

BLENDTEC

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DOCUMENT NUMBER

SRV-0XX

DOCUMENT TITLE

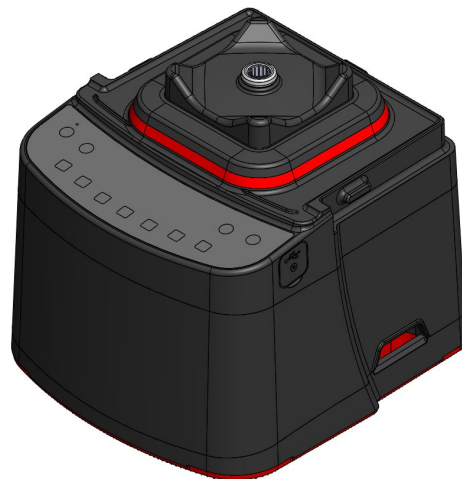
Service instructions to install SRV-500 in S885 and S895

REVISION

A 01

RELEASE INFORMATION

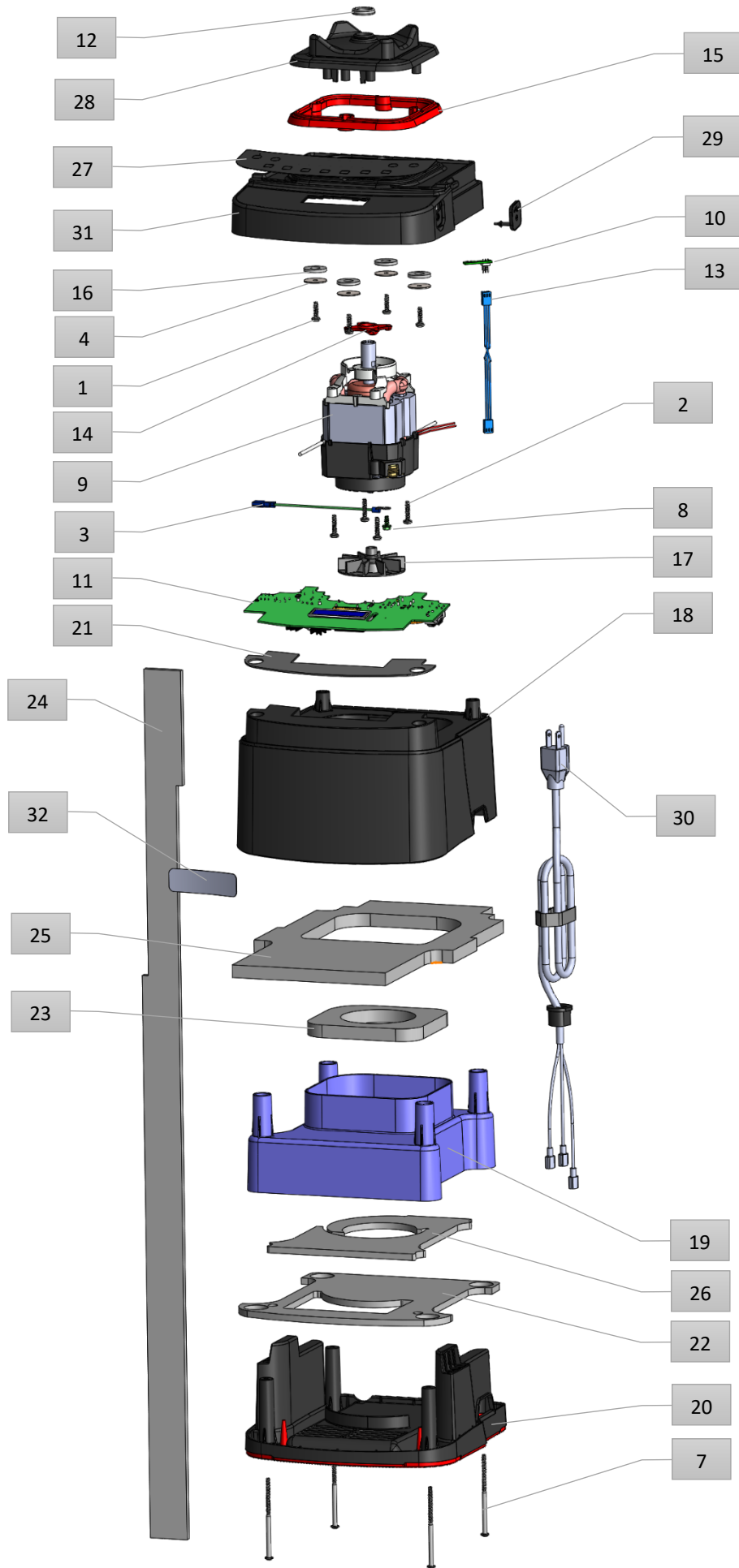
February 2023



PROPRIETY INFORMATION:

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Exploded View



Bill of Materials

Item numbers refer to Exploded View on previous page

* Part numbers that contain "X" indicate that there are different part numbers for different models. For example, 11-220-XX could be 11-220-01 for a 120V motor, or 11-220-02 for a 240V motor.

† Part only used in 240V motor builds (not shown in exploded view)

