

# **ProForce<sup>®</sup>** **1500/1500XP** **Service Manual**

 **ProTeam<sup>®</sup>**  
*The Vacuum Company*

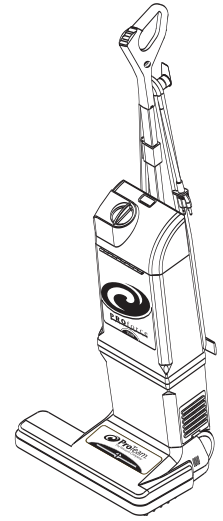
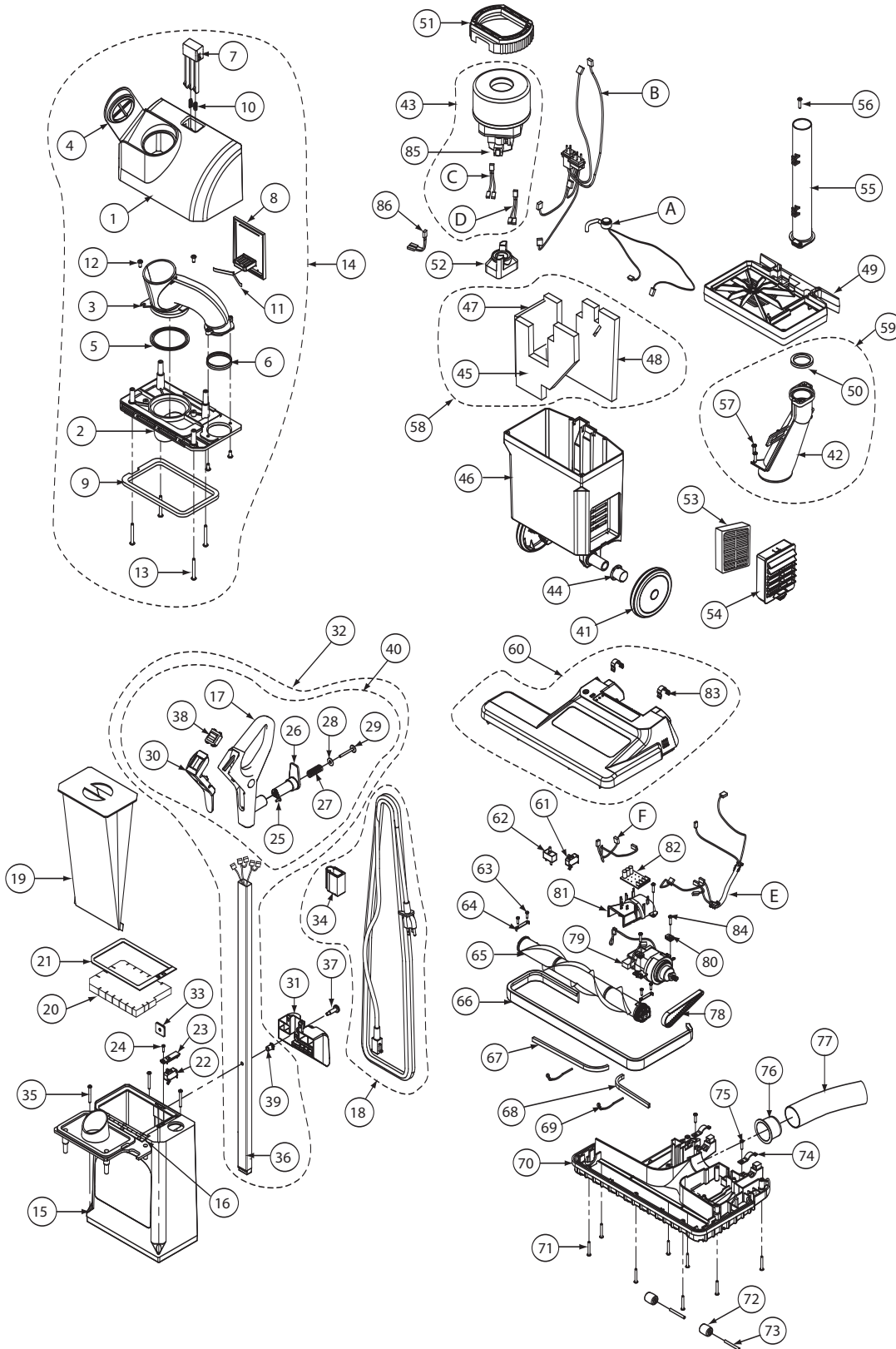
# Table of Contents

## ATTENTION

Before servicing any part or proceeding with any repair procedure on any ProTeam vacuum, ALWAYS disconnect the vacuum from power source.

ProForce 1500 Full Vacuum Parts and Index	2-3
ProForce 1500XP Full Vacuum Parts and Index	4-5
<b>BAG COVER</b>	
Index	6
Disassembly	7
<b>BAG HOUSING</b>	
Index	8
Disassembly	9
Bag Lockout Switch Replacement	10
Hose Collar Repair	11
Bag Housing to Motor Housing	12
<b>MOTOR HOUSING</b>	
Index	13
Disassembly	14-17
1500XP Wand Guide	18
<b>ELECTRICAL</b>	
1500XP Wire Guide	19
Wire Harness Replacement	20-27
<b>MOTOR</b>	
Carbon Brushes	28
<b>POWER NOZZLE</b>	
Index	29
Assembly	30
Power Nozzle to Body Assembly	31
Hose Sleeve Replacement	32
Pivot Bearing Replacement/Wheel Replacement	33
<b>HOSE AND POWER CORD</b>	
Index	34
<b>HANDLE</b>	
Index	35
Assembly	36-38
Handle/New Power Cord & Strain Relief Replacement	39-40
Final Vacuum Assembly	41
<b>TROUBLESHOOTING</b>	
Clearing Hose and Wand Obstructions	42
<b>SCHEMATICS</b>	
Wiring Schematic	43

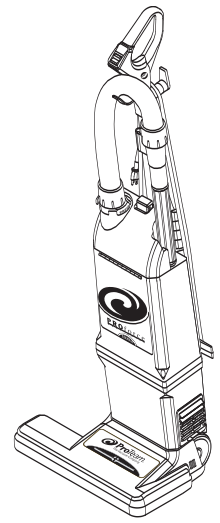
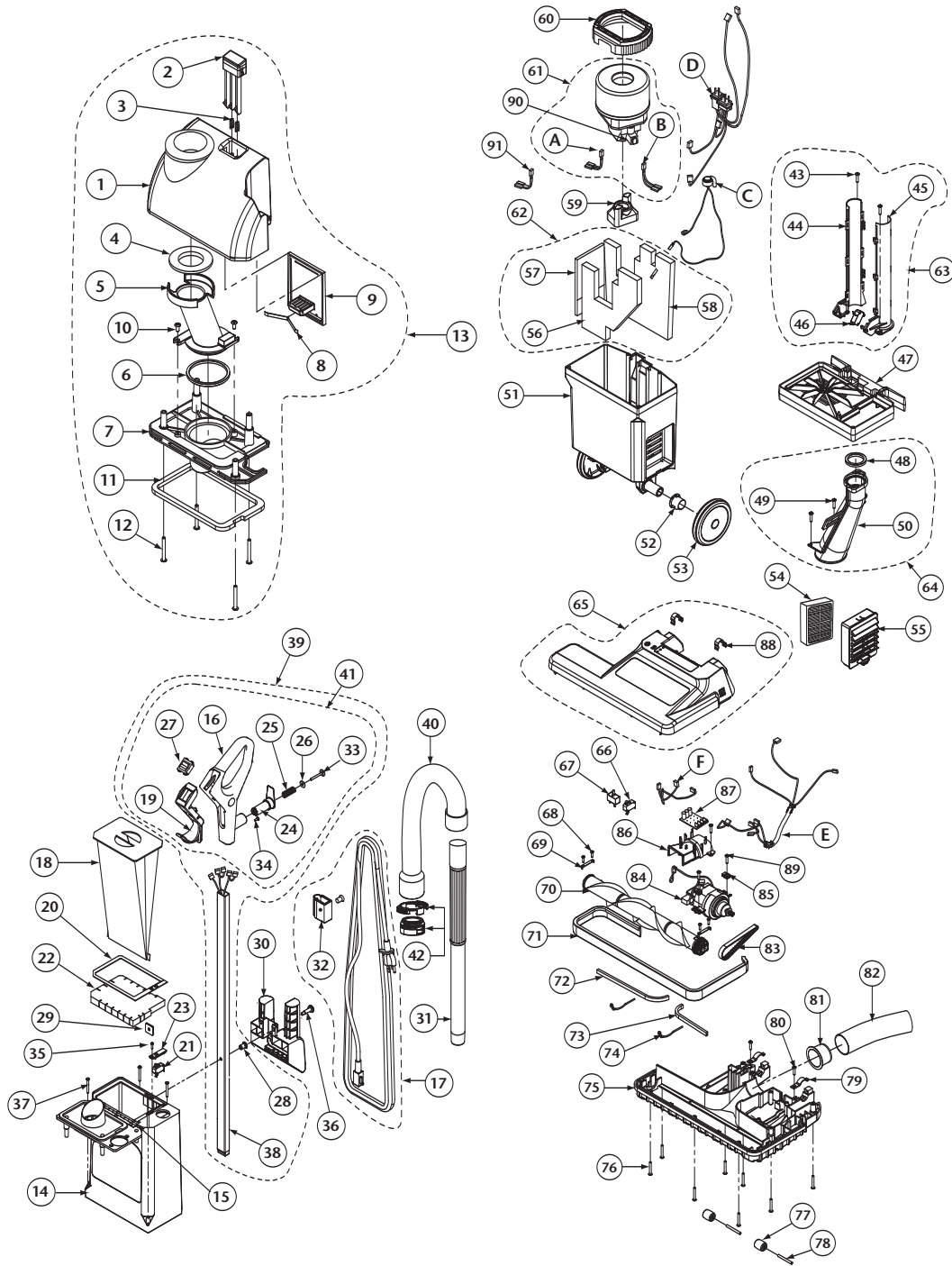
# Full Vacuum Parts – 1500



# Full Vacuum Index – 1500

No.	Part Name	No.	Part Name
1	104569 Cover, Bag Housing, Grey	41	104306 Wheel, Rear
2	104570 Plate, Bag Cover Nozzle	42	104250 Air Duct Assembly
3	104571 Duct, Crossover, Bag Cover	43	104957 Motor Assembly Kit w/Jumpers (includes: C, D)
4	104574 Plug, Access Port	44	104504 Bearing, Pivot
5	104575 Seal, Crossover Duct/Bag Cover Nozzle Plate, Lower	45	103532 Foam, Sound, Motor Housing Front Panel
6	104576 Seal, Crossover Duct, Inlet	46	104536 Motor Housing, Charcoal
7	104232 Latch, Release, Bag Cover	47	103533 Foam, Sound, Motor Housing Left Panel
8	104243 Flex Plate, Bag Cover Latch	48	103531 Foam, Sound, Motor Housing Rear Panel
9	104241 Seal, Gasket, Bag Cover	49	104245 Bulkhead, Dark Grey
10	104233 Spring, Release Button, F/Bag Cover Latch	50	104253 Seal, Lower Air Duct, Nitrile
11	104242 Spring, Bag Cover Latch	51	104249 Motor Mount, Upper Nitrile
12	104577 Screw, Phillips, 4.2mm x 9.5mm	52	104247 Motor Mount, Lower Nitrile
13	104493 Screw, Phillips, 4.2mm x 35mm	53	105136 Filter, Exhaust, HEPA Media
14	105491 Filter Cover Kit, w/Riveted Hinge and 6 Rivets (includes: #1-13)	54	104246 Cover, Filter Cartridge, Charcoal
15	104739 Bag Housing Assembly, Grey, w/Riveted Hinge and Decal Includes Bag Cover Nozzle Plate	55	104578 Air Duct, Upper ProForce 1500
16	104491 Rivet F/Bag Housing Assembly	56	104209 Screw, Phillips, 4.2mm x 12mm, F/Upper Air Duct
17	104255 Handle w/Over Mold and Decal	57	104267 Screw, Phillips, 4.2mm x 19mm, F/Lower Air Duct
18	104284 Cord, Power Clasp, 50' Yellow (Includes: #34)	58	105488 Motor Housing Sound Filter Kit (includes: #5,7,8)
19	103483 Intercept Micro Filter	59	105489 Air Duct Kit (includes: #2, 10, 17)
20	104281 Filter, Double Layer Motor Intake	60	104494 Power Nozzle Cover w/Detent Springs & Decal
21	104738 Seal, Gasket, Bag Housing	61	104279 Switch, Safety, Power Nozzle Lockout
22	104283 Switch, Filter, Lock-Out	62	104212 Circuit Breaker
23	104282 Cover, Switch, Filter Lock-out	63	104496 Screw, Phillips, 2.9mm x 13mm, F/Brush Retainer
24	105075 Screw, Phillips, 2.9mm x 13mm, F/Switch Cover	64	104499 Retainer, Brush Roll
25	104509 Screw, Phillips, F/Handle Assembly M4 x 10mm x .07 Pitch	65	104216 Brush Roll, Power Nozzle, 14"
26	104268 Bracket, Cord Wrap	66	104218 Bumper, Power Nozzle, Vinyl
27	104269 Spring, Compression, Cord Wrap Bracket	67	104736 Seal, Base Cover, Air Duct, Left, 7.5" Long
28	104270 Washer, Compression Spring, Cord Wrap Bracket	68	104737 Seal, Base Cover, Air Duct, Right, 5.5" Long
29	104271 Screw, Cord Wrap, 4mm x 38mm Phillips Round Head	69	104500 Brace, Formed Wire, F/Power Nozzle Base
30	105090 Handle Bezel w/Screws	70	104221 Baseplate, Power Nozzle
31	104741 Handle, Carry	71	104497 Screw, Phillips, 4.2mm x 35mm, F/Base Cover
32	105114 Handle, Tube Assembly Complete (includes: #17, 25, 26, 27, 28, 29, 30, 36, 38, 39)	72	104501 Roller, Front
33	104259 Plate, Handle Nut	73	104502 Shaft, Front Roller Axle
34	105091 Clasp, Strain Relief, Yellow	74	104503 Clamp, Rear Wheel
35	104493 Screw, Phillips, 4.2mm x 35mm	75	104495 Screw, Phillips, 4.2mm x 19mm, F/Powerhead
36	104958 Handle, Tube, w/Wire Harness, Rivet Nut and Plug Rivet	76	104227 Sleeve, Hose, Air Duct
37	104266 Screw, Handle Assembly	77	104230 Hose, Power Nozzle to Air Duct, Lower
38	105147 Switch, Rocker, On/Off	78	104217 Belt, Drive, F/Brush Roll
39	104264 Bushing, Handle Tube	79	104506 Motor, Power Nozzle with Crimps
40	105501 Handle Kit (includes: #17, 25, 26, 27, 28, 29, 30, 38)	80	104498 Grommet, Vibration, Power Nozzle Motor, Nitrile
		81	104224 Cover, Air Duct, Power Nozzle
		82	104226 Board, Vacuum Operation Indicator
		83	104507 Spring, Detent, Upright Lock
		84	105371 Screw, Phillips, 4.2mm x 19mm, F/Power Nozzle Motor
		85	105281 Carbon Brush Set for ProForce Motor
		86	105760 Thermal Protector
		105755	Wire Harness Kit includes: A. Sensor, Bag, Full Indicator B. Harness, Wire, Main Power Supply C. Harness, Jumper, White D. Harness, Jumper, Red E. Harness, Wire, Power Nozzle F. Harness, Power Nozzle Switch

# Full Vacuum Parts – 1500XP

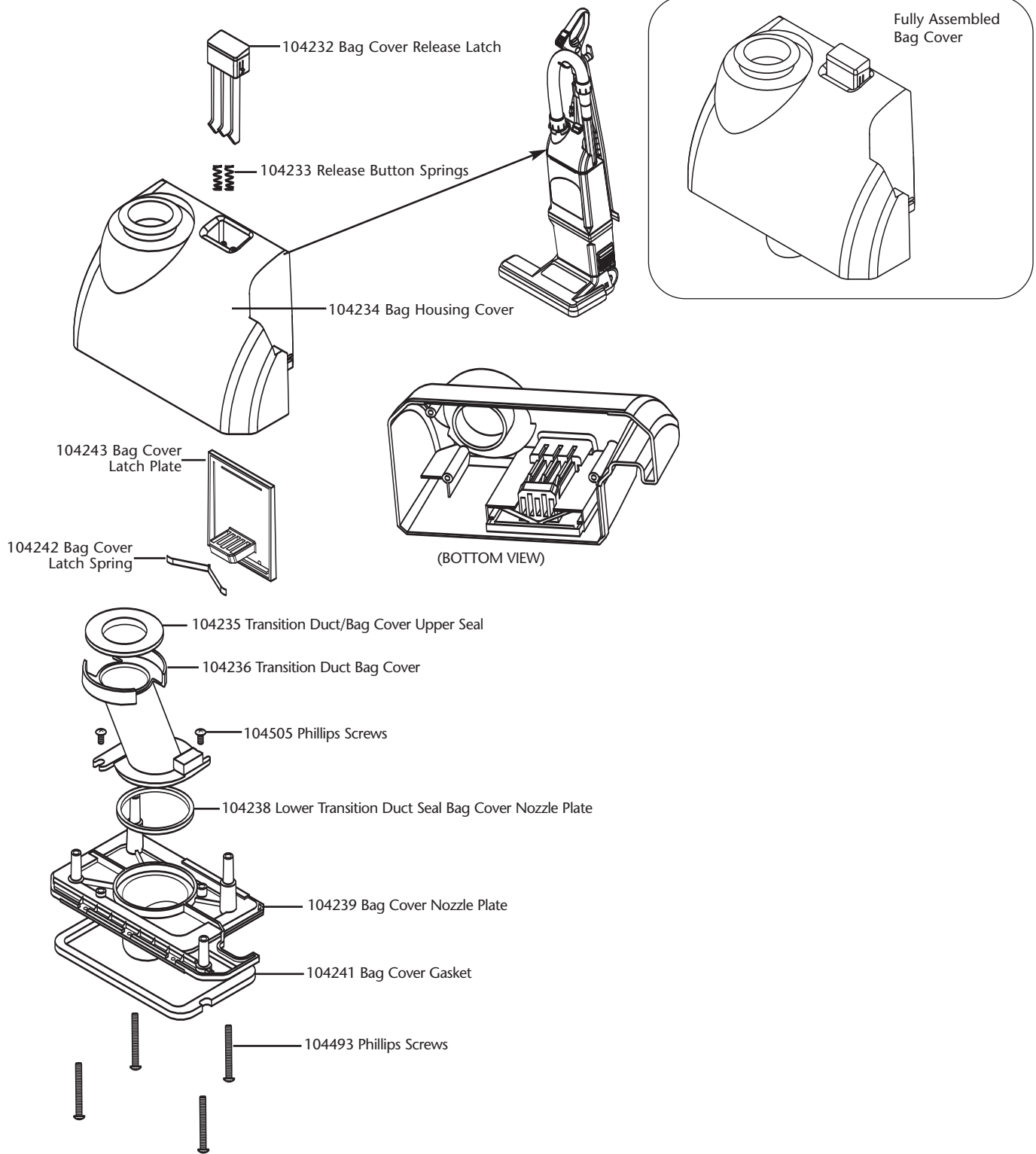


# Full Vacuum Index – 1500XP

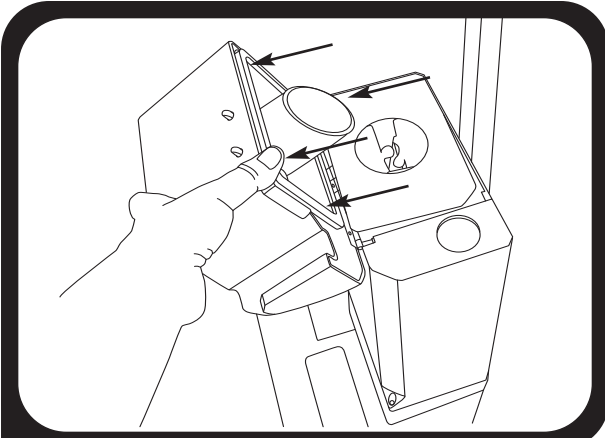
No.	Part Name	No.	Part Name
1	104234 Cover, Bag Housing, Grey F/XP	43	104209 Screw, Phillips, 4.2mm x 12mm, F/Wand Guide
2	104232 Latch, Release, Bag Cover	44	104261 Guide, Wand, Upper Left
3	104233 Spring, Release Button, F/Bag Cover Latch	45	104260 Guide, Wand, Upper Right
4	104235 Seal, Transition Duct/Bag Cover, Upper	46	104263 Switch, Wand Lockout
5	104236 Duct, Transition, Bag Cover, F/XP	47	104245 Bulkhead, Dark Grey
6	104238 Seal, Transition Duct/Bag Cover Nozzle Plate, Lower	48	104253 Seal, Lower Air Duct, Nitrile
7	104239 Plate, Bag Cover Nozzle, F/XP	49	104267 Screw, Phillips, 4.2mm x 19mm, F/Lower Air Duct
8	104242 Spring, Bag Cover Latch	50	104250 Air Duct Assembly
9	104243 Plate, Bag Cover Latch	51	104536 Motor Housing, Charcoal
10	104505 Screw, Phillips, 4.2mm x 9.5mm	52	104504 Bearing, Pivot
11	104241 Gasket, Bag Cover	53	104306 Wheel, Rear
12	104493 Screw, Phillips, 4.2mm x 35mm	54	105136 Filter, Exhaust, HEPA Media
13	105486 Filter Cover Kit w/Riveted Hinge and 6 Rivets (includes: #1-12)	55	104246 Cover, Filter Cartridge, Charcoal
14	104490 Bag Housing Assembly, Grey w/Riveted Hinge & Decal Includes Bag Cover Nozzle Plate	56	103532 Foam, Sound, Motor Housing, Front Panel
15	104491 Rivet F/Bag Housing Assembly	57	103533 Foam, Sound, Motor Housing, Left Panel
16	104255 Handle w/Over Mold and Decal	58	103531 Foam, Sound, Motor Housing, Rear Panel
17	104284 Cord, Power, w/Strain Relief, 50' Yellow	59	104247 Motor Mount, Lower Nitrile
18	103483 Intercept Micro Filter	60	104249 Motor Mount, Upper Nitrile
19	105088 Handle Bezel w/Screws	61	104957 Motor Assembly w/Jumpers (includes: A, B)
20	104738 Seal, Gasket, Bag Housing	62	105488 Motor Housing Sound Filter (includes: #56, 57, 58)
21	104283 Switch, Filter, Lock-Out	63	105490 Wand Kit (includes: #43, 44, 45, 46)
22	104281 Filter, Double Layer Motor Intake	64	105489 Air Duct Kit (includes: #48, 49, 50)
23	104282 Cover, Switch, Filter Lock-out	65	104494 Power Nozzle Cover w/Detent Springs & Decal
24	104268 Bracket, Cord Wrap	66	104279 Switch, Safety, Power Nozzle Lockout
25	104269 Spring, Compression, Cord Wrap Bracket	67	104212 Circuit Breaker
26	104270 Washer, Compression Spring, Cord Wrap Bracket	68	104496 Screw, Phillips, 2.9mm x 13mm, F/Brush Retainer
27	105147 Switch, Rocker, On/Off	69	104499 Retainer, Brush Roll
28	104264 Bushing, Handle Tube	70	104216 Brush Roll, Power Nozzle, 14"
29	104259 Plate, Handle Nut	71	104218 Bumper, Power Nozzle, Vinyl
30	104265 Handle, Carry w/Tool Caddy, F/XP	72	104736 Seal, Base Cover, Air Duct, Left, 7.5" Long
31	104294 Wand, F/XP	73	104737 Seal, Base Cover, Air Duct, Right, 5.5" Long
32	105091 Clasp, Strain Relief, Yellow W/Ratchet Fastener	74	104500 Brace, Formed Wire, F/Power Nozzle Base
33	104271 Screw, Cord Wrap, 4mm x 38mm, Phillips Round Head	75	104221 Baseplate, Power Nozzle
34	104509 Screw, Phillips, M4 x 10mm x .07 Pitch, F/Handle Assembly	76	104497 Screw, Phillips, 4.2mm x 32mm, F/Base Cover
35	105075 Screw, Phillips, 2.9mm x 13mm, F/Switch Cover	77	104501 Roller, Front
36	104266 Screw, Handle Assembly	78	104502 Shaft, Front Roller Axle
37	104493 Screw, Phillips, 4.2mm x 35mm	79	104503 Clamp, Rear Wheel
38	104958 Handle, Tube w/Wire Harness, Rivet Nut and Plug Rivet	80	104495 Screw, Phillips, 4.2mm x 19mm, F/Powerhead
39	104959 Handle, Tube Assembly Complete, F/XP (includes: #16, 19, 24, 25, 26, 27, 28, 33, 34, 38)	81	104227 Sleeve, Hose, Air Duct
40	104961 Hose, Assembly w/Cuffs, F/XP (includes: #42)	82	104230 Hose, Power Nozzle to Air Duct, Lower
41	105502 Handle Kit (includes: #16, 19, 24, 25, 26, 27, 33, 34)	83	104217 Belt, Drive, F/Brush Roll
42	105573 Quick Release Hose Cuff	84	104506 Motor, Power Nozzle with Crimps
105572	Quick Detach Clip	85	104498 Grommet, Vibration, Power Nozzle Motor, Nitrile
		86	104224 Cover, Air Duct, Power Nozzle
		87	104226 Board, Vacuum Operation Indicator
		88	104507 Spring, Detent, Upright Lock
		89	105371 Screw, Phillips, 4.2mm x 19mm, F/Power Nozzle Motor
		90	105281 Carbon Brush Set for ProForce Motor
		91	105760 Thermal Protector
		105754	Wire Harness Kit includes: A. Harness, Jumper, Red B. Harness, Jumper, White C. Sensor, Bag Full Indicator D. Harness, Main Power Supply E. Harness, Wire, Power Nozzle F. Harness, Power Nozzle Switch



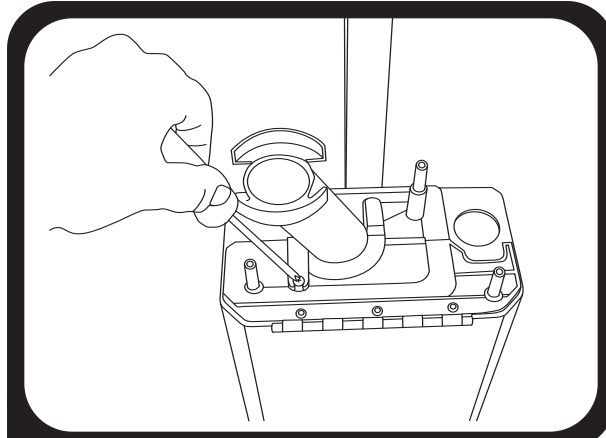
# Bag Cover



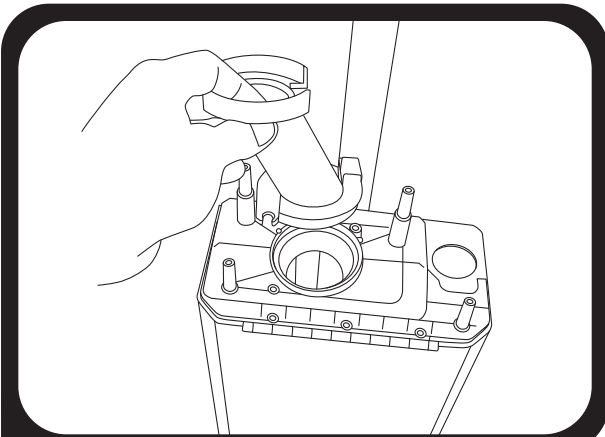
## DISASSEMBLY



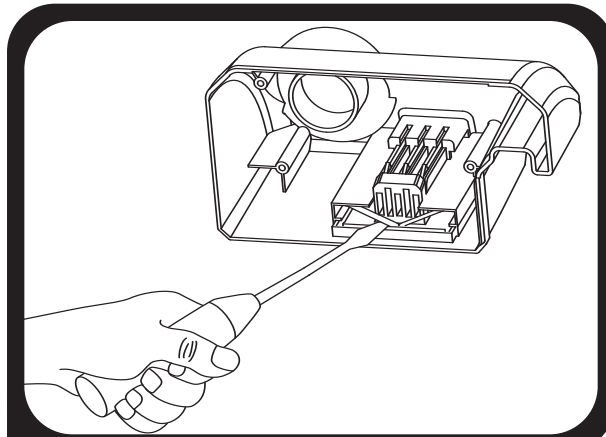
1. Tilt bag cover forward to open. Remove (4) phillips screws to release from bag cover nozzle plate.



