

Technical Support Bulletin: S3-FLPHPT-01

Field Load Plate High Potential Testing in BVS-S3

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This procedure outlines the steps required to test the voltage isolation from the load leads to the Load Plate and therefore to ground. The Load Plate Assembly is the aluminum plate mounted in the upper half of the BVS cabinet.

ELECTROCUTION HAZARD!

This procedure involves working with high voltage. The voltage sensing leads and load current leads carry full battery voltage. Battery Voltage can be as high as 600Vdc depending on the battery system! If you are not trained to work with high voltage equipment, do not attempt to use this procedure!

Tools Required:

DC Hi-Pot Insulation tester

Parts included in kit:

Follow the steps below and refer to the attached drawing when replacing the power transistors in your BVS-S3.

1. Turn **OFF** the **NICAD** battery switch and move the **RUN/STANDBY** switch to the **STANDBY** position. These switches are located on the top of the right-hand side of the chassis. Unplug the AC step-down transformer from the duplex outlet in the cabinet.
2. Unplug **ALL** of the black load current lead connector(s) from the sockets located at the top left-hand side of the cabinet. **NOTE: The button on the connector must be depressed to release the latch!**
3. Unplug the green five pin connector from the chassis. This socket will be labeled "current control."
4. Connect the negative clip of the hi-pot tester to a convenient bolt on the load plate. Ensure a good connection.
5. Set to Hi-Pot tester to **1,000V DC**.
6. Touch the positive lead of the Hi-Pot tester to the **red Load Lead**. You can access this wire at the terminal strip on the upper left hand side of the Load Plate. It will be the uppermost wire in the terminal strip. Other wire colors include but are not limited to orange, black, and green.
7. Activate the test by pressing and holding the trigger on the tester. The tester should indicate infinite resistance from the red lead to the load plate at 1000V. Usually this will be displayed as a 1 on the tester's readout.

8. Repeat this test for the **green Load Lead**. This is occasionally, but not always the last wire in the terminal strip. If the tester reads anything more than an unmeasurably small resistance, the condition of the load plate is questionable, and may require further service.
9. Plug the green 6 pin plug back into the socket labeled "current control."
10. Plug the AC step-down transformer into the duplex outlet in the cabinet and wait for the display to show the time.
11. Turn **ON** the **NICAD** battery switch and move the **RUN/STANDBY** switch to the **RUN** position.
12. Plug all of the black load current lead connector(s) into their respective sockets located at the top left-hand side of the cabinet and test at the terminal strip to see if the required DC voltages are present. See table below for voltages. If not, replace the 9A load current fuse(s) as necessary.

WIRE COLORS	VOLTAGE READING
BLACK TO RED	FULL DC BATTERY VOLTAGE
BLACK TO ANY OTHER THAN RED	APPROX. ½ DC BATTERY VOLTS. VOLTAGE TO ANY OTHER COLOR SHOULD NOT DIFFER BY MORE THAN +/- 2 VOLTS DC.

Please call **BTECH Inc.** Technical Support if any questions arise.