

Technical Data Sheet, GB44, 220-240V

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Trouble Shooting Guide

- **Symptom:** Unit is extremely noisy.
- **Cause:** Possible worn bearing on cutter assembly. Remove container from blender. Slowly turn the cutter assembly from the bottom of the container. If it is hard to turn or feels loose/wobbly replace cutter assembly. Possible worn drive coupling. Check the teeth of the drive coupling. If worn, replace drive coupling outlined in repair guide.
- **Symptom:** During a normal cycle the machine stopped. **RED LED on control panel is illuminated (not flashing).**
- **Cause:** The unit has possibly overheated. **NOTE: the indicator/warning lights will change from Green to Yellow indicating motor is getting hot to Red indicating motor has reached overheat condition. Need to run a cool down cycle – see Operating Manual for instructions. If unit will not do so, the Thermal Protector has opened. Unplug the machine for 15-30 minutes. Plug in the unit and try to operate. If the problem persists, check other Symptoms.**
- **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. Ensure power is operational.
- **Symptom:** No jar sensor indicator
- **Cause:** PC board, membrane switch, ribbon connector or jar sensor, touch pad.
- **Symptom:** Power switch fails.
- **Cause:** Check connection. Ensure the PVC switch cover is present (moisture protection).
- **Symptom:** Timer switch is binding.
- **Cause:** Remove timer 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. **RED LED flashes 4 times. See Locked Rotor symptom below.**
- **Cause:** System is not reading Hall Effect information. Could be broken magnet, bad sensor, bad connection of cable, bad board.
- **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.

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- **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.
- **Symptom:** RED LED on control panel flashes 4 times (4x). The unit will not start.
- **Cause:** Indicates a Motor Overheat Problem. See Overheat Symptom above.
- **Symptom:** RED LED on control panel continuously flashes every half second.
- **Cause:** (1) The Jar is not in place on base. Jar sensor is loose or not connected to PCB. Check connection at PCB. (2) The PCB is not getting a signal from the Motor NTC. Check connection at PCB. If good, NTC has opened, replace motor.
- **Symptom:** RED LED on control panel flashes 8 times.
- **Cause:** This indicates a Motor overspeed condition - indicating a defective Triac and the PCB needs to be replaced.
- **Symptom:** RED LED on control panel flashes 4 times.
- **Cause:** This indicates a Motor locked rotor condition - indicating the PCB is not getting Hall Effect signal - motor shaft is not turning). Remove container and determine what is preventing the cutter assembly from turning. If cutter assembly is free to turn, then motor is defective – something is preventing the motor to turn (locked bearings, damaged commutator/brushes, etc.) – replace motor.



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.

