

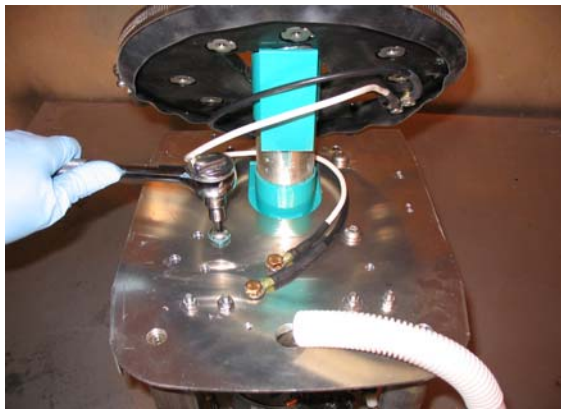
J&J Service Instructions

January 5, 2005

Motor Disassemble



- Remove lead from relay to motor (black wire)
- Remove bolt holding relay to motor



- Turn motor assy. Upside down
- Remove pivot shield refer Steering Bushing Replacement instructions
- Remove the four 3/8 hex head motor mount bolts



- With bolts removed grasp the drive tube and separate it from motor
- **Note:** When using this technique to disassemble the motor assembly, can be awkward to handle



- To ease motor breakdown place a spacer on bench to support motor. A D-Rubber works well for this procedure

<u>Part#</u>	<u>Description</u>
00833	Rubber, "A" Style

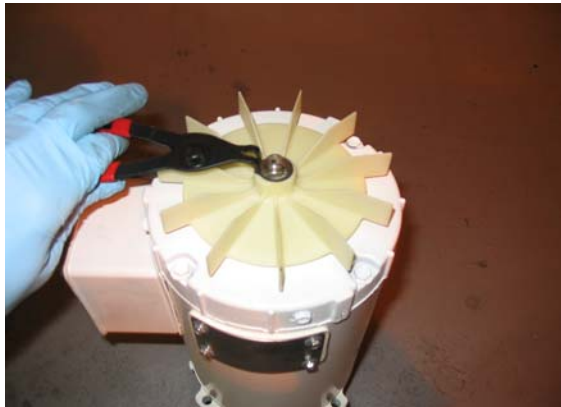
J&J Service Instructions

January 5, 2005

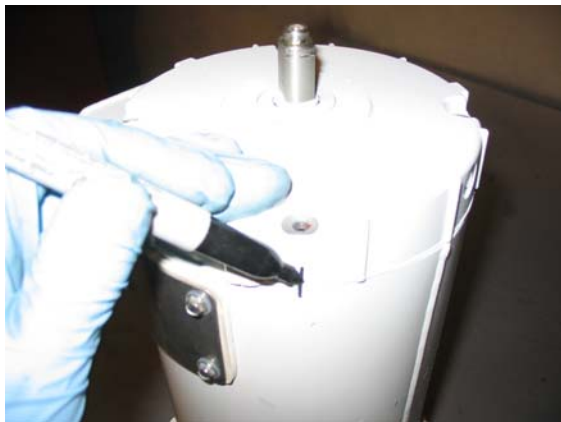
Motor Disassemble



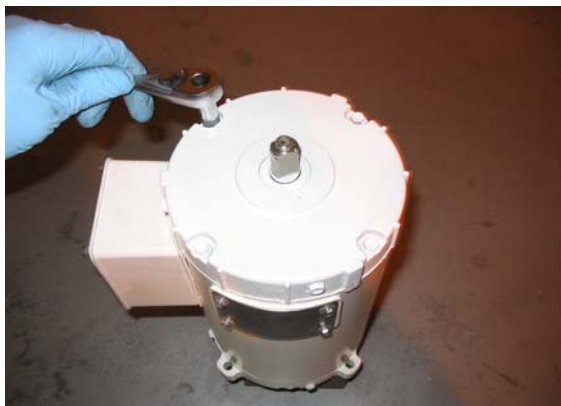
- Remove fan guard



- Remove c-clip. Be careful when removing clip as to spread it just enough to slide off of shaft.
- Remove fan



