

Carrier Parkway • Syracuse N.Y. 13221

Single-Package Cooling Units

INDEX

UNIT MODEL	VOLTS-PHASE-HERTZ	FIGURE NO.	LABEL DIAGRAM NO.
50BT, BU 004,006	230-1-60	1	50BA509504
	208/230-3-60	2	50BA509524
	460-3-60	3	50BA509514
50BT, BU 006	575-3-60	4	50BA509534
	208/230-3-60	5	50BA509564
460-3-60			
50BT 008	575-3-60	6	50BA509554
	208/230-3-60	7	50BB504214
460-3-60			
50BU 008	575-3-60	8	50BB504224
	208/230-3-60	9	50BA509584
460-3-60			
50BT, BU 012	575-3-60	10	50BA509574

Extended voltage compressor

Accessory Remote Control and/or Thermostat Wiring (50BT, BU012) Fig 11

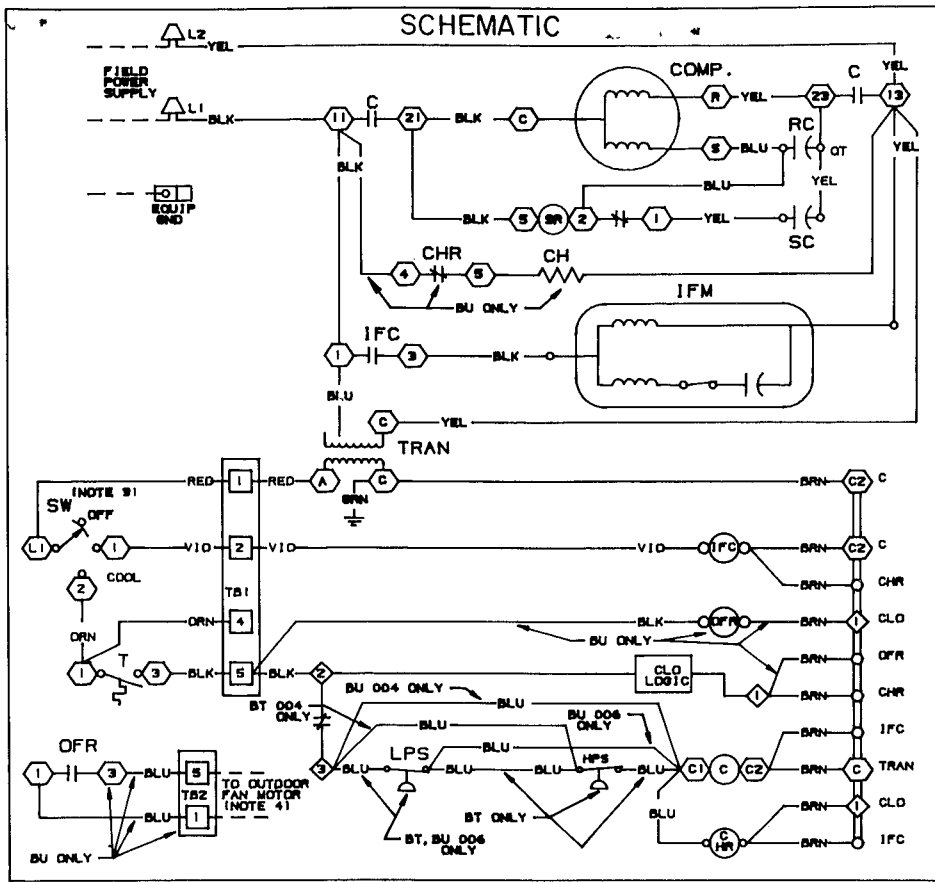
Accessory Remote Control and/or Thermostat Wiring (50BT, BU004,006,008) . . Fig 12

LEGEND

- C — Compressor Contactor
 - CH or CCH — Crankcase Heater
 - CHR — Crankcase Heater Relay
 - CLO — Compressor Lockout
 - COMP — Compressor
 - CR — Control Relay
 - DU — Dummy Terminal
 - Equip Gnd — Equipment Ground
 - HPS — High Pressure Switch
 - IFC — Indoor Fan Contactor
 - IFM — Indoor Fan Motor
 - IP — Internal Protector
 - LLS — Liquid Line Solenoid
 - LPS — Low Pressure Switch
 - OFR — Outdoor Fan Relay
 - OL — Overload
 - QT — Quadruple Terminal
 - RC — Run Capacitor
 - S — Compressor Solenoid
 - SC — Start Capacitor
 - SR — Start Relay
 - SW — Switch
 - T — Thermostat
 - TB — Terminal Block (Board)
 - TC — Thermostat Cooling
 - Tran — Transformer
-
- Field Splice
 - Terminal Block (Board)
 - Terminal Compressor Lockout (CLO)
 - Terminal (Unmarked)
 - Terminal (Marked)
 - Factory Wiring
 - Field Wiring
 - Indicates common potential only; does not represent wire

NOTES

1. Compressor and fan motor thermally protected.
2. Three-phase motors protected under primary single-phase conditions.
3. Three-position selector switch functions as follows:
 - a. OFF
 - b. FAN ON
 - c. FAN and COOL ON
4. Outdoor fan motor must not exceed 1/2 hp at 125 or 250 volts.
5. If original wire as furnished must be replaced, Type 90 C or its equivalent must be used.
6. For 200/230-3-60 volt units only, transformer is wired for 200 volts. If 230 volt power supply is used, the transformer must be re-connected. Remove black (BLK) wire from terminal 200 and connect it to terminal 230.



COMPONENT ARRANGEMENT

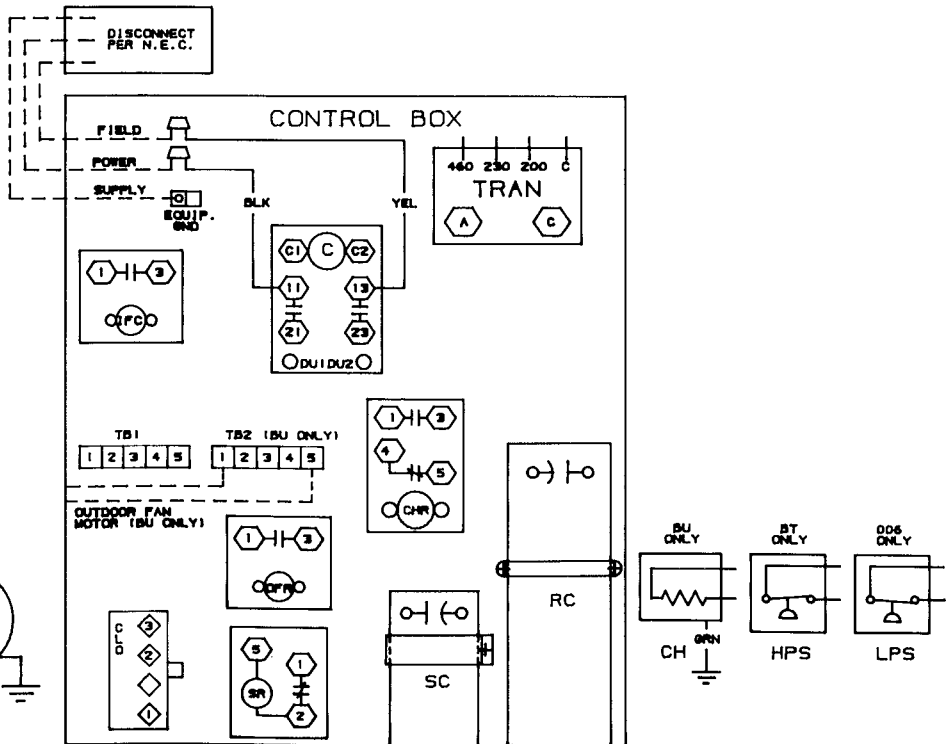
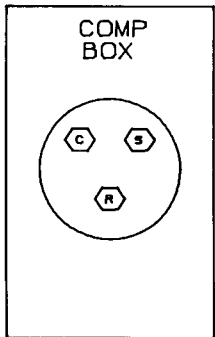
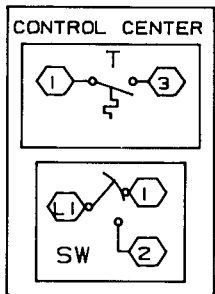


