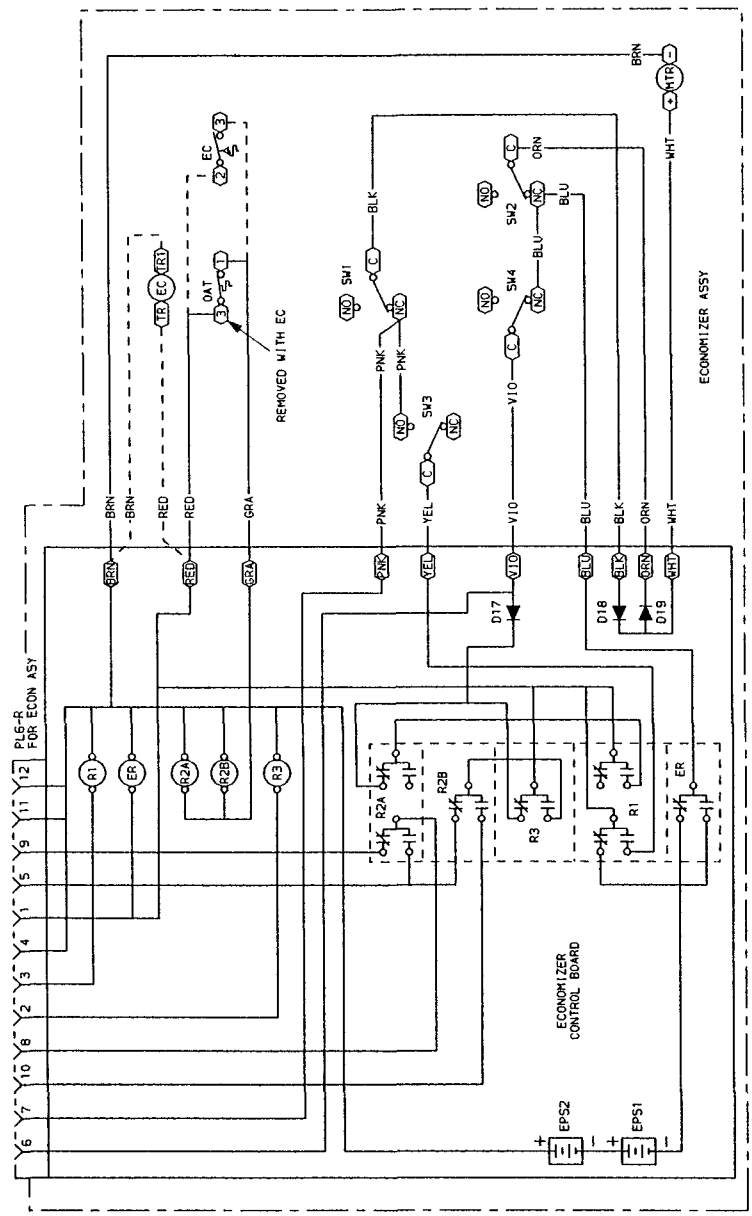
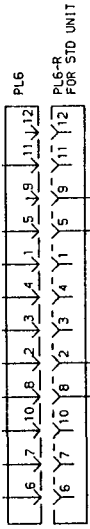


Fig. 18 – Label Diagram, Schematic and Component Arrangement; 50HJ007; 575-3-60

BRN TRAN

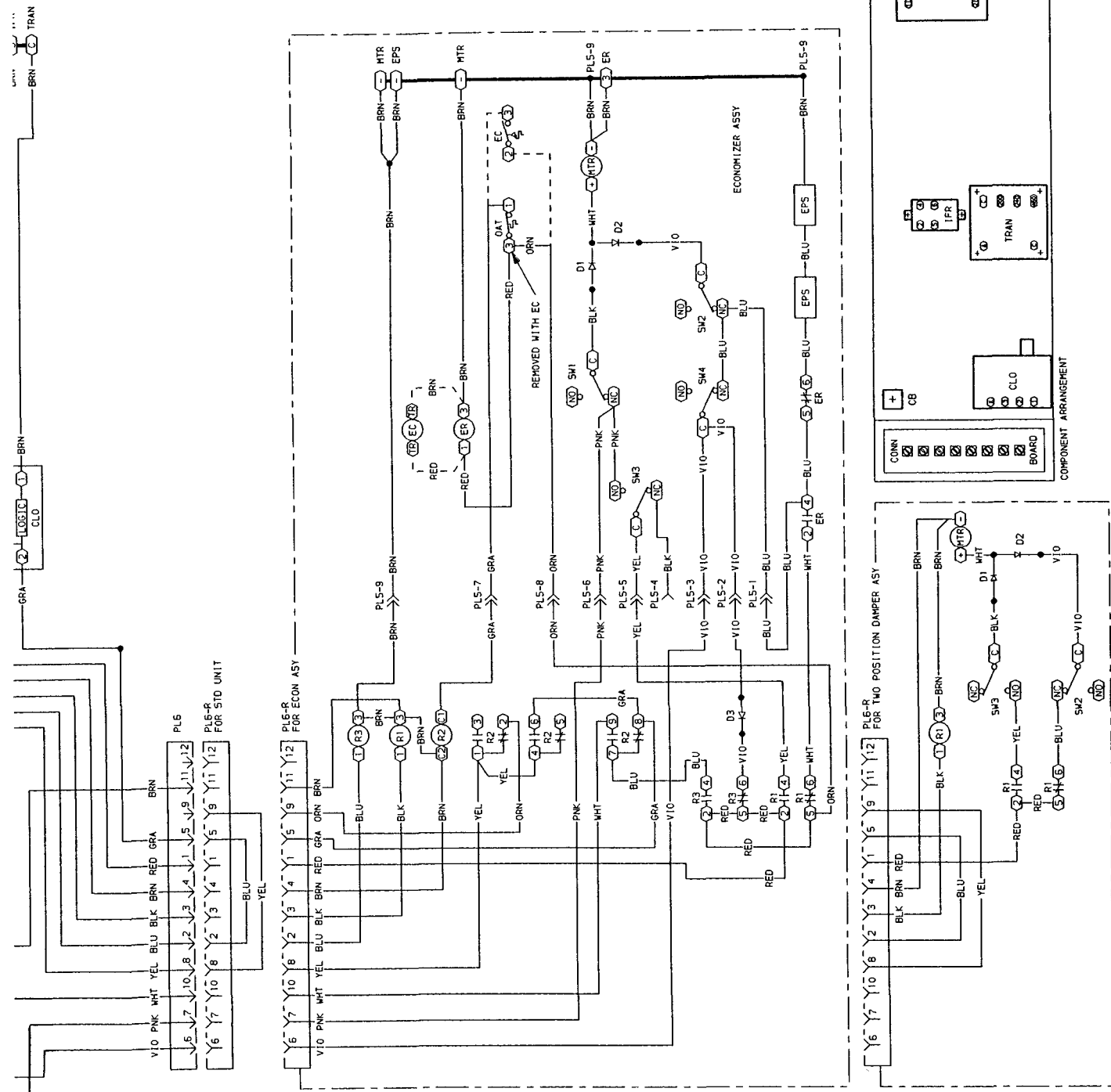


Fig. 19 -- Label Diagram, Schematic and Component Arrangement; 50HJ006,007; 230-3-50

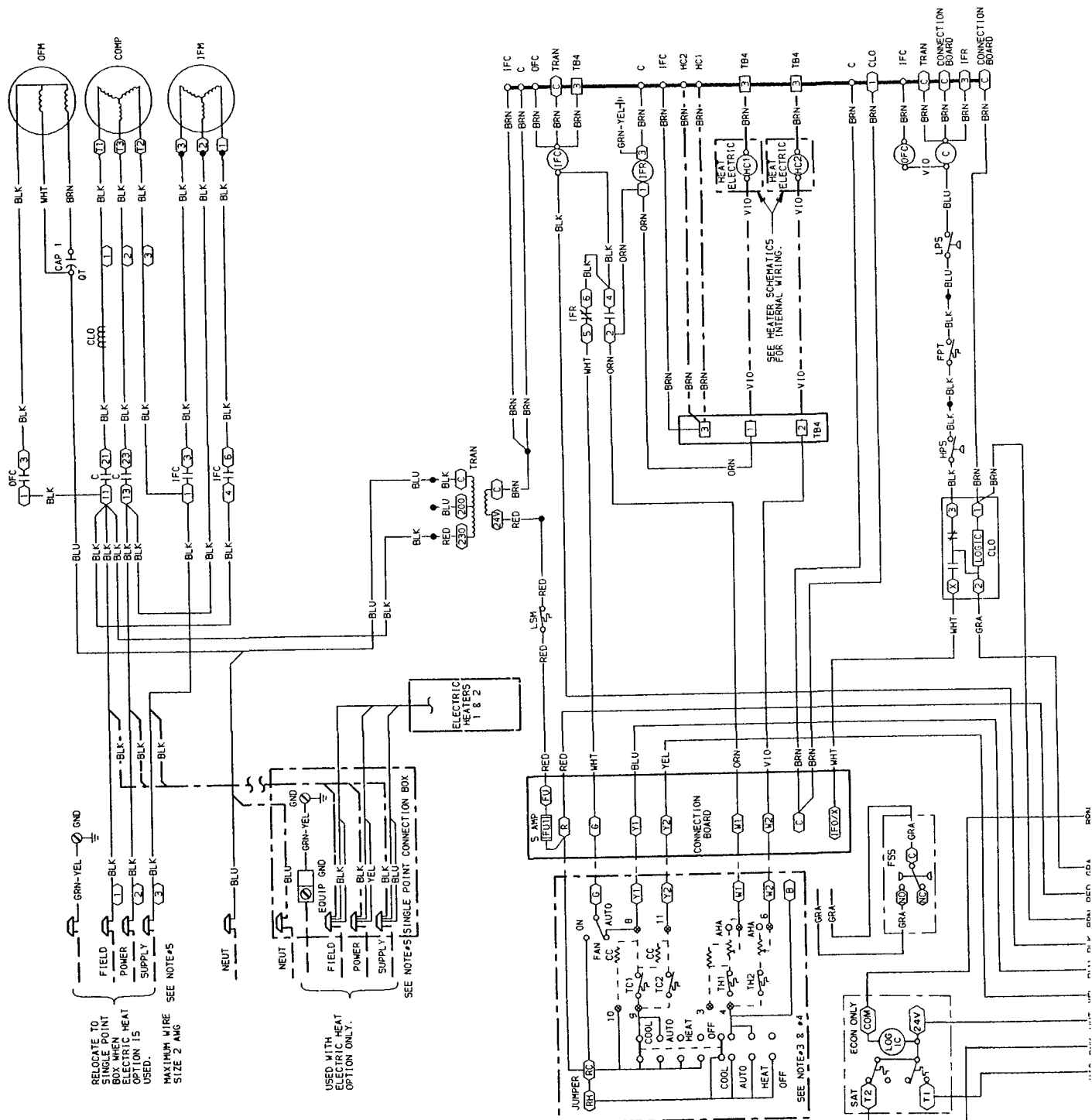


Fig. 20 – Label Diagram, Schematic and Component Arrangement; 50HJ006,007; 400-3-50



