

Figure 1

OVERVIEW

The EasyFire heater is equipped with a long life DC fan motor (Figure 1). This motor utilizes a special brush material that may require additional break in time to properly wear in or seat the brushes. When the motor is new the brush has a contoured end that allows for minimum contact initially to facilitate the break in. As this wears the full width of the brush begins to contact the armature allowing for proper operation.

We have found that a small quantity of motors have not immediately seated the brushes causing a motor fault light (Red Flashing LED) on the control panel. The motor fault condition requires the unit to be powered down (unplugged) to clear. This condition may also be the result of a feed jamb. The control system is designed to address both inoperative fan and feed motor in the same manner to protect the user and minimize further damage to the unit. The fan motor condition is easily corrected by dressing the brushes and reinstalling them.



Figure 2

Testing for a fan motor brush problem is accomplished by two methods. After recycling the heater by unplugging and reestablishing power. Press the "Fan" switch only. If the fan runs push the Clean button and allow the motor speed to increase to full speed. If the "Red Safety Light" does not light then the fan motor is generally considered in proper operation. If pressing the Off button then pressing a run button such as Low provides a short period then a flashing "Red Safety Light" the feed may be jammed. This can be cleared by removing pellets from hopper and removing access cover. If the safety light operates on "fan or clean" then accomplish the following service.

Tools Required: #2 Phillips screw driver, medium flat blade, small flat blade, #200 or fine sand paper strip (Figure 2).

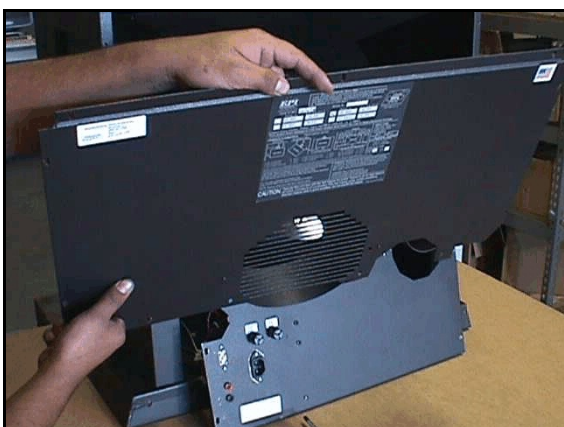


Figure 3

Accessing the motor for brush service: The fan motor is accessed from the rear of the heater by removing the phillips screws on the upper and lower rear access panels. Once the panels are free tilt the upper panel to the rear allowing the fan shroud to clear the convection fan blade (Figure 3)

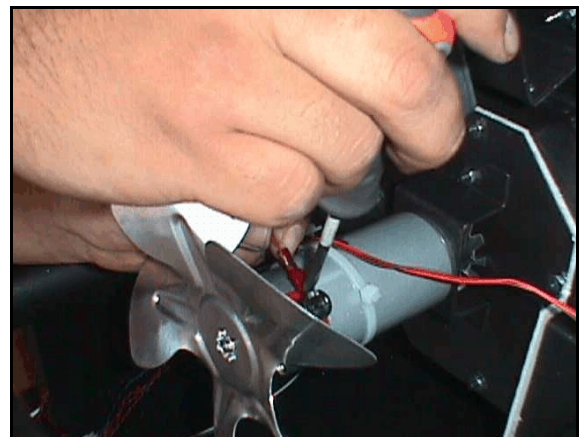


Figure 4

Removing the wire harness connections : Using care not to bend the fan blade, carefully use a flat blade screw driver to help pry off the red and black motor wire terminals (Figure 4). Note the brush holders have a corresponding red and black base to confirm wire connections.

Removing the brush caps: Using a small flat blade screw driver remove one brush cap at a time. Care should be taken as the brush holder has a spring that forces to the brush onto the armature. This spring may cause the cap to pop out unless held firmly (**Figure 5**).

