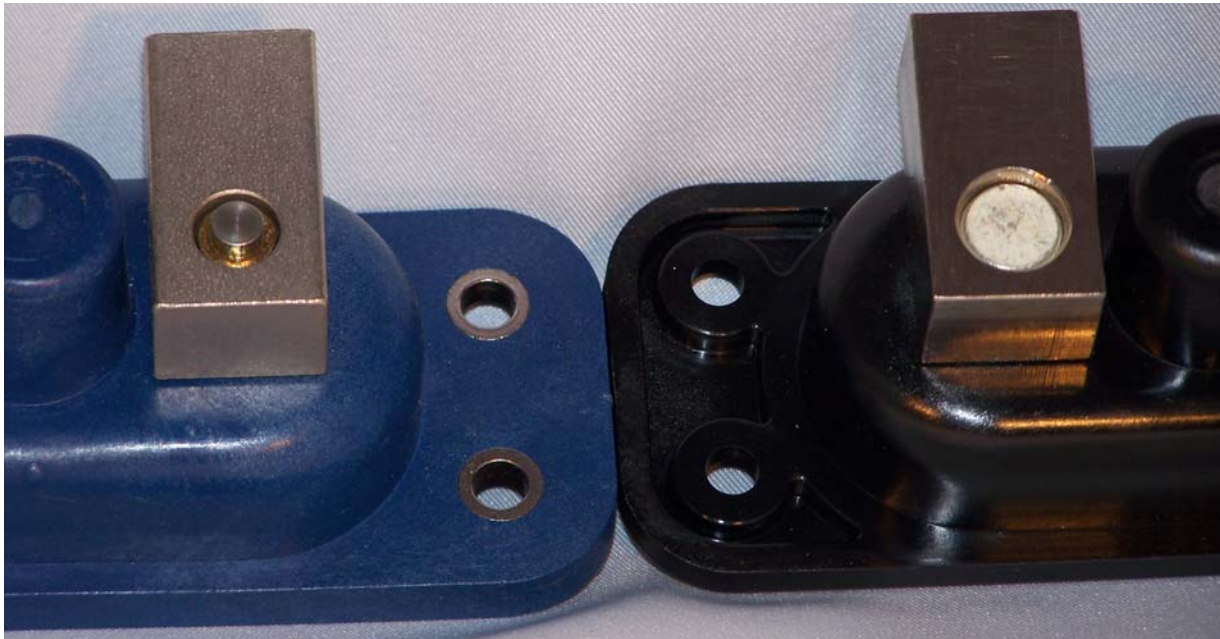




Improved Battery/Power Connectors for Aircraft and Other High Current Applications

MS3509 Receptacle: Old vs. New



Molding Material Improvements

- Higher Heat Tolerance (HDT over 500°F)
- Robust and Chemical Resistant
- Better Design for Manufacturing- no sink marks

MS3509 Receptacle: Old vs. New



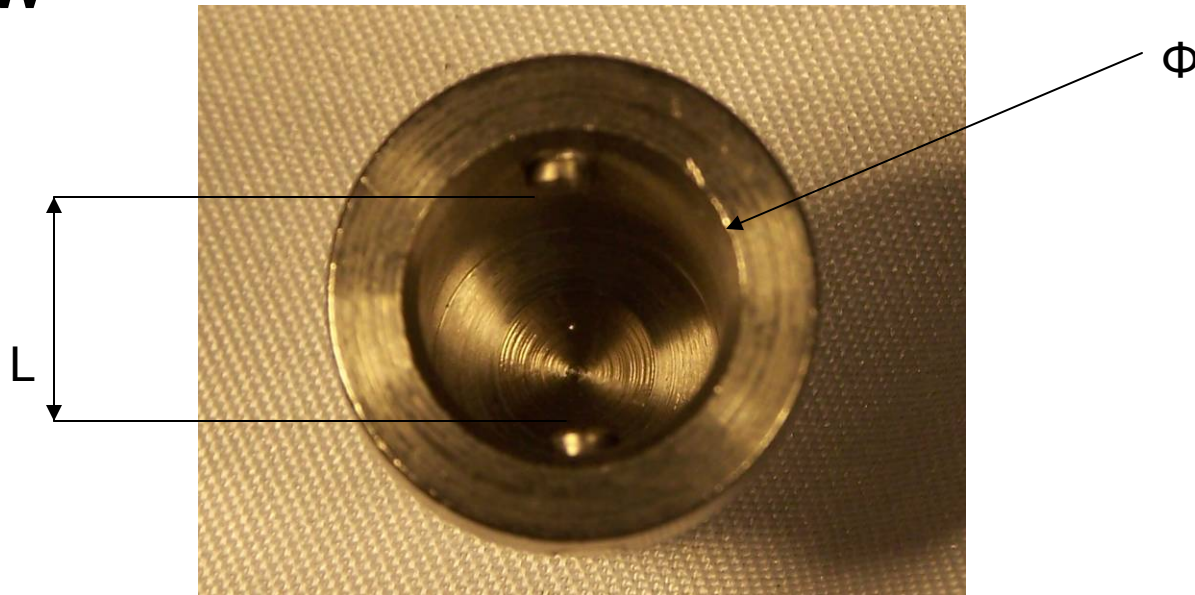
Mounting Holes

- Eliminated plated steel mounting ferrules
 - Reduced cost (4 less inserts)
 - Removed 4 rust sources