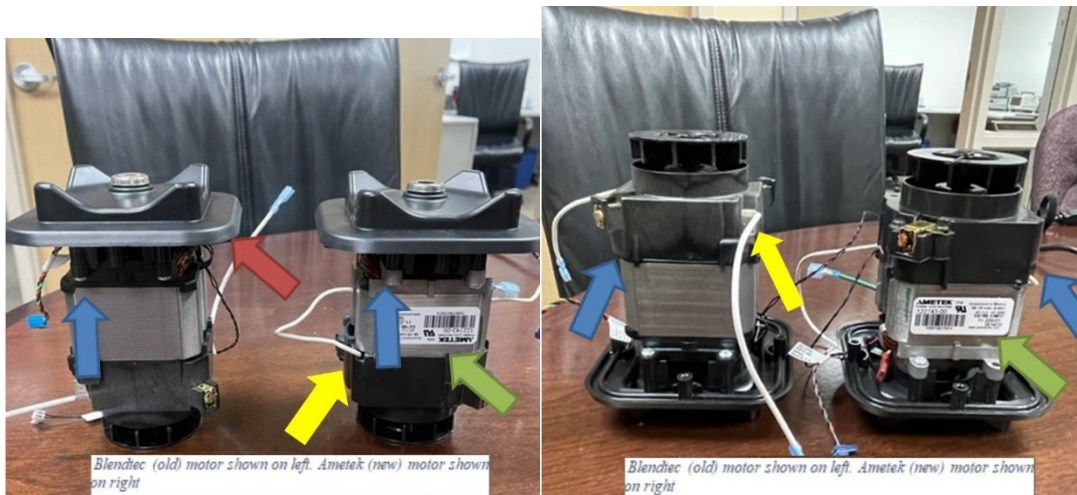
‡ Part only used in 120V motor builds

<i>Item Number</i>	<i>Part Number</i>	<i>Quantity</i>	<i>Part Description</i>
1	10-012-D05EL	4.00	Screw, TRD Forming, ZP, #8-16 x 5/8in, PH Torx T20, Tri-Lobe
2	10-012-D06EL	4.00	Screw, TRD Forming, ZP, #8-16 x 3/4in, PH Torx T20, Tri-Lobe
3	10-029-30‡	1.00	Wire, Jumper, 16AWG, Green w/Yellow Stripe, 4.5in L, 1/4in F
4	10-209-18	4.00	Washer, Custom, Steel, AN 970, .2 ID x .88 OD x .065 Thk, ZP
5	10-273-03†	1.00	Ground wire with ferrite, 20 loop, Stealth
6	10-277-02†	1.00	Ferrite, Clamp on, 240V, Stealth
7	10-245-01	4.00	Screw, Custom, SST, CR, 8-18 x 3-1/8in, PHP, Type 25, Blk
8	11-100-01	1.00	Screw, Ground, Green
9	11-220-XX*	1.00	Ametek Drop in motor
10	15-350-01	1.00	Electronic Assembly, Speed Sensor, Hall Effect
11	15-470-XX*	1.00	Electronic Assembly with Firmware, Tactile Stealth, DIM
12	20-217-01	1.00	Sling Ring, Large I.D.
13	20-272	1.00	Harness, Wire, Hall Sensor
14	22-301	1.00	Magnet Disk Assembly
15	28-003	1.00	Gasket, Motor Isolation, Stealth
16	28-004	4.00	Washer, Silicone, Motor Isolation, Stealth
17	28-006	1.00	Fan, Radial, Plastic, Straight Blade, Stealth
18	28-013-01	1.00	Housing, Middle, Stealth, Molded, Black
19	28-014	1.00	Baffle, Stealth
20	28-015-01	1.00	Housing, Base, Stealth, Overmolded Assembly, Red
21	28-025	1.00	Gasket, PCB, Stealth
22	28-026-01	1.00	Foam, Base Bottom, Stealth, (Base)
23	28-026-02	1.00	Foam, Top Middle, Stealth, (Small with hole)
24	28-026-03	1.00	Foam, Baffle, Inside, Long, Stealth, (Long strip)
25	28-026-05	1.00	Foam, Baffle, Motor, Stealth, (Large folded)
26	28-026-06	1.00	Foam, Baffle, Inside, Bottom, Stealth (Medium with swirl)
27	28-034	1.00	Touchpad, Switch+Overlay, Stealth, Tactile
