

Compass Sport Service Guide

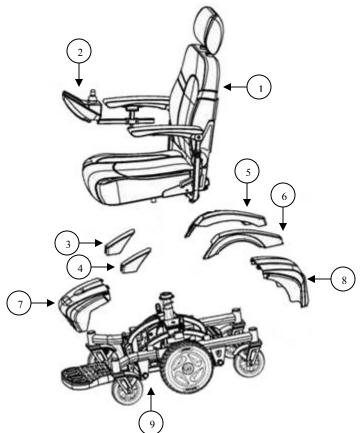


This Service Guide contains: Troubleshooting Replacement Instructions Illustrated Parts Breakdown

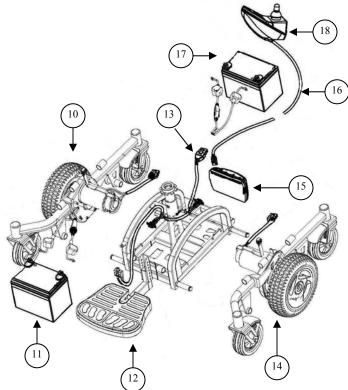
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Compass Sport Nomenclature



- 1. Seat Assembly
- 2. Control Unit (Shark)
- 3. Right Caster Cover
- 4. Left Caster Cover
- 5. Right Fender
- 6. Left Fender
- 7. Front Battery Cover
- 8. Rear Battery Cover
- 9. Base
- 10. Right Side Drive Train
- 11. Front Battery
- 12. Footplate
- 13. Power Harness with
- Circuit Breaker
- 14. Left Side Drive Train
- 15. Power Module (Shark)
- 16. Bus Cable
- 17. Rear Battery
- 18. Control Unit (Joystick)



Contact Information

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About the Compass Sport Service Guide

This service guide provides you with the information necessary to troubleshoot the Golden Technologies Compass Sport equipped with the Dynamic Shark controller. The troubleshooting scenarios in this manual consist of procedures that enable you to systematically trace and correct faults in the system.

Before troubleshooting, check the following:

- Make sure that the circuit breaker is reset.
- Visually check terminals for corrosion. Check wires for missing insulation.
- *Make sure that the batteries are fully charged and in good working order.* When possible, keep sets of known good batteries of various ratings in your shop at all times. The Compass Sport uses 35AH (U1) batteries. Problems that surface during troubleshooting are often due to the fact that the batteries are not fully charged or can not hold their charge.
- *Make sure that the electrical connections are secure.* Unplug the connectors and make sure all of the pins are seated properly. Push the pins back into the connector housing if necessary. Make sure that the battery terminals are tight.

NOTE: If you get to a point during troubleshooting where you cannot continue, call tech support at 800-624-6374.

COMPASS SPORT COMPONENTS

The Compass Sport is a battery-operated power chair controlled by a Dynamic control system. The control system monitors and displays flash codes on the LED array when it detects a fault in the system. The Compass Sport was designed to operate with between 18 - 24 volts (V) of direct current (DC).

The Compass Sport control system is made up of the following components. Reference the diagrams on pages 11 and 12.

- 12V/(35AH) Batteries (2)
- Battery Harnesses (2)
- Main Circuit Breaker
- Battery Charger
- Power Harness
- Motors (2) (left/right)
- Park Brakes (2) (left/right)
- SHARK Dynamic Power Module
- SHARK Dynamic Control Unit (Joystick)
- SHARK Bus Cable

NOTE: Parts and service must be authorized by the Golden Technologies Service Department. Unauthorized parts or service may void the warranty. For more information, contact the Golden Technologies Service Department at 800-624-6374 or parts@goldentech.com.

Component: 12VDC (35AH) Batteries (2)
Location: Connected in series inside the battery box.
Function: Supply 24VDC to the power module. (12VDC x 2).
Connections: Front Battery and Rear Battery.
Failure Signs: Batteries drain quickly. Power chair runs slowly or not at all. Batteries will not charge, but charger is working properly. Flash Code #2.

Tests: Load test. Fully charge the batteries first. Make sure charging system is working. **Expected Readings:** 12 - 14VDC each when fully charged. **Serviceable:** Replace batteries as necessary.

Component: Park Brake (2)
Location: End of each motor.
Function: Park Brake for the motor.
Connections: Each park brake has a 2 pin male connector, which connects to each motor harness.
Failure Signs: Power chair will not move or moves sluggishly. No audible click when the chair stops.
Tests: Test for open. See Flash Codes #5 and #6.
Expected readings: Less than 80 ohms, but not shorted.
Serviceable: Replace if outside this range.

Component: Circuit Breaker

Location: Mounted on the front of the power base.

Function: Protects battery circuit from current overload. When the current draw exceeds the breaker rating, the circuit breaker will open.

Connections: Terminals on the circuit breaker are connected to the batteries through the power harness.

Failure Signs: Opens repeatedly. This may indicate a failed circuit breaker or short in the wiring. Also, may open if the motors are overloaded (from excessive weight, short in system, etc.)

Test: Measure the resistance across the circuit breaker. Also check for continuity across the power harness from the circuit breaker to each battery. Refer to the power harness wiring diagram on page 13.

Expected reading: Less than 10 ohms.

Serviceable: *Circuit breaker must be replaced with exact current rating.* Replace power harness if no continuity.

Component: Battery Charger

Location: Stored inside a pouch on the seatback.

Function: Recharges batteries.

Connections: XLR connector connects to the charger port on the front of the control module.

Failure Signs: Charger power LED does not go on. Batteries will not charge.

Tests: Charger tests vary. Some chargers may be tested by measuring positive and negative leads on the charger connector. Other chargers need to see battery voltage before charging.

Expected reading: Varies with charger.

Serviceable: Replace if necessary.

Component: Motors (2)

Location: Left and right sides of the power base.

Function: Drives the power chair.

Connections: The right motor harness connects to M1 on the power module and the left motor harness connects to M2 on the power module.

Failure Signs: Power chair runs slowly or not at all.

Tests: Test for internal resistance in motor. Test motor wires for continuity. See Flash Codes #3 and #4.

Expected readings: Internal resistance is less than 5 ohms but not shorted.

Note: Can be as low as 0.3 ohms.

Serviceable: Replace motor if outside range.

Component: SHARK Power Module

Location: Rear of the power base.

Function: Monitors the system and displays faults when something in the system is out of range. These faults are displayed as a series of flashes by the battery meter.

Connections: Control unit (joystick), DCI (not used), M1 (right motor), 24V (power harness from batteries), M2 (left motor). Refer to figures 1 and 2 on pages 11 and 12.

Failure Signs: Flash Code #8.

Tests: Measure voltage at SHARK Bus Connector pin 1 (battery positive) and pin 4 (battery negative).

Expected readings: Battery voltage.

Serviceable: Replace as necessary.

Component: SHARK Control Unit (Joystick)
Location: End of the armrest.
Function: Provides user interface to the power chair. Also, shows battery charge and status of control system.
Connections: XLR charger/programming port on the front of the control module. Bus cable connection on the back of the control module.
Failure Signs: Flash Code #7
Tests: Measure voltage at pin 1 (battery positive) and pin 2 (battery negative).
Expected readings: Battery voltage.
Serviceable: Replace as necessary.

Component: SHARK Bus Cable Location: Rear of SHARK Control Unit (Joystick). Function: Provides connectivity to the SHARK power module. Connections: 4 pin quick connect bus cable. Failure Signs: Flash Code #9 Tests: Measure continuity. Expected readings: Less than 10 ohms. Serviceable: Replace if open.

The SHARK Battery Gauge

| | The Battery Gauge is used to indicate power on and provides an estimate of the remaining battery capacity. |
|--|---|
| | Any green LEDs lit indicate well charged batteries. |
| | If only amber and red LEDs are lit, the batteries are moderately charged. |
| | Recharge before undertaking a long trip. |
| | If only red LEDs are lit, the batteries are running out of charge. Recharge as soon as possible. |

| Display | Description | This means | Notes |
|-------------------|---|--|---|
| 0000000 | All LEDs OFF | Power is OFF | |
| ****** | All LEDs ON steady | Power is ON | Less LEDs imply a reduced battery charge. |
| ***** | Left RED LED is flashing | Battery charge is low | The batteries should be charged as soon as possible. |
| chase | Right to left 'chase' | SHARK is being brought out of Lock mode | To unlock SHARK, press the Horn button twice within 10 seconds. |
| chase - steady | Left to right 'chase' alternating with steady display | SHARK is in programming, inhibit and/or charging mode | The steady LEDs indicate the current state of battery charge. |

The following table indicates what the gauge will display for any given state.

SCENARIO 1: Press the on/off button and the LED array does not light up.

Before attempting to troubleshoot the power chair, make sure all connectors are connected and seated properly. Make sure that the batteries are connected properly and **fully-charged**. Refer to the wiring diagrams on pages 13 and 14 for the correct wiring. If the batteries are not fully charged or connected properly, then voltage measurements may produce faulty readings. Measure the voltage across the rear battery negative (black) terminal and the front battery positive (red) terminal to get battery voltage. If the batteries will not charge, go to "Scenario 2: Batteries will not charge."

1. Check the circuit breaker.

- If it is tripped Reset it.
- Not tripped Go to the next step.
- Tripped but does not reset Remove the seat and front battery box cover. Go to step 12.

2. Measure voltage across pin 1 (B+) and pin 2 (B-) on the control unit (Joystick) charging socket.

- 0VDC Go to the next step.
- 25VDC or (battery voltage) Replace the control unit.

A WARNI

WARNING Prevent damage to the Joystick. Be careful when inserting the meter leads into the charging socket. Do not allow the meter leads to touch each other, which will cause a short.

- 3. Disconnect the bus cable from the control unit (Joystick).
- 4. Measure voltage across pin 1 (+) and pin 4 (-) on the bus cable.
 - 0VDC Go to the next step.
 - 25VDC or (battery voltage) Replace the control unit (Joystick).
- 5. Remove the seat.
- 6. Remove the rear battery box cover.
- 7. Disconnect the bus cable from the power module.
- 8. Measure voltage across pin 1 (+) and pin 4 (-) on the power module.
 - 0VDC Go to the next step.
 - 25VDC or (battery voltage) Replace bus cable.



