

Large Rooftop Units Accessory Power Exhaust 50/60 Hz

Cancels: IIK 542J-150-20 IIK 542J-150-24
9/15/03

Installation Instructions

Part Number: CRPWREXH008B00
CRPWREXH009B00
CRPWREXH010B00

GENERAL

The accessory power exhaust package is used on the following units when these base units are fitted with economizers: 15 to 25 ton, standard-efficiency electric heat/electric cool and gas heat/electric cool units; 12 to 20 ton, high-efficiency electric heat/electric cool and gas heat/electric cool units; and 13 and 15 ton, high-efficiency heat pump units. See Table 1. The accessory will show a date code of 0903000001. Use this accessory with 13 to 25 ton rooftop units with a serial number of 3503Fxxxxx or later that are equipped with the EconoMiSer+.

NOTE: This accessory is not compatible with the preassembled horizontal supply transition accessory.

Table 1 — Accessory Power Exhaust Usage

UNIT VOLTAGE	POWER EXHAUST PACKAGE NO.
208/230, 460 V (60 Hz)	CRPWREXH008B00*
575 V (60 Hz)	CRPWREXH010B00
220 V, 400 V (50 Hz)	CRPWREXH009B00

*Power exhaust motor is wired for 460 v.

PACKAGE CONTENTS

QUANTITY	ITEM
1	Power exhaust with motor, control box, fan, and fan grille
1	Conduit assembly
5	Electrical snap bushings
7	No. 10AB x 1/2-in. lg screws
1	Center post
1	Insulated panel
2	No. 10-32 x 3/8-in. machine screws
3	Wire nut connectors

INSTALLATION

1. Unpack accessory package. See Fig. 1.
2. Disconnect power to unit. Remove the control box access panel, main control box cover, and alternate return-air access panel (see Fig. 2). Using screws from alternate return-air access panel, install center post and insulated panel as shown in Fig. 3.

3. Remove 5/8-in. and 7/8-in. knockouts from bottom of main control box (see Fig. 4) and two 7/8-in. knockouts in partition separating return-air compartment from control box section. Install snap bushing provided in knockout closest to economizer side of unit (see Fig. 5).
4. Position power exhaust box (see Fig. 5) next to alternate return-air opening (see Fig. 3) and install using screws provided.