28	28-04X-XX*	1.00	Motor Mount, Stealth
29	28-303	1.00	USB Cover Assembly, Stealth
30	28-309-XX*	1.00	Assembly, Stealth, Cord, Power
31	28-310-01	1.00	Assembly, Upper Housing, Stealth, Tactile
32	37-804	1.00	Nameplate, Stealth, Stainless

New motor for all stealth models

Blendtec will no longer be manufacturing the motors used in the stealth products. Blendtec has partnered with the motor manufacturing experts at Ametek to provide customers with high quality motors. This change was made to alleviate supply chain challenges and provide customers with a higher quality motor. There is no need to replace your current Blendtec-manufactured motor if it is still functioning; however, all replacement motors purchased will be motors manufactured by Ametek. The new Ametek motor is designed to be a drop-in replacement with a few minor changes to supporting components.

The following steps explain how to replace a Blendtec motor with an Ametek motor.



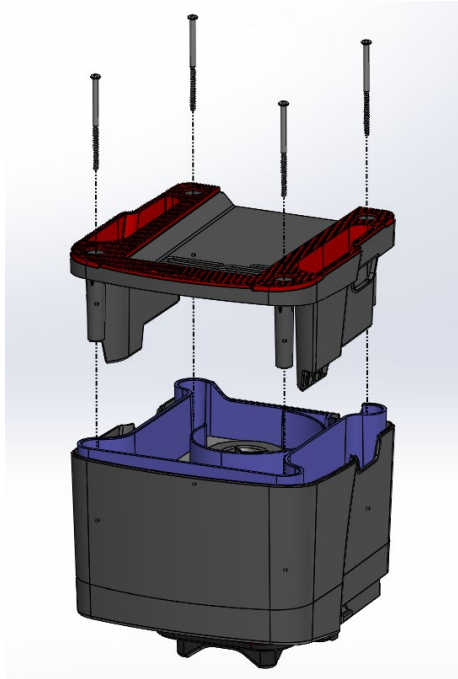
Visual differences between the Blendtec motor and the Ametek motor (pointed out in images above).

- **Mounting Brackets (Blue Arrows)**
 - Blendtec motor has black plastic mounting bracket
 - Ametek motor has aluminum casted mounting bracket
- **Motor wires and thermistor (Yellow Arrows)**
 - Blendtec motor does not have integrated motor wires or thermistor
 - Ametek motor has integrated motor wires and thermistor
- **Height difference (Red Arrows)**
 - Blendtec motor laminations are 1.75" tall
 - Ametek motor laminations are 1.50" tall
- **Sticker (Green Arrow)**
 - Sticker notates an Ametek motor



1. *Unplug the blender from the power source! Do not attempt to service a machine that is connected to a power source!*