WARNING Prevent damage to the (Shark) power module. Be careful when touching the leads on the power module. Do not allow the meter leads to touch each other, which will cause a short.

9. Disconnect the power harness from the power module.

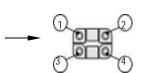
10. Measure voltage across the pin 1 (+) and pin 2 (-) on the power harness.

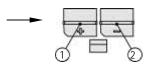
- 0VDC Go to the next step.
- 25VDC or (battery voltage) Replace the power module.

WARNING Before attempting to measure resistance, make sure there is no power to the circuit. Unplug the front and rear battery harnesses from the power harness

11. Measure Resistance across the terminals on the circuit breaker.

- Less than 10 ohms Go to the next step.
- Open Replace the circuit breaker.





SCENARIO 1 - Continued

12. Check continuity across the circuit breaker wires of the power harness and across the battery wires of the power harness. Repair or replace the power harness as necessary.

13. Check continuity across both the front and the rear battery harnesses. If open, check in-line fuse and replace fuse or harness as necessary. *Fuses must be replaced with exact type and rating.*

Note: When checking continuity, visually inspect wires, connectors, and pins for any damage and to make sure the pins are seated properly in their connectors.

SCENARIO 2: Batteries Will Not Charge (Shark Charging Test)

NOTE: Battery chargers will not charge the batteries unless the battery voltage is 18VDC or above and there is a closed circuit between the batteries. The circuit breaker completes that circuit. *Make sure that the circuit breaker is reset*. If necessary, use a set of known good batteries.

1. Check the voltage across pin 1 (+) and pin 2 (-) on the charger XLR connector. *Note: The charger must be plugged in and turned to the on position.*

- Greater than 24VDC Go to the next step.
- Less than 24VDC Try another wall outlet or known good charger.





WARNING Do not touch either of the multimeter probes on the third pin or the XLR connector cover. You may damage the charger.

2. Remove the seat and the battery box covers.

3. Make sure that the batteries are connected according to the battery connection diagram on the inside of the battery cover and/or figure 6 on page 14. Check the batteries and cables for corroded or loose terminals. Clean and tighten if necessary.

4. Measure voltage across the rear battery negative (black) terminal and the front battery positive (red) terminal.

- Less than 18VDC Load test and replace batteries as necessary.
- Greater than 18VDC Go to next step.
- 0VDC Go to step 9.

5. Unplug the battery harnesses from the power harness. Measure the voltage across the battery connectors on the power harness. Place the red meter lead on the positive pin of the front red connector mounted to the frame. Place the black meter lead on the negative pin of the rear black connector mounted to the frame. Refer to figure 4 on page 13.

Note: The charger must be plugged in and turned to the on position to perform the testing procedure.

- Greater than 24VDC Test the battery harnesses for continuity and replace as necessary.
- 0VDC Go to the next step.

SCENARIO 2 - Continued

- 6. Reconnect the battery harnesses to the power harness. Unplug the power harness from the power module. Measure voltage across the pin 1 (+) and pin 2 (-) on the power module.
 - Greater than 24VDC Test the power harness for continuity and replace as necessary.
 - 0VDC Go to the next step.

WARNING Prevent damage to the (Shark) power module. Be careful when touching the leads on the power module. Do not allow the meter leads to touch each other, which will cause a short.

7. Reconnect the power harness to the power module. Disconnect the bus cable from the power module. Measure voltage across pin 1 (+) and pin 4 (-) on the bus cable.

- Greater than 24VDC Replace the power module.
- 0VDC Go to the next step.

8. Reconnect the bus cable to the power module. Disconnect the bus cable from the joystick. Measure voltage across pin 1 (+) and pin 4 (-) on the joystick.

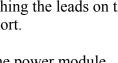
- Greater than 24VDC Replace the bus cable.
- 0VDC Replace the control unit.

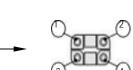
WARNING Before attempting to measure resistance, make sure there is no power to the circuit. Unplug the front and rear battery harnesses from the power harness.

9. Measure Resistance across the terminals on the circuit breaker.

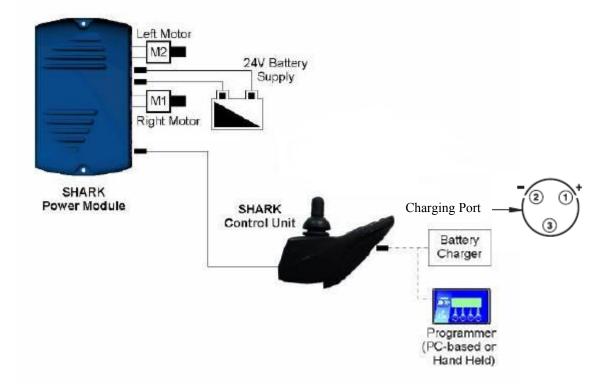
- Less than 10 ohms Go to the next step.
- Open Replace the circuit breaker.

10. Check continuity across the circuit breaker wires of the power harness and across the battery wires of the power harness. Repair or replace the power harness as necessary.





Electrical System



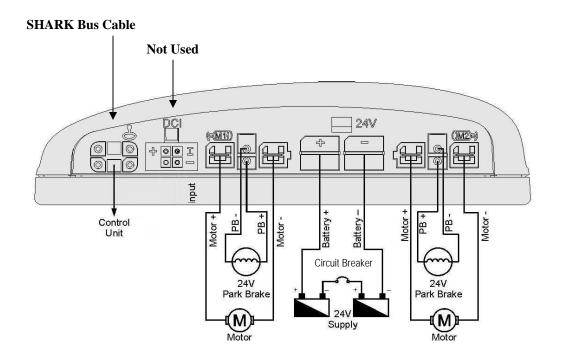


Figure 1. Compass Sport Electrical System Connector Key (Shark)

| Connect | or ney | IOF Shark Controller |
|-------------|------------|-------------------------------|
| | Battery Co | onnector Pinout |
| | Pin | Function |
| | 1 | Battery Positive |
| | 2 | Battery Negative |
| | | |
| | Motor Co | nnector Pinout |
| 3 | Pin | Function |
| ₫ , 2 | 1 | Motor Positive |
| ഷംജ് | 2 | Motor Negative |
| l d d l d d | 3 | Park Brake Negative |
| 4 | 4 | Park Brake Positive |
| | | |
| | SHARK Bu | s Connector Pinout |
| | Pin | Function |
| 12 | 1 | Battery Positive |
| 3 4 | 2 | SHARK Communications BUS High |
| | 3 | SHARK Communications BUS Low |
| · · | 4 | Battery Negative |
| | | |

Connector Key for Shark Controller

Note: The Shark controller and the controller harnesses are keyed, eliminating the possibility of the cables from being incorrectly connected to the controller.

Cabling Diagram

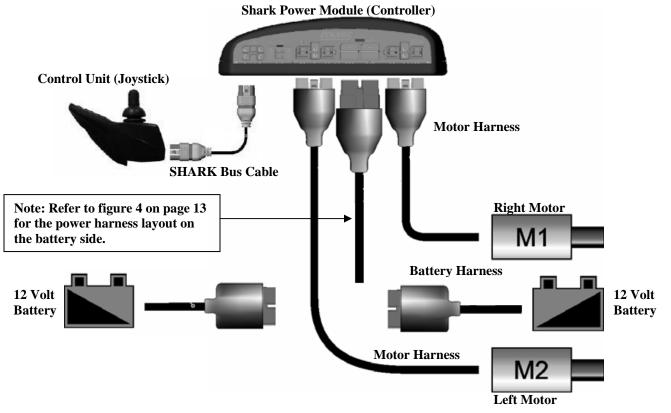
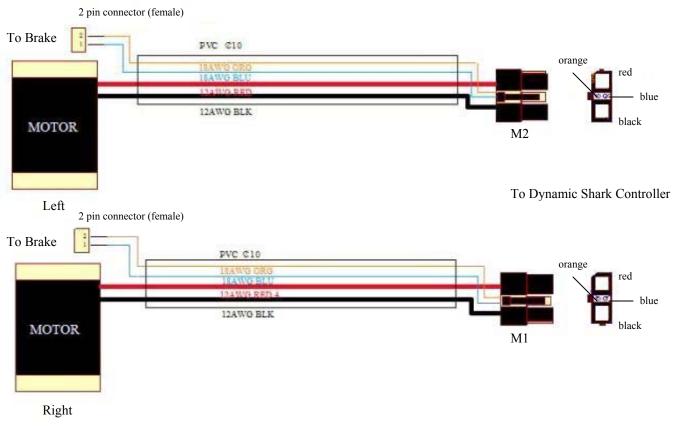
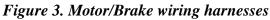


Figure 2. Compass Sport Cabling Diagram (Circuit Breaker not shown)

Wiring Diagrams





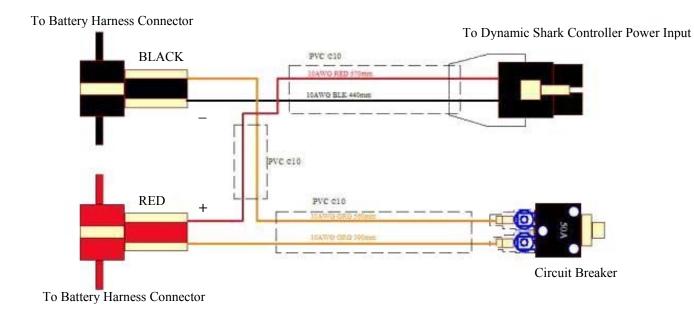


Figure 4. Power Harness

Wiring Diagrams – continued

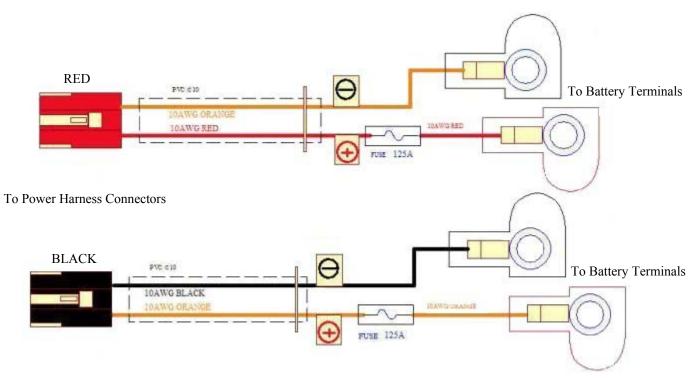


Figure 5. Battery Harnesses

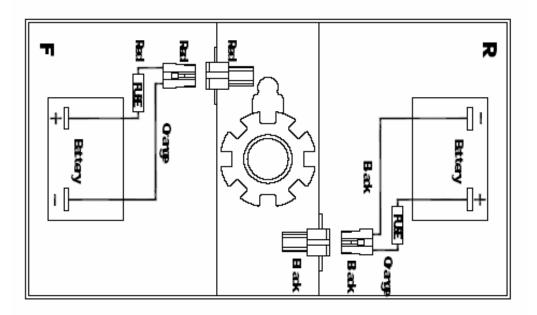


Figure 6. Correct Battery Placement

Troubleshooting Guide for the Shark Power System

Step 1: Battery voltage is always the first thing to check.