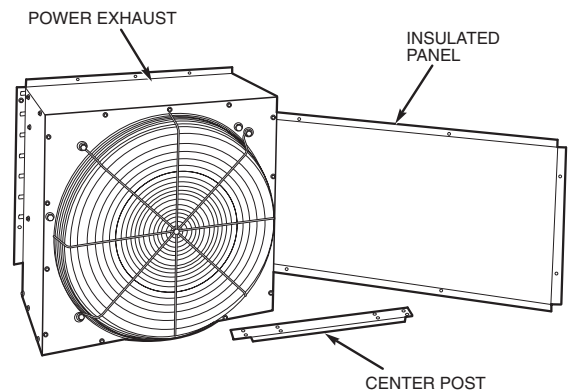


Fig. 1 — Accessory Power Exhaust Package

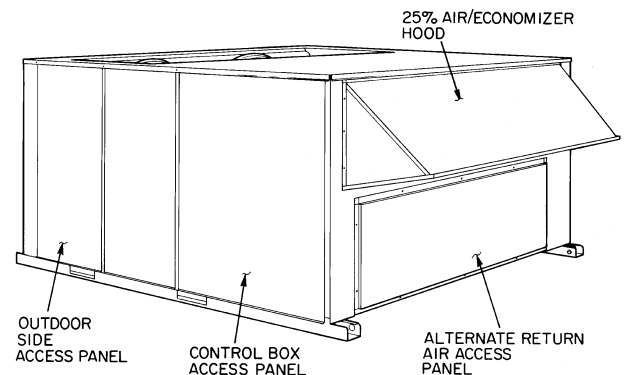


Fig. 2 — Typical Base Unit

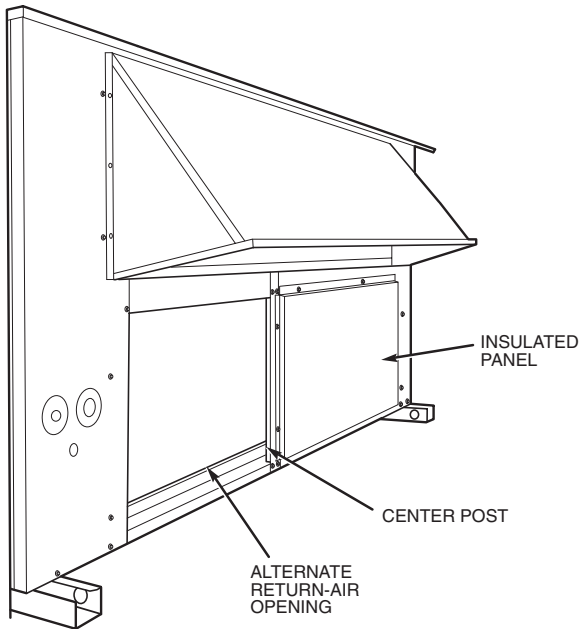


Fig. 3 — Panel and Center Post Installation

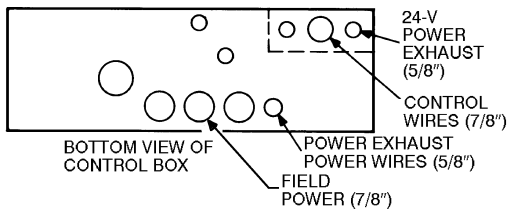
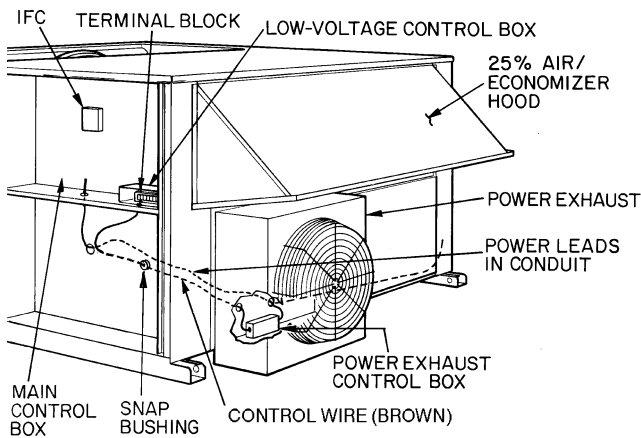


Fig. 4 — Low-Voltage Control Box Connections



LEGEND

IFC — Indoor Fan Contactor

NOTE: Dashed lines indicate field-installed control wiring.

Fig. 5 — Control Wiring Installation

Power Wiring — Power exhaust accessory package CRPWREXH008B00 is shipped with power wiring connected to motor for 460-v operation, but may be rewired for 208/230-v operation.

⚠ WARNING

Lock open and tag power disconnect before working on any electrical components.

208/230 V, 60 Hz — Remove the no. 10AB x 1/2-in. lg screws from the perimeter of power exhaust front panel. Remove front panel containing fan and fan motor.