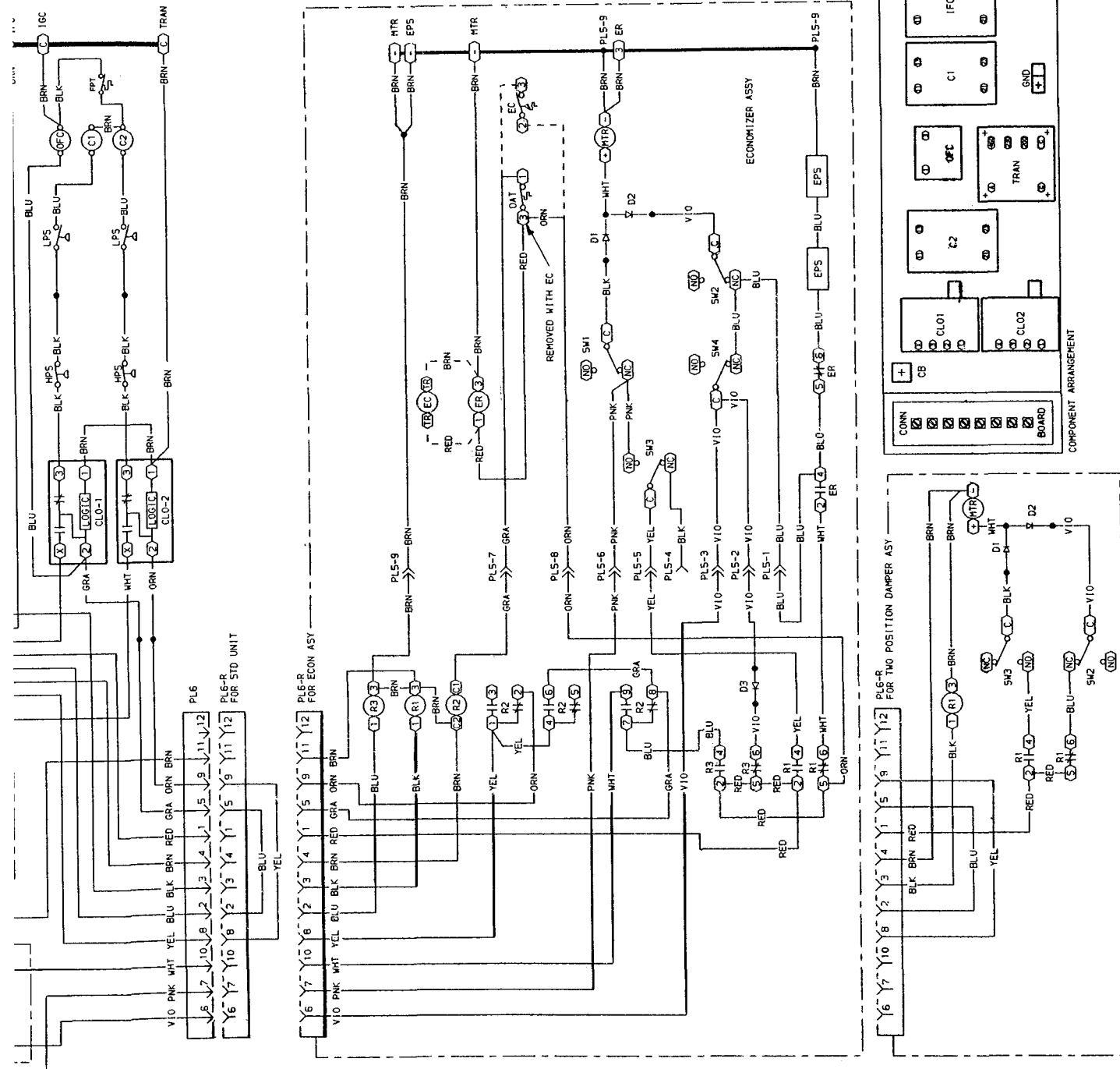
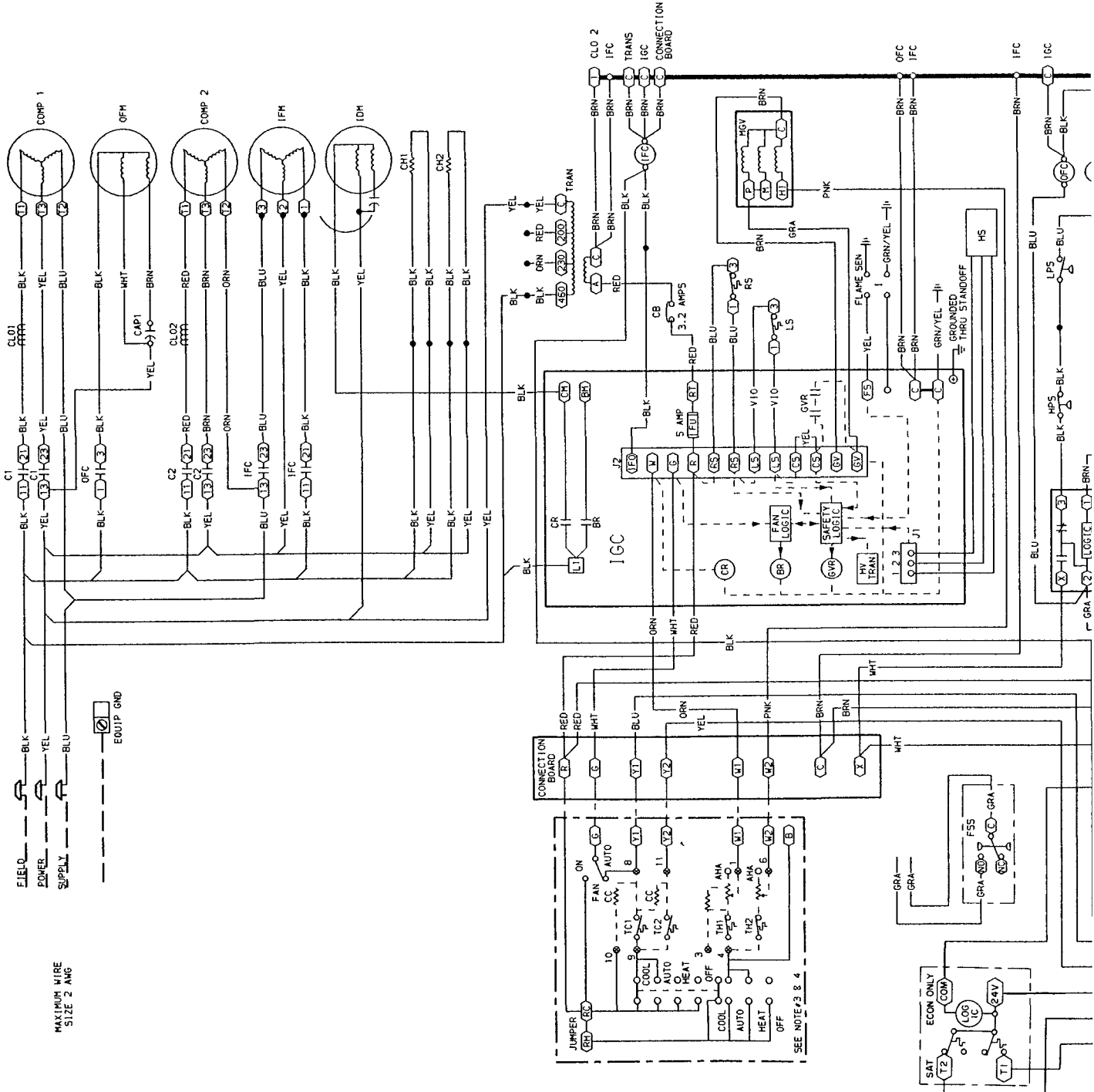


Fig. 21 — Label Diagram, Schematic and Component Arrangement; 48HM007; 208/230-3-60