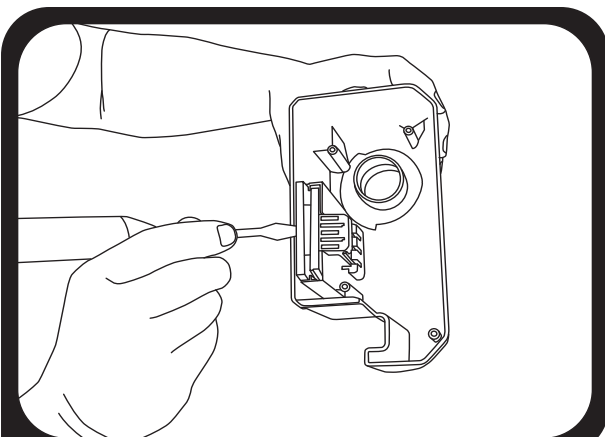
2. To release transition duct remove (2) phillips screws from bag cover nozzle plate.



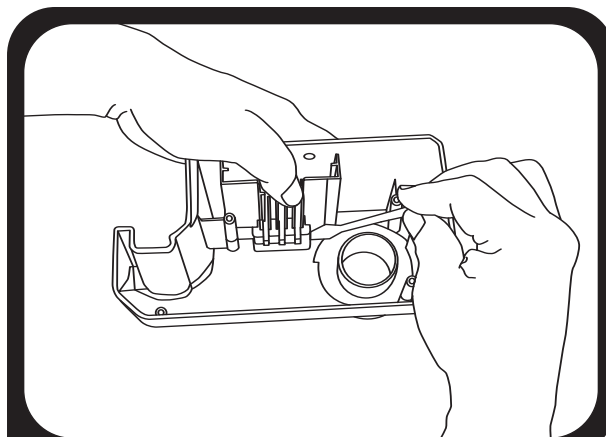
3. Lift transition duct bag cover and remove.



4. Using a flathead screwdriver pry upward on bag cover latch spring to release.



5. Insert flathead screwdriver beneath bag cover latch plate to release. Make sure rounded points clear holes in bag cover.

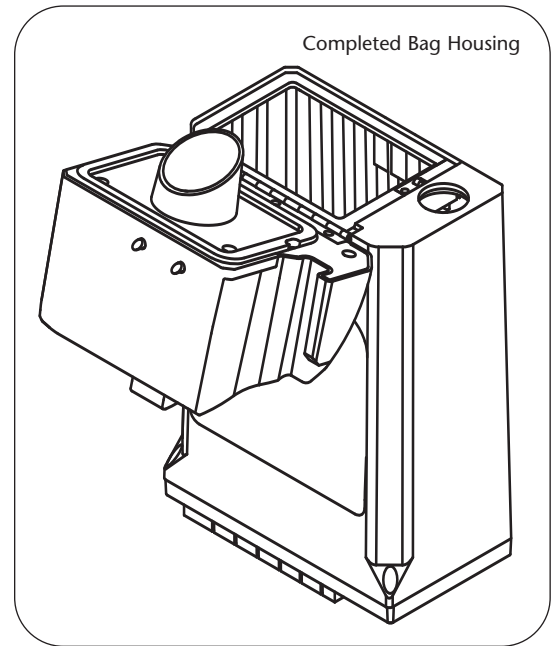
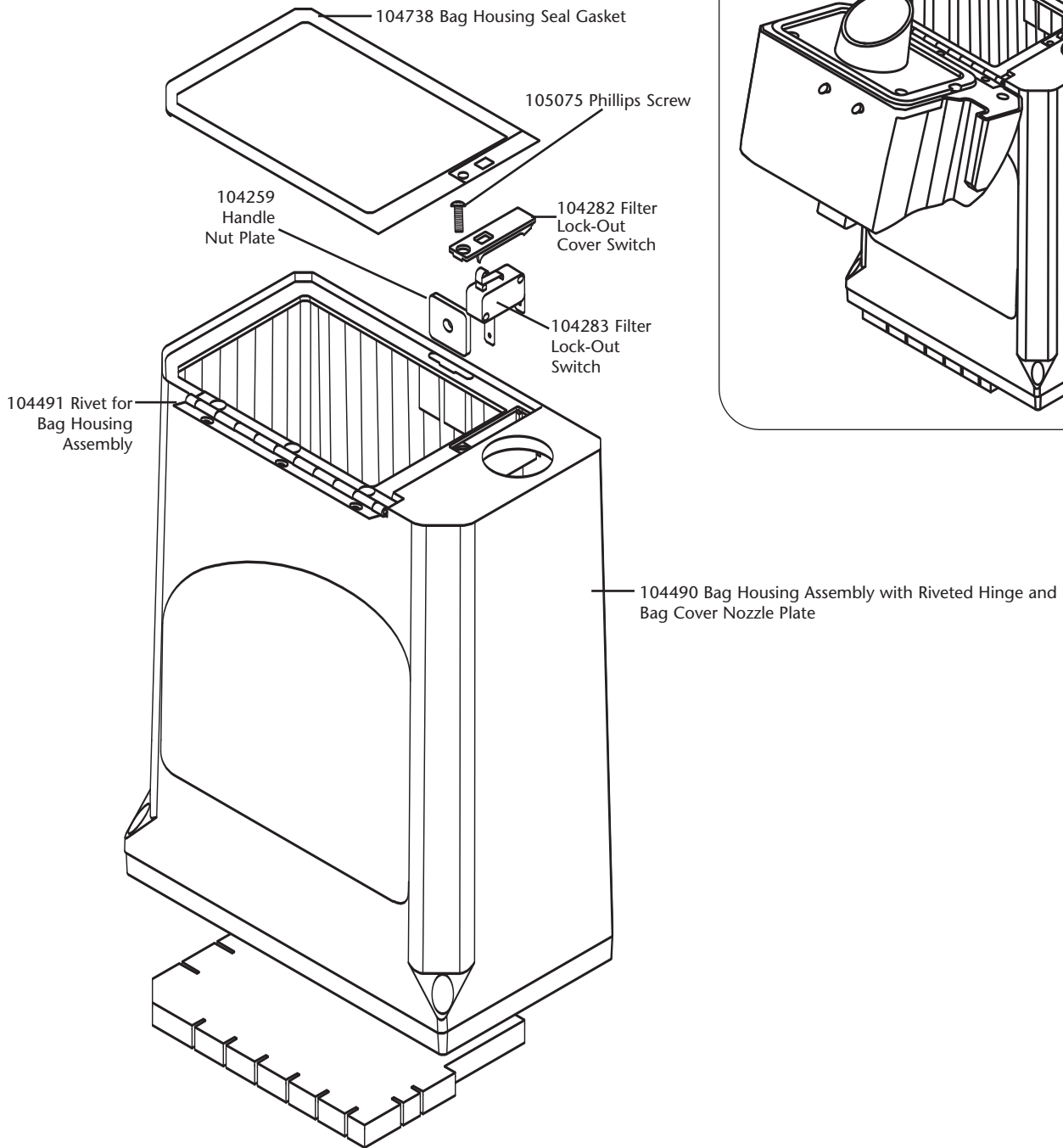


6. Using thumb to hold in place, insert flathead screwdriver into bag cover (near top) to release bag cover release latch.

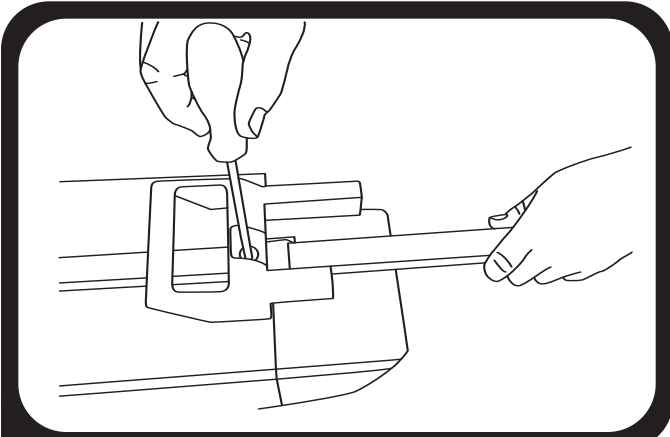
To Reassemble. Repeat steps in reverse.



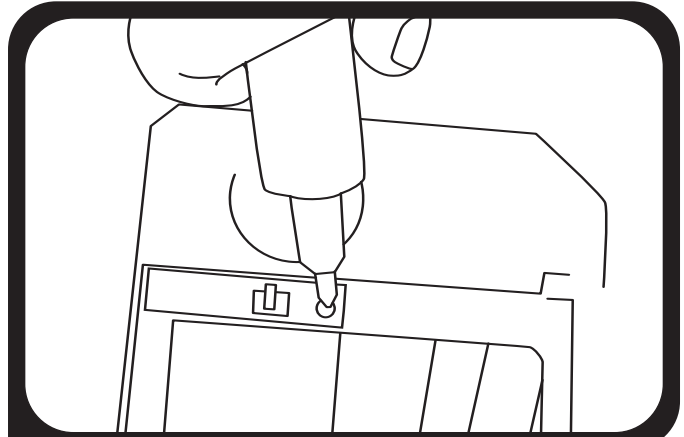
# Bag Housing



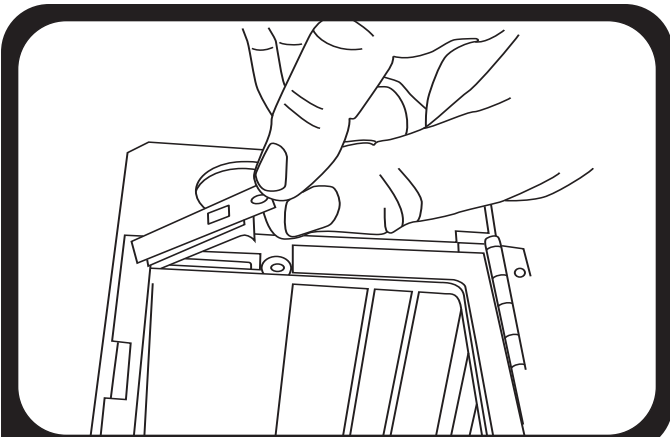
## DISASSEMBLY



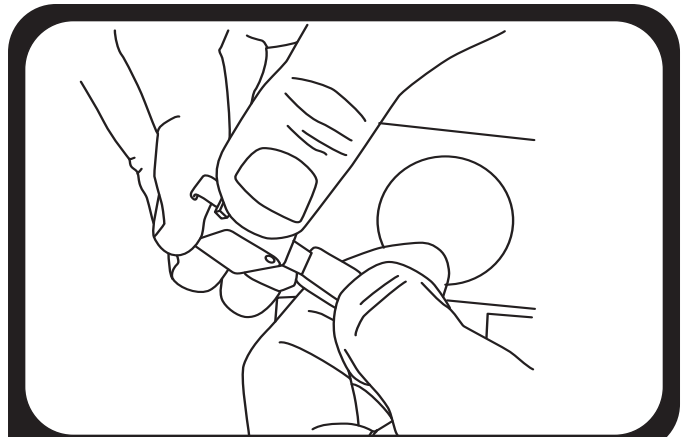
1. Remove screw on carry handle. Slide tube away from base. Unplug power cord.



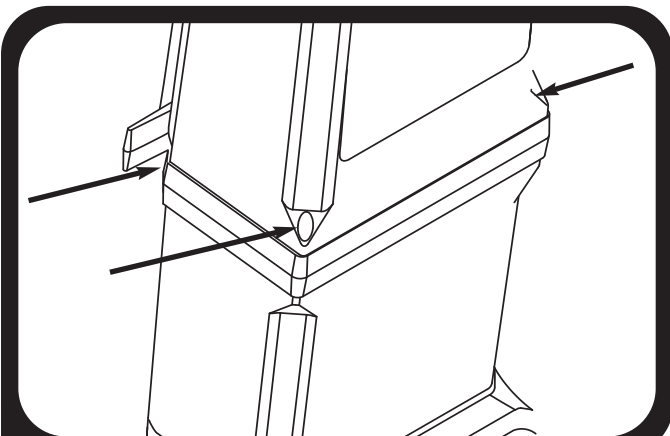
2. Remove cover screw.



3. Remove switch cover and filter lockout switch. To remove the switch cover, insert a flathead screwdriver under switch lever and gently pry upward.



4. Remove crimps by pressing locking tab on locked connector.

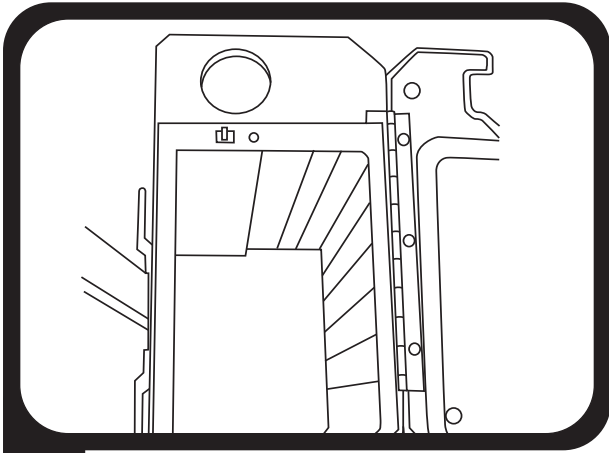


5. Remove 4 screws located near bottom of bag housing (2 front, 2 back). Remove bag housing.

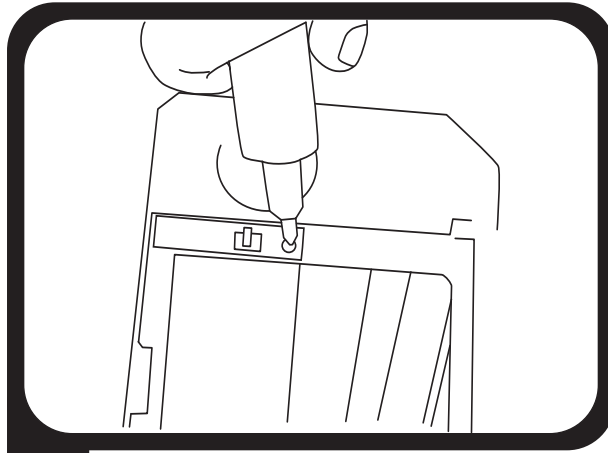
To Reassemble. Repeat steps in reverse.

# Bag Housing

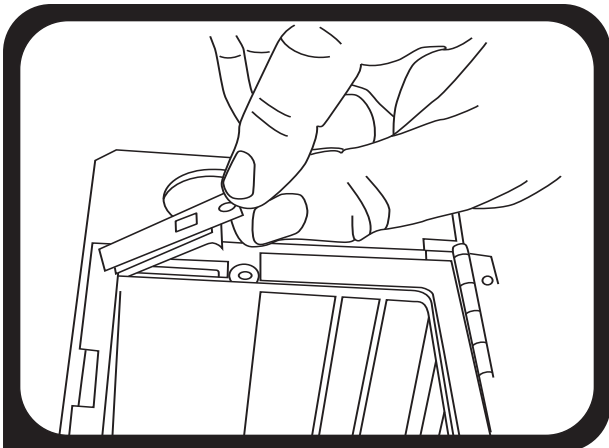
## BAG LOCKOUT SWITCH REPLACEMENT



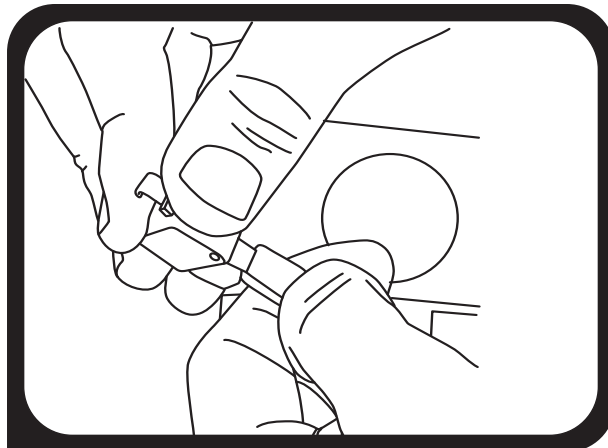
1. Open filter bag housing.  
Remove filter bag.



2. Remove cover screw.

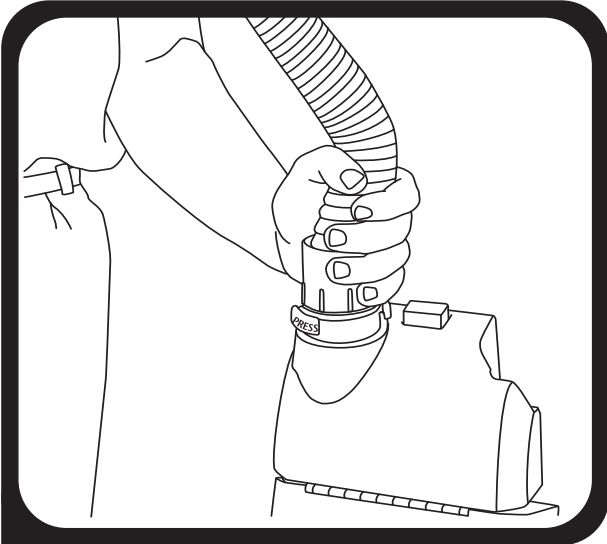


3. Remove switch cover and filter lockout switch. To remove the switch cover, insert a flathead screwdriver under switch lever and gently pry upward.

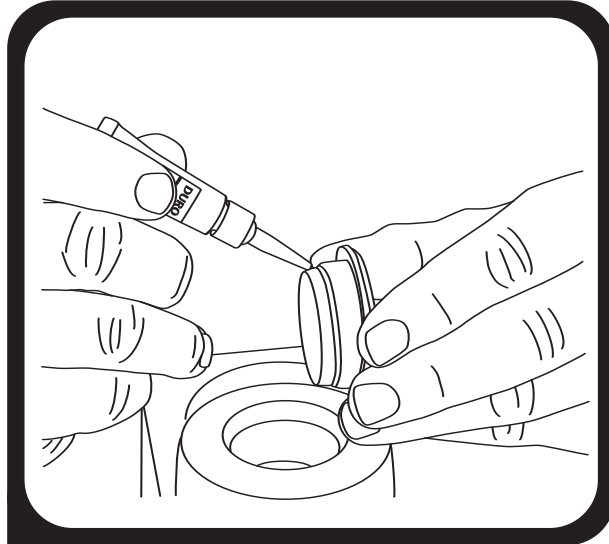


4. Remove crimps by pressing locking tab on locked connectors. Reverse steps to reassemble.

## HOSE CAP COLLAR REPAIR – For ProForce 1500XP Only

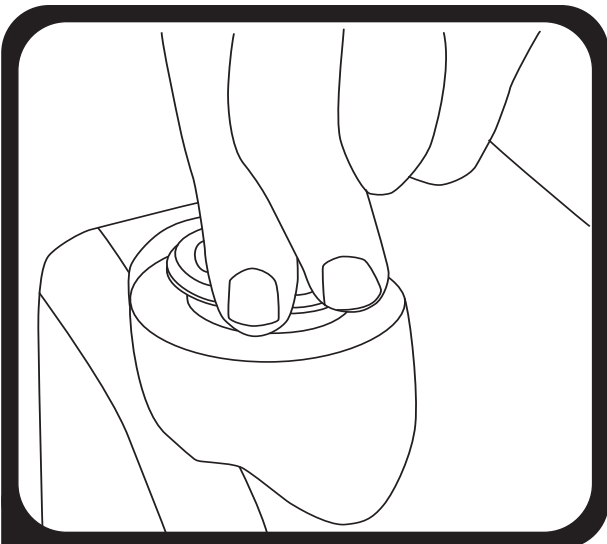


1. To inspect the collar, attach the quick release cuff to the bag cover collar. Lift the vacuum by the hose cuff. The collar should support the weight of the vacuum. If not, the collar will fail and separate from the bag cover. The collar will need to be removed from the quick release cuff and re-glued into the bag cover. If this collar test fails, proceed to Step 2.



2. Clean cuff and housing with rubbing alcohol. Apply a continuous bead of "Super Glue" type adhesive around the entire perimeter of the detached collar. Care should be taken to avoid drips and runs.

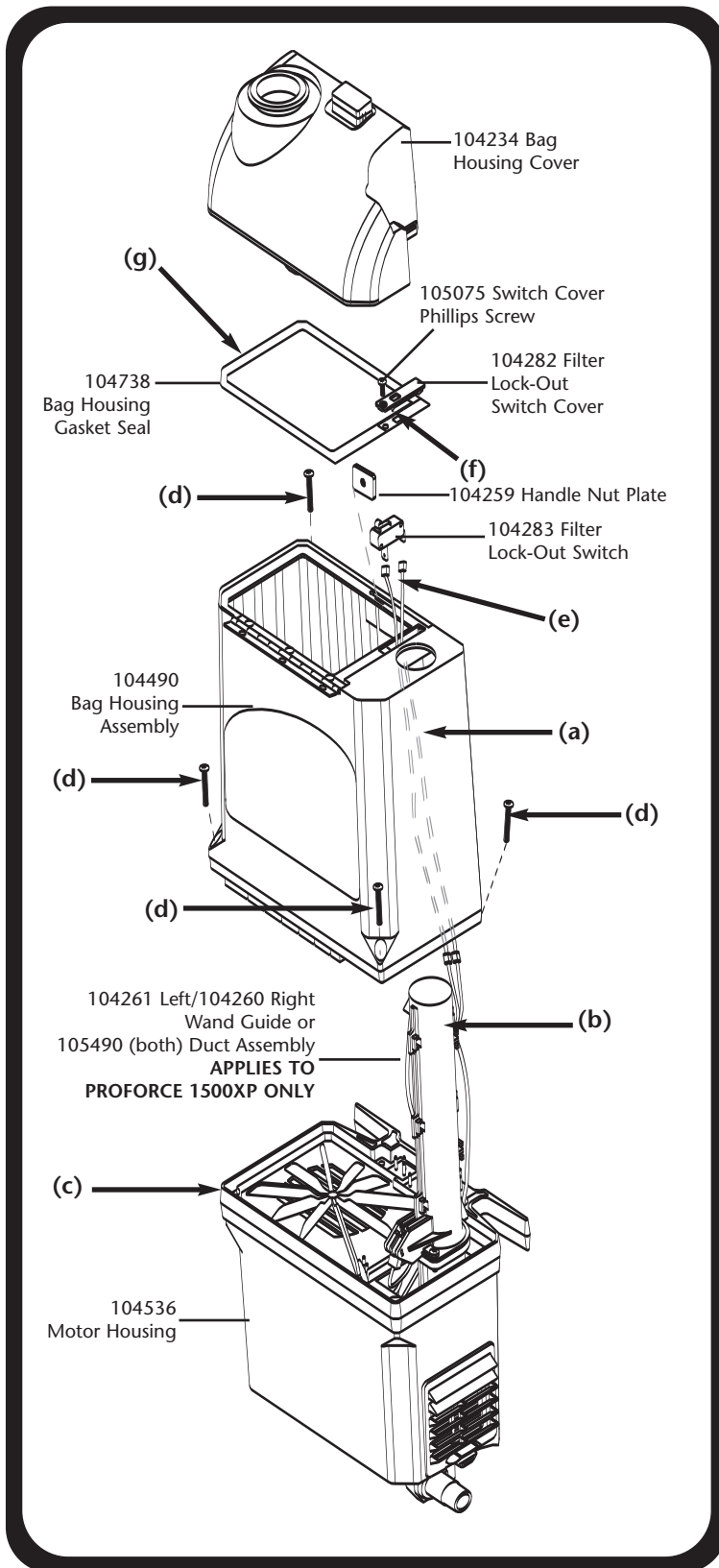
**IMPORTANT:** you have only a few seconds to apply the bead of glue and seat the collar into the bag cover.



3. Quickly insert collar into bag cover evenly, pressing firmly for 20 seconds to assure an adequate bond.

# Bag Housing to Motor Housing

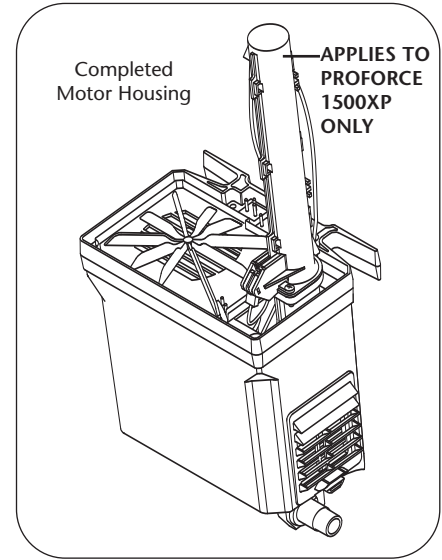
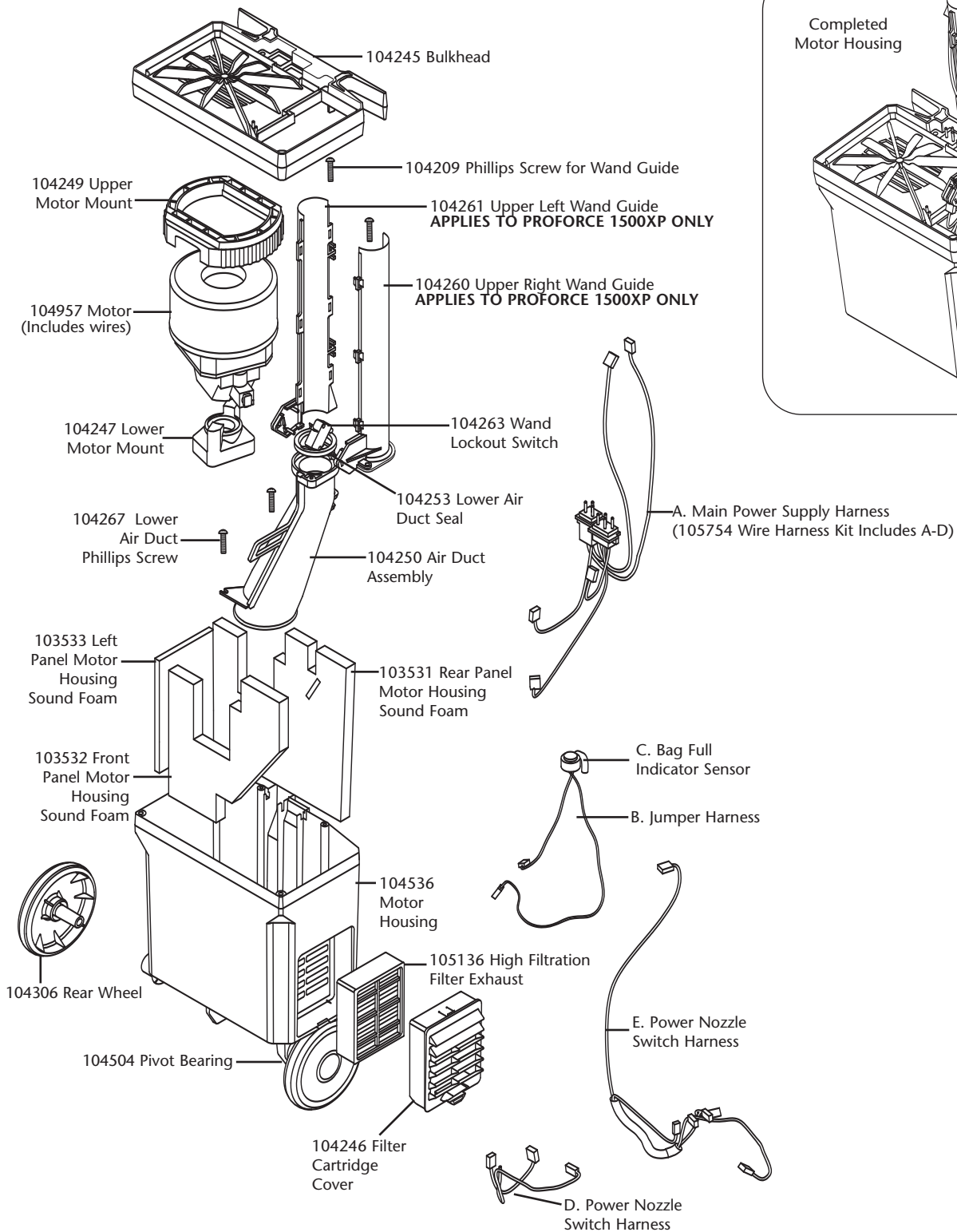
## ASSEMBLY



- (a) Feed bag switch wires through bag housing using wire guide (see page 18).
- (b) Align duct with opening in bag housing (**APPLIES TO PROFORCE 1500XP ONLY**).
- (c) Bag housing assembly should fit neatly onto bulkhead.
- (d) Insert bag housing screws and tighten.
- (e) Attach harness connectors to switch and place switch into position.
- (f) Fasten switch cover with screw.
- (g) If replacing the bag housing seal, do not let the seal cover the lockout switch cover opening.