Fig. 1 — Label Diagram, 50BT, BU004 and 006; 230-1-60

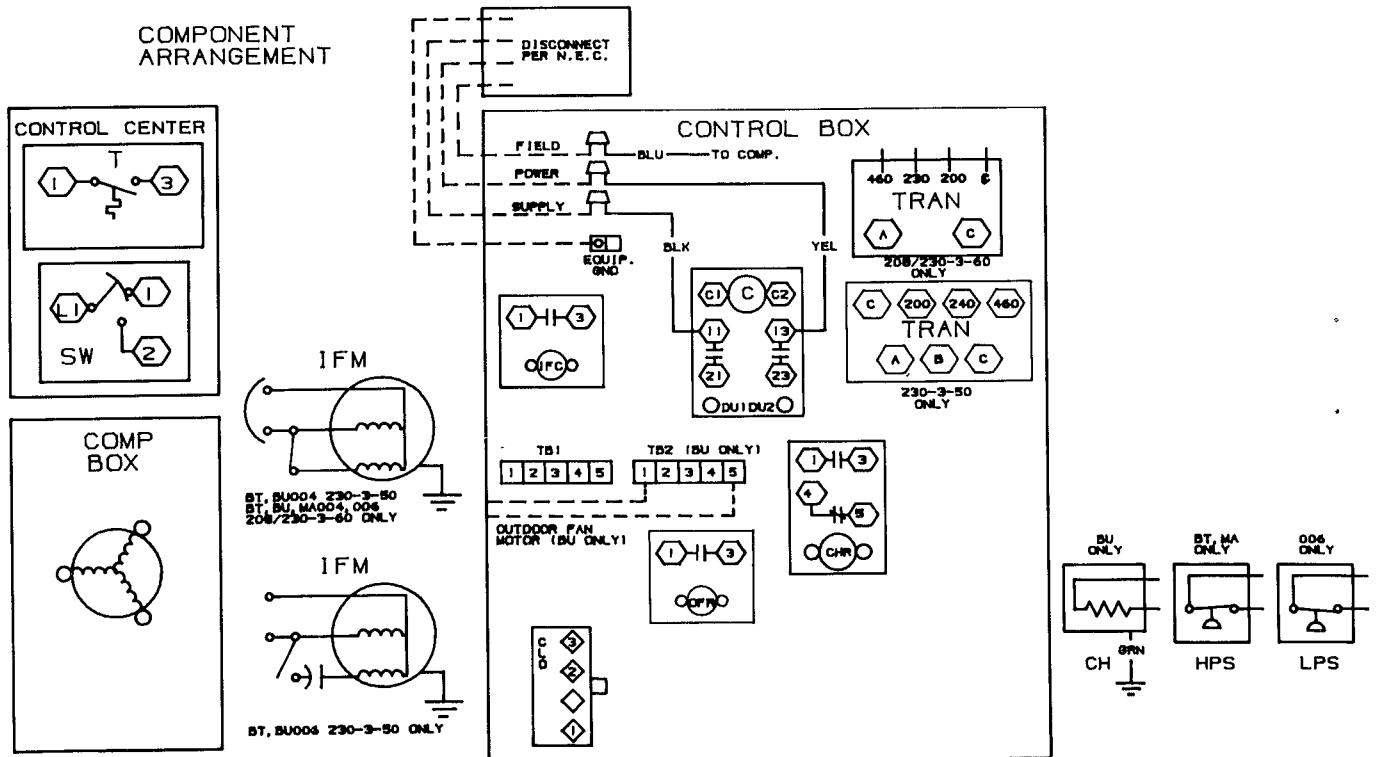
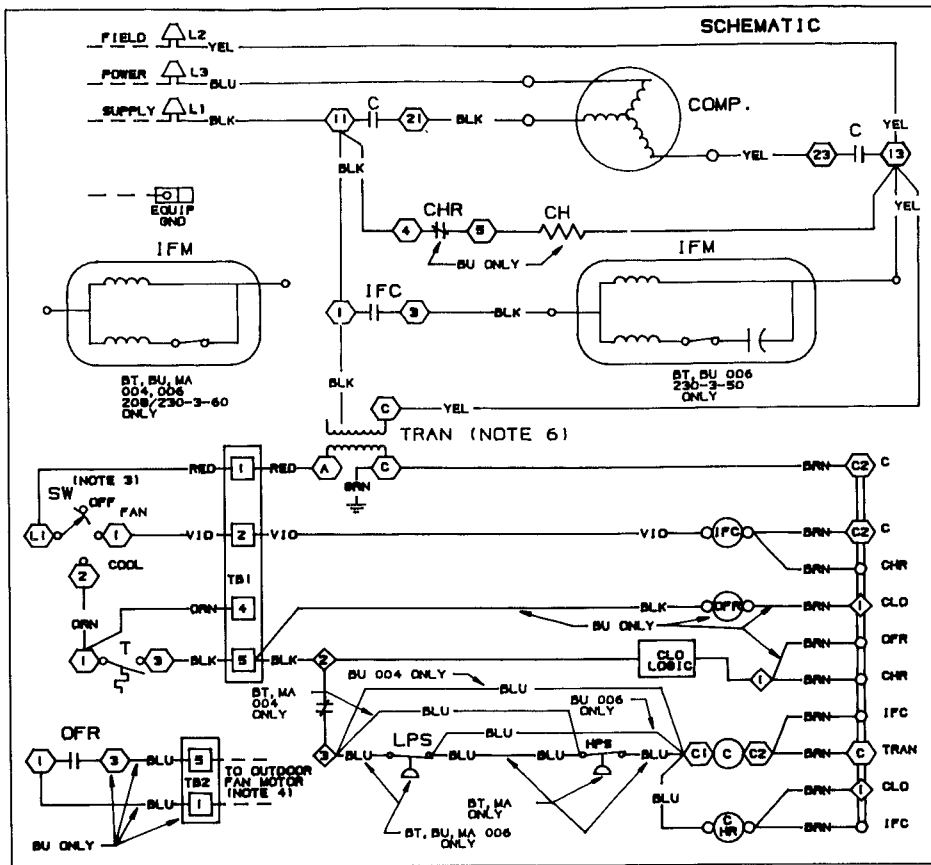
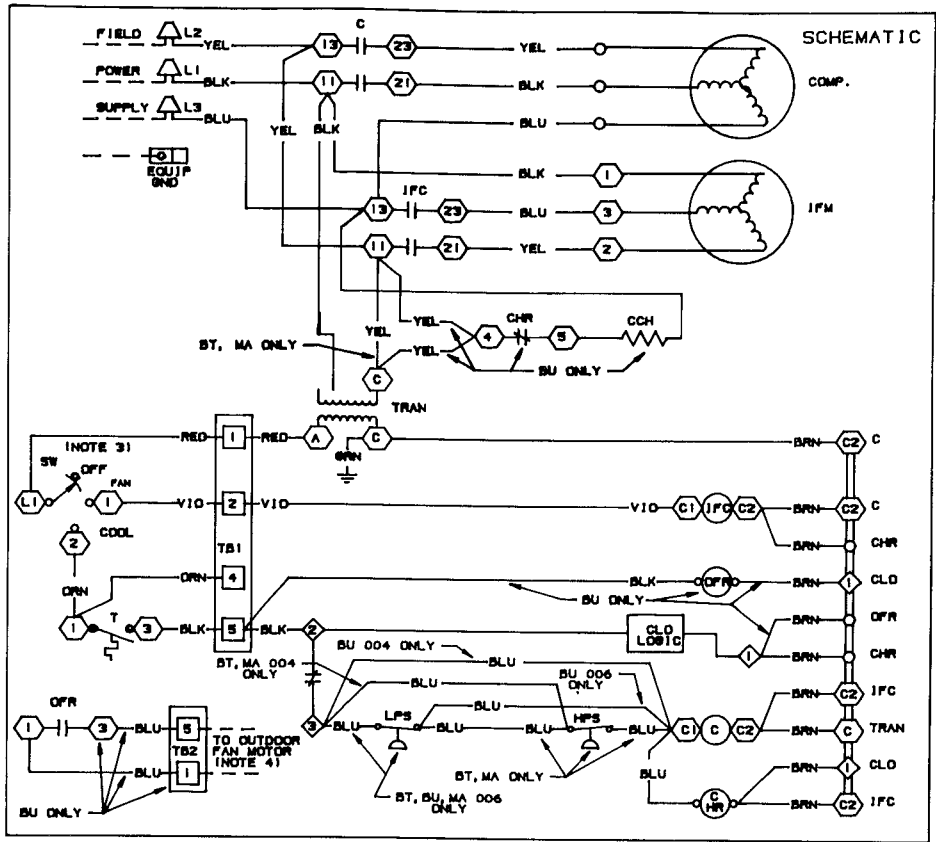