MAXIMUM WIRE
SIZE 2 AWG

SEE NOTE#3 & 4

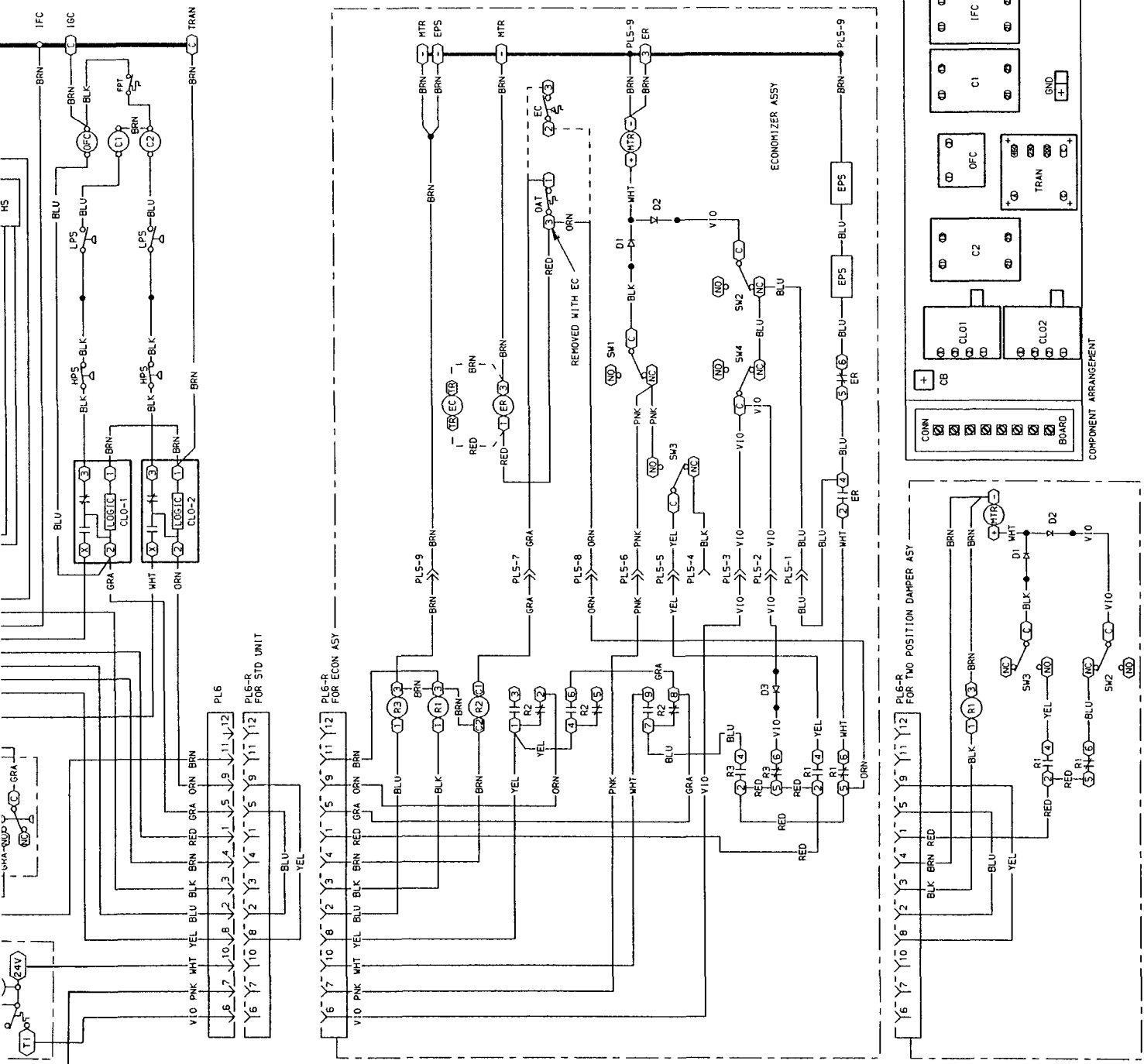
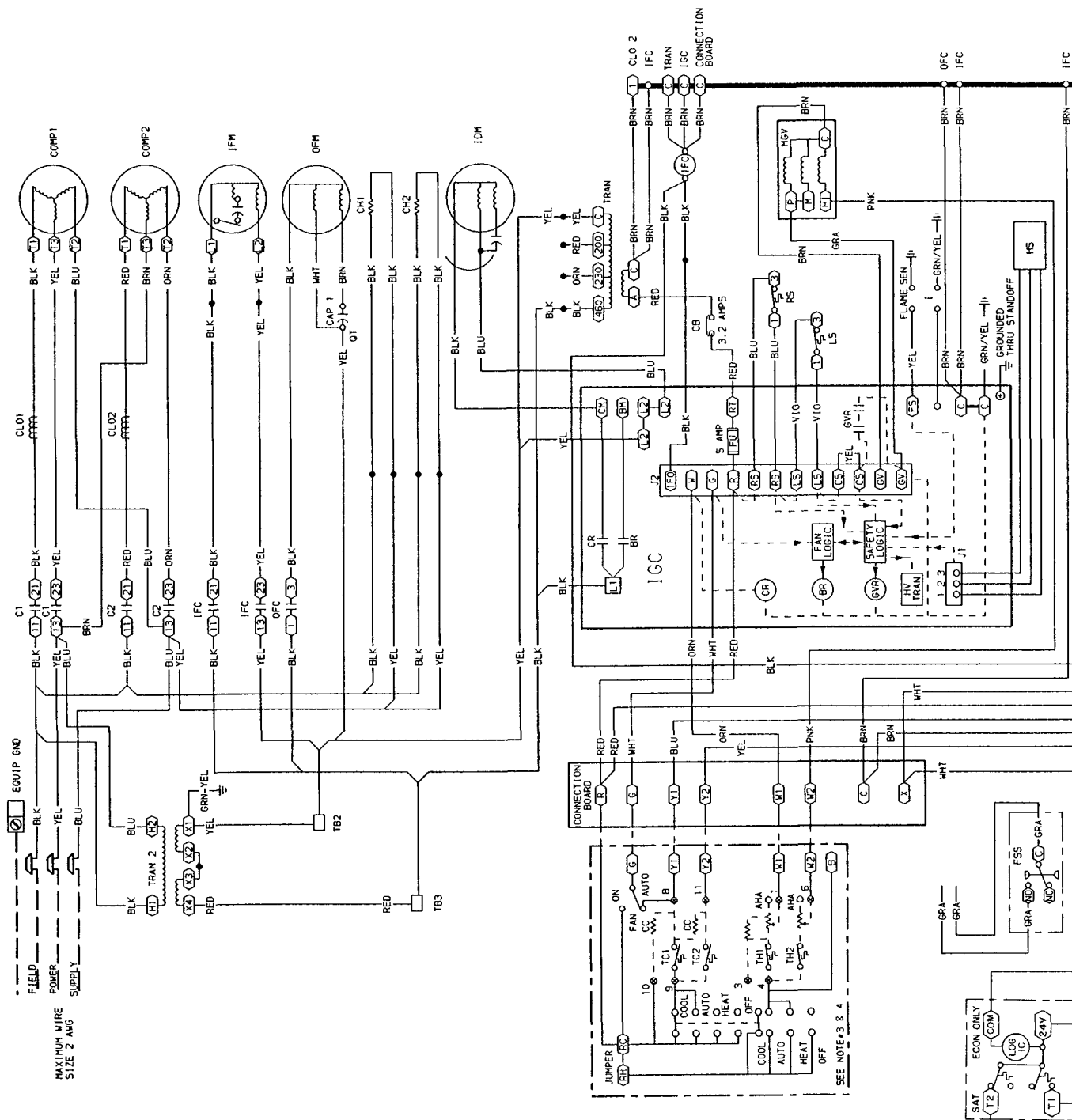


