

MCH-100-A Hotjet Heat Gun
CARBON BRUSH REPAIR AND REPLACEMENT

TROUBLESHOOT: NO AIR – FAN IS NOT TURNING

SOLUTION: UNSEATED BRUSHES REPAIR MCH-111.038.1

Revision: 11/8/12

To repair brushes that have become unseated from internal fan motors:

- (1) Unplug tool from power supply.
- (2) Remove three screws from handle. See fig 1



Fig 1

- (3) Carefully slide the handle back over the cable. DO NOT FORCE IT off or you may snap the screen and switch bracket. Slowly work it back and forth while you pull back on the handle.
- (4) Starting with MCH-100-A serial number 992142 the EMI protection in the 111.038.1 heat gun assembly changed from a nickel metal painted shield to SS sheet metal. Fig 2 below shows the sheet metal shield as the handle is pulled back. Figure 3 shows the handle completely pulled back and the sheet metal EMI shield.



Figure 2



Figure 3

MCH-100-A Hotjet Heat Gun
CARBON BRUSH REPAIR AND REPLACEMENT

- (5) Figure 4 shows the location of the brush and the spring
- (6) Look at the spring that holds the brush in place. Figure 4 shows the spring properly seated on the spring. Figure 5 shows the spring off to the side out of place.

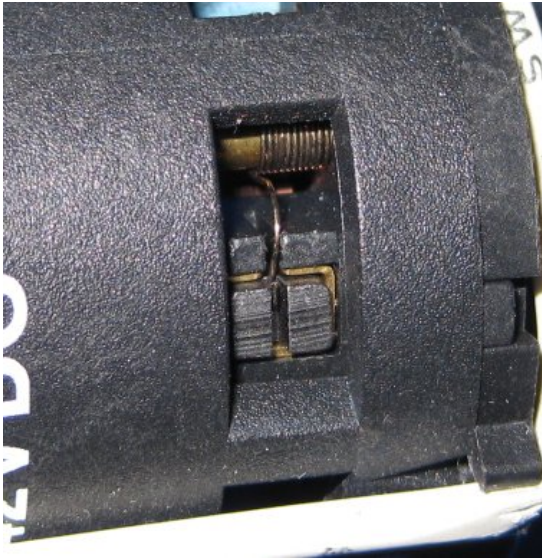


Figure 4

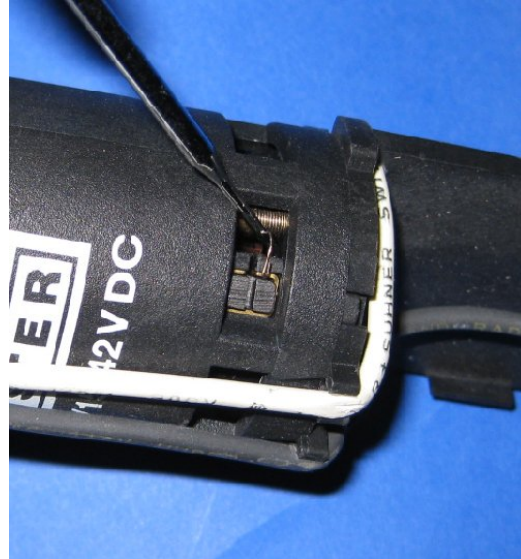


Figure 5

- (7) Remove the brush to check for damage and the length of the brush. If the brush length is under $\frac{1}{4}$ " it should be replaced. See figure 6 and 7.



Figure 6

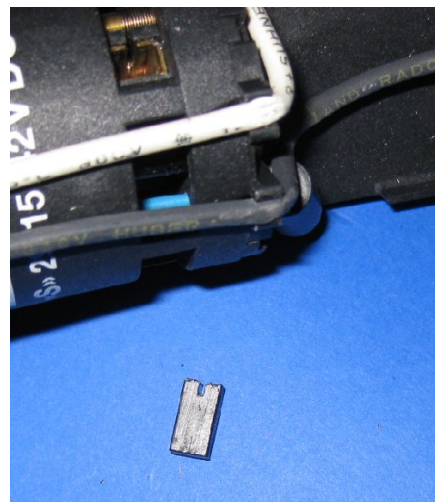


Figure 7

- (8) If the brush does not need replacement then reinstall and reset the small wire spring clamp. See figure 4. Make sure the carbon brush is seated properly against the motor armature.