A. Check the battery voltage through the 3-pin battery charger port located on the front of the controller as shown in figure 1.

- Set voltmeter to the 50 VDC scale.
- Place the meter leads into the two outside pins of the battery charger port as shown in figure 2.
- Meter should read approximately 25 VDC.

B. If the voltage is below 25 VDC:

- Recharge the batteries for 8 hours.
- Check wiring for any visible damage and make sure all the cables are connected properly.
- Make sure that the pins are seated in the connectors properly and the fuses are good.

C. If the voltage is 20 VDC or less:

- The battery charger may not recognize a low voltage and thus will not charge the batteries.
- Boost charge the batteries to bring the voltage up to a level that the charger will see, then plug the battery charger into the charger port and charge for 8 hours.
- If the batteries will not charge, replace both batteries.

D. If the voltage is dropping too quickly, perform a load test on the batteries using a load tester. If you do not have access to a load tester, you can load test by performing the follow steps.

- Place the meter leads into the outside pins of the battery charger port as shown in figure 2. Sit in the power chair and drive it.
- After an initial drop, the voltage should hold steady at approximately 24VDC or higher when driving with a load on the chair.
- If the voltage continues to drop while driving, replace BOTH batteries.





Figure 2

Step 2: Check for "FLASH CODES"

Flash Codes



Flash codes indicate the nature of an abnormal condition directly from the SHARK Information Gauge. Without the use of any servicing tools, the condition can be simply diagnosed.

Note: An Amber wrench shaped LED as shown above will display a series of flashes that give the user visual feedback of the current fault condition.

| Flash Code | Description | |
|------------|-----------------------------|--|
| 1 | User Fault | Possible stall timeout or user error. |
| · · | | Release the joystick to neutral and try again. |
| | | Try charging the batteries. |
| 2 | Battery Fault | Batteries may require replacing. |
| | | Check the batteries and cabling. |
| 3 | Left Motor Fault | Check the left motor, connections and cabling. |
| 4 | Right Motor Fault | Check the right motor, connections and cabling. |
| 5 | Left Park Brake Fault | Check the left park brake, connections and cabling. |
| 6 | Right Park Brake Fault | Check the right park brake, connections and cabling. |
| _ | SHARK Control Unit Fault | Check the SHARK Communications Bus connections and wiring. |
| 7 | | Replace the Control Unit. |
| 8 | SHARK Power Module Fault | Check SHARK connections and wiring. |
| 0 | | Replace the Power Module. |
| | | Check Battery voltage is greater than 17V. |
| 9 | SHARK | Check SHARK Bus Cable. |
| | Communications Fault | Replace the SHARK Power Module. |
| | | Replace the SHARK Control Unit. |
| 10 | Unknown Fault | Check all connections and wiring. |
| | | Consult a service agent. |
| 11 | Incompatible Control | The Control Unit is incompatible with the Power Module. |
| | Unit | Ensure the brand of the Power Module matches that of the Control Unit. |

Flash Code 1: User Fault

A. Possible stall timeout or user error – Release the joystick to neutral and try again.

• Turn the controller off and then on again to clear the fault.

Flash Code 2: Battery Fault

A. Try charging the batteries.

- B. Check the battery voltage and cabling. Refer to step 1 on page 15.
- C. If the battery voltage fault persists after completing step 1, replace the batteries.

Flash Code 3: Left Motor Fault

A. Check the resistance of the left motor to determine if the fault is in the motor or the controller.

- Set your meter to the 20 Ohm scale.
- Touch the leads together to make sure the ohm meter is accurate. You should have 0 ohms at this point. If not, your meter needs to be calibrated.
- Place the red and black meter leads on the two outside pins of the connector on the motor as shown in figure 3.
- Meter reading should be between 0.3 and 5 ohms.
- Any reading outside this range, replace the motor.

B. Check the resistance of the M2 motor connector on the controller.

- Disconnect the battery from the controller.
- Set your meter to the 200k ohm scale.
- Touch the leads together to make sure the meter is accurate. You should have 0 ohms at this point. If not, your meter needs to be calibrated.
- Place the red and black meter leads on the two outside pins of the M2 motor connector on the controller as shown in figure 4.
- Meter reading should be 22k ohms.
- Any reading outside this range, replace the controller.

C. If the reading is within range, and the controller still displays a flash code, check the wiring for visible damage and that all cables are connected properly. Make sure all connectors are seated properly in their connectors.





Flash Code 4: Right Motor Fault

A. Check the resistance of the right motor to determine if the fault is in the motor or the controller.

- Set your meter to the 20 Ohm scale.
- Touch the leads together to make sure the ohm meter is accurate. You should have 0 ohms at this point. If not, your meter needs to be calibrated.
- Place the red and black meter leads on the two outside pins of the connector on the motor as shown in figure 5.
- Meter reading should be between 0.3 and 5 ohms.
- Any reading outside this range, replace the motor.

B. Check the resistance of the M1 motor connector on the controller.

- Disconnect the battery from the controller.
- Set your meter to the 200k ohm scale.
- Touch the leads together to make sure the meter is accurate. You should have 0 ohms at this point. If not, your meter needs to be calibrated.
- Place the red and black meter leads on the two outside pins of the M1 motor connector on the controller as shown in figure 6.
- Meter reading should be 22k ohms.
- Any reading outside this range, replace the controller.

C. If the reading is within range, and the controller still displays a flash code, check the wiring for visible damage and that all cables are connected properly. Make sure all connectors are seated properly in their connectors.





Flash Code 5: Left Park Brake Fault

A. Make sure the left park brake lever is engaged.

• If disengaged, re-engage the park brake lever and turn the power off and back on to reset flash code.

B. Check the resistance of the left park brake, to determine if the fault is in the park brake or in the controller.

- Set your meter to the 200 ohm scale.
- Touch the leads together to make sure the meter is accurate. You should have 0 ohms at this point. If not, your meter needs to be calibrated.
- Place the red and black meter leads on the two middle pins of the motor connector as shown in figure 7 on page 19.
- Meter reading should be 80 ohms or less, but not shorted.
- Any reading outside this range, replace the park brake.

C. If the reading is within range, and the controller still displays a flash code, check the wiring for visible damage and that all cables are connected properly. Make sure all connectors are seated properly in their connectors.



Figure7

Flash Code 6: Right Park Brake Fault

A. Make sure the right park brake lever is engaged.

• If disengaged, re-engage the park brake lever and turn the power off and back on to reset flash code.

B. Check the resistance of the right park brake, to determine if the fault is in the park brake or in the controller.

- Set your meter to the 200 ohm scale.
- Touch the leads together to make sure the meter is accurate. You should have 0 ohms at this point. If not, your meter needs to be calibrated.
- Place the red and black meter leads on the two middle pins of the motor connector as shown in figure 7.
- Meter reading should be 80 ohms or less, but not shorted.
- Any reading outside this range, replace the park brake.

C. If the reading is within range, and the controller still displays a flash code, check the wiring for visible damage and that all cables are connected properly. Make sure all connectors are seated properly in their connectors.

Flash Code 7: SHARK Control Unit Fault

A. Holding the power switch for a timeframe greater then 4 seconds while powering up will cause the remote to display this flash code. This is not a fault but a safety feature designed to detect if the power button is working properly. The power button is your emergency stop button for the power chair.

- Turn the power off and then on again to reset the fault.
- B. Check the SHARK Communications Bus connections and wiring.
- C. Check that the wiring is not damaged and that all cables are connected properly.
- D. Make sure all pins are seated properly in their connectors.

E. If after performing the previous tests and the fault still persists, or the remote will not turn off, replace the SHARK control unit.

Flash Code 8: SHARK Power Module Fault

A. Check the SHARK connections and wiring for continuity.

- B. Check that the wiring is not damaged.
- C. Make sure all pins are seated properly in their connectors.
- D. If after performing the previous tests and the fault still persists, replace the SHARK power module.

Flash Code 9: SHARK Communication Fault

A. Check that the battery voltage is greater than 17VDC. Refer to step 1 on page 15.

- B. Check the SHARK bus cable for continuity.
- C. Make sure all pins are seated properly in their connectors.

D. If after performing the previous tests and the fault still persists, replace both the SHARK control unit and the SHARK power module.

Flash Code 10: Unknown Fault

A. Check all connections and wiring.

B. Call Technical Support.

Flash Code 11: Incompatible Control Unit

A. Make sure the brand of the Power Module matches that of the Control Unit.

Step 3: Check for other conditions displayed by the Shark Control Unit.