**NOTE:** Make sure the handle nut plate (#104259) is in place before you replace the bag housing gasket seal.

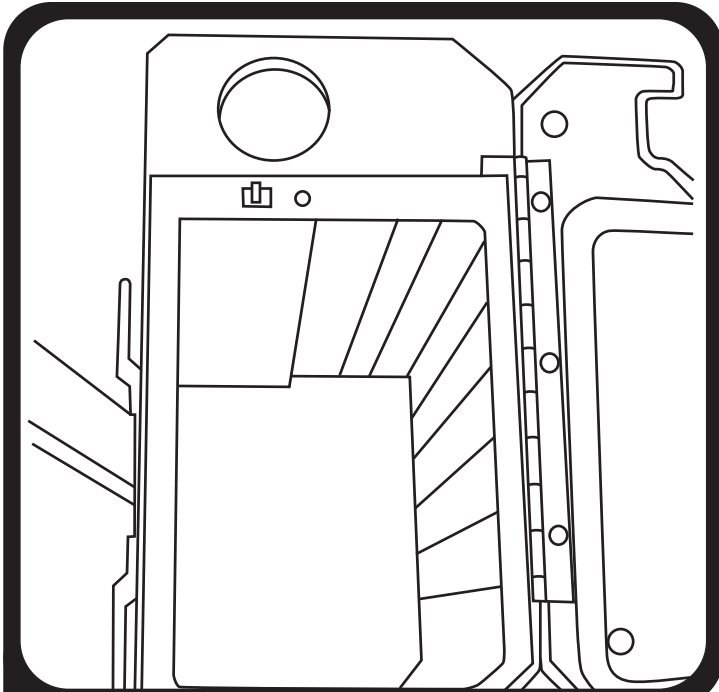
# Motor Housing



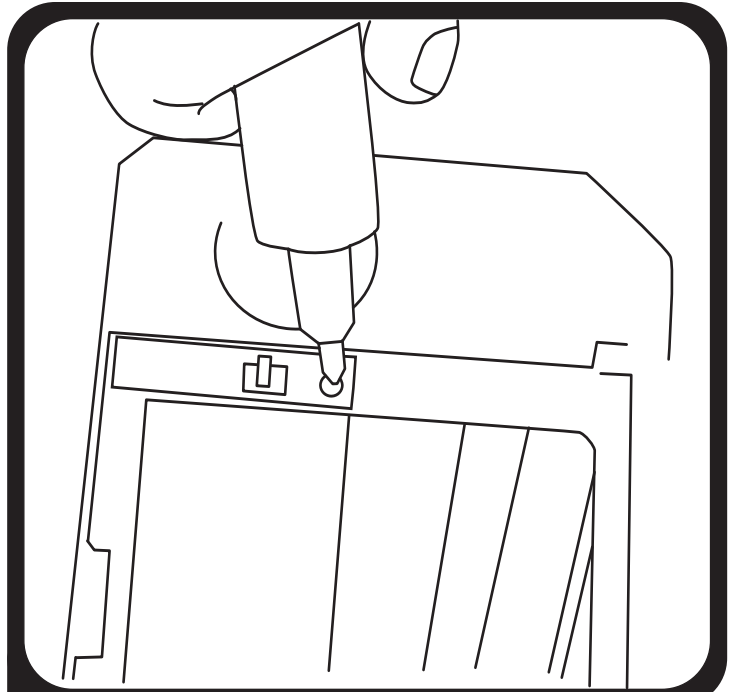


# Motor Housing

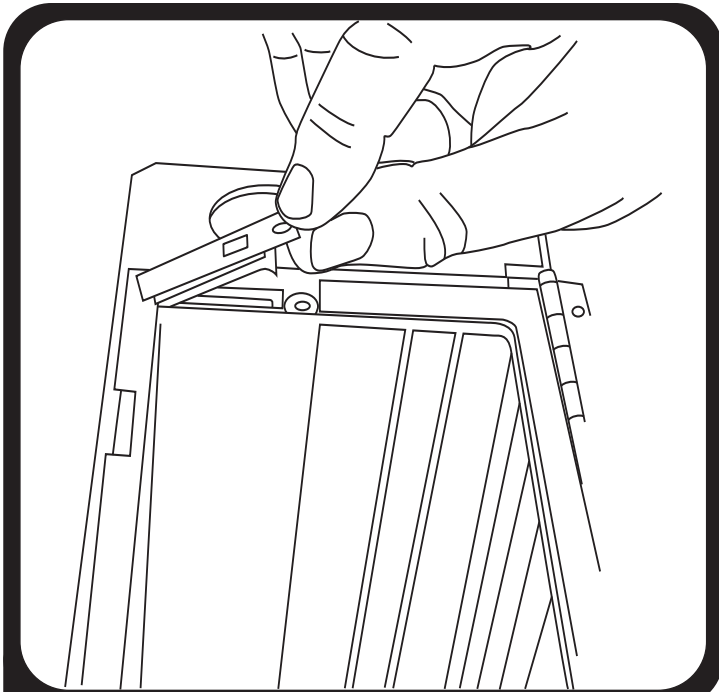
## DISASSEMBLY



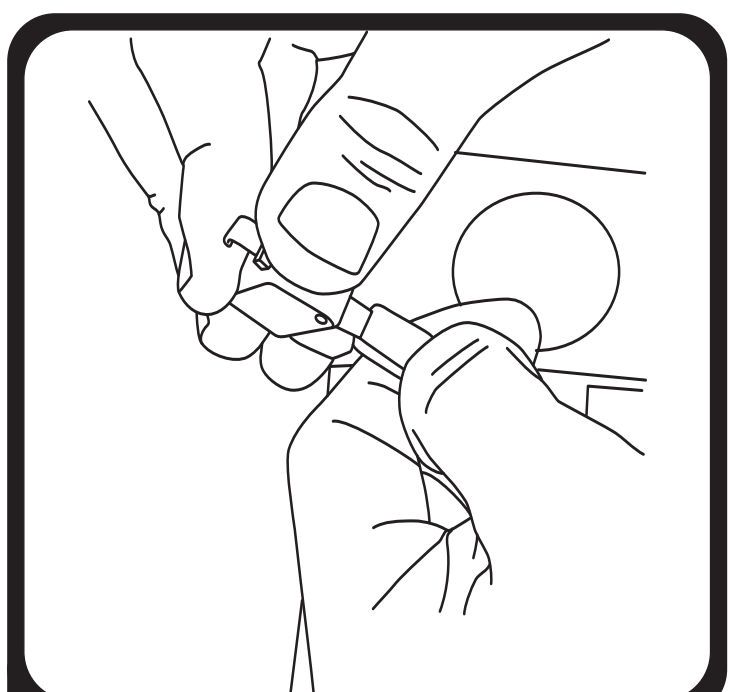
1. Remove handle and power cord. Open bag housing cover. Remove Intercept Micro™ Filter.



2. Remove switch cover screw.



3. Remove switch cover and filter lockout switch. To remove the switch cover, insert a flathead screwdriver under switch lever and gently pry upward.

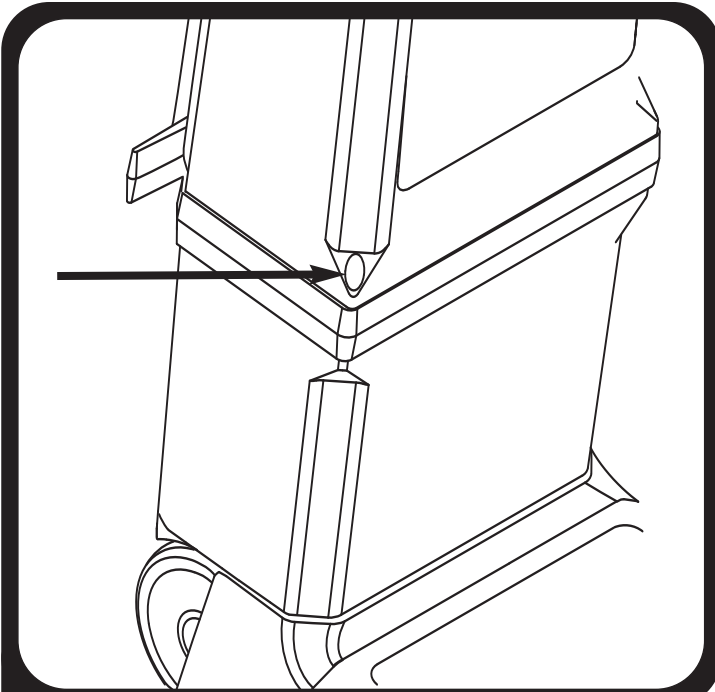


4. Remove crimps by pressing locking tab on connector.

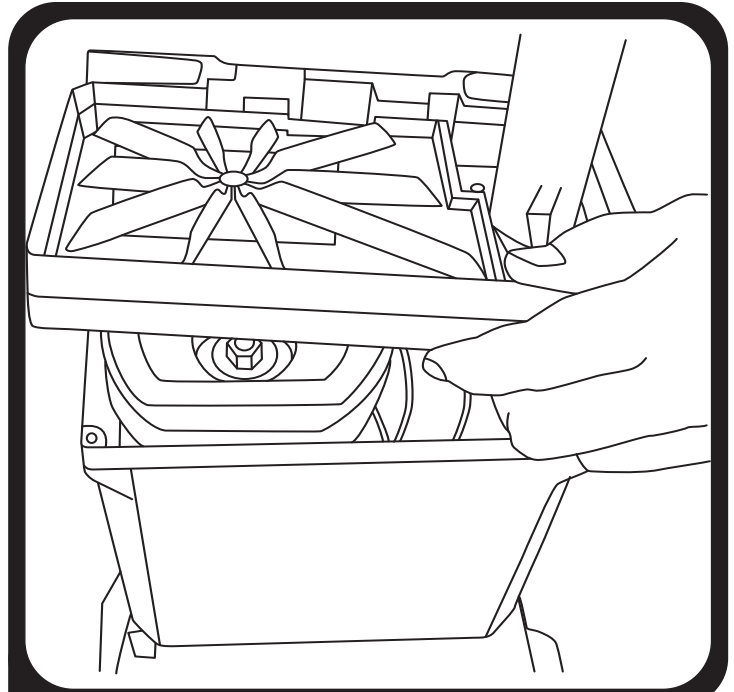
(Continued on page 15)

# Motor Housing

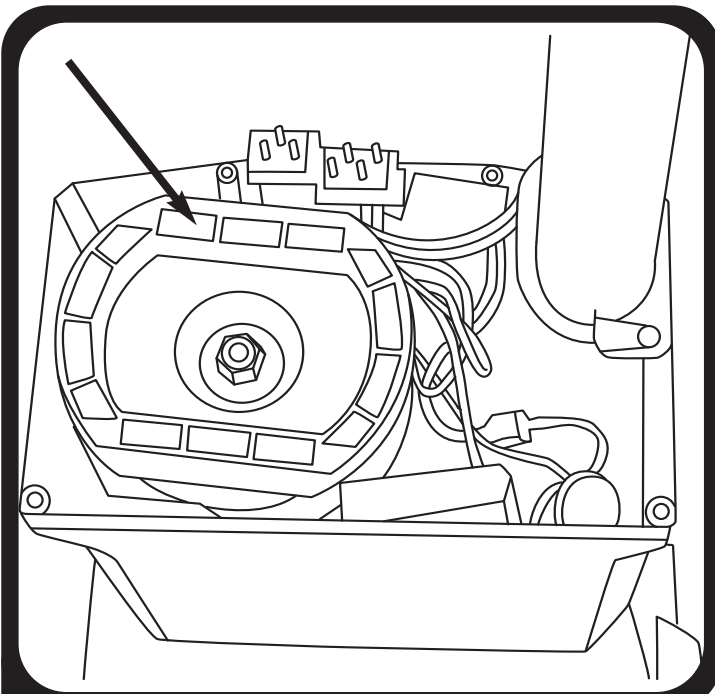
## DISASSEMBLY (CONTINUED FROM PG 14)



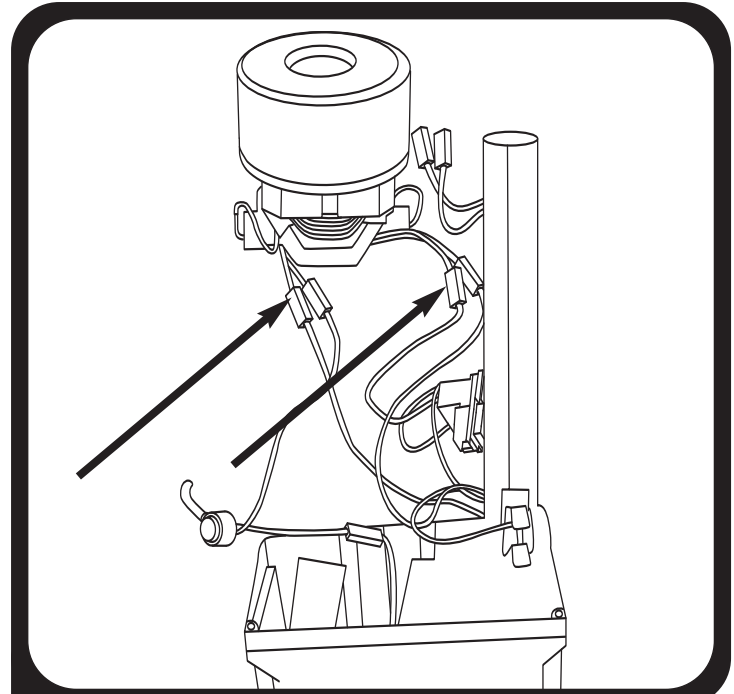
5. Remove (4) bag housing screws and bag housing.



6. Remove the bag full indicator tube (tube not pictured) from the bulkhead and lift off the bulkhead.



7. Remove upper motor mount. Lift motor from housing.

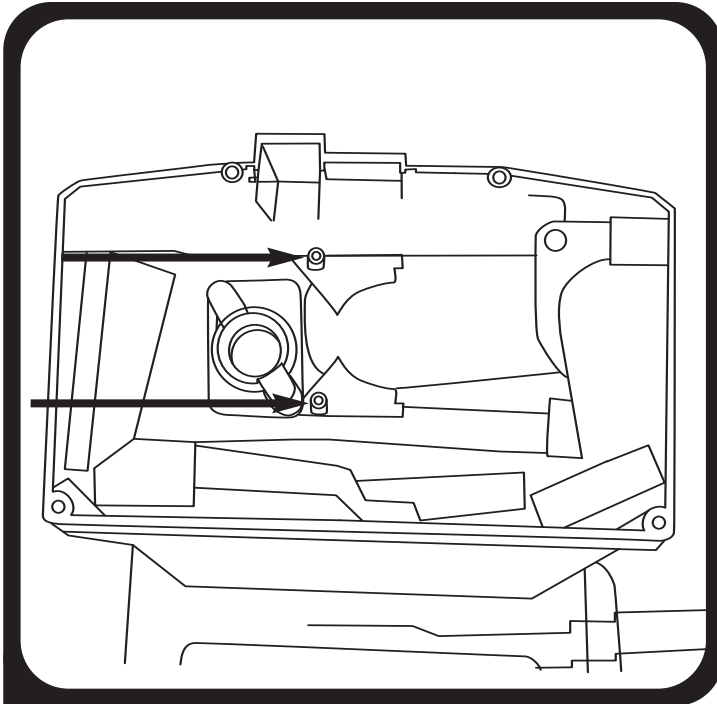


8. Disconnect motor crimps from motor and from lower air duct. Remove motor.

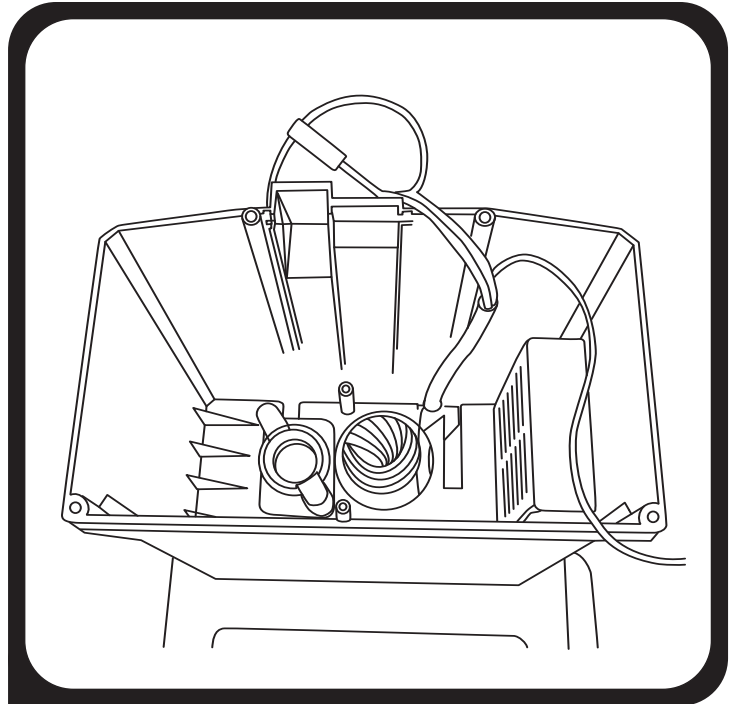
*(Continued on page 16)*

# Motor Housing

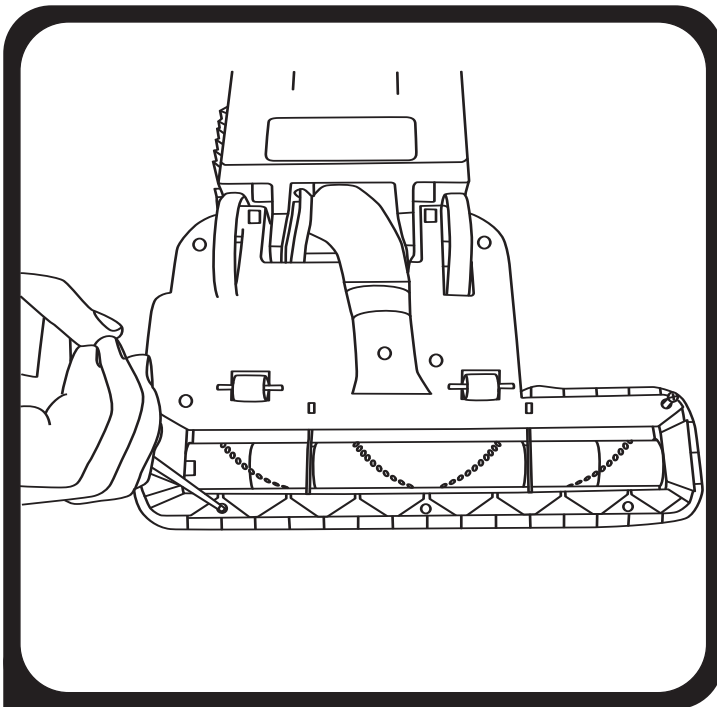
## DISASSEMBLY (CONTINUED FROM PG 15)



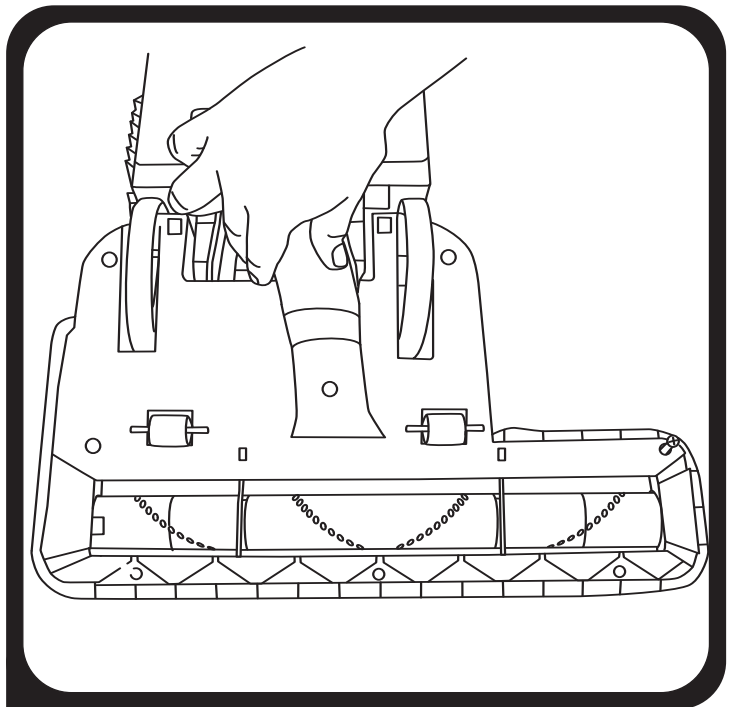
9. Remove (2) lower air duct screws from inside motor housing then remove the foam that covers wire harness.



10. Housing should look like this after the foam and air duct are removed.



11. Turn vacuum over and remove (8) screws.

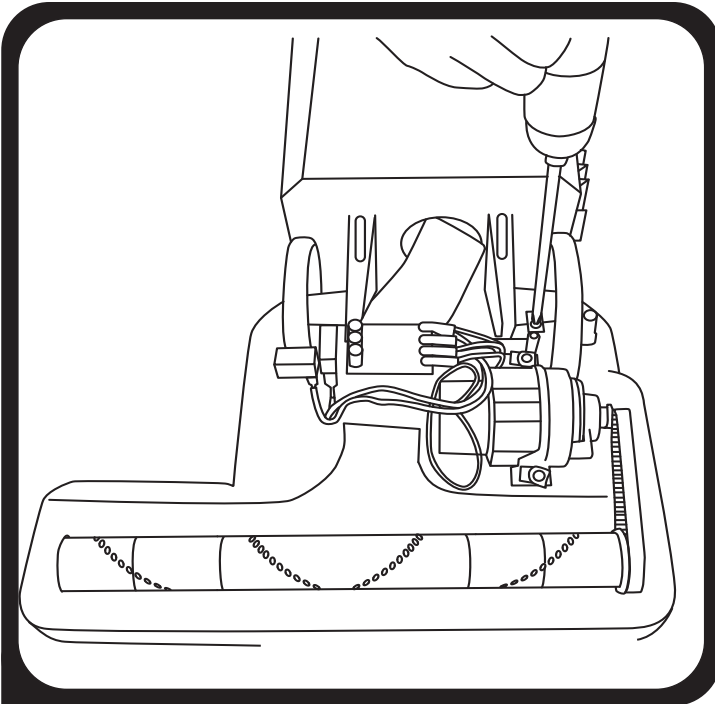


12. Slide duct flex hose from powerhead.

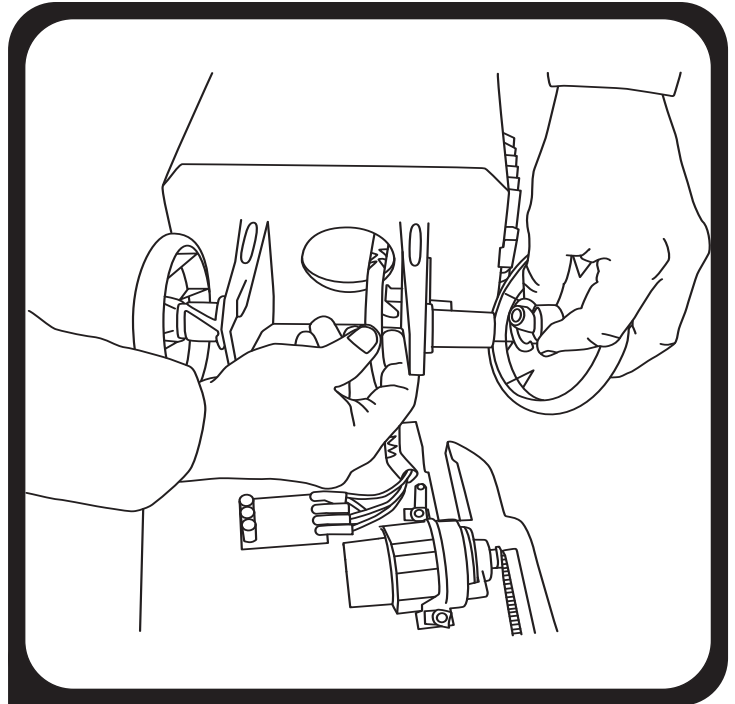
(Continued on page 17)

# Motor Housing

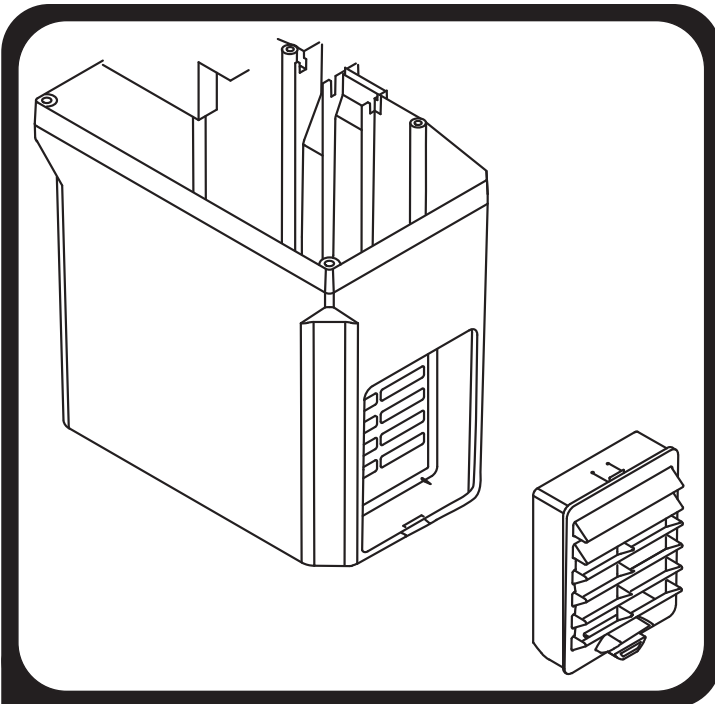
## DISASSEMBLY (CONTINUED FROM PG 16)



- 13.** Remove (2) wheel clamp screws on left and right wheels.



