

Motor Removal Procedure

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Optibike R8C and R15C Full Carbon E-Bike





This Guide describes the motor removal and installation for the Optibike R8C and R15C Full Carbon E Bike.



Caution!

The procedure described in this manual should be done by a qualified mechanic.

Failure to do this procedure correctly could result in serious injury to rider and or damage to the bike that is not covered under warranty.

Tools Required

The motor removal should take less than 30 minutes. The following tools are required.

1. 3mm Allen Wrench (For motor wire bolt)
2. 5mm Allen Wrench (For 3 Pinch Bolts on Bottom Bracket Shell)
3. 8mm Allen Wrench (Crank Bolt Removal)

Square Taper Crank Removal Tool (To remove crank arms) (Park Tool CCP-22C Square Crank Removal Tool or similar)

4. 1 ¾ open end wrench or channel Lock (To remove Sprocket Carrier Nut)



Motor Removal Procedure

Step 1: Place bike in bike stand or turn bike upside down. (If turning upside down, make sure the display will not hit the ground)



Step 2: Remove the 2ea crank arm fixing bolts with 8mm Allen Wrench.



Step 3: Remove the crank arms with the crank arm removal tool. (Be sure to screw the tool completely into crank arm before removal)

Step 4: Remove the 1 ¾ inch nut from the Sprocket Carrier on right side. Place the 8mm Allen wrench or other smooth object through the sprocket to prevent rotation while removing nut. Turn CCW to remove.



Step 5: Remove the motor wire cover on left side



Step 6: Loosen the three M6 Allen bolts on motor mount 3 turns. Use 5mm Allen Wrench.



Step 7: Gently Press straight blade screwdriver into gap on motor shell near center bolt to spread motor shell slightly. (Do not over spread shell. Do not twist screwdriver. Press in straight, just enough so motor will begin to slide out.)



Step 8: Begin to slide motor out to left. Gently pull the wires from the frame until connectors are exposed. Leave motor in frame slightly to support it.



Step 9: Pull the connector apart. The small black one has a clip to depress to separate them. The larger motor connector must be pulled apart with force. DO it slowly.



Step 10: Continue to pull motor from frame.

If packing motor for shipment. Be sure the connectors and wires are well covered in foam so they do not get damaged. Be sure motor wires are not kinked when packaged. It is recommended to ship in minimum 10 inch cubed box with lots of packing material.

Installation of Motor

Step 1: Insert straight blade screwdriver in gap of motor shell.



Step 2: Slide Motor about 1 inch into frame.



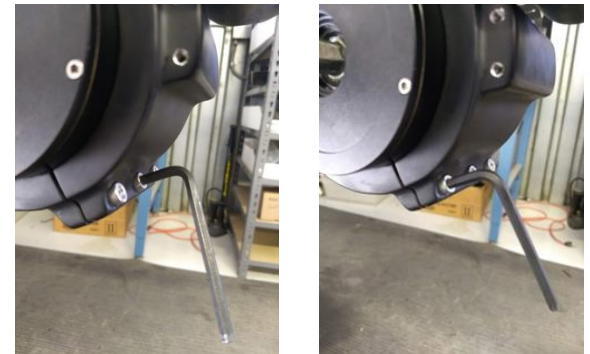
Step 3: Connect the motor wires and gently press wires into frame as you slide the motor in.



Step 4: Press motor into frame until left cover is about 20mm from frame edge. (The motor wire grommet will be touching frame at this distance).



Step 5: Tighten the 3 each 6mm motor shell bolts. Start on center bolt and then do outside bolts. Tighten lightly each time. Entire process should take 3 sets of tightening. Maximum torque is 45 inch lbs. (Do not overtighten or this may damage frame)



Step 6: Install the sprocket, washer and nut. Hold the sprocket with a smooth object inserted through sprocket. Tighten with 1 $\frac{3}{4}$ inch wrench.



Step 6: Place a dab of grease inside crank arm mounting surface and insert crank arms (Note: there are left and right crank arms. They are marked with an “L” or “R” on inside of crank arm.



Step 7: Insert the crank arm fixing bolts and tighten with M8 Allen wrench to 300-350 inch pounds.



Step 8: Re Check all your work and be sure all bolts are correctly in place and tight.