Hypertherm®

# PAC105

# PAC110T

# Torch and Lead Replacement

**Kit # 060208 – PAC110T Lead**
**128478 – PAC105 Lead**
**128833 – PAC105 Torch**

## Field Service Bulletin

**(P/N 804150)**

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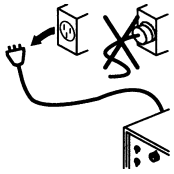
**Hypertherm, Inc.**
**Hanover, NH USA**
**www.hypertherm.com**


**WARNING**
**ELECTRIC SHOCK CAN KILL**



**Disconnect electrical power before performing any maintenance.**
**See *Section 1* of the Operator Manual for more safety precautions.**

# Introduction

## Purpose

Describes necessary steps to replace the torch lead in the PAC105/PAC110T hand torch and replace the PAC105 hand torch on the PMX190c system.

## Tools And Materials Needed

#2 Phillips screw driver
1/4", 5/16", 3/8", and 7/16" wrenches
Channels locks
Heat gun

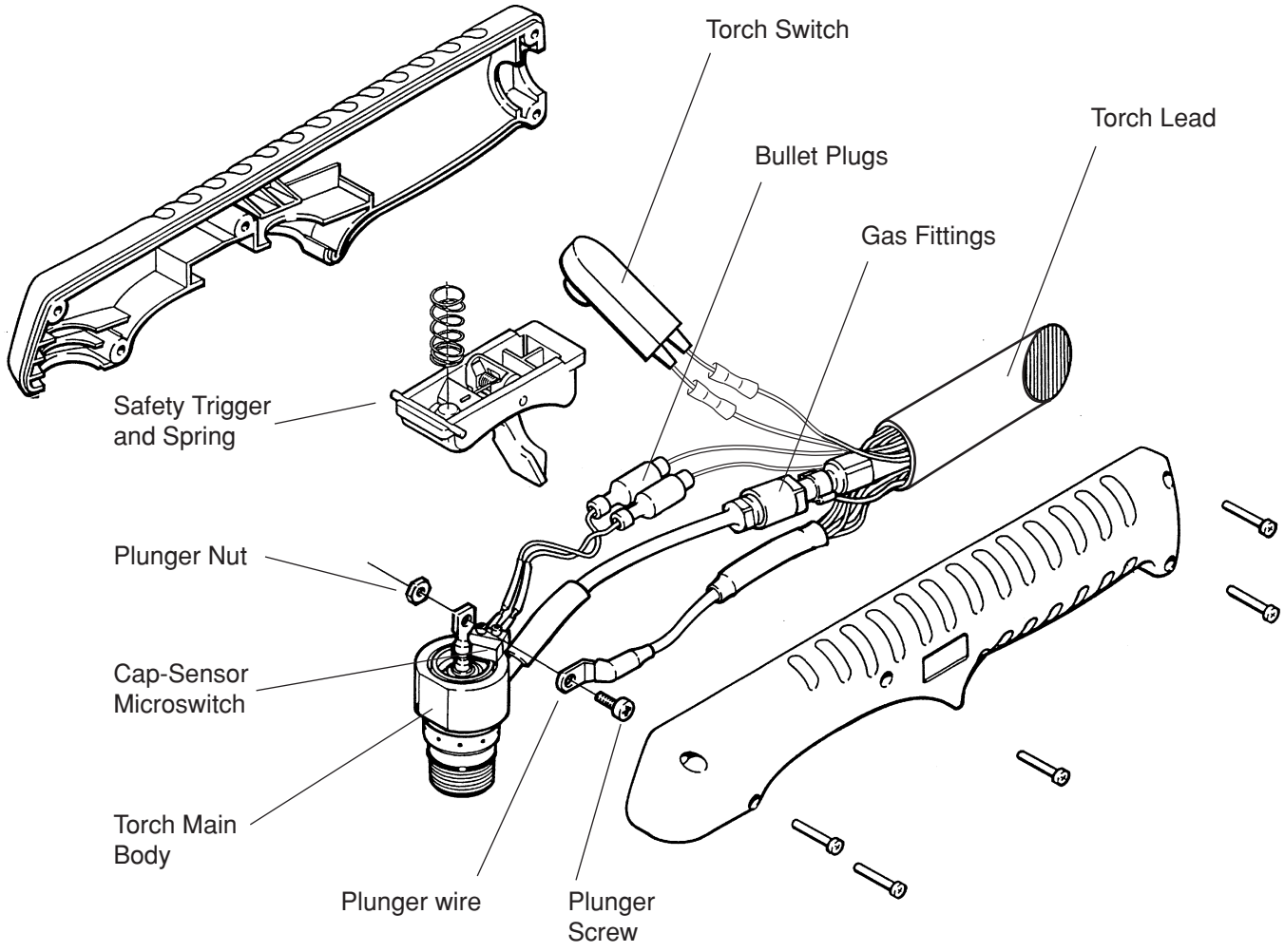
## Lead Replacement Kit Contents

| Item | Part Number | Description | Qty |
|---|---|---|---|
| 1 | 075503 | Lock Nut, 4-40 | 1 |
| 2 | 075504 | Screw, 4-40 | 1 |
| 3 | 023441 | Plunger wire | 1 |
| 4 | 128775 | 20' PAC105 torch lead | 1 |
| | 128554 | 20' PAC110T torch lead | 1 |