2. Remove the 4 screws (10-245-01) from the base (28-015-01) and set aside. Do not remove the base foam (28-026-01).



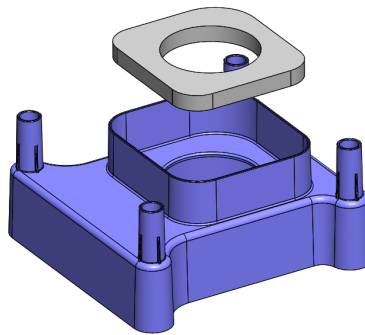
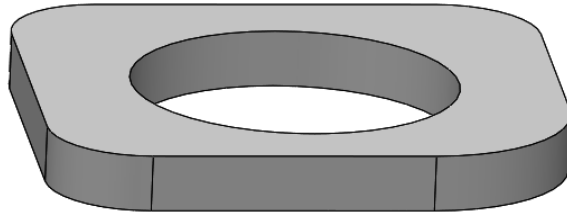
3. Remove the baffle (28-014) from the middle housing (28-013-01). Do not remove the bottom foam (28-026-06) or the long strip of foam (28-026-03).

- a. It may be necessary to remove the top baffle foam (28-026-05) from the baffle. For the Ametek motor, the total height of the foam in the top of the baffle needs to be .50 in. The Blendtec (old) motor mated with a foam part that was .25 in tall. If the foam on top of the baffle is .25" tall remove it and replace with the .5" thick piece included in the kit.

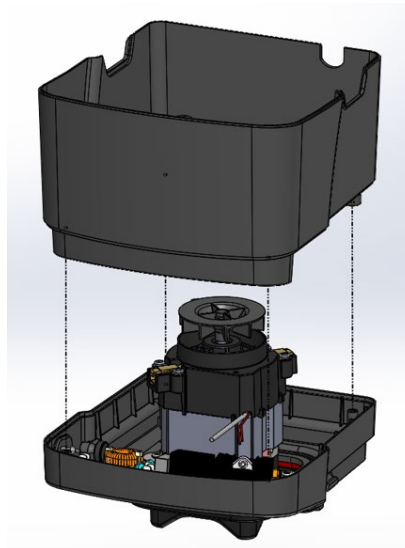


FAILURE TO FOLLOW THIS STEP MAY RESULT IN POOR AIRFLOW TO THE MOTOR CAUSING IT TO OVERHEAT.

- i. Tip – a razor blade makes removing the **top baffle foam (28-026-05)** easier.



4. Remove the **power cord (28-309-XX)** from the slot on the **middle housing (28-013-01)** and remove the middle housing from the **top housing (28-310-01)**. Set aside.

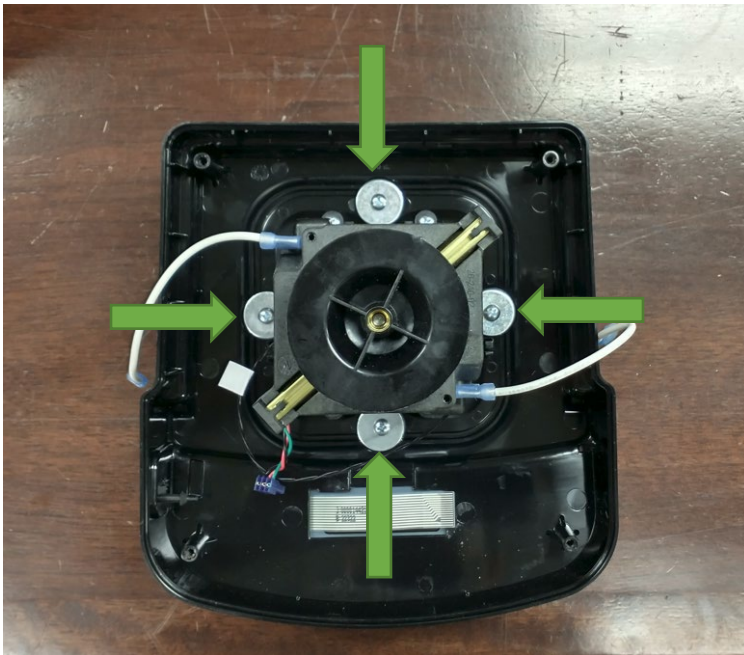


5. Unplug the old white motor wires, speed sensor wire and thermistor from the circuit board. These will not be reused.

- Starting with the right side front carefully lift out the PC board being careful not to damage the keypad ribbon as it is pulled through the slot, set it aside.



