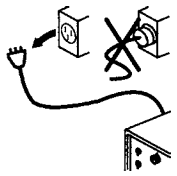
Hypernet Installation HPR130XD, HPR260XD and HPR400XD

Field Service Bulletin

806570 – Revision 0 – May, 2010

Hypertherm®


WARNING
ELECTRIC SHOCK CAN KILL



Disconnect electrical power before performing any maintenance.
All work requiring removal of the power supply cover must be performed by a qualified technician.
See the *Safety Section* of the system's Manual for more safety precautions.

Introduction

Purpose

This field service bulletin provides the instructions necessary to install the Hypernet PC board into a HPR130XD, HPR260XD, or HPR400XD power supply.

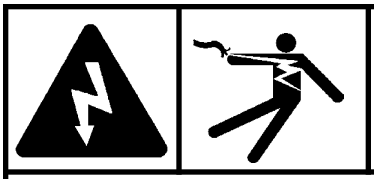
Kit 228604 contents (HPR400XD)

Part number	Description	Quantity
141162	PCB assembly: HPR130XD, HPR260XD, or HPR400XD Hypernet interface	1
229329	Harness: HPR130XD, HPR260XD, or HPR400XD Hypernet interface	1
229385	Wire group: HPR400XD/HPR800XD Hypernet arc voltage	1
075485	Machine screw: 10-32 x 3/8"	3
075491	Machine screw: 6-32 x 3/8"	4
075160	Kep nut: 10-32	3
101122	Mounting bracket: HPR400XD Hypernet	1
002543	Insulator: HPR400XD Hypernet	1
108844	Grommet (bushing): 1" black	1
343013	Cable tie base: Self adhesive, 1" square	3
343005	Cable tie	12
223172	Cable: CNC interface 2.3 m (7.5 ft)	1

Kit 228611 contents (HPR130XD and HPR260XD)

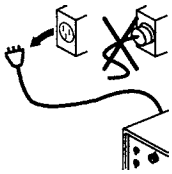
Part number	Description	Quantity
141162	PCB assembly: HPR130XD, HPR260XD, or HPR400XD Hypernet	1
229329	Harness: HPR130XD, HPR260XD, or HPR400XD Hypernet	1
075491	Machine screw: 6-32 x 3/8"	2
123760	Cable: machine interface 0.61 m (2 ft)	1

HPR130 and HPR260 power supplies



DANGER

ELECTRIC SHOCK CAN KILL



Turn off all electrical power before removing the power supply cover. Press the power supply OFF (0) pushbutton switch and set the line disconnect switch to OFF. In the U.S., use a "lock-out and tag-out" procedure until the service or maintenance is complete. In other countries, follow appropriate local and national safety procedures.

Install the Hypernet interface PC board

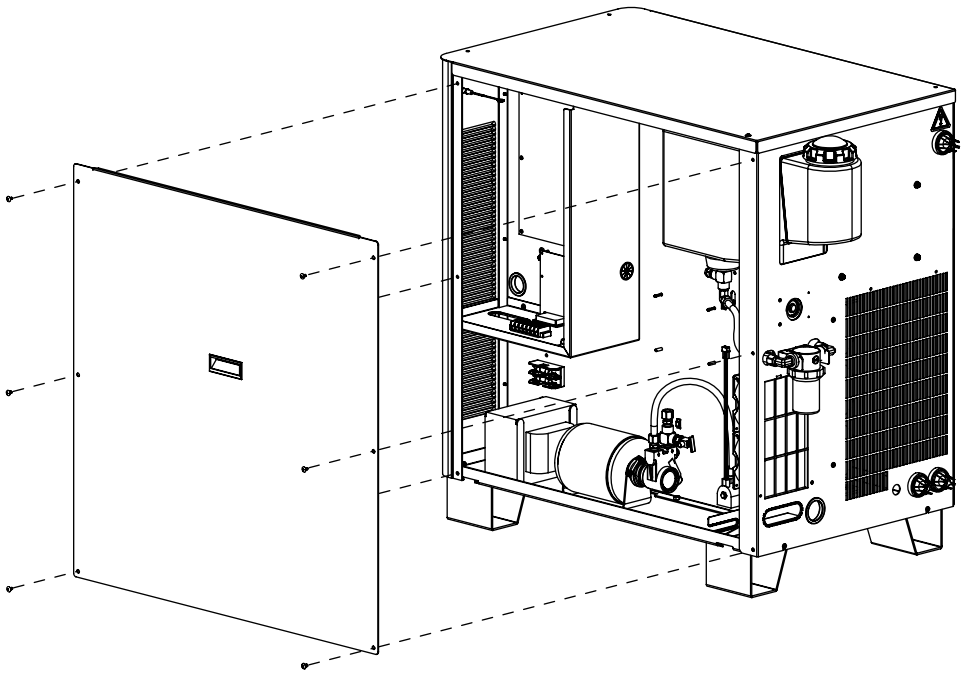
A Remove the right side panel from the power supply.

B Install the Hypernet interface PC board (141162) on the 4 standoffs in the power supply. Use the screws (075491) provided in this kit if needed.

C Install the machine interface cable (123760) from the control board to the Hypernet interface board.

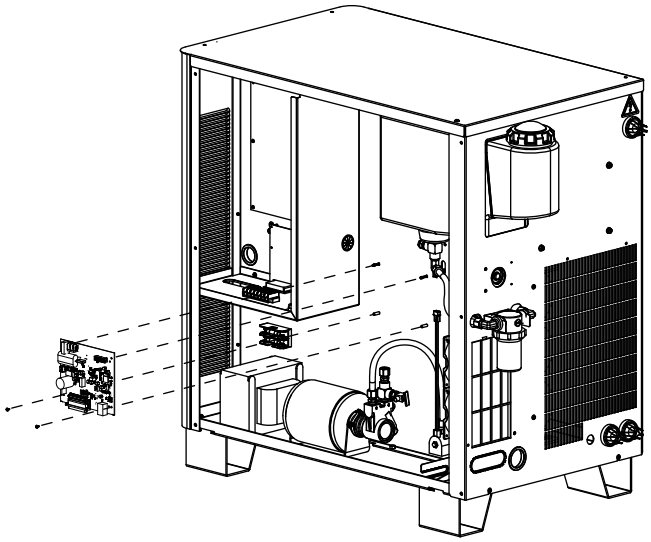
Note: Only the HPR130 power supply is shown, but the location for installing the Hypernet interface board and the location of the bundled wires (page 6) are the same in the HPR260 power supply.