A. All LEDs off on the battery gauge indicates the power is off.



B. All LEDs on steady on the battery gauge indicates the power is on. Less LEDs imply a reduced battery charge.



C. The left red LED flashing on the battery gauge signifies an extremely low battery charge. The batteries should be charged as soon as possible.

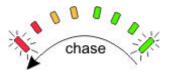


- Charge the batteries for 8 hours.
- Refer to step 1 for measuring battery voltage.
- Make sure the correct charger is being used and that it is working properly.
- Make sure the charger is working, by check the voltage across pin 1 and 2 on the charger XLR connector. +



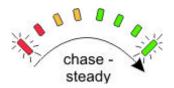
• If after performing the previous tests and the flashing still persists, replace the batteries.

D. A right to left LED chase on the battery gauge signifies that the Shark is in a locked state.



• To unlock the Shark, turn the controller on and press the horn button twice within ten seconds.

E. A left to right LED chase on the battery gauge signifies that the Shark is in a charge inhibit. The steady LEDs indicate the current state of battery charge.



- Remove the battery charger from the charging port.
- If the flashing persists after the charger has been removed, replace the controller.

F. When all speedometer LEDs are flashing, and the battery gauge LEDs are steady, the Shark has detected an Out Of Neutral At Power Up (OONAPU) condition.



• Release the joystick back to the neutral position.

REPLACEMENT INSTRUCTIONS

DRIVE WHEEL

1. Turn off power.

- 2. Place the power chair in drive mode.
- 3. Place a support under the frame so that the drive wheel is off the ground.
- 4. Remove the drive wheel. Note: Make sure to retain the axle key. See figure 7.
- 5. Install the new drive wheel. Note: Make sure the axle key is installed correctly in the axle slot. Also, make sure the washer is installed facing in the correct direction, with the dimples facing toward the hub cap.
- sure the washer is installed facing in the correct direction, with the
- 6. Remove the frame support.
- 7. Power on and test the power chair.

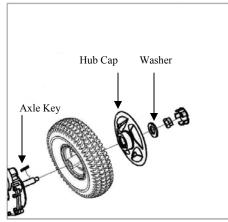


Figure 7. Drive Wheel Assembly

CASTER

- 1. Turn off power.
- 2. Place the power chair in drive mode.
- 3. Place a support under the frame so that the caster wheel is off of the ground.
- 4. Remove the cap from caster arm. See figure 8.
- 5. Remove the nut that fastens the caster wheel to the caster arm. See figure 8.
- Note: Make sure you retain the hardware used to secure the caster assembly.
- 6. Install the new caster assembly.
- 7. Remove the frame support.
- 8. Power on and test the power chair.



Figure 8. Front Left Caster Assembly shown

DRIVETRAIN

- 1. Turn off power.
- 2. Place the power chair in drive mode.
- 3. Disconnect the bus cable from the control unit (Joystick).
- 4. Remove the seat and seat post.
- 5. Remove the battery box covers.

6. Remove the center shroud and either the right or the left side shrouds from the frame.

Note: Only the center shroud requires screw removal (qty.2). All other shrouds are the snap on type. Simply lift up to remove.

- 7. Disconnect and remove the batteries.
- 8. Disconnect the motor (either left or right) from the power module.
- 9. Cut and remove (either left or right) rear wiring tie wraps only. Note: Left side (qty.3) Right side (qty.2).
- 10. Prop up the center of the power chair, so the casters and wheels are off the ground.

11. Remove the drive wheel. See drive wheel replacement and figure 7 on page 22.

Note: Drive wheel removal is NOT required if replacing only the brake.

11. Remove the two snap rings from (either left or right) side and pull drive assembly towards you to remove.

12. Remove the motor/brake assembly. See figure 9.

Note: Motor/Brakes are Left/Right side specific. The instructions you received with the parts MUST BE followed to ensure proper fit and function.

- 13. Install the new motor/brake assembly.
- 14. Replace (either left or right) side back onto the frame and reinstall the two snap rings.
- 14. Replace the drive wheel.
- 14. Reconnect motor (either left or right) to the power module.
- 15. Replace (either left or right) rear wiring tie wraps.
- 16. Reinstall the batteries.
- 17. Reinstall the center shroud and seat post.
- 18. Reinstall all other shrouds.
- 19. Reinstall the seat.
- 20. Reconnect the bus cable to the control unit (Joystick).
- 21. Power on and test the power chair.

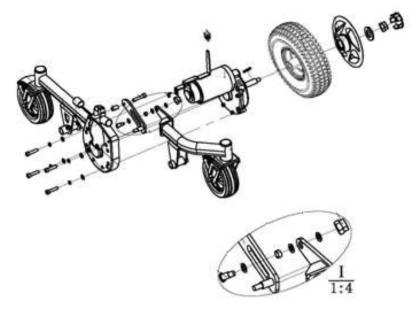


Figure 9. Drivetrain Assembly (Left side shown)

POWER MODULE

- 1. Turn off power.
- 2. Place the power chair in drive mode.
- 3. Disconnect the bus cable from the control unit (Joystick).
- 4. Remove the seat.
- 5. Remove the rear battery cover.
- 6. Disconnect the motor harnesses M2 and M1, the power harness, and the bus cable from the power module.
- 7. Remove the power module from the battery box, by removing the two screws securing it. See figure 10.
- 8. Install the new power module onto the battery box.
- 9. Reconnect the motor harnesses M2 and M1, the power harness, and the bus cable to the new power module.
- 10. Reinstall the battery box cover.
- 11. Reinstall the seat.
- 12. Connect the control unit (Joystick) to the bus cable.
- 13. Power on and test the power chair.

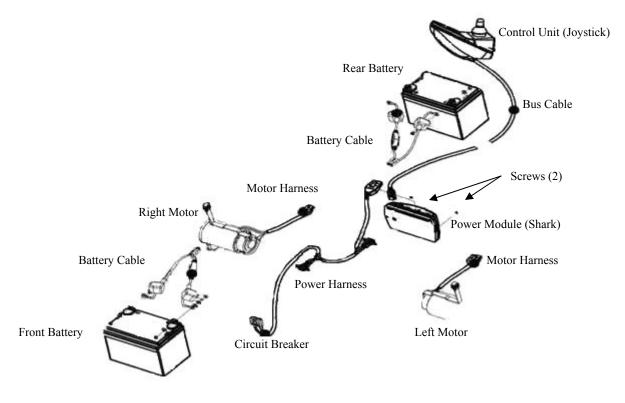


Figure 10. Electrical System

APPENDIX A - HOW TO USE A VOLTMETER

Step 1

Plug the probes into the meter. Red goes to the positive (+) and black to the negative (-).

Step 2

Turn the selector dial or switch to the type of measurement you want. To measure direct current - a battery, for example - use DCV. To measure alternating current, such as a wall outlet, use ACV.

Step 3

Choose the range setting. The dial may have options from 5 to 1000 on the DCV side and 10 to 1000 on the ACV side. The setting should be the top end of the voltage you are reading. Not all voltmeters have this setting.

Step 4

Turn the meter on.

Step 5

Hold the probes by the insulated handles and touch the red probe to the positive side of a DC circuit or either side of an AC circuit. Touch the other side with the black probe.

Step 6

Read the digital display or analog dial.

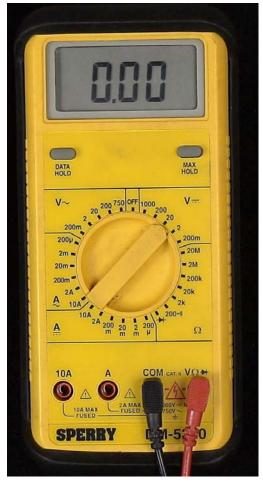


Figure 35. Multimeter (Set to DC Volts)

APPENDIX B - HOW TO USE AN OHM METER

Ohm's law breaks down into the basic equation: Voltage = Current x Resistance. Current is generally measured in amps, and resistance in ohms. Testing the resistance on an electrical circuit in your home or car can help you diagnose problems with that circuit. You can use a simple ohmmeter for this task, but most professionals now use the ohmmeter function of a multimeter (also called multitester or VOM, for volt/ohmmeter). Read on for instructions on how to use an ohmmeter and test for resistance.

- Ohmmeter or Multimeter (Volt/ohmmeter)
- Circuit to test (with all power OFF)
- Service manual

Step 1

Disconnect completely and/or turn OFF all power to the circuit you are testing. You must have a completely dead wire or circuit in order to ensure accuracy in measurement, as well as your own safety. Your ohmmeter will supply the voltage and current for your circuit so NO other power is necessary. Testing a powered circuit can "cause damage to the meter, circuit, and *you*."

Step 2

Connect testing wires to the ohmmeter. The black wire goes to the ground (common) outlet, the red wire to the volt/ohms outlet.

Step 3

Consult a service manual for the normal range of resistance for the circuit you are testing.

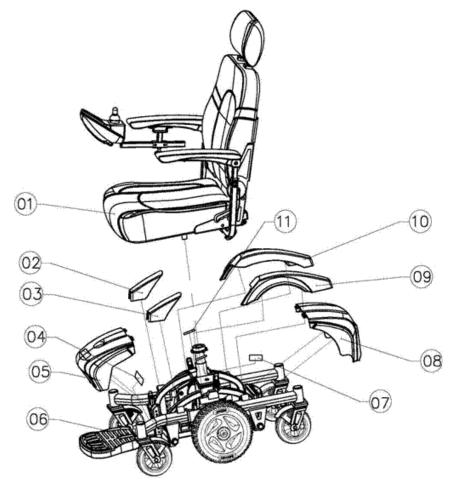
Step 4

Set the dial to the "ohms" setting with a multimeter. On an individual ohmmeter, you may have to set a range for the readings, in ohms, kilohms or megohms. Use the range you located in your service manual to set the dial.



