

MAXPRO200[®] ***Hand Torch Repair***

Field Service Bulletin

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		DANGER! 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 <i>Safety</i> section of the system's manual for more safety precautions.		

Purpose

This Field Service Bulletin explains how to replace the handle, the torch main body, or the leads for the MAXPRO200 hand torch.

Required tools and materials

- Number 2 Phillips screwdriver
- T-20 Torx driver

Handle replacement kits

90° torch handle – 228985

Part Number	Description	Quantity
001905	90° hand torch handle	1
002244	Safety trigger assembly	1
027254	Safety trigger spring	1
075841	Screws	6
210185	Label (pre-installed onto the torch handle)	1
210209	Hypertherm IEC label (pre-installed onto the torch handle)	1

65° torch handle – 228986

Part Number	Description	Quantity
001906	65° hand torch handle	1
002244	Safety trigger assembly	1
027254	Safety trigger spring	1
075841	Screws	6
210184	Label (pre-installed onto the torch handle)	1
210209	Hypertherm IEC label (pre-installed onto the torch handle)	1

Torch main body replacement kits

90° torch main body – 428109

Part Number	Description	Quantity
024347	Insulating tube	1
420070	90° torch main body assembly	1

65° torch main body – 428108

Part Number	Description	Quantity
024347	Insulating tube	1
420109	65° torch main body assembly	1

Torch leads replacement kits

25 foot torch lead – 428131

Part Number	Description	Quantity
024347	Insulating tube	1
229498	25 foot lead set	1

50 foot torch lead – 428132

Part Number	Description	Quantity
024347	Insulating tube	1
229499	50 foot lead set	1

75 foot torch lead – 428133

Part Number	Description	Quantity
024347	Insulating tube	1
229500	75 foot lead set	1

100 foot torch lead – 428134

Part Number	Description	Quantity
024347	Insulating tube	1
229501	100 foot lead set	1

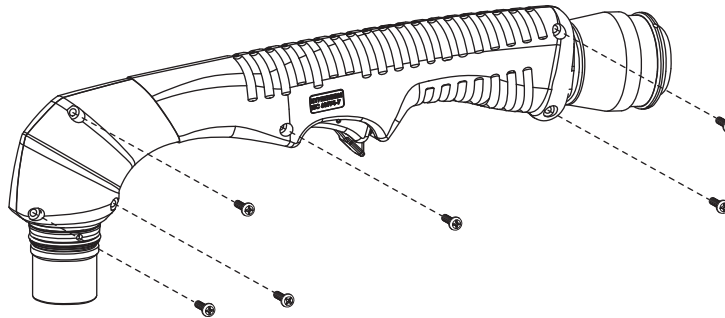
Introduction

- The coolant needs to be drained from the system if you are replacing the leads or the torch main body
- The handle needs to be removed for all kits. Once the handle has been removed proceed to the instructions for:
 - *Handle replacement* on page 4
 - *Torch lead replacement* on page 7
 - *Torch main body replacement* on page 11

Note: Only the 90° torch is shown but the procedures are the same for the 65° torch.

