

## **40 Volt Lithium Repair Disassembly Guide**

### **To remove control board/PCB (311041755):**

Remove battery from powerhead

Remove top 6 T20 torx housing screws (322021755) and (322031755)

Lift off top housing (341021755). Lift out two side vent housings (341061755)

**Be sure to take note of control board direction, motor, main power connector, wire location and routing**

Slide rear housing support (341071755) out of the bottom housing (341031755)

Slowly slide control board/PCB assembly up out of housing

Disconnect each connector. Slide control board/PCB out, removing factory connected battery pin (341012181) from rear of housing, leaving these wires connected to control board

### **To install replacement control/PCB board:**

Make all connections to appropriate wires. Each connector is keyed and sized, and will only connect to one wire. (The LED wires (small black and red sets) are the exception, as these don't matter)

Slide control board/PCB down into slot, carefully routing wires as you go

Route wires the same as before. Slide battery connector pin back into rear of housing, routing wires accordingly, then reinstall the top housing support above battery pin connector

When control board/PCB is seated down into housing, tuck all wires into their place and position the motor main power connection on top, tucking this horizontally at the top rear of board beside the motor.

Place in each side vent, place top housing into place over all, be sure to line up all edges and make sure no wires are being pinched.

Housing should fall into place and require no force to close the gap between top and lower housings.

Hold top housing down in place. Then reinstall the 6 top screws; bring them down gently until they touch counter sunk bore.

Reinstall battery

Refer to IPL and labor guide for repairs that should be made, and repairs that require a TOOL ONLY to rectify situation. Control board replacement and some of the larger repairs you may need to do are listed below:

**To replace Motor:**

Remove battery from powerhead

Place powerhead upside down

Using a 4 MM ALLEN remove the 4 gear screws (322011755) from the flange (331041755)

Place powerhead upright again.

Remove top 6 T20 torx housing screws (322021755) and (322031755)

Lift off top housing (341021755). Lift out two side vent housings (341061755)

Unplug motor main power plug and smaller input connector

Lift motor up off powerhead

**To install replacement motor:**

Place motor down into transmission motor plate (333021755), lining up gear

Reconnect power plug and input wire to control board/PCB

Carefully place powerhead upside down, holding motor in place

Install the 4 gear screws back into place; start and gently bring up until head almost touches bore in the flange

Place powerhead upright

Reinstall the side vents and top housing, reconfirming motor connector and wire placement

Install the 6 T20 torx top housing screws; hold top housing down in place, bring them down gently until they touch counter sunk bore.

Place powerhead upside down and tighten all 4 of the 4 mm Allen gear screws

Reinstall battery

Other smaller parts like the LED lights or plastic housing may experience breakage, but these are simple to replace the proper part easily

Examples of these types of repairs:

#### **LED's**

Remove battery

Remove auger

Position powerhead upside down

Remove light cup/housing covers (341051755 or 341041755)

Remove the two T20 torx screws (322041755)

Lift off cup; be aware of the wires position and connection. Again, they are keyed accordingly

Unplug and replace damaged/not working LED (362011755)

Reconnect appropriate wires; reinstall cup, being sure wires are routed in correct locations

Most all parts that may need to be replaced, are easy to do.

#### **Various Housings:**

Top housing and side vents

These can all be replaced by using a T20 torx bit, removing each fastener, and carefully removing broken parts

Other repairs are fairly simple; all connections to or from each part, motor, control board, lights and switches are all pre-terminated at the factory, allowing disconnection and reconnection via "keyed" wire connectors that will only plug into their corresponding counterpart. This way, connection of each part is simplified.

#### **Components listed on the IPL and labor guide on StrikeMaster ftp site:**

Most items still under warranty coverage will not be replaced (due to cost and/or labor involved); instead, an entire assembly will be replaced. Refer to IPL and labor guide for warranty situations.

**After warranty or for non-warranty repairs:** larger components are more difficult, and require more time and knowledge to remove, repair/replace. Before doing any work, service centers will need to discuss with customer the possible solutions, repairs and costs involved.

#### **Breakage of a Main Handle Assy- (311011755)**

Main handle breakage within warranty will require a TOOL ONLY to be used to correct the situation. If out of warranty, the handle can be replaced but at the customer's expense.

This repair does involve a complete disassembly of powerhead and a few critical steps to take note of.

(Pay special attention to how the wires around transmission and inside the lower housing are routed, also the wires in right light cup to and from switch/light)

**To replace broken handle:**

Remove battery and auger.

Position powerhead upside down.

Remove the 4 gear case screws (322011755).

Remove the 4 bottom housing screws (322031755).

The lower flange (331041755) must be gently pried off, around the output shaft (There are two small relief slots around the perimeter of the flange, which will allow access to the flange lip for two small flat head hand screwdrivers).

After the flange has been removed, there is a snap ring and spacer around the output shaft that will need to be removed at this point (333031755 & 329011755).

Position powerhead upright and remove top 6 housing screws, top housing (341021755), side vents and housing support.

Motor can then be unplugged and lifted off.

Control board and battery pin should be removed, and all wires disconnected via each connector.

The lower housing should be loose at this point. You can then cut the two main black wrapped wires that run through the bottom of the housing and out to each handle light/switches, since the new handle will come with these wires preinstalled (also, the left side connector will not fit through the bottom housing hole).

Lift out the transmission assembly (311021755).

Take the broken handle and set aside.

Place new handle upside down and remove the right two screws and right light cup (341051755).

Flip light cup over; carefully cut zip tie and unwrap both connectors, then disconnect.

Remove wire from the bottom slot in handle, route wire out of handle assembly and set aside with light cup assembly.

Position handle upright and set transmission assembly on top handle base. Note the key positions; one is larger than the other. Be sure transmission sits in the appropriate sized key slots.

Position these two upside down, and reinstall spacer and snap ring around the output shaft.

Slide flange assembly back into handle base recess, and gently tap into place.

Position powerhead upright; slide lower housing over transmission body, down onto the handle base.

Position powerhead upside down and install the lower housing screws.

Position powerhead upright.

Place motor assembly on top of transmission case. Be sure bolt holes and name is positioned correctly.

Tip powerhead on its side; while holding motor in place, start the 4 gear screws up through flange, through the transmission body and thread into motor. Do not tighten, just thread until screw heads are almost touching the flange recessed bore.

Tip powerhead back upright.

Feed the right side wire removed from new handle (small connect end) down through the lower housing and handle base. Route back out to the right side of handle (switch and light).

Position powerhead upside down. Reinstall light cup wires and connectors; wrap zip tie and place assembled wired light cup back into handle. Be sure wires are not in the way of the switch function or push slide stop (341101755). Put in two screws to tighten.

Push the wire along handle bottom edge back into the slot.

Position powerhead back upright.

Install control board and connect all wire connectors, routing the wires around motor.

Slide in rear housing support side vents and top housing.

Be sure all edges line up and that no wires are being pinched in any seam. The top housing should sit into the perimeter lip and not require any force to get into place.

Put in all 6 top housing screws and tighten.

Position powerhead upside down and tighten the 4 gear screws.

Position upright. Install battery and test.