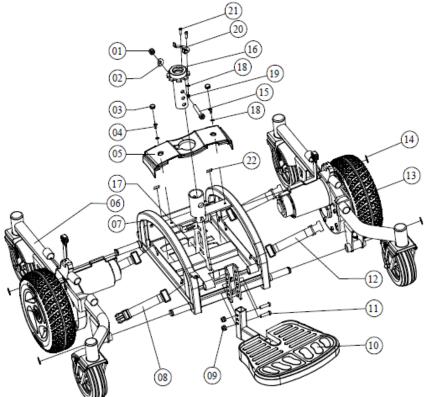
Figure 36. Multimeter (Set to Ohms)

ILLUSTRATED PARTS BREAKDOWN



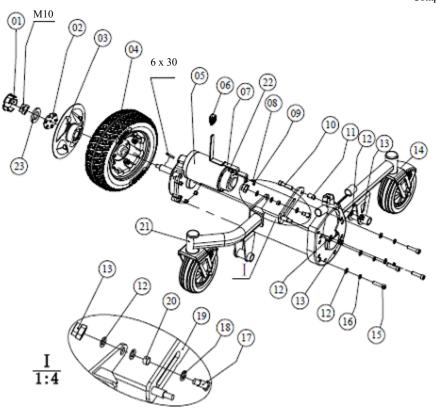
GP605 Compass Sport (WE03E001)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------------|--|-----|
| 01 | SMH-GRC-1818-C21 | Highback Grey Charcoal 18x18 (Arms and Joystick Sold Separately) | 1 |
| 01 | SMH-COS-1818-C21 | Highback Coffee Sand 18x18 (Arms and Joystick Sold Separately) | 1 |
| 02 | WE03E501BLUE | Cover, Blue Right Front Caster for Compass Sport GP605 | 1 |
| 02 | WE03E501RED | Cover, Red Right Front Caster for Compass Sport GP605 | 1 |
| 03 | WE03E502BLUE | Cover, Blue Left Front Caster for Compass Sport GP605 | 1 |
| 03 | WE03E502RED | Cover, Red Left Front Caster for Compass Sport GP605 | 1 |
| 04 | WE03E511 | Decal, Serial Number | 1 |
| 05 | WE03E503RED | Cover, Front Red U1 Battery for Compass Sport GP605 | 1 |
| 05 | WE03E503BLUE | Cover, Front Blue U1 Battery for Compass Sport GP605 | 1 |
| 06 | WE03E101 | Base, GP605 Compass Sport | 1 |
| 07 | SE1P526A | Decal, Max Weight 300 lbs | 1 |
| 08 | WE03E504RED | Cover, Rear Red U1 Battery for Compass Sport GP605 | 1 |
| 08 | WE03E504BLUE | Cover, Rear Blue U1 Battery for Compass Sport GP605 | 1 |
| 09 | WE03E505BLUE | Fender, Blue Left for Compass Sport GP605 | 1 |
| 09 | WE03E505RED | Fender, Red Left for Compass Sport GP605 | 1 |
| 10 | WE03E506BLUE | Fender, Blue Right for Compass Sport GP605 | 1 |
| 10 | WE03E506RED | Fender, Red Right for Compass Sport GP605 | 1 |
| 11 | 3002343010 | Decal, Unlock 43*7 | 2 |



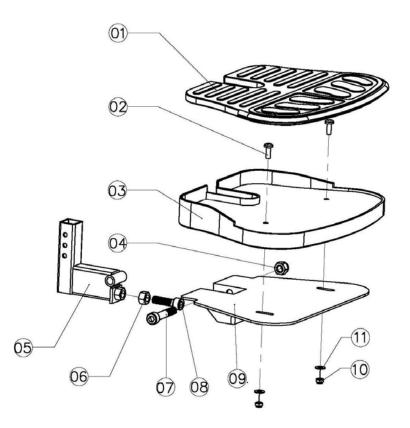
Base, GP605 Compass Sport (WE03E101)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|--------------|---|-----|
| 01 | 3100310012 | Nut, Nylon (M10) | 1 |
| 02 | SA2P422A | Washer, ARC (Φ 10) | 1 |
| 03 | NA1P504A | Сар | 2 |
| 04 | 3110605062 | Screw, Cross Slot Pan Head M5*10 | 2 |
| 05 | WE03P506BLUE | Plate, Battery Cover Connection w/ Ledge Blue for Compass Sport GP605 | 1 |
| 05 | WE03P506RED | Plate, Battery Cover Connection w/ Ledge Red for Compass Sport GP605 | 1 |
| 06 | WE03E102 | Drive Train, Right Includes Caster Arms, Wheels and Motor | 1 |
| 07 | WE93A101 | Chassis, Compass Sport GP605 | 1 |
| 08 | WE03A111 | Strap, Battery Right Male for Compass Sport GP605 | 2 |
| 09 | 3100308082 | Nut, Nylon Black Zinc Plated M8 | 2 |
| 10 | WE03E103 | Footplate, Assembly for Compass Sport GP605 | 1 |
| 11 | 3110208082 | Bolt, Flat Round Hex Black Zinc Plated M8*45 | 2 |
| 12 | WE03A112 | Strap, Battery Left Female for Compass Sport GP605 | 2 |
| 13 | WE03E104 | Drive Train, Left Includes Wheels and Motor | 1 |
| 14 | 3001419019 | C Clasp ϕ 19 | 4 |
| 15 | 3110611052 | Bolt, Hex Head Cylinder Black Zinc (M10*65) | 1 |
| 16 | SE05E403 | Post, Seat for LiteRider GL110 and Compass GP605 | 1 |
| 17 | WC5P129A | EVA Foam Tape(25*50*5) | 2 |
| 18 | 3000405032 | Washer, Flat (5.5*10*1) | 4 |
| 19 | 3100305012 | Nut, Nylon (M5) | 2 |
| 20 | WE03P406 | Position Limiter | 1 |
| 21 | 3110605052 | Screw, Cross Slot Pan Head Black Zinc M5*6L | 2 |
| 22 | WE03P516 | Battery Cushion Block (23*30) | 2 |



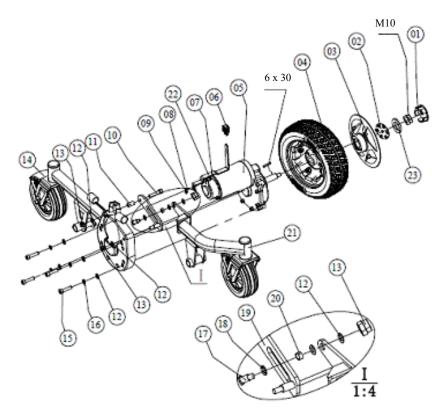
Right Side Drive Train (WE03E102)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | SE06P517 | Cap, Rim for Companion GC240/340/440 and Compass Sport GP605 | 1 |
| 02 | WE03P204 | Washer ϕ 10.5* ϕ 53*1.5 | 1 |
| 03 | SE07E502 | Hubcap, Plastic 10" for Companion GC240/340, LiteRider GL110 and Compass Sport GP605 | 2 |
| 04 | WE03E201 | Wheel, Drive Complete Assembly for Compass Sport GP605 | 1 |
| 05 | RA03E103 | Motor, Right Assembly with Gearbox and Brake for Compass Sport GP605 | 1 |
| 06 | WE03P510 | Cap, Brake Handle Yellow for Compass Sport GP605 | 1 |
| 07 | WE03P143 | Handle, Brake Black for Compass Sport GP605 | 1 |
| 08 | 3111404012 | Screw, Cross Head Countersunk White Zinc Plated M4*12 | 1 |
| 09 | 3111404022 | Screw, Cross Head Countersunk White Zinc Plated M4*5 | 1 |
| 10 | 3110308132 | Screw, Hex Cap Socket Head Black Zinc Plated M8*45 | 2 |
| 11 | WE03P139 | Limit Set | 1 |
| 12 | 3000408012 | Washer, Flat Black Zinc φ 8.4* φ 16*1.6 | 7 |
| 13 | 3100308012 | Nut, Nylon Black Zinc M8 | 3 |
| 14 | WE03E105 | Caster, Rear Right Arm with Wheel for Compass Sport GP605 | 1 |
| 15 | 3110208022 | Screw, Hex Cap Socket HeadM8*35 | 4 |
| 16 | 3003108012 | Washer, Spring 8 | 4 |
| 17 | WE03P140 | Sliding Pin | 1 |
| 18 | 3000410052 | Washer, Flat Black Zinc φ 10.5* φ 18*1.6 | 2 |
| 19 | WE03A107 | Plate, Right Connector Front to Rear Caster for Compass Sport GP605 | 1 |
| 20 | WC9P002A | Spacer | 1 |
| 21 | WE03E106 | Caster, Front Right Arm with Wheel for Compass Sport GP605 | 1 |
| 22 | 3100304012 | Nut, Nylon (M4) | 1 |
| 23 | 3000410032 | Washer, Flat(10.5*30*2.5) | 1 |



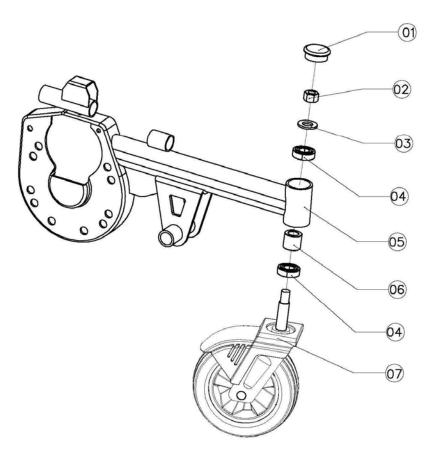
Footplate Assembly (WE08E103)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|
| 01 | WE03P508 | Pad, Footplate for Compass Sport GP605 | 1 |
| 02 | 3110606021 | Screw, Cross Slot Pan Head Black Zinc M6*16 | 2 |
| 03 | WC9P107A | Footplate Shell ABS | 1 |
| 04 | 3100310012 | Nut, Nylon Black Zinc M10 | 1 |
| 05 | WE03A109 | Bracket, Footplate Mounting for Compass Sport GP605 | 1 |
| 06 | 3100110032 | Nut, Hex Black Zinc M10 | 1 |
| 07 | 3110310042 | Bolt, Hex Head Cylinder Black Zinc M10*50 | 1 |
| 08 | 3110310012 | Bolt, Hex Head Cylinder Black Zinc M10*35 | 1 |
| 09 | WE03A110 | Footplate Metal Base Plate (Electro Black) | 1 |
| 10 | 3100306012 | Nut, Nylon Black Zinc M6 | 2 |
| 11 | 3000406042 | Washer, Flat ϕ 6.6* ϕ 12*1.6 | 2 |