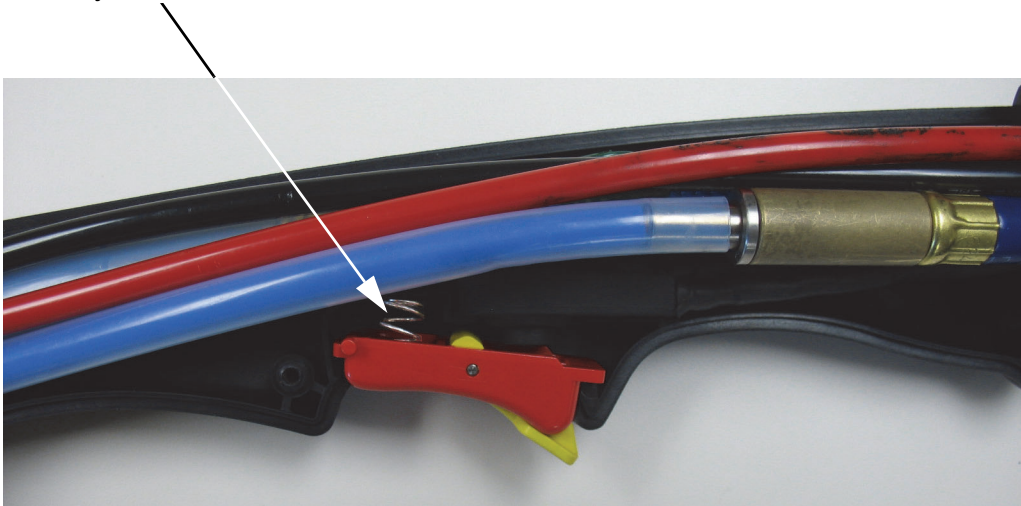
Remove the handles

1. Turn OFF all power to the system.
2. Remove the consumables and the water tube from the torch.
3. Use a number 2 Phillips screwdriver to remove the screws (6) that hold the handle together. Keep the screws for reuse if you are replacing the leads or the torch main body.



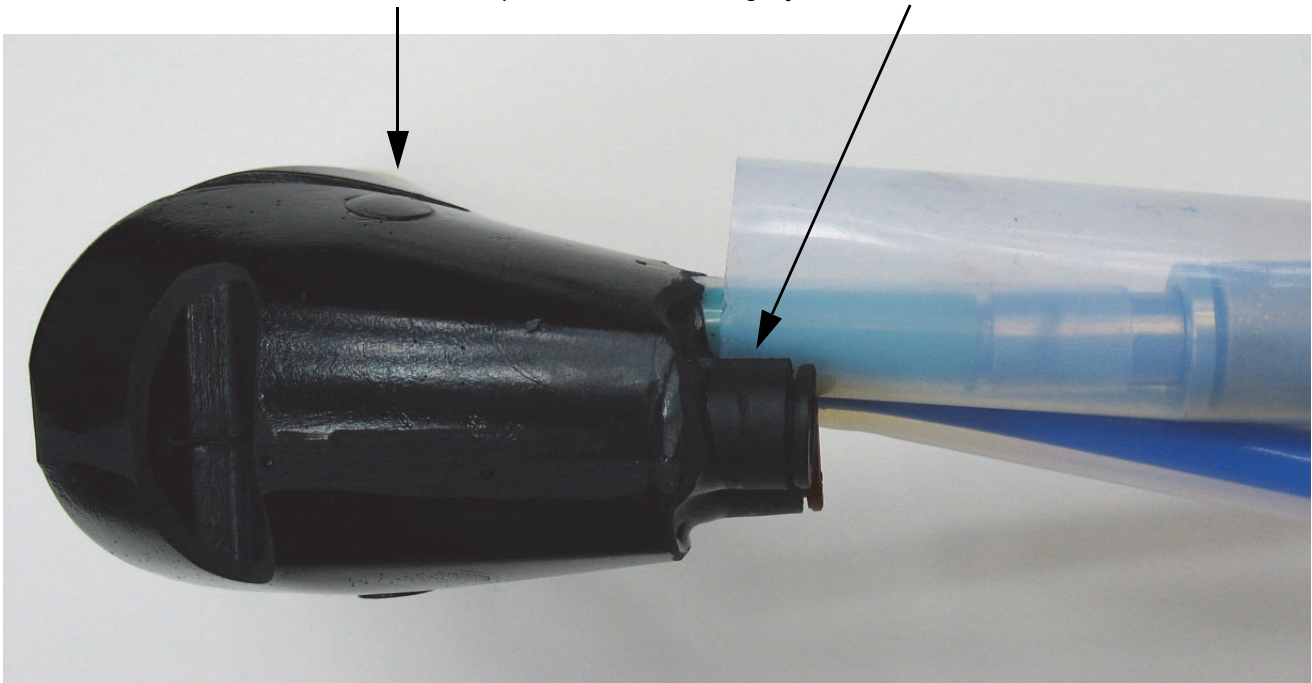
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4. Carefully separate the handle sections so that the trigger spring is not lost. If you are replacing the handle you will also be replacing the spring and safety trigger. Keep the spring and trigger for reuse if you are replacing the leads or the torch main body.