Fig. 22 — Label Diagram, Schematic and Component Arrangement; 48HM007; 460-3-60



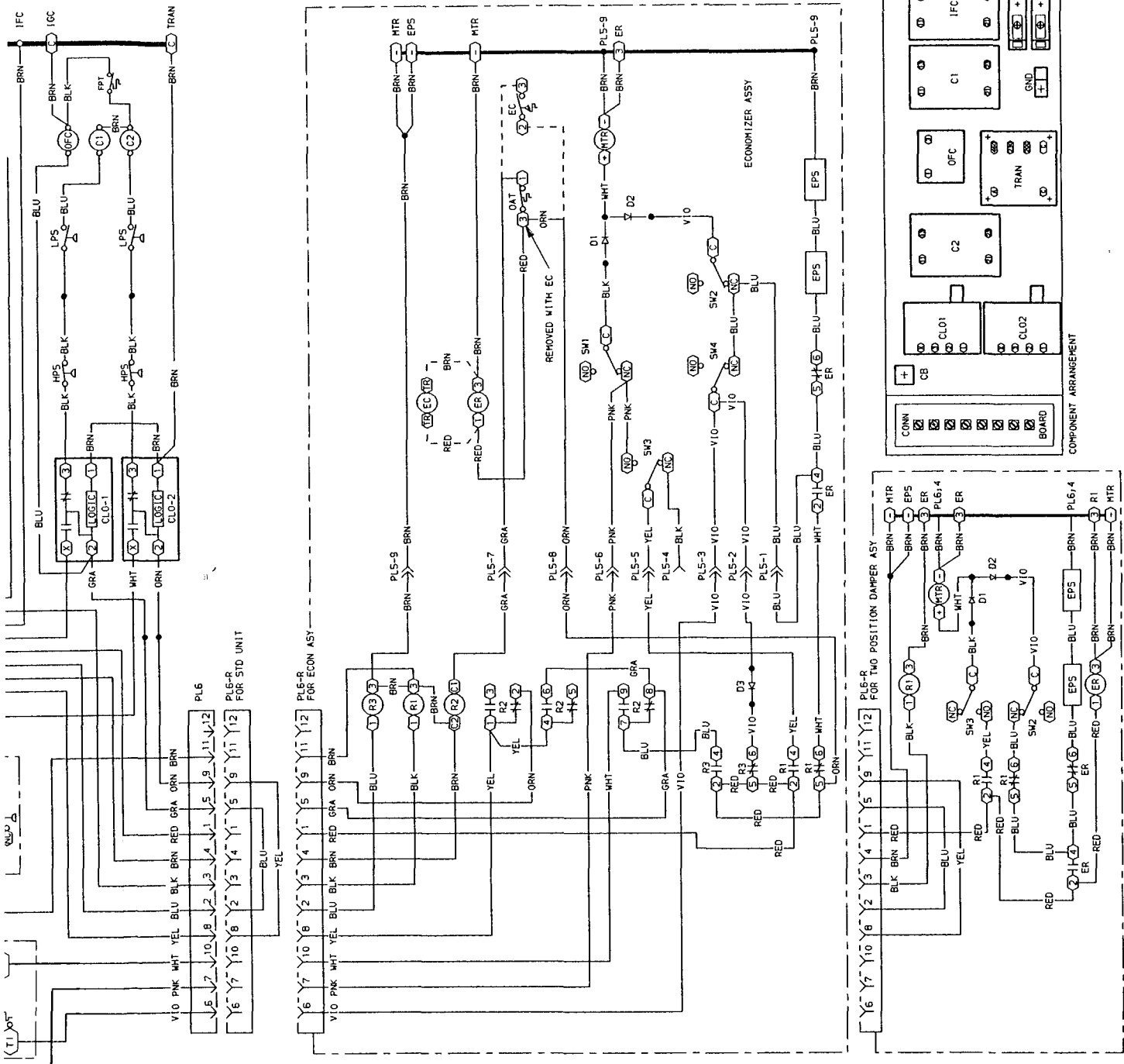
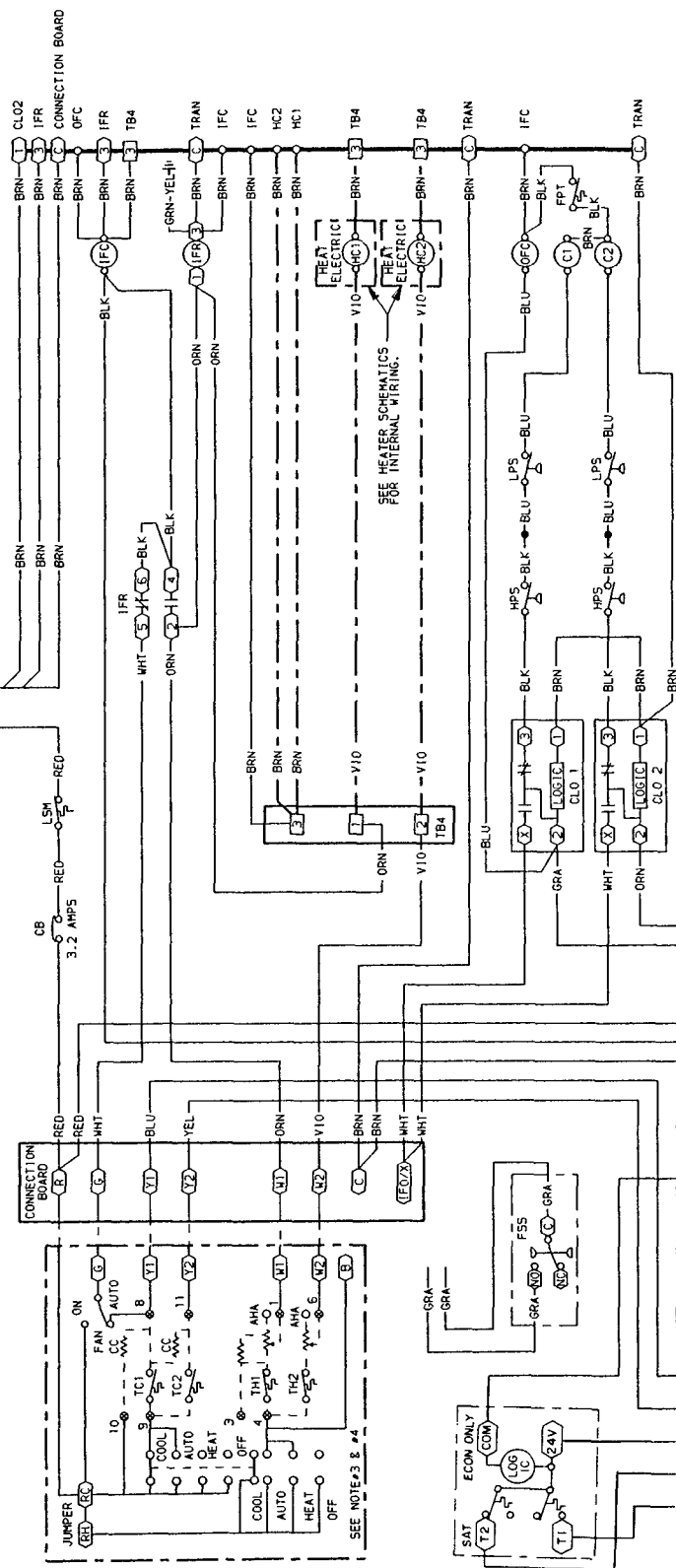
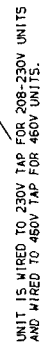


Fig. 23 — Label Diagram, Schematic and Component Arrangement; 48HM007; 575-3-60



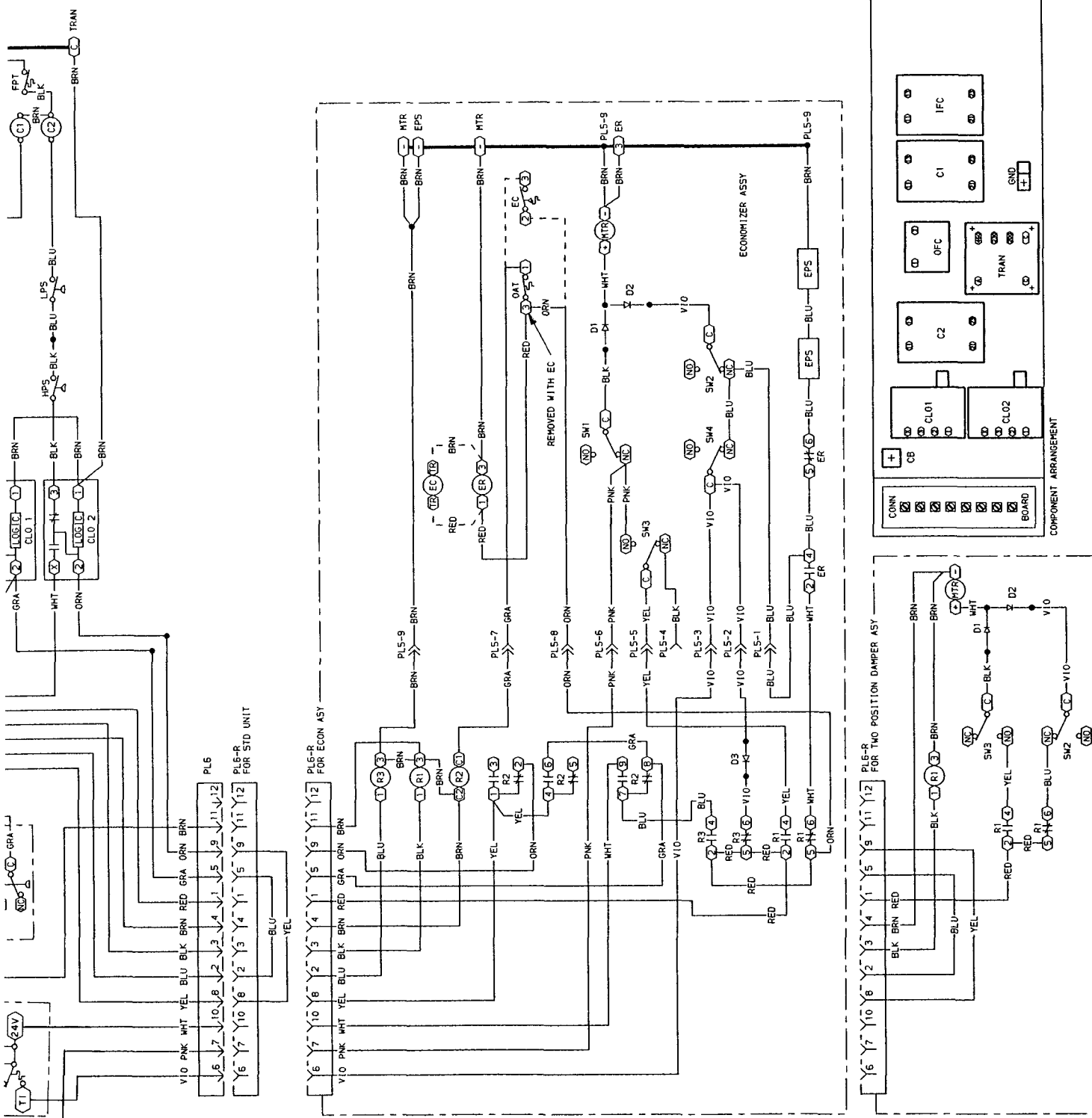


Fig. 24 – Label Diagram, Schematic and Component Arrangement; 50HM007; 208/230-3-60, 460-3-60