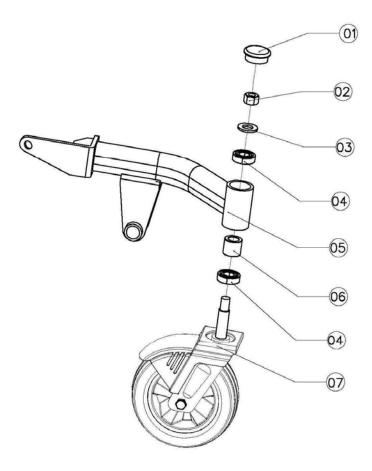
Left Front Caster Arm Assembly (WE08E104)

| Left Front Caster Arm Assembly (WE06E104) | | | | |
|---|------------|--|-----|--|
| ITEM | PART NO. | DESCRIPTION | QTY | |
| 01 | SE06P517 | Cap, Rim for Companion GC240/340/440 and Compass Sport GP605 | 1 | |
| 02 | WE03P204 | Washer $\phi 10.5^* \phi 53^* 1.5$ | 1 | |
| 03 | SE07E502 | Hubcap, Plastic 10" for Companion GC240/340, LiteRider GL110 and Compass Sport GP605 | 1 | |
| 04 | WE03E204 | Wheel, Drive Complete Assembly for Compass Sport GP605 | 1 | |
| 05 | RA03E102 | Motor, Left Assembly with Gearbox and Brake for Compass Sport GP605 | 1 | |
| 06 | WE03P510 | Cap, Brake Handle Yellow for Compass Sport GP605 | 1 | |
| 07 | WE03P143 | Handle, Brake Black for Compass Sport GP605 | 1 | |
| 08 | 3111404012 | Screw, Hex Socket White Zinc Plated (M4*12) | 1 | |
| 09 | 3111004022 | Screw, Hex Socket White Zinc Plated (M4*6) | 1 | |
| 10 | 3110308032 | Screw, Hex Cap Socket Head Black Zinc Plated M8*40 | 2 | |
| 11 | WE03P139 | Limit Set | 1 | |
| 12 | 3000408012 | Washer, Flat Black Zinc ϕ 8.4* ϕ 16*1.6 | 7 | |
| 13 | 3100308012 | Nut, Nylon Black Zinc (M8) | 3 | |
| 14 | WE03E107 | Caster, Rear Left Arm with Wheel for Compass Sport GP605 | 1 | |
| 15 | 3110208022 | Screw, Hex Cap Socket Head M8*35 | 4 | |
| 16 | 3003108012 | Washer, Spring 8 | 4 | |
| 17 | WE03P140 | Sliding Pin | 1 | |
| 18 | 3000410052 | Washer, Flat Black Zinc φ 10.5* φ 18*1.6 | 1 | |
| 19 | WE03A108 | Plate, Left Connector Front to Rear Caster for Compass Sport GP605 | 1 | |
| 20 | WC9P002A | Spacer | 1 | |
| 21 | WE03E108 | Caster, Front Right Arm with Wheel for Compass Sport GP605 | 1 | |
| 22 | 3100304012 | Nut, Nylon White Zinc Plated (M4) | 1 | |
| 23 | 3000410032 | Washer, Flat Black Zinc $\varphi 10.5^* \varphi 30^* 2.5$ | 1 | |



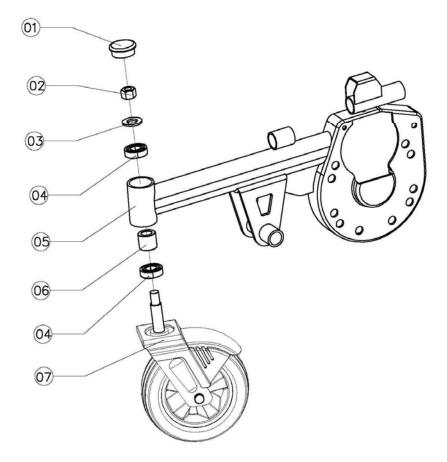
Right Rear Arm Assembly (WE03E105)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | WC9P421A | Cap, Caster Black Plastic for Compass Sport GP605 | 1 |
| 2 | 3100312011 | Nut, Nylon White Zinc (M12) | 1 |
| 3 | 3000413041 | Washer, Flat White Zinc (Ø13*Ø20*2) | 1 |
| 4 | 3090160020 | Bearing, Caster (6002-2Z) for Compass Sport GP605 | 2 |
| 5 | WE03A104 | Arm, Rear Right Caster Arm Only for Compass Sport GP605 | 1 |
| 6 | WD2P205A | Spacer, Caster Wheel White Zinc for Compass Sport GP605 | 1 |
| 7 | WE03E202 | Fork, Right Caster Assembly w/ Wheel for Compass Sport GP605 | 1 |



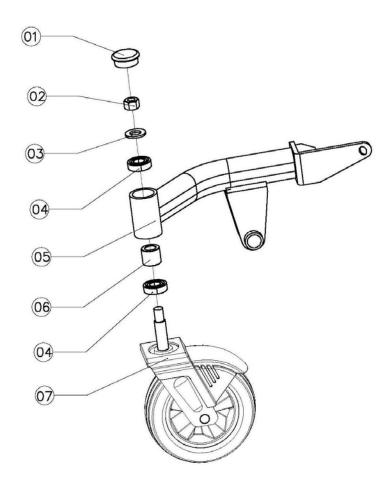
Right Forearm Assembly (WE03E106)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 1 | WC9P421A | Cap, Caster Black Plastic for Compass Sport GP605 | 1 |
| 2 | 3100312011 | Nut, Nylon White Zinc (M12) | 1 |
| 3 | 3000413041 | Washer, Flat White Zinc (Ø13*Ø20*2) | 1 |
| 4 | 3090160020 | Bearing, Caster (6002-2Z) for Compass Sport GP605 | 2 |
| 5 | WE03A105 | Arm, Front Right Caster Arm only for Compass Sport GP605 | 1 |
| 6 | WD2P205A | Spacer, Caster Wheel White Zinc for Compass Sport GP605 | 1 |
| 7 | WE03E202 | Fork, Right Caster Assembly w/ Wheel for Compass Sport GP605 | 1 |



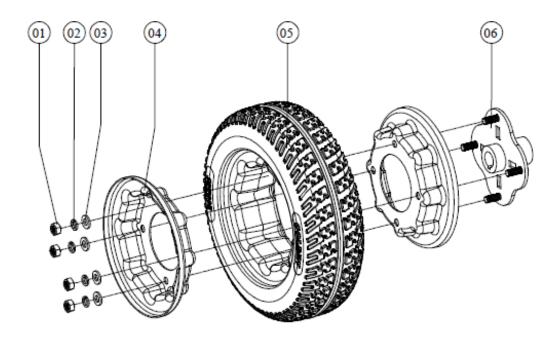
Left Rear Arm Assembly (WE03E107)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|
| 1 | WC9P421A | Cap, Caster Black Plastic for Compass Sport GP605 | 1 |
| 2 | 3100312011 | Nut, Nylon White Zinc (M12) | 1 |
| 3 | 3000413041 | Washer, Flat White Zinc (Ø13*Ø20*2) | 1 |
| 4 | 3090160020 | Bearing, Caster (6002-2Z) for Compass Sport GP605 | 2 |
| 5 | WE03A103 | Arm, Rear Left Caster Arm Only for Compass Sport GP605 | 1 |
| 6 | WD2P205A | Spacer, Caster Wheel White Zinc for Compass Sport GP605 | 1 |
| 7 | WE03E203 | Fork, Left Caster Assembly w/ Wheel for Compass Sport GP605 | 1 |



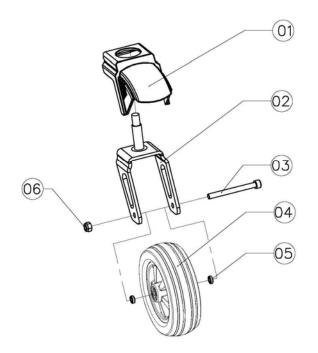
Left Forearm Assembly (WE03E108)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|
| 1 | WC9P421A | Cap, Caster Black Plastic for Compass Sport GP605 | 1 |
| 2 | 3100312011 | Nut, Nylon (M12 White Zinc) | 1 |
| 3 | 3000413041 | Washer, Flat White Zinc (Ø13*Ø20*2) | 1 |
| 4 | 3090160020 | Bearing, Caster (6002-2Z) for Compass Sport GP605 | 2 |
| 5 | WE03A106 | Arm, Front Left Caster Arm Only for Compass Sport GP605 | 1 |
| 6 | WD2P205A | Spacer, Caster Wheel White Zinc for Compass Sport GP605 | 1 |
| 7 | WE03E203 | Fork, Left Caster Assembly w/ Wheel for Compass Sport GP605 | 1 |



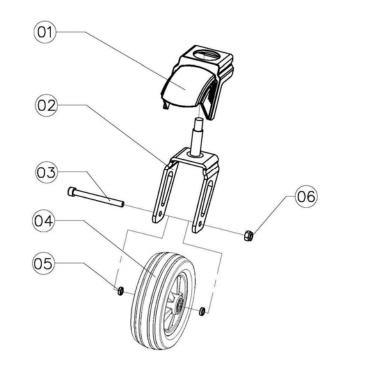
Wheel Assembly (WE03E201)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | 31001W3011 | Nut, Hex White Zinc (5/16-24UNF) | 4 |
| 02 | 3003108011 | Washer, Spring (8) | 4 |
| 03 | 3000408011 | Washer, Flat White Zinc (φ 8.4* φ 16*1.6) | 4 |
| 04 | WC9P301A | Mag, Black for Compass Sport GP605 4" | 2 |
| 05 | 3070100030 | Tire, Solid Urethane ø260*85 For Compass Sport GP605 | 1 |
| 06 | WE03A203 | Hub, For Compass Sport GP605 | 1 |