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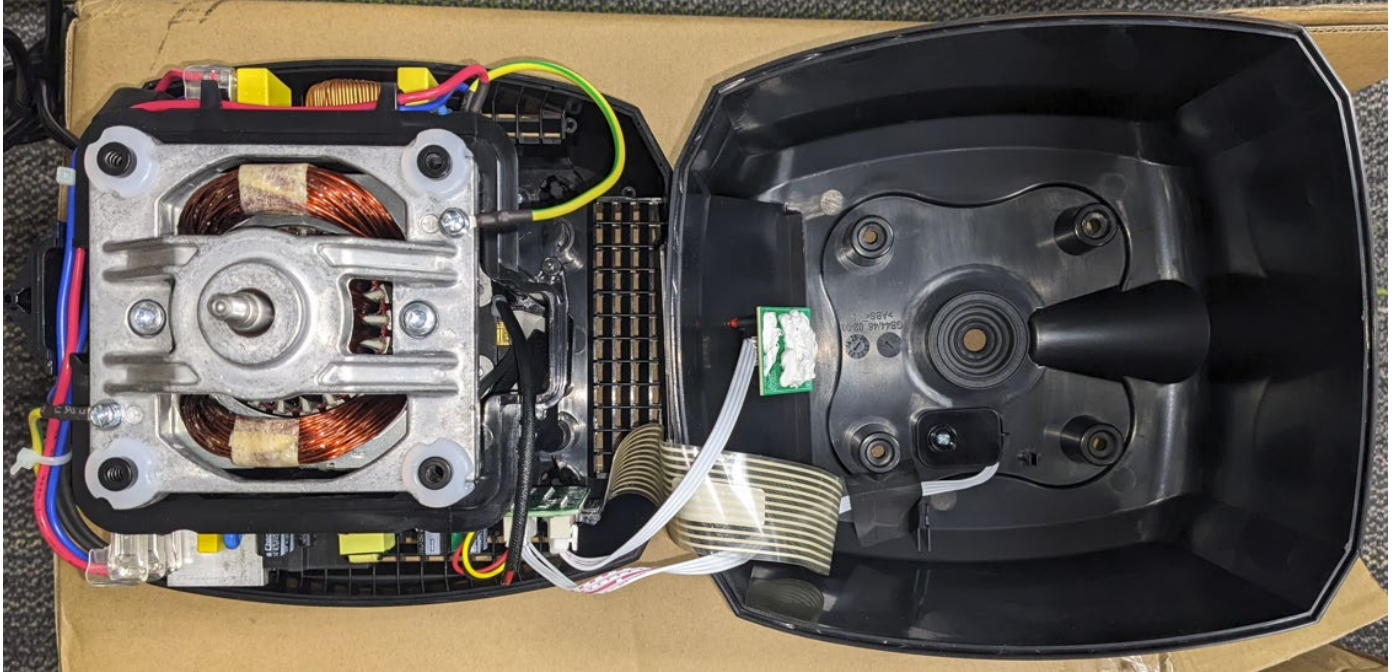


Figure 1. Machine Interior.

Circuit Breaker and Cord Socket Wiring Details (See Figure 2)

- Blue wire from power cord socket left terminal "N" routes through the large EMC filter coil and to the "IN_N" terminal of the RFI Board.
- Red wire from the "IN_L" terminal of the RFI board routes through the large EMC filter coil and to Reset terminal of circuit breaker/On-Off switch.
- Yellow/Green striped wire routes from center terminal of cord socket through the small EMC filter coil to the motor chassis (ground).
- Brown wire routes from the power cord socket right terminal "L" of the cord socket to the OFF terminal of the circuit breaker.

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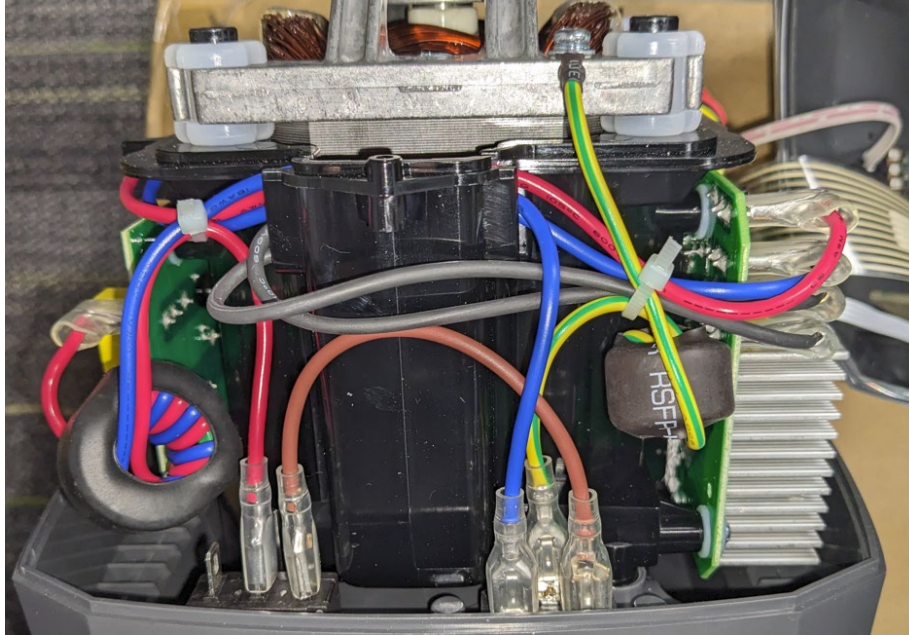


Figure 2. Interior View of Power Cord Socket and Non-illuminated Circuit Breaker Switch

RFI Filter Wiring Details (See Figure 3.)