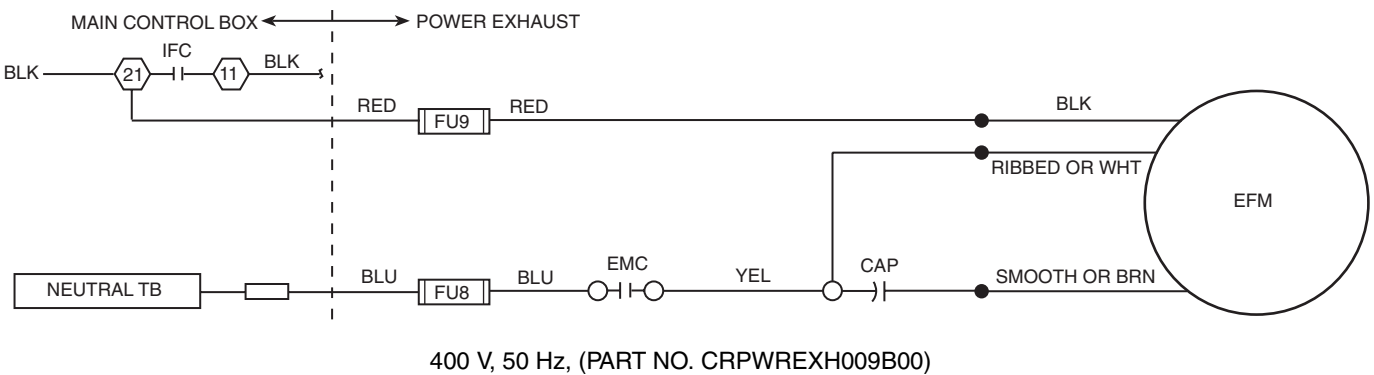
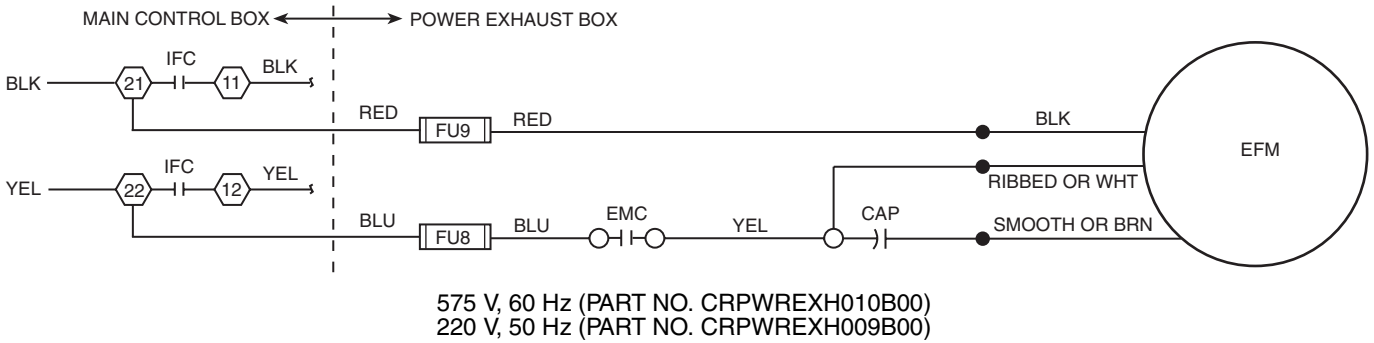
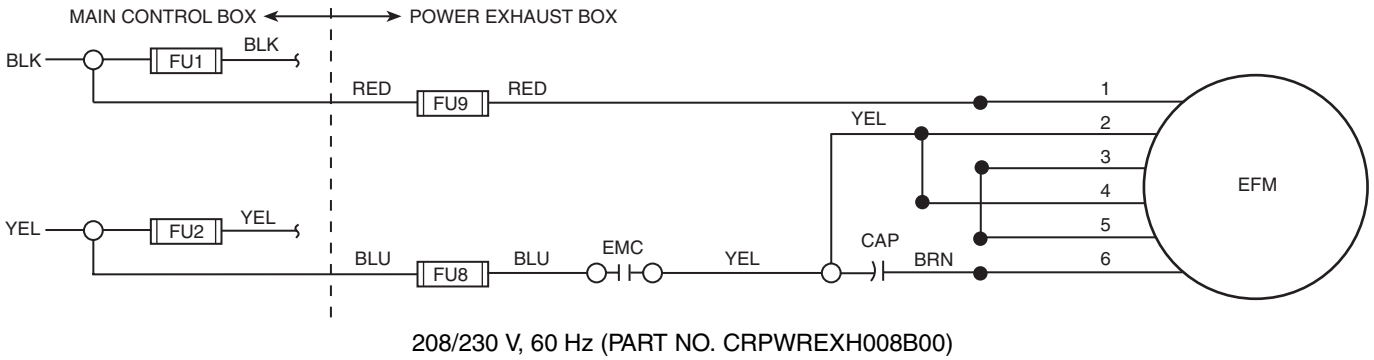
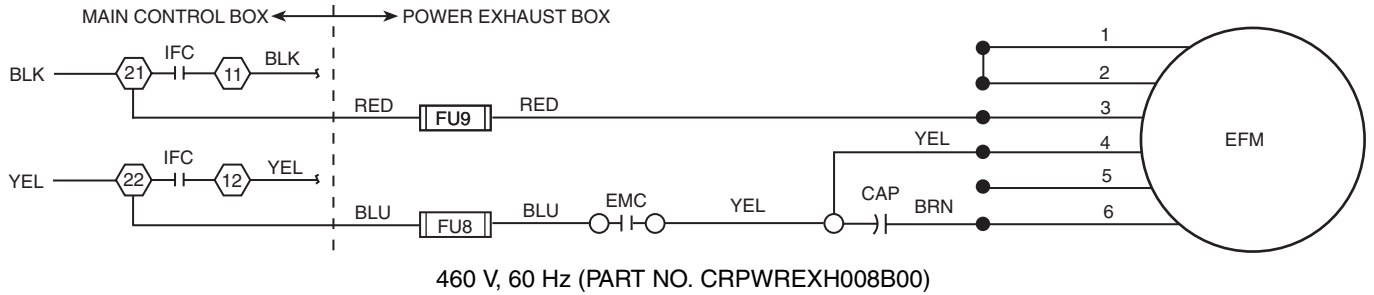
Referring to Fig. 6-8, change connection at power exhaust motor as follows:

