PAC611

Torch Insulator Upgrade

Field Service Bulletin
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HYPERTHERM®

PAC611

Torch Insulator Upgrade

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PAC611 Torch Insulator Upgrade

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INTRODUCTION

Purpose

This field service bulletin will enable a qualified technician to upgrade the PAC611 torch's quick disconnect assembly with a new torch insulator.

This upgrade will correct the problem of retaining rings popping off of the quick disconnect sockets when sockets are rotated. The modified insulator now has a groove in its internal wall to allow for clearance of the retaining rings when sockets are rotated.

Included in this upgrade are a new torch insulator and stainless steel retaining rings.

P/N	Description	Qty
120136	Insul:PAC611 Fr-End INTFCQDISC	1
027403	Crescent Ring:13/32	3

WARNING

Work described in this manual must be performed only by qualified technicians!

REMOVING PAC611 TORCH FROM CUTTING MACHINE

1. Remove torch from quick disconnect assembly.

WARNING - HIGH VOLTAGE!

Power to the HT4100 system must be disconnected before proceeding with torch modification! Turn all related disconnect switches to OFF position. Lock out and tag out switches.

2. Shut down HT4100 system and turn line disconnect switch(es) to OFF. See warning above.

3. Disconnect leads from high frequency console and motor valve console. See IM165 instruction manual (HT4100:Installation), and IM222 instruction manual (PAC611 Quick Disconnect Torch), if necessary.

4. Disconnect air hose from air supply.

5. Remove PAC611 Quick Disconnect Assembly (028804) and leads from cutting machine.

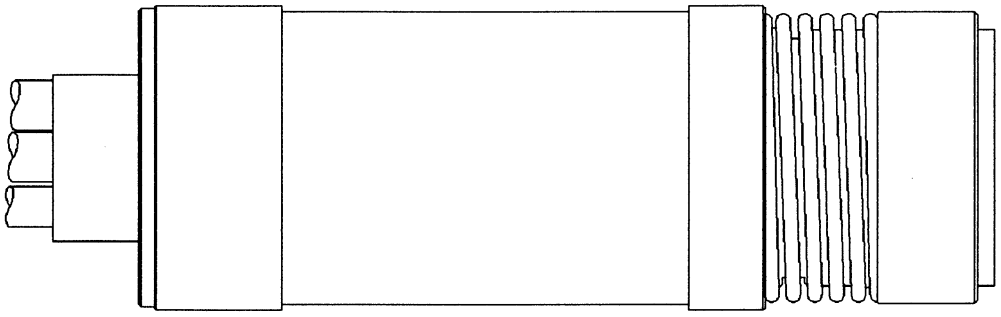

Figure 1 PAC611 Quick Disconnect Assembly (028804) without Torch and Bellows

REMOVING LEADS FROM QUICK DISCONNECT ASSEMBLY

1. Unscrew PAC611 housing (120130) from quick disconnect assembly.
2. Slide housing over torch leads to expose connections to quick disconnect assembly.

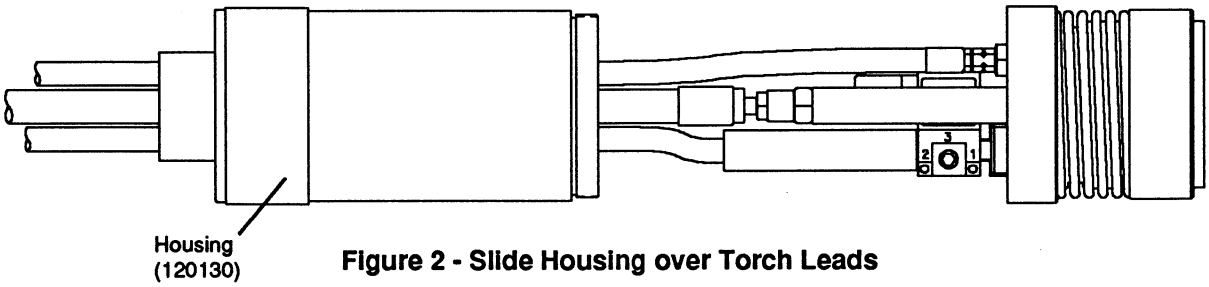

Figure 2 - Slide Housing over Torch Leads

3. Disconnect air hose, shield hose, pilot arc cable, water out and water in hoses from quick disconnect assembly. Note: Do not disconnect plasma hose or off valve assembly at this time.