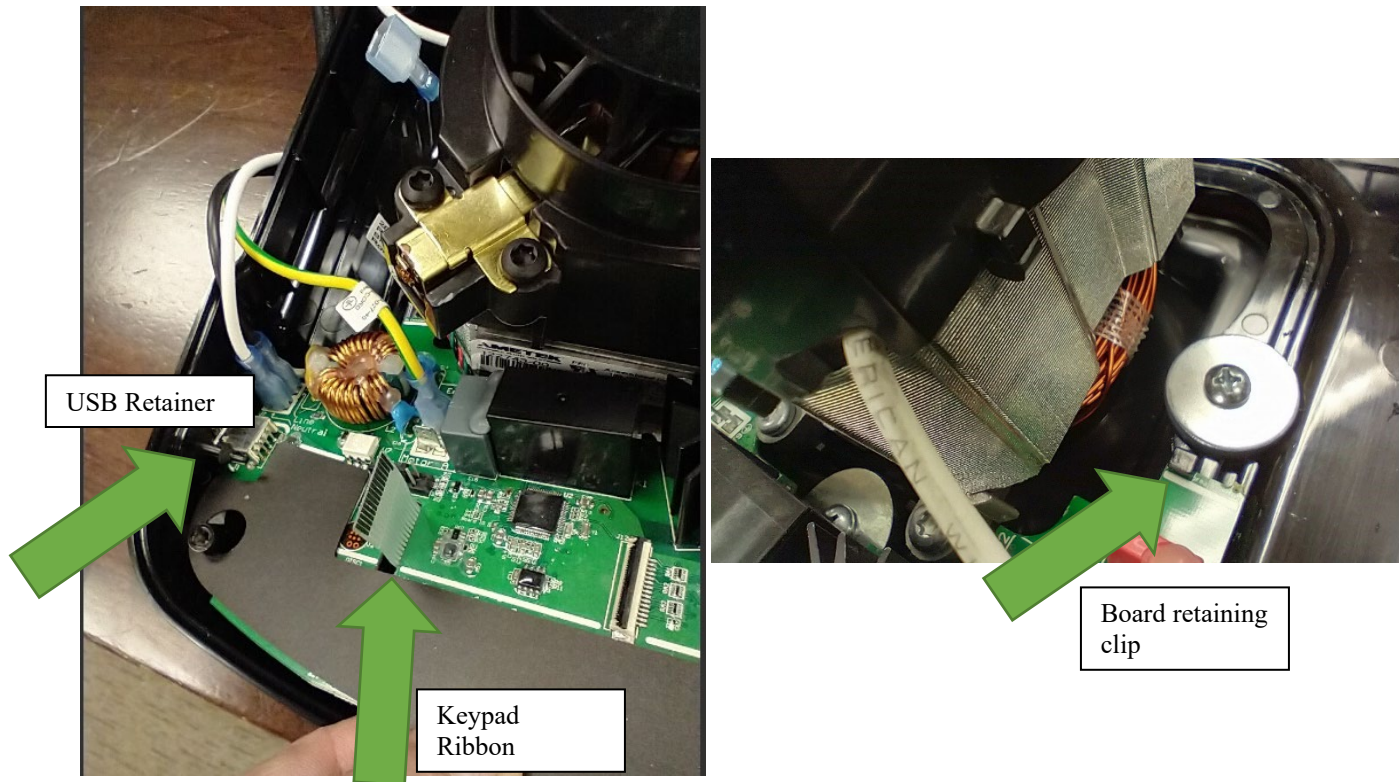
- Remove the 4 screws and washers then carefully remove the old motor assembly.



