

- |                           |                                   |
|---------------------------|-----------------------------------|
| ① VSI CONTROLLER          | ⑥ BATTERY CHARGER                 |
| ② POWER INTERFACE HARNESS | ⑦ CHARGER POWER INTERFACE HARNESS |
| ③ CIRCUIT BREAKER HARNESS | ⑧ RIGHT MOTOR                     |
| ④ AMMETER                 | ⑨ LEFT MOTOR                      |
| ⑤ CHARGER INHIBIT HARNESS |                                   |

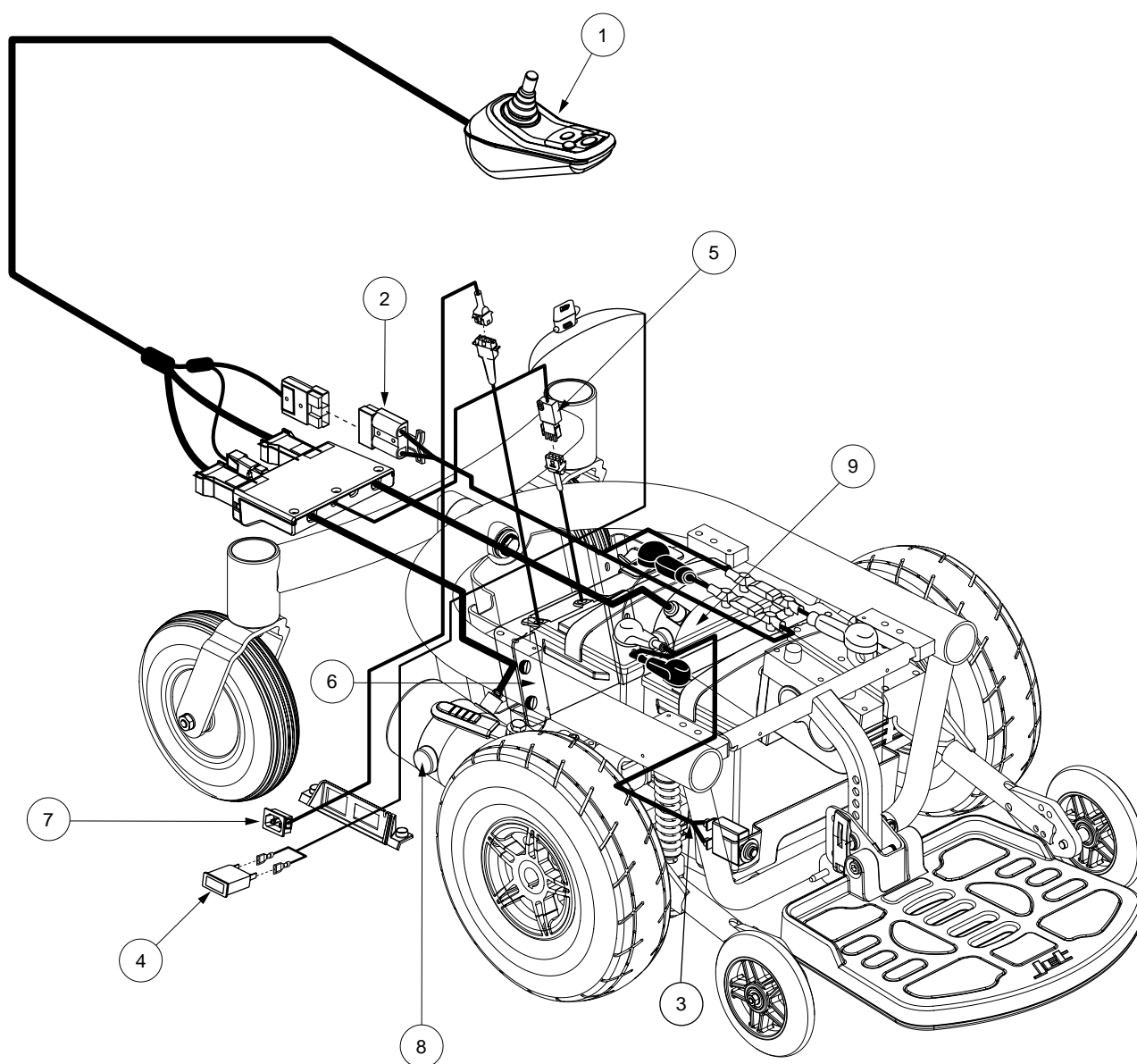


Diagram 1. Jet 3/10 Ultra Troubleshooting Key

28. Verify that the charger inhibit harness (5) is connected to the fuse (5c) and ammeter properly (connectors 5d and 5e). **See diagram 3.**
  - *If they are wired properly*, then go to the next step.
  - *If they are not wired properly*, then rewire and retest the system.
29. Unplug connector 1c from connector 5a. **See diagram 2.**
30. Measure voltage across pin 1 and pin 3 of connector 1c. **See figure 9.**
  - *If your multimeter indicates about 25VDC*, then go to the next step.
  - *If your multimeter indicates 0VDC*, then replace the VSI controller (1) and retest the system.
31. Measure resistance across pin 1 and pin 2 of the ammeter (4).
  - *If your multimeter indicates less than 1 ohm*, then replace the charger power interface harness (7) and retest the system.
  - *If your multimeter indicates more than 1 ohm*, then replace the ammeter (4) and retest the system.