Fig. 2 — Label Diagram, 50BT, BU004 and 006; 208/230-3-60



COMPONENT ARRANGEMENT

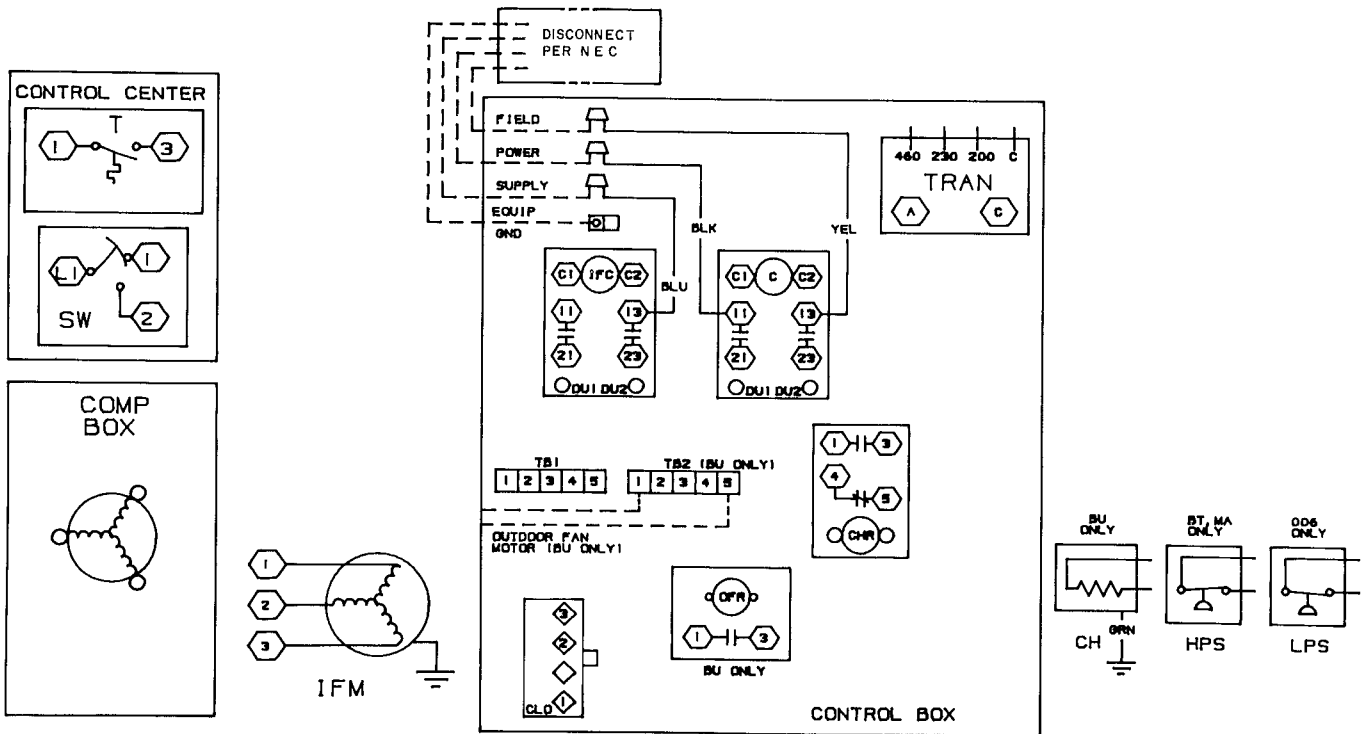
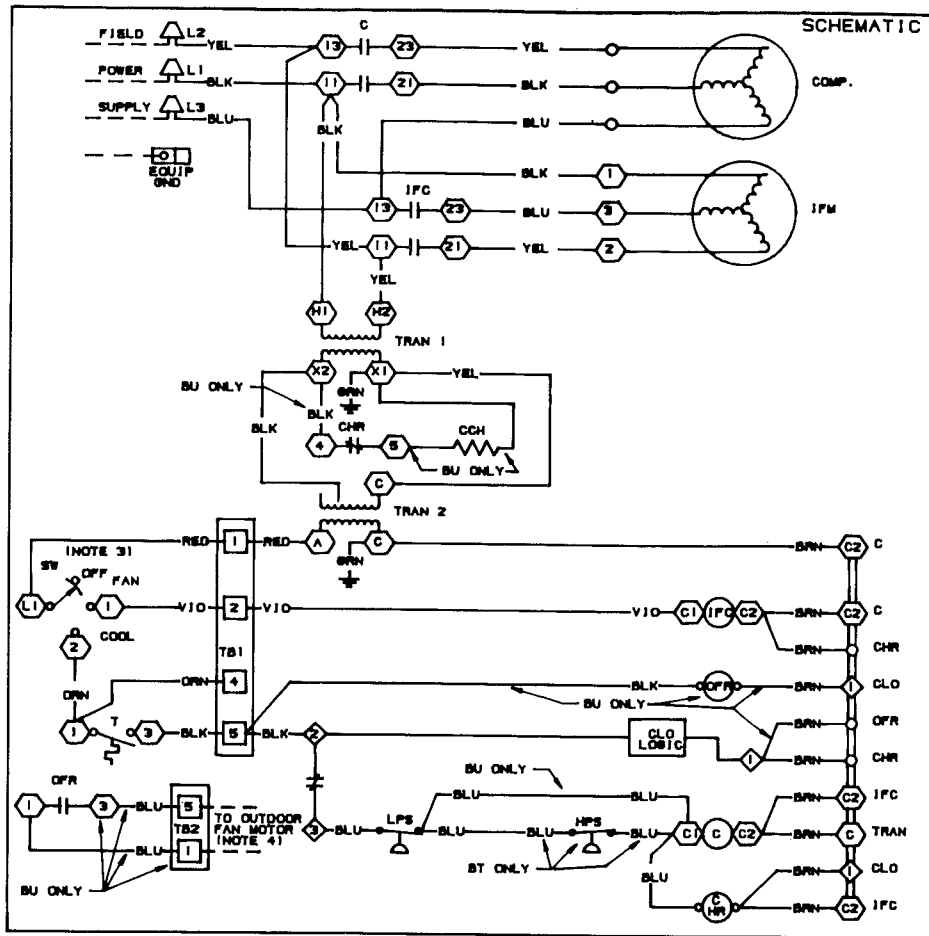


