



Brush Replacement Guide:

Tools/equipment needed:

1. Heat gun
2. Torque-limiting hex driver with flat drive bit
3. Loctite 38653 222 Purple Low-Strength Thread Locker

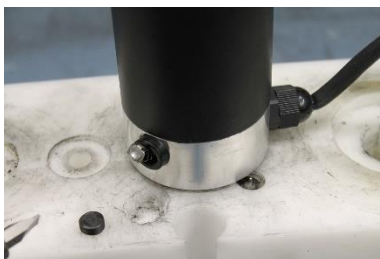
Removal and Installation Instructions:

1. Apply heat from a heat gun for 10-15 seconds to the brush cap being serviced. For reference MMP uses the Master Heat Gun HG-501A.
2. Using the hex driver, remove the brush cap. If the brush cap does not easily reverse, reapply heat for another 10-15 seconds. For reference the below torque driver is the Proto 6106 Torque Driver.



*It is important to note that the use of the proper sized flat drive bit is essential to success. If a screwdriver or drive bit that is not large enough to fill the entire slot is used the brush cap can easily fail when attempting to remove. This is because all the rotational forces are focused too near the center of the cap and directly at the sharp edges of the driver or drive bit.

3. Loosen brush caps with a flat head screw driver and remove the motor brushes. Set the caps and brushes aside and note spring direction to ensure brushes will be placed back in the holder the same direction they were removed.

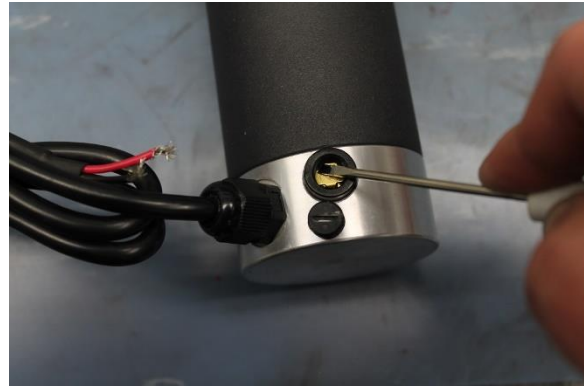


+++ Inspect and service the brushes, taking note of the brush conditions. If necessary, replace the brushes. +++



4. Place brushes into brush holders. Thread and start to tighten brush caps. As the cap tightens apply low strength thread locker and allow the rotation of the cap to spread the thread locker evenly. Torque the brush cap with the torque-limiting driver to the following specs:

TORQUE LIMIT SETTINGS:		
Minimum: 5 In-Lbs	Nominal: 6 In-Lbs	Maximum: 8 In-Lbs



(For reference the torque driver shown is the Proto 6106 Torque Driver.)