

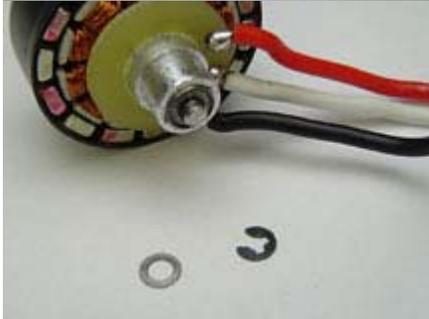
## Shaft and Bearing Replacement Instructions for BP-8Y/9Y/12/12Y/21 Motors



1. Use a 1.5mm Allen (hex) wrench to loosen the set screw holding the firewall mount on the back of the motor.



2. Pull off the firewall mount. Some twisting may be needed to get it all the way off.



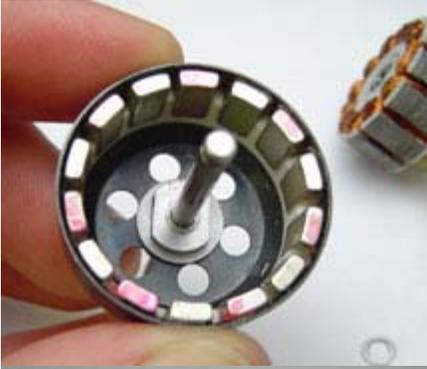
3. Remove the e-clip that retains the shaft. Use a large flat-head screwdriver to push on both prongs of the e-clip simultaneously. Be careful not to lose it! Also remove the washer underneath the e-clip.



4. Pull the bell housing off the stator. The front bearing may come off with the shaft. If so, remove the bearing from the shaft and place it back in its boss on the stator. Since you have the motor disassembled, this is a good time to change the bearings also.



5. Next, you will need to remove the large black nut on the front of the bell housing. To do this...



...you will need to securely grasp the metal flange on the inside of the bell housing....



...which is best done using long nose flat-nosed pliers like those shown here. The adjustable crescent wrench is good for holding the nut.



6. Take a deep breath, grasp the flange on the inside with the flat-nosed pliers and the nut with the crescent wrench and loosen the nut. It will be tight. Do your best to keep the jaws of the pliers tight up against the bellhousing to keep the pliers from slipping off the flange. We've found it is easier to hold the crescent wrench stationary, and turn the pliers like a screwdriver.



7. After much effort and cursing, you have successfully removed the nut. Grab a cold beverage and pat yourself on the back for a job well done.



8. Remove the shaft from the bellhousing by tapping lightly on the front of the shaft. Always replace the shaft after removing it – you are sure to chew it up in the process of removing it. Reassemble the motor with the new shaft by reversing the disassembly steps.