Fig. 3 — Label Diagram, 50BT, BU004 and 006; 460-3-60



COMPONENT ARRANGEMENT

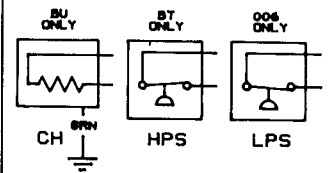
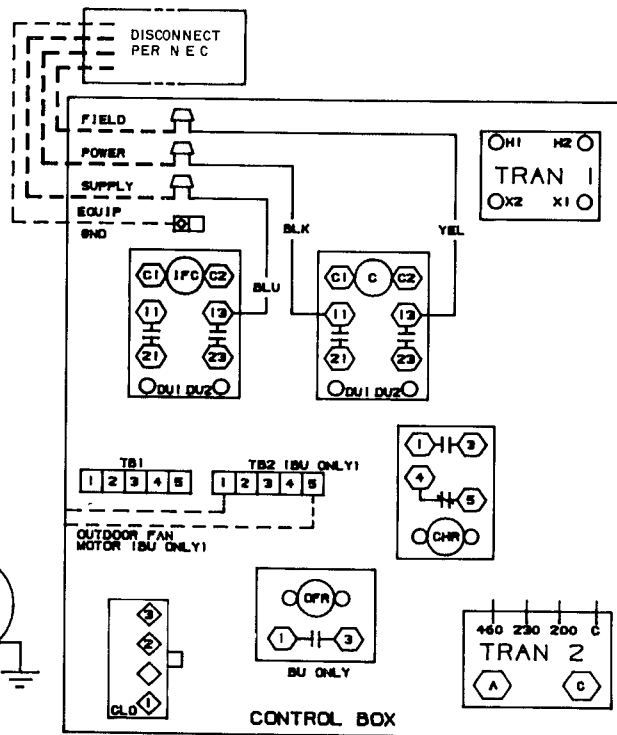
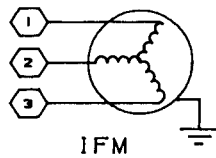
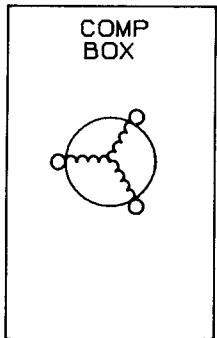
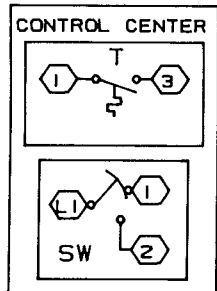
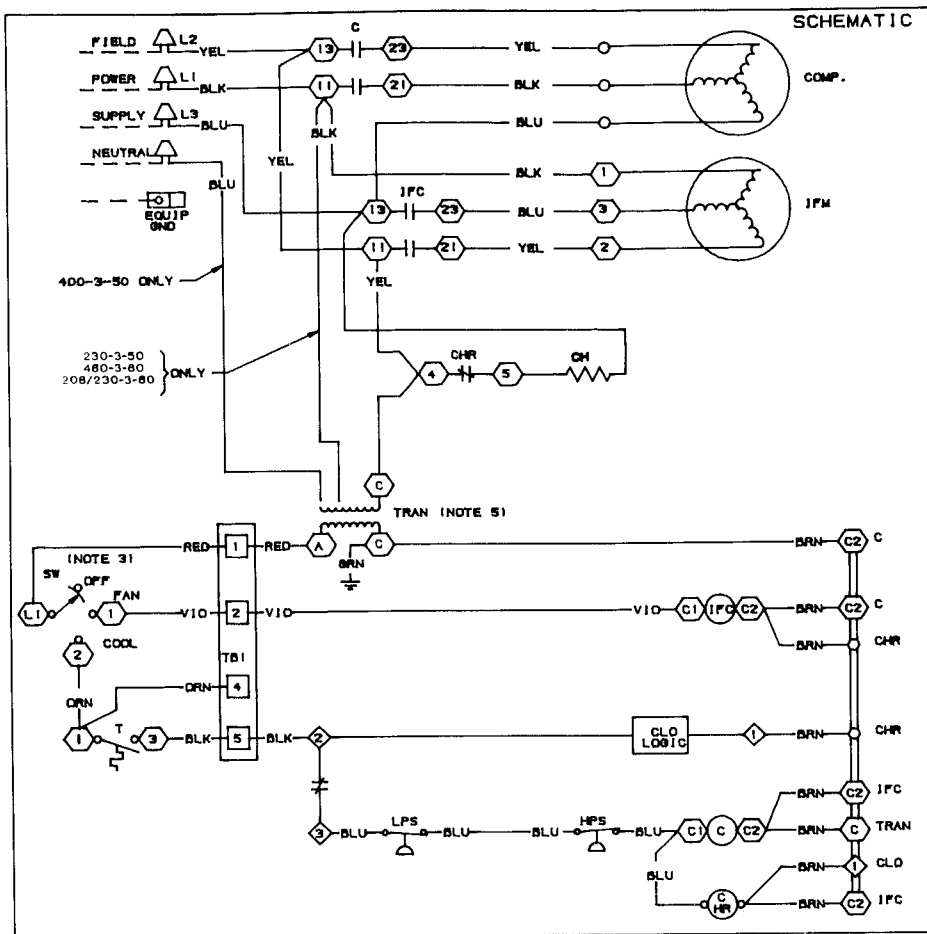


Fig. 4 — Label Diagram, 50BT, BU006; 575-3-60



COMPONENT ARRANGEMENT

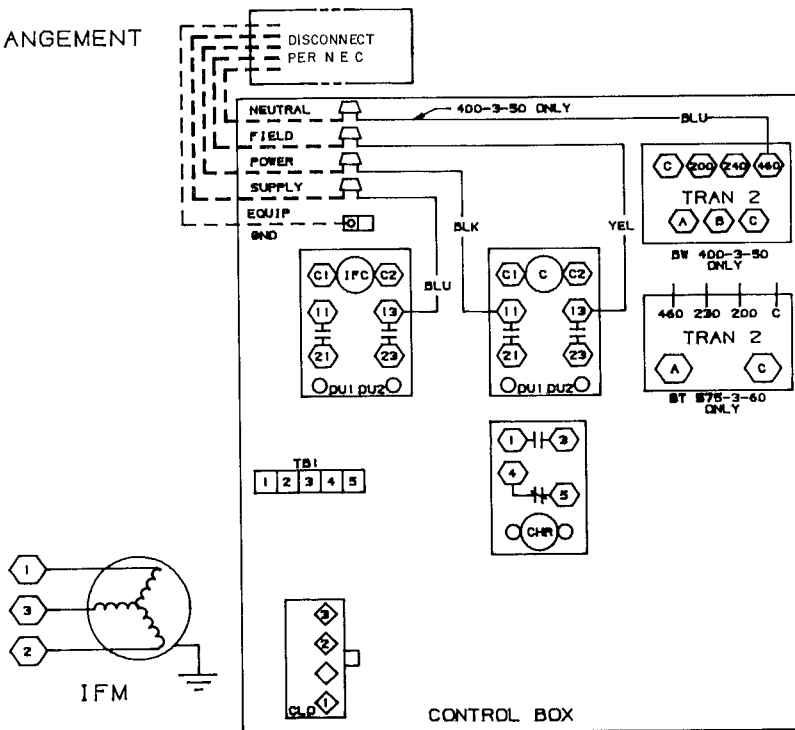
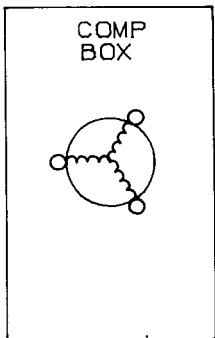
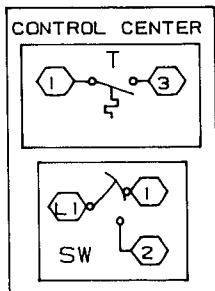
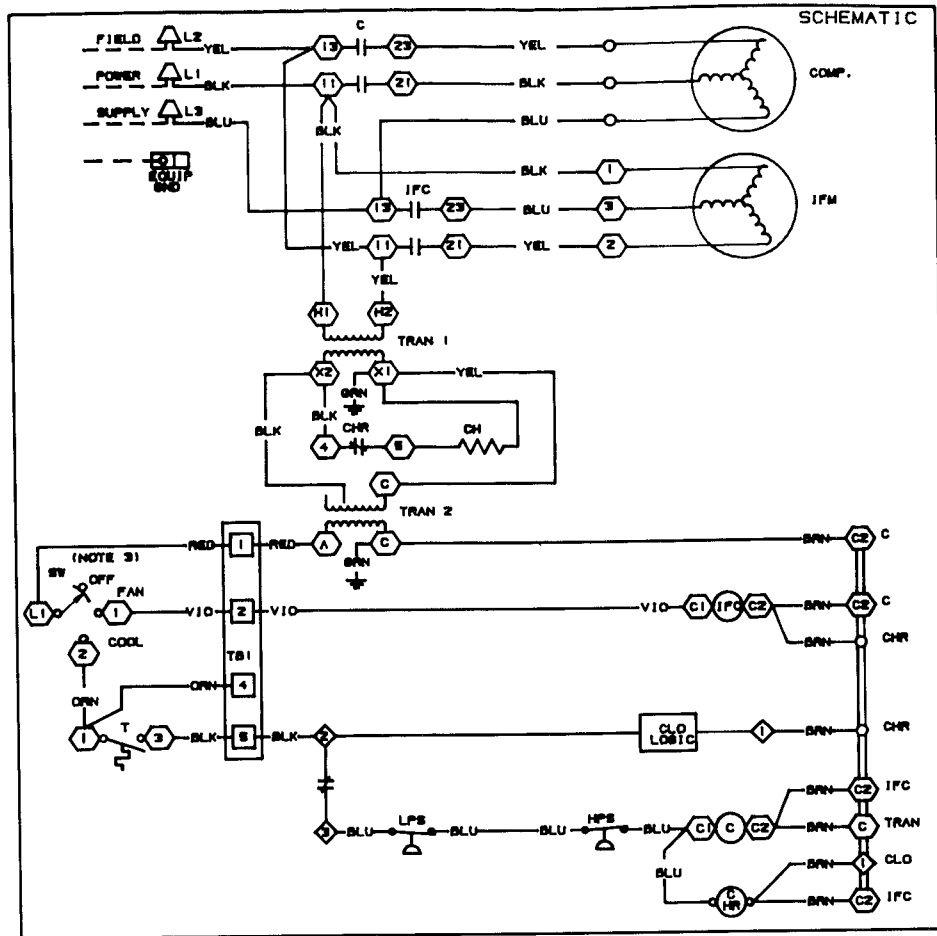


