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|---------------------------|-----------------------------------|
| 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 | |

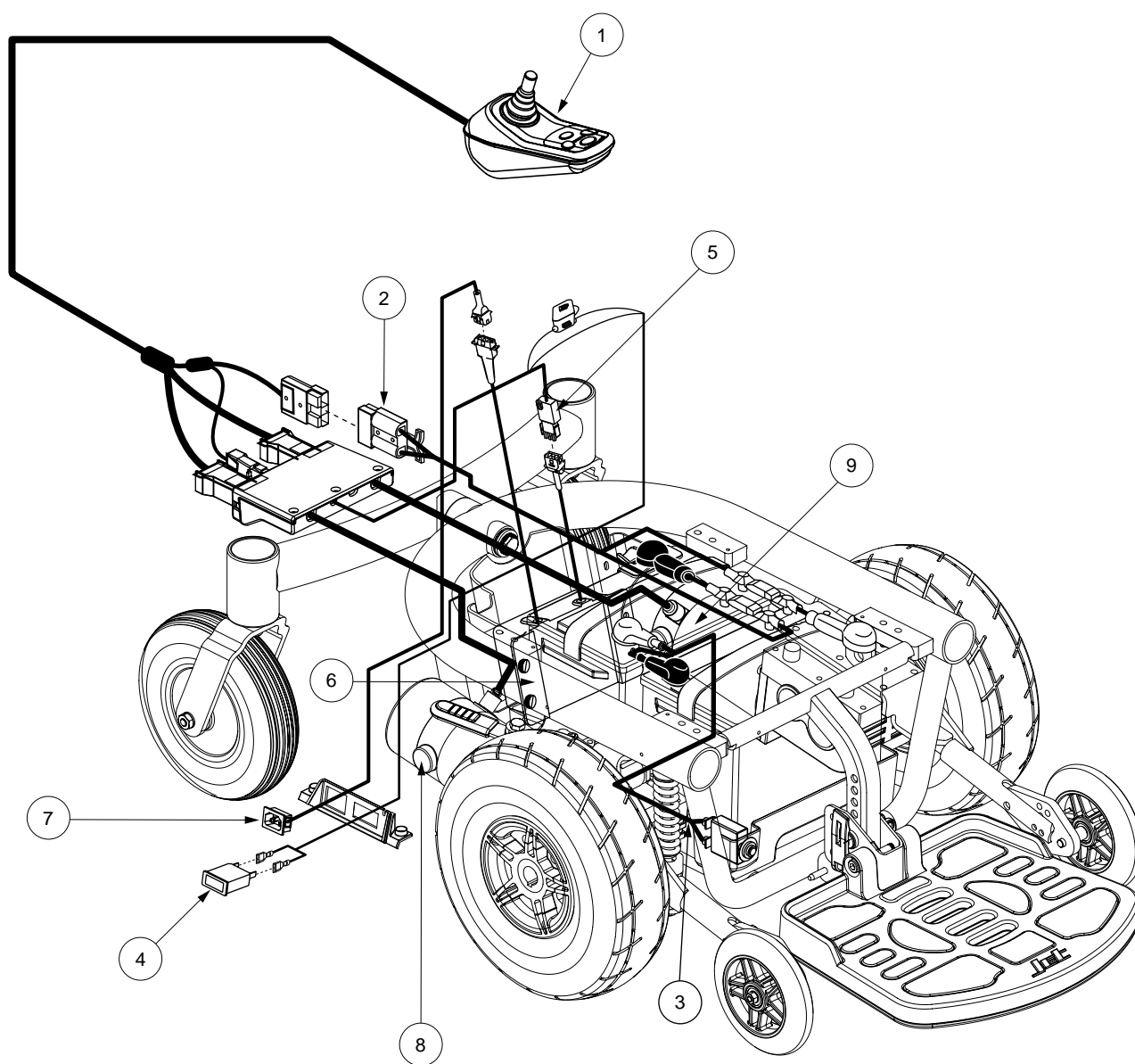


Diagram 1. Jet 3/10 Ultra Troubleshooting Key

SECTION 2 - FLASH CODE DIAGNOSIS

Flash Code - Steady Flash of Speed/Profile LEDs

Symptom:

Steady Flash of Speed/Profile LEDs

Diagnosis:

This is an indication of the “LOW ENABLE, NO DRIVE AWAY” feature set up on the VSI controller. This feature keeps the power chair from driving while the battery charger is plugged into an electrical outlet.

Solution:

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

1. Plug the charger power cord into connector 7b and an electrical outlet. Make sure the outlet is live and the power cord is working properly.



PROHIBITED! Never use an extension cord to plug in your battery charger. Plug the charger directly into a properly wired standard electrical outlet.



PROHIBITED! Removal of the grounding prong can create an electrical hazard. If necessary, properly install an approved 3-pronged adapter to an electrical outlet having 2-pronged plug access. Failure to heed could result in personal injury and or property damage.