- Before removing end cap mark the location of cap in relation to motor casing



- Remove the four cap bolts

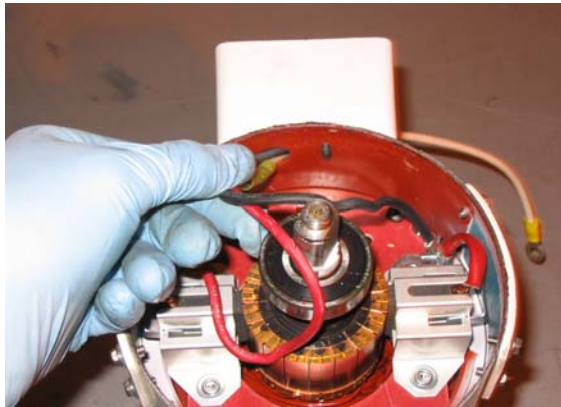
J&J Service Instructions

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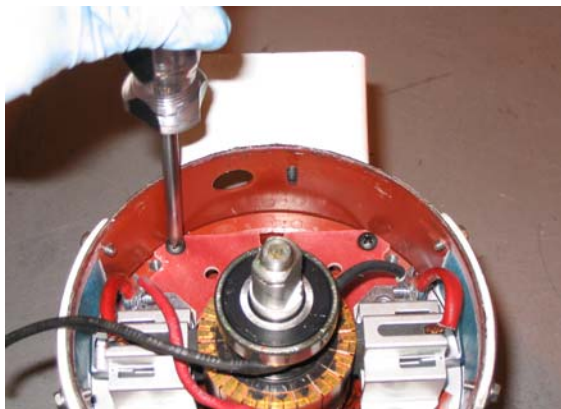
Motor Disassemble



- To remove cap it may necessary to tap cap off by using a soft blow hammer.



- Pull the negative and positive leads through motor casing



- Remove the four Phillips headed screws and remove brush holder assy.



- Turn motor over and mark the location of end cap in relation to motor casing

J&J Service Instructions

November 4, 2004

Motor Disassemble



- Lightly tap on the cap. When pulling apart armature will stay attached to end cap. Considerable effort is required to pull apart do to the magnetism between the magnets and armature



- Loosen the two Phillips screws on end cap



- Remove the bearing retainer
- Remove end cap



- To remove bearings a puller is required.

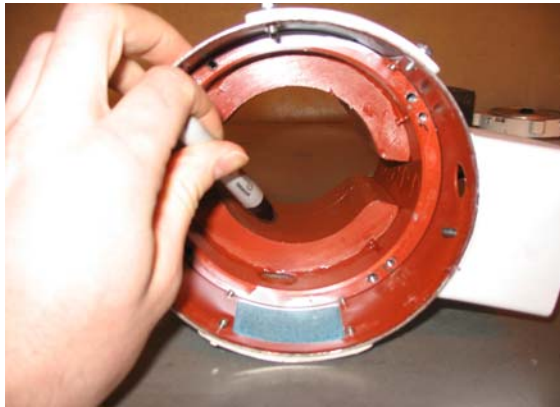
J&J Service Instructions

January 5, 2005

Motor Disassemble



- Clean commutator with emory cloth and electric motor cleaner if needed. Only the carbon build up needs to be removed. Try not to remove any brass material.



- Inspect magnets for cracks or missing magnet material.



- Install bearing retainer



- With assembly held upright hold bearing retainer in position and screw into place.

J&J Service Instructions

January 5, 2005

Motor Disassemble



- Slide armature into motor.