- 14.** Remove wheels and pivot bearings. Pull wire harness through body housing.

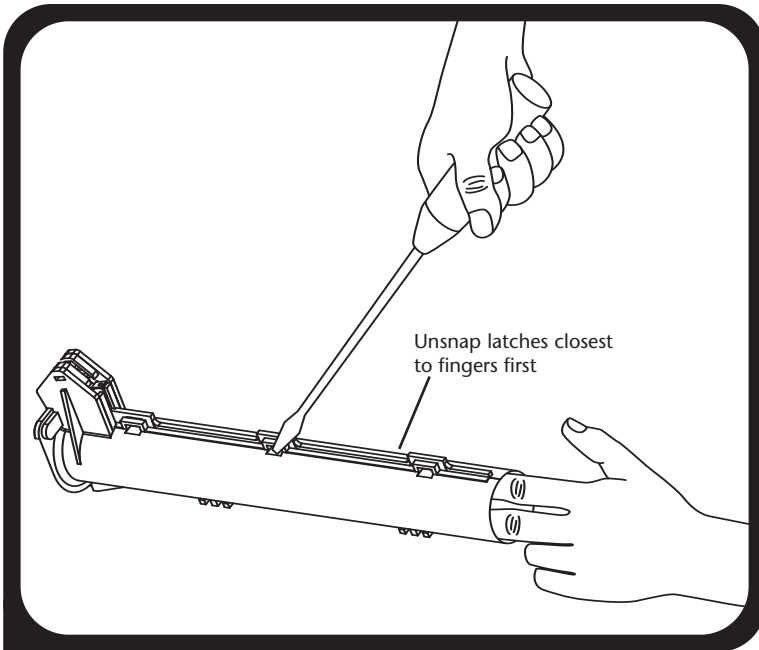


- 15.** Remove exhaust filter.

To Reassemble. Repeat steps in reverse.

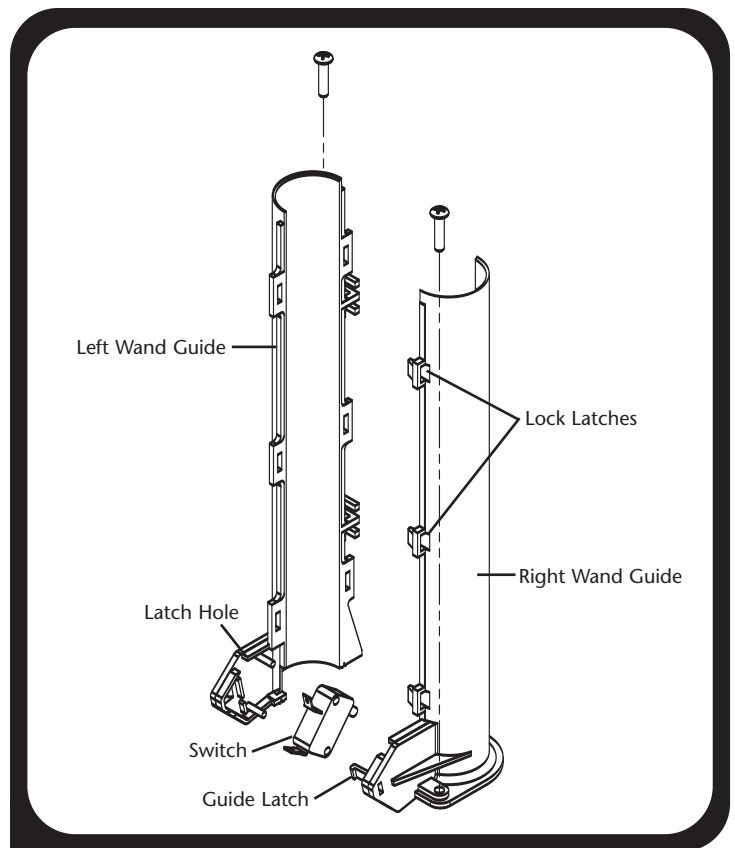
# Motor Housing

## WAND GUIDE – For ProForce 1500XP Only



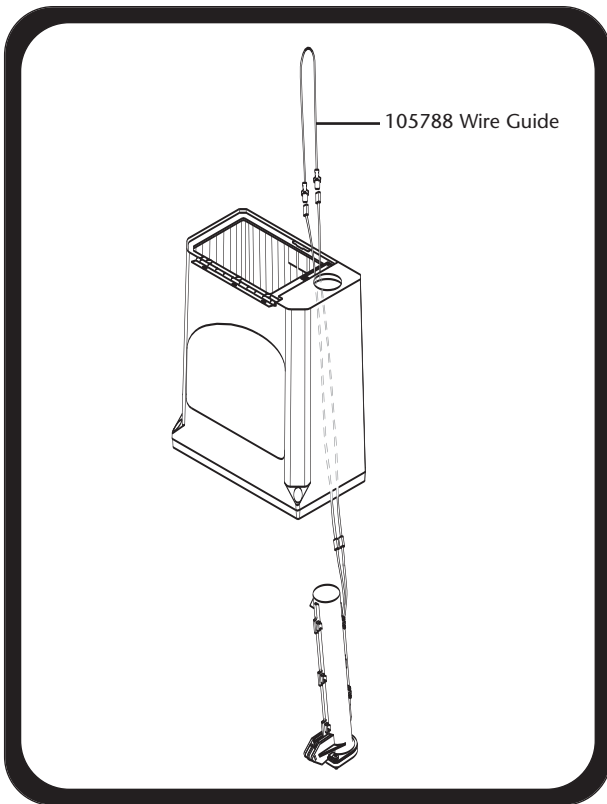
**Note:** Use care in prying open latches with screwdriver so as not to break tabs.

1. Separate left wand guide from right wand guide by inserting two fingers between two guides. Use a flat tip screwdriver with opposite hand to unsnap lock latches and pry open wand guides using your two fingers.

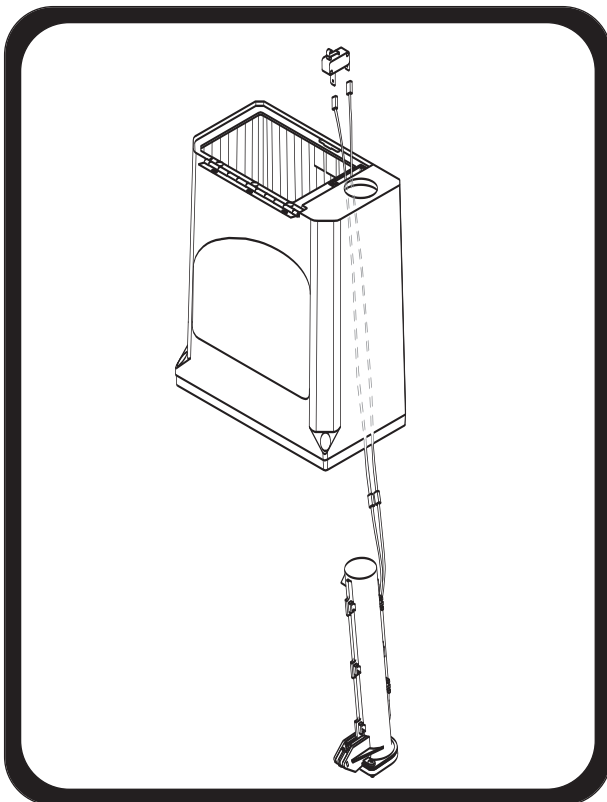


2. Switch Installation. Seat switch into the left wand guide. Snap lock latches together all the way up both sides of the wand guides.

## WIRE GUIDE – For ProForce 1500XP Only



1. Call ProTeam Customer Service at 866.888.2168 to order wire guide #105788.
2. Insert wire guide into bag housing switch cavity. Make sure one wire is on either side of opening.
3. Thread wire guide through to the bottom of bag housing.
4. Attach wire guide to switch leads.
5. Pull wire guide back through the bag housing.

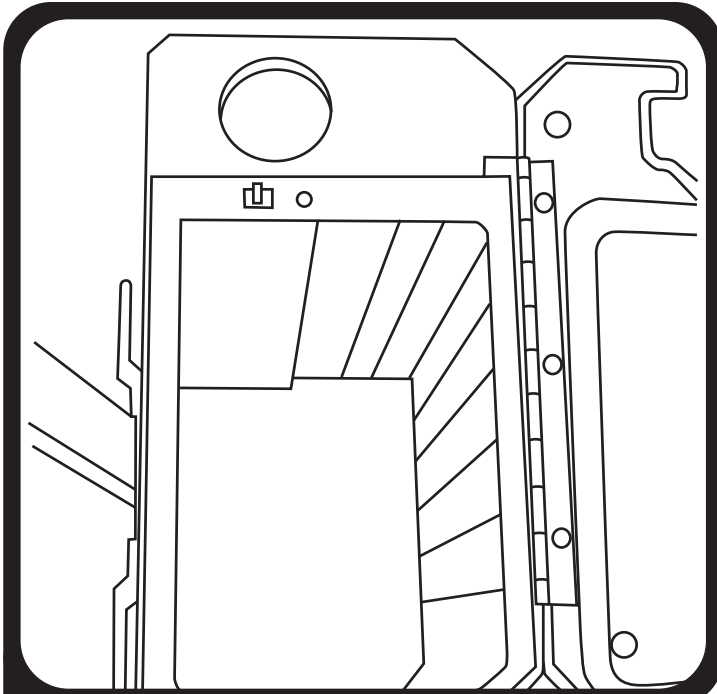


6. Remove wire guide and reinstall bag lockout switch.

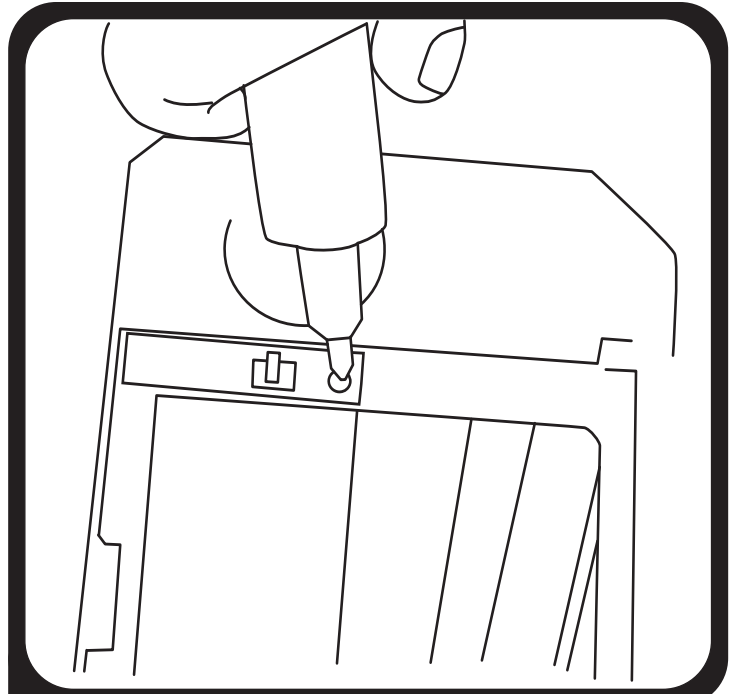


# Wire Harness

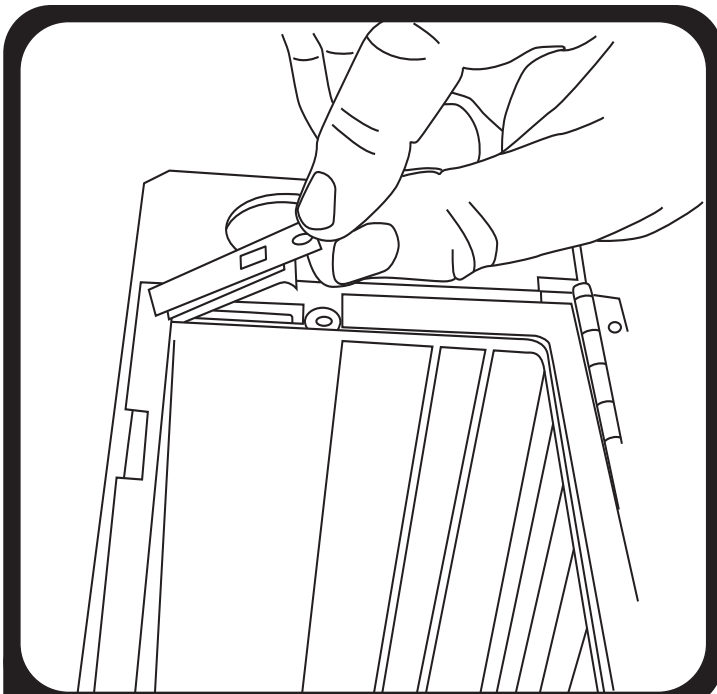
## WIRE HARNESS REPLACEMENT



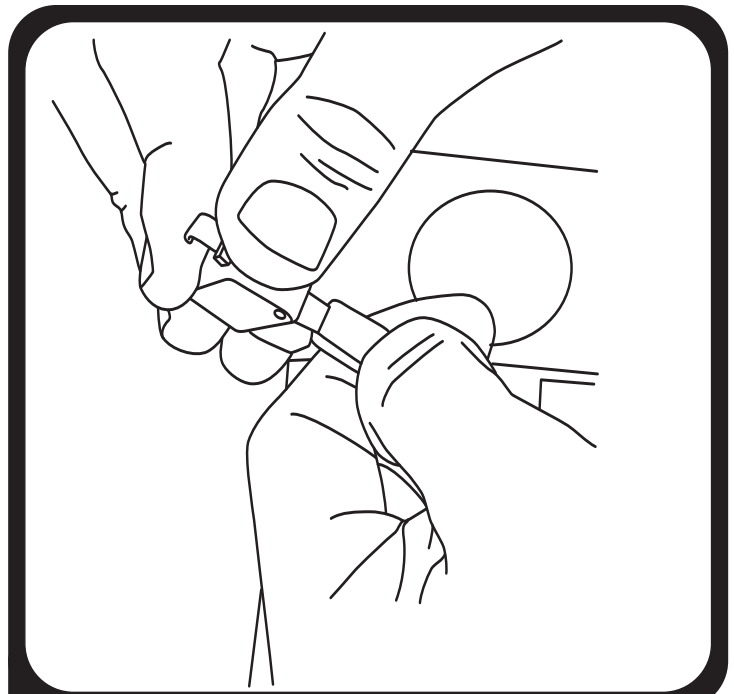
1. Remove handle and power cord. Open bag housing cover. Remove Intercept Micro Filter.



2. Remove switch cover screw.



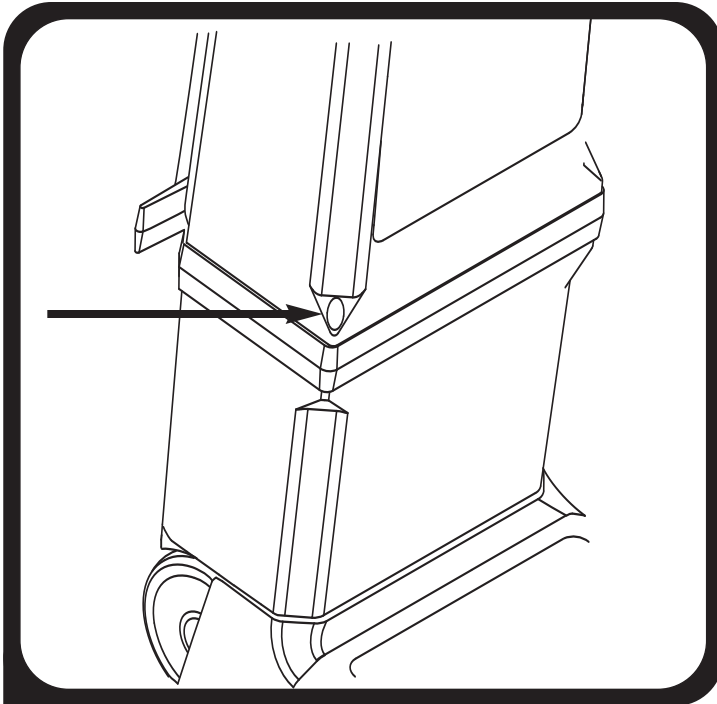
3. Remove switch cover and filter lockout switch. To remove the switch cover, insert a flathead screwdriver under switch lever and gently pry upward.



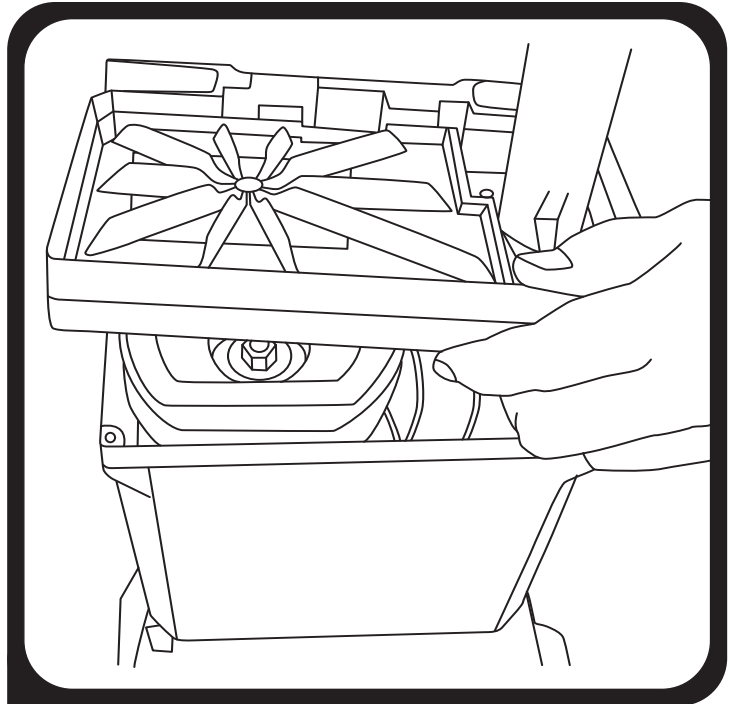
4. Remove crimps by pressing locking tab on connector.

(Continued on page 21)

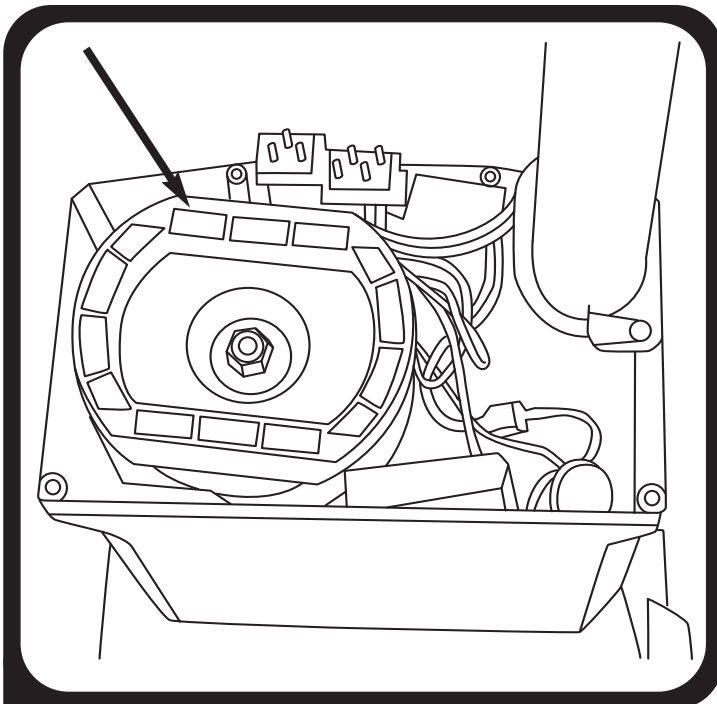
## WIRE HARNESS REPLACEMENT (CONTINUED FROM PG. 20)



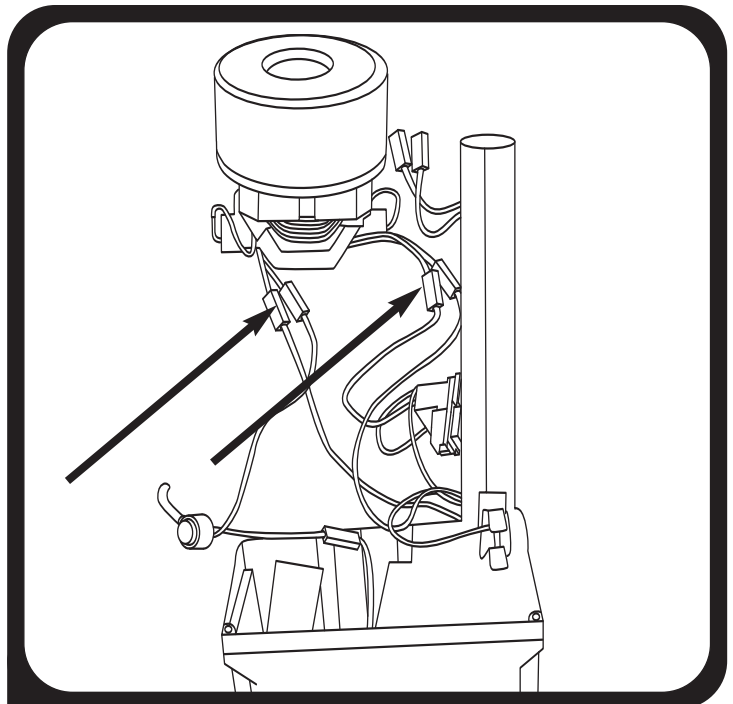
5. Remove (4) bag housing screws and remove bag housing.



6. Remove the bag full indicator tube (tube not pictured) from the bulkhead and lift off the bulkhead.



7. Remove upper motor mount.

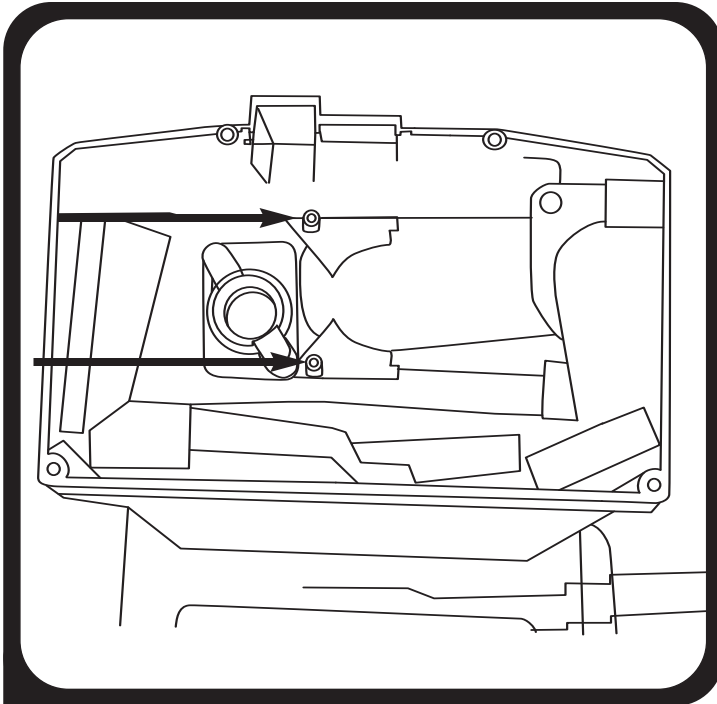


8. Disconnect motor crimps from motor and remove motor.

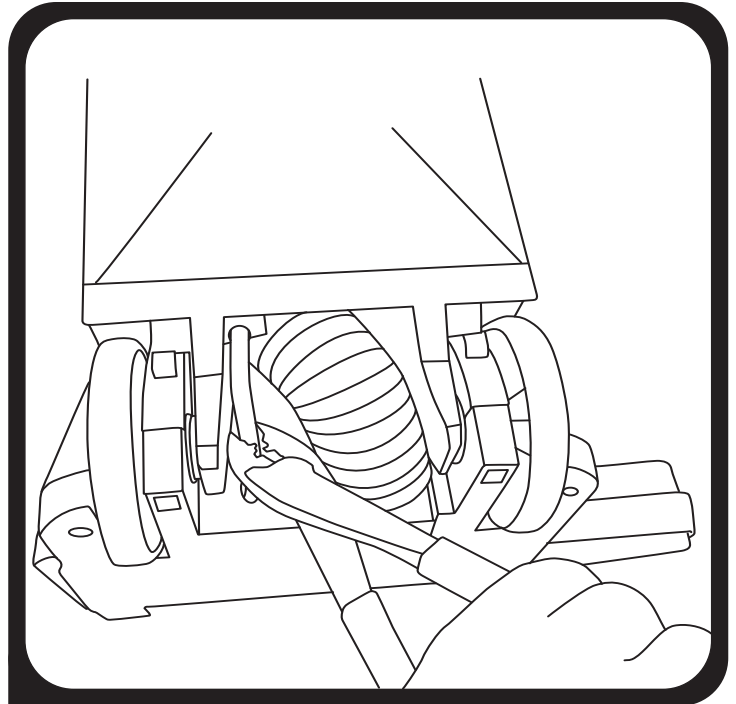
(Continued on page 22)

# Wire Harness

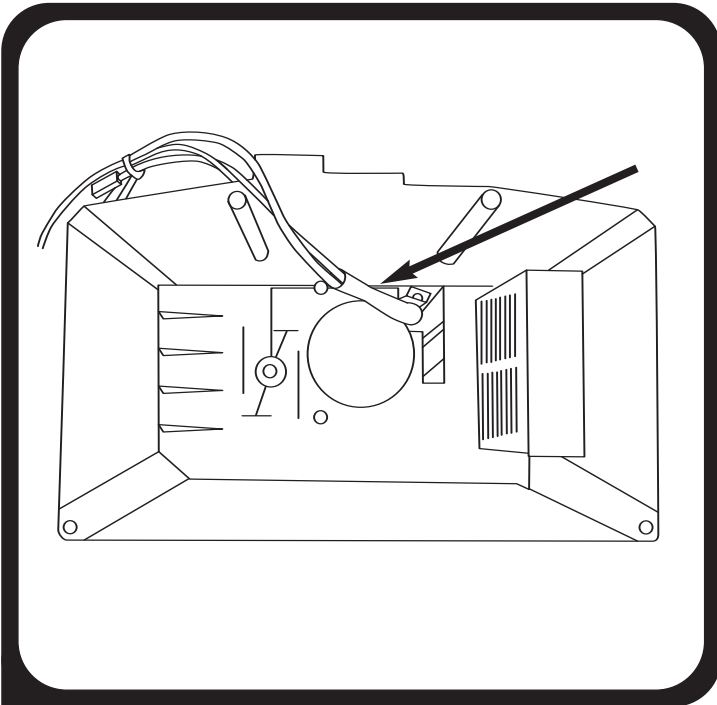
## WIRE HARNESS REPLACEMENT (CONTINUED FROM PG. 21)



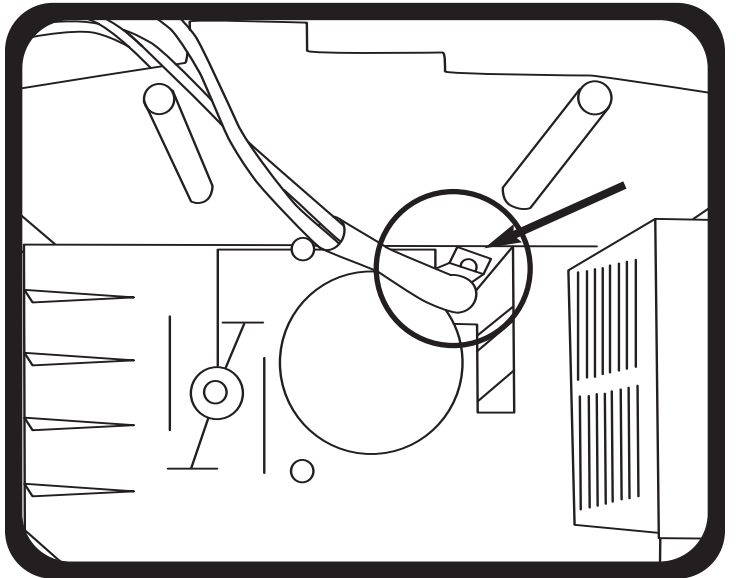
9. Remove (2) lower air duct screws from inside motor housing then remove the foam that covers wire harness.