A



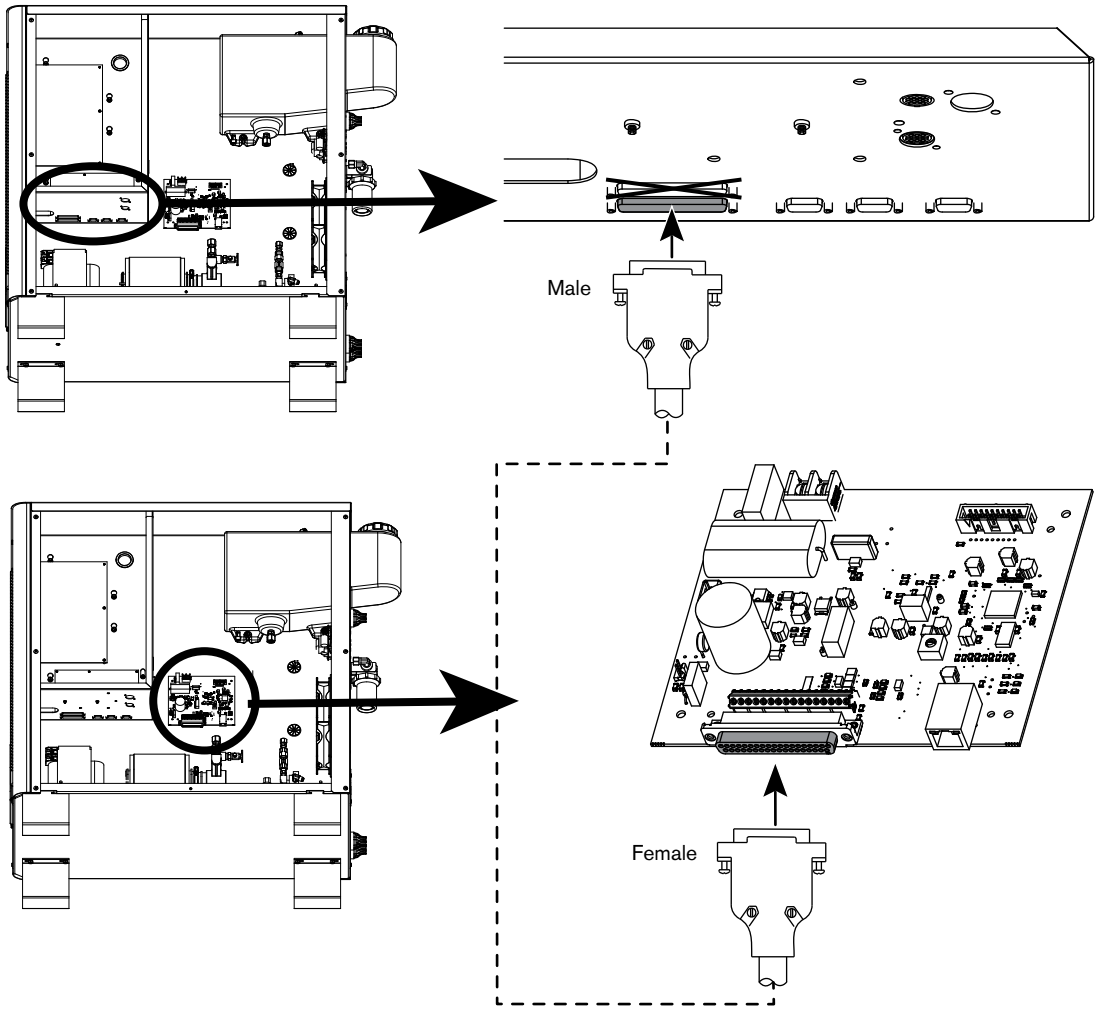
Power supply panel removal

B



Install the Hypernet interface PC board

C



Control PC board to Hypernet interface board connection inside the power supply

Connect the 229329 wire harness

A Remove the connector from receptacle J4 on the power distribution board (PCB2).

B Plug in the connector that was removed from J4 on PCB2 into the connector on harness 229329 marked "XFMR".

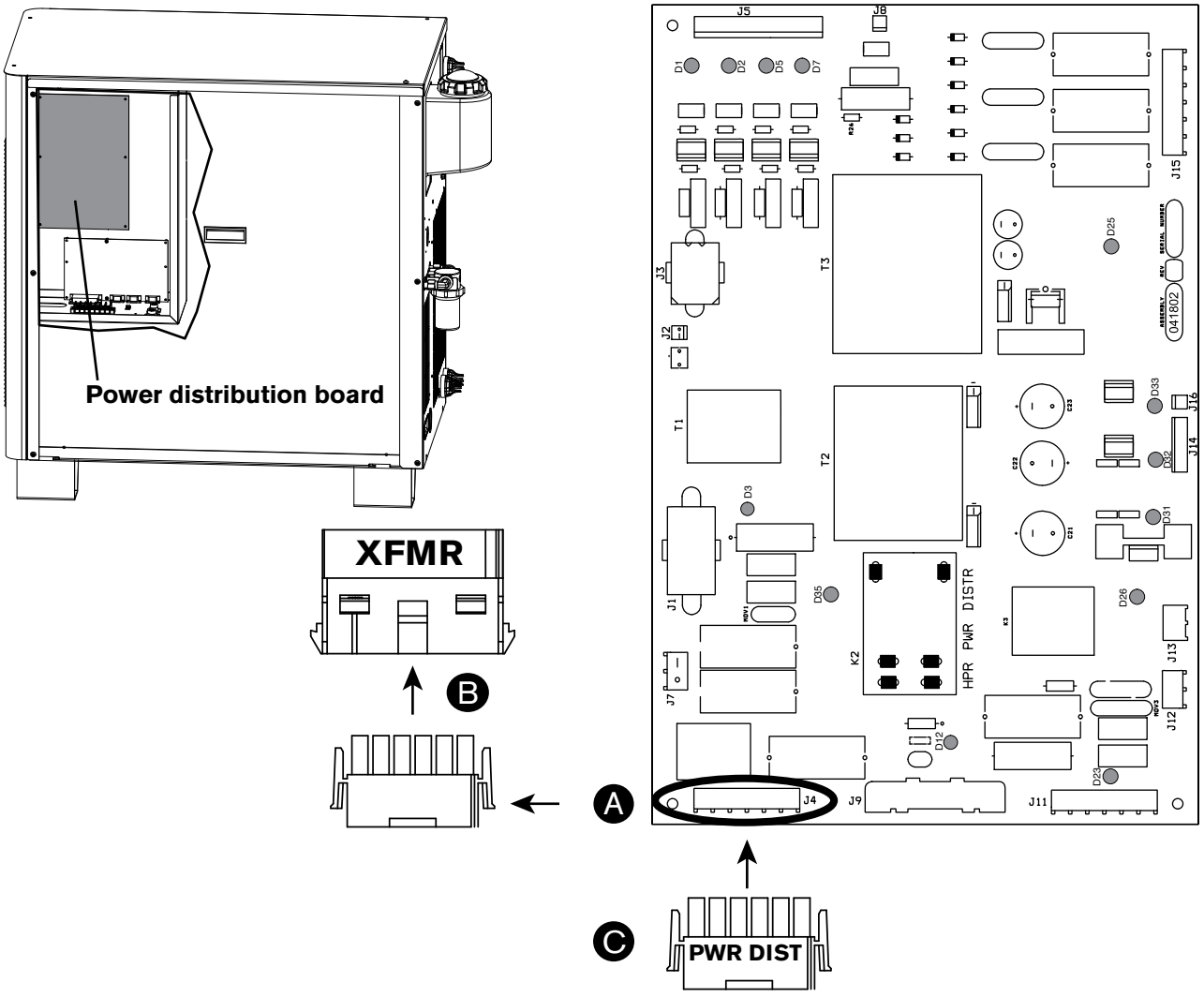
C Plug in the connector on the 229329 harness marked "PWR DIST" into J4 on PCB2.

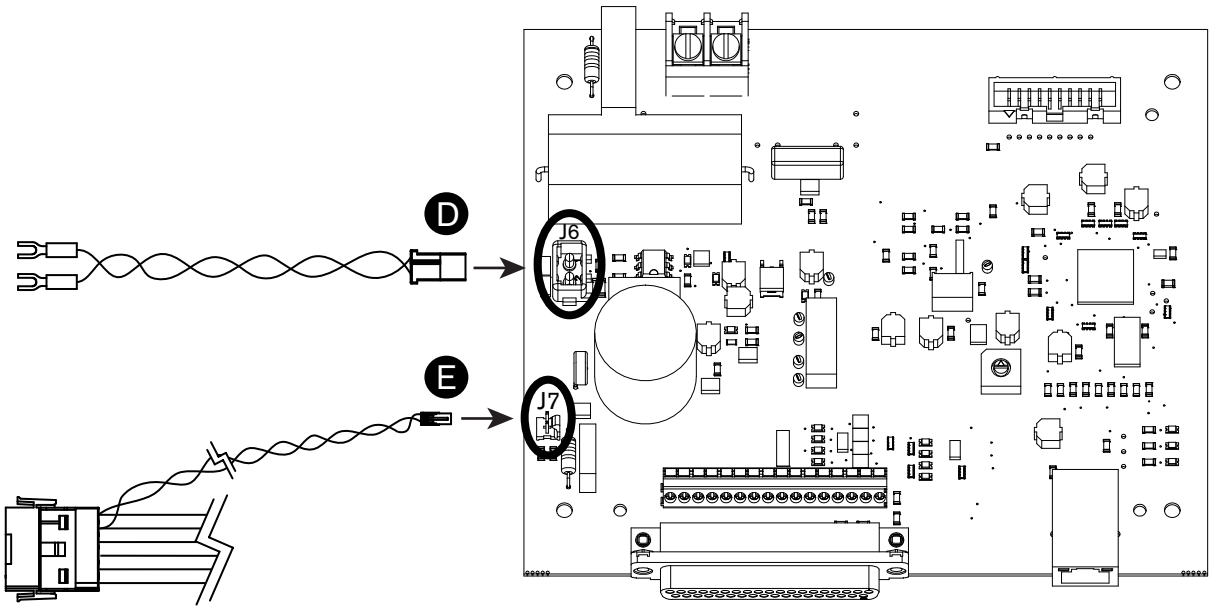
D Plug in the connector on the 229329 harness marked "J13.6" to J6 on the Hypernet interface PCB (141162).