11. Place the new Ametek **motor (SRV-500)** in the top housing, install the rubber washers followed by the metal washers then the mounting screws. **Tighten to 15-17 in-lbs** Make sure the ground wire is facing the rear of the machine.



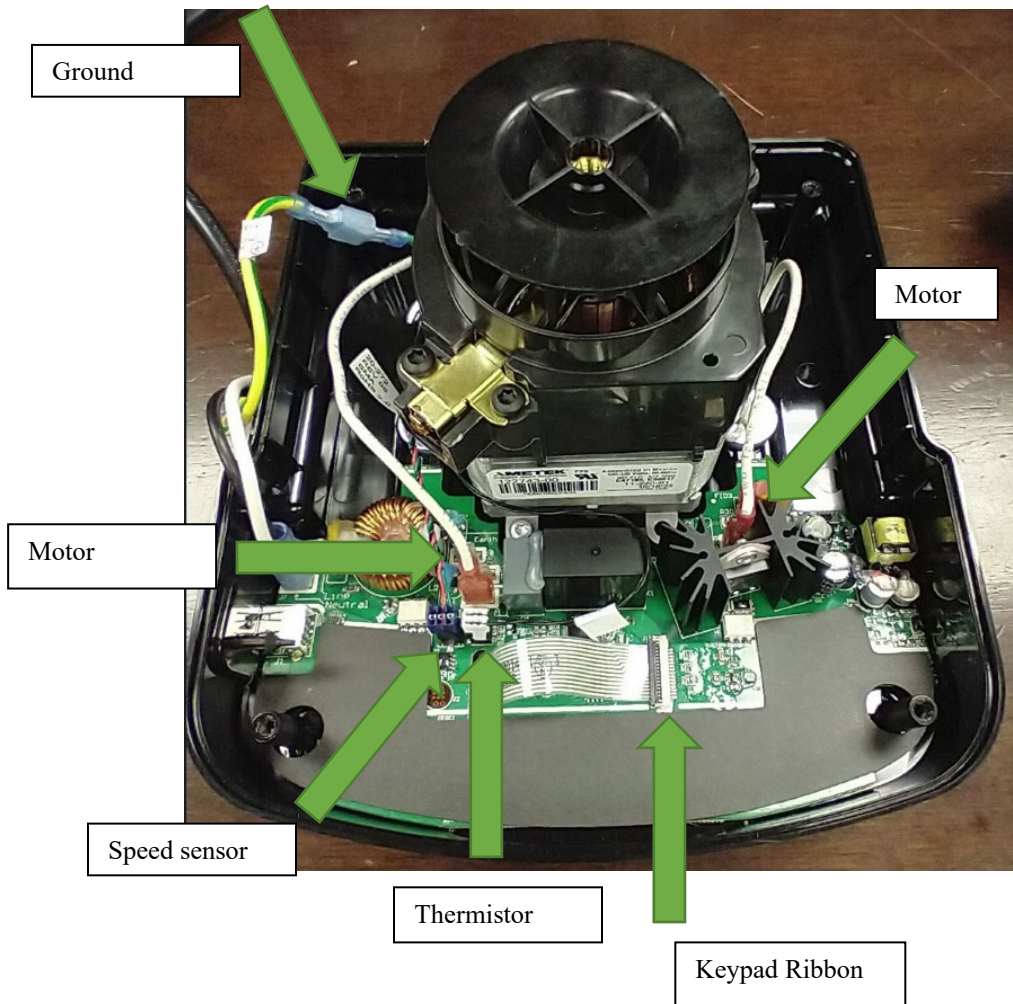
12. Reinstall the PC board by installing the starting with the left side and back, pay special attention to ensure the board goes under the USB retainer, the keypad ribbon goes through the slot, and the board ends up under the 2 board retention tabs.