Improved Locking Pin Engagement

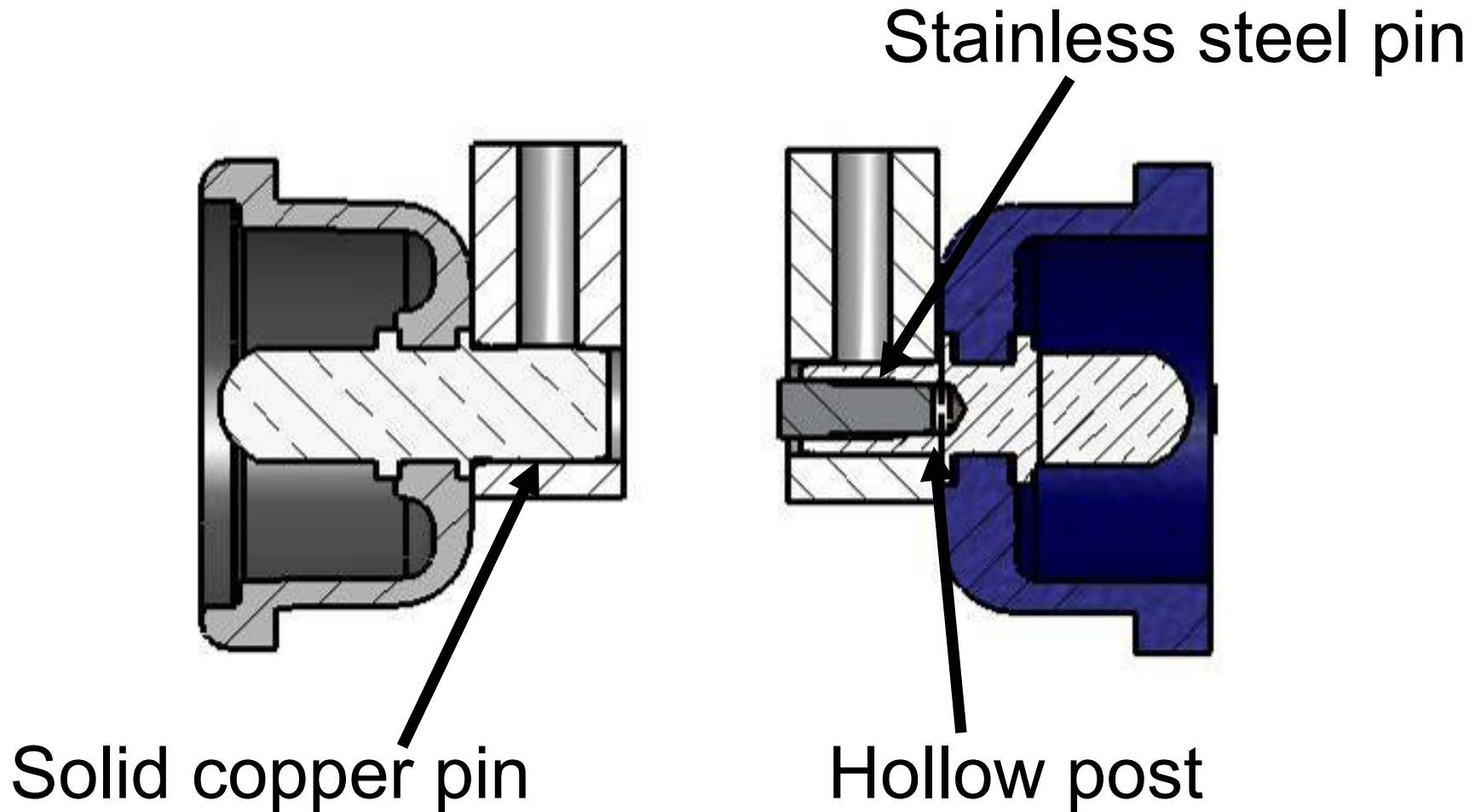
- Reduced tolerance on pin chamfer
- Reduced tolerance on hole diameter (Φ)
- Reduced distance between pins (L)
- Increased engagement with mating worm screw



Lower Resistance Terminal Adapter Assembly

- Improved consistency and quality
- Two less components in assembly
- Less mistakes in customer assembly
- Eliminated stainless steel and hollow post from circuit
- Uses same low-resistance design as 7007 Quick Disconnect (MS25182-2)
- Copper terminal adapter better than ledloy