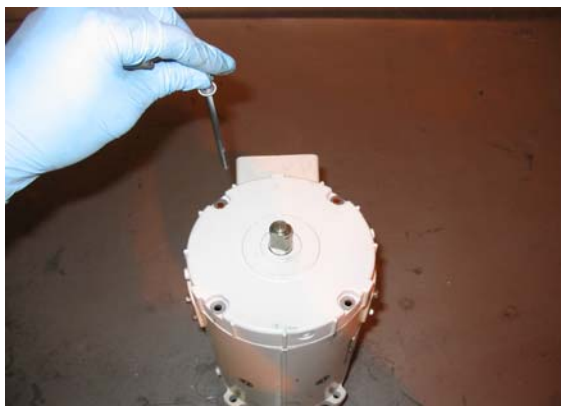
⚠ WARNING Be careful as the magnetism will want to pull the pieces together. Keep fingers clear.



- Insert the brush holder assy. Into motor by holding the brushes apart and slide over commutator.



- Make sure that the wave washer gets installed before end cap.



- Apply grease to lip of seal
- Install end cap. Be careful not to damage seal when installing
- Make sure to align with the marking that were made during disassembly.

J&J Service Instructions

January 5, 2005

Motor Disassemble



- Install fan



- Install fan cover



- Grease output shaft with a marine grade grease or equivalent



- This step may require two people to perform.
- Carefully join the two assembly together. The drive shaft is indexed via key that lines up with the keyway on output shaft.

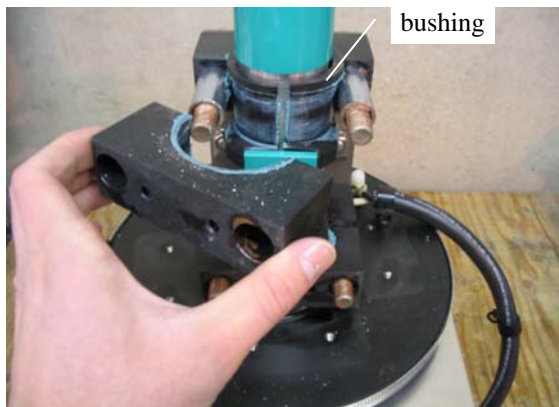
J&J Service Instructions

January 5, 2005

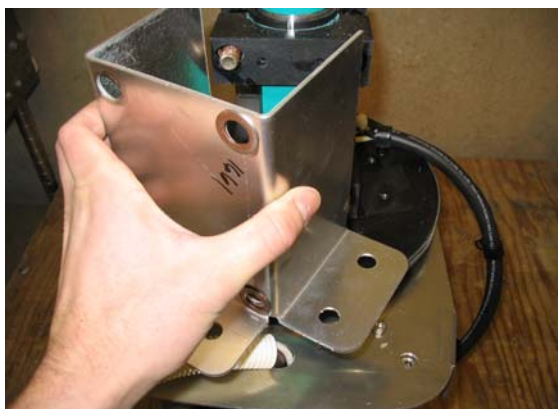
Motor Disassemble



- In order to line up the keyway on the output shaft with the drive shaft rotate the propeller to align.
- Before bolting together make sure to have motor in correct position. The wire box should align with go switch.



- To help hold the drive shaft housing bushings place a small dab of marine grease on the backside of bushings.
- Install pivot bracket



- Place pivot shield back onto motor assembly.

J&J Service Instructions

January 5, 2005

Motor Disassemble



- A copper anti seize must be applied to the pivot bracket studs.
- Lightly torque the pivot bracket nuts.
- If over tightened binding of the pivot assy. may occur.



. Finish by installing the allen cap headed screws. Make to have the motor power cable clamps in the correct position. (indicated by arrows)



- Re attach the relay with a 5/16x1/2 bolt, 5/16 lock washer, 5/16x3/4 flat washer.

⚠ CAUTION

It is crucial that you use the correct size bolt and washers. Too long of bolt can cause motor damage if used.



- Reconnect lead from motor to relay.
- Double check all connections to power post.