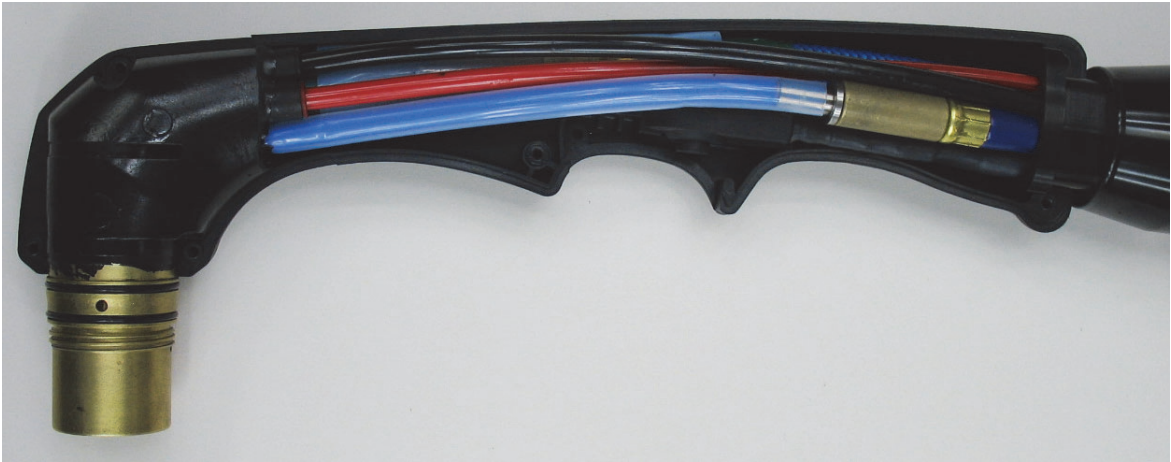


Handle replacement

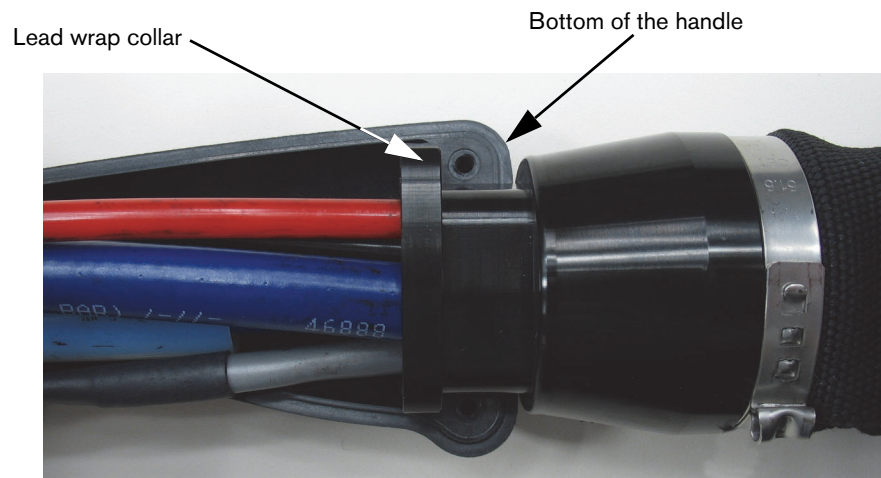
Note: The insulating tube must remain installed on the coolant supply hose (blue braided hose with green tape). It should be as close to the torch head as possible. It slides in tightly between connectors.



1. Install the torch main body, with leads still attached, into one half of the new handle.



2. The collar on the lead wrap must be installed inside the bottom of the handle as shown to prevent the lead wrap from sliding down the leads away from the torch handle.