1. Remove splice between leads 1 and 2.
2. Remove cap from lead 5.
3. Remove yellow wire from lead 4.
4. Remove red wire from lead 3.
5. Connect red wire to lead 1.
6. Connect yellow wire to leads 2 and 4.
7. Splice leads 3 and 5.

Replace front panel containing fan and fan motor. Proceed as described below.

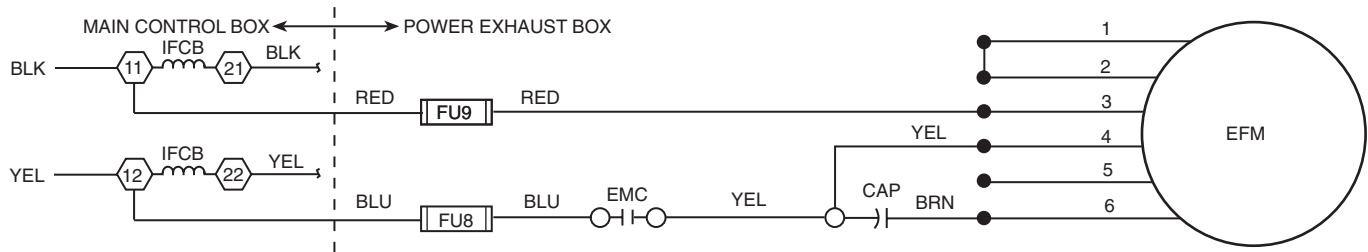
ALL UNITS — Feed the red and blue power wires from rear of power exhaust box through conduit assembly. Route conduit assembly through hole in partition to main control box (see Fig. 5). Secure conduit assembly to bottom of main control box and at rear of power exhaust box.

Route the red and blue power wires from conduit termination to main control box components: per Fig. 6 for 15 ton standard-efficiency electric heat/electric cool and gas heat/electric cool units and 12 ton high-efficiency electric heat/electric cool and gas heat/electric cool units; per Fig. 7 for 18 to 25 ton standard-efficiency electric heat/electric cool and gas heat/electric cool units, 15 and 20 ton high-efficiency electric heat/electric cool and gas heat/electric cool units, and 15 ton high-efficiency heat pump units; and per Fig. 8 for 13 ton high-efficiency heat pump units.

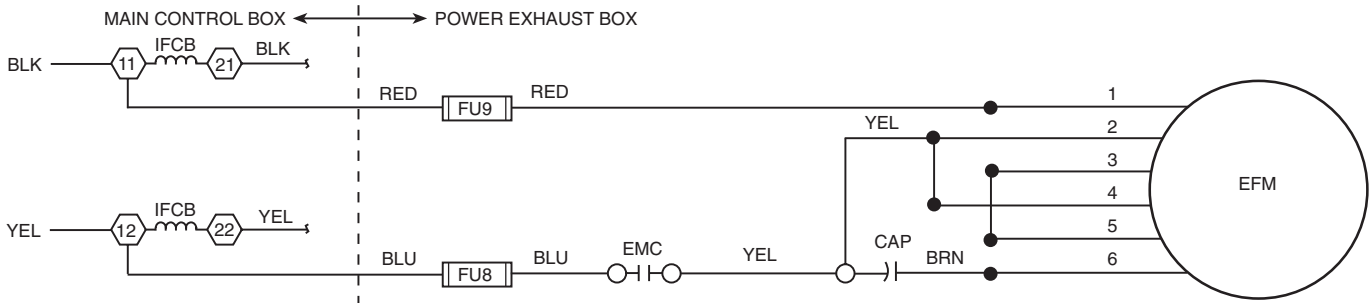


- LEGEND
- CAP** — Capacitor
 - EMC** — Exhaust Motor Contactor
 - EFM** — Exhaust Fan Motor
 - FU** — Fuse
 - IFC** — Indoor-Fan Contactor
 - TB** — Terminal Block