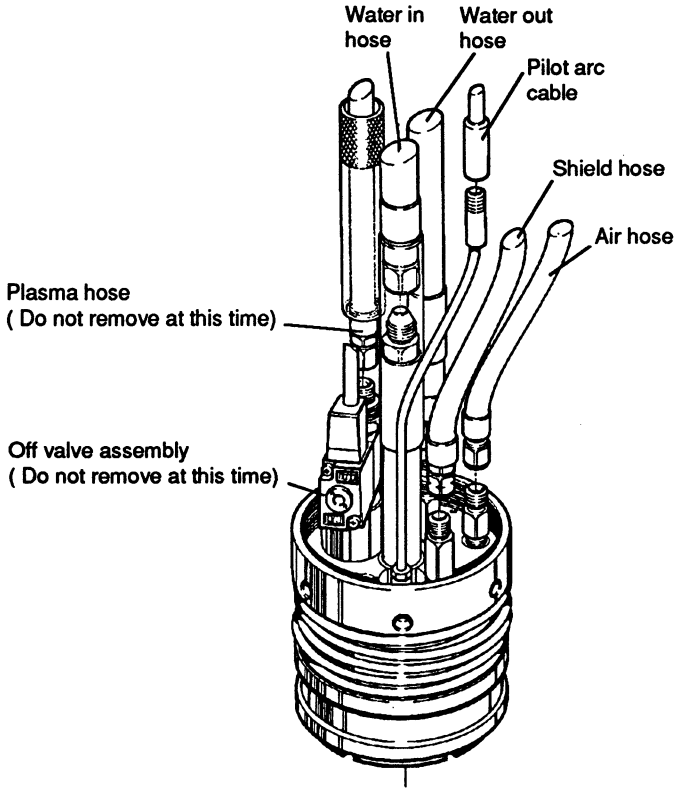

Figure 3 - Disconnecting Leads

4. To remove plasma hose and off-valve assembly (029933), remove retaining ring (027403) from inside of quick disconnect assembly and pull out off-valve assembly. See Figure 4.

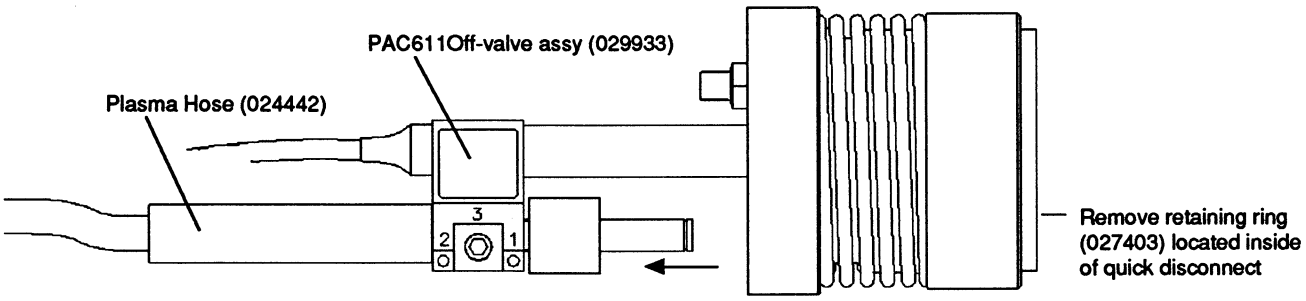

Figure 4 Removing Off-valve Assembly and Plasma Hose from Quick Disconnect Assembly

REMOVING TORCH INSULATOR

1. Remove retaining rings from the other sockets and remove sockets.

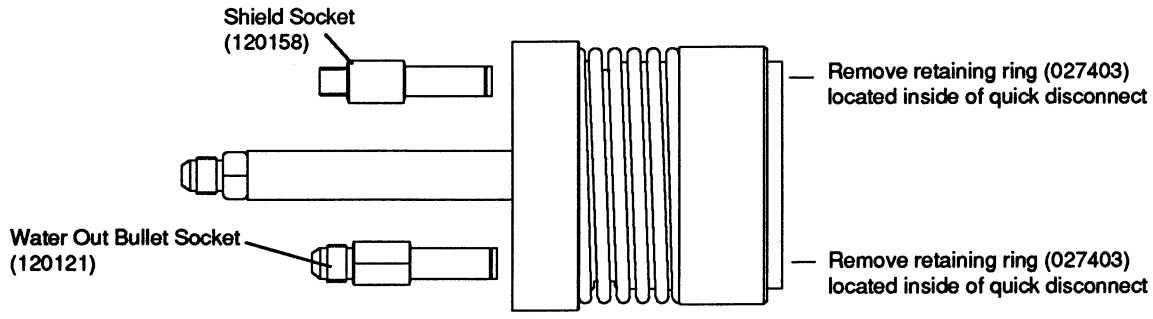

Figure 5 Removing Sockets from Quick Disconnect Assembly

2. Remove 3 screws (075448) that connect torch insulator (120136) to quick disconnect assembly. Torch insulator with attached pilot arc connection and water-in center connector will fall out easily.