Lower Resistance Terminal Adapter Assembly

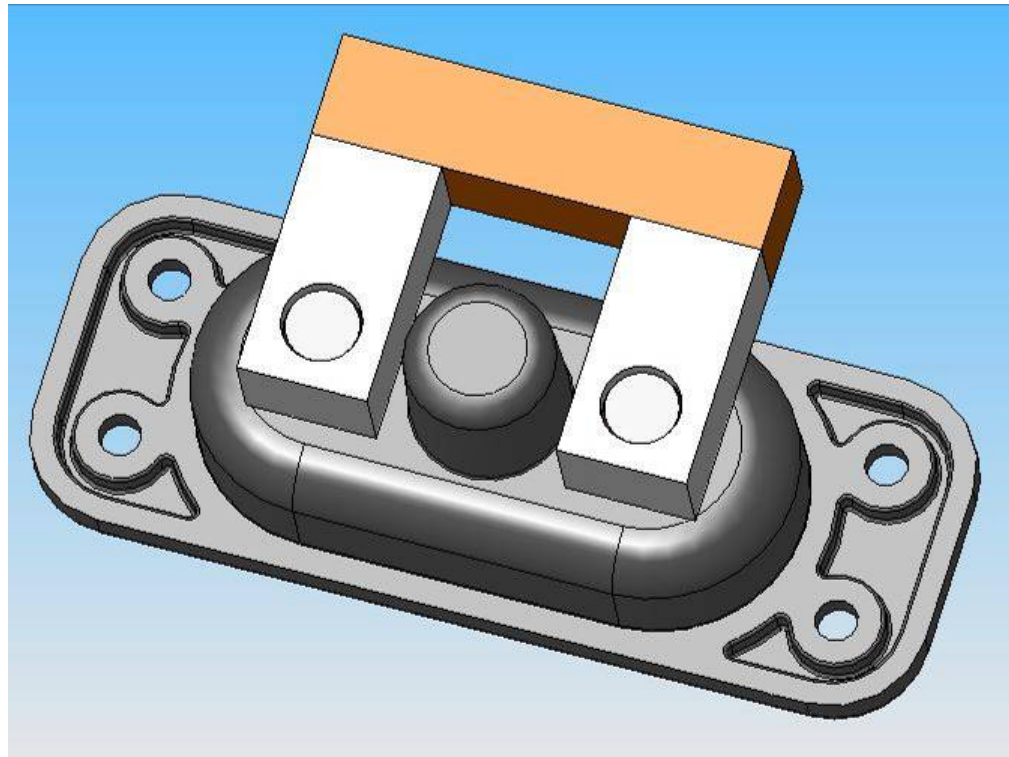


Test Program

- Prototype samples and standard Receptacles were mated to P/N 7007 & tested @ 1500A
 - 3 type 3509-28 receptacles
 - Prototype with steel terminal blocks
 - Prototype with copper terminal blocks
- Terminal blocks shunted with copper block of same C.S
- Volt drop measured at cable connections in mating connector P/N 7007

Receptacle Test set up

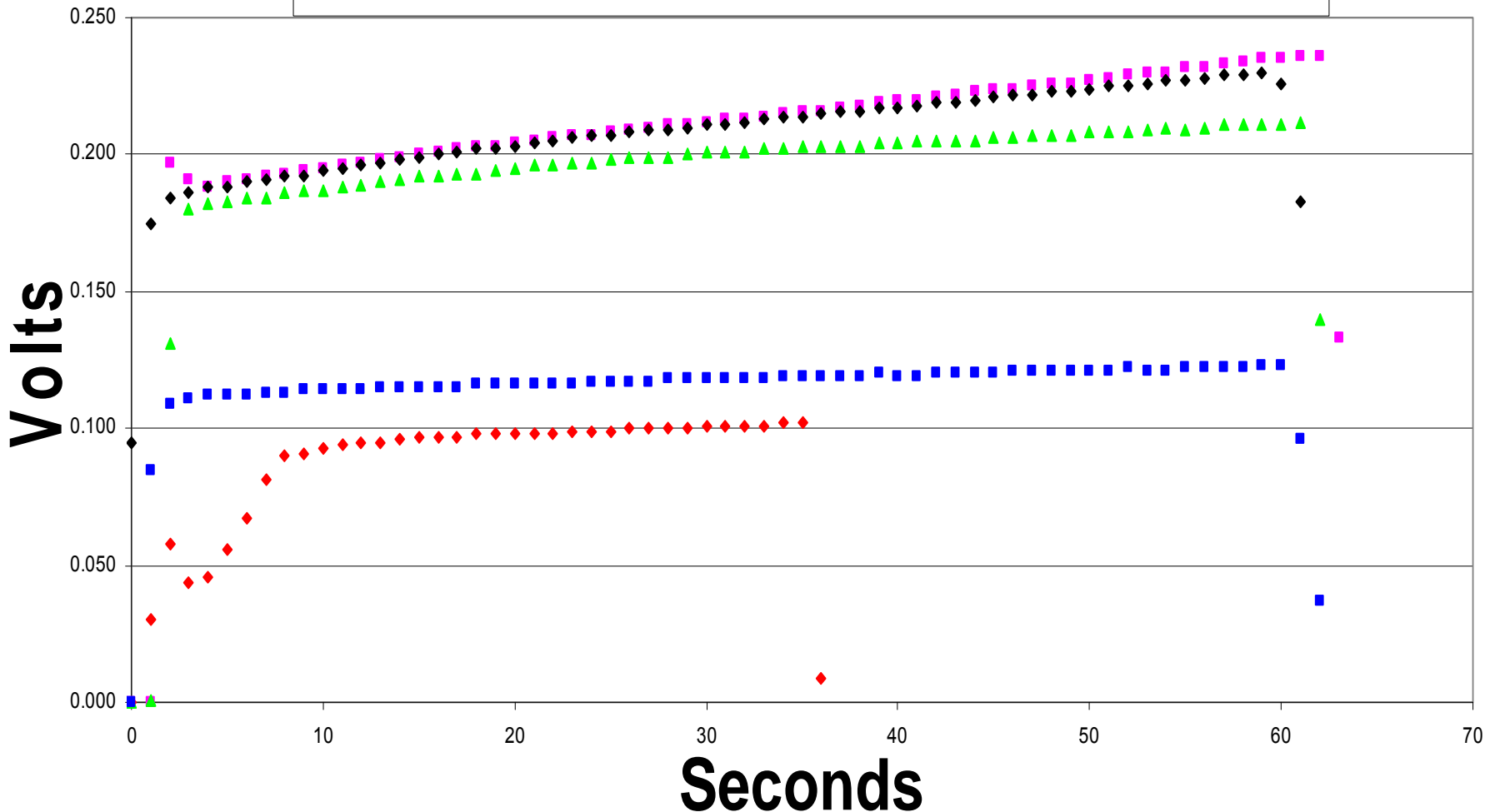
- Copper shunting bar bolted in place across adaptor blocks