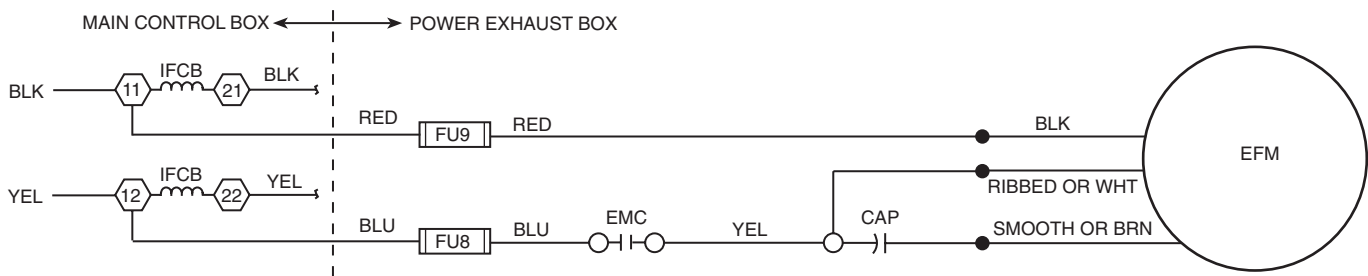
Fig. 6 — Power Wiring Connection Diagrams
(15 Ton Standard-Efficiency Electric Heat/Electric Cool and Gas Heat/Electric Cool Units
and 12 Ton High-Efficiency Electric Heat/Electric Cool and Gas Heat/Electric Cool Units)



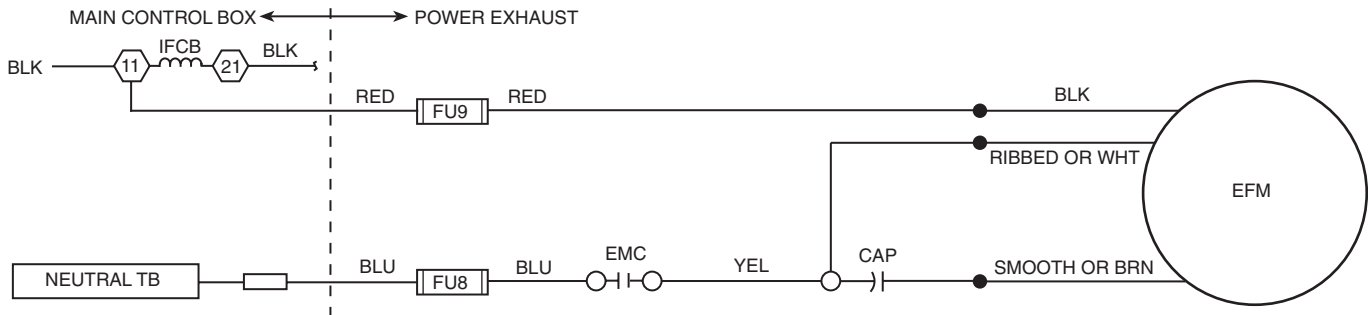
460 V, 60 Hz (PART NO. CRPWREXH008B00)



208/230 V, 60 Hz (PART NO. CRPWREXH008B00)