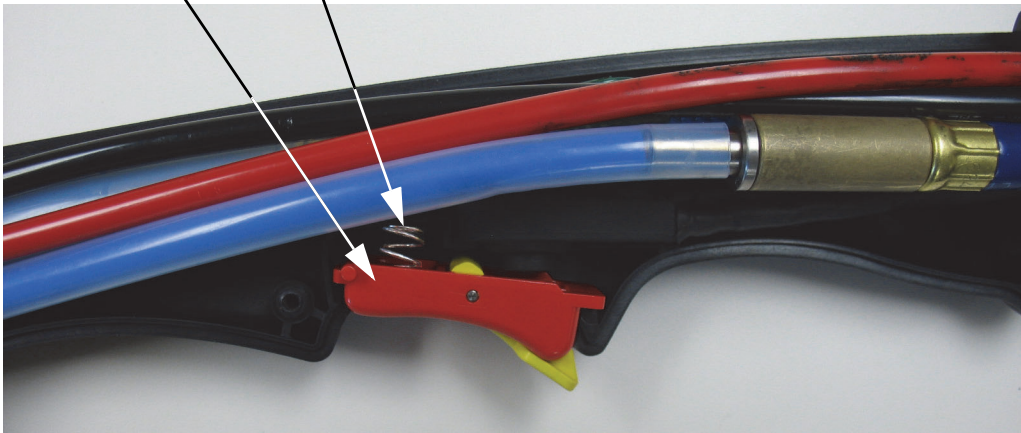


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3. Re-install the start switch as shown below.



4. Install the new safety trigger and spring. You need to compress the spring as you are installing the trigger.



5. While holding the spring and trigger in place, install the other half of the handle using the new screws provided in the kit to secure it.

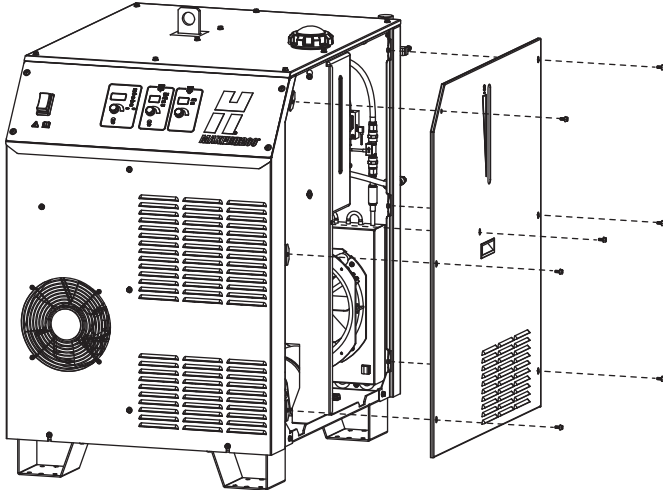
Note: Use the screws you saved when the handles were removed if you are replacing the leads or the torch main body.