2. Note movement if any of the ammeter.
 - *If the ammeter moves at all*, then go to the next step.
 - *If the ammeter does not move*, then go to **step 11**.
3. Remove the seat and the trapeze bars. Refer to the power base owner's manual.
4. Remove the front shroud and foot platform assembly.
5. Remove the center and rear shrouds. **See figure 3.**
6. Remove the main shroud. **See figure 3.**
7. Unplug connector 6a from connector 5b. **See diagram 3.**
8. Place a jumper in pin 1 and pin 2 of connector 5b and attempt to drive the power chair. **See figure 6.**
 - *If the power chair does not drive*, then go to the next step.
 - *If the power chair drives*, then replace the battery charger (6) and retest the system.



WARNING! Never short or jumper the two outside pins of the charger inhibit harness. This could result in personal injury and/or damage to the equipment.

9. Unplug connector 1c from connector 5a. **See diagram 2.**
10. Place a jumper in pin 1 and pin 2 of connector 1c and attempt to drive the power chair. **See figure 7.**
 - *If the speed/profile LEDs still flash and the power chair does not drive*, then replace the VSI controller (1) and retest the system.
 - *If the speed/profile LEDs stop flashing and the power chair drives*, then replace the charger inhibit harness (5) and retest the system.

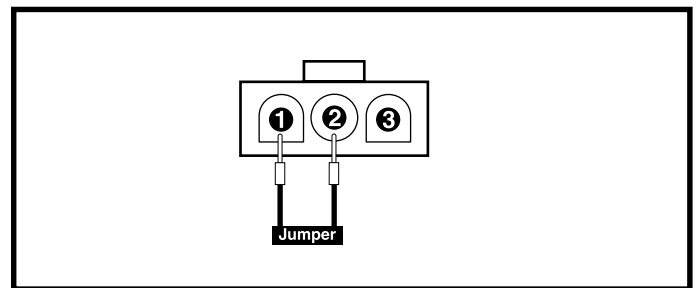


Figure 6. Connector 5b - Jumpered

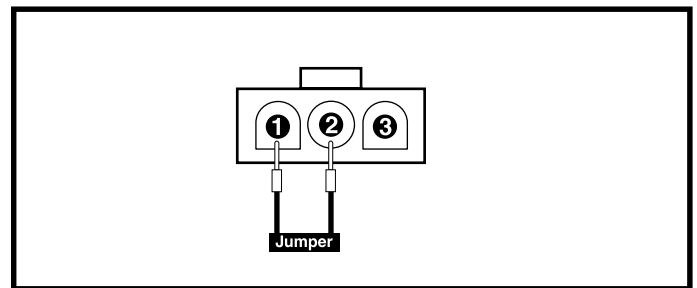


Figure 7. Connector 1c - Jumpered

(from step 2)

11. Unplug the charger power cord from the electrical outlet, while observing the speed/profile LEDs.
 - If the speed/profile LEDs continue to flash, then go to the next step.
 - If the speed/profile LEDs illuminate and do not flash, and the power chair drives, then go to **step 20**.
12. Remove the seat and the trapeze bars. Refer to the power base owner's manual.
13. Remove the front shroud and foot platform assembly.
14. Remove the center and rear shrouds. **See figure 3.**
15. Remove the main shroud. **See figure 3.**
16. Unplug connector 5b from connector 6a. **See diagram 3.**
17. Measure voltage across pin 1 and pin 3 of connector 5b. **See figure 8.**
 - If your multimeter indicates 0VDC, then go to the next step.
 - If your multimeter indicates about 25VDC, then replace the battery charger (6) and retest the system.
18. Unplug connector 5a from connector 1c. **See diagram 3.**
19. Measure voltage across pin 1 and pin 3 of connector 1c. **See figure 9.**
 - If your multimeter indicates 0VDC, then replace the VSI controller (1) and retest the system.
 - If your multimeter indicates about 25VDC, then replace the charger inhibit harness (5) and retest the system.

(from step 11)

20. Remove the seat and the trapeze bars. Refer to the power base owner's manual.
21. Remove the front shroud and foot platform assembly.
22. Remove the center and rear shrouds. **See figure 3.**
23. Remove the main shroud. **See figure 3.**
24. Remove the charger inhibit harness fuse (5c). **See diagram 3.**
25. Measure resistance across the two fuse blades. **See figure 10.**
 - 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 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.

26. Unplug connector 5b from connector 6a. **See diagram 3.**
27. Measure voltage across pin 1 and pin 3 of connector 5b. **See figure 8.**
 - If your multimeter indicates 0VDC, then go to the next step.
 - If your multimeter indicates about 25VDC, then replace the battery charger (6) and retest the system.