575 V, 60 Hz (PART NO. CRPWREXH010B00)
220 V, 50 Hz (PART NO. CRPWREXH009B00)

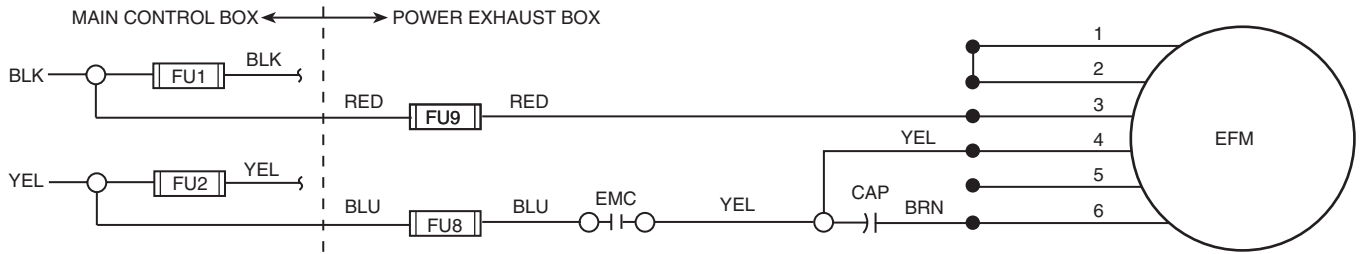


400 V, 50 Hz (PART NO. CRPWREXH009B00)

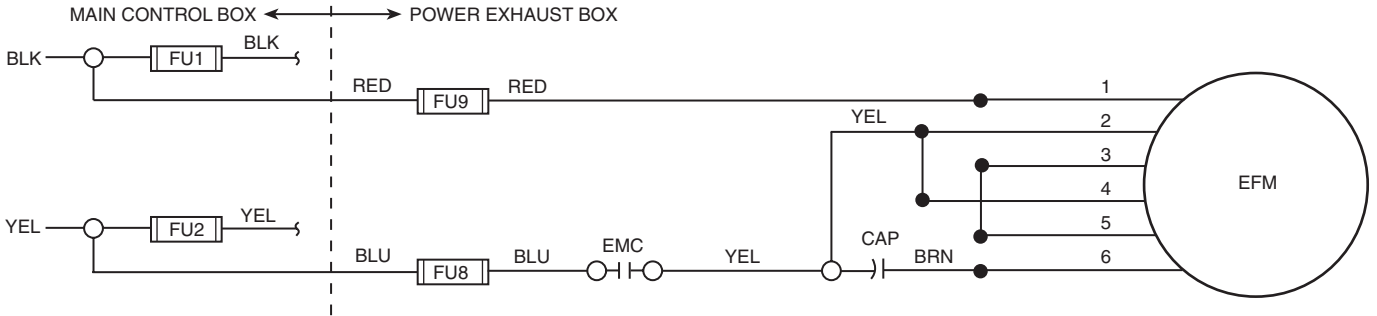
LEGEND

- CAP** — Capacitor
- EMC** — Exhaust Motor Contactor
- EFM** — Exhaust Fan Motor
- FU** — Fuse
- IFCB** — Indoor Fan Circuit Breaker
- TB** — Terminal Block

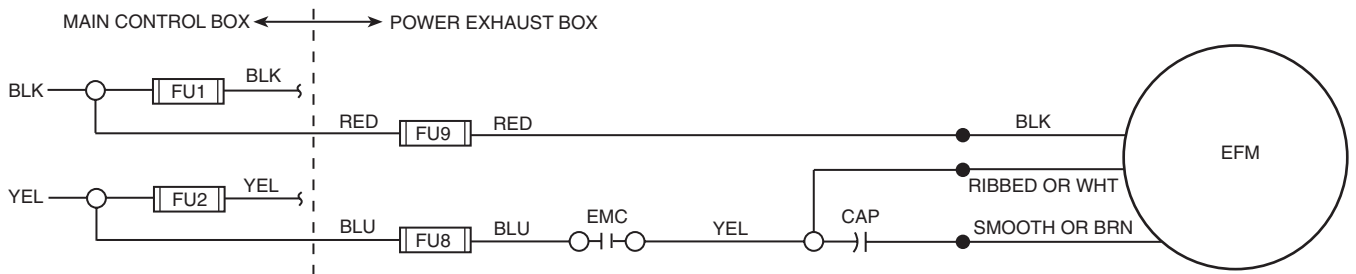
**Fig. 7 — Power Wiring Connection Diagrams
(18 to 25 Ton Standard-Efficiency Electric Heat/Electric Cool and Gas Heat/Electric Cool Units,
15 and 20 Ton High-Efficiency Electric Heat/Electric Cool and Gas Heat/Electric Cool Units,
and 15 Ton High-Efficiency Heat Pump Units)**



460 V, 60 Hz (PART NO. CRPWREXH008B00)



208/230 V, 60 Hz (PART NO. CRPWREXH008B00)



575 V, 60 Hz (PART NO. CRPWREXH010B00)

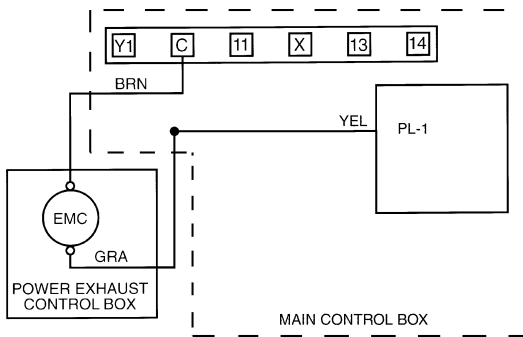
LEGEND

- CAP** — Capacitor
- EMC** — Exhaust Motor Contactor
- EFM** — Exhaust Fan Motor
- FU** — Fuse

**Fig. 8 — Power Wiring Connection Diagrams
(13 Ton High-Efficiency Heat Pump Units)**

Control Wiring

1. Route the gray wire from the power exhaust assembly through the partition panel and into the main control box. Connect the gray wire to the yellow wire from PL-1. (See Fig. 9.)
2. Remove screw from return air base rail halfway between power exhaust and economizer motor. Install wire tie under screw and secure gray wire to return-air base rail.