6. Make sure the switch functions properly and the installation is complete.

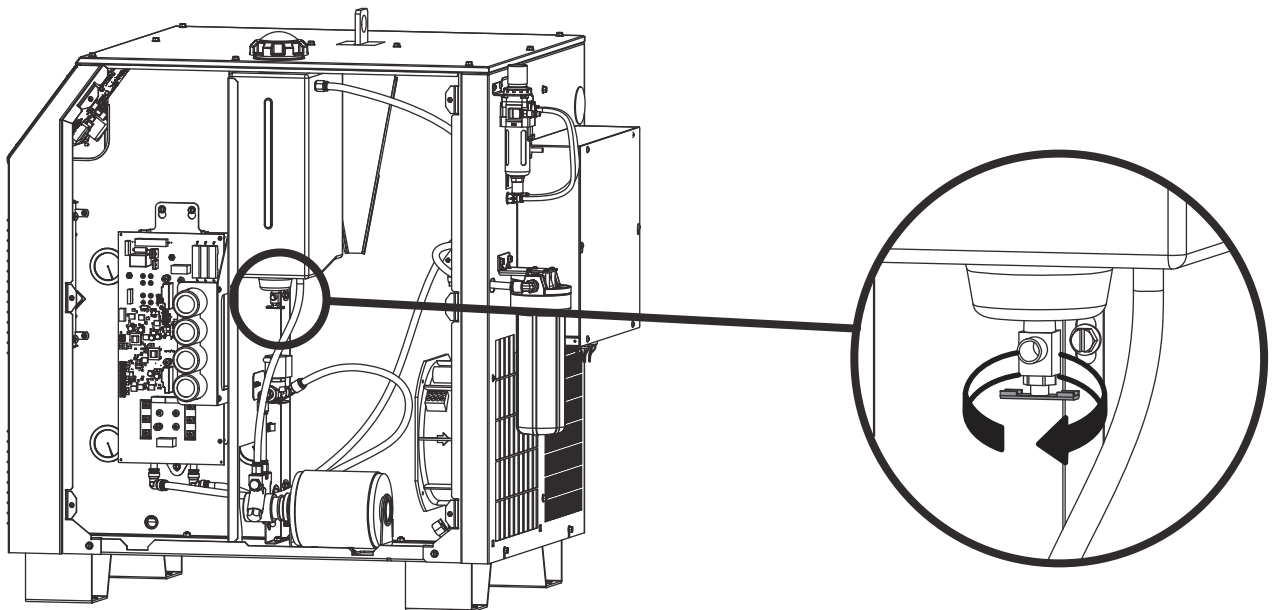
Torch lead replacement

Draining the coolant system

1. Turn OFF the power and remove the right side panel from the power supply.



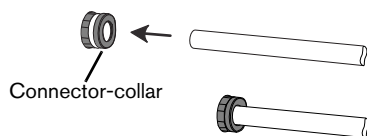
2. Locate the coolant drain valve and use a 20 liter (5 gallon) container to catch the coolant. Coolant will flow as soon as the drain is opened. Close the drain valve when the coolant stops flowing. Always dispose of coolant according to local and national codes.



Push-to-Connect fittings

The torch lead connections use push-to-connect fittings.

- To make a connection, push the hose fitting into the connector until it stops.



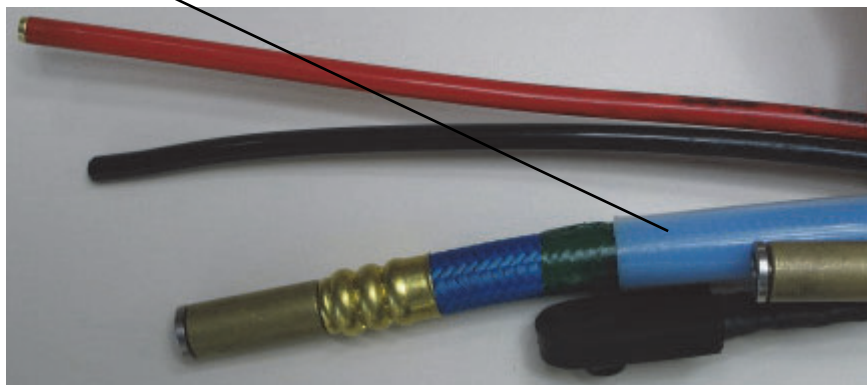
- To disconnect a fitting, push the connector-collar toward the fitting, hold the collar in place and pull the hose away from the fitting.