## Flash Code #1 - Low Battery Voltage

### Symptoms:

One Battery Condition Meter LED Flashing

### Diagnosis:

The battery voltage to the VSI controller is low. This is most likely due to batteries that are not getting charged properly or at all.

### Solution:

Use the following procedure to find the source of the fault:

1. Measure voltage across pin 1 (B+) and pin 2 (B-) on the off-board charging socket (connector 1a). **See figure 11.**
  - *If your multimeter indicates less than 22VDC*, then go to the next step.
  - *If your multimeter indicates more than 22VDC*, then replace the VSI controller (1) and retest the system.
2. Remove the seat and the trapeze bars. Refer to the power base owner's manual.
3. Remove the front shroud and foot platform assembly.
4. Remove the center and rear shrouds. **See figure 12.**
5. Remove the main shroud. **See figure 12.**

**NOTE:** Do not unplug the ammeter or the charger power interface harness.

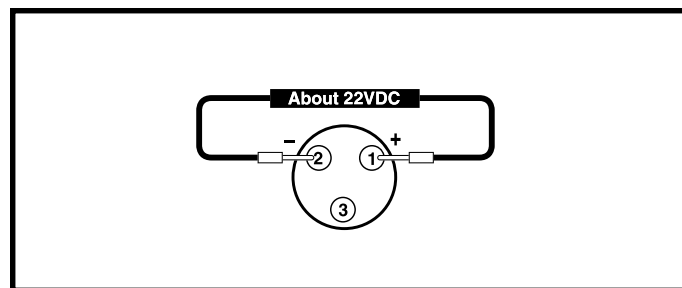


Figure 11. Connector 1a

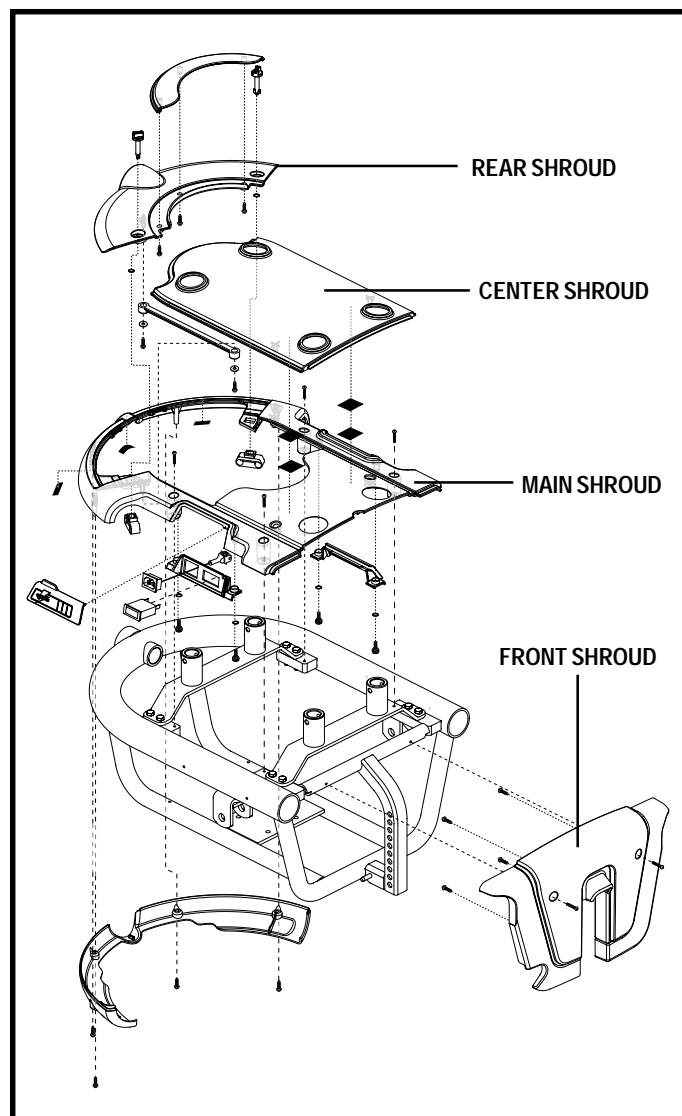


Figure 12. Jet 3/10 Ultra Shroud Assembly

6. Unplug connector 1b from connector 2a. **See diagram 2.**
7. Measure voltage across pin 1 and pin 2 of connector 2a. **See figure 13.** Compare this voltage to the voltage measurement in step 1.
  - *If your multimeter indicates the same voltage, then go to the next step.*
  - *If your multimeter indicates a different voltage (by at least 0.2VDC), then replace the VSI controller (1) and retest the system.*
8. Measure voltage across connector 2b and connector 2c. **See diagram 2.** Compare this voltage to the voltage from step 7.
  - *If your multimeter indicates the same voltage, then go to the next step.*
  - *If your multimeter indicates a different voltage (by at least 0.2VDC), then replace the power interface harness (2) and retest the system.*
9. Measure voltage across connector 2b and connector 2c. **See diagram 2.** Plug the battery charger into an electrical outlet to charge and observe the battery voltage.
  - *If the voltage does not change, then go to the next step.*
  - *If the voltage increases, then the batteries are charging. Charge the batteries until the ammeter drops back down to zero.*
  - *If the ammeter reading did not increase when the battery charger was plugged into the electrical outlet but the battery voltage increased, then replace the ammeter (4) and retest the system.*
10. Unplug connector 1c from connector 5a. **See diagram 3.** Make sure the battery charger is still plugged into the electrical outlet.
11. Measure voltage across pin 1 and pin 3 of connector 5a. **See figure 14.**
  - *If your multimeter indicates 0VDC, then go to the next step.*
  - *If your multimeter indicates between 25 — 30VDC, then replace the VSI controller (1) and retest the system.*
12. Unplug connector 6a from connector 5b. **See diagram 3.**
13. With the battery charger still plugged into the electrical outlet, measure voltage across pin 1 and pin 3 of connector 6b. **See figure 15.**
  - *If your multimeter indicates 0VDC, then go to the next step.*
  - *If your multimeter indicates 25 — 30VDC, then go to step 20.*
14. Unplug connector 7a from connector 6b. **See diagram 3.**
15. Measure AC voltage across pin 1 and pin 3 on connector 7a and across pin 1 and pin 2 on connector 7a. **See figure 16.**
  - *If your multimeter does not indicate 120VAC in both tests, then go to the next step.*
  - *If your multimeter indicates 120VAC in both tests, then replace the battery charger (6) and retest the system.*