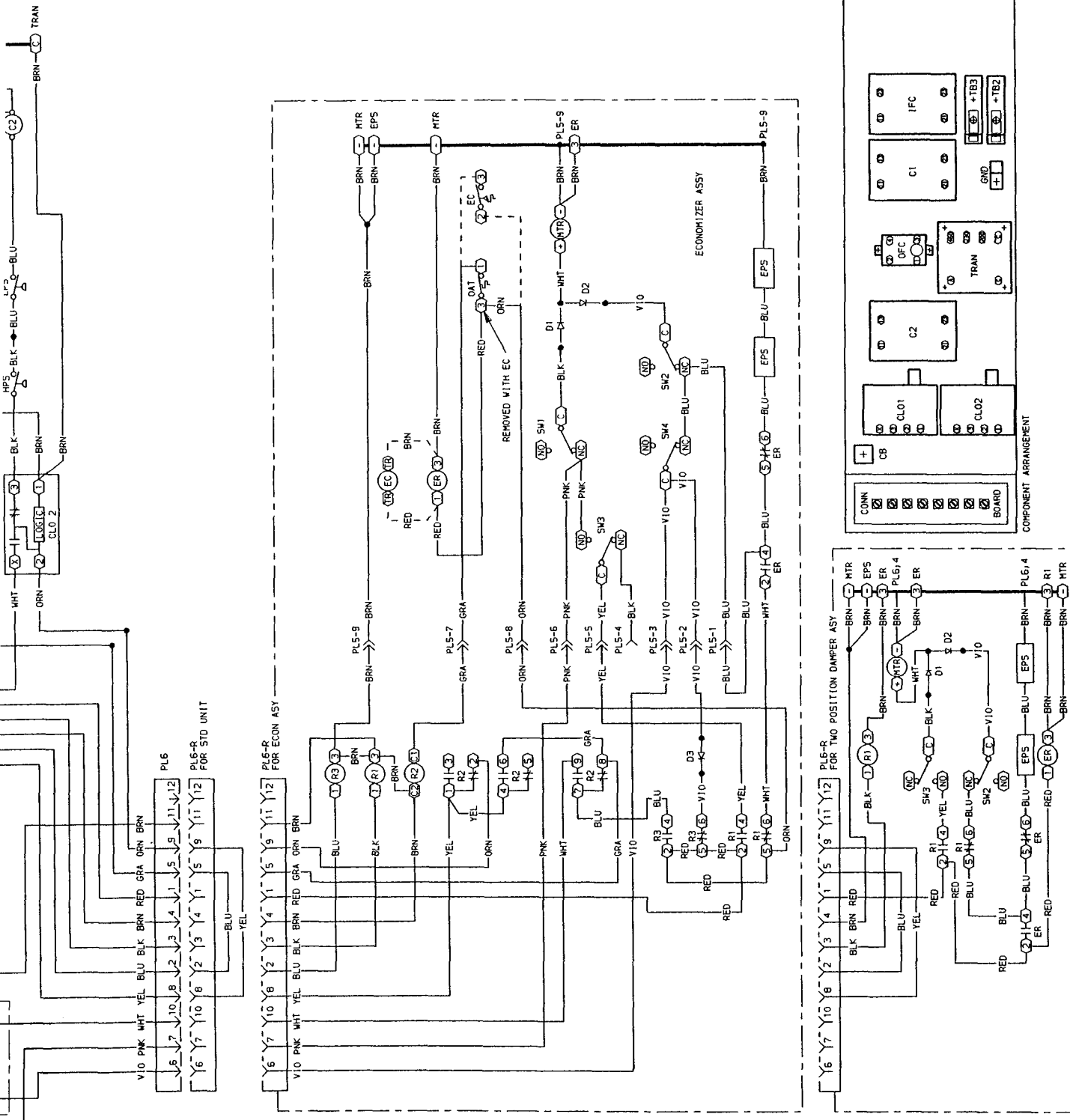
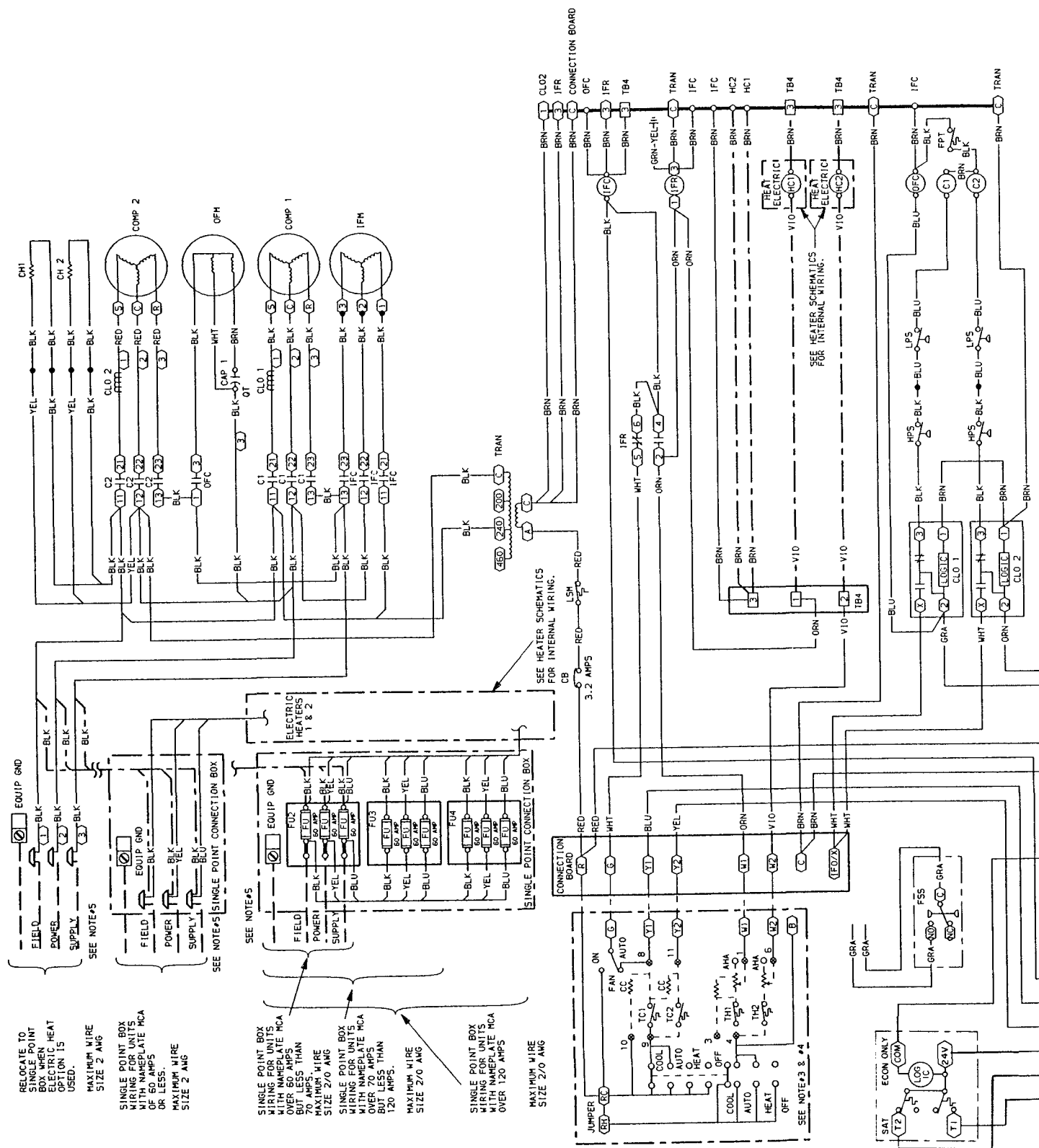


Fig. 25 — Label Diagram, Schematic and Component Arrangement; 50HM007; 575-3-60



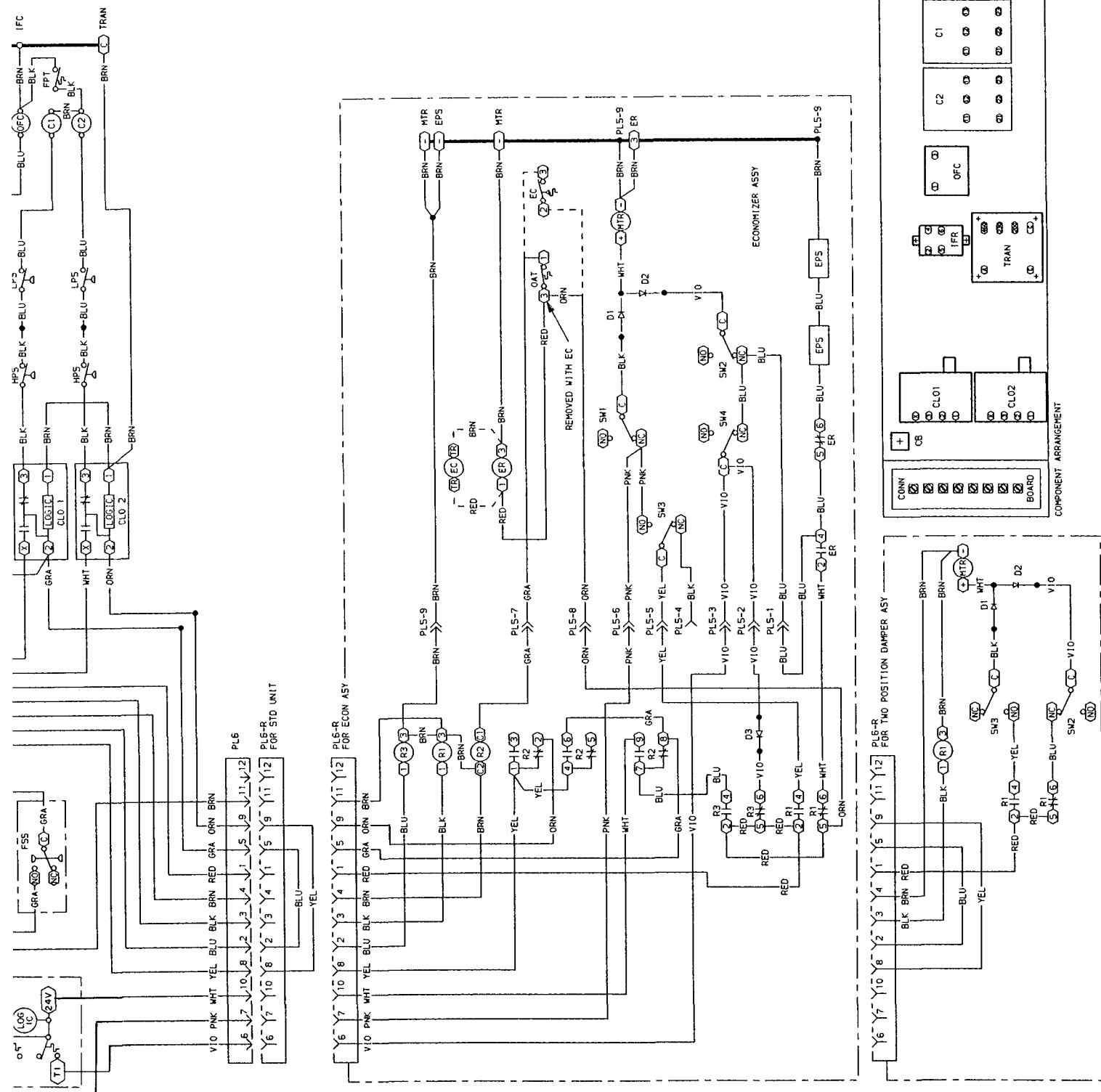
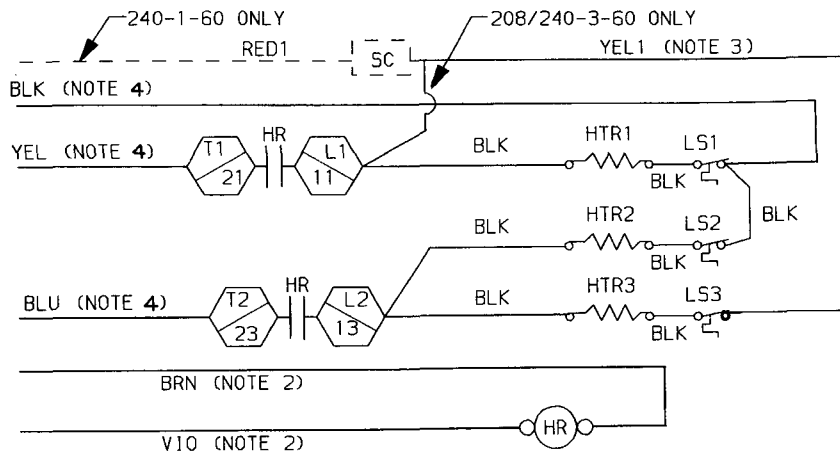