- Blue wire (on right) from power cord socket left terminal “N” routes through the large EMC filter coil and to the “IN_N” terminal of the RFI Board.
- Red wire (on right) from the “IN_L” terminal of the RFI board routes through the large EMC filter coil and to Reset terminal of circuit breaker/On-Off switch.
- Blue wire (on left) from the “OUT_N” terminal of the RFI Board routes to the “N” terminal on the Power PCB.
- Red wire (on left) from the “OUT_L” terminal of the RFI board routes to the “L” terminal on the Power PCB.
- Yellow/Green striped wire (on left) routes to the motor chassis.

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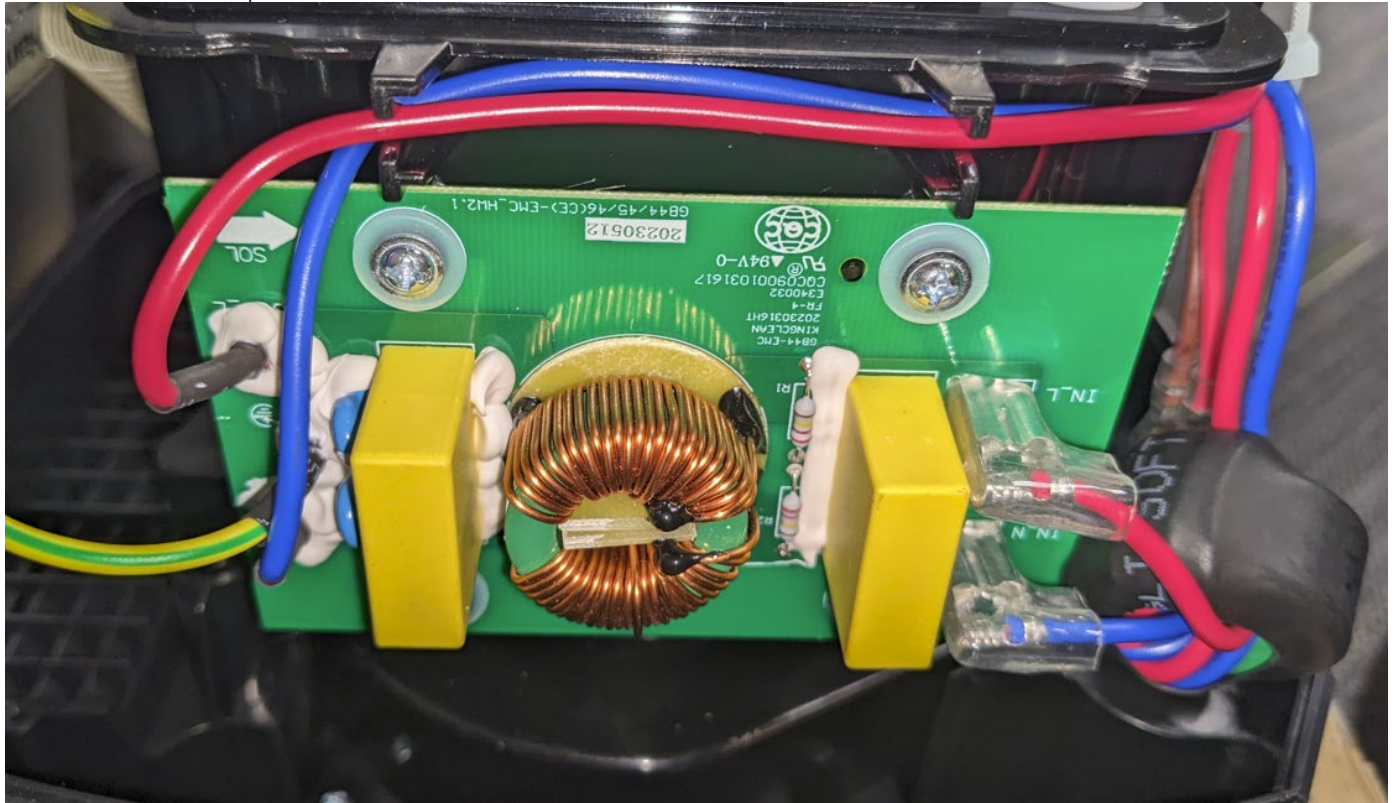