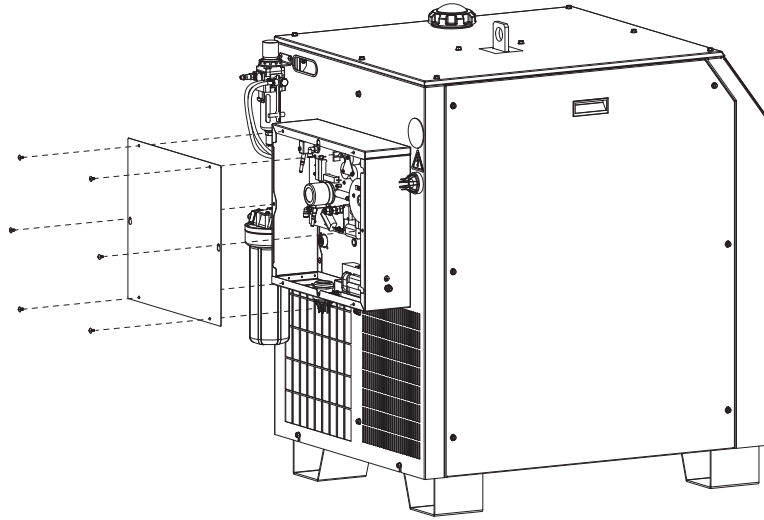
Remove the old lead

1. With the handle already removed (*Remove the handles* on page 3 for details), disconnect the individual torch lead connections from the torch main body.

Note: The new insulating tube in the kit must be installed on the coolant supply hose before making connections.