Fig. 26 — Label Diagram, Schematic and Component Arrangement; 50HM007; 220-3-50



SCHEMATIC DIAGRAM



⚠ WARNING

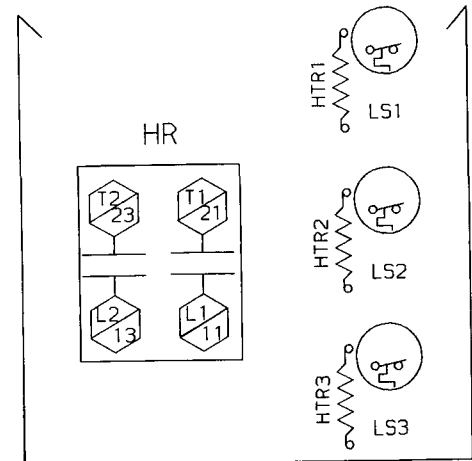
Electric Shock Hazard —
Disconnect all branch circuits before removing this cover

NOTES:

1. To be wired in accordance with NEC and local codes
2. BROWN and VIO 24-vac wires are supplied with heater and connected at installation to base unit as shown on base unit wiring diagram
3. For single phase disconnect YEL1 wire from terminal L1/11 and connect RED1 wire and splice connector to loose terminal on YEL1 as shown above.
4. Power wires are supplied with heater and connected at installation to base unit field power connection box as shown on base unit wiring diagram. For field installation of electric heaters, field power connection box shown on equipment nameplate must be used

Fig. 28 — Label Diagram Accessory Electric Heater; 208/240 V; Single Phase 50HJ004-006

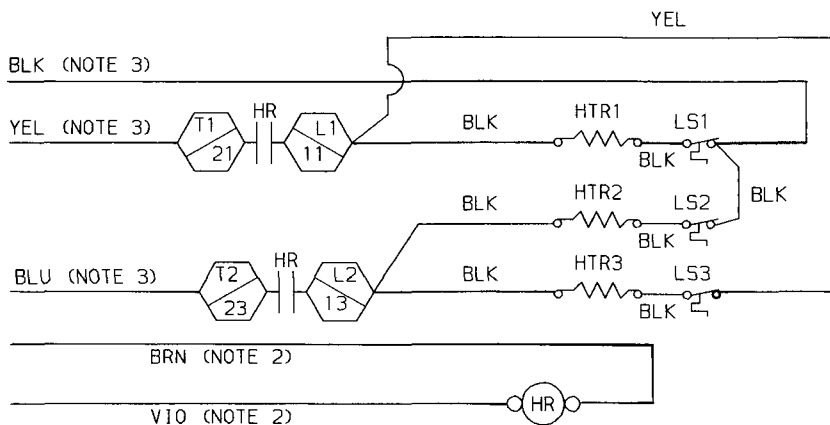
COMPONENT ARRANGEMENT



LEGEND

- Sylvania
- Marked Terminal
- Elmwood
- Unmarked Terminal
- HTR** — Heater
- HR** — Heater Relay
- LS** — Limit Switch
- NEC** — National Electrical Code
- SC** — Splice Connector

SCHEMATIC DIAGRAM



⚠ WARNING

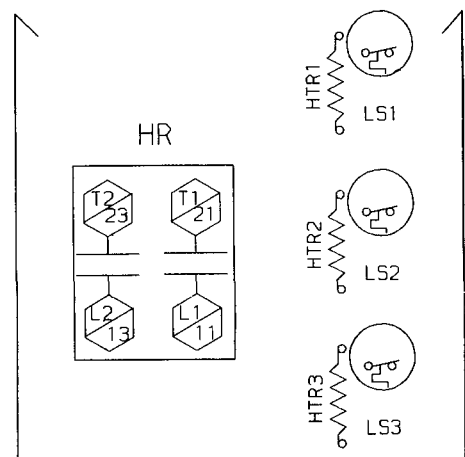
Electric Shock Hazard —
Disconnect all branch circuits before removing this cover

NOTES:

1. To be wired in accordance with NEC and local codes.
2. BROWN and VIO 24-vac wires are supplied with heater and connected at installation to base unit as shown on base unit wiring diagram.
3. For single phase disconnect YEL1 wire from terminal L1/11 and connect RED1 wire and splice connector to loose terminal on YEL1 as shown above.
4. Power wires are supplied with heater and connected at installation to base unit field power connection box as shown on base unit wiring diagram. For field installation of electric heaters, field power connection box shown on equipment nameplate must be used

Fig. 29 — Label Diagram, Accessory Electric Heater; 50HJ004-007 and 50HM007, 208/240 V, 3 Phase

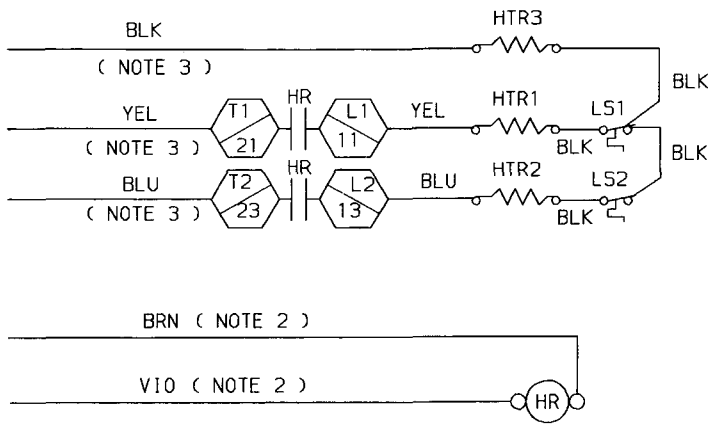
COMPONENT ARRANGEMENT



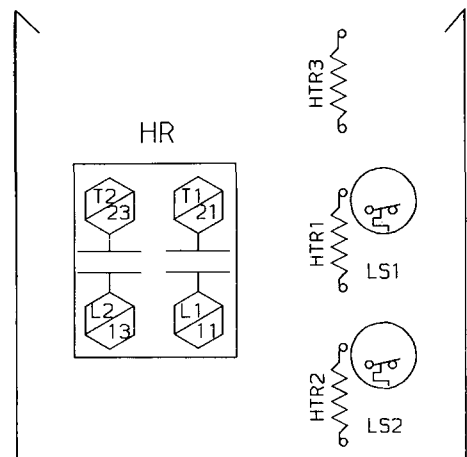
LEGEND

- Sylvania
- Marked Terminal
- Elmwood
- Unmarked Terminal
- HTR** — Heater
- HR** — Heater Relay
- LS** — Limit Switch
- NEC** — National Electrical Code

SCHEMATIC DIAGRAM



COMPONENT ARRANGEMENT



⚠ WARNING

Electric Shock Hazard —
Disconnect all branch circuits before removing this cover

NOTES:

- 1 To be wired in accordance with NEC and local codes.
- 2 BROWN and VIO 24-vac wires are supplied with heater and connected at installation to base unit as shown on base unit wiring diagram
- 3 Power wires are supplied with heater and connected at installation to base unit field power connection box as shown on base unit wiring diagram. For field installation of electric heaters, field power connection box shown on equipment nameplate must be used

LEGEND

- Sylvania
- Marked Terminal
- Elmwood
- Unmarked Terminal
- HTR — Heater
- HR — Heater Relay
- LS — Limit Switch
- NEC — National Electrical Code
- SC — Splice Connector

Fig. 30 — Label Diagram, Accessory Electric Heater; 50HJ004-007 and 50HM007, 480 V; Single Phase