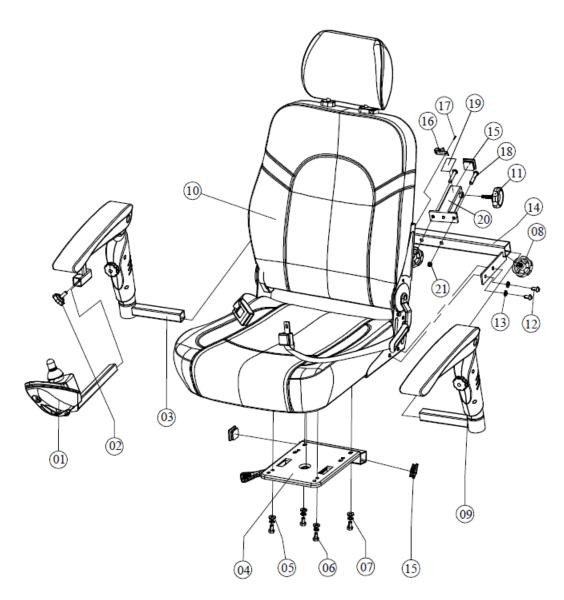
Right Caster Assembly (WE03E202)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|
| 01 | WE03P509 | Cover, Caster Black Plastic for Compass Sport GP605 | 1 |
| 02 | WE03A202 | Fork, Caster Fork only for Compass Sport GP605 | 1 |
| 03 | 3110308122 | Screw, Hex Head Socket Cap Black Zinc (M8*82) | 1 |
| 04 | WC9E112A | Wheel, Caster for Compass Sport GP605 | 1 |
| 05 | WC9P202A | Spacer, White Zinc (Ø12* φ 8.5*4) | 2 |
| 06 | 3100308012 | Nut, Nylon Black Zinc (M8) | 1 |



Left Caster Assembly (WE03E203)

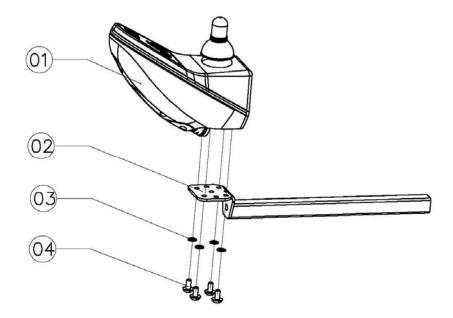
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|
| 01 | WE03P509 | Cover, Caster Black Plastic for Compass Sport GP605 | 1 |
| 02 | WE03A202 | Fork, Caster Fork only for Compass Sport GP605 | 1 |
| 03 | 3110308122 | Screw, Hex Head Socket Cap Black Zinc (M8*82) | 1 |
| 04 | WC9E112A | Wheel, Caster for Compass Sport GP605 | 1 |
| 05 | WC9P202A | Spacer, White Zinc (Ø12* φ 8.5*4) | 2 |
| 06 | 3100308012 | Nut, Nylon Black Zinc (M8) | 1 |



Seat Assembly (WE03E401)

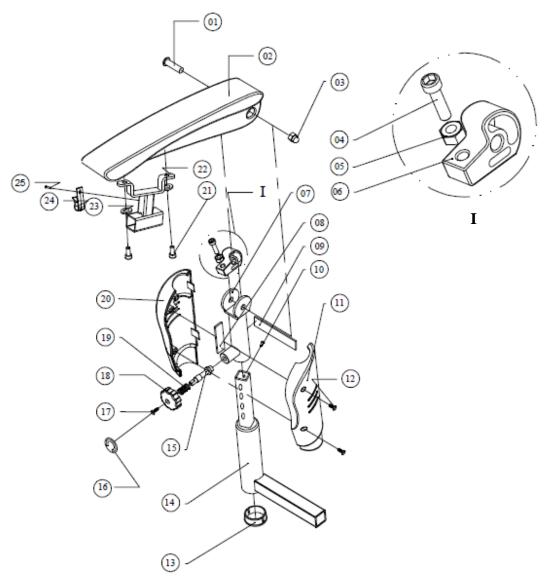
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|
| 01 | WE03E402 | Extension, Joystick Mounting Arm with Joystick for Compass Sport GP605 | 1 |
| 02 | MBH-COAHAK | Knob, Arm Height Adjustable for Compass GP600M/GP620M/GP605 and Companion GC240/340/440 (M8*20) | 1 |
| 03 | WE03E405 | Arm, Right Assembly for Compass Sport GP605 | 1 |
| 04 | MBX-CSSA2 | Swivel, Seat Assembly for Companion GC221/321/421/240/340/440, LiteRider GL110, Alante GP201R (post-2006 High Profile Collar) and Compass Sport GP605 | 1 |
| 05 | 3000408031 | Washer, Flat Zinc (Ø8.4*Ø24*2) | 4 |

| 06 | 3110408092 | Bolt, Outer Hex White Zinc (M8*35L) | 4 |
|----|--------------|--|---|
| 07 | 3003108011 | Washer, Spring White Zinc (Ø8) | 4 |
| 08 | MBA-COKAWA | Knob, Arm Width Adjustable for Compass GP600M/GP620M/GP605M and Companion GC240/340/440 | 1 |
| 09 | WE09E403C | Arm, Left Assembly for Compass Sport GP605 | 1 |
| 10 | SMH-GRC-1818 | 18x18 High Back Seat Raw | 1 |
| 11 | 3111308030 | Knobs | 1 |
| 12 | 3110108122 | Socket Screw, Black Zinc Plated | 4 |
| 13 | 3003108012 | Spring Washer (Ø8) | 4 |
| 14 | WS35A103 | Armrest Casing | 3 |
| 15 | WC9P453A | WC9P453A Square Tube Plug | |
| 16 | WC9P511A | Plastic Clamp | 3 |
| 17 | 3111804012 | Cross Pan Head Screw | 1 |
| 18 | 3110108042 | Screw, Large Hex Head Flat Black Zinc | 2 |
| 19 | SE1P529A | Label on Armrest Casing | 1 |
| 20 | WD6A402A | Accessory Bracket | 1 |
| 21 | 3100308012 | Nut, Nylon Black Zinc (M8) | 2 |



Controller Assembly (WE03E402)

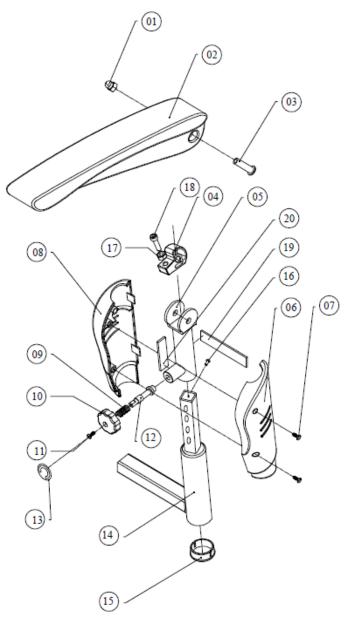
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | MBC-DYNSJ1 | Joystick, Dynamic Shark REMD Drive (black, no cable, pushbutton controls) | 1 |
| 02 | MBH-A3SA | Arm, Straight(fits into joystick mount) for Alante GP201R/GP202R, Compass GP600M/GP620M and Compass Sport GP605 | 1 |
| 03 | 3003105012 | Washer, Spring Black Zinc (5) | 4 |
| 04 | 3110105012 | Screw, Large Hex Head Flat Black Zinc M5*16 | 4 |



Right Arm Assembly (WE03E405)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|
| 01 | 3110108032 | Screw, Large Hex Head Flat Black Zinc M8*40 | 1 |
| 02 | WC9A409B | Armrest Assembly | 1 |
| 03 | 3100208012 | Nut, Cap Shaped Black Zinc M8 | 2 |
| 04 | 3110308032 | Screw, Large Hex Head Flat Black Zinc (M6*40) | 1 |
| 05 | 3100108012 | Socket Screw (M8) | 2 |
| 06 | WC9P415B | Adjusting Block | 1 |
| 07 | WC9A416A | Rail, Arm Top for Compass Sport GP605 | 2 |
| 08 | WC9P489A | Armrest Shell Fixed Cotton I | 1 |
| 09 | WC9P488A | Armrest Shell Fixed Cotton II | 1 |

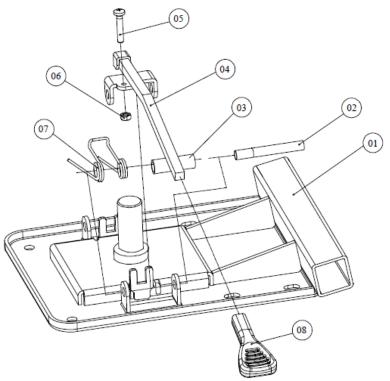
| | | · · · · · · · · · · · · · · · · · · · | |
|----|------------|---|---|
| 10 | 3110604041 | Screw, Crossed Pan Head White Zinc (M4*8) | 2 |
| 11 | WC9P416A | Shell | 2 |
| 12 | 3111804012 | Screw, Crossed Head Countered sunk Self Tapping White Zinc (M4*8) | 1 |
| 13 | WC9P421A | Tube Plug | 1 |
| 14 | WC9A417A | Bracket, Arm Joining for Compass Sport GP605 (L) | 1 |
| 15 | WC9P420A | Bayonet | 1 |
| 16 | WC9P454A | Label for Bayonet | 1 |
| 17 | 3111004031 | Flat Phillips Head Screw | 1 |
| 18 | WC9P419A | Adjustable Knob | 1 |
| 19 | WC9P418A | Tube, Arm Bottom Bent For Compass Sport GP605 | 1 |
| 20 | WC9P417A | Shell | 1 |
| 21 | 3110306052 | Hexagon Socket Head Screw (M6*12) | 1 |
| 22 | WC6A404A | Bracket, Joystick Mounting for Compass Sport GP605 | 1 |
| 23 | 3003106012 | Washer, Spring Black Zinc (6) | 1 |
| 24 | WC9P511A | Plastic Clamp | 1 |
| 25 | 3111804012 | Screw, Crossed Head Countered sunk Self Tapping White Zinc (M4*8) | 1 |