10. Cut lower wire harness between the motor housing and the base assembly. Pull the air duct system, air duct hose and lower wire harness out of the motor housing.



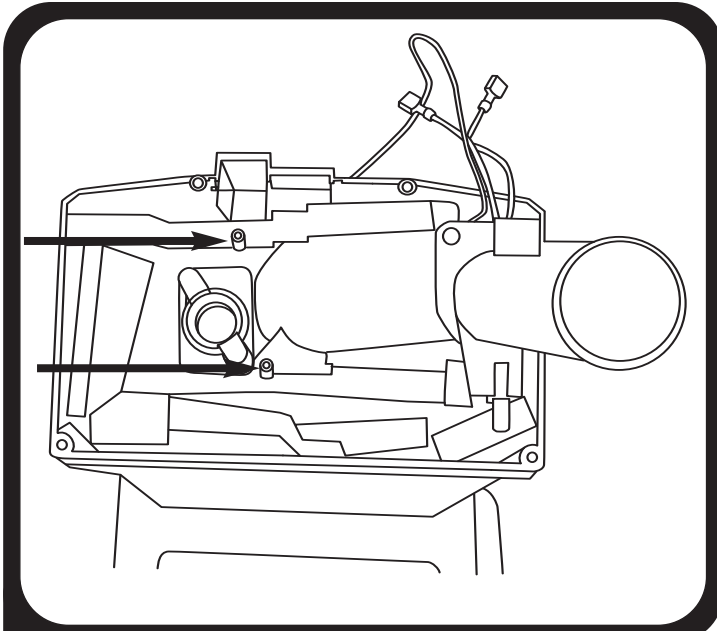
11. Insert new power nozzle wire harness in motor housing, locking brass fitting into position as shown.



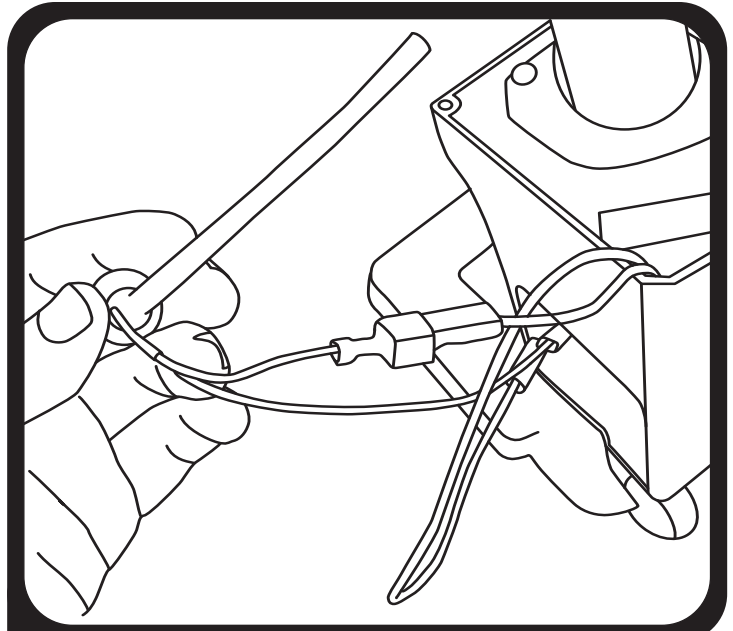
Note: Rotate brass fitting so it cannot be trapped by the lower duct.

(Continued on page 23)

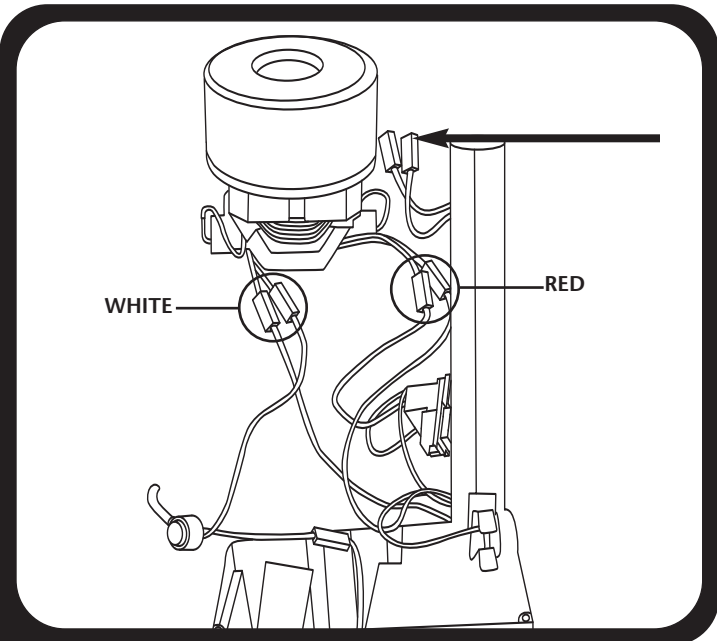
## WIRE HARNESS REPLACEMENT (CONTINUED FROM PG. 22)



- 12.** Install lower duct assembly and foam. Tighten (2) screws. Wire harness should remain behind lower duct assembly. Reinstall foam as shown.

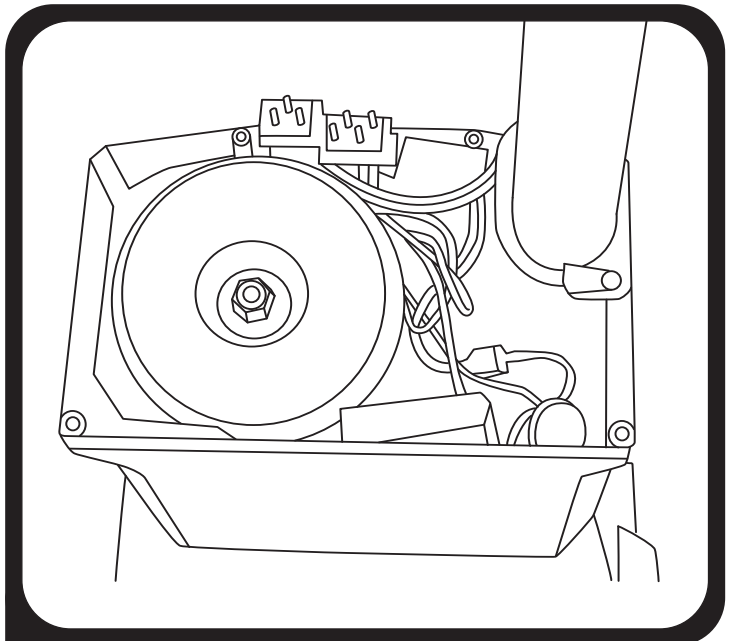


- 13.** Install upper wire harness and connect the vacuum bag full sensor.



- 14.** Connect wires as shown – Red to red. White to white.

**Note:** The two black wires are threaded up through the wand guide.



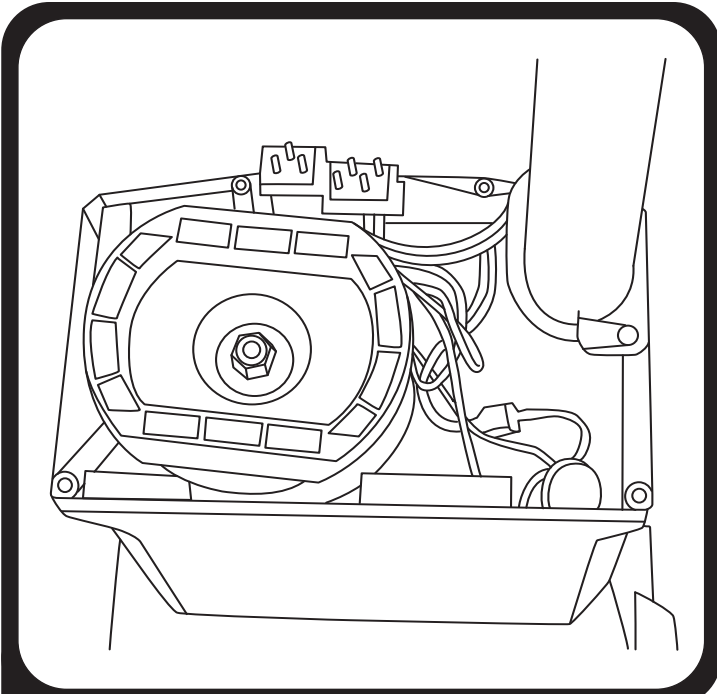
- 15.** Replace vacuum motor as shown.

**Note:** motor must be properly seated. It is properly seated when the motor can no longer rotate easily. The bulkhead will not fully seat over the motor housing if the motor is not properly installed.

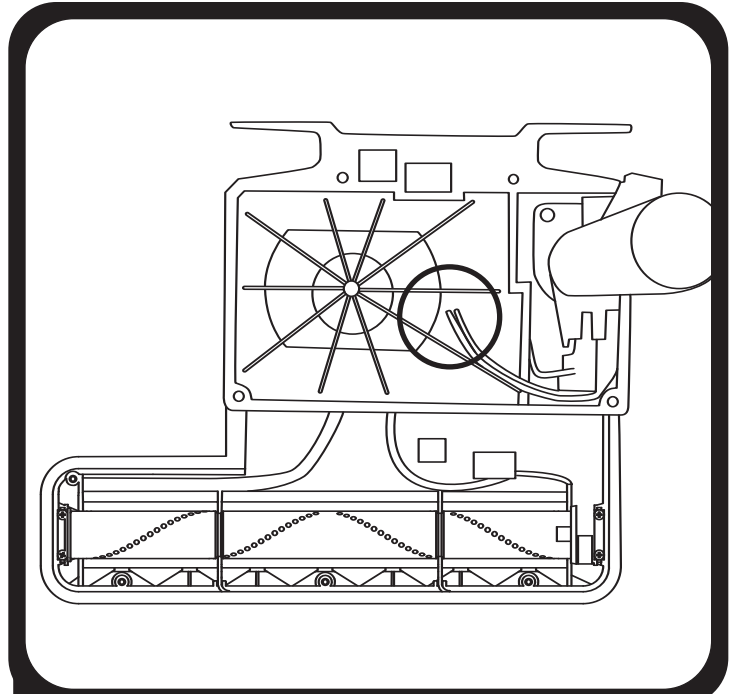
(Continued on page 24)

# Wire Harness

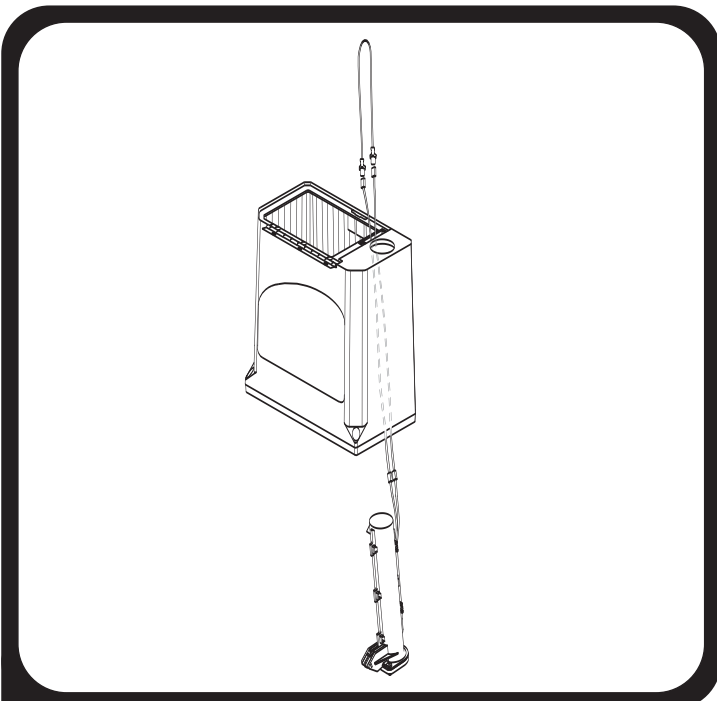
## WIRE HARNESS REPLACEMENT (CONTINUED FROM PG. 23)



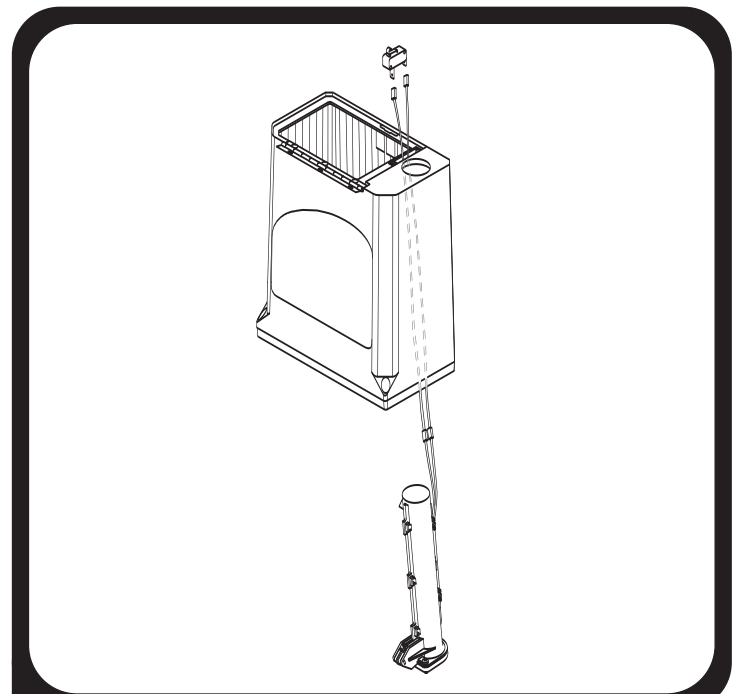
**16.** Replace sound foam and install the motor mount.



**17.** Tuck wires below bulkhead, leaving the bag full indicator tube out to insert into the bulkhead as shown. If the bulkhead does not seat firmly onto the motor housing, you must adjust the motor until the motor is properly installed.

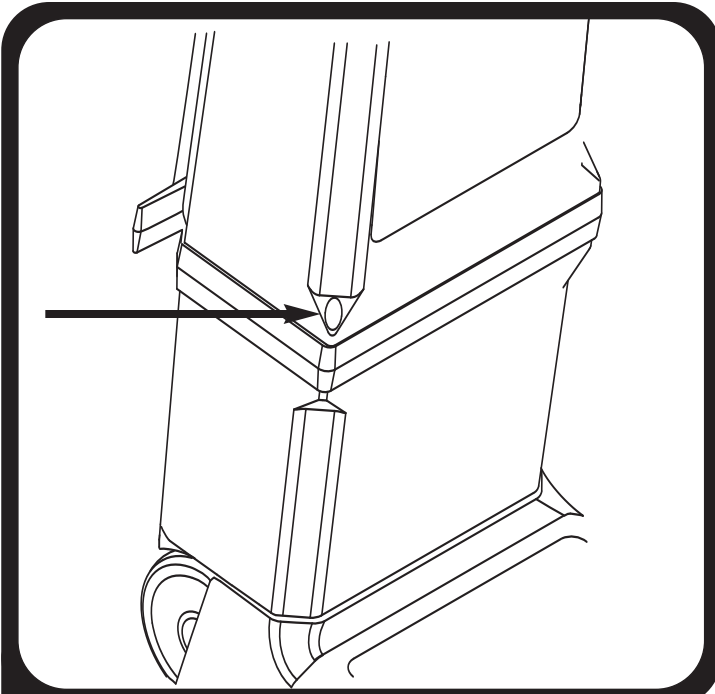


**18.** Insert wire guide into bag housing switch cavity. Make sure one wire is on either side of opening. Thread wire guide through to the bottom of bag housing. Attach wire guide to switch leads. Pull wire guide back through the bag housing.

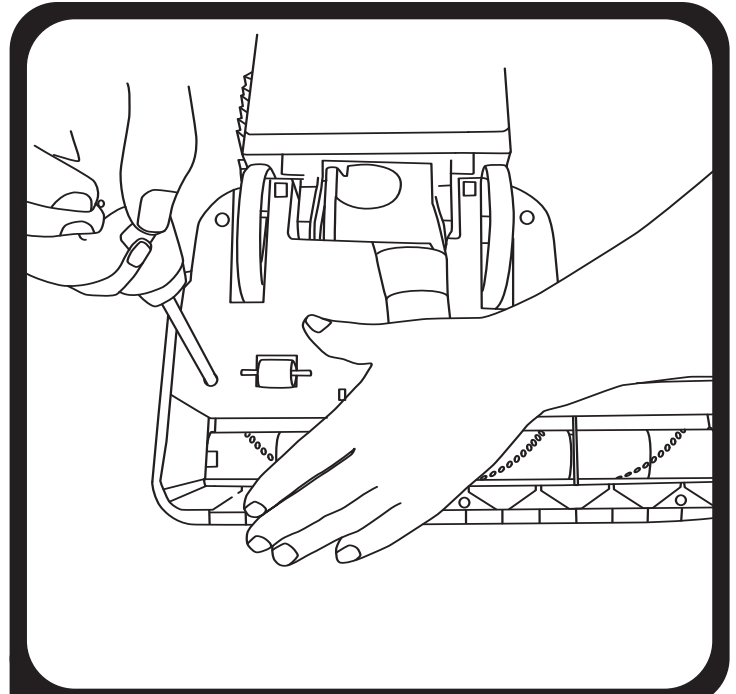


**19.** Remove wire guide and reinstall bag lockout switch.  
*(Continued on page 25)*

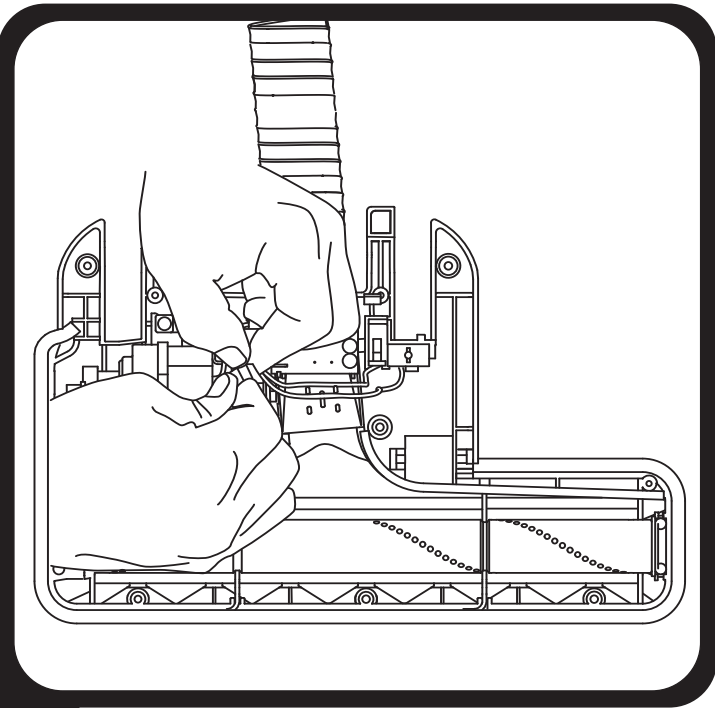
## WIRE HARNESS REPLACEMENT (CONTINUED FROM PG. 24)



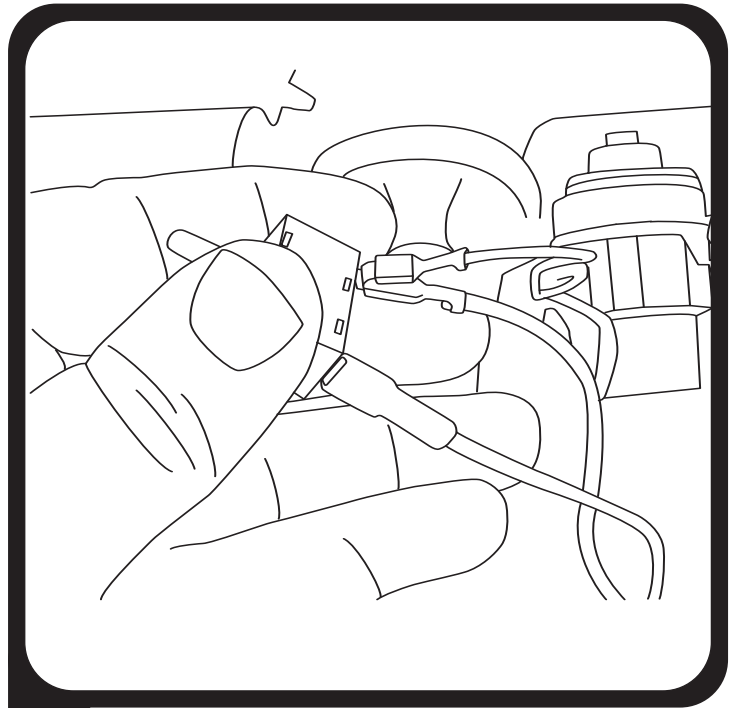
**20.** Attach bag housing. Insert (4) bag housing screws. Upper wire harness replacement now complete.



**21.** To replace lower wire harness remove (8) baseplate screws and turn vacuum back over to remove base cover.



**22.** Disconnect all wire connections.



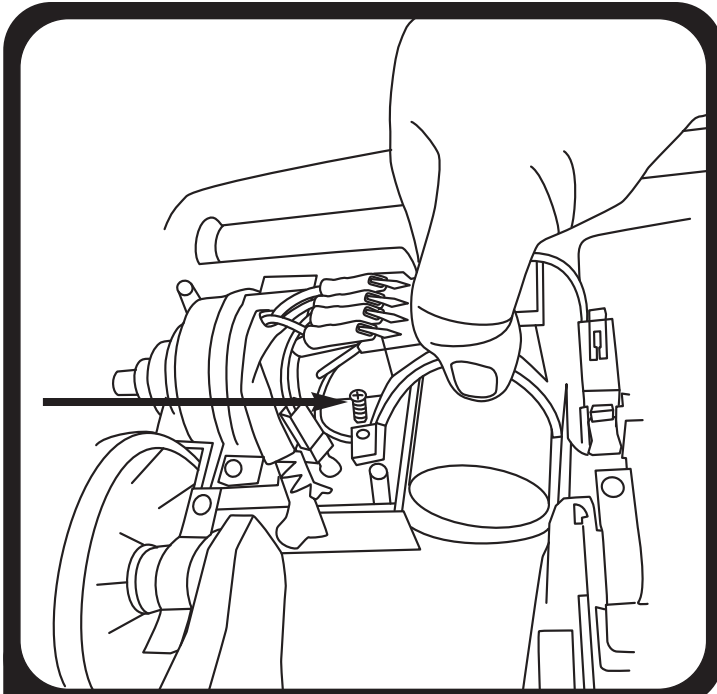
**23.** Remove wire ties. Remove the circuit breaker and power nozzle lockout switch. Do not remove power nozzle motor.

*(Continued on page 26)*

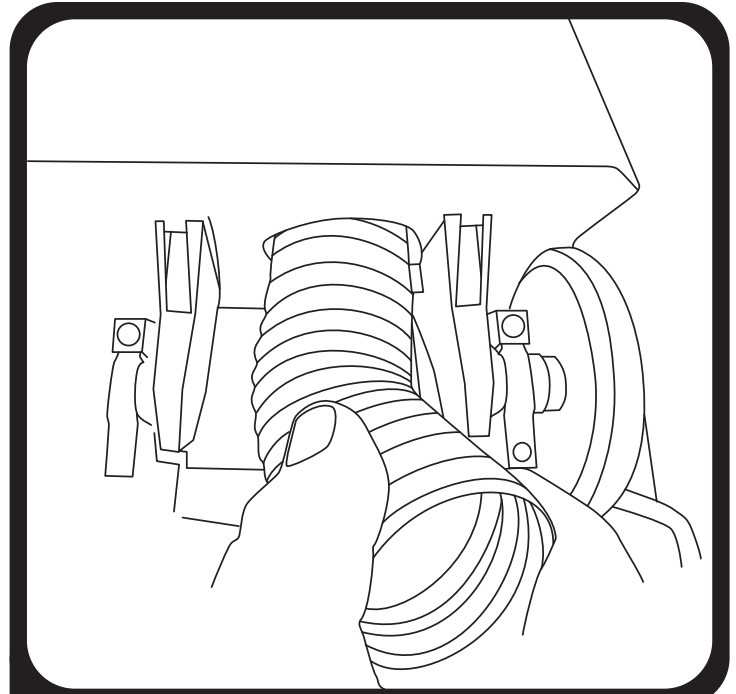


# Wire Harness

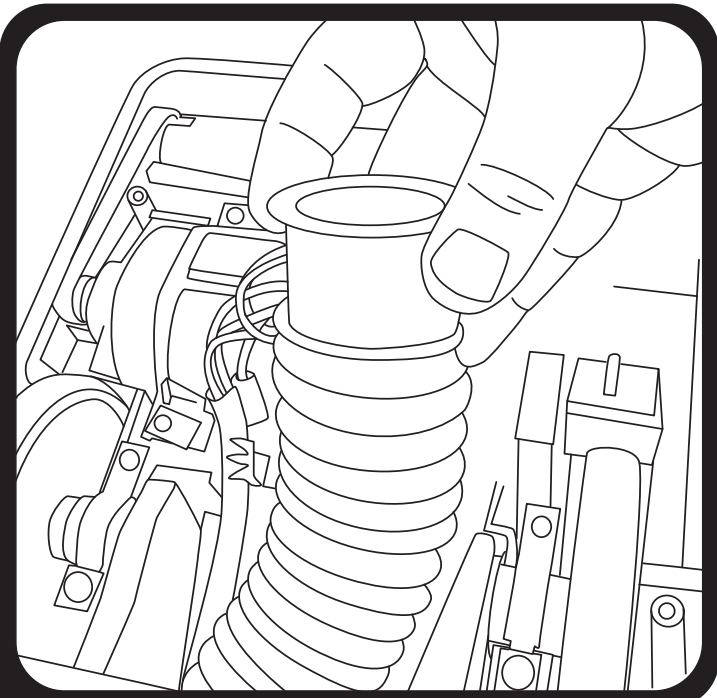
## WIRE HARNESS REPLACEMENT (CONTINUED FROM PG. 25)



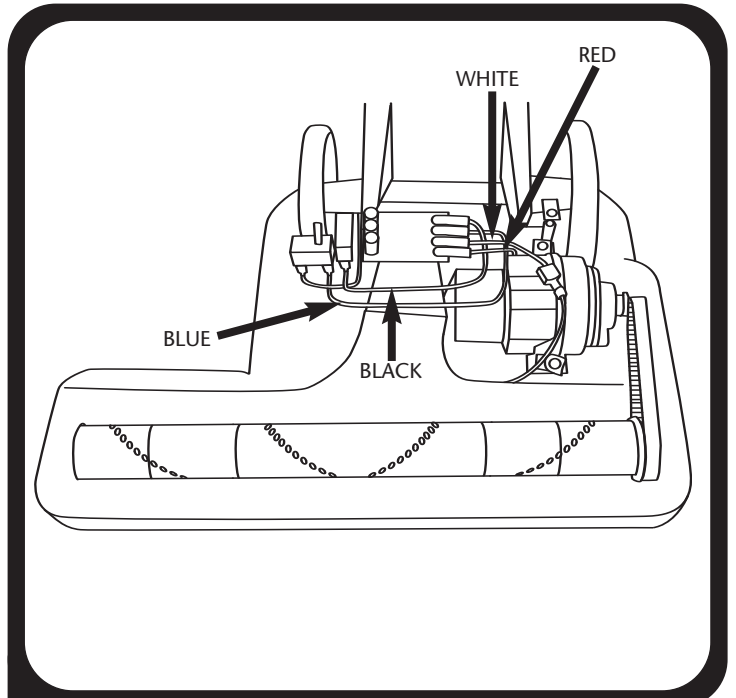
**24.** Remove screw that holds the cover and air duct.