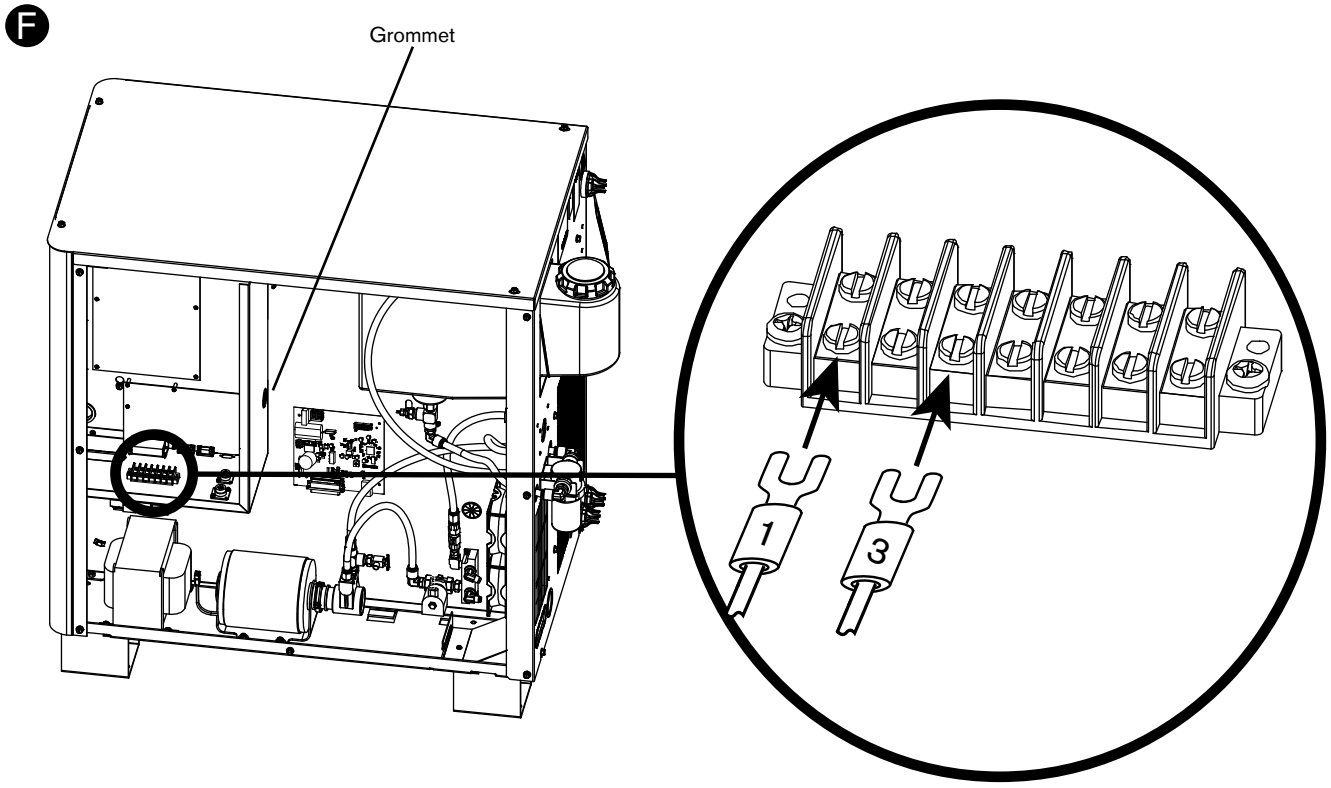
E Plug in the connector on the 229329 harness marked "J13.7" to J7 on the Hypernet interface PCB (141162).

Note: Route the wires from steps "D" and "E" through the grommet on the side of the control box. See the figure in Step "F".

F Connect the fork terminal on the 229329 harness labeled Number 1 to TB2 location number 1.
Connect the fork terminal on the 229329 harness labeled Number 3 to TB2 location number 3.







Note: There are other wires present on TB1, locations 1 and 3. The new wires can be installed on top of the existing wires.

Arc voltage wire connections

A. Cut the cable tie on the arc voltage wires bundled below the Hypernet interface board (numbered 25 and 26).

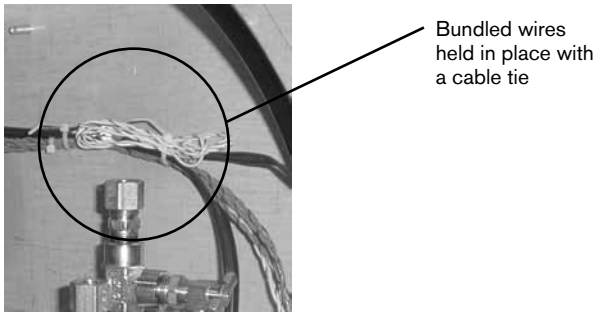
B. Attach wire number 25 to terminal marked WORK, and wire number 26 to terminal marked ELECTRODE.

C. Cut the cable tie on the arc voltage wires bundled near the I/O board (numbered 25 and 26).

D. Connect wire Number 25 to the bolt on the bus bar marked WORK (+).
Connect wire Number 26 to the bolt on the bus bar marked TORCH (–).

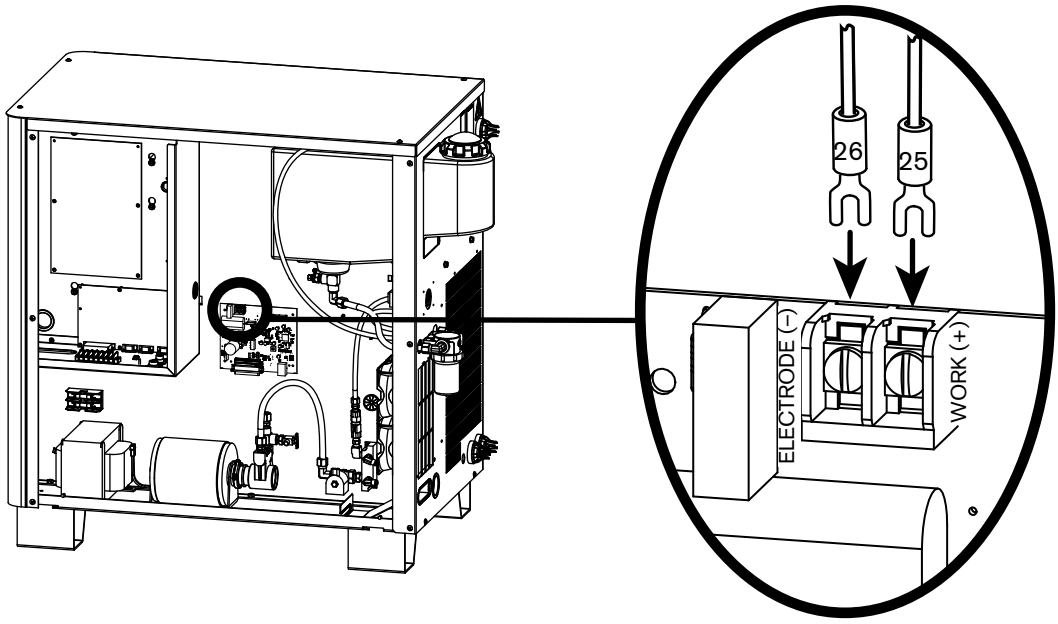
Secure all wires and cables as required.