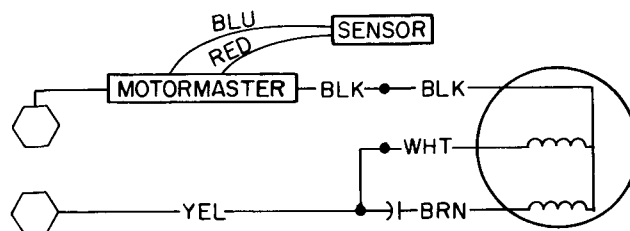
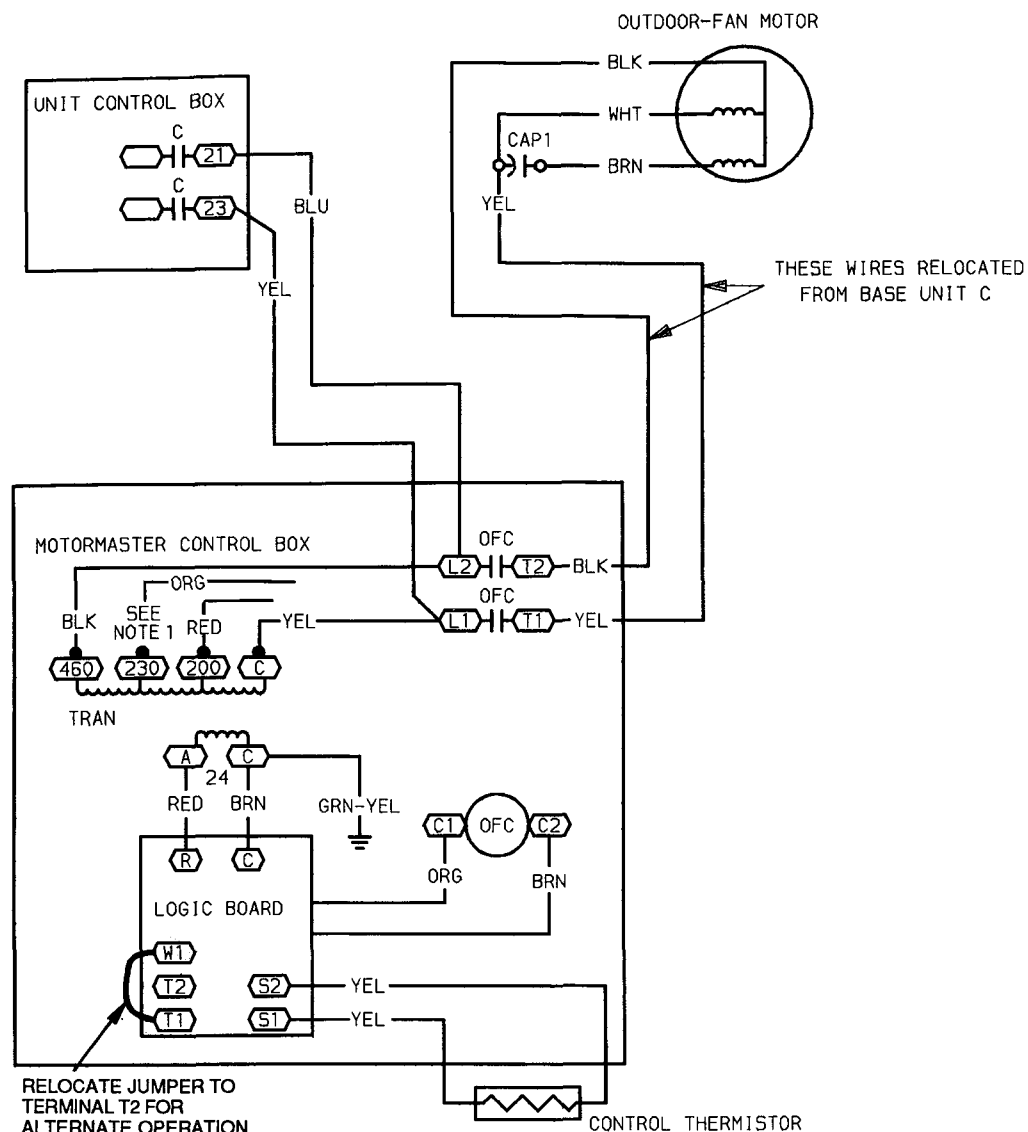


Fig. 31 — Motormaster® Device Wiring



- LEGEND
- C** — Contactor
- OFC** — Outdoor-Fan Contactor
- TRAN** — Transformer
- NOTES:

- 1 Motormaster® II transformer is wired for 460-v supply; it must be rewired for 208/230-v application. Be sure to insulate unused tap.
2. When alternate mode operation is selected, the controller shifts the fan cycle to raise the average condensing temperature approximately 11° C (20° F) higher than standard mode

Fig. 32 — Wiring Schematic, Motormaster II Device

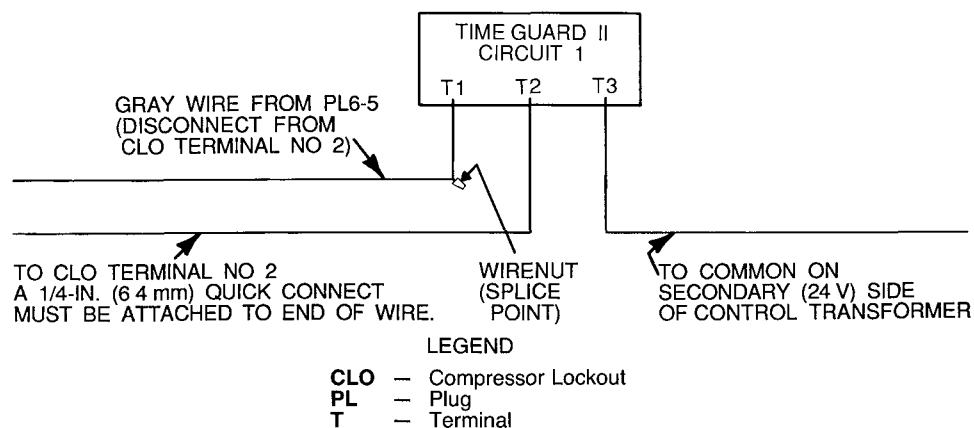


Fig. 33 — Time Guard® II Control Wiring

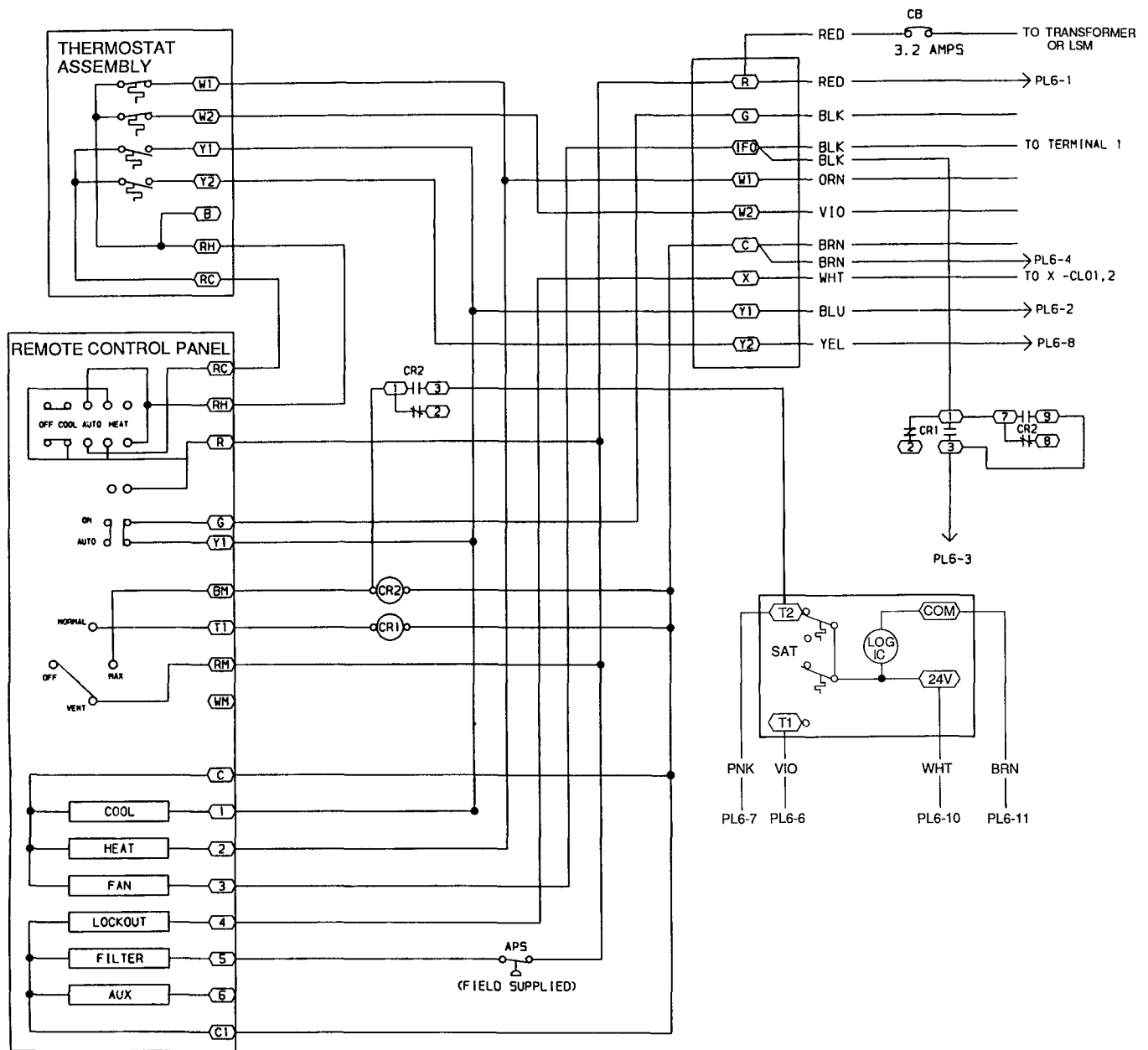
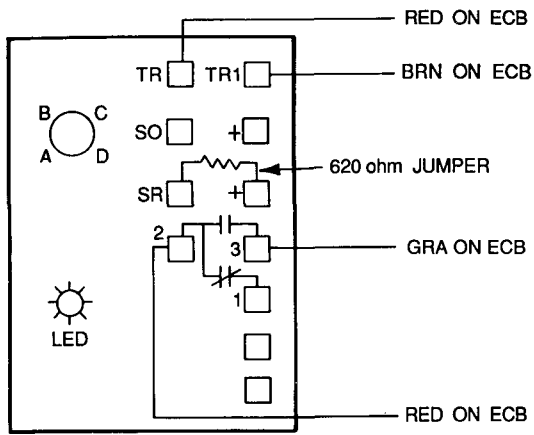


Fig. 34 — Remote Control Panel Wiring



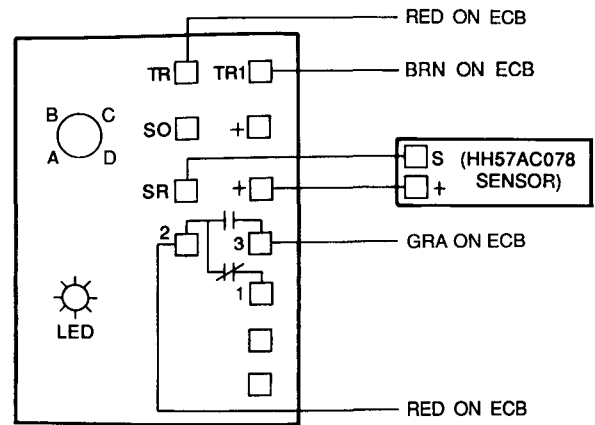
LEGEND

ECB — Economizer (Varislide™) Control Board

LED — Light-Emitting Diode

NOTE: Switches shown in high enthalpy state. Terminals 2 and 3 close on enthalpy decrease.