Fig. 5 — Label Diagram, 50BT008; 208/230-3-60, 460-3-60



COMPONENT ARRANGEMENT

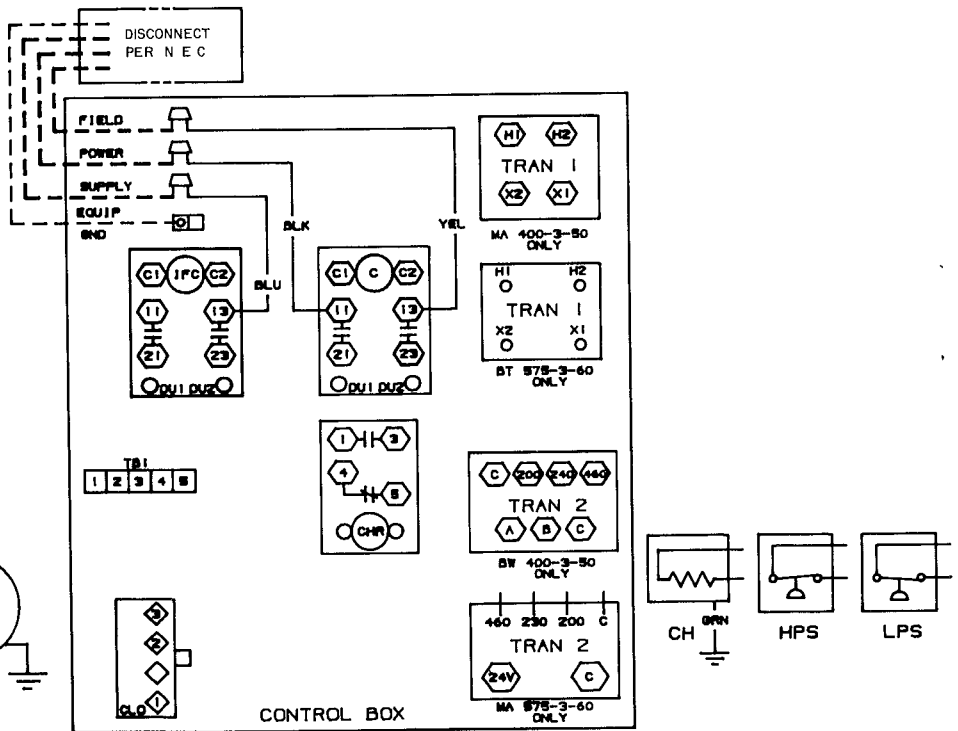
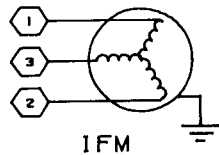
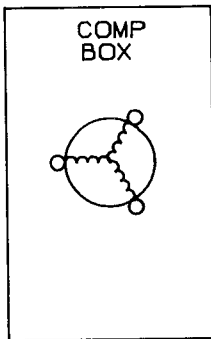
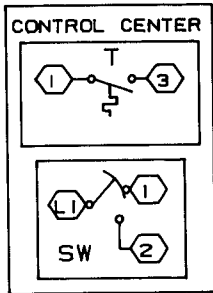
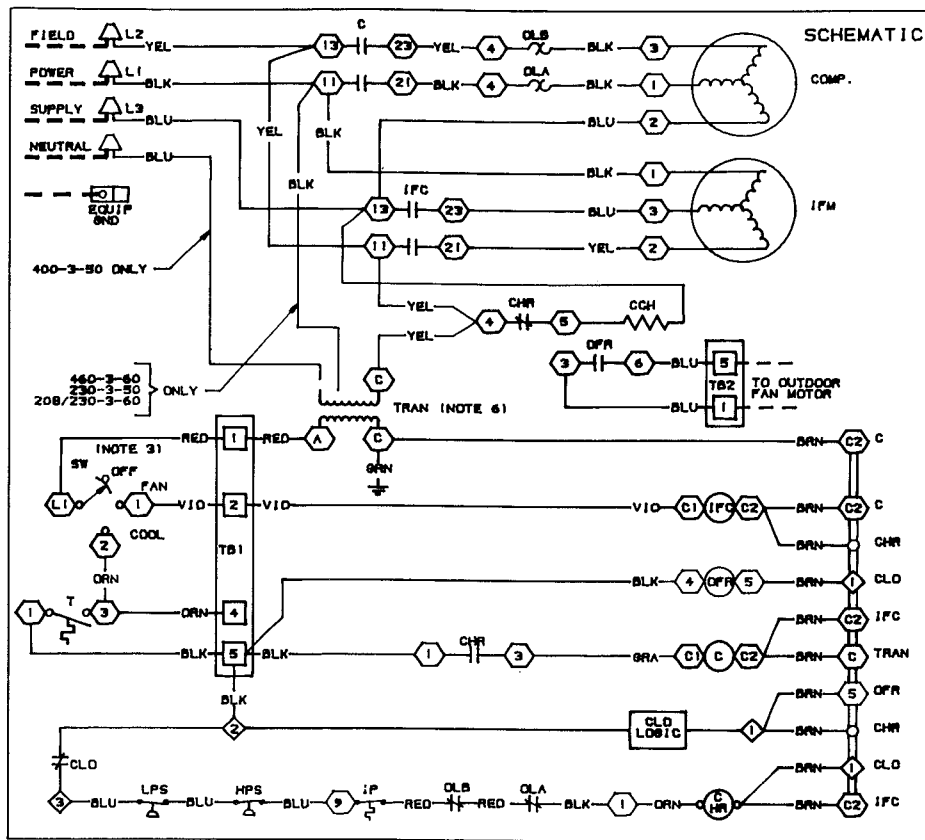