A



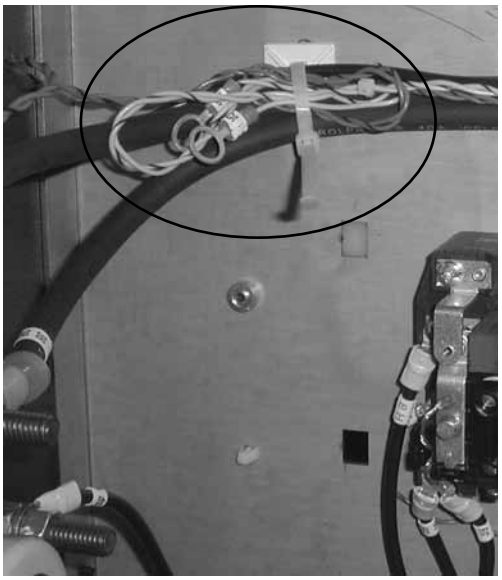
Arc voltage wire location

B



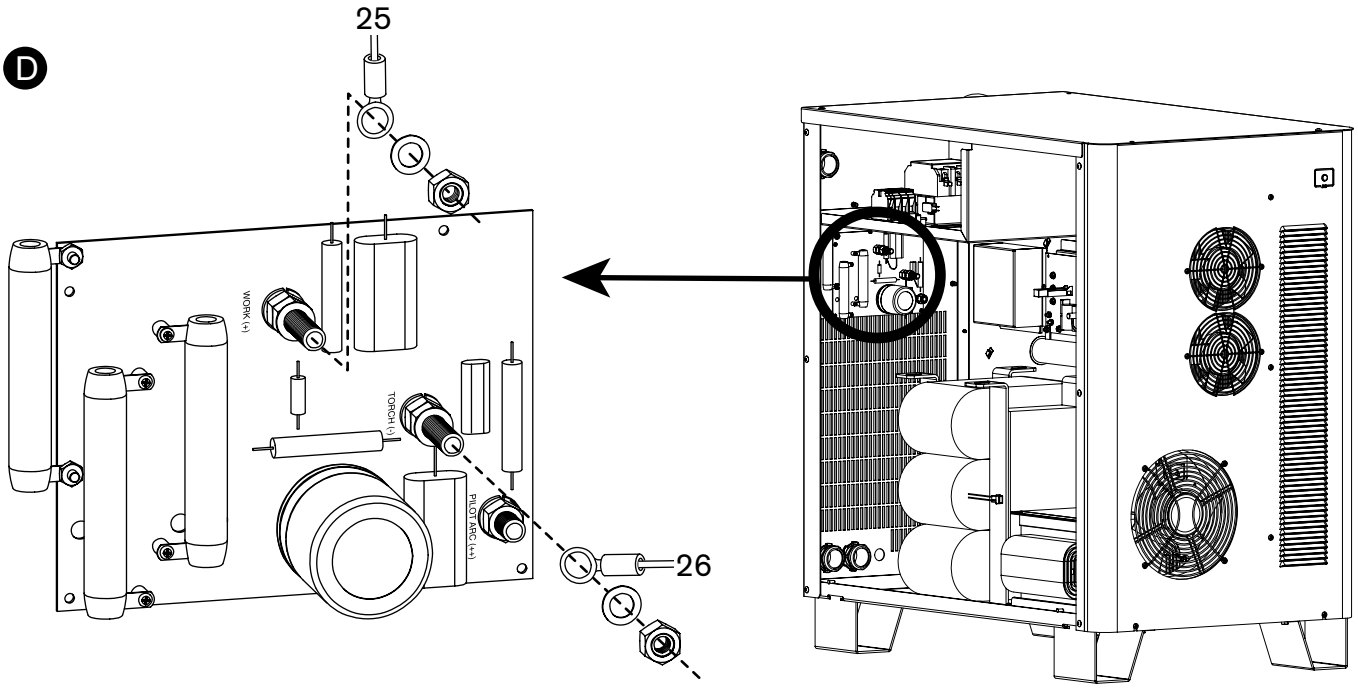
Hypernet interface board connection

C



Arc voltage wire location

D



I/O board connections

HPR400XD power supplies

Install the Hypernet interface PC board

A Remove the top panel and both side panels from the power supply.

B Inspect the center panel in the power supply for mounting holes. If there are no mounting holes through the center panel, use the mounting bracket in this kit (101122) as a template. Position the bracket as shown, mark the location of the holes, and drill 3, 6.8 mm (17/64”) holes through the center panel.

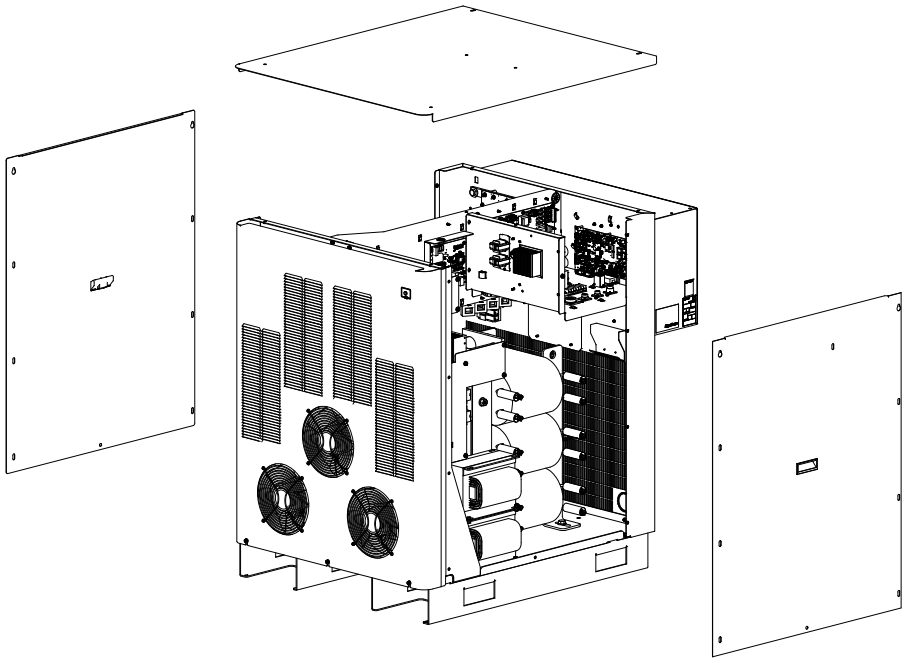
C Mount the bracket (101122) on the center panel using the 3 machine screws (075485) in this kit. If mounting holes had to be drilled, screw the 3 Kep nuts in this kit (075160) onto the machine screws on the side of the center panel opposite the bracket.

D Install the insulator (002543) and the grommet (108844) onto the bracket

E Install the Hypernet interface PC board (141162) on the 4 standoffs on the mounting bracket. Use the screws (075491) provided in this kit.

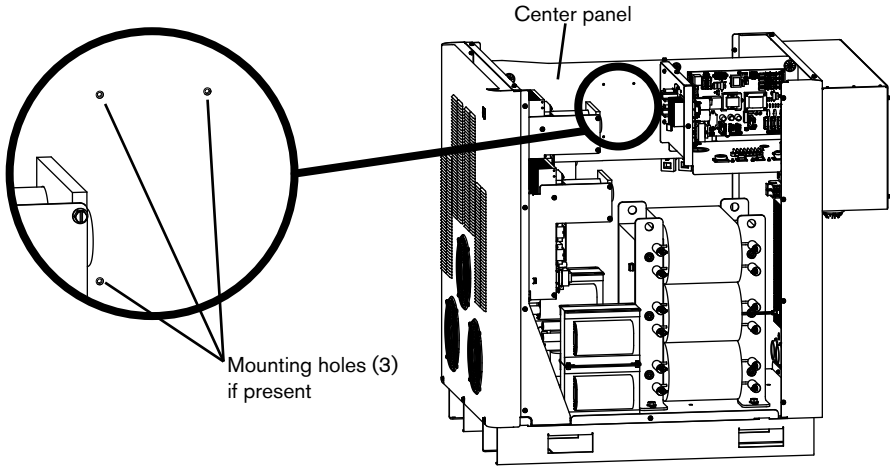
F Install the machine interface cable (223172) from the control board to the Hypernet interface board. Route the cable between the main transformer and the inductors. Use the cable tie bases (343013) and cable ties (343013) in this kit to prevent the cable from moving.