Fig. 35 — Accusensor™ II Enthalpy Control (Part No. HH57AC077) Wiring



LEGEND

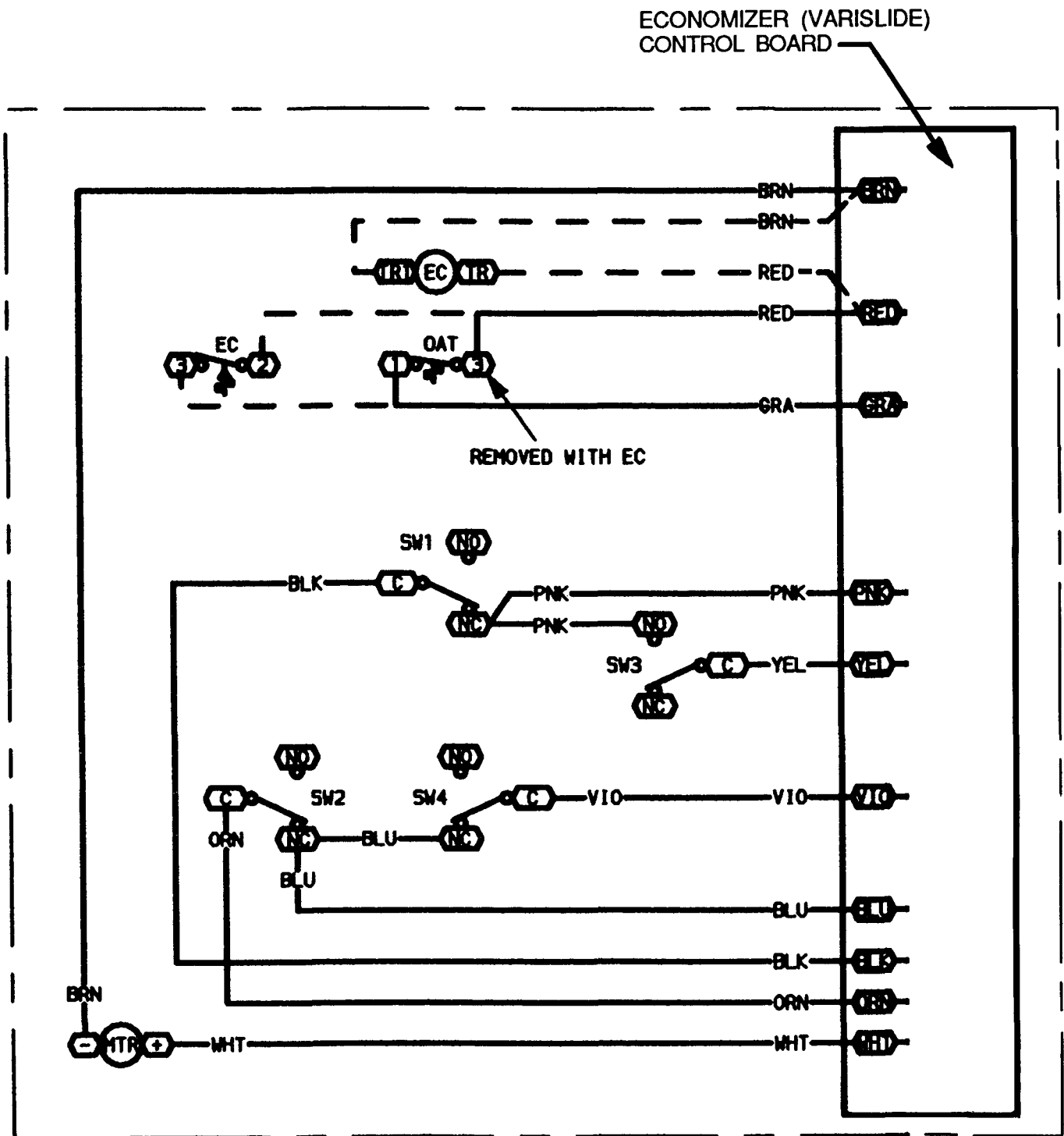
ECB — Economizer (Varislide) Control Board

LED — Light-Emitting Diode

NOTES:

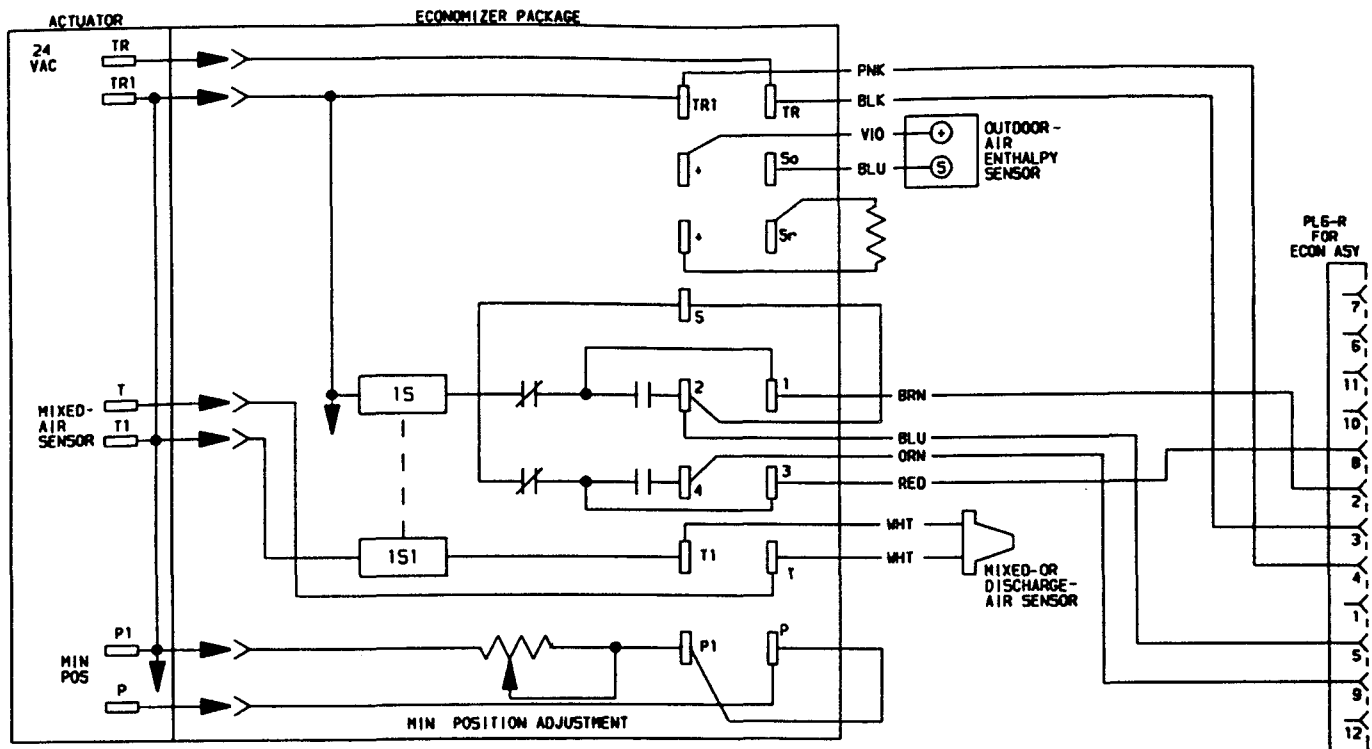
1. Removing factory-installed 620-ohm jumper across SR and + before connecting wires from HH57AC078 sensor
2. Switches are shown in high outdoor-air enthalpy state. Terminals 2 and 3 close on low outdoor enthalpy relative to indoor-air enthalpy

Fig. 36 — Accusensor III Enthalpy Control (Part No. HH57AC077 and HH57AC078) Wiring



- LEGEND
- | | |
|------------------------------|------------------------------------|
| EC — Enthalpy Control | SW2 — Switch Fully Closed |
| MTR — Motor | SW3 — Switch Minimum Vent Position |
| OAT — Outdoor-Air Thermostat | SW4 — Switch Maximum Vent Position |
| SW1 — Switch Fully Open | |

Fig. 37 — Enthalpy Control and Varislide™ Economizer Control Board Wiring



LEGEND

ECON	— Economizer	S	— Switch, Sensor
MIN	— Minimum	S _O	— Sensor, Outdoor
P	— Potentiometer	S _R	— Sensor, Return
PL	— Plug	TR	— Transformer
POS	— Position		

Fig. 38 — PARABLADE Economizer Wiring