Volt Drop @ 1500A

P/N 7007 & 3509-28: Prototype, Standard

◆ Cu ■ 3509#1 ▲ 3509#2 ◆ 3509#3 ■ Steel



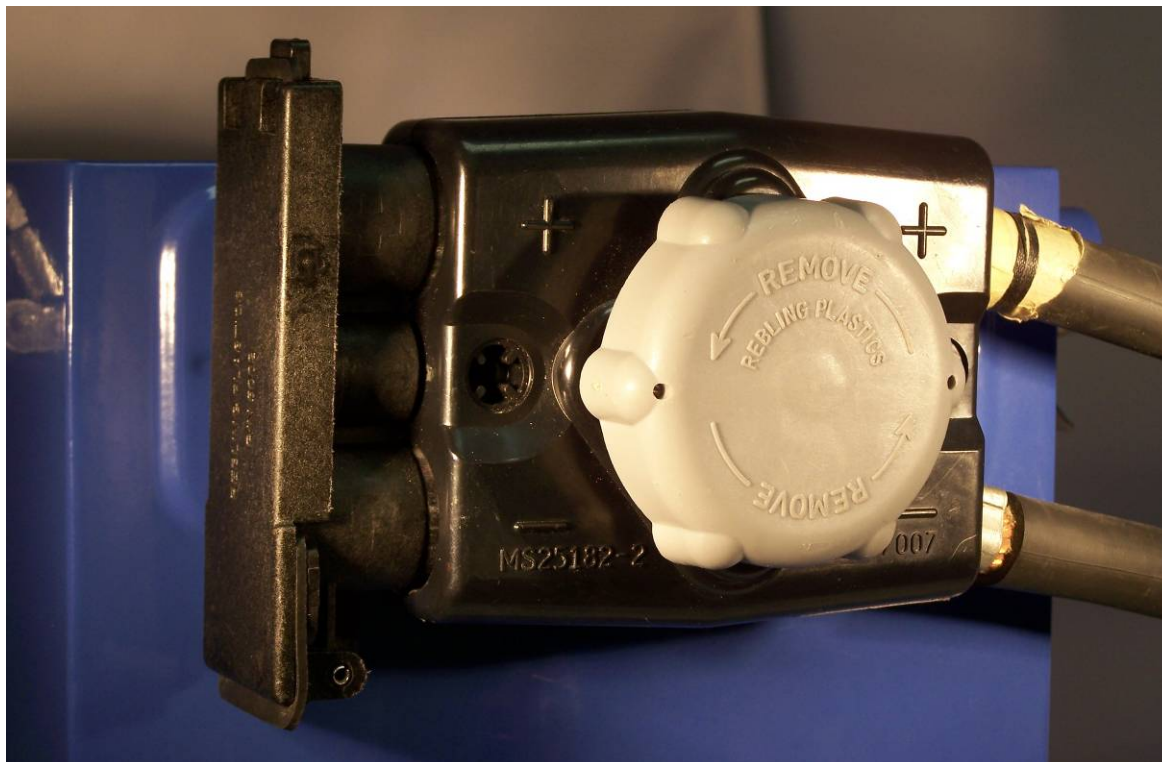
Add-on Connectors for Rebling Plastics MS25182-2

- Normal configuration- only one side used.