**25.** Thread the air duct hose into the motor housing.



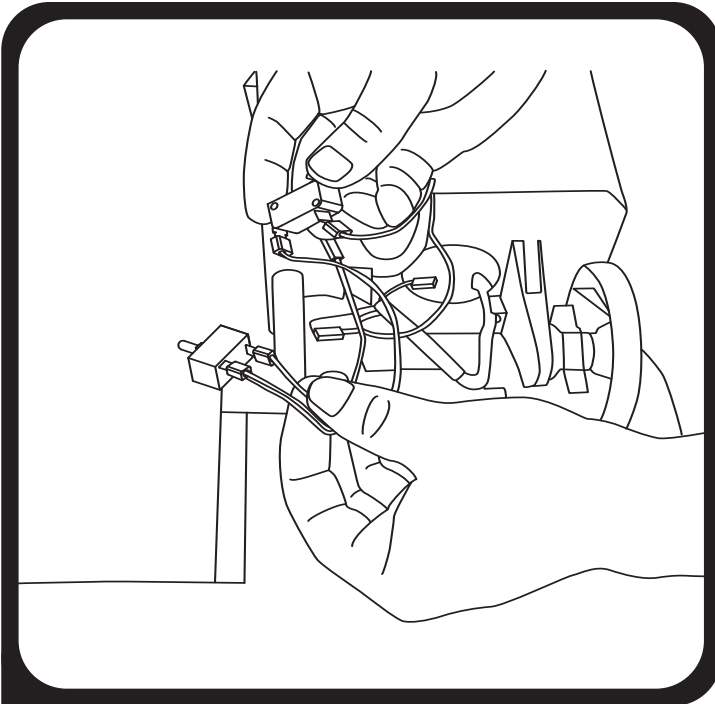
**26.** Put the hose sleeve into the other end of the hose and position in the base assembly. Replace the cover, air duct, and screw.



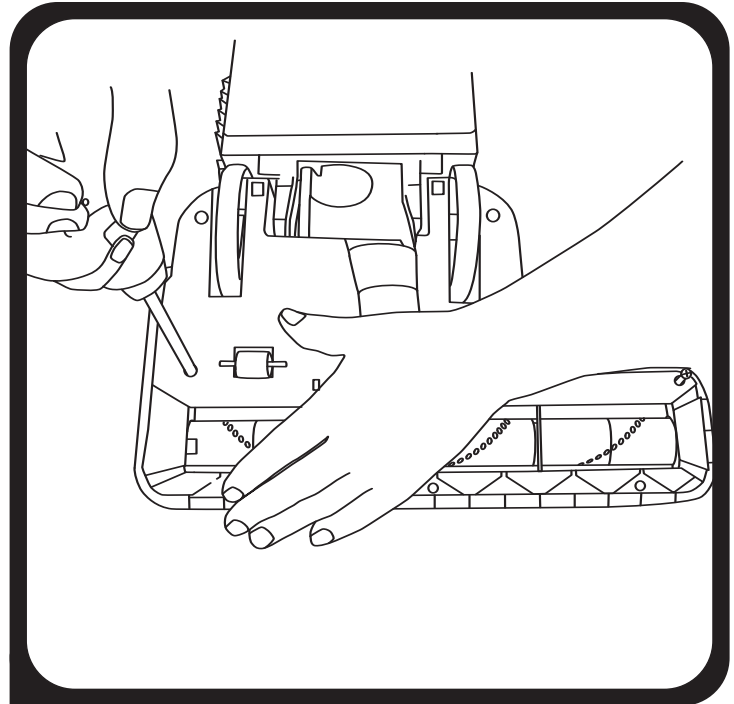
**27.** Connect wires as shown and verify orientation of switches.

*(Continued on page 27)*

## WIRE HARNESS REPLACEMENT (CONTINUED FROM PG. 26)



**28.** Attach new blue and black wires.



**29.** Replace base cover and screws.

### To Reassemble.

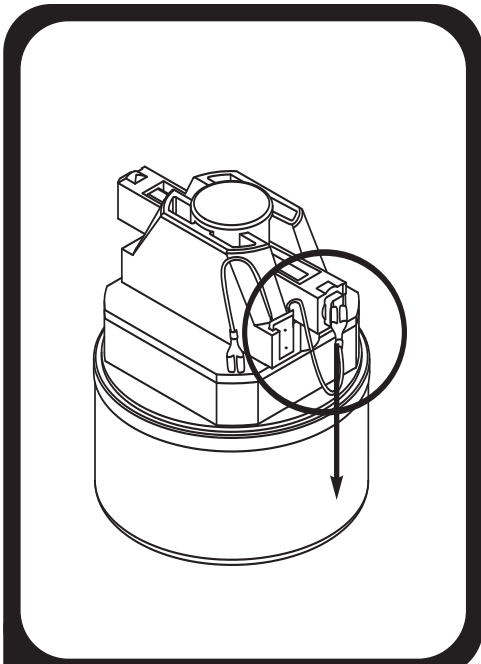
Reverse Steps 29 through 1 to finish reassembly.

### TO PERFORM A FUNCTION TEST:

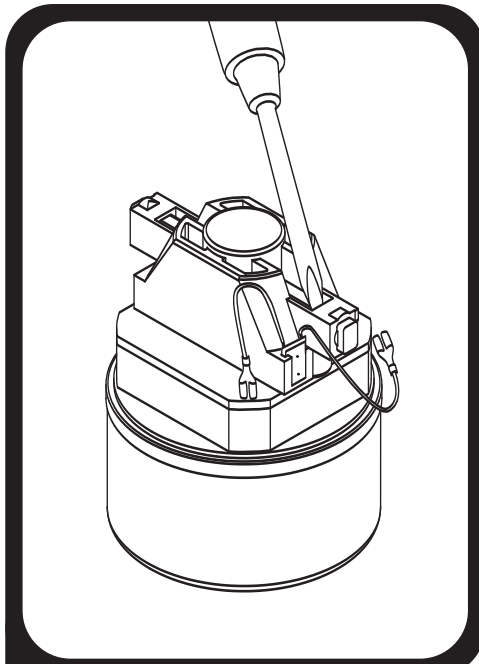
1. Reinstall handle assembly and cord.
2. Install Intercept Micro Filter.
3. Plug in vacuum and turn vacuum on in the number two (II) position.
4. Powerhead motor should be running. Release vacuum from upright locked position.
5. The brush roll motor should stop and the red warning light should light up. Release the switch and the powerhead should go back to normal operation.
6. Turn the vacuum on in position number one (I). The vacuum motor should be on. Pull out the wand and cover the end of the wand with your hand. This will simulate blockage and the bag full light should come on. Take your hand off the end of the wand and the light should turn off. If your vacuum passes these tests, your vacuum is ready to use.

# Motor

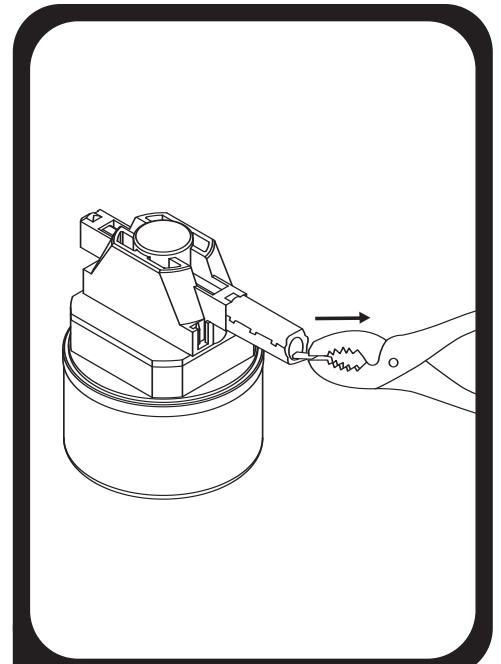
## REMOVING CARBON BRUSHES



1. Disconnect wire from carbon brush.

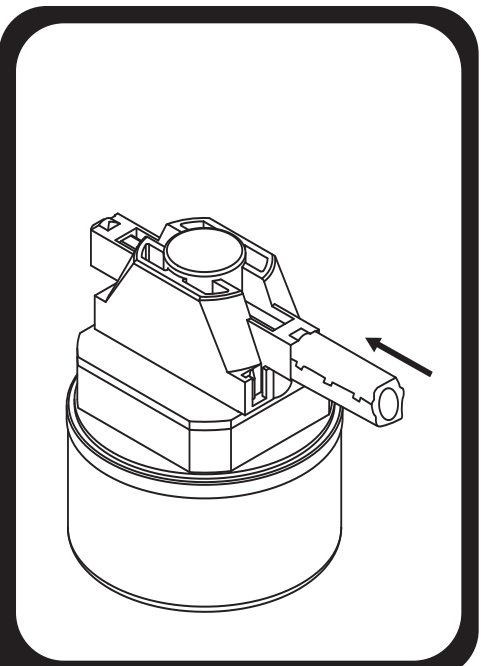


2. Remove both locking connectors with small flat tip screwdriver. Press brass tab (inside bracket) down so it is flush with brush.

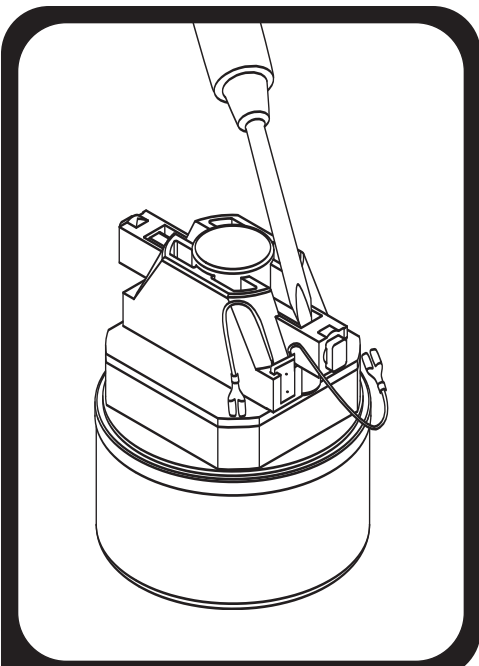


3. Using pliers (or fingers), carefully grasp tab and remove carbon brush from bracket

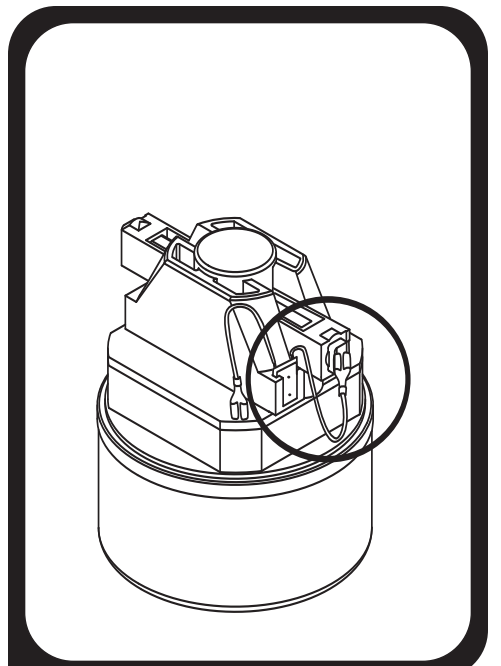
## INSTALLING CARBON BRUSHES



1. Insert carbon brush into bracket.



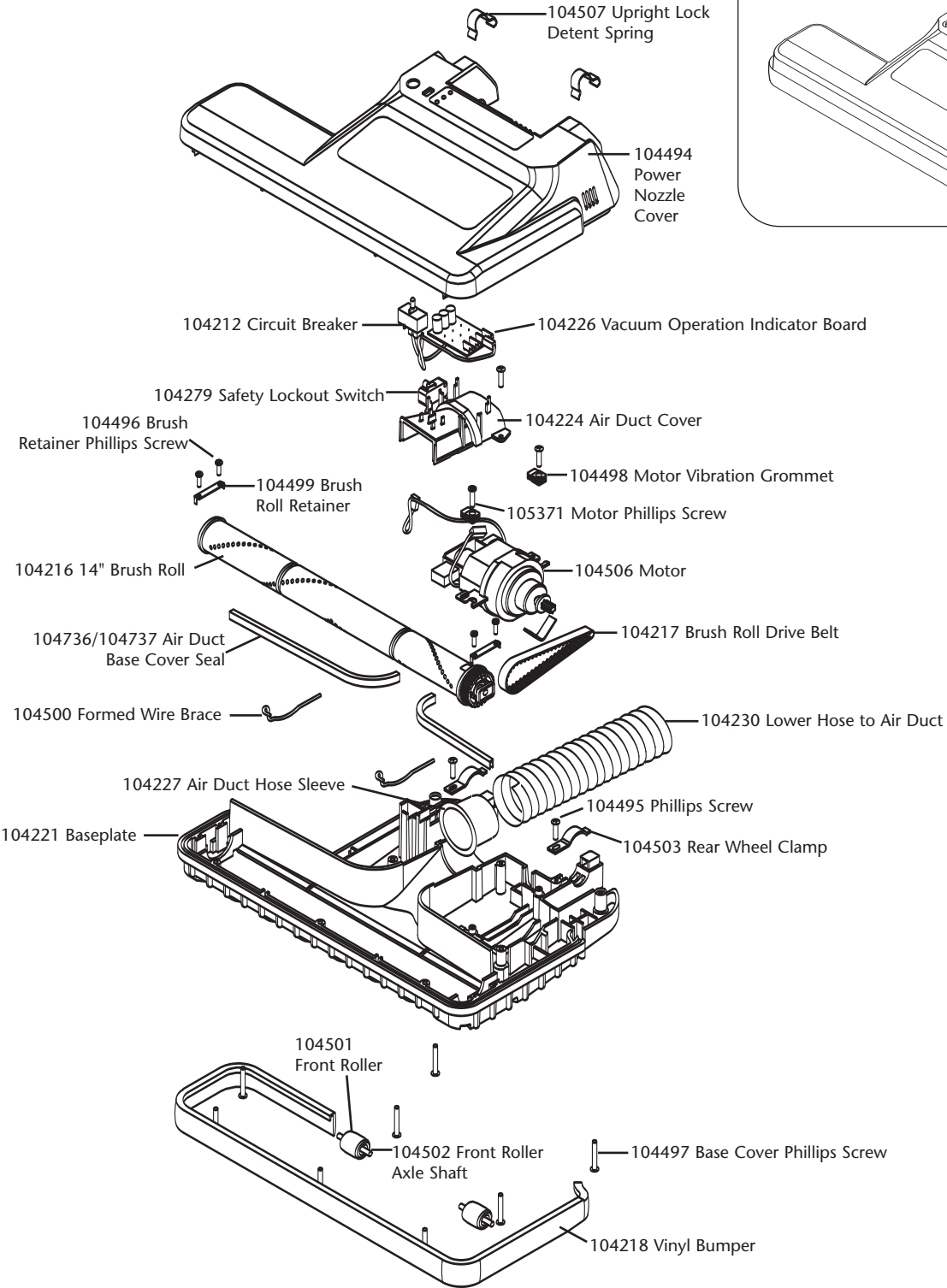
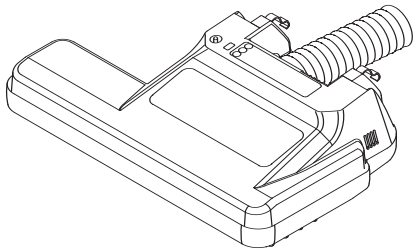
2. Carefully bend brass tab slightly upward with small flat tip screwdriver.



3. Re-connect wire. Replace locking tabs. Bend tabs downward.

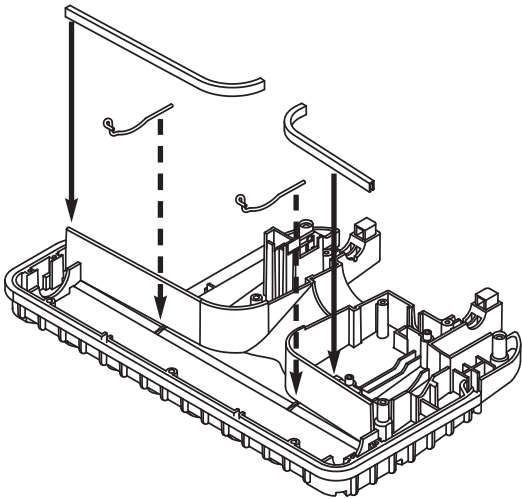
# Power Nozzle

Fully Assembled Power Nozzle

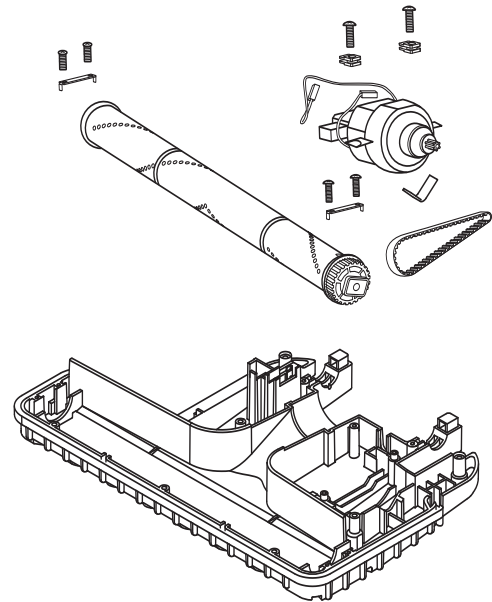


# Power Nozzle

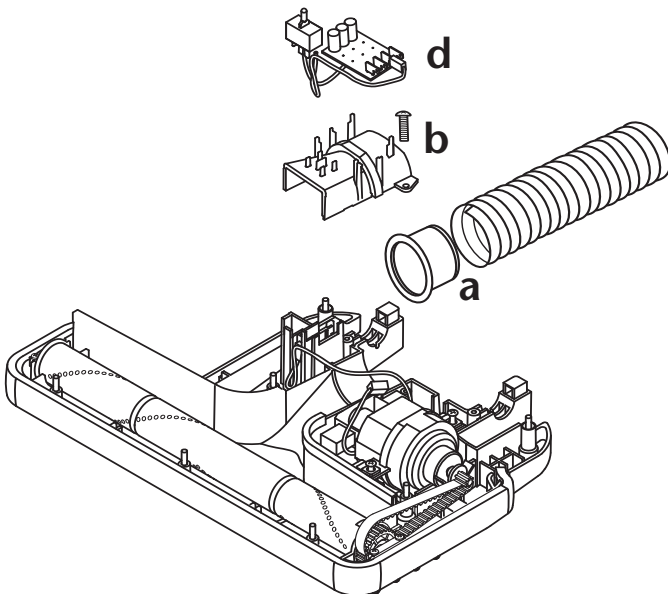
## ASSEMBLY



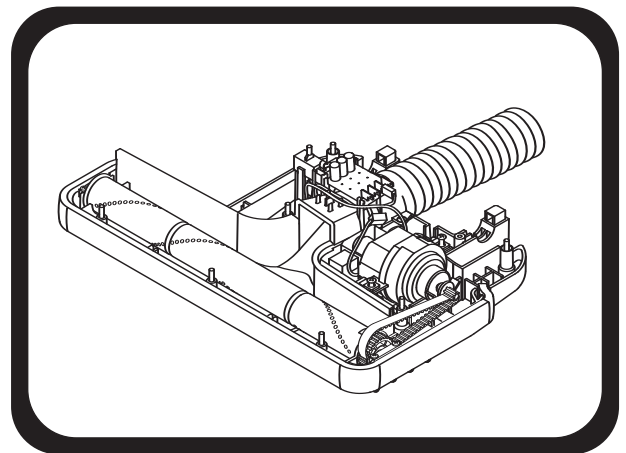
1. Insert braces and seals.



2. Install motor, brush roll, and belt. Be careful. Do not attempt to over-tighten screws.



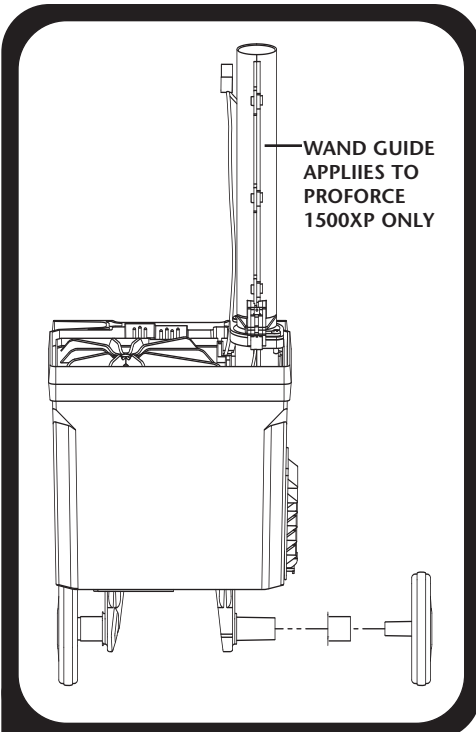
3. Additional components:  
a) Install sleeve and hose.  
b) Install duct cover.  
c) Install electronic components, SPI board, circuit breaker, and switch.  
d) Attach jumper wire to SPI board.  
e) Make sure components are properly seated in the base.



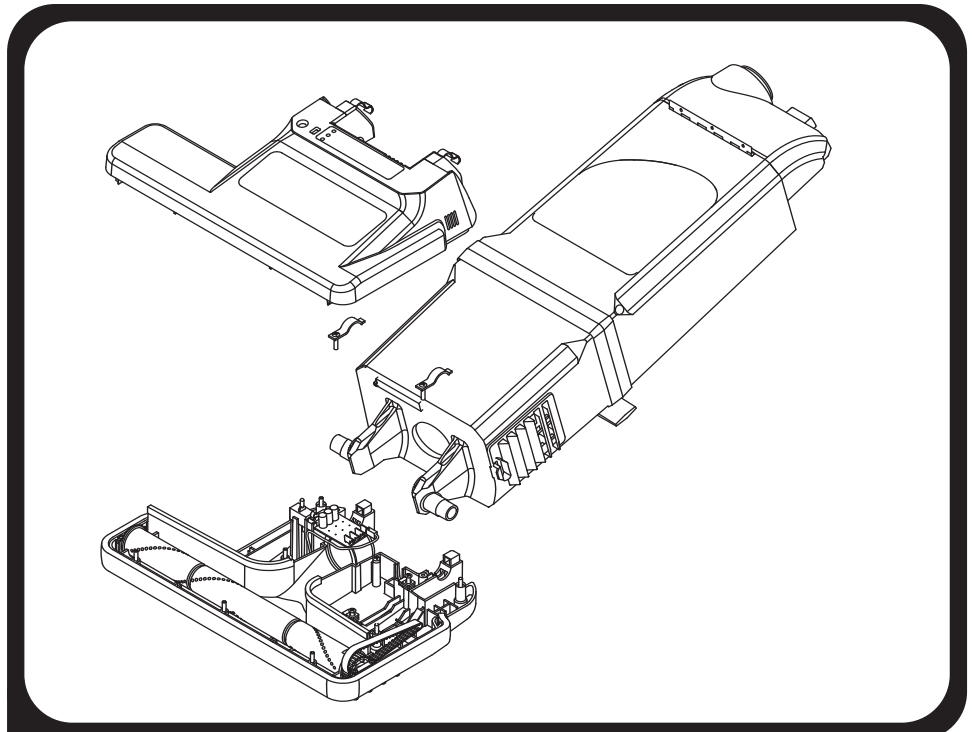
Fully assembled power nozzle (bottom view).

# Power Nozzle to Body Assembly

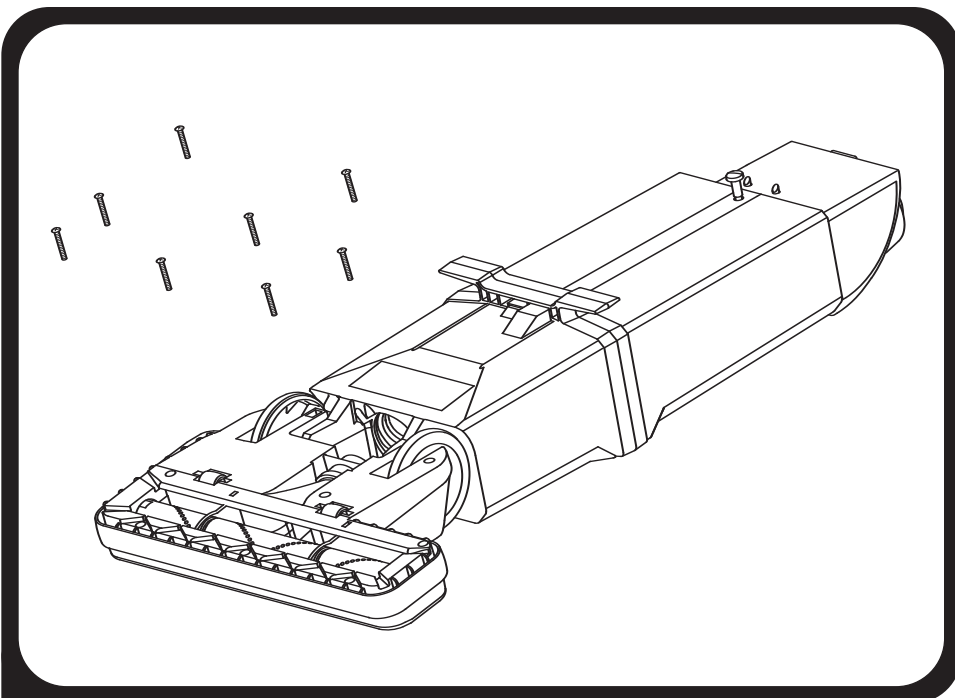
## ASSEMBLY



1. Place axle sleeve onto motor axle, making sure the shoulder is facing the motor housing. Put wheel onto motor housing axle.



2. Wheel axles on the motor housing should be placed in the grooves on the power nozzle base. Wheel clamps are then put into place and screwed down. Power nozzle cover will then be placed on top of the base.