Figure 3. RFI FILTER

RFI Board Removal and Replacement

- Disconnect wires from RFI board, mark if necessary or refer to wiring detail for proper placement.
- Remove the four Phillips screws and gently pull the RFI board

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Control Board Wiring Details (Figure 4) & Control Panel Wiring Details (Figure 5)

- Red wire (on left) routes to the left side of EMC Board.
- Blue wire (on left) routes to the left side of EMC Board.
- Upper Black wire (on left) routes to the Motor non-thermal control device side.
- Lower Black wire (on left) routes to the Motor thermal control device side.
- Red/Black/Yellow ribbon J6 3 wires route to the Motor Hall Effect sensor.
- Red/Black ribbon J7 2 wires route to the Motor NTC Thermal control device.
- J5 Connector = unused
- White ribbon J8 4 wires (below J5) routes to the Jar Sensor on the underside of the Upper Housing.
- White ribbon J3 4 wires in 4 wire connector (upper right corner) routes to the Rotary Timer Dial on control panel.
- Red connector J4 = unused
- Large Black J1 is the receptacle for the 12 wire ribbon from the Control Panel Touch Pad

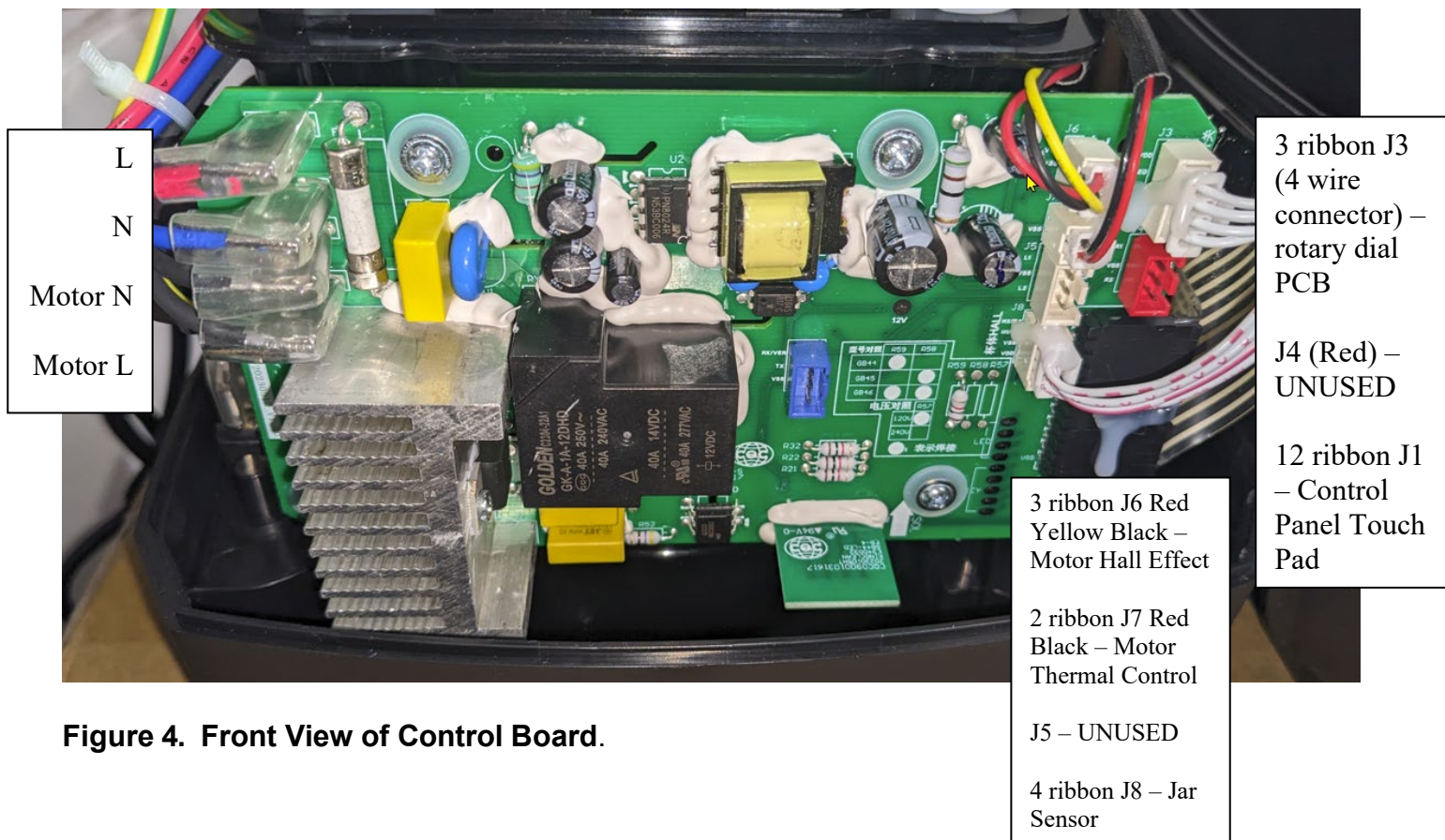


Figure 4. Front View of Control Board.

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Figure 5 - Control Panel Wiring Details

Motor Removal and Replacement

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

Board Removal and Replacement

- Remove the 4 screws that secure the PC board.
- Remove the 4 screws that secure the EMC board.
- If needed, remove the screws from the bottom of the machine that secure the motor shroud.
- Re-assemble in reverse order.

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Power Switch Removal and Replacement

- Remove the upper housing (see **Housing Disassembly** above).
- Disconnect the wires from the power switch. Note color to terminal for reassembly.
- Depress the latches on both sides of the switch to free it from the housing.
- Press the switch down and out of the housing.
- Re-assemble in reverse order. Remember to re-assemble any removed small wire ties. Be careful not to bend or damage the switch terminals.

Rotary Speed Switch Removal and Replacement (See Figure 5)

- Disassemble upper housing as described above.
- Remove knob by gently prying loose and pulling straight back.
- Remove moisture seal and remove hex nut and washer.
- Speed Control Module will drop out of upper housing.