Fig. 6 — Label Diagram, 50BT008; 575-3-60



COMPONENT ARRANGEMENT

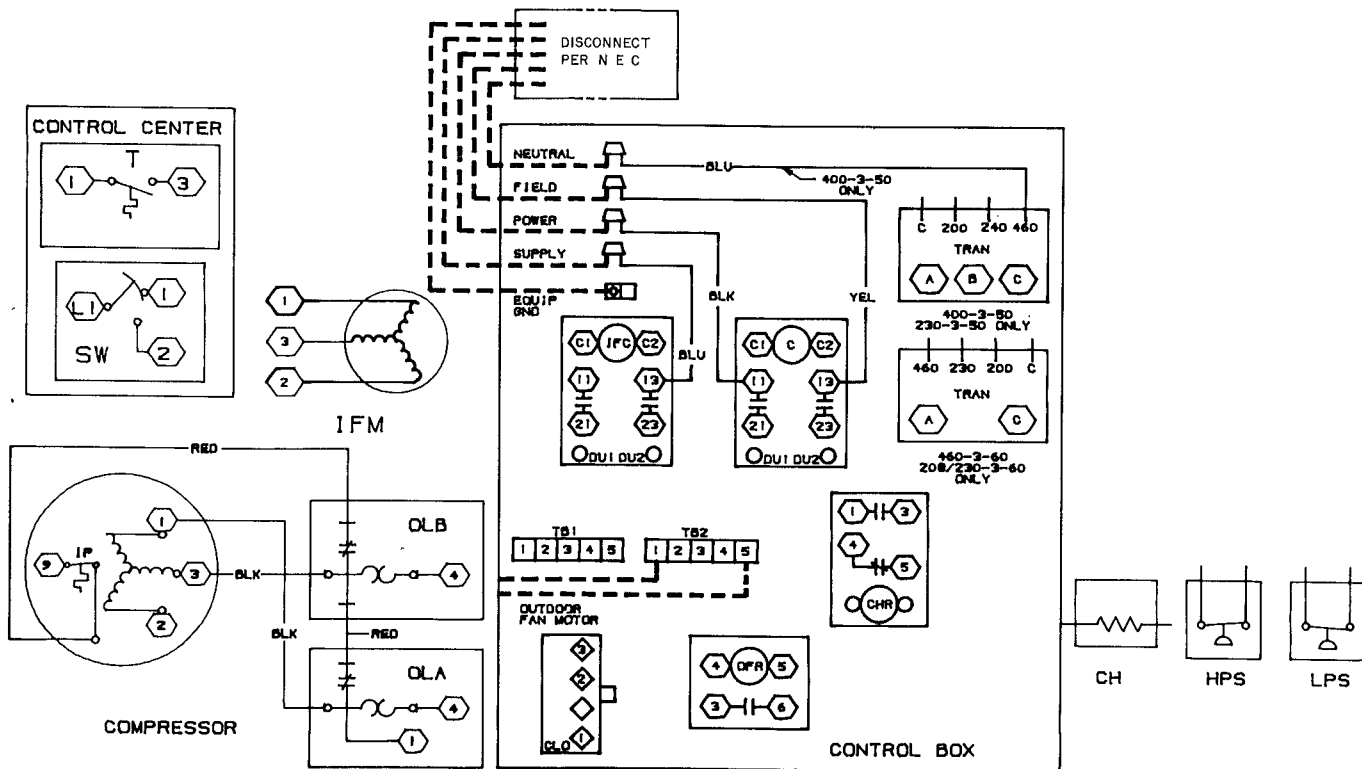
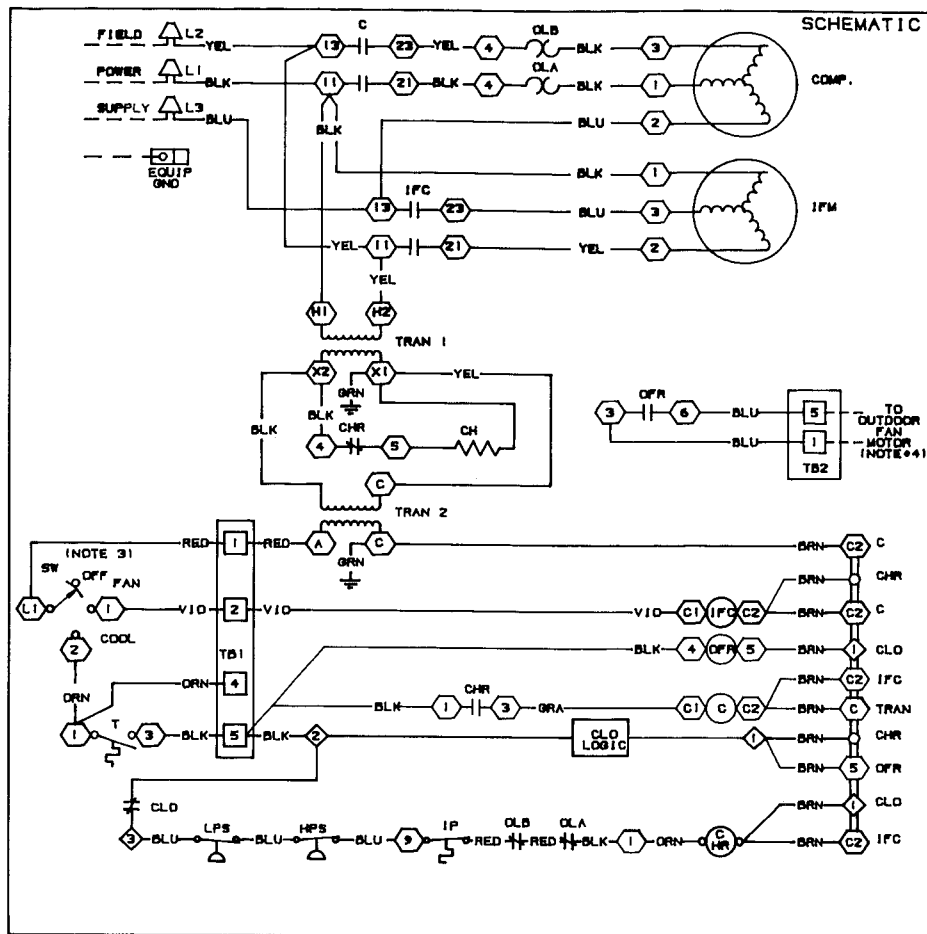


Fig. 7 — Label Diagram, 50BU008; 208/230-3-60, 460-3-60



COMPONENT ARRANGEMENT

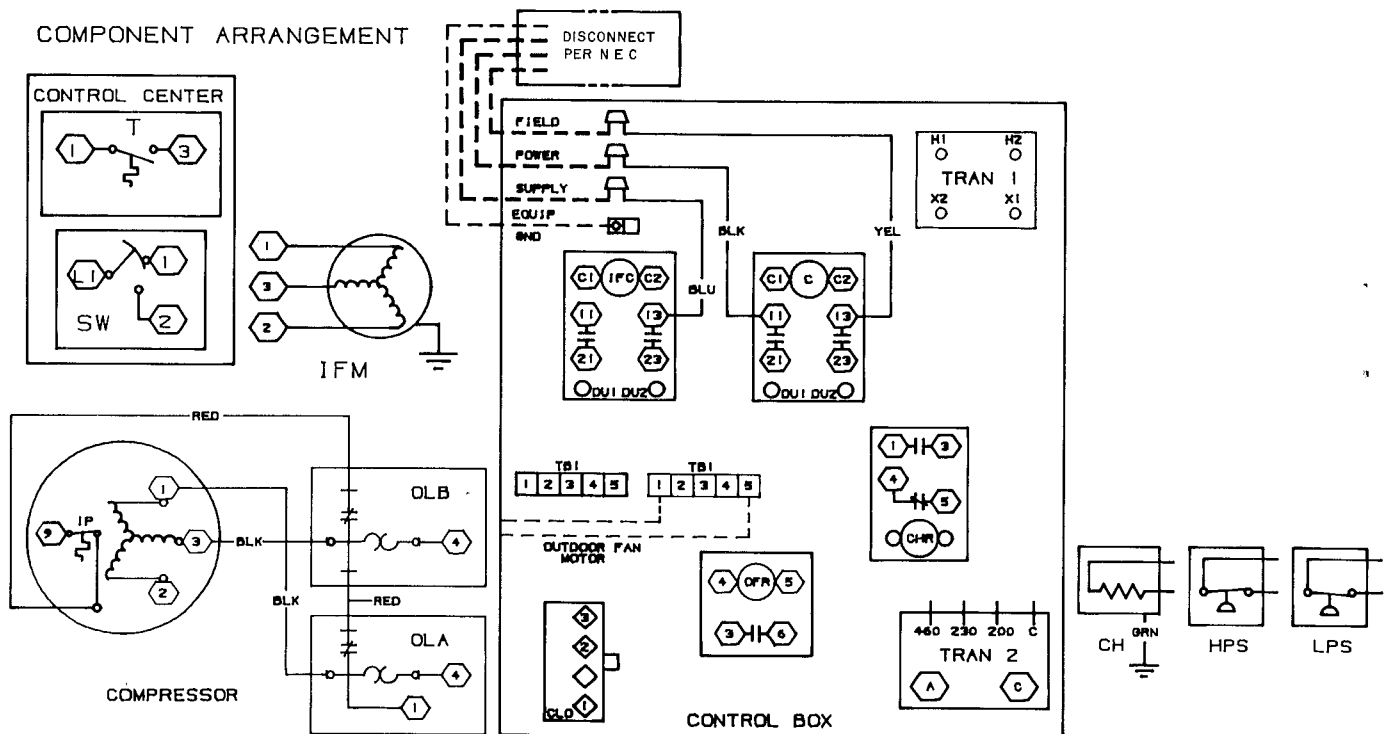
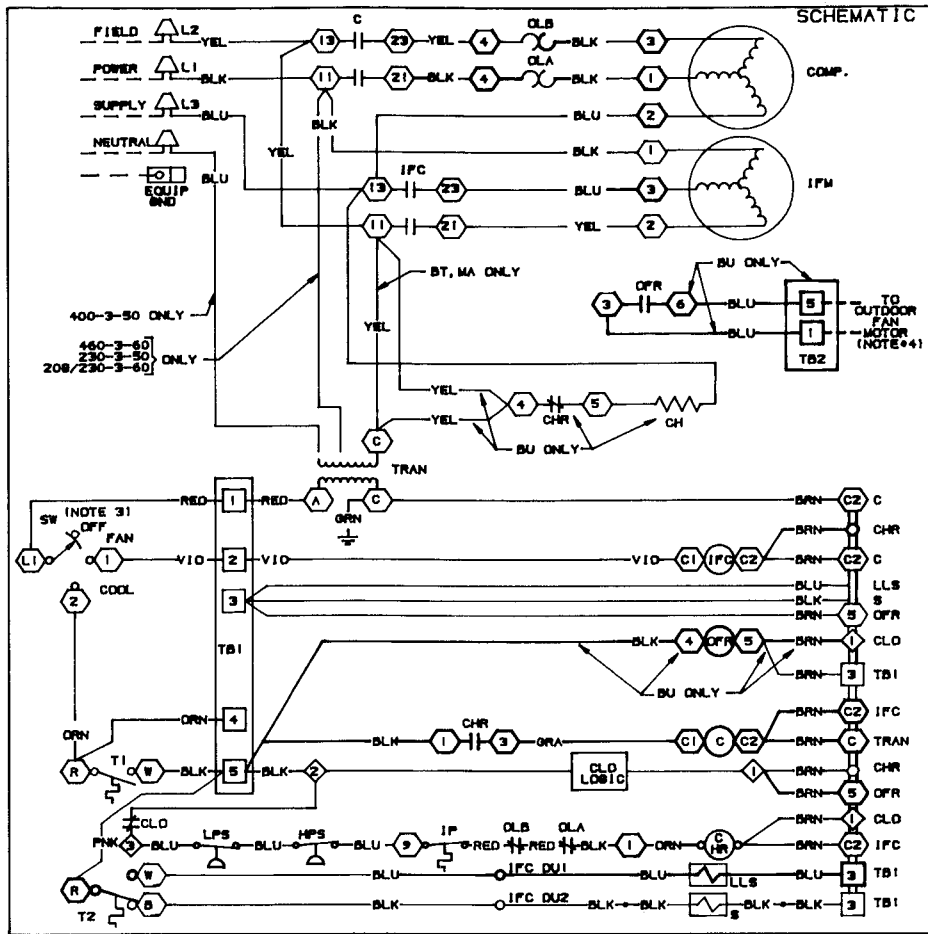