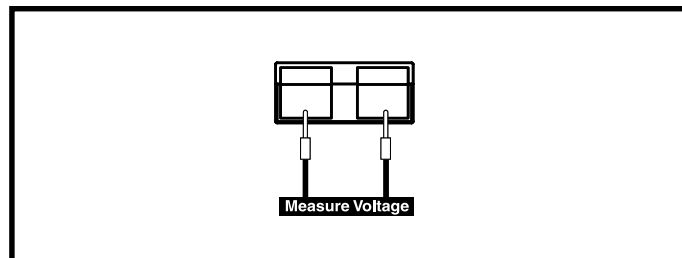


Figure 13. Connector 2a

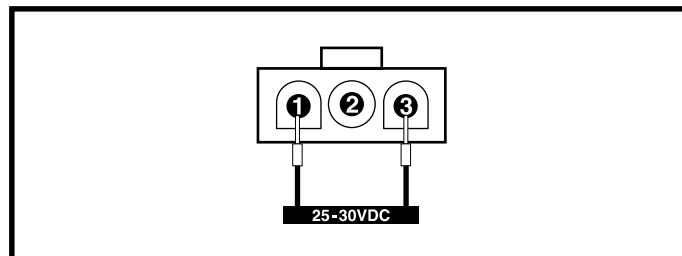


Figure 14. Connector 5a

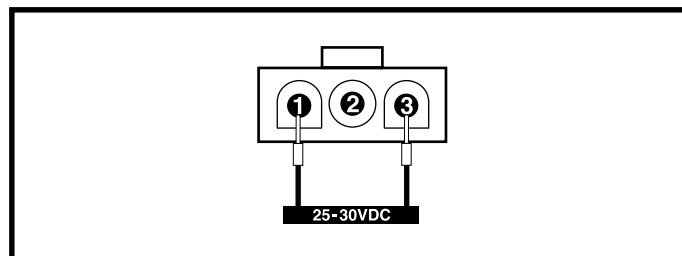


Figure 15. Connector 6b

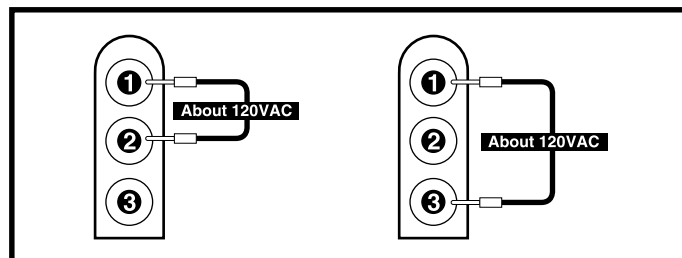


Figure 16. Connector 7a

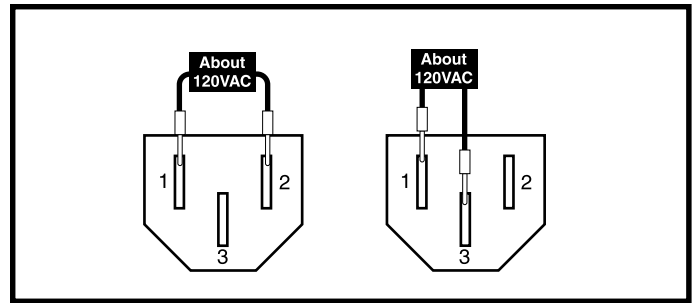
16. Unplug the charger power cord from connector 7b. See **diagram 2**.
17. Measure AC voltage across pin 1 and pin 2 and across pin 1 and pin 3 of the charger power cord 3-pin connector. See **figure 17**.
  - If your multimeter does not indicate 120VAC for both tests, then go to the next step.
  - If your multimeter indicates about 120VAC for both tests, then replace the charger power interface harness (7) and retest the system.
18. Unplug the charger power cord from the electrical outlet.
19. Measure AC voltage across pin 2 and pin 3 and across pin 1 and pin 3 of the electrical outlet. See **figure 18**.
  - If your multimeter indicates about 120VAC for both tests, then replace the charger power cord and retest the system.
  - If your multimeter does not indicate about 120VAC for both tests, then try a different electrical outlet and retest the system.

(from step 13)

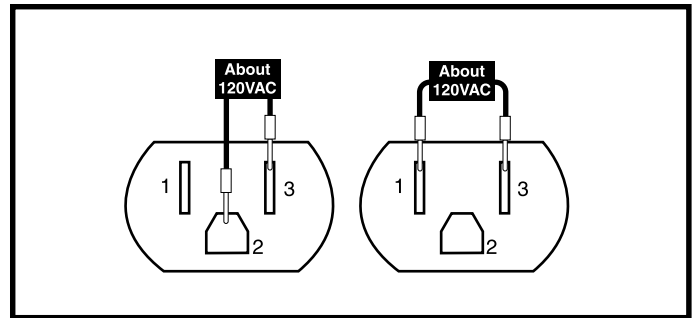