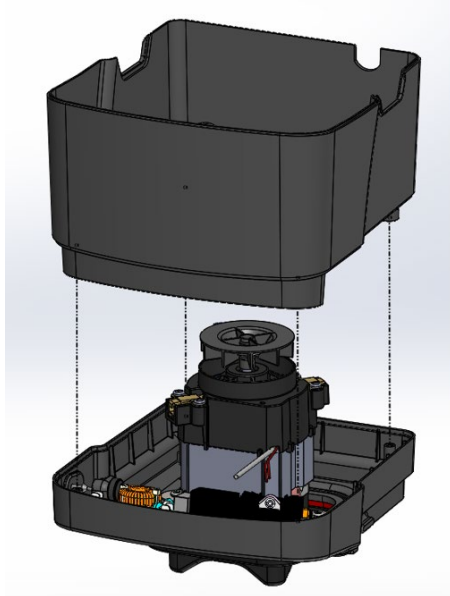
13. Reinstall all electrical connections.

- a. Both white motor wires to “Motor A” and “Motor B” on circuit board
- b. Thermistor to “Therm” terminal on circuit board
- c. Speed sensor harness to “Speed” terminal on circuit board
- d. Keypad ribbon to keypad connector, ensure it is locked
- e. Power cord
 - i. Black or Brown wire to “Line” terminal on circuit board
 - ii. White or Blue wire to “Neutral” terminal on circuit board

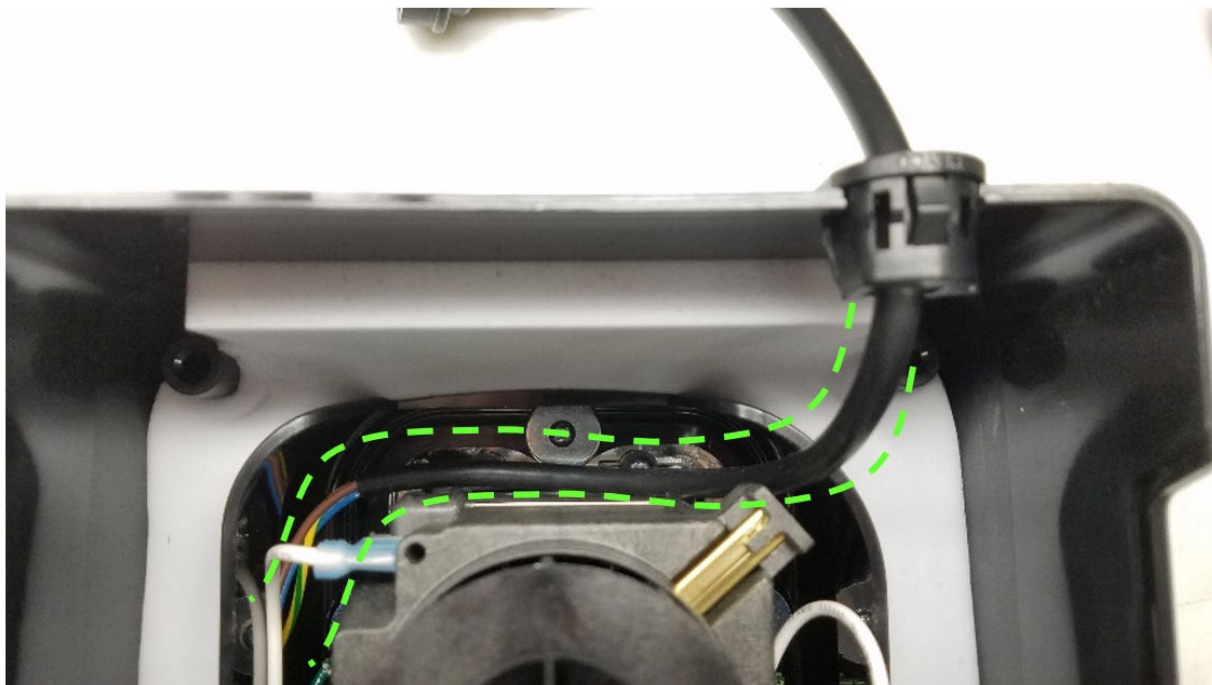
iii. Green w/ Yellow strip wire to motor ground wire mounted to new motor.



