

- |   |                                |   |                       |    |                 |
|---|--------------------------------|---|-----------------------|----|-----------------|
| 1 | REMOTE PLUS JOYSTICK           | 5 | BATTERY CABLE         | 9  | LEFT MOTOR      |
| 2 | POWER MODULE                   | 6 | FRONT BATTERY HARNESS | 10 | CIRCUIT BREAKER |
| 3 | REDEL CABLE                    | 7 | REAR BATTERY HARNESS  | 11 | RUN PLUG        |
| 4 | POWER TAKE-OFF/INHIBIT HARNESS | 8 | RIGHT MOTOR           | 12 | REDEL RUN PLUG  |

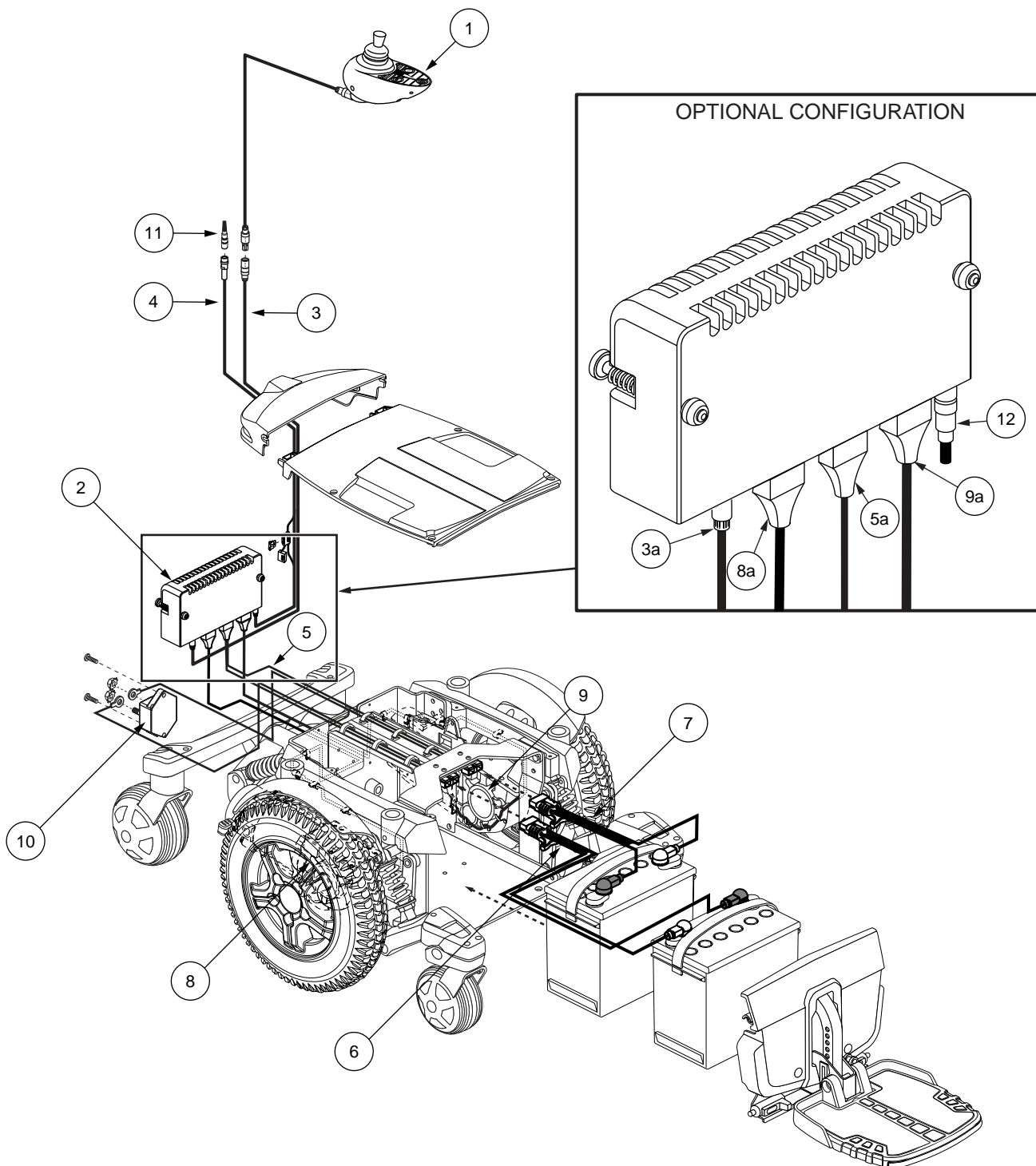


Diagram 1. Quantum 6000 Troubleshooting Key

3. Remove the motor brushes from the left motor and inspect them for wear or damage. **See figure 33.**
  - *If the motor brushes are worn below 0.25 in. or they are physically damaged, then replace the brushes and retest the system.*
  - *If the motor brushes are not worn below 0.25 in. and are not physically damaged, then replace the left motor (9) and retest the system.*

### Flash Code #3 - Left Motor Wiring Fault

#### Symptoms:

There is a steady flash of three battery condition meter LEDs (red).

#### Diagnosis:

There is a wiring fault between the left motor (9) and the brake.

#### Solution:

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

1. Unplug connector 9a from connector 2b. **See diagram 3.**
2. Measure resistance from pin 1 to pin 3, then pin 1 to pin 4 on connector 9a. **See figure 34.**
  - *If your multimeter indicates an open for both tests, then replace the power module (2) and retest the system.*
  - *If your multimeter indicates less than 1 ohm for either test, then replace the left motor (9) and retest the system.*

### Flash Code #4 - Right Motor Disconnected

#### Symptoms:

There is a steady flash of four battery condition meter LEDs (three red, one yellow).

#### Diagnosis:

There is an open in the right motor (8).

#### Solution:

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

1. Unplug connector 8a from connector 2d. **See diagram 3.**
2. Measure resistance from pin 1 to pin 2 on connector 8a. **See figure 35.**
  - *If your multimeter indicates an open, then go to the next step.*
  - *If your multimeter indicates about 0.5 – 1.5 ohms, then replace the power module (2) and retest the system.*