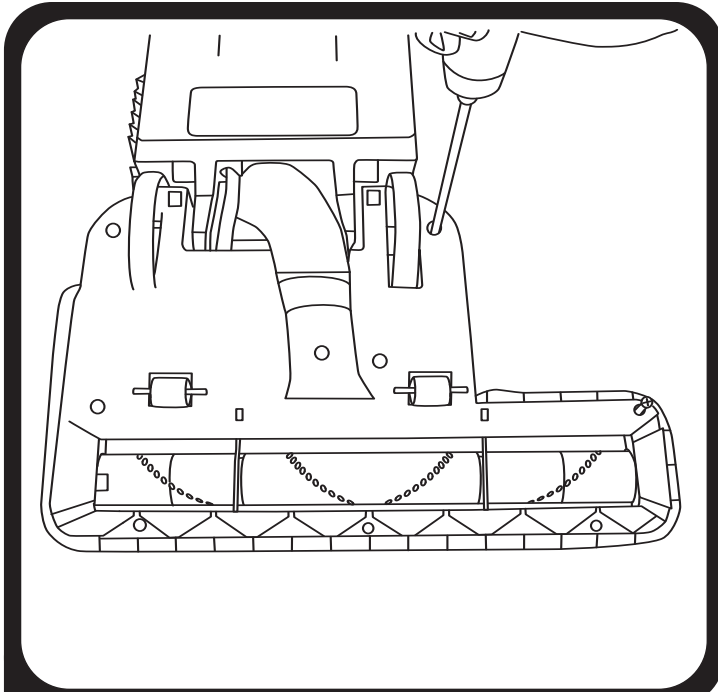


3. Flip the unit and fasten cover to power nozzle base using (8) screws.

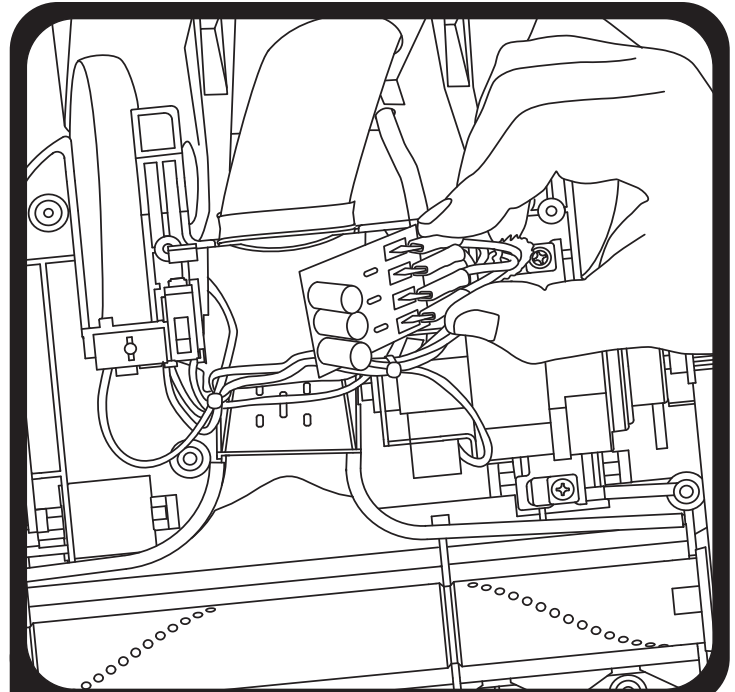


# Power Nozzle

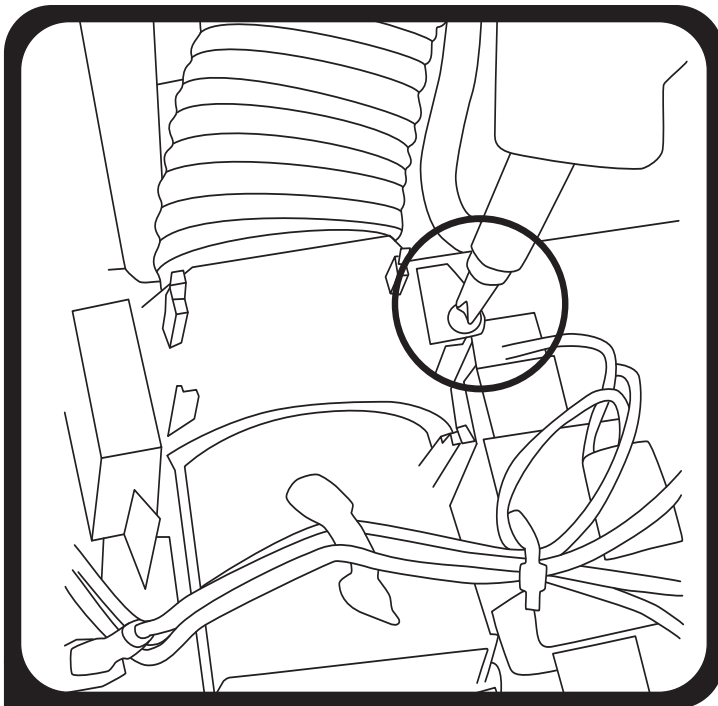
## HOSE SLEEVE REPLACEMENT



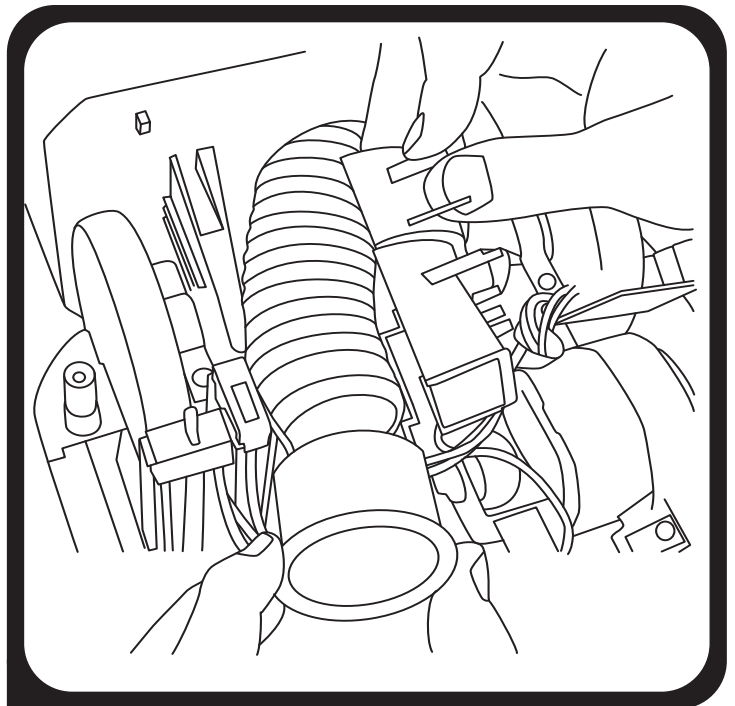
1. Remove (8) screws from base plate. Turn vacuum over and pull base cover off powerhead.



2. Unclip circuit board and move aside.

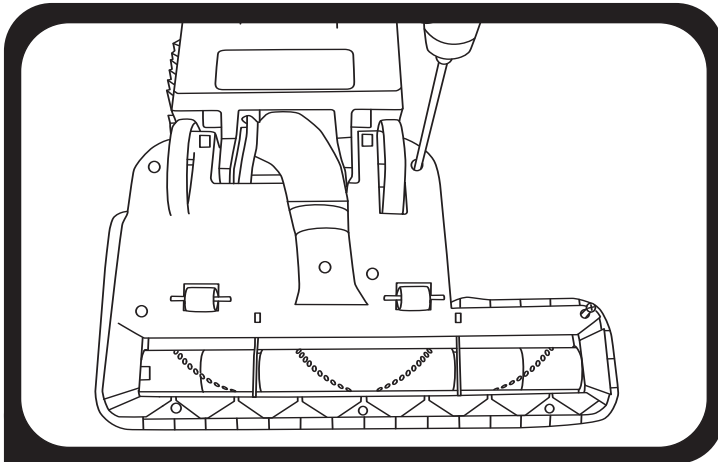


3. Unscrew air duct cover.

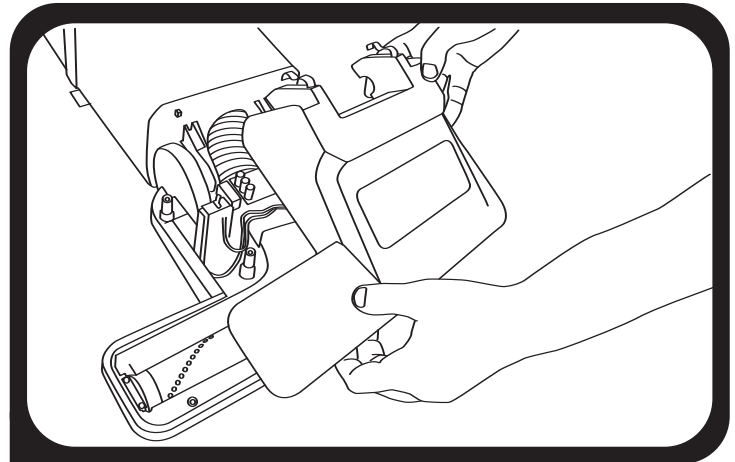


4. Pull off air duct cover. Pull out hose sleeve. Replace with new sleeve. Sleeve must sit in groove to be properly seated. Reverse steps to reassemble.

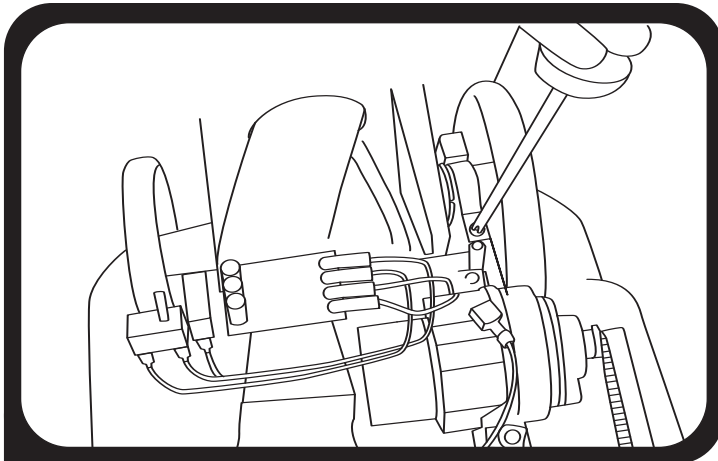
## PIVOT BEARING REPLACEMENT/WHEEL REPLACEMENT



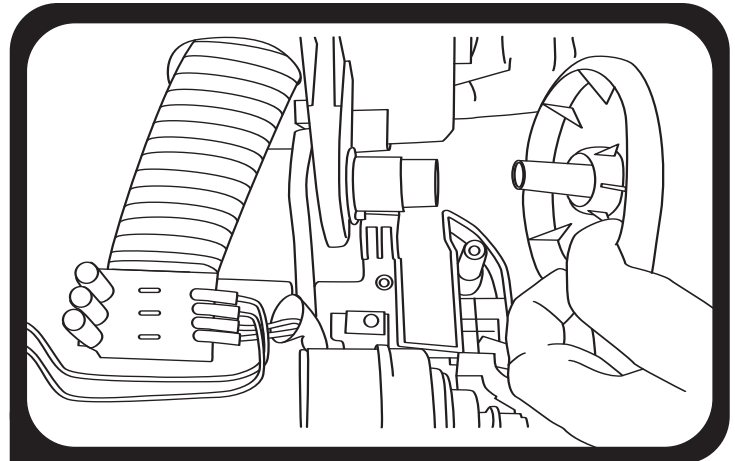
1. Remove 8 screws from base plate.



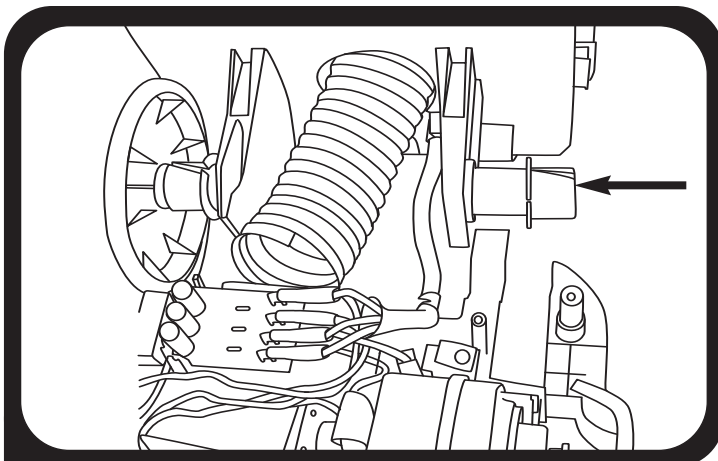
2. Turn vacuum over and pull base cover off powerhead.



3. Remove right and left rear wheel clamps.



4. Lift bag housing from powerhead and remove wheel.

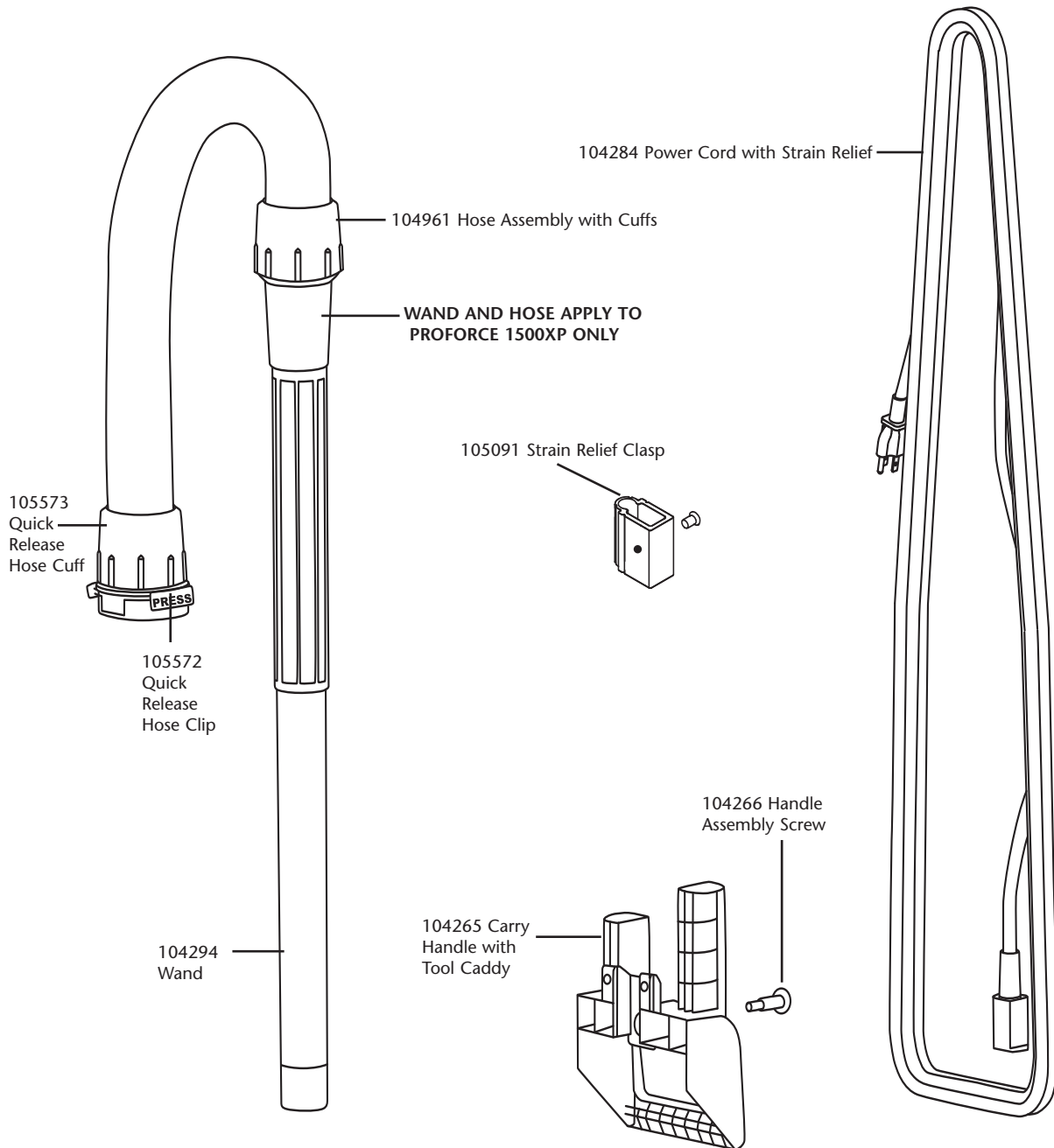


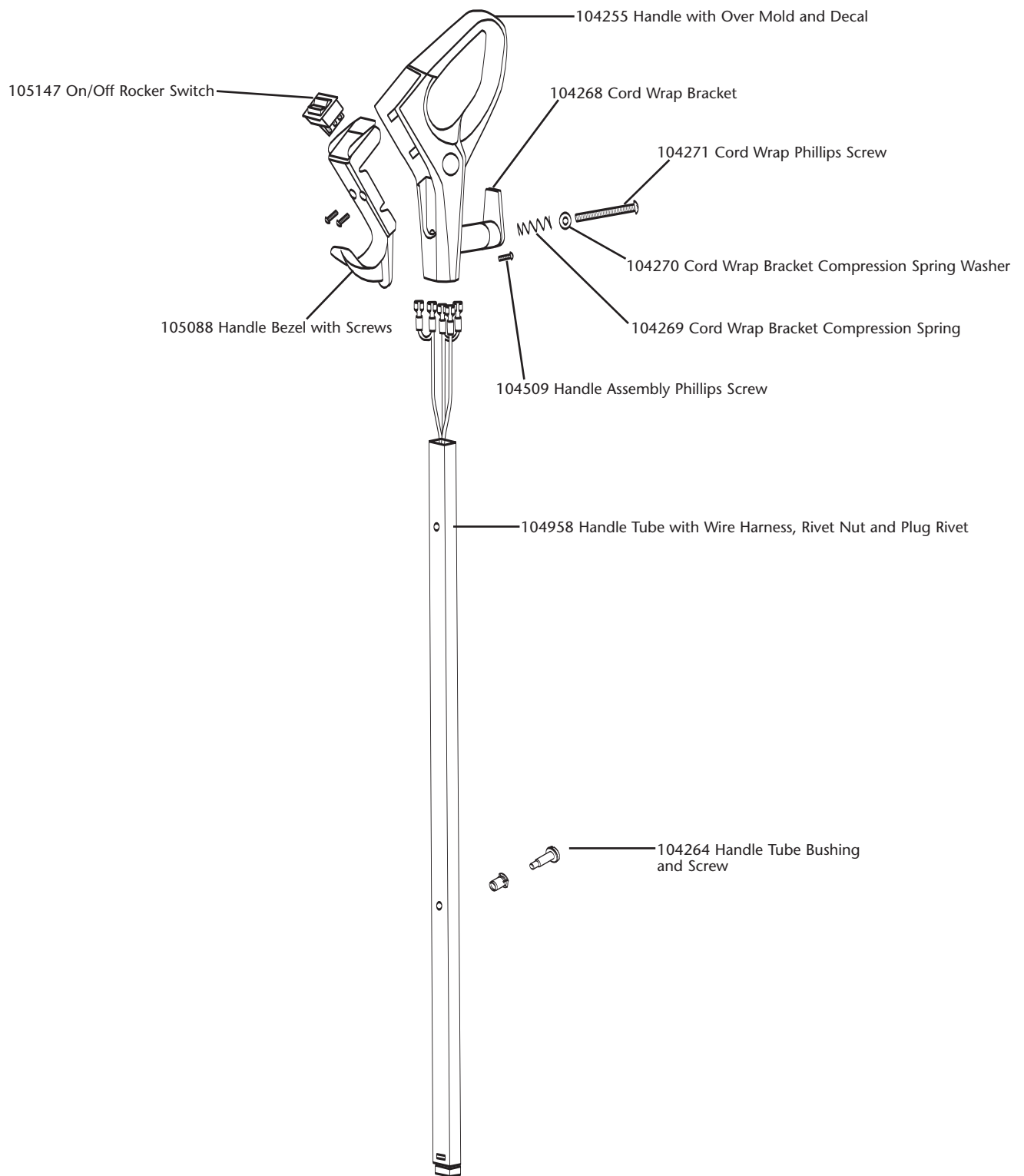
5. Remove old pivot bearing. Install new pivot bearing.

To Reassemble.  
Repeat steps in reverse.



# Hose and Power Cord





# Handle

## HANDLE ASSEMBLY

fig. 1

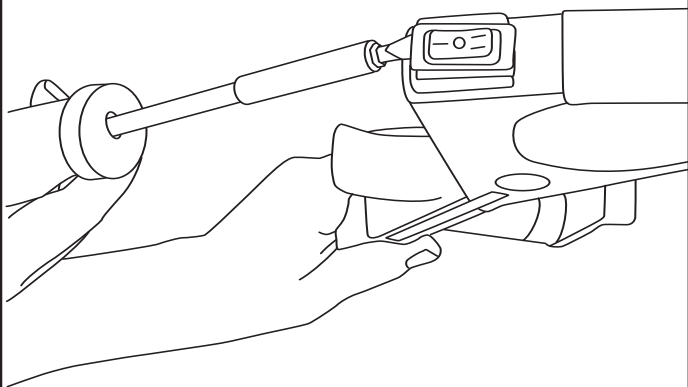
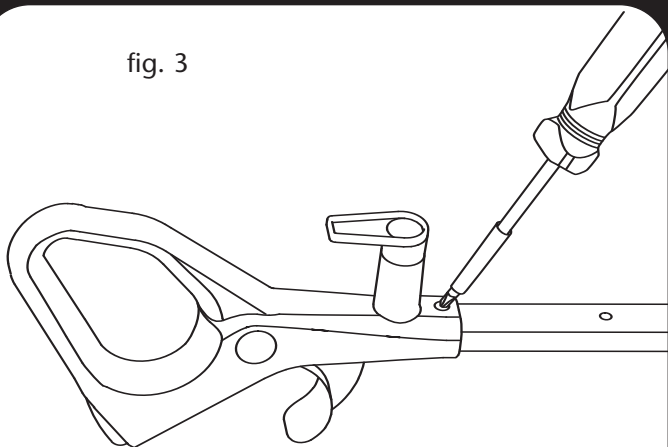


fig. 2



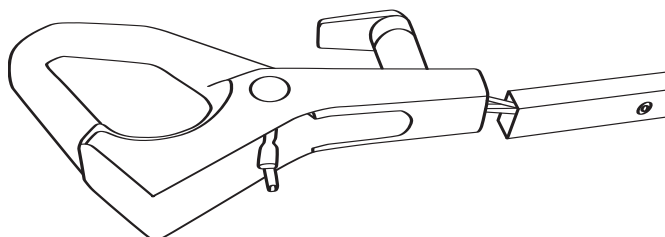
1. Use a flathead screwdriver (fig. 1) to pry bottom of switch from the handle body. Disconnect all wires from switch posts by depressing locking tab on base of crimps. (Fig. 2)

fig. 3



2. Remove screw at base of handle and remove from handle tube (fig. 3).

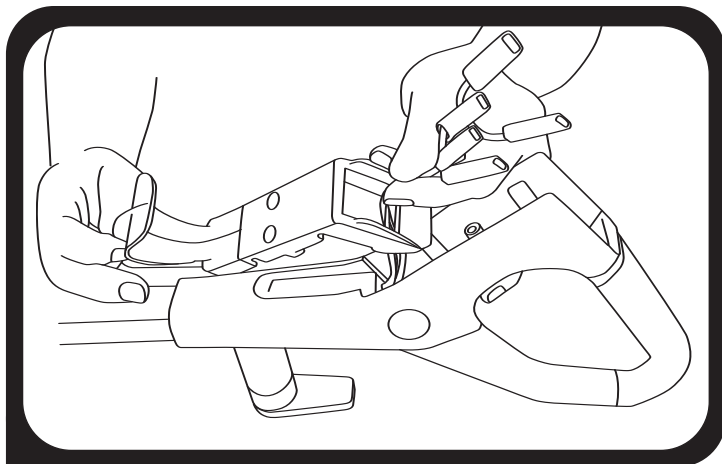
fig. 4



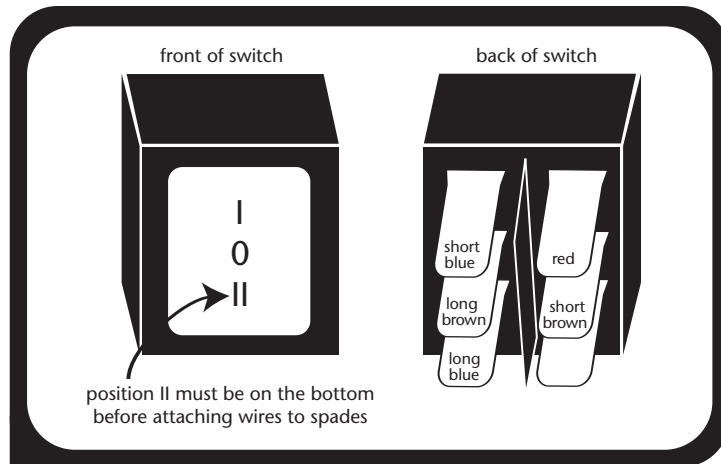
3. Feed handle wire harness through new handle and replace screw at the base of the handle (fig. 4).

*(Continued on page 37)*

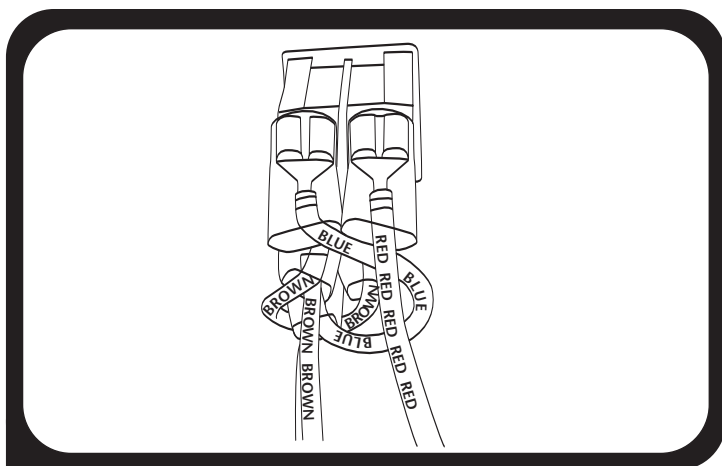
## HANDLE ASSEMBLY (CONTINUED FROM PG. 36)



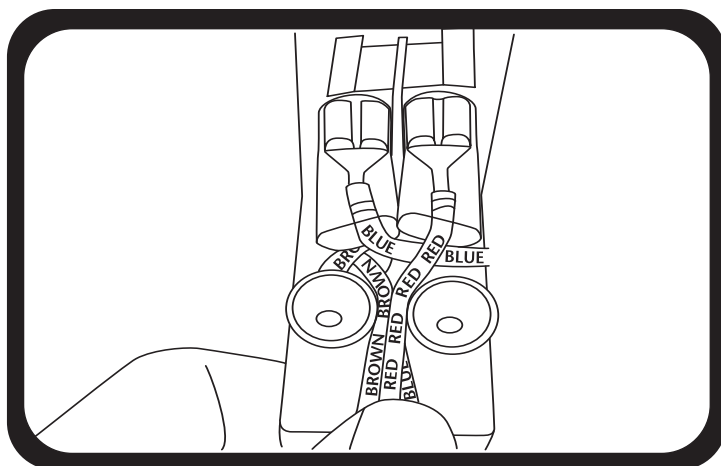
4. Feed wires through opening on handle bezel.



5. Using the diagram provided above, attach wires to switch. Orient the switch box with the II position on the down side.
- Attach the first plug on the brown wire to the middle left spade.
  - Attach the first plug on the blue wire to the lowest left spade. Wait to attach the last blue plug.
  - Wrap the second brown plug underneath blue and attach to the middle right spade.
  - Attach the last blue plug to the upper right spade. The bottom right spade will remain unattached.
  - Connect the red wire to the top right spade.



6. When finished with steps a through e your final wire connection configuration should appear as above.

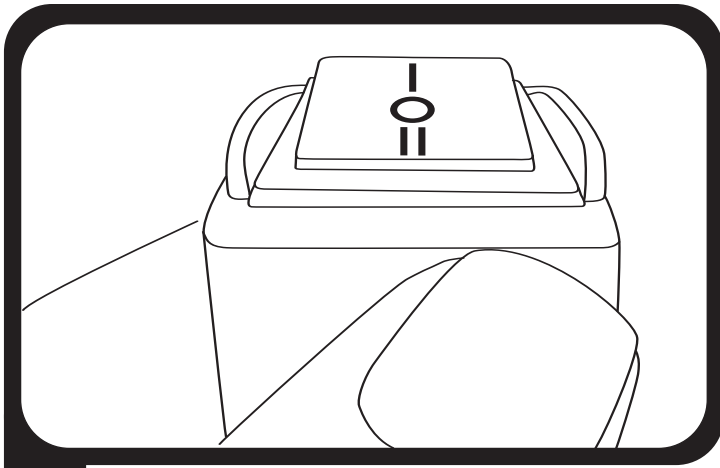


Install the switch into the handle bezel. Place the long BLUE, BROWN, then RED wires between the screw bosses in that order (as shown). BROWN and BLUE wire loops must be positioned above the screw bosses on the handle bezel as shown.