14. Place the **middle housing (28-013-XX)** on the top housing with the power cord coming through the main opening. The foam should still be in the middle housing. **Ensure that no wires are pinched between the top housing and middle housing.**

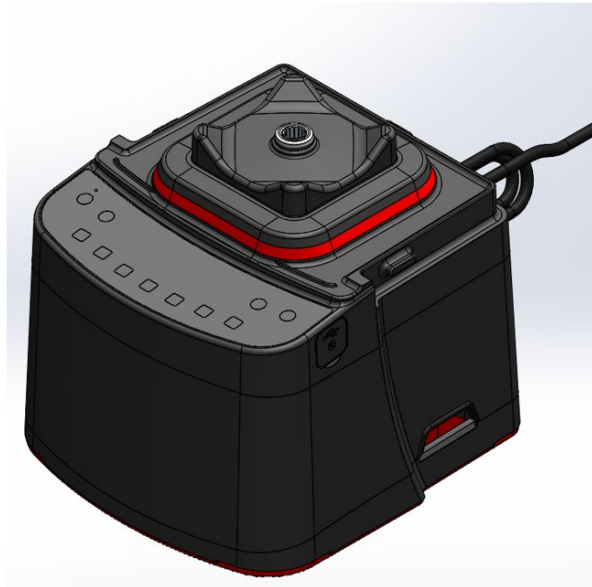
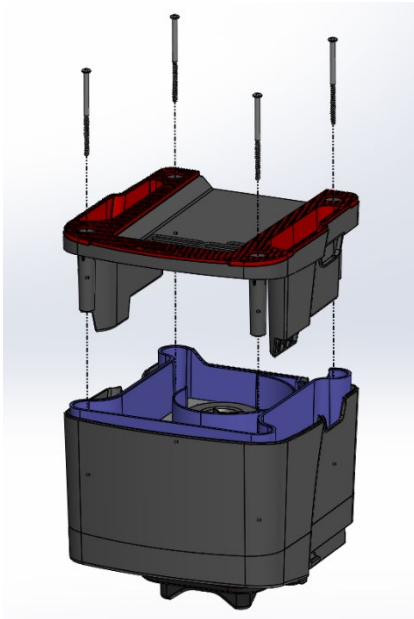


15. Place the power cord clip into the slot on the middle housing. Ensure the power cord follows the path behind the motor and into the machine as shown in the picture. Path outlined by green dashed lines. Place the baffle into the machine. **Ensure the correct configuration of foam is used.** **Ensure that no wires are pinched between the baffle and the middle housing.**





16. Place the housing base with the foam onto the baffle and fasten the housing base to the rest of the machine with the 4 long screws (10-245-01). These screws have type 25 8-18 threads, a Phillips #2 pan head, and are 3-1/8" long. Tighten the screws to 12 – 14 in-lbs.



17. Test machine to make sure it works.

Error Code Explanations and Troubleshooting:

Error Code	Root Cause	How to Correct
Error: Overtemp Condition Detected	Motor overworked	Allow motor to cool then try again
	Motor damage	Replace motor
Error: Overload Condition Detected (motor spins for 2 seconds)	Defective speed sensor	Replace speed sensor
	Defective speed sensor jumper wire	Replace jumper wire
	Magnet disc missing/damaged	Replace motor
Error: Overload Condition Detected (motor does not spin)	Worn out brushes	Replace motor
	Bad connection between control board and motor	Connect/replace jumper between control board and motor
	Defective internal wiring in motor	Replace motor
Error: Temperature sensor not detected	Temperature sensor not connected to PC board	Connect temperature sensor
	Temperature sensor damaged	Replace temperature sensor
Error: Zero crossing not detected	Defective zero crossing circuit on circuit board.	Replace circuit board
	Power line noise	Remove noise from power line
Error: Reset error detected	Controller reset itself	If error recurs replace control board
Error: Read/Write error detected	Incorrect data written to EEPROM	If error recurs replace control board
Error: Motor control error detected	Magnet disc issue such as missing magnets, improper magnet orientation	Replace motor
	Defective speed sensor	Replace speed sensor
	Defective speed sensor Jumper wire	Replace speed sensor jumper wire
	Defective speed sensor circuitry on control board	Replace control board
Error: Button disabled	User has disabled button in programming	Reprogram to enable button

Electronic Schematic

