Technical Support

Subject
RAPTAIR-MF Welder/Booster Low/No DC Current

System or Parts affected

- RAPTAIR-MF (D600005 / 7)
  - Genset Ribbon Cable P/N# 3550856

Overview

- A small number D600005/D600007 Raptair Multifunctions may have left the factory with an improperly manufactured 14 pin male welder connector.
- The pins in this connector may not have been fully locked into the connector, and could potentially be pushed back into the body of the male connector when connecting to the female.
- This can prevent good connection between the welder control box and the DC side of the booster/welder.
- The connector can be corrected rather than replacing the cable. (Cable replacement requires removal of the generator)

Symptoms of this problem:

- lack of power to the welder
- Incorrect voltage to the battery booster
- Inoperative battery booster

Before you start

- Completely read this document before attempting repair of diagnostics.

Ensure Multifunction is completely turned off/shut down.

Inspection

Connector inspection:

1) Disconnect the welder control box from the Multifunction at the connector at the Multifunction.
2) Closely inspect the male pins in the connector at the end of Multifunction side of the connection.
3) Pins should stand at uniform height from the connector, and the metal shoulder should be visible at the base of each pin. (Figure 1)
4) If pins are uneven and/or the shoulders of the pins are not visible, the pins are not seated correctly. (Figure 2)

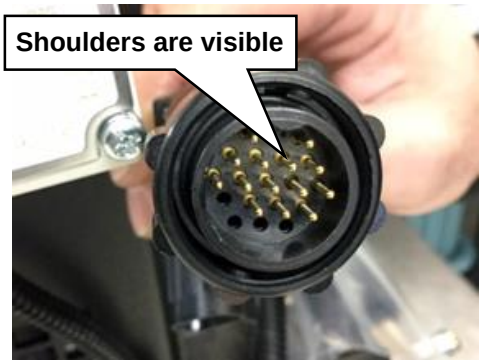

Figure 1 – Example good plug

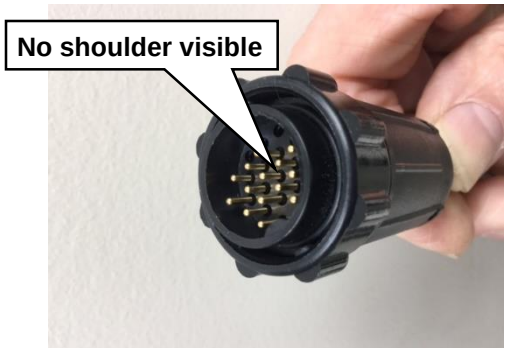

Figure 2 – Example of poorly seated contacts

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EXT-MF-017	A	Tech	Document Release	BDJ 15 Feb 2016	BPC 16 Feb 2016	N/A	16 Feb 2015

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Corrective Action:

Connector Disassembly:

1. Locate and clean the connector. Provide a clean, solid surface to work on. (fig3)
2. Remove the two screws and wire retainer clamp from the base of the connector**.** (Fig 4)
3. Slide the knurled knob forward while turning it to find its locking point. Once locked you can loosen off the threaded connector cover. (Fig 5)
4. Grasping the cable with one hand, pull the cover back exposing the inside of the connector. (Fig 6-7)

Do not pull connector cover back while holding connector body. May result in wires & pins being pulled completely out of connector!

Figure 3 – Plug location

Figure 4 – Plug disassembly

Figure 5

Figure 6

Figure 7

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Seating the Pins:

1. Using a small flat screwdriver, from the inside of the connector press the pins into the body of the connector, taking care not to damage the wire. The pins will seat with a distinct ‘click’.
2. Pins should be uniform height in connector, tips almost flush with rim, all with shoulder showing as in Figure 1.

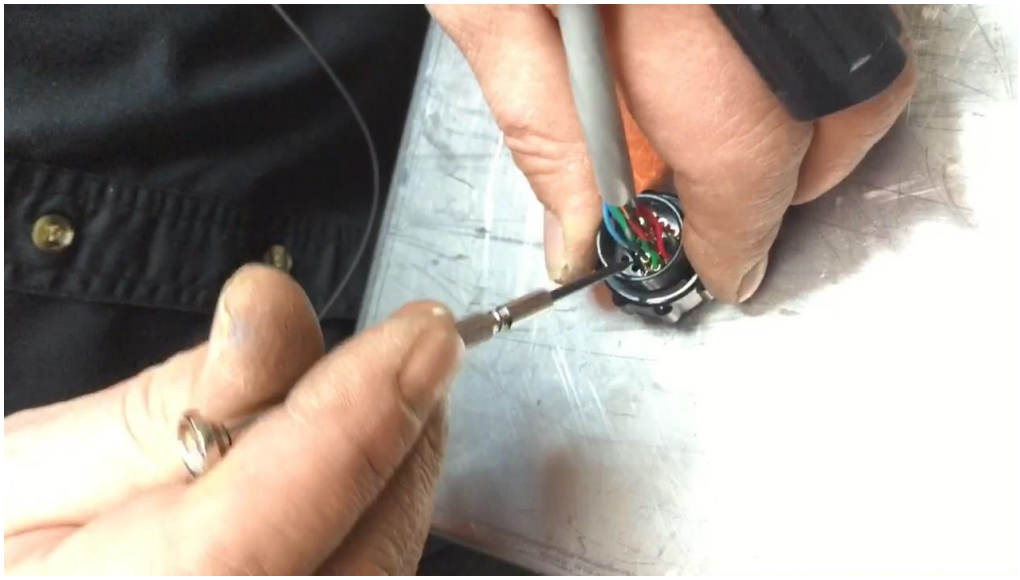

Figure 8

Take special care not to damage insulation or wires.

Reassembly

1. Reassemble connector in reverse order of disassembly.
2. Connect Welder Control as per Installation Manual and test.

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