Left Arm Assembly (WE03E403C)

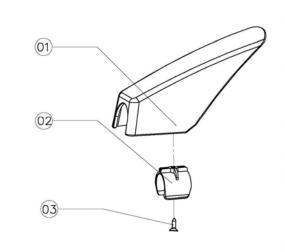
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---|-----|
| 01 | 3100208012 | Pad, Arm 14" for Compass Sport GP605 | 1 |
| 02 | WC9A409B | Rail, Arm Top for Compass Sport GP605 | 1 |
| 03 | 3110108039 | Screw, Large Hex Head Flat Black Zinc (M6*30) | 2 |
| 04 | WC9P415B | Nut, Hex M8 | 1 |
| 05 | WC9A416A | Spacer, Arm Joining For Compass Sport GP605 | 1 |

| | | - | |
|----|------------|--|----|
| 06 | 3111804012 | Bracket, Arm Joining for Compass Sport GP605 | 1 |
| 07 | WC9P417A | Screw, Hex Head Socket Set Black Zinc M6*12 | 2 |
| 08 | WC9P416A | Nut, Hex Black Zinc M6 | 2 |
| 09 | 3111804012 | Tube, Arm Bottom Bent For Compass Sport GP605 | 1 |
| 10 | WC9P419A | Screw, Hex Head Socket Cap Black Zinc M8*30 | 1 |
| 11 | 3111004031 | Nut, Cap Shaped Black Zinc M8 | 1 |
| 12 | WC9P420A | Screw, Large Hex Head Flat Black Zinc M8*40 | 1 |
| 13 | WC9P454A | Label for Bayonet | 1 |
| 14 | WC9A418A | Bracket, Arm Joining for Compass Sport GP605 (R) | 1 |
| 15 | WC9P421A | Tube Plug | 1 |
| 16 | 3110604041 | Screw, Crossed Pan Head White Zinc (M4*8) | 1 |
| 17 | 3100108012 | Nut, Cap Shaped Black Zinc M8 | 1 |
| 18 | 3110308039 | Hexagon Socket Head Screw (M8*30) | 11 |
| 19 | WC9P488A | Armrest Shell Fixed Cotton I | 1 |
| 20 | WC9P489A | Armrest Shell Fixed Cotton II | 1 |



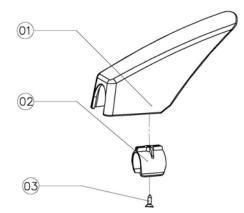
Seat Swivel Assembly (WE03E406)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|---------------------------------|-----|
| 01 | WE03A406 | Sear Swivel | 1 |
| 02 | 3000608012 | Spring Pin (φ8*63.5) | 1 |
| 03 | SE1P413B | Lock Handle Group | 1 |
| 04 | SE1A404C | Cross Pan Head screw | 1 |
| 05 | 3110605092 | Cross Recess Head Screw (M5*35) | 1 |
| 06 | 3100105012 | Hex Nut (M5) | 1 |
| 07 | SE1P424A | Torsion Spring | 1 |
| 08 | SE1P530A | Cover for Swivel lever | 1 |



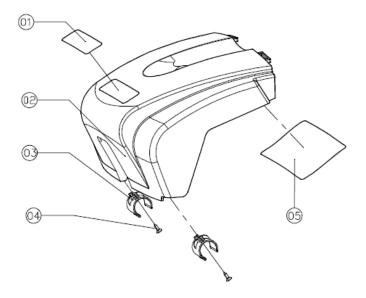
Right Front Caster Arm Cover (WE03E501)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | WE03P503 | Cover, Front Right Caster For Compass Sport GP605 | 1 |
| 02 | WC9P510A | Clip, Cover Mounting for Compass Sport GP605 | 1 |
| 03 | 3111103051 | Screw, Crossed Head Countersunk Self Tapping White Zinc ST3.5*12 | 1 |



Left Front Caster Arm Cover (WE03E502)

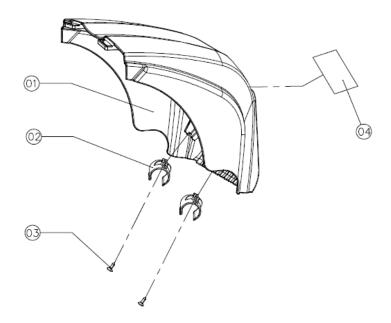
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | WE03P504 | Cover, Front Left Caster For Compass Sport GP605 | 1 |
| 02 | WC9P510A | Clip, Cover Mounting for Compass Sport GP605 | 1 |
| 03 | 3111103051 | Screw, Crossed Head Countersunk Self Tapping White Zinc ST3.5*12 | 1 |



Battery Front Cover Group (WE03E503)

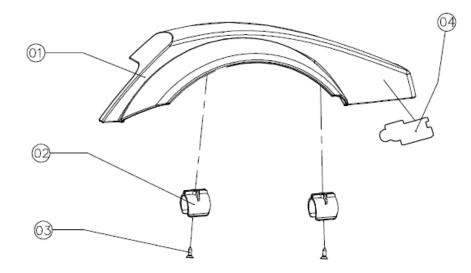
| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | WC9P528A | Sticker, Compass Sport | 1 |
| 02 | WE03P503 | Cover, Front Battery Plastic Only for Compass Sport GP605 | 1 |
| 03 | WC9P510A | Clip, Cover Mounting for Compass Sport GP605 | 2 |
| 04 | 3111103051 | Screw, Crossed Head Countersunk Self Tapping White Zinc ST3.5*12 | 2 |

Note: Item (05) Battery Diagram Label – Not Available.



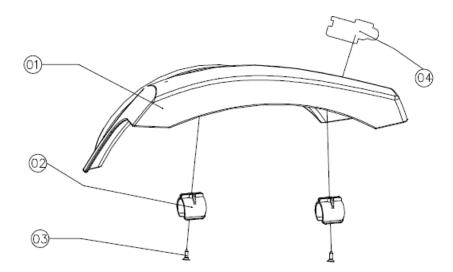
Battery Back Cover Group (WE03E504)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | WE03P505 | Cover, Rear Battery Plastic Only for Compass Sport GP605 | 1 |
| 02 | WC9P510A | Clip, Cover Mounting for Compass Sport GP605 | 2 |
| 03 | 3111103051 | Screw, Crossed Head Countersunk Self Tapping White Zinc ST3.5*12 | 2 |
| 04 | WE03P512 | Label, Black Cover | 1 |



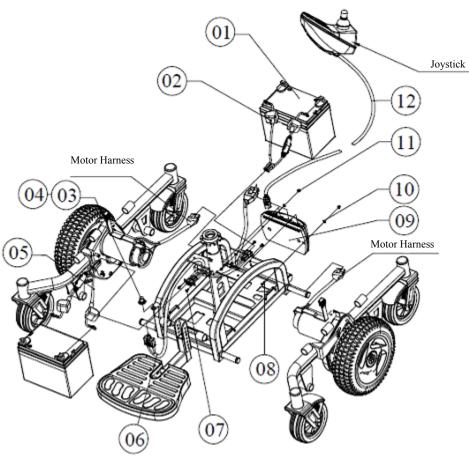
Left Fender (WE03E505)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | WE03P501 | Fender, Left Plastic Only for Compass Sport GP605 | 1 |
| 02 | WC9P510A | Clip, Cover Mounting for Compass Sport GP605 | 1 |
| 03 | 3111103051 | Screw, Crossed Head Countersunk Self Tapping White Zinc ST3.5*12 | 1 |
| 04 | WE03P514 | Label for Drive Wheel Cap | 1 |



Right Fender (WE03E506)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|------------|--|-----|
| 01 | WE03P502 | Fender, Left Plastic Only for Compass Sport GP605 | 1 |
| 02 | WC9P510A | Clip, Cover Mounting for Compass Sport GP605 | 1 |
| 03 | 3111103051 | Screw, Crossed Head Countersunk Self Tapping White Zinc ST3.5*12 | 1 |
| 04 | WE03P514 | Label for Drive Wheel Cap | 1 |



Wiring Diagram (WE03E601)

| ITEM | PART NO. | DESCRIPTION | QTY |
|------|----------------|--|-----|
| 01 | MBE- BATTU1 | Battery, U1 9 12V/33AH) | 2 |
| 02 | SE06A614 | Nut, Hex (M6 Battery Own) | 1 |
| 03 | 3100511010 | Nut, Waterproof Protector LB-D-11S Protector Own | 1 |
| 04 | 3000411010 | Protector Pads (T=0.2 Protector Own) | 1 |
| 05 | SE06A612 | Cable, Battery for the Circuit Breaker Assembly for GC240, GC340, GC440 (left) Compass GP605 (front) | 4 |
| 06 | WE03A603 | Wire for Protector | 1 |
| 07 | 311704011 | Cross Recessed Screw (ST4.2*13) | 4 |
| 08 | 3111004052 | Flat Phillips Head Screw (M4*25) | 2 |
| 09 | 3051600030 | Module, Dynamic Shark 60A Non-Expandable Power for Compass GP600 | 1 |
| 10 | 3000404032 | Washer, Flat Black Zinc $\varphi 4.3^* \varphi 8^* 0.8$ | 2 |
| 11 | 3100304012 | Nut, Nylon Black Zinc M4 | 2 |
| 12 | 3052300200 | Extension Cable for Controller | 1 |



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