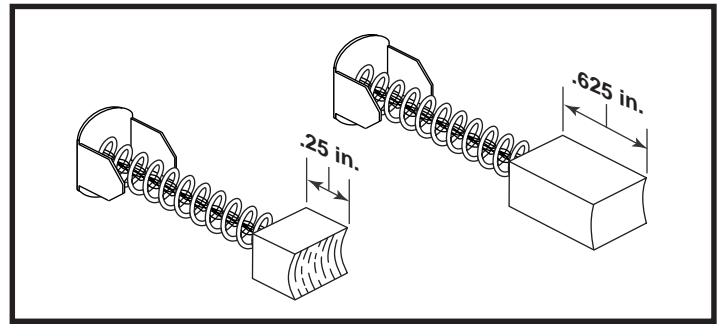


Figure 33. Motor Brushes

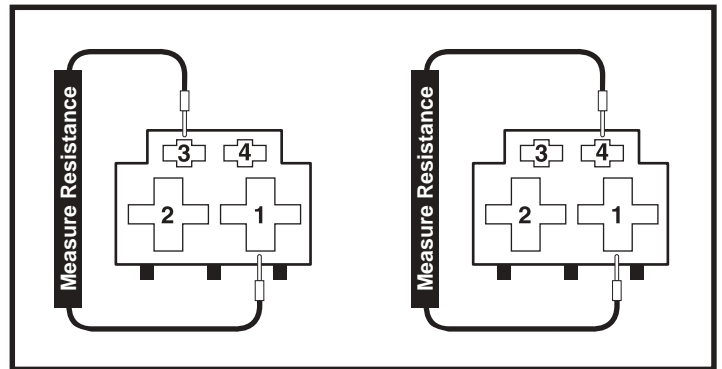


Figure 34. Connector 9a

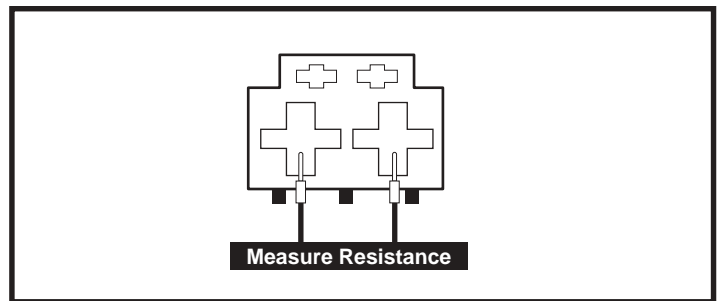


Figure 35. Connector 8a

3. Remove the motor brushes from the right motor and inspect them for wear or damage. **See figure 33.**
  - *If the motor brushes are worn below 0.25 in. or they are physically damaged, then replace the brushes and retest the system.*
  - *If the motor brushes are not worn below 0.25 in. and are not physically damaged, then replace the right motor (8) and retest the system.*

#### Flash Code #5 - Right Motor Wiring Fault

##### Symptoms:

There is a steady flash of five battery condition meter LEDs (three red, two yellow).

##### Diagnosis:

There is a wiring fault between the right motor (8) and the brake.

##### Solution:

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

1. Unplug connector 8a from connector 2d. **See diagram 3.**
2. Measure resistance from pin 1 to pin 3, then pin 1 to pin 4 on connector 8a. **See figure 36.**
  - *If your multimeter indicates an open for both tests, then replace the power module (2) and retest the system.*
  - *If your multimeter indicates less than 1 ohm for either test, then replace the right motor (8) and retest the system.*

#### Flash Code #6 - Inhibit Active

##### Symptoms:

There is a steady flash of six battery condition meter LEDs (three red, three yellow).

##### Diagnosis:

- An off-board charger is connected to the off-board charger socket (1a).
- There is a short between pin 2 and pin 3 on the off-board charger socket (1a).

##### Solution:

If the Remote Plus joystick (1) indicates an inhibit active fault and there is no off-board charger plugged into the off-board charger socket (1a), then replace the Remote Plus joystick (1) and retest the system.

#### Flash Code #7 - Possible Joystick Fault

##### Symptoms:

There is a steady flash of seven battery condition meter LEDs (three red, four yellow).

##### Diagnosis:

The Remote Plus joystick (1) has a problem with the joystick (gimble).

**NOTE:** *If the joystick was out of the neutral (center) position when powered up, then the battery condition meter will scroll up and down twice, then display seven flashing LEDs.*

**NOTE:** *If the speed/profile LEDs are flashing along with the seven battery condition meter LEDs, then there is a communications fault between the power module (2) and the joystick (1). Check for physical damage to the Redel cable (3) and repair as necessary.*

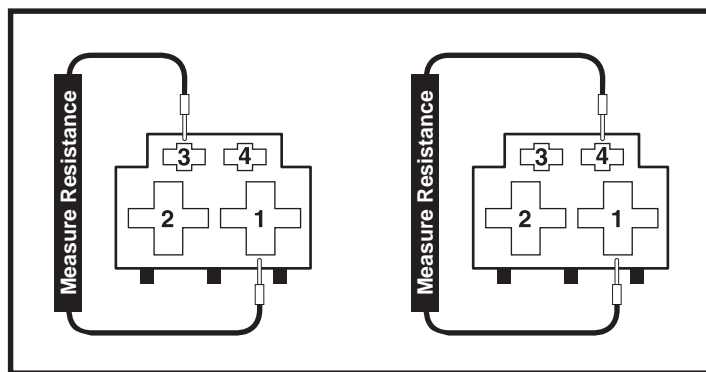


Figure 36. Connector 8a