20. Verify that the charger inhibit harness (5) is connected to the fuse and ammeter properly. See **diagram 3**.
  - If they are connected properly, then go to the next step.
  - If they are not connected properly, then reconnect them and retest the system
21. Measure resistance across pin 1 and pin 2 of the ammeter (4).
  - If your multimeter indicates less than 1 ohm, then go to the next step.
  - If your multimeter indicates more than 1 ohm, then replace the ammeter (4) and retest the system.
22. Remove the charger inhibit harness fuse (5c). See **diagram 3**.
23. Measure resistance across the two blades of the fuse. See **figure 19**.
  - If your multimeter indicates less than 1 ohm, then replace the charger inhibit harness (5) and retest the system.
  - If your multimeter indicates more than 1 ohm, then replace the fuse (5c) and retest the system.



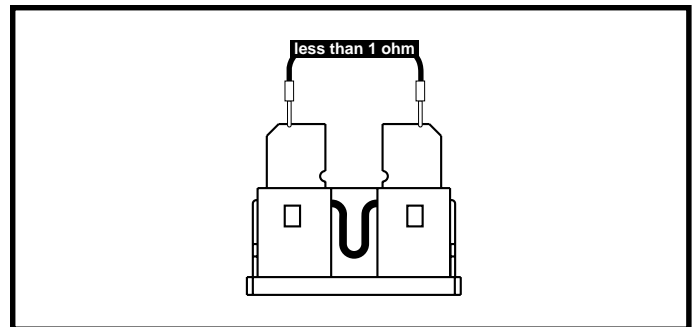
**WARNING!** The replacement fuse must exactly match the rating of the new fuse. Failure to use properly rated fuses may cause damage to the electrical system and may result in personal injury.



**Figure 17. Charger Power Cord 3-pin Connector**



**Figure 18. Electrical Outlet**



**Figure 19. Fuse 5c**