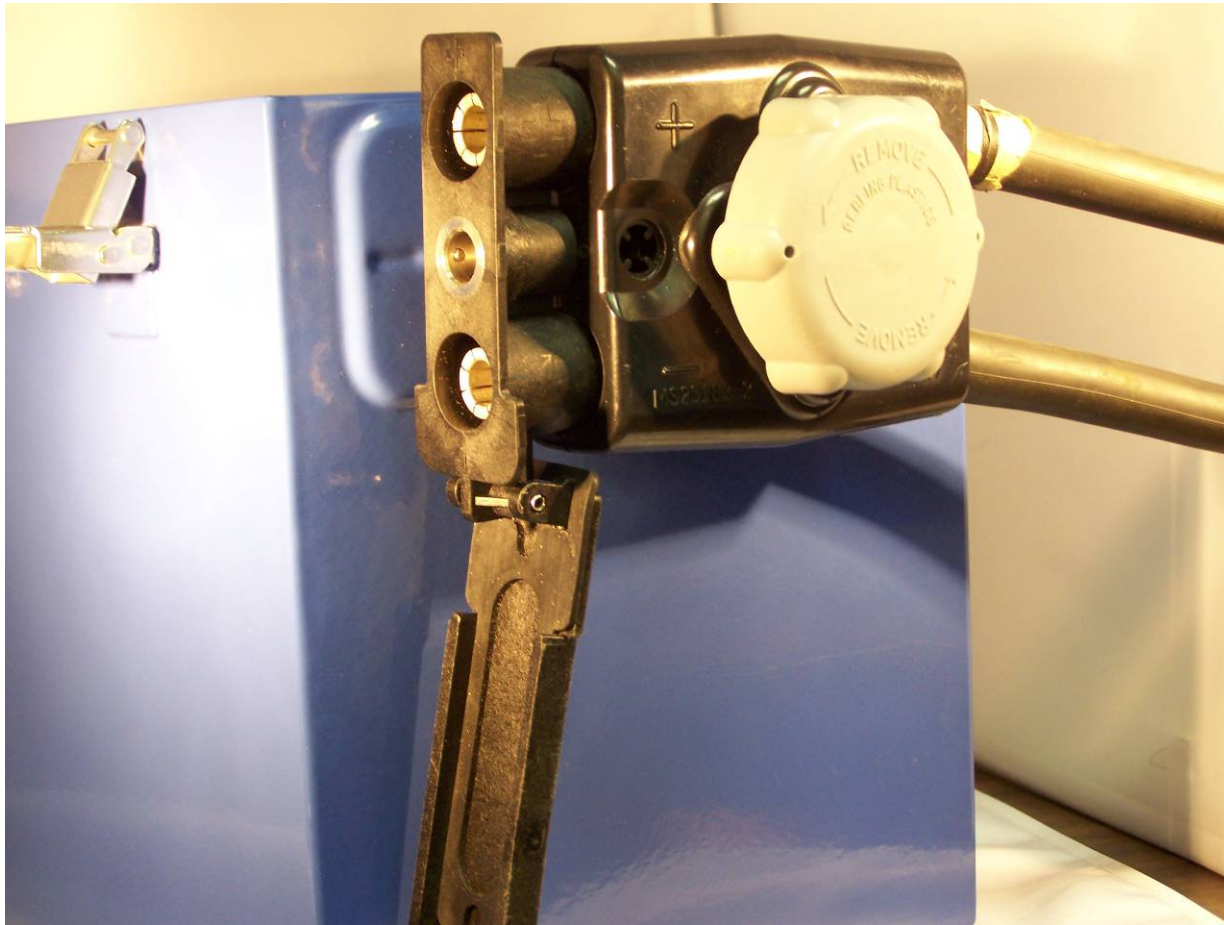
5002 “Add-on Receptacle”

- Design fits either unused side of MS25182-2
- Uses same low-resistance socket/pin design as in MS25182-2 & MS3509



P/N 5002 Open for Connection

- Integral dust cover with gasket keeps sockets clean and snaps open/closed



5003 Quick Disconnect

- Correct polarity guaranteed for either side
- Pivoting handle fits tight spaces



Rebling add-on connections

- Low resistance for high current applications
- Easily retrofit to either side of MS25182-2 connector
- Polarized
- Add-on Receptacle meets qualification requirements of MS25182-2 (MIL-P-18148C)
- Battery always connected

Rebling add-on connections

- Qualified to requirements of MS25182-2
- Installs in Rebling P/N 7007, 4-Wire Connector, Type MS25182-2 Connector
- Makes Available side a Low Resistance Power Receptacle: Micro-ohm resistance
- Allows connecting external power directly to aircraft battery without breaking battery-to-aircraft connection.

Support-Side Add-on Connector

- Installs on support Cable
- Has Comparable high current capability
- Shell Material: High-Temperature Nylon to Endure Mechanical Shocks that can occur during handling

