HBF600 64 oz FOOD BLENDER

Trouble Shooting Guide

- **Symptom:** Constant red light from cycle counters on bottom of PC board.
- **Cause:** Fault condition. Turn the machine upside down the indicators will be in the right, front corner of the machine. A constant red light tells you that there is a fault that will require more investigation.

- **Symptom:** During a normal cycle the machine stopped.
- **Cause:** The unit has possibly overheated without notice to the warning lights indicating to run a cool down cycle. Unplug the machine 15-30 minutes. Plug in the unit and try to operate. If the problem persists proceed to repair guide.

- **Symptom:** No lights when power button is depressed.
- **Cause:** No power. Ensure the power outlet is operational. Ensure that the circuit breaker on the bottom of the machine has not tripped.

- **Symptom:** No jar sensor indicator
- **Cause:** PC board, membrane switch, ribbon connector or jar sensor.

- **Symptom:** Unit functions but not as intended.
- **Cause:** Check the ribbon cable and connector for evidence of shorting. The ohms at the ribbon cable connector should be less than 300 and voltage should be about 9V.
- **Cause:** Ribbon cable not properly sealed. Separate the two halves of ribbon cable and apply Dow 748 RTV Electric grade sealant. Add mylar cover over ribbon cable connection if missing.

- **Symptom:** Power switch fails.
- **Cause:** Check connection. Ensure the PVC switch cover is present (moisture protection).

- **Symptom:** Speed switch is binding.
- **Cause:** Remove speed dial. Gently clean dial, rubber boot and touch pad. Grease inside diameter of rubber seal and replace.

- **Symptom:** Motor runs 3-7 seconds and quits.
- **Cause:** Broken magnet on motor/hall effect sensor, hall effect sensor failure, PC board failure.

- **Symptom:** Blender keeps tripping wall circuit breaker.
- **Cause:** Unit needs a dedicated 15-amp circuit (no additional electrical devices should be operating on this circuit). If symptom is present with the unit operating on a dedicated circuit the cause could be a shorted diode bridge on the power board.

- **Symptom:** The lights come on but the unit will not start.
- **Cause:** Most probable cause is Touch Pad failure. Another possibility is PC Board failure.

Repair Guide

Housing Disassembly

- Turn power switch to the "off" position and unplug the machine.
- Remove the jar pad.
- Remove the four screws under jar pad feet.
- Carefully lift cover from unit; wires will limit your movement.

Wiring Detail

Power Board (see figure 1)

- The power switch cable attaches to the power board (right side of machine) to connector R301.
- Cable from connector 3305 on power board goes around the front of the unit and plugs into the PC board connector 3105.
- Push on connector J304 (top connector) on the power board connects to connector J103 on the PC board (bottom connector).
- Connector J302 (second from top) and J301 (bottom) on the power board connects to black leads coming from the motor.
- Connector J303 (third from the top) on the power board connects to J104 (second from top) on the PC board.

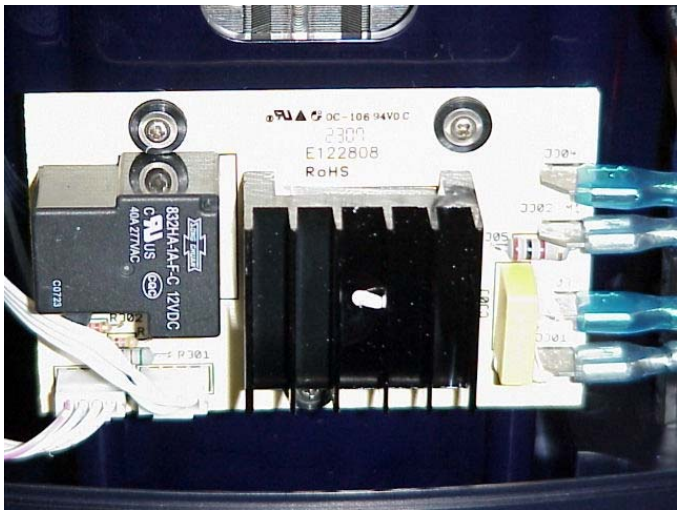

Figure 1. Power board. Top push on connector is line voltage. Numbers 2, 3 and 4 are low voltage (3 from top is the lowest voltage at approximately 12 V. 2 & 4 from the top are approximately 20V).

PC Board (see figure 2)

- The Ribbon Cable attaches to the lower right/front of the PC board. The cable trace identifier (or line) is in the up/top position. To remove the ribbon cable from the PC board you must first remove the clamp and mylar shield which cover and secure the cable. Grasp the fitting and unplug the cable.
- To attach the cable, loosen the motor shroud from the bottom of the machine enough to clear the bottom edge of the cable and the upper edge of the lower housing. Position the screw through the mylar shield, slide the retaining clamp in place over the cable; secure the cable, retaining clamp and mylar shield with the screw. Re-secure the motor shroud.
- The cable from the speed control attaches to terminal J4 (upper/front) corner of the board.
- The jar sensor attaches to terminal J7 (second terminal set).
- The pair of red and black wires coming from the heat sensor on the motor attach to terminal J6 (third terminal set).
- The hall effect connector attaches to terminal J5 (forth and closest to center/top of the board).
- The black wire from the cord attaches to terminal J102(third connector down rear of the board).
- The red jumper wire coming from the circuit breaker attaches to push on terminal J101 (Top rear of board).