Fig. 8 — Label Diagram, 50BU008; 575-3-60



COMPONENT ARRANGEMENT

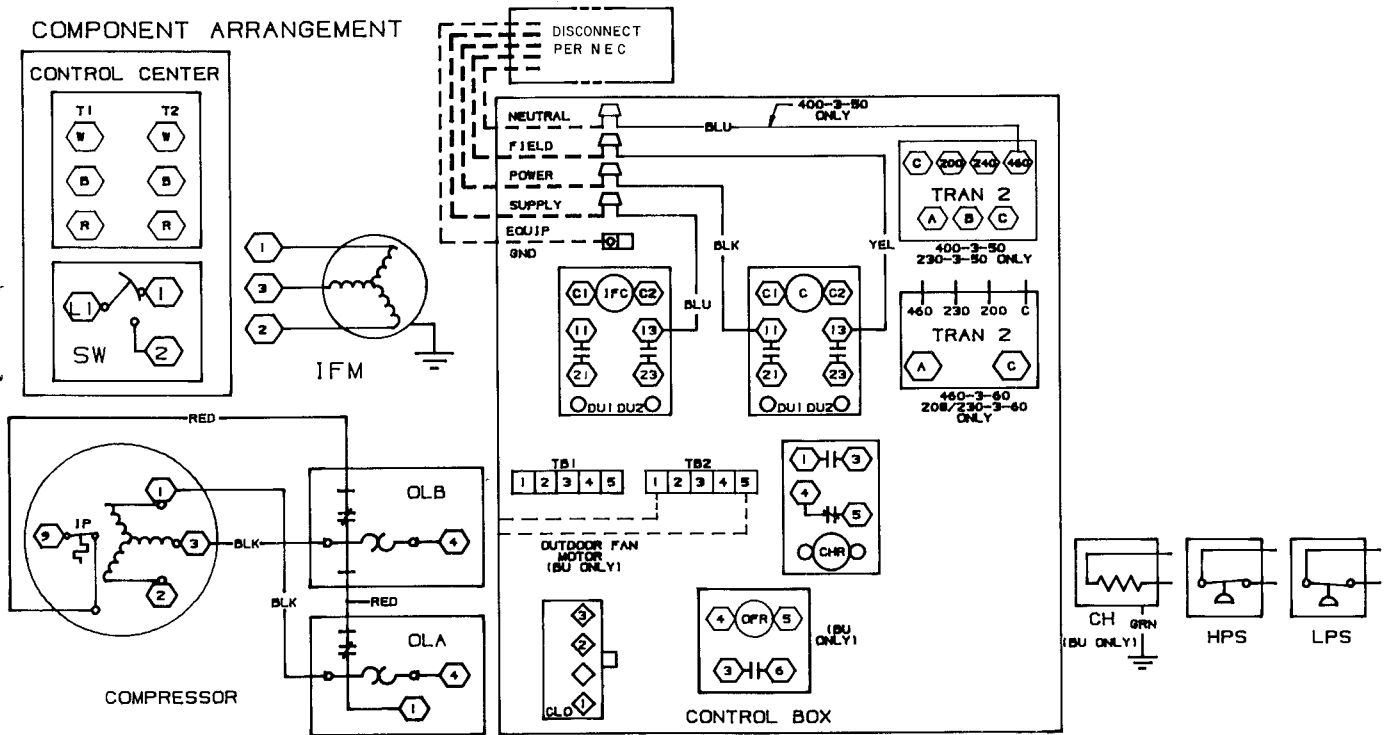
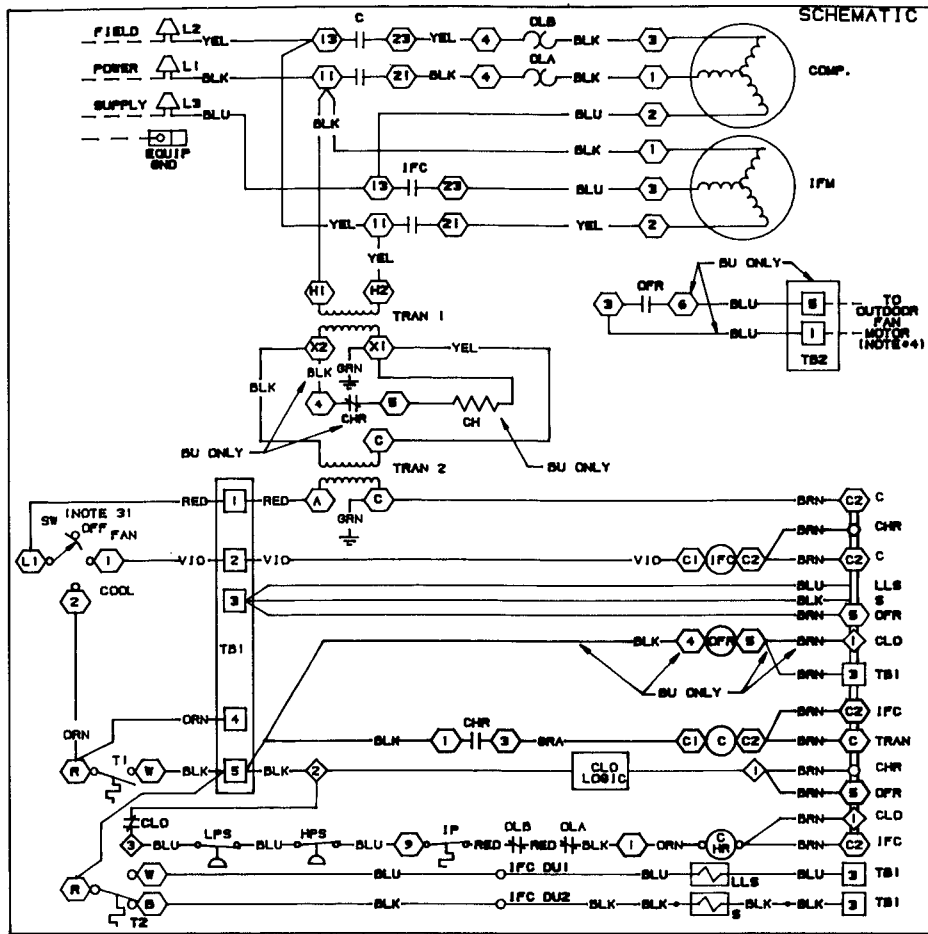