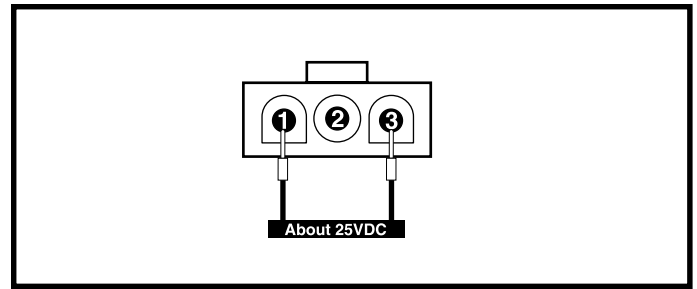


Figure 8. Connector 5b

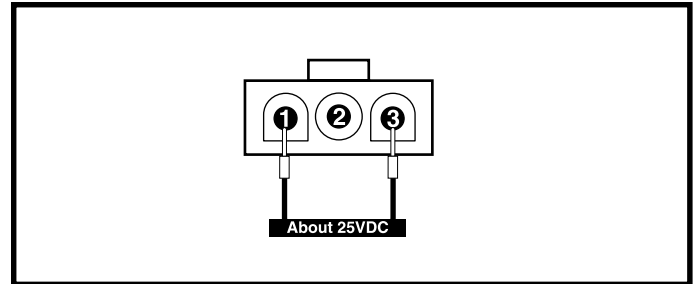


Figure 9. Connector 1c

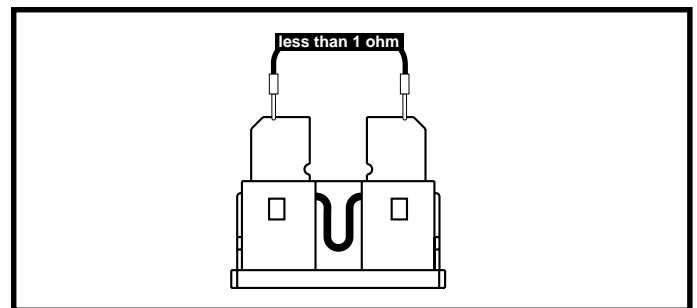


Figure 10. Fuse 5c

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.

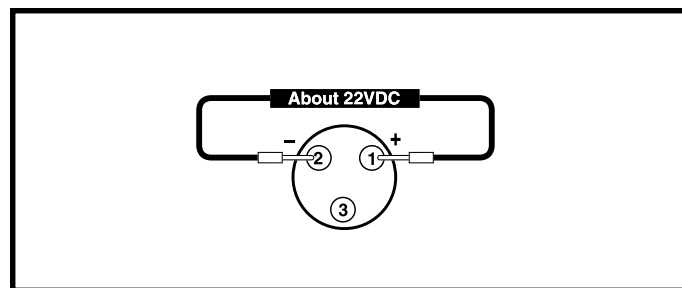


Figure 11. Connector 1a

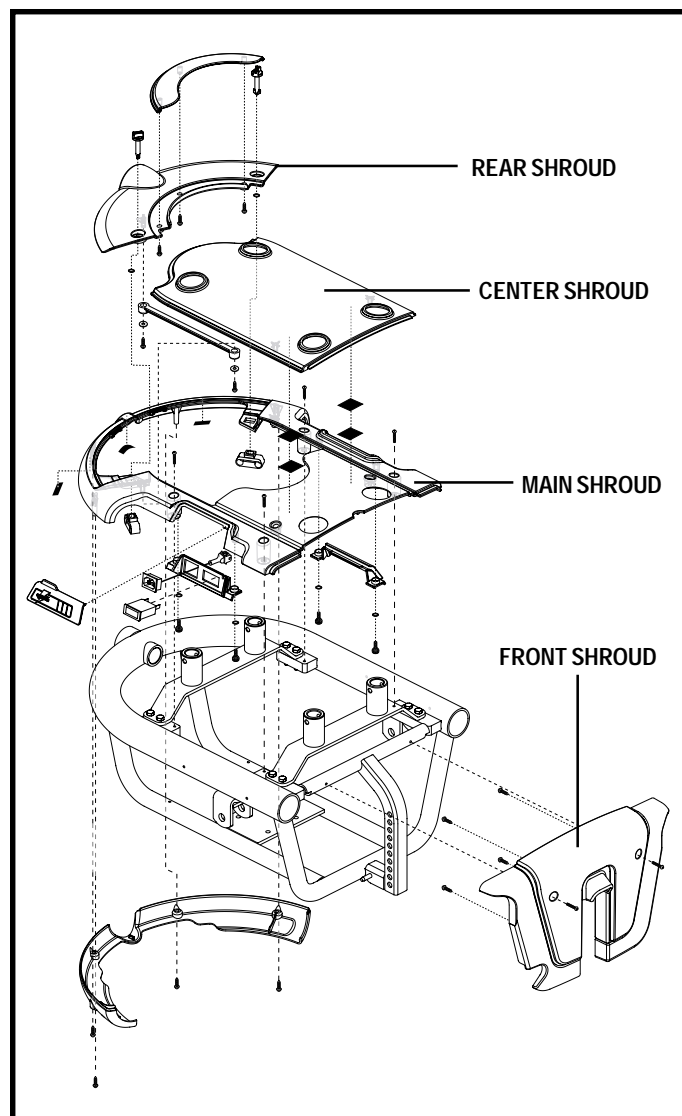


Figure 12. Jet 3/10 Ultra Shroud Assembly