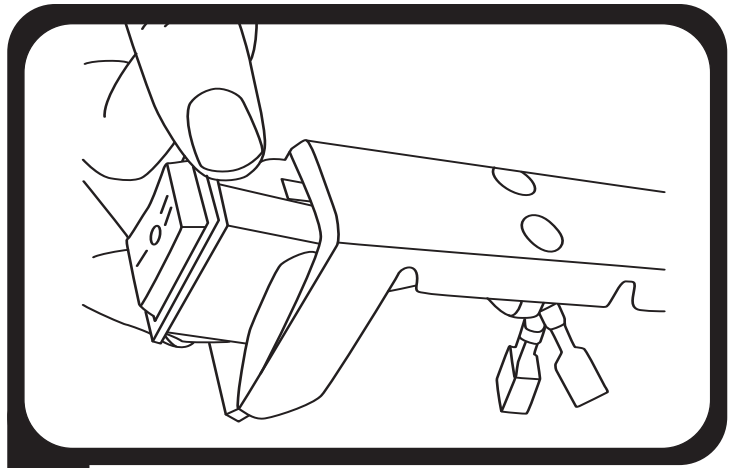
*(Continued on page 38)*

# Handle

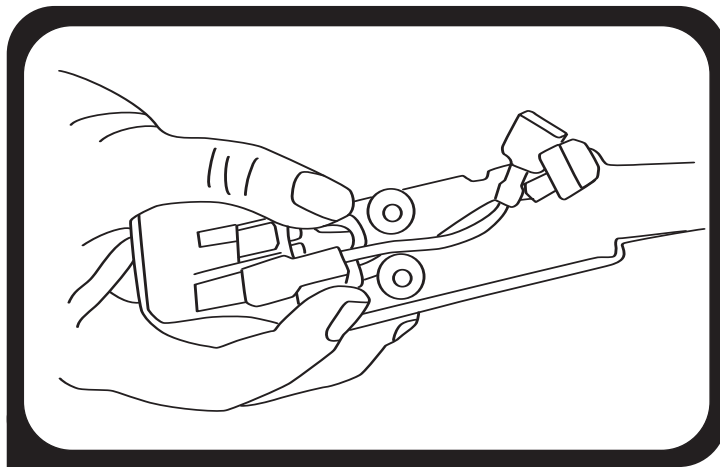
## HANDLE ASSEMBLY (CONTINUED FROM PG. 37)



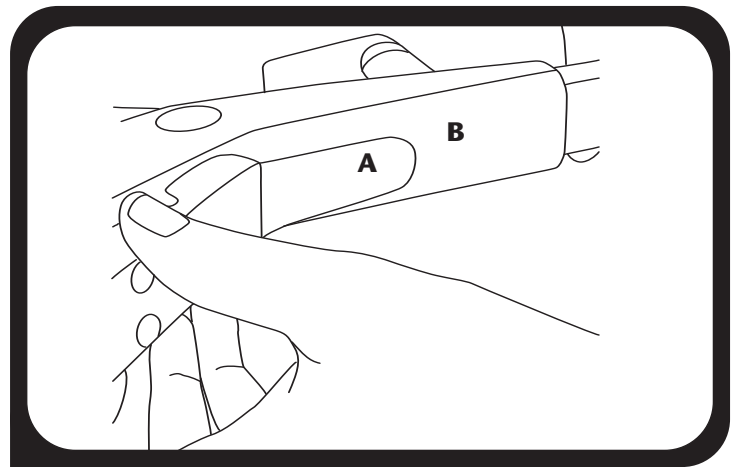
7. Switch must remain flat to the handle bezel when installed into handle body as shown.



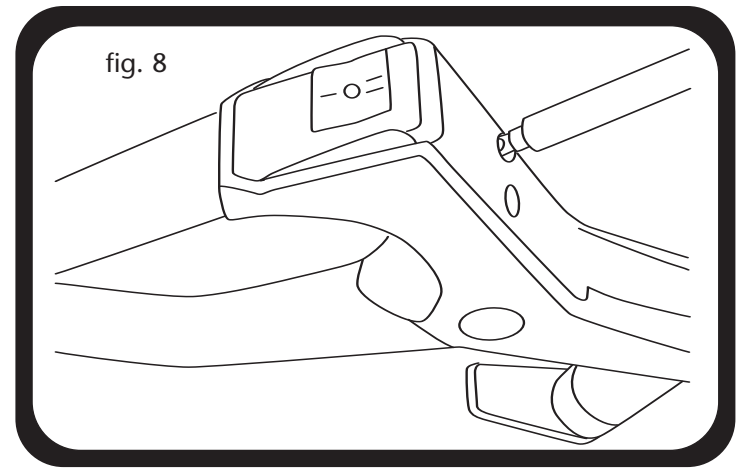
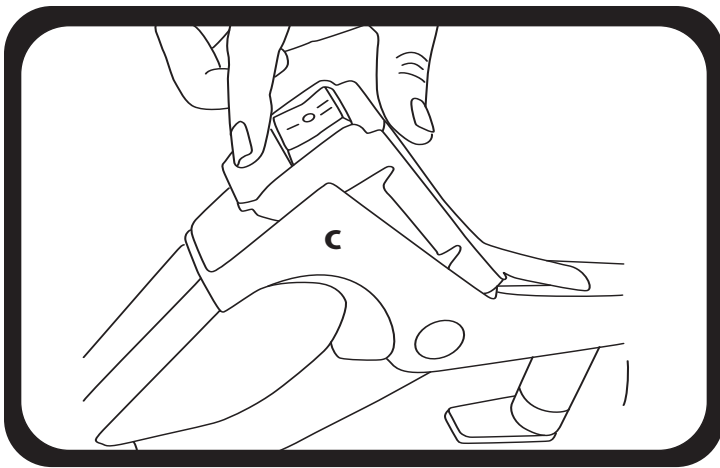
8. Press the switch into place in the handle bezel. The II position should be closest to the front of the bezel.



9. Lay the long red, brown and blue wires between the circular shoulders and gently place handle bezel into handle.

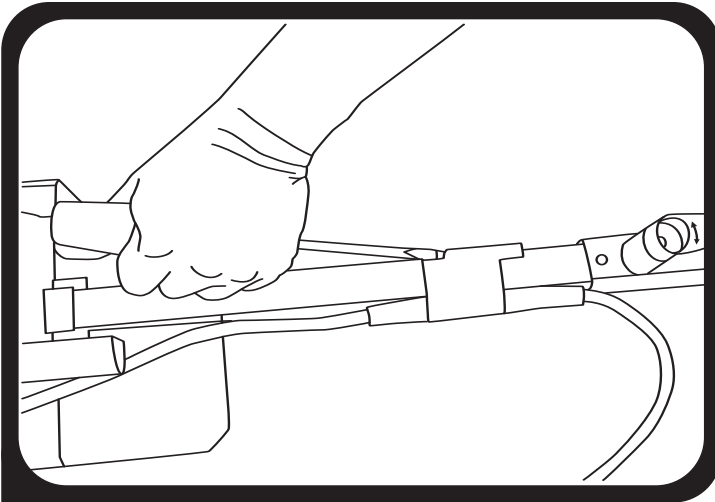


10. Slide tab A into handle slot B and press firmly into place at C. Be sure all switch wires are routed between screw bosses to ensure that the wires do not get damaged. Insert screws into bezel (fig. 9).

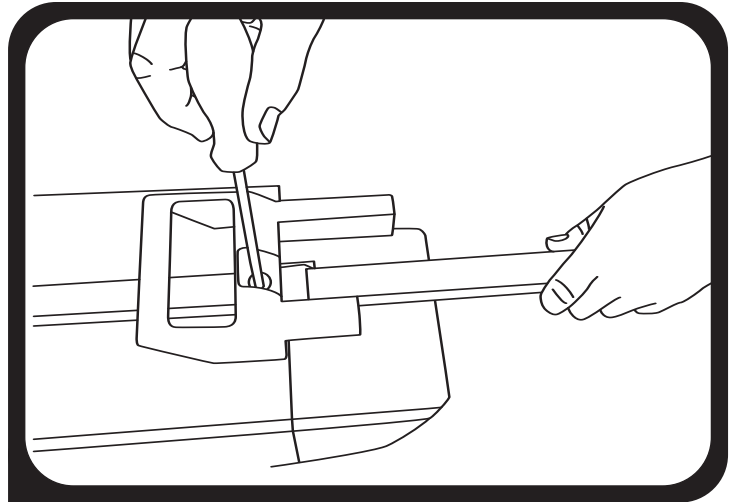


# Handle and Power Cord

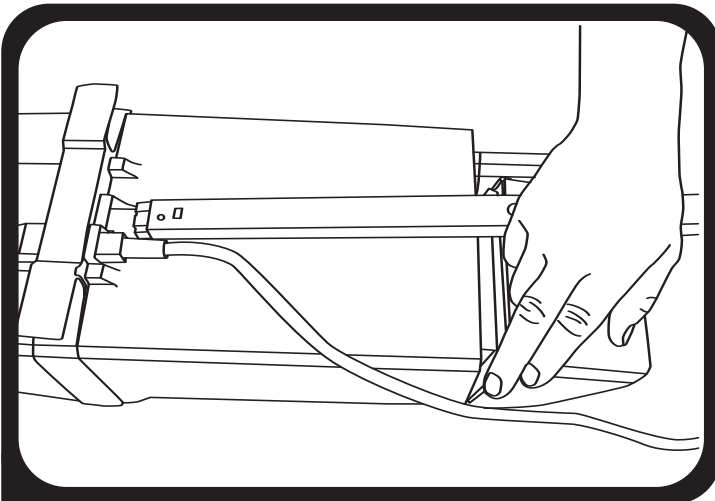
## NEW CORD AND STRAIN RELIEF REPLACEMENT



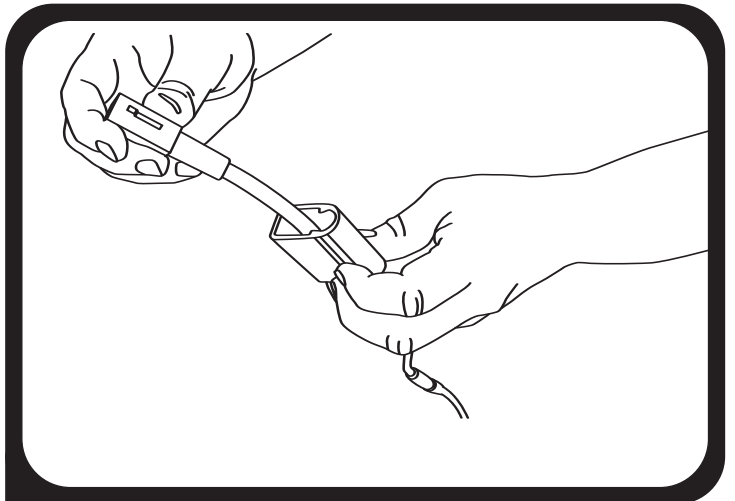
1. Use a flathead screwdriver and hammer to push the strain relief towards the handle. Snap off remaining strain relief.



2. Remove screw from carry handle and remove carry handle.



3. Slide handle tube away from base. Unplug old power cord.



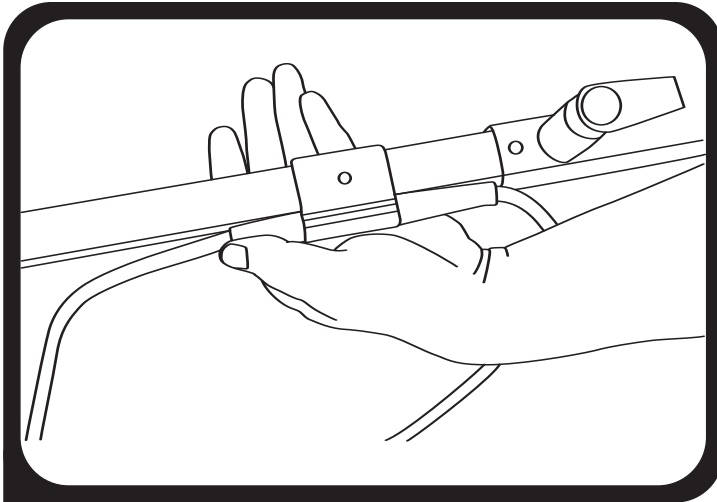
4. Feed new strain relief clasp over the new power cord. Slide strain relief up to the groove on the power cord and snap strain relief clasp into place.

**NOTE:** Use care when sliding the strain relief clasp over the handle tube bushing so as not to damage bushing.

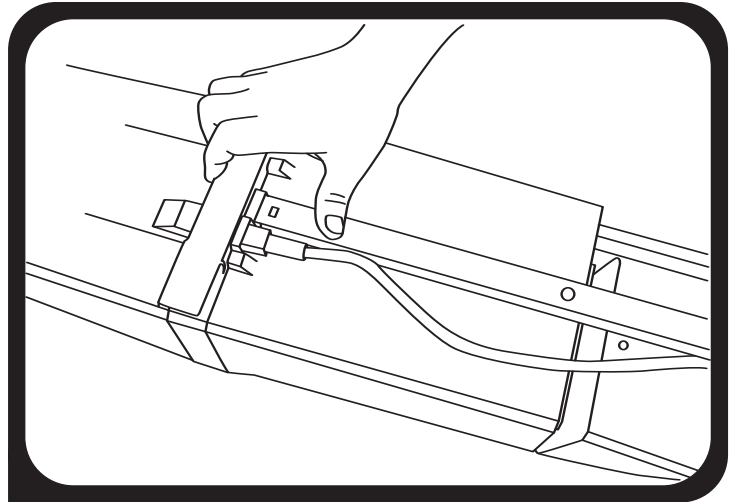
*(Continued on page 40)*

# Handle and Power Cord

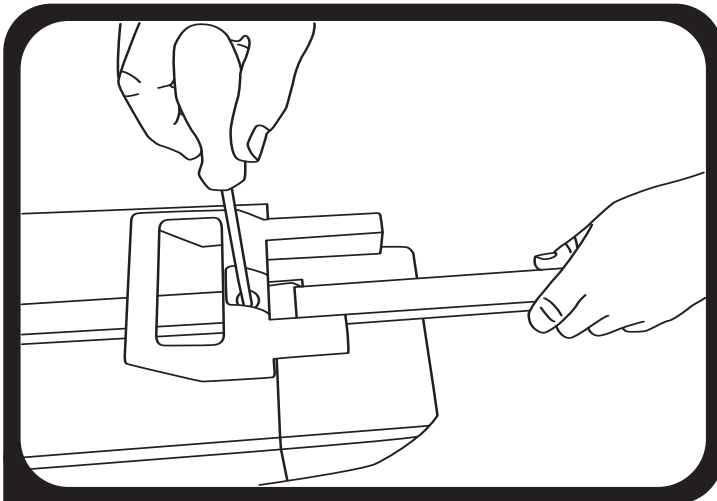
## NEW CORD AND STRAIN RELIEF REPLACEMENT (CONTINUED FROM PAGE 39)



- 5.** Slide handle tube through opening in strain relief. Align holes on strain relief and handle tube. Insert new ratchet fastener in hole and push flush.



- 6.** Plug in new cord and slide handle tube into base.

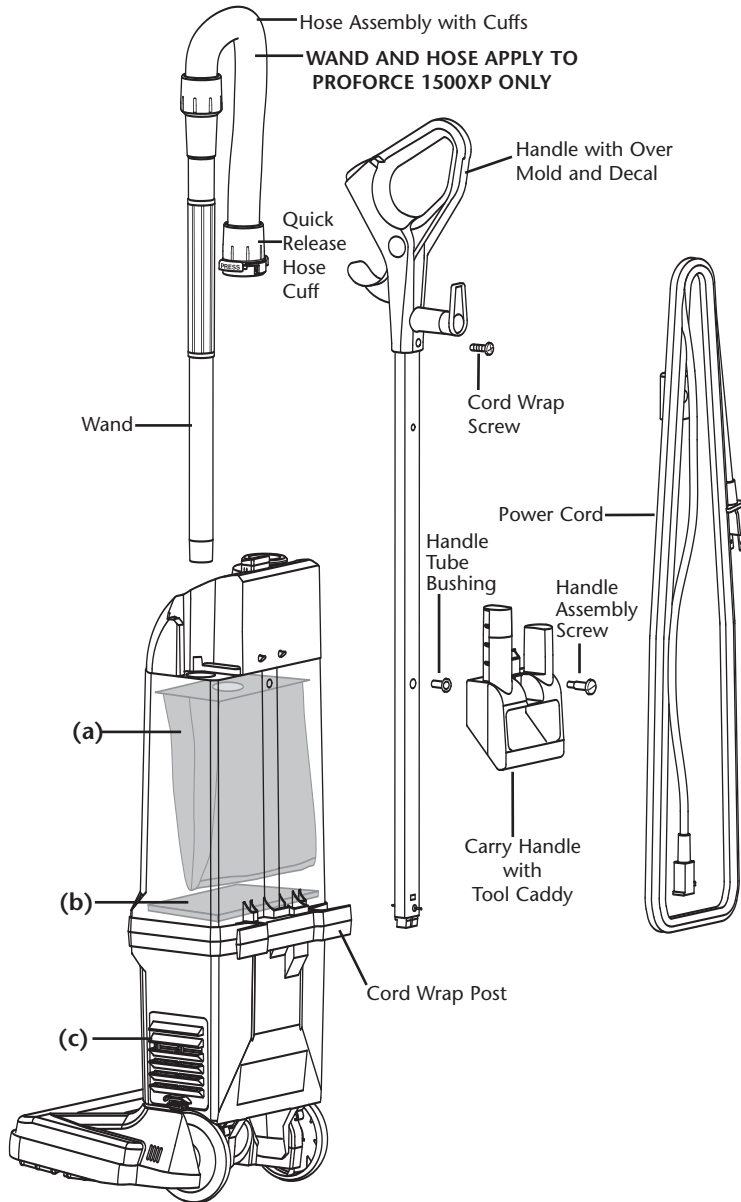


- 7.** Use flathead screwdriver to reattach carry handle to handle tube.



# Final Vacuum Assembly

## ASSEMBLY



- 1.** Install all 3 filters:  
(a) Intercept Micro Filter  
(b) Motor Intake Filter  
(c) Exhaust Filter
- 2.** Install Power Cord and Handle with Over Mold and Decal. Attach with Handle Tube Bushing and Carry Handle with Tool Caddy.
- 3.** Wrap Power Cord around Cord Wrap Post.

# Troubleshooting—Clearing Hose and Wand Obstructions

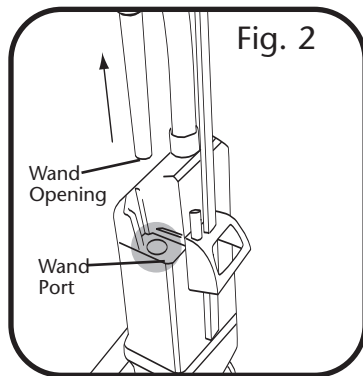


Fig. 1 – Airflow path and possible obstruction locations

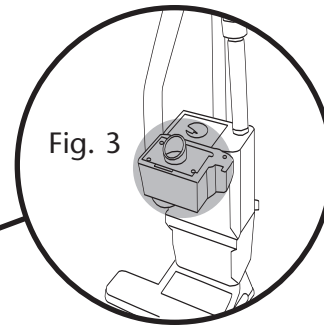


Fig. 3

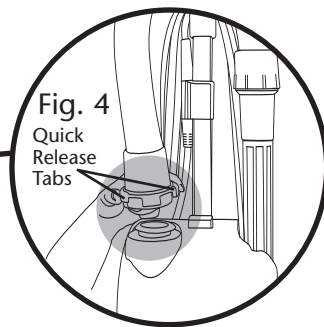


Fig. 4  
Quick  
Release  
Tabs

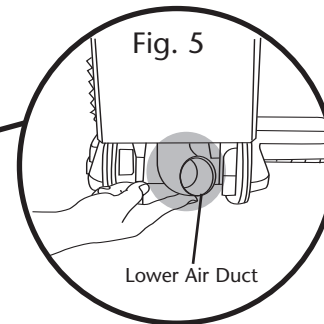


Fig. 5

Lower Air Duct

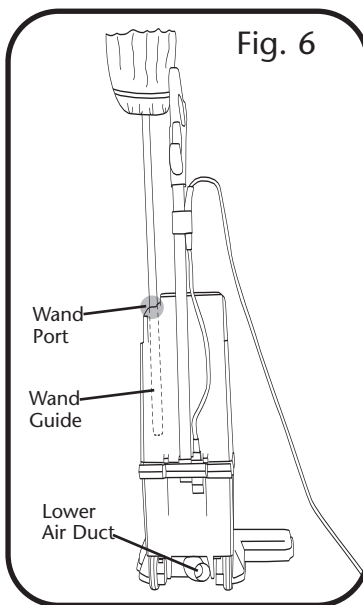
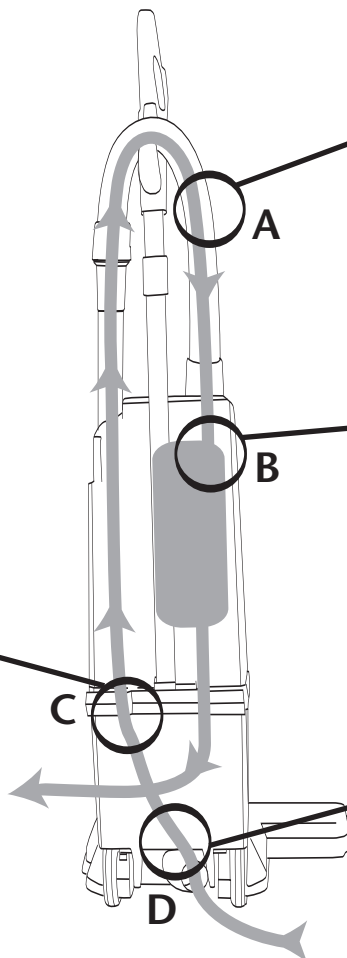
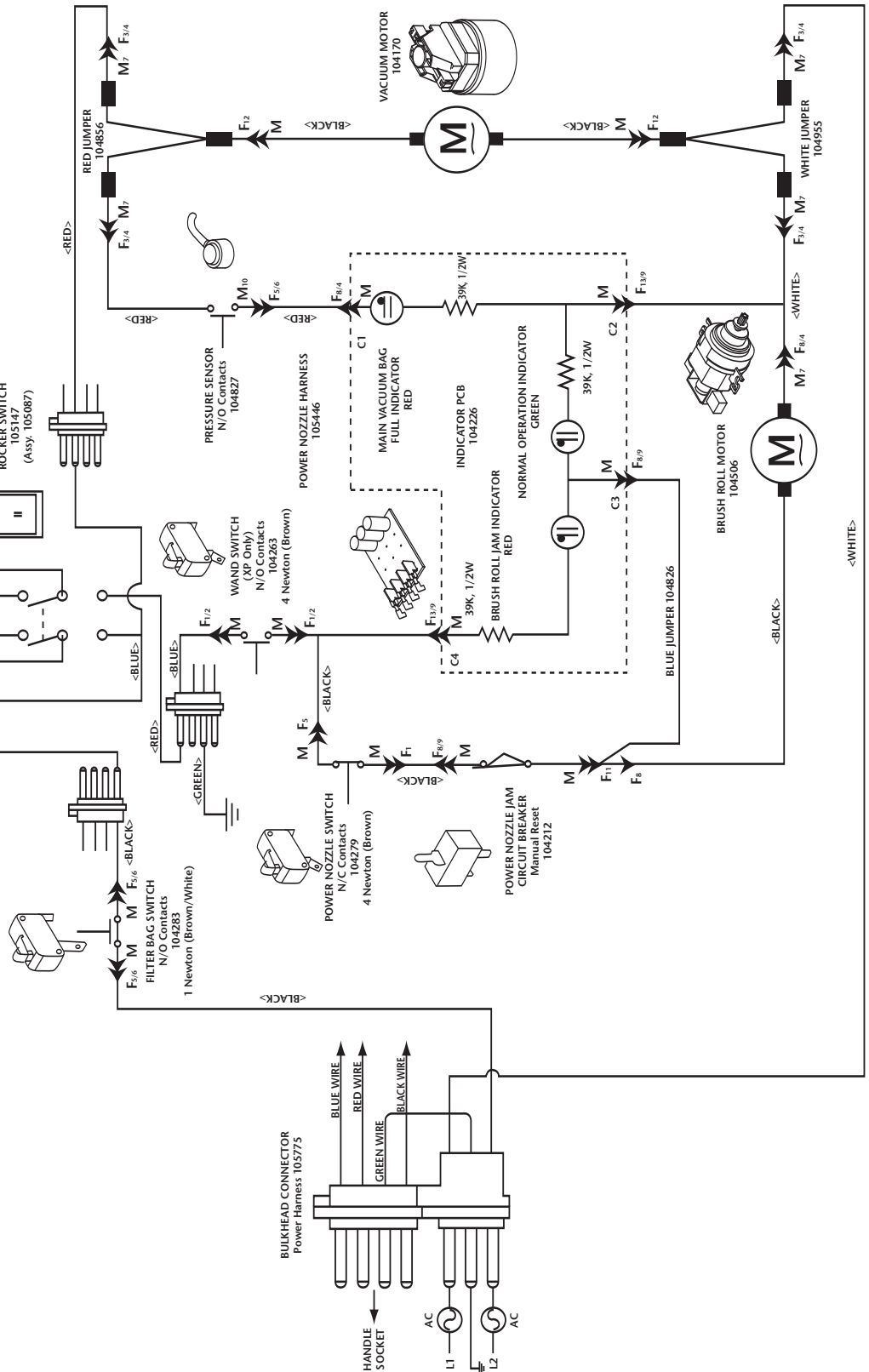


Fig. 6



1. Familiarize yourself with air flow path and possible obstruction locations (Fig 1).
2. To determine obstruction location, remove wand from port. (Fig 2). Turn on vacuum and place hand over wand opening to check for proper suction. If no suction exists, blockage is at location A or B (as shown in Fig 1) and proceed to Step 3. If there is proper suction, the blockage is at location C or D (as shown in Fig 1) and proceed to Step 5.
3. Open Bag Housing Cover (Fig. 3) and replace Intercept Micro Filter. A full filter will restrict airflow.
4. Remove hose from the bag housing cover by using the quick release tabs. (Fig. 4). Look into upper hose and wand. Shake or insert broom handle to clear any visible debris. Replace hose and wand on vacuum.
5. If blockage is not in the wand or upper hose, disconnect the lower air duct hose on the back of the power nozzle (Fig 5). Visually check the lower air duct hose for debris and remove. To check for unobstructed air flow, turn on vacuum and place hand over opening on lower air duct. If you feel proper suction, reconnect lower air duct and resume vacuuming. If blockage is not in lower air duct hose, proceed to step 6.
6. With bottom air duct hose and upper hose and wand disconnected, carefully insert a broom handle (or any similar item like a short length of hose, pipe, etc) approximately 14 inches into wand guide on top of vacuum housing (Fig. 6) to dislodge obstruction or debris. Debris should then drop or move into the lower air duct where you can then remove it with your hand (Fig 5).
7. Reconnect the lower air duct and upper hose assembly, and power on the vacuum.

CONNECTOR	DESCRIPTION	TAB	SERIES	WIRE
1	Female AMP	0.032	.250 Flag	18-12
2	Sleeve AMP	0.032	.250 Flag	18-22
3	Female AMP	0.187	0.187	20-16
4	Sleeve AMP	0.187	0.187	22-18
5	Female AMP	0.032	0.250	22-18
6	Sleeve AMP	0.032	0.250	22-18
7	Male AMP	0.032	0.187	22-18
8	Female AMP	0.020	0.187	20-14
9	Sleeve AMP	0.032	0.187	2-#18
10	Male AMP	0.032	0.250	22-18
11	Female AMP	0.020	.187 PB	20-16
12	Female AMP	0.032	0.187	2-#18
13	Female AMP	0.020	0.187	2-#18





5118 N. Sawyer Ave., Boise, Idaho 83714 • 800.541.1456  
[www.pro-team.com](http://www.pro-team.com)