**Note:** All items come pre-assembled.

## Torch Replacement Kit Contents

| Item | Part Number | Description | Qty |
|---|---|---|---|
| 1 | 070782 | 20' PAC105 hand torch | 1 |
| 2 | 015283 | Fitting elbow | 1 |
| 3 | 004881 | Heat shrink tubing | 1 |



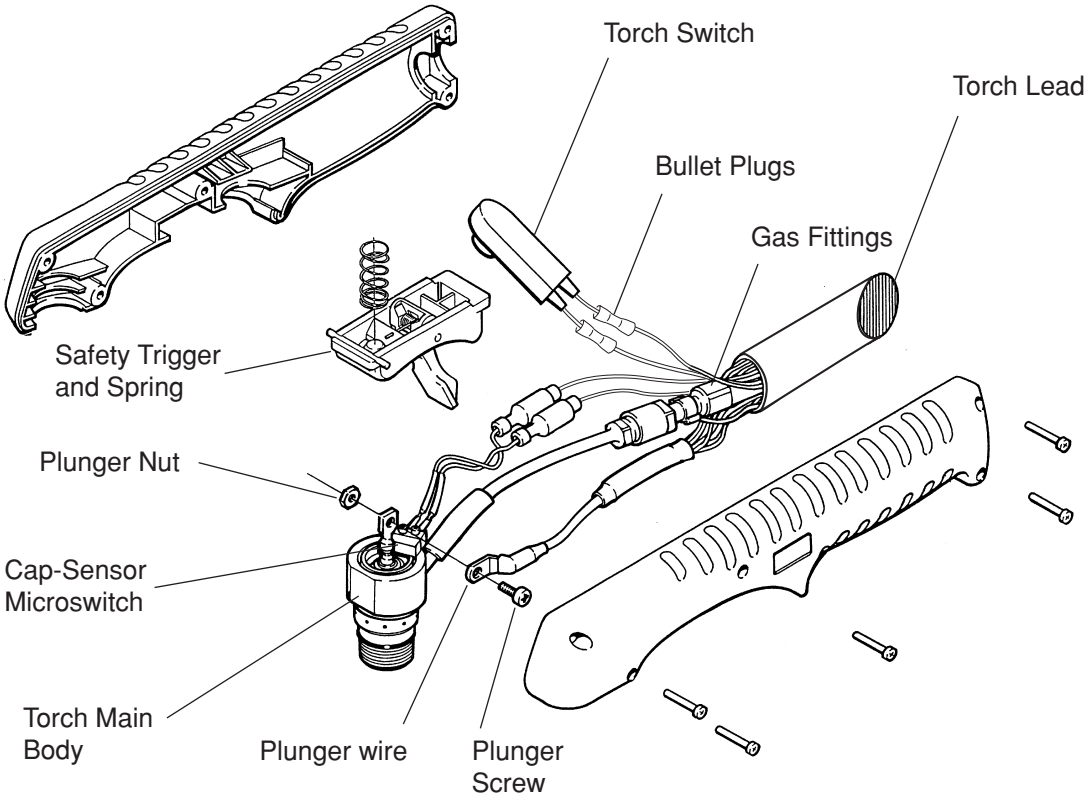

## PAC105 and PAC110T Lead Replacement

### General

1. Disconnect electrical power and gas supply.
2. Remove torch lead from power supply.

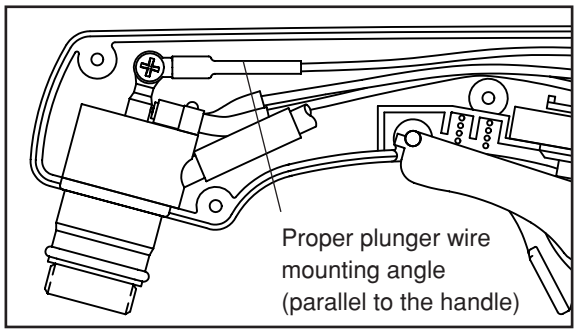
### Remove Torch Head from Damaged Lead

1. Remove the 5 screws that secure the handle halves together and remove handles from torch main body, torch switch, and safety trigger.
2. Pull on bullet plugs to disconnect the lead terminals (2) from the cap-sensor microswitch wired. Do **not** pull on wires.
3. Disconnect the plunger wire from the torch main body by holding the plunger nut with a 1/4" wrench or nut driver and removing the plunger screw.
4. Disconnect the torch main body and torch lead gas fittings using 5/16" and 7/16" open-end wrenches.