A

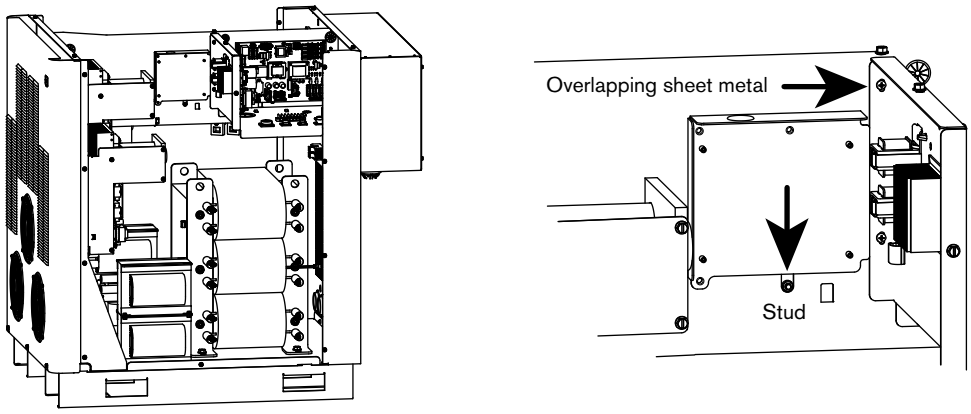


Power supply panel removal

B

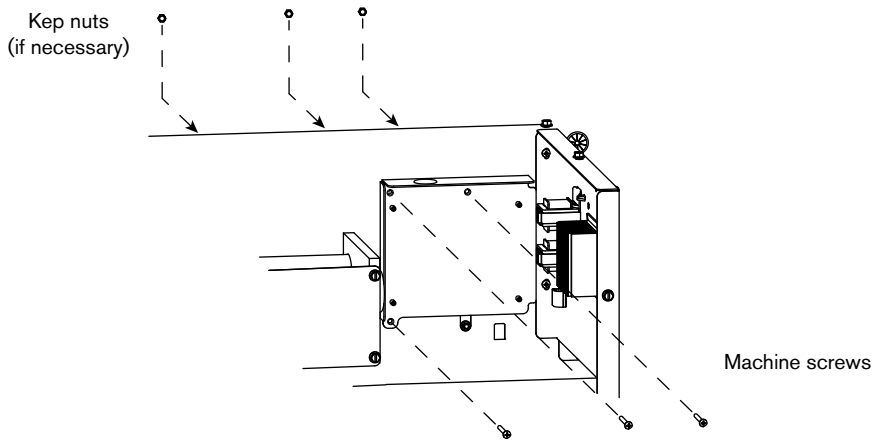


Note: Place the mounting bracket flat against the center panel and slide it to the right until it is flush against the overlapping sheet metal and down until it is stopped by the stud.