LEGEND

EMC — Exhaust Motor Contactor

Fig. 9 — Control Wiring Connection Diagram

3. Insert snap bushing (provided) into $\frac{5}{8}$ -in. knockout in bottom of low-voltage control box. Route brown wire through partition panel snap bushing and into low-voltage control box. Connect brown wire to terminal C on low-voltage terminal strip (see Fig. 9).
4. Replace access panels and return power to unit.

Figure 10 shows the unit with accessory power exhaust package installed. Figure 11 shows a typical unit wiring schematic with power exhaust wiring.

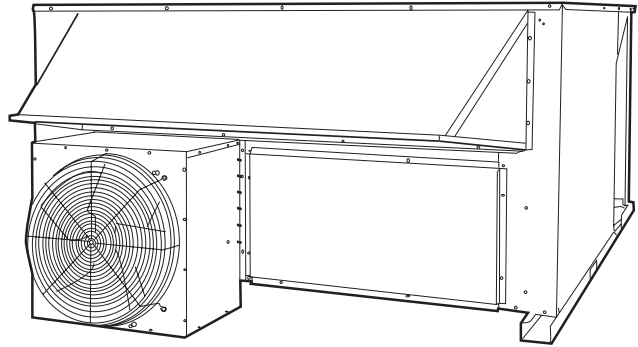
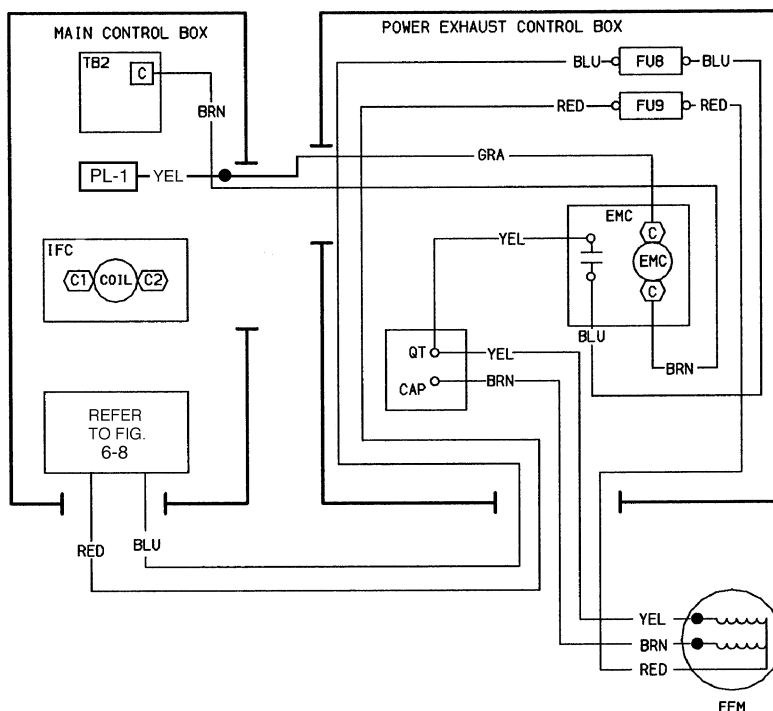


Fig. 10 — Accessory Power Exhaust Package Installed on Base Unit



LEGEND

C — Contactor
 CAP — Capacitor
 EMC — Exhaust Motor Contactor
 EFM — Exhaust Fan Motor
 FU — Fuse
 IFC — Indoor Fan Contactor
 QT — Quadruple Terminal
 TB — Terminal Block

○ Terminal (Unmarked)
 ⬡ Terminal (Marked)
 □ Terminal Block Connection
 ● Splice

NOTES: Fan motor thermally protected.

Fig. 11 — Typical Unit Wiring Schematic