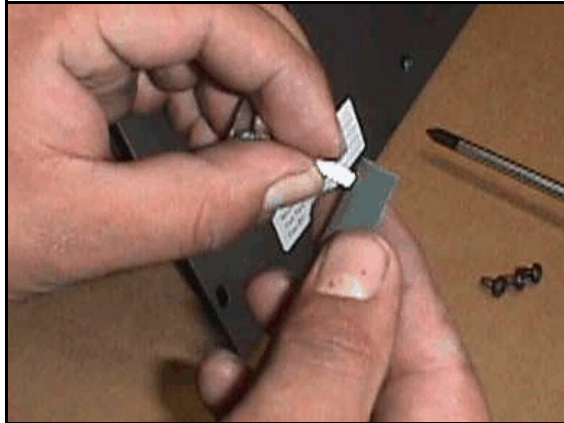


Figure 6

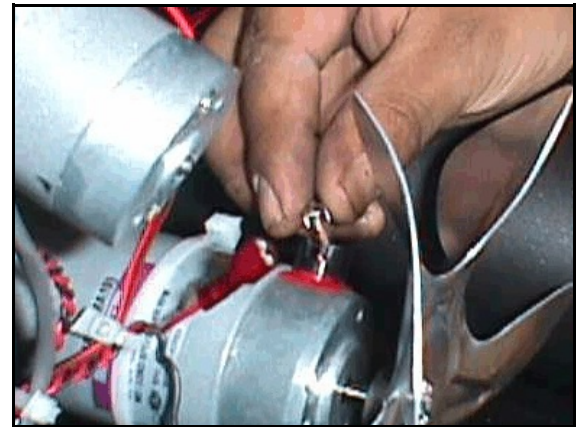


Figure 5

Removing and dressing the brush: Remove the brush from the holder by lifting up and sliding the brush and spring clear (**Figure 5**). Once the brush is clear hold the brush base and carefully take a couple of swipes across the brush face with fine sand paper (**Figure 6**).

NOTE: WHEN SANDING THE FACE OF THE BRUSH DO NOT REMOVE ANY MATERIAL. WE ARE ONLY SCUFFING THE SURFACE TO ALLOW FOR BETTER BRUSH CONTACT.

Reinstalling the brush: Insert the brush back into the holder. Hold the terminal tab into the holder. Carefully insert the cap and turn with a small flat bladed screw driver. *Use care not to cross thread the cap.* Once the cap is threaded lightly tighten against terminal tab (**Figure 7**).

Repeat service on lower brush.

Assembly:

Reconnect motor wires to red and black terminals. Check fan blade for bent blades by spinning by hand. If blades are not aligned carefully bend back into place.

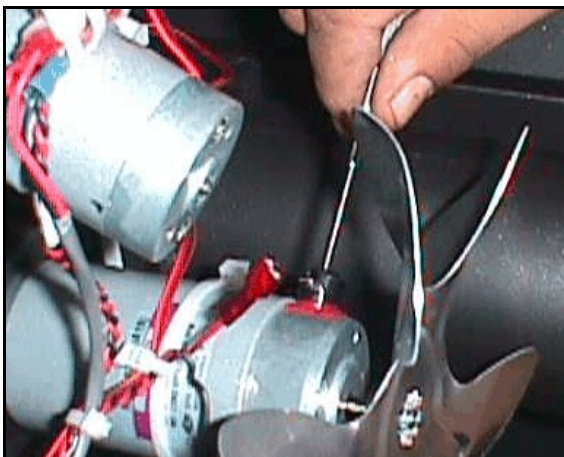


Figure 7

Carefully reinstall upper rear panel (**Figure 8**).



Figure 8

After completing the installation of the rear panel and tightening all the phillips screws. Plug the heater back into AC power and test run by running fan motor on "Fan" setting for 2 minutes and then running on "Clean" for 30 seconds. Open hopper lid and run unit through a beginning start up by pressing "Low" and allowing fan to ignitor and fan to start up. If all appears to activate reinstall unit.

Additional information is available on line@ www.sierraproductsinc.net/pages/customer_service

Technical Customer Service - 909-399-3355x14