Fig. 9 — Label Diagram, 50BT, BU012; 208/230-3-60, 460-3-60



COMPONENT ARRANGEMENT

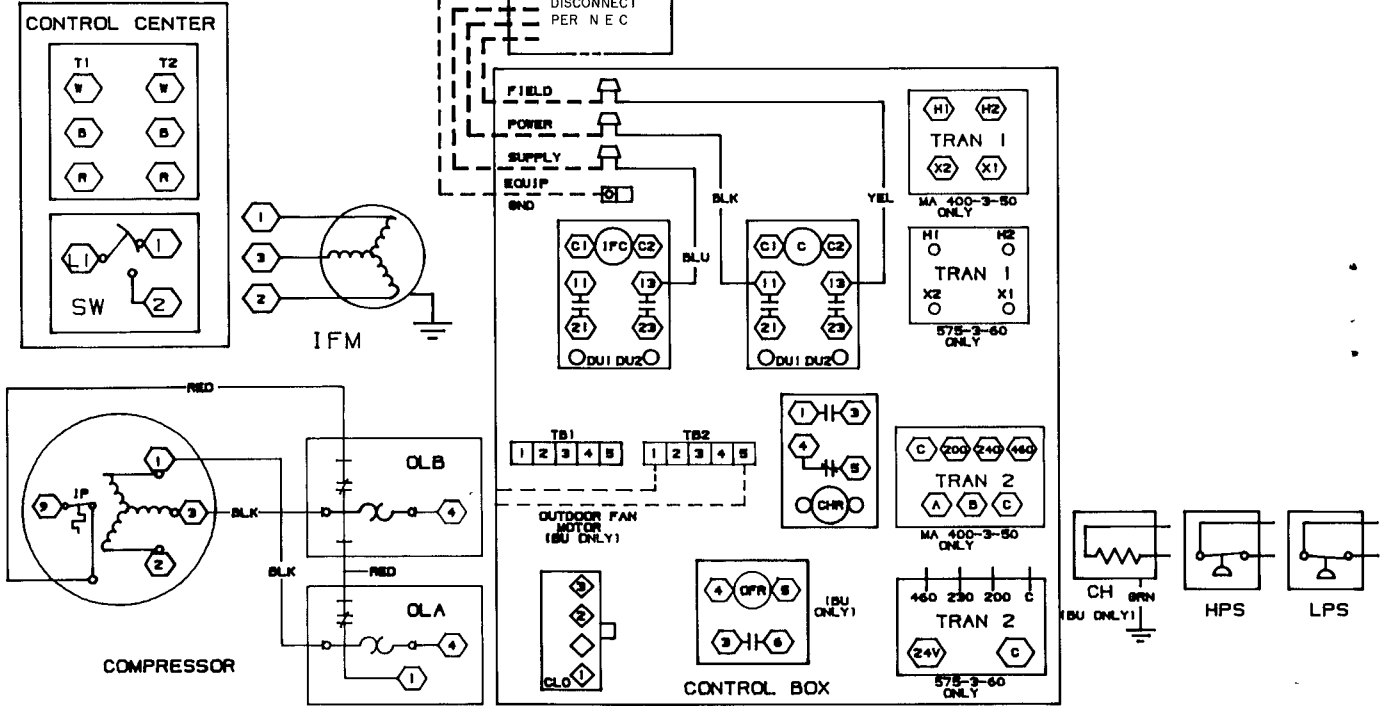


Fig. 10 — Label Diagram, 50BT, BU012; 575-3-60

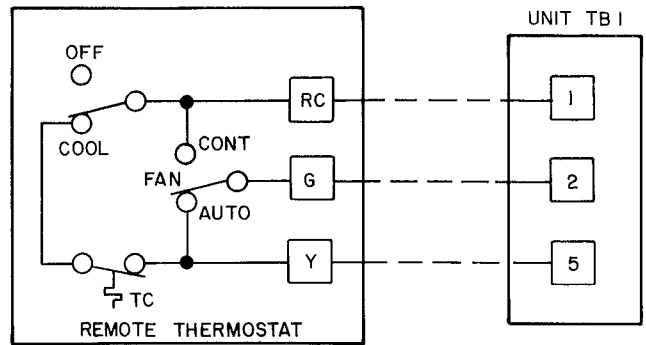
CONTROL SEQUENCE

All Units — Indoor air fan operates whenever unit power is on and selector switch is at COOL. When a crankcase heater is part of the unit, it is energized whenever unit power is on but shuts off when compressor starts.

For remote thermostat control (field-installed), a 24-volt control circuit plus terminal block is provided. This control circuit uses a current sensing lock-out relay that locks off the compressor in the event that any safety device is activated (LPS, HPS, or compressor overload). Reset of the lock-out relay is accomplished by de-energizing and then re-energizing the control circuit power. This may be done by either raising then lowering the thermostat, or by cycling the OFF/FAN/COOL switch to OFF and then back to COOL.

Units 50BT, BU004/006/008 — Thermostat starts and stops compressor as required.

Unit 50BT, BU012 — Step 1 of thermostat starts and stops compressor as required. Step 2 of thermostat opens the liquid line solenoid and closes the compressor capacity control solenoid valve on call for additional capacity. When step 2 of thermostat is satisfied, the liquid line solenoid valve closes and compressor capacity control valve is energized to unload compressor.



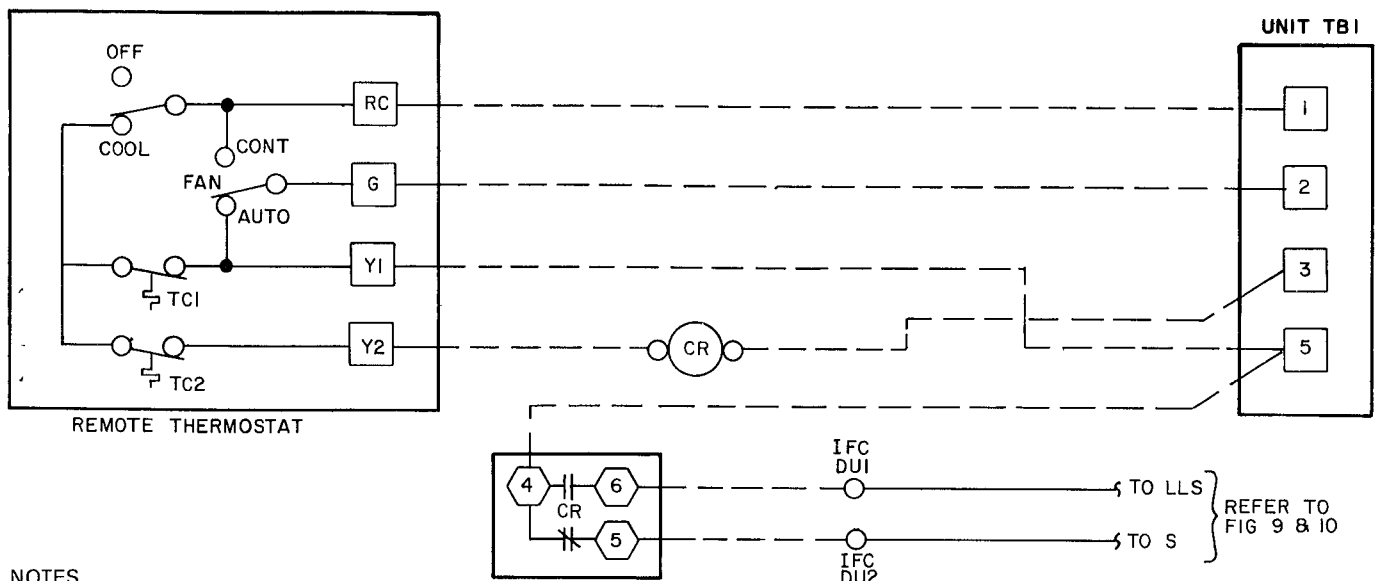
NOTES:

- 1 Set unit control switch to OFF
- 2 Refer to Fig 1 — 8. Remove wire connecting terminal 1 on TB1 to terminal L1 on SW. Remove wire connecting terminal 5 on TB1 to terminal 3 (terminal 1—Fig 7) of thermostat T. Connecting remote thermostat as shown will provide remote thermostat control of unit

Fig. 12 — Field Wiring for Accessory Remote Control and/or Thermostat (50BT, BU004, 006 and 008)

→ **Table 1 — Components for Accessory Remote Control and/or Thermostat (50BT, BU004-012) (Field-Supplied)**

COMPONENT	50BT, BU UNIT SIZE	
	004, 006, 008	012
Thermostat, 24 v	HH07AT170	HH07AT172
Subbase	HH93AZ170	HH93AZ180



NOTES.

- 1 Set unit control switch to OFF
- 2 Refer to Fig 9 and 10. Disconnect the following wires:
 - A red wire connecting terminal 1 on TB1 to terminal L1 on switch SW
 - B black wire connecting terminal 5 on TB1 to terminal W on thermostat T1
 - C blue and black wires connecting terminals W and B of thermostat T2 to dummy terminals (DU1 and DU2) of indoor fan contactor (IFC)
 Tape all disconnected ends with electrical tape
- 3 Make the following electrical connections. Connect terminals 6 and 5 of control relay (CR) to DU1 and DU2 of IFC as shown. Wire control relay coil between Y2 of remote thermostat and terminal 3 of unit TB1. Connect remote thermostat terminals RC, G and Y1 to unit TB1 terminals as shown
- 4 Control relay is field supplied and should be mounted in unit control box. Specify control relay HN61KPO01 (60-Hz) or HN61KPO02 (50-Hz) when ordering

Fig. 11 — Field Wiring for Accessory Remote Control and/or Thermostat (50BT, BU012)

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

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