MS25182-2 Four-Wire Connector

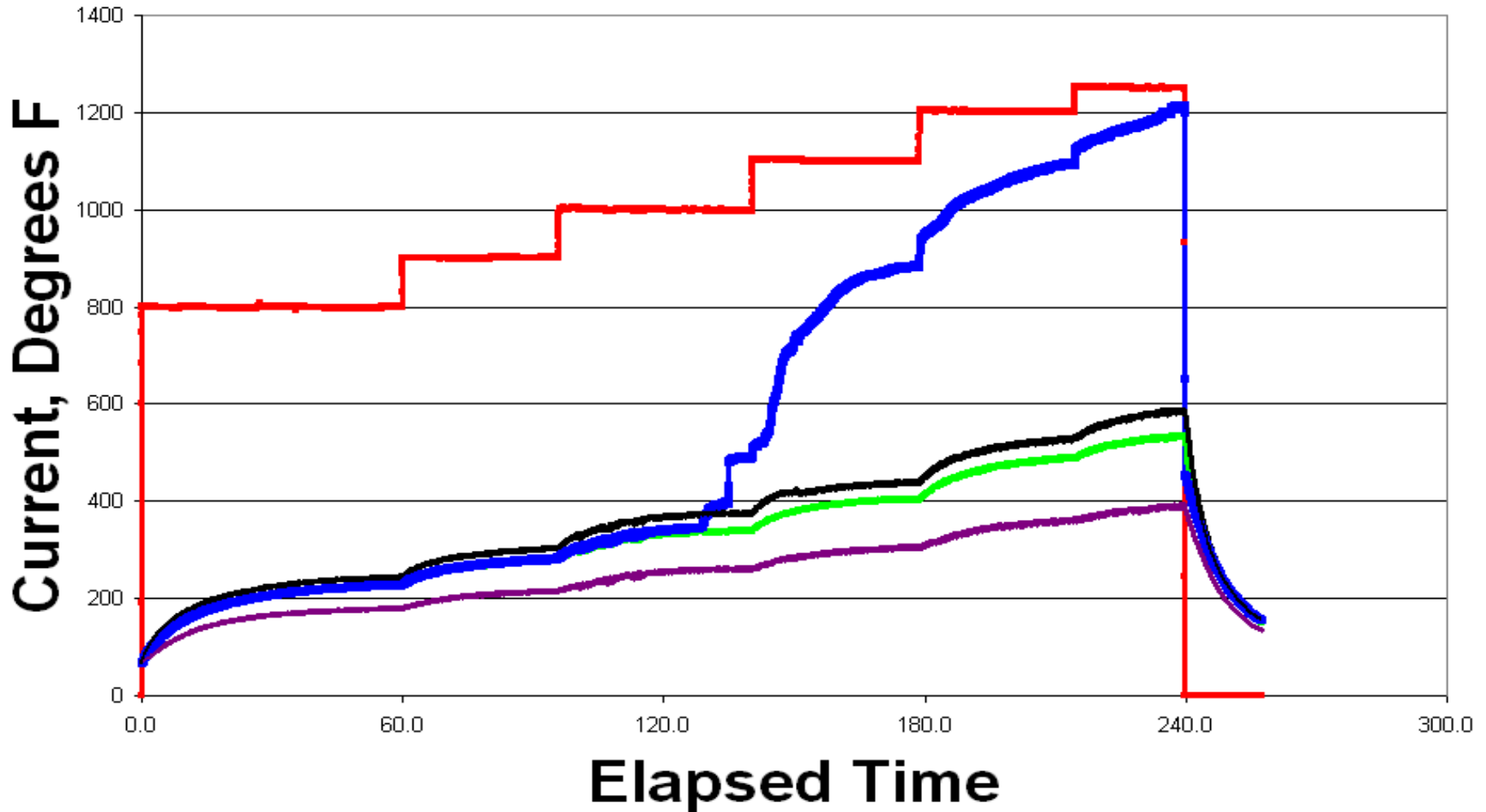
- Shell
 - High Temperature Plastic
 - Shell adequately protects contact sockets so that plastic caps are not needed on sockets

MS25182-2 Four-Wire Connector

- Contacts
 - Low resistance copper alloy
 - Maximum surface contact with mating pins
 - Floating for precise alignment with mating pins
 - Capable of continuous high current.