- Disconnect ribbon wire from the main PCB board and connect the ribbon from the new timer control board.
- Assemble in reverse order.

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 between the front and back post on the left side to simulate the jar being positioned. Verify the function of the new touch pad. If acceptable continue with touch pad removal and replacement.
- Mark and disconnect all leads connecting the upper housing to the lower housing.
- Follow instructions above for removing the Rotary Speed Switch. You will need to work around the jar sensor cable.
- Carefully remove the silicone sealant from 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 contaminants that may interfere with the proper adhesion of the replacement touch pad. Remove any adhesive residue using a mild adhesive remover such as Goo Gone.
- Allow housing to completely dry and replace with a new control panel.
- 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.

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Replacing the Drive Coupling

- Turn the unit upside down. Remove bottom cover. Place a Flat Screwdriver into the bottom of the motor drive.
- Grasp the drive coupling at the top of the blender base with non-slip tool and hold the screwdriver in place while turning the drive coupling counterclockwise. Alternate method: use a 14mm 12point socket in an impact driver set to CCW direction. This will loosen the drive coupling enough so that it can be removed by hand. Replace with new drive coupling.

A 12point socket (not 6 point) with an impact driver will quickly remove the clutch



12 point on left, 6 point on right

Testing the container for a frozen or worn cutter assembly

- Remove the container from the blender base. Hold the container by the handle and slowly turn the coupling at the bottom of the container. The blades of the cutter assembly should turn freely without wobbling or binding.

How to Determine Cycle Count

- Turn the power switch to OFF.
- Unplug the machine.
- Turn the machine upside down so that you can look into grid holes on the bottom, front right of machine.
- Plug the machine in and turn the power switch to the ON position.
- Count the number of flashes from the LED light; first red, then yellow, then green.
- Example: Red- 2, Yellow- 0, Green- 8. You have recorded 208.
- At the end add two zeros. Your cycle count = 20,800.

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