

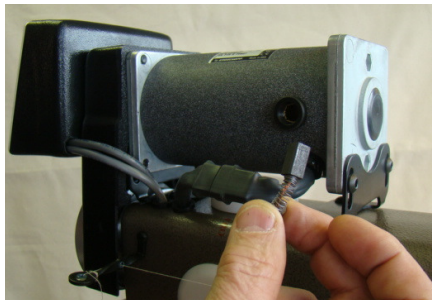
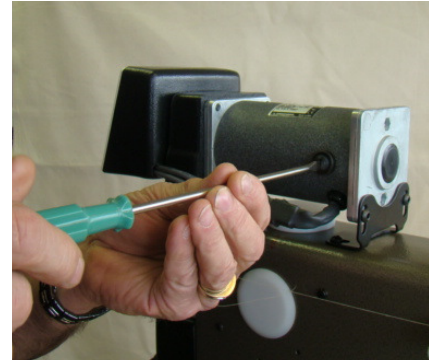
Prepare to check the brushes by first powering down and unplugging the machine. It is recommended that you place a drop cloth around the base of the machine, since some fine black dust will come out of the motor during this process.



Locate the 2 brush covers, they are on either side of the motor toward the end of the motor that is away from the back display.



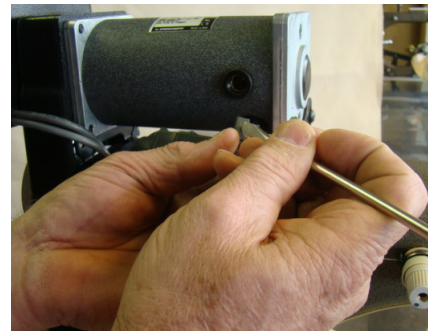
When removing the brush cover (unscrew them counter-clock-wise with a standard screwdriver) you will notice an oval brass metal plate that springs out of the hole a little bit.



Gently pull the plate (which has a spring and braided conductor coming out of it) out until you see the square graphite post start to come out.



Using a sharp object like a machine needle, mark the upper flat surface of the brush with an R (for right) or an L (for left) so you can put the brushes back in the hole they came out of **and** in the same orientation (scribed letter up). Inspect the brushes for wear by measuring their length. If the brushes are less than $\frac{3}{8}$ " – $\frac{1}{4}$ " long, measuring the graphite, they should be replaced.



With both brushes removed, use compressed air or canned air to blow air through one hole and out the other; do this while rotating the hand wheel and continue until the air coming out is dust free. Note: you may want to lay down a drop cloth when doing this step as you should expect to see a bit of black dust come out of the motor.



Once the brush holders have been cleaned out, return the brushes back to their respective positions, right brush in the right hole and left brush in the left hole. New brushes can be installed without concern for left or right; however, care should be taken to align the brushes so the arc of the face of the brush follows the arc of the side of the motor.



Push the brass colored plate into the hole with the cap and screw the cap down just snugging it up. Don't over tighten, the cap is made of plastic not metal and can be damaged.



For more information, please refer to the Gammill User's Manual.