P/N 7007, 4-Wire Max Current

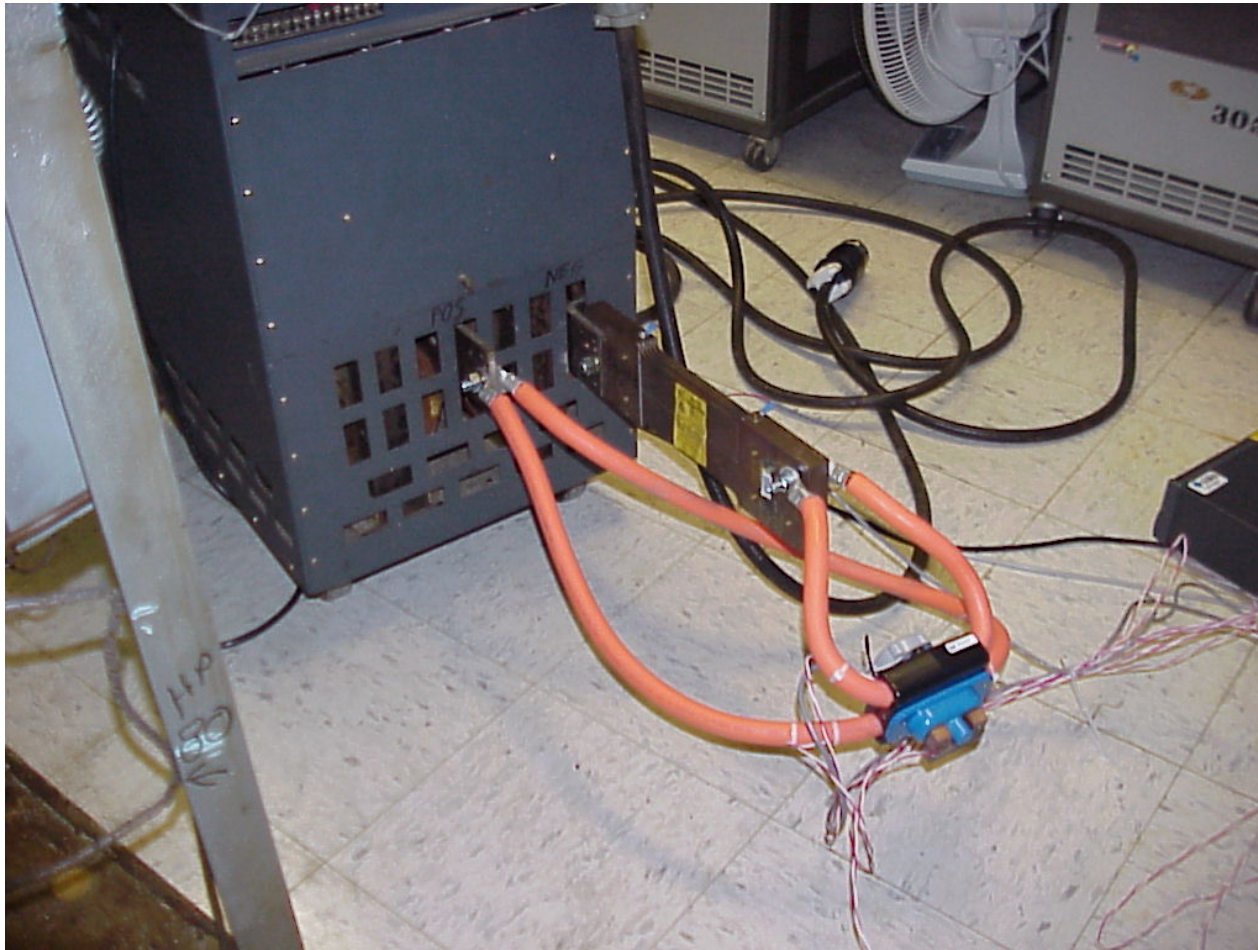
— Current — Plug + — Plug -- — Cable — Block