MCH-100-A Hotjet Heat Gun
CARBON BRUSH REPAIR AND REPLACEMENT

- (9) If the spring recoils back into the motor area, use a small paperclip shaped as shown in figure 8. Carefully reach into the spring area hooking the spring with the bent part of the paper clip pulling it up and onto the carbon brush inserting into the slot on the top of the brush. See figure 9.

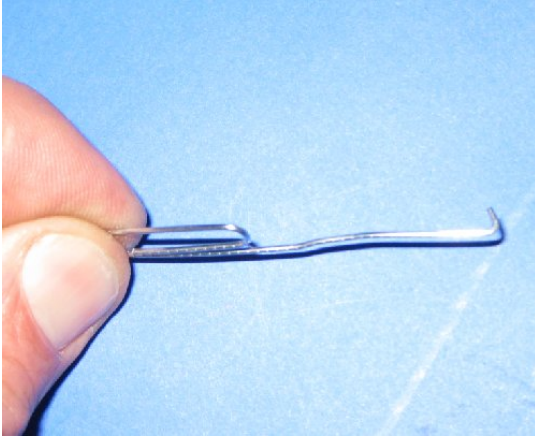


Figure 8



Figure 9

- (10) With the brush back in place plug the heat gun into the MCH-100-A power supply to test the tool before you re-install the handle. **WARNING** because the handle is off there is a risk of electrical shock, therefore be very careful as you run the test not to touch any part of the exposed electrical connections.

- (11) Carefully replace the handle. Be careful not to damage EMI shield. Position the shield as shown in Figure 10. Figure 11 and 12 shows the shield wrapped around the inner workings of the tool with the handle slipped into place to start the process. Note the shield slightly overlaps itself as it goes in. Figure 12 shows the overlap. The handle goes on one way as it has a slight "U" in the back end for the power cord. See Figure 13

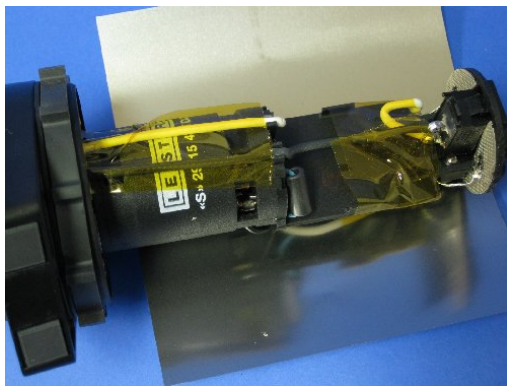


Figure 10



Figure 11

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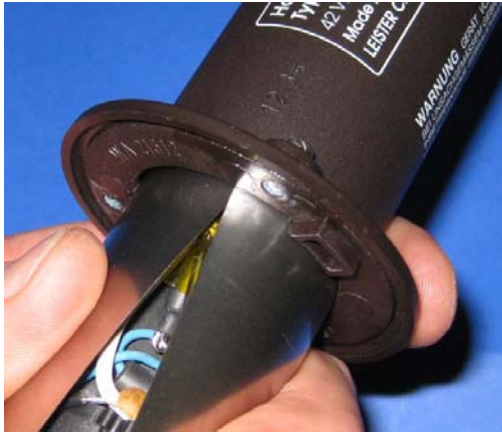


Figure 12



Figure 13

(12) Replace screws. Make sure to add Loctite to screws.

(13) Plug tool into power supply.

(14) Test tool.

If you still have problems with no air call Jono Bixby, 401-683-3199 Ext 1008. Email is jono.bixby@malcom.com