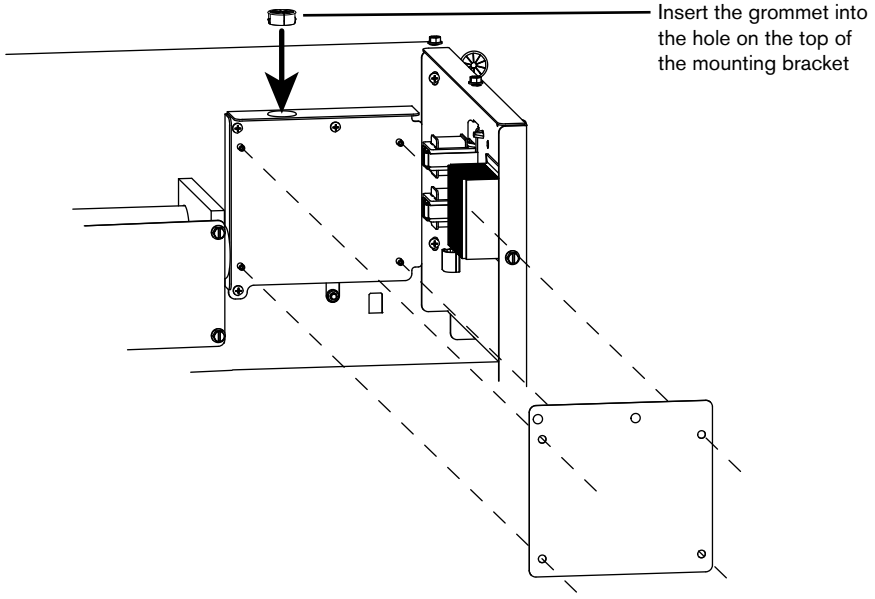
Mounting bracket orientation

C



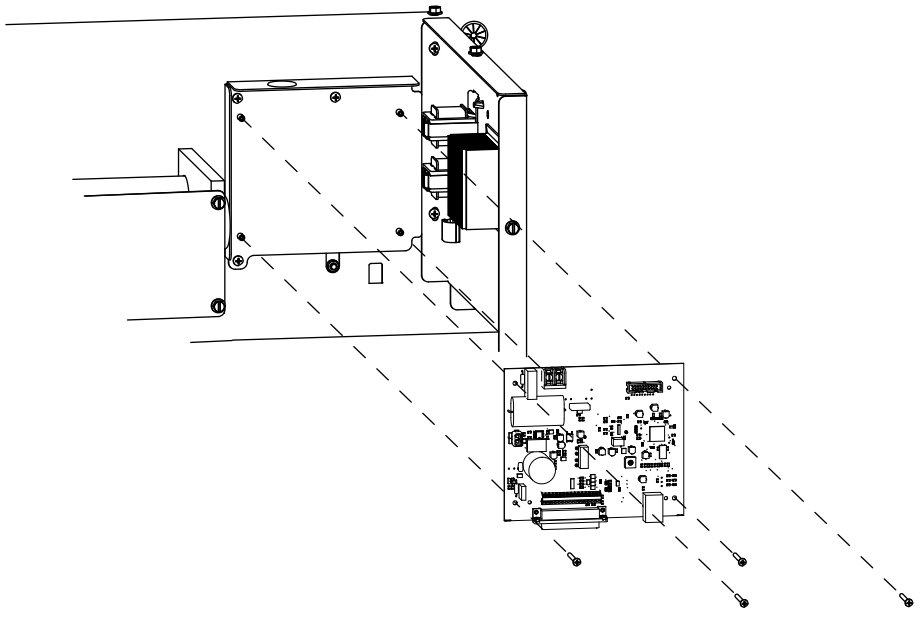
Mounting bracket installation

D



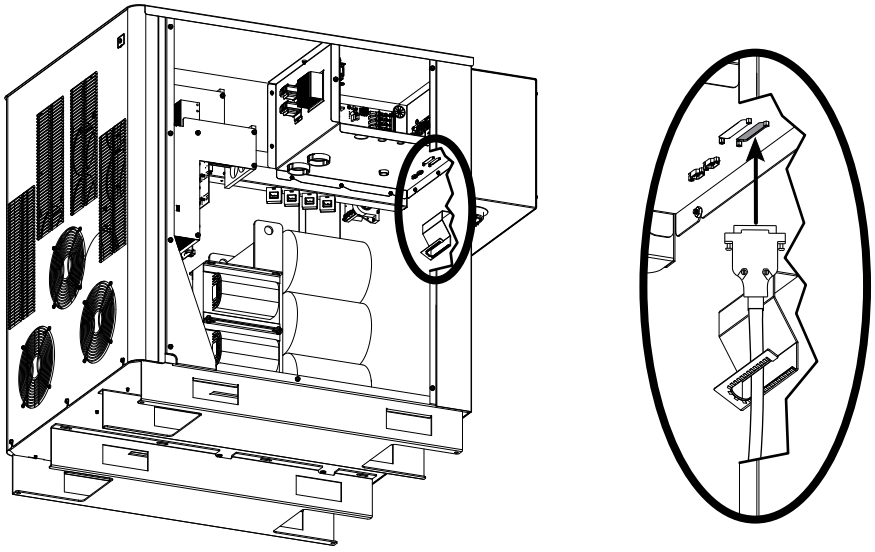
Grommet and insulator installation

E

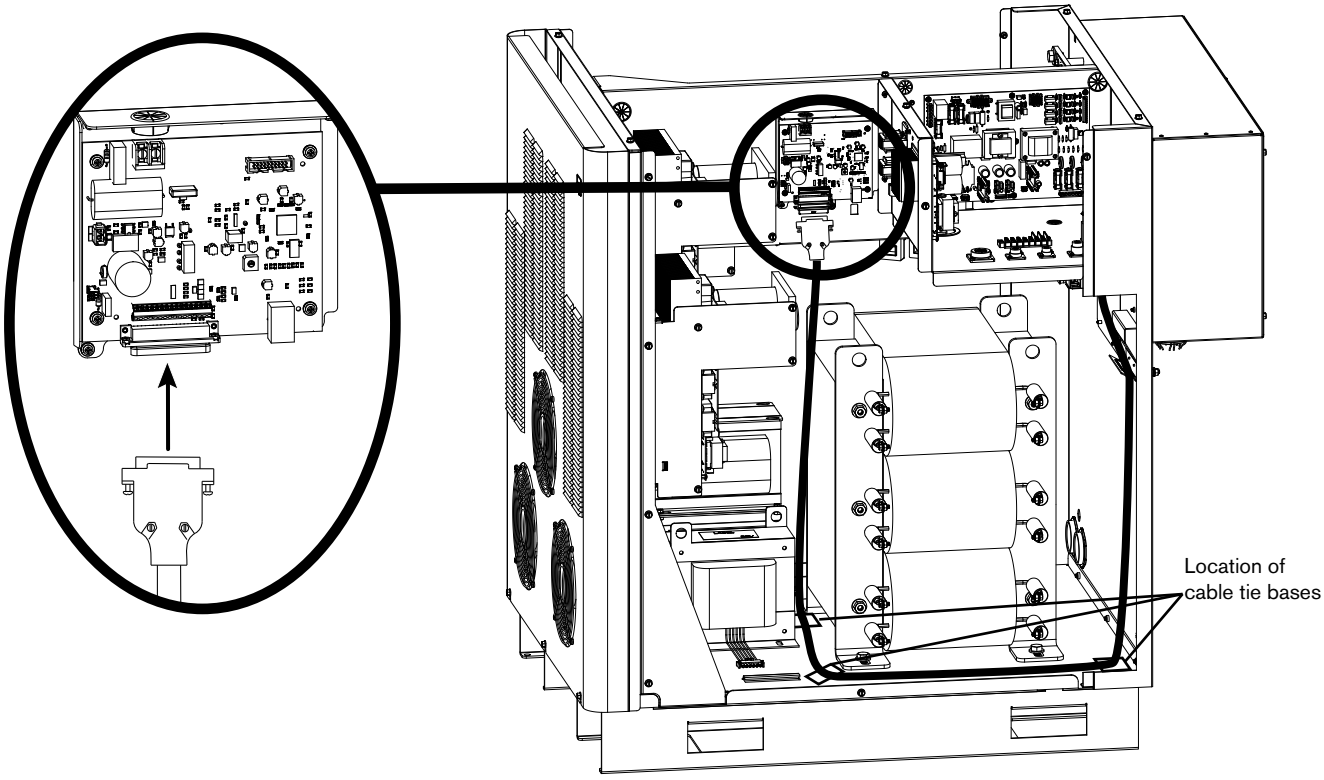


Hypernet interface board mounting

Ⓕ



223172 cable to control board connection



223172 cable to Hypernet board connection and cable routing

Connect the 229329 wire harness

A Remove the connector from receptacle J4 on the power distribution board (PCB2).

B Plug in the connector that was removed from J4 on PCB2 into the connector on harness 229329 marked “XFMR”.

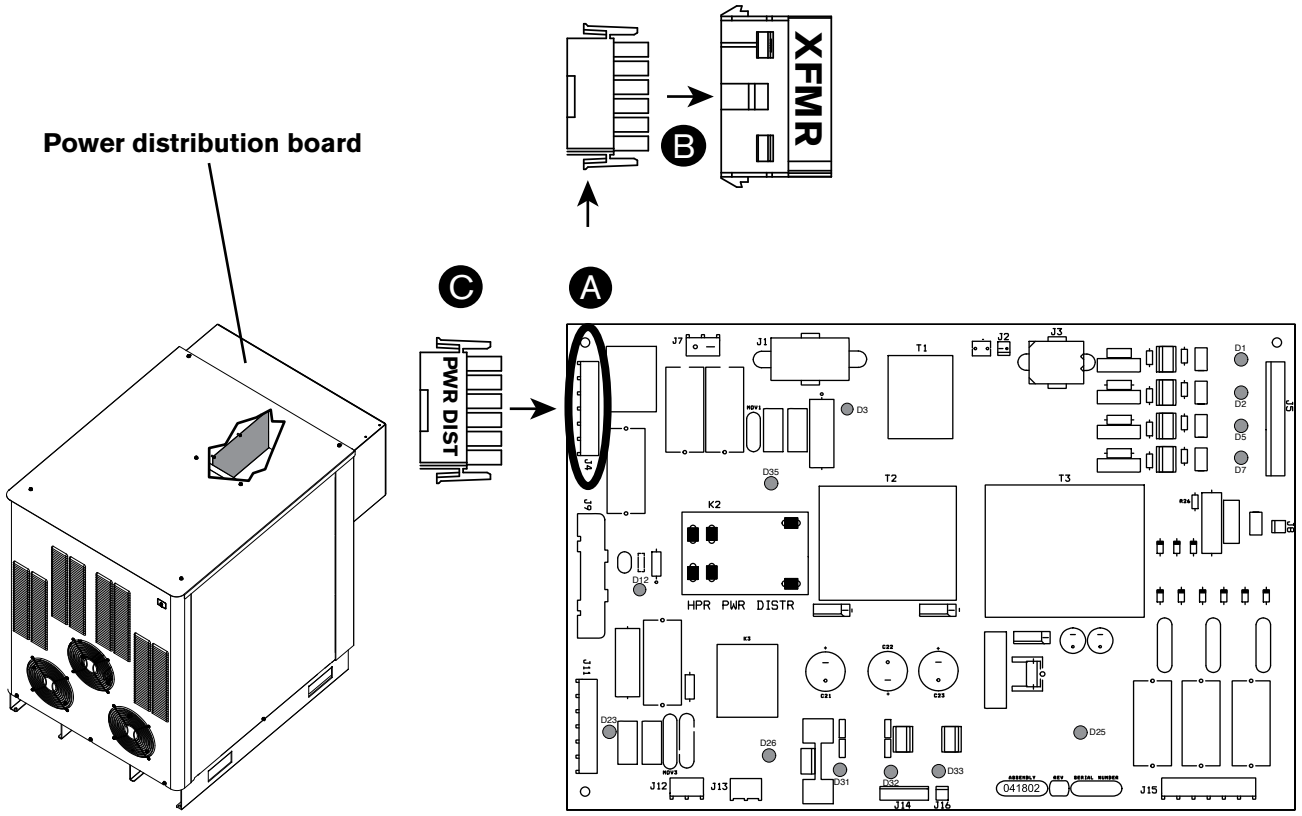
C Plug in the connector on the 229329 harness marked “PWR DIST” into J4 on PCB2.