## Install Torch Head on New Lead

1. Connect the torch main body and torch lead gas fittings using 5/16" and 7/16" open-end wrenches. Torque to 70 in-lbs or 1/4 turn beyond finger-tight.
2. Connect the plunger wire to the plunger with the kit supplied nut and screw. Hold the plunger wire at the proper angle (see Figure below) and tighten the screw to 8 in-lbs of torque.




3. Connect the 2 cap-sensor microswitch wire bullet plugs.
4. Install the torch main body and torch switch into the handle. Be certain that the torch switch slides into the postion above the safety trigger, and that the trigger movement activates the switch push-button and then releases. While positioning the handle halves together, be careful not to pinch any wires.
5. Replace the 5 screws to secure the handle halves together.
6. PAC105 – skip to page 4.
   PAC110T – connect electrical connections
   - Purple and Blue wires to RC1
   - Red wires to Pilot
   - White wires to Electrode/L2-Red

   Note: Tighten screws to 10 in-lbs (12 kg cm) of torque
7. Tighten strain relief on to the lead.
8. Reinstall the cover and secure with existing screws.
9. Connect gas and power see *Section 3 of the Owners Manual.*
10. Verify that the Cap Off sensor works properly.
    1. Turn On the power supply.
    2. Cap Off and Fault LEDs should illuminate
    3. Turn Off the power supply.
    4. Install consumables.

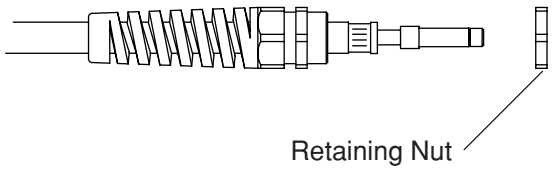
# PAC105 Torch and Lead Replacement

## General

1. Disconnect electrical power and gas supply.

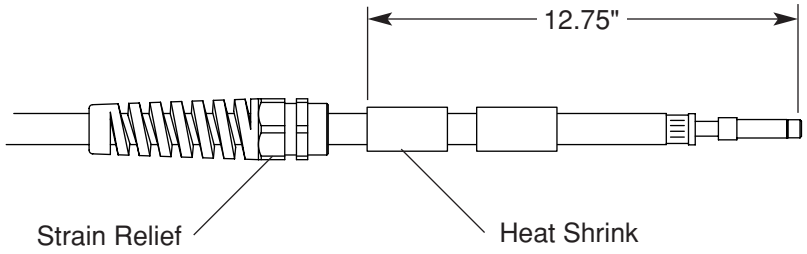
## Remove Torch Lead

1. Remove cover using 1/4" socket or slotted screw driver.
2. Loosen lead strain relief nut on inside of power supply.
3. Disconnect the torch lead electrical connections. Cut any wire ties securing the wires.
4. If the lead is connected with a push-in fitting press the retaining ring and pull the lead fitting out.
   If the lead is connected with a threaded fitting use a 7/16" wrench to disconnect the lead. Then use a 7/16" wrench to remove the threaded elbow fitting from the compressor and replace it with the provided push-in elbow fitting, Part No. 015283, using a 3/8" wrench.
5. Discard old lead.
   Note: Save plastic retaining nut for installation of new lead.




## Prepare Torch Lead For Installation

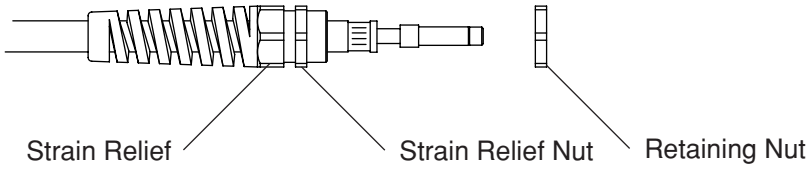
1. Install heat shrink tubing on power supply end of torch lead using heat gun.
   - For models with a cooling coil on the compressor skip to Step 2.
   - For models without a cooling coil on the compressor place the included heat shrink as shown below.




2. Hand tighten strain relief on lead.
   Note: Must be loose enough to slide along the lead.
3. Slide strain relief unitl it stops against the heat shrink.
4. Hand tighten strain relief.

## Install Torch Lead

1. Slide new torch lead through the chassis and slide the strain relief nut over the lead.
   Note: Do not tighten strain relief.
2. Push the lead fitting completely into the push-in fitting on the compressor.
   Note: Pull on the lead fitting to verify that the connection is secure.
3. Reconnect the electrical connections, matching the color of the wires to the labels on the power board.
4. Secure the wires in their original positions using wire or cable ties.
5. Use channel locks to snug the strain relief nut on the inside of the chassis.
6. Hand tighten strain relief to secure the lead.




7. Reinstall the cover and secure with existing screws.
8. Connect gas and power see *Section 3 of the Owners Manual.*
9. Verify that the Cap Off sensor works properly.
   1. Turn On the power supply.
   2. Fault LED should illuminate
   3. Turn Off the power supply.
   4. Install consumables.