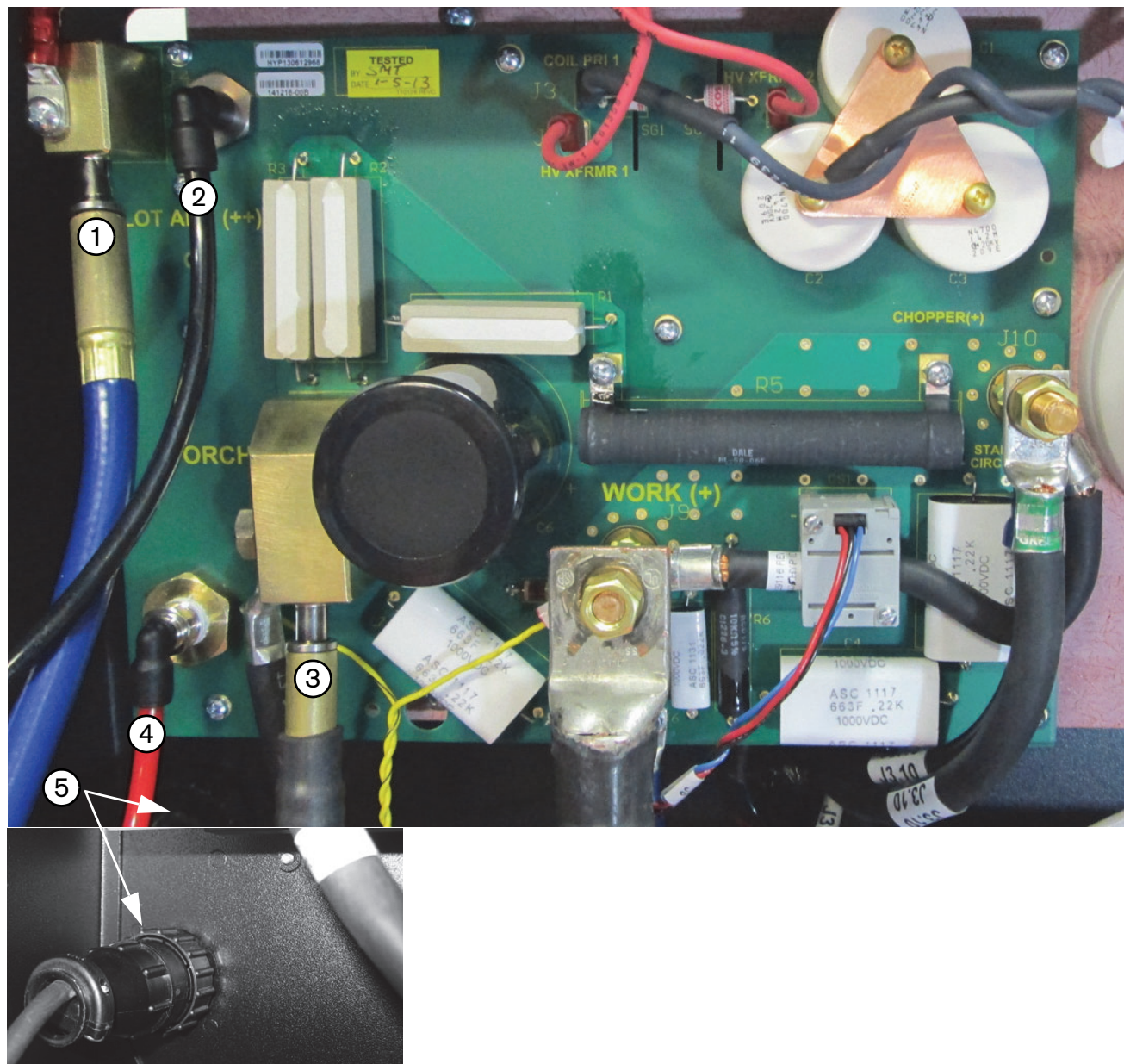


2. Using a T-20 Torx driver, remove the ignition enclosure panel screws (6).



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3. Disconnect the individual torch lead connections from the I/O board in the ignition enclosure located on the rear panel of the power supply. The connections are numbered 1 through 5.



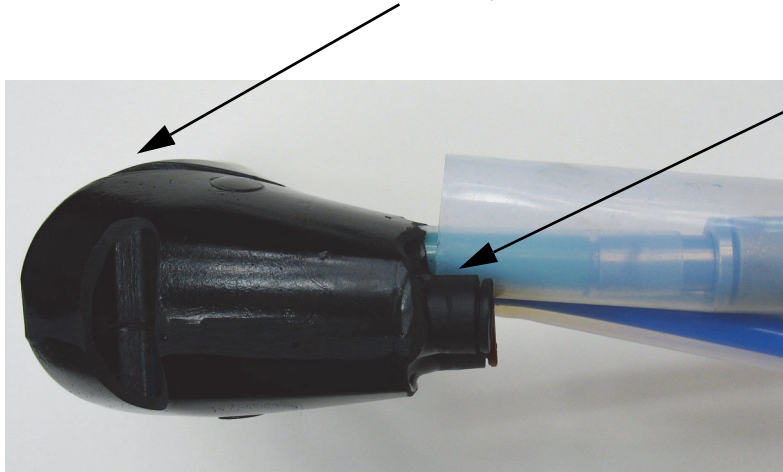
Number	Connection ID	Label/description
1	PILOT ARC (++)	Braided blue hose from the torch lead.
2	Plasma gas hose (no ID on the board)	Black tubing from the torch lead.
3	TORCH (-) / J7	Black coolant hose (supply to the torch lead).
4	Coolant return (no ID on the board)	Red coolant hose (return from the torch lead).
5	No ID on the panel	Torch connector – torch solenoid valve, torch type, and torch identification.

4. Disconnect the torch lead from the ignition enclosure by pressing the collar on the torch lead against the ignition enclosure and turning it until the tabs on the collar align with the corresponding openings in the ignition enclosure.

Install the new lead

Note: See *Push-to-Connect fittings* on page 8 for details on how the connections work.

1. Insert the end of the torch lead through the opening of the ignition enclosure. Secure the collar on the torch lead to the ignition enclosure by aligning the tabs on the collar with the corresponding openings in the ignition enclosure, rotate the collar until it stops, and verify that the collar will not detach when released.
2. Use the pictures and table on page 10 as a reference and connect the cables and hoses to the I/O board.
3. Install the new insulating tube, included in the kit, onto the coolant supply hose (blue braided hose with green tape) and connect the coolant supply hose to the torch main body.
 - ❑ The insulating tube should be as close to the torch main body as possible. It slides in tightly between connectors.



4. Connect the other hoses to the torch main body.
5. See *Handle replacement* on page 4 for instructions on putting the torch back together.

Torch main body replacement

1. Drain the coolant from the power supply. See *Draining the coolant system* on page 7.
2. See *Remove the handles* on page 3 for details on torch disassembly.
3. See step 1 under *Remove the old lead* on page 8 for instructions on disconnecting the leads from the torch main body.
4. See step 3 and 4 above (under *Install the new lead*).
5. See *Handle replacement* on page 4 for instructions on putting the torch back together.

Note: The new insulating tube in the kit must be installed on the coolant supply hose before making connections.