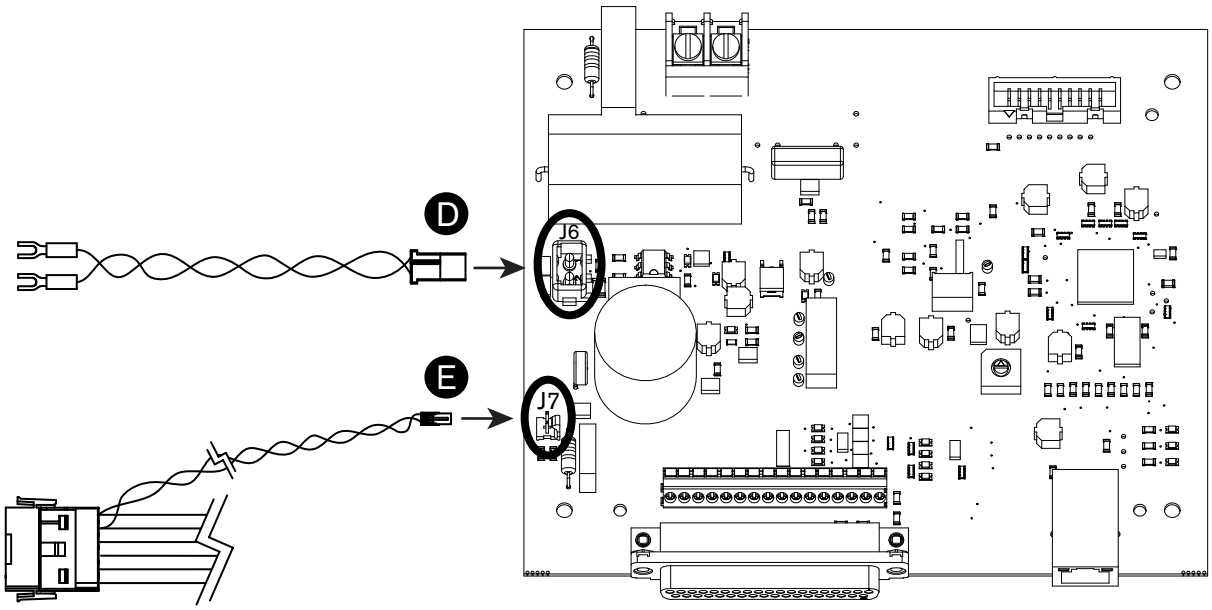
D Plug in the connector on the 229329 harness marked “J13.6” to J6 on the Hypernet interface PCB (141162).

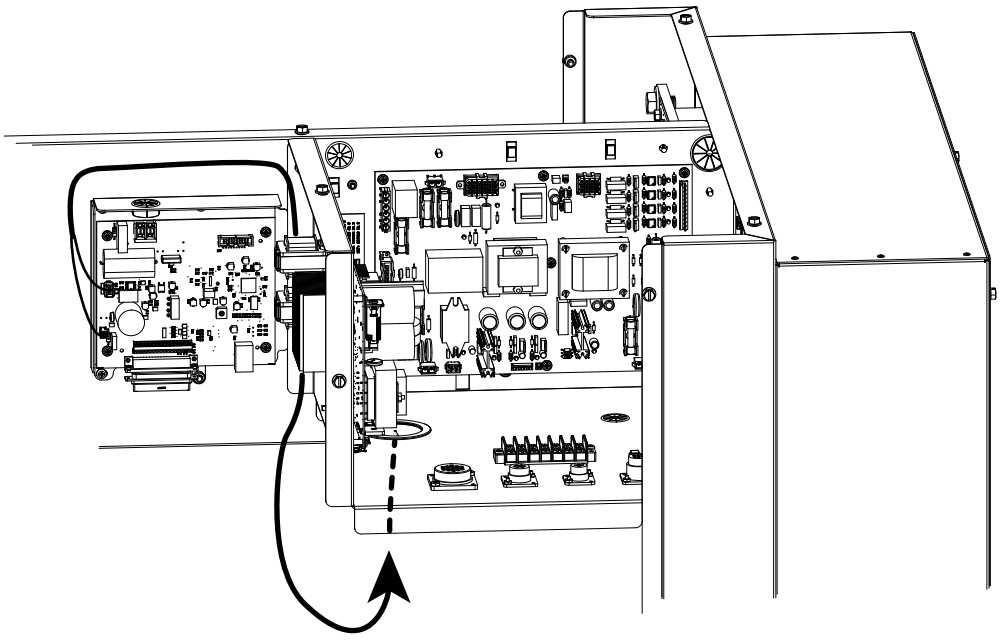
E Plug in the connector on the 229329 harness marked “J13.7” to J7 on the Hypernet interface PCB (141162).

Note: Route the wires from steps “D” and “E” through the grommet on the bottom of the control box. See the figure on the next page.

F Connect the fork terminal on the 229329 harness labeled Number 1 to TB2 location number 1.
Connect the fork terminal on the 229329 harness labeled Number 3 to TB2 location number 3.

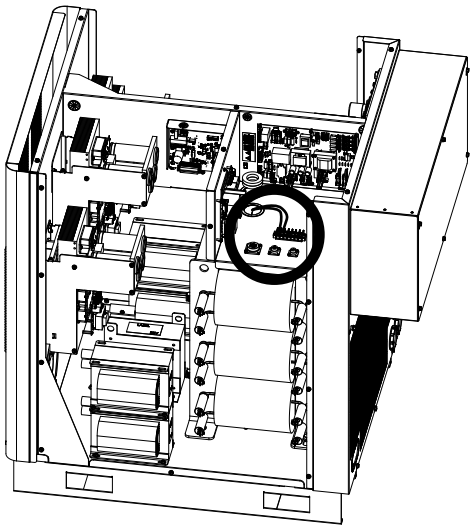


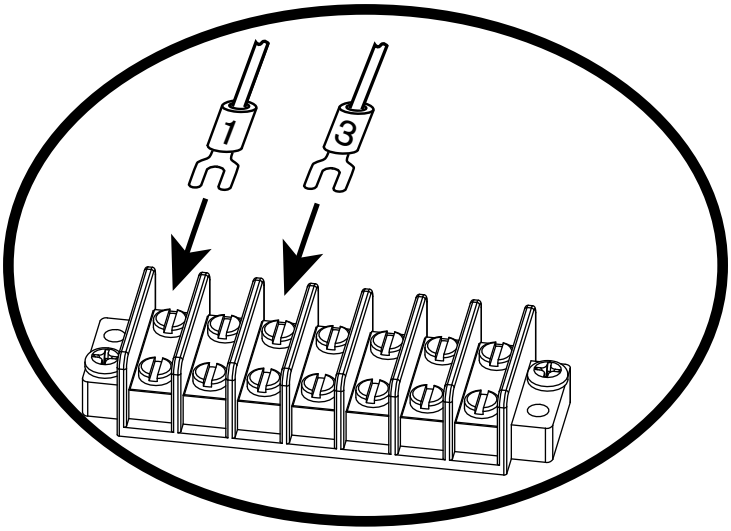




Cable routing to control box routing

F Note: There are other wires present on TB1, locations 1 and 3. The new wires can be installed on top of the existing wires.





Arc voltage wire connections

A Cut the cable tie on the arc voltage wires bundled below the I/O board (numbered 25 and 26).

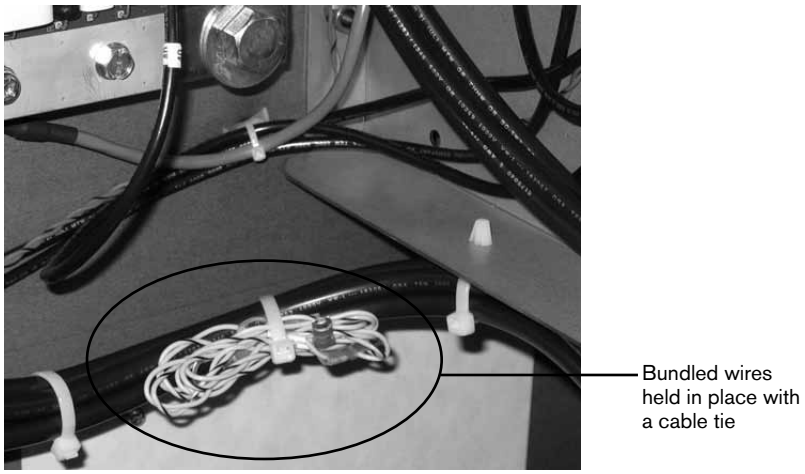
Note: If the bundled wires are only 26 inches long, discard them and use the 64 inch wires (229385) supplied in this kit.