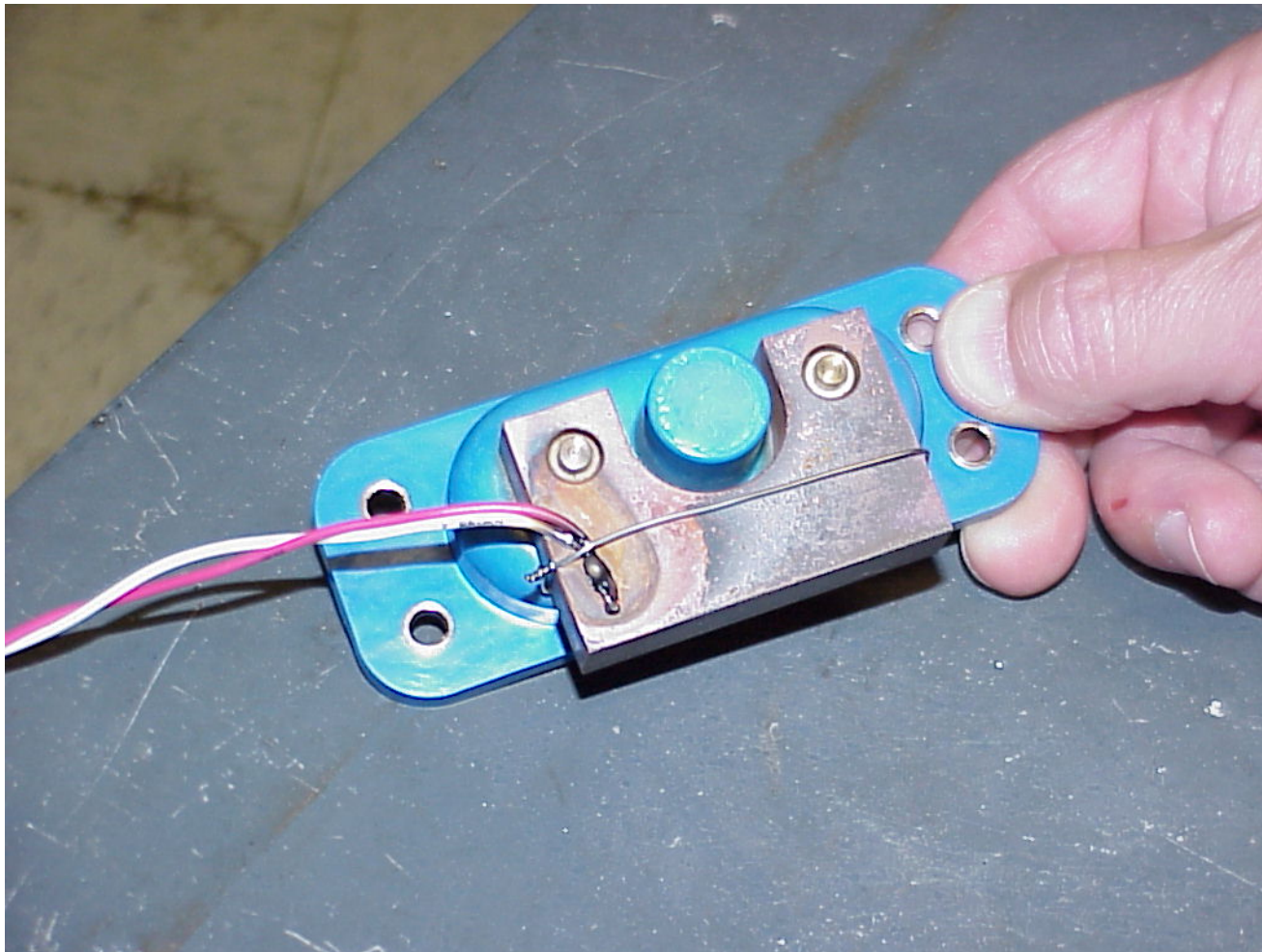
Power Supply Used for Test



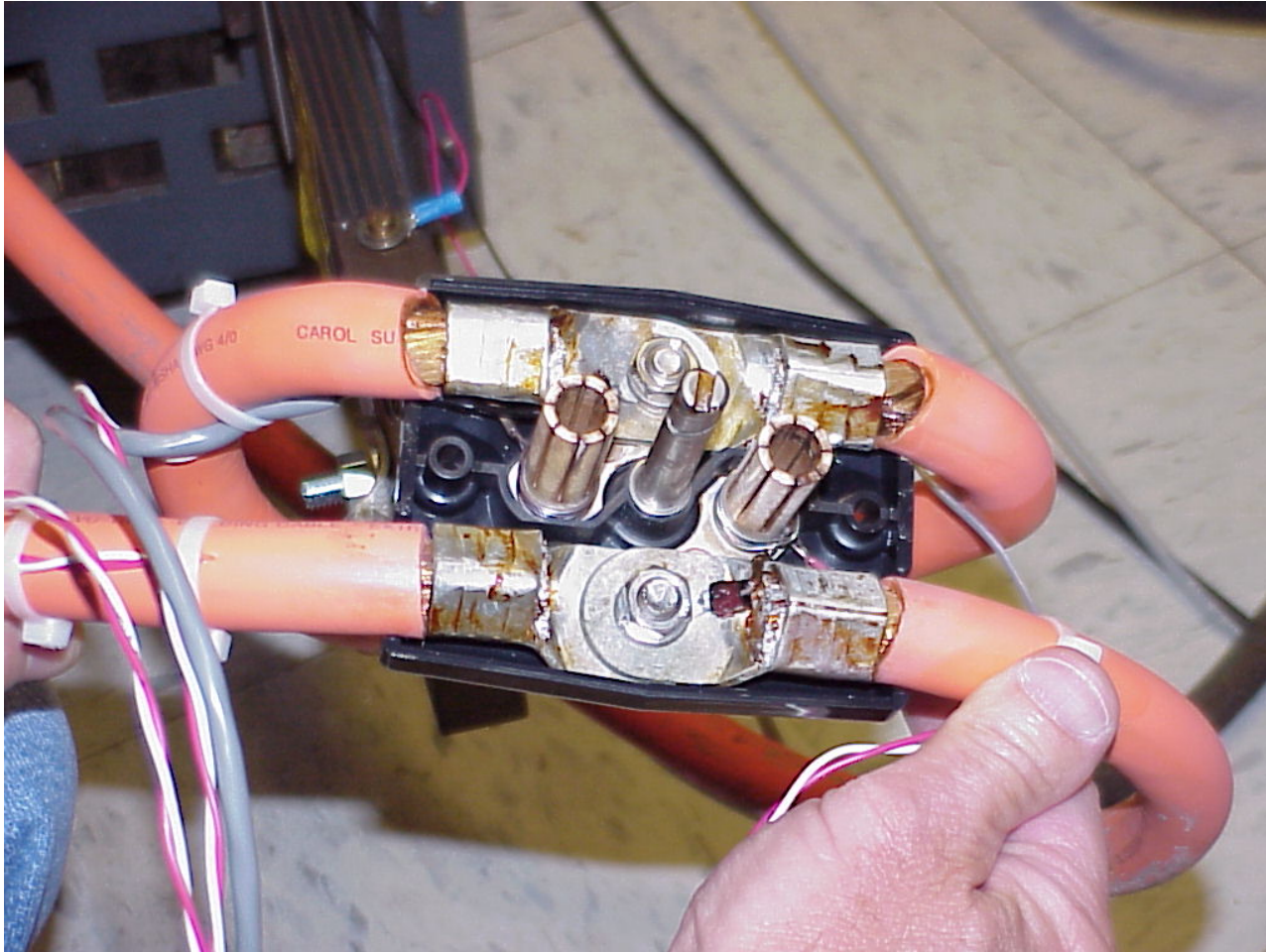
Power Supply, Shunt and Connector



Test Receptacle



Dual Cable Installation



Questions?



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