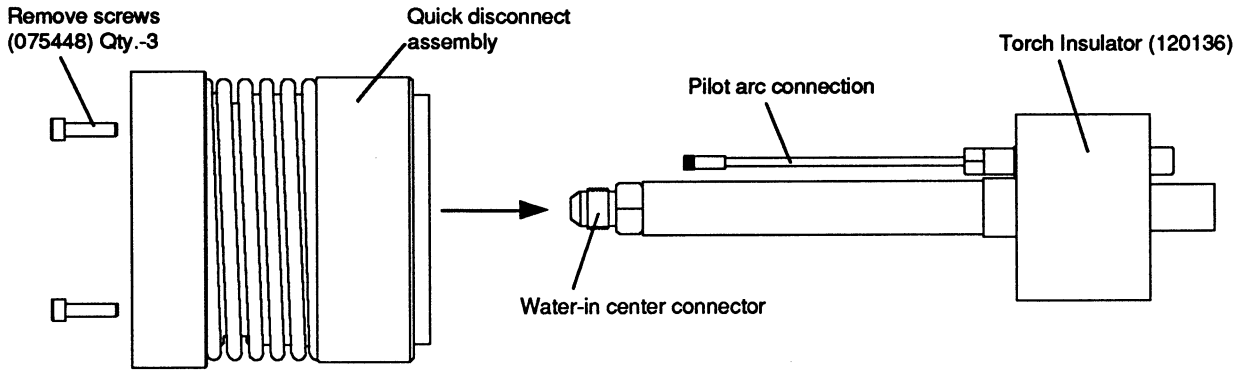

Figure 6 Removing Torch Insulator from Quick Disconnect

3. Remove water-in center connector (120154) by unscrewing, using a 9-16" wrench on one end, and a protected pliers or vice-grip to hold the brass center piece (120122) on the other end.

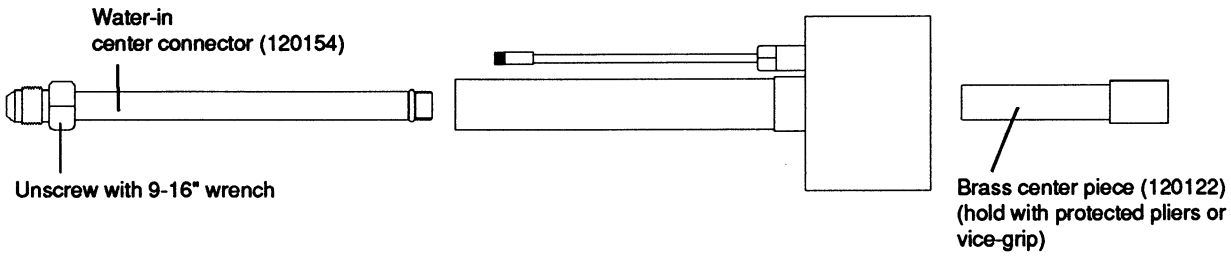

Figure 7 Removing Water-In Center Connector from Torch Insulator

4. Unscrew pilot arc connector from torch insulator by turning clockwise on the hex portion of the connector until the connector drops out the other end. See Figure 7 for before and Figure 8 for after pilot arc connector removal.

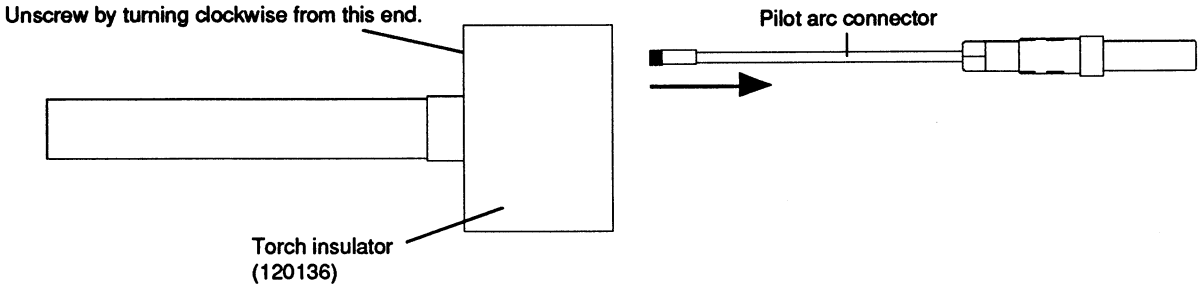

Figure 8 Removing Pilot Arc Connector from Torch Insulator

REPLACEMENT WITH UPGRADED TORCH INSULATOR

1. Take new modified torch insulator and install in quick disconnect assembly by reversing instructions in this bulletin. Note: Replace all retaining rings with stainless steel retaining rings supplied with this upgrade.

2. PAC611 torch insulator upgrade is complete.