B Make the connections to the Hypernet interface board using the wire ends with fork terminals. Attach wire number 25 to the terminal marked WORK and wire number 26 to the terminal marked ELECTRODE.

C Make the connections to the I/O board using the wire ends with ring terminals. Connect wire Number 25 to the bottom bus bar as shown. Connect wire No. 26 to the top bus bar marked as shown.

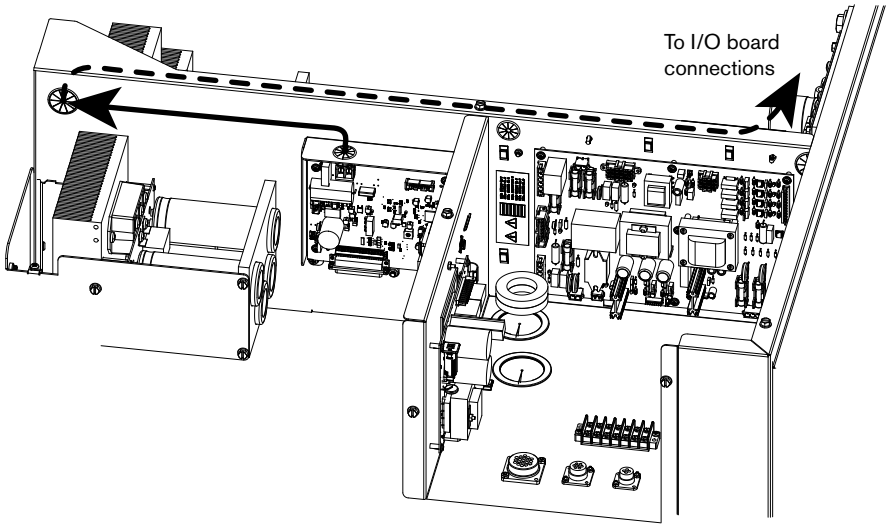
Secure all wires and cables as required.

A



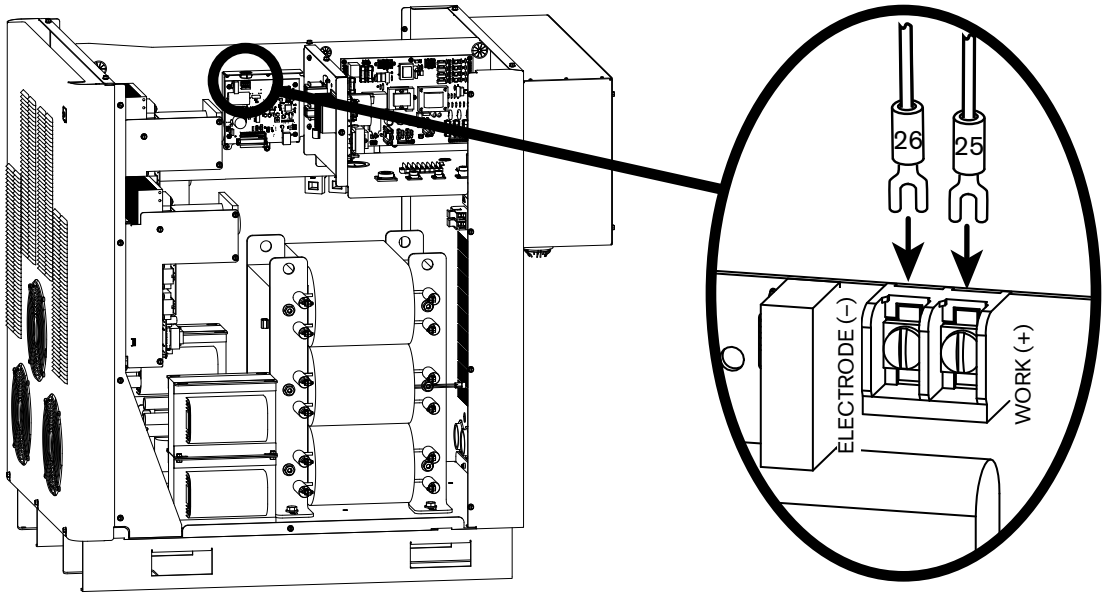
Arc voltage wire location

Note: Attach the arc voltage wires to the existing wire harness with cable ties and route the wires through the grommet and along the opposite side of the center panel to the I/O board.



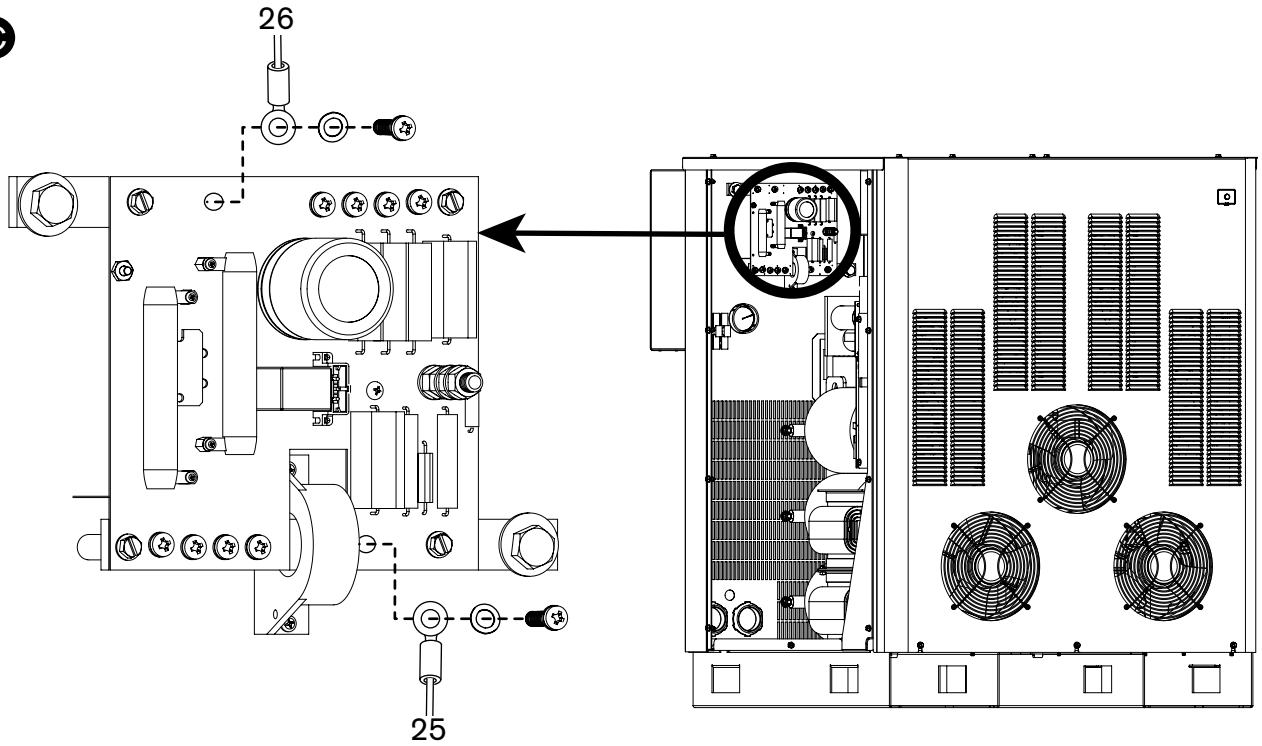
Arc voltage wire routing

B



Hypernet interface board connection

C



I/O board connections

Hypertherm®

Hypertherm, Inc.
Hanover, NH 03755 USA
603-643-3441 Tel

Hypertherm (S) Pte Ltd.
417847, Republic of Singapore
65 6 841 2489 Tel

Hypertherm (Shanghai) Trading Co., Ltd.
PR China 200052
86-21 5258 3330 /1 Tel

Hypertherm Europe B.V.
4704 SE Roosendaal, Nederland
31 165 596907 Tel

HYPERTHERM BRASIL LTDA.
Guarulhos, SP - Brasil
55 11 6409 2636 Tel

www.hypertherm.com