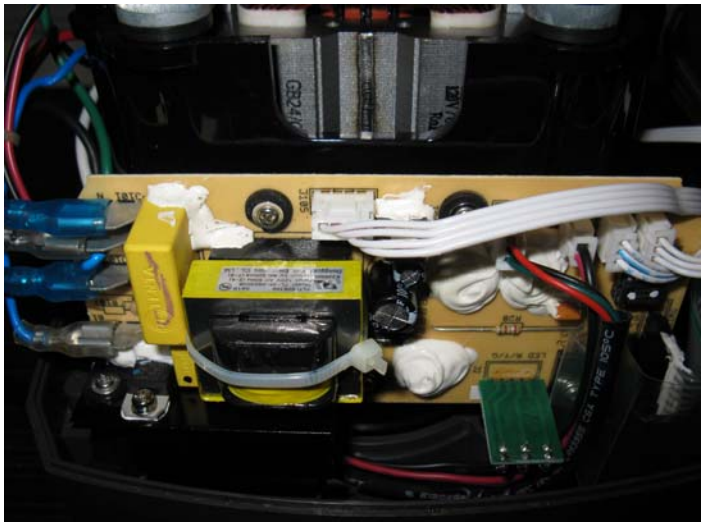

Figure 2. PC Board

Motor Removal and Replacement

- Remove the ground screw securing the green ground wire from the cord.
- The motor lifts out of the motor shroud once you have removed the wires attached to the power board (see **Wiring Detail** above). Note the wire tie location on the wires coming from the motor. It will need to be replaced.
- Remove the screws from the bottom of the machine that secure the motor shroud.
- Re-assemble in reverse order and remember to replace wire tie.

Board Removal and Replacement

- Remove the screws from the bottom of the machine that secure the motor shroud.
- Remove the 5 screws that secure the PC board.
- Remove the 3 screws that secure the power board.
- Re-assemble in reverse order.

Power Switch Removal and Replacement

- Remove the upper housing (see **Housing Disassembly** above).
- Disconnect the cables from the power board and PC board. Disconnecting the ribbon cable is optional.
- Remove the wire tie that secures the cable to the power switch.
- Disconnect the small board from the power switch.
- Remove the threaded, knurled ring holding the power switch.
- The power switch is removed from the front of the upper housing.
- Re-assemble in reverse order. Remember to secure the cable to the power switch with a small wire tie being careful not to bend or damage the switch terminals.

Speed Control Removal and Replacement

- Remove the knob from the stem of the speed control.
- Remove the upper housing (see **Housing Disassembly** above).
- Disconnect the cables from the power board and PC board. Disconnecting the ribbon cable is optional.
- Remove the wire tie that secures the Speed control cable, jar sensor cable and power switch cable.
- Remove the hex nut from the front of the speed control.
- Remove the speed control through the inside of the upper housing.
- Re-assemble in reverse order. Secure the speed control cable, jar sensor cable and power switch cable with a small wire tie.

Touch Pad Removal and Replacement

- Remove the upper housing following the instructions in **Housing Disassembly** above.
- Before proceeding, plug the new touch pad into the PC board and test the new touch pad. With the old touch pad unplugged and the new touch pad plugged into the PC board, position a magnet between the jar pad and the upper housing to simulate the jar being positioned. Verify the function of the new board. If acceptable continue with touch pad removal and replacement.
- Identify and disconnect all leads connecting the upper housing to the lower housing.
- Follow instructions above for removing the power switch and timer. You will need to work around the jar sensor cable.
- The silicone sealant will need to be removed where the ribbon cable comes through the housing. Score down each side of the ribbon cable with a sharp edge and remove the silicone.
- Peel the touch pad off the front of the housing and pull the ribbon cable through the slot.

- It is important to remove the sticky residue that remains on the housing before installing the new touch pad. It is equally important to ensure that the surface is free of all contaminates that may interfere with the proper adhesion of the replacement touch pad.
- Once the housing is clean reverse the process to reassemble the housing.
- Be careful after removing the paper back from the new touch pad to locate the pad in the correct spot the first time. The ribbon will try to push the touch pad to the right. You will find it easier to pull the ribbon through the slot and position the edge of the touch pad closest to the ribbon first.
- Re-apply silicone to the inside of the housing where the ribbon cable comes through the housing.

How to Determine Cycle Count

- Turn the on / off switch to the “off” position.
- Unplug the machine.
- Turn the machine upside down and position so that you can look into the right grill with the control buttons facing you.
- Plug the machine into a power source.
- Use the on/off switch to turn the machine on.
- Count and record the number of flashes from the LED lights; first Red, then Yellow, then Green.
- You can use the on on/off switch to restart the process at any time.
- Once complete add two zeros to the end. This is your cycle count.
- Example: Red – 2, Yellow – 0, Green – 8. You have recorded 208. At the end add two zeros - 20800. Your cycle count is 20,800.