



Electronic Service Manuals

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BP27 ULTRA MAXX

IMPORTANT SAFETY INSTRUCTIONS



**READ AND UNDERSTAND ALL INSTRUCTIONS
BEFORE OPERATING OR SERVICING MACHINE**



DANGER ! Failure to Observe These Instructions Can Cause Personal Injury to Machine Operator, By-Standers or Possible Machine Damage.

- **ALWAYS** wear eye protection and protective clothing when working with the batteries.
 - The batteries contain **ACID**. Avoid contact with skin or clothing.
 - Antidote: **EYES** - Flush with water 15 minutes. Call physician.
INTERNAL - Drink water or milk. Follow with Milk of Magnesia, beaten egg or vegetable oil. Call physician.
 - Service should be done only by authorized, trained personnel.
 - Charge Batteries in a well ventilated area with Battery Compartment Open.
 - Batteries generate explosive gasses - keep sparks, flames, burning cigarettes or other ignition sources away at all times.
 - Batteries are heavy - two (2) people are required for installation or removal.
 - Never lay anything on top of batteries to prevent arcing.
 - Turn off all switches during installation and service.
 - To maintain machine balance, always slide batteries back into position as shown on battery installation decal.
 - Connect batteries as shown on battery installation decal to avoid shorting out batteries and electrical system.
 - Disconnect battery leads before performing any service or repairs.
 - **ALWAYS** make sure battery charger is turned off when connecting/disconnecting to machine to prevent sparking.
 - **ALWAYS** operate this machine from the rear control panel, not from the side.
 - **NEVER** operate machine in an explosive atmosphere (grain dust or gas vapor).
 - **NEVER** use flammable liquids (gas, kerosene, solvents or thinners) to clean floor.
 - **ALWAYS** turn off master switch when changing pads.
 - **NEVER** operate machine with skirts or covers removed.
 - **NEVER** leave machine unattended.
- PERSONAL INJURY AND PROPERTY DAMAGE FROM MACHINE OVERTURNING, BATTERIES FALLING OUT OF MACHINE OR BATTERIES LEAKING ACID CAN OCCUR IF YOU DO NOT FOLLOW THESE PRECAUTIONS:
- **NEVER** attempt to operate machine unless you have been trained in its operation.
 - Follow these rules when working on or near loading docks and ramps:
 - **ALWAYS** be sure ramp is secured to vehicle before attempting to load/unload.
 - **ALWAYS** use extreme caution when operating machine on a ramp or loading/unloading a machine into or out of a truck. Use extreme caution if ramp is wet, oily or covered with cleaning chemicals.
 - **NEVER** turn machine on an incline.
 - **NEVER** stop machine on a ramp.
 - **NEVER** attempt to climb a grade of more than 20 degrees.
 - **NEVER** park machine near a dock or on ramps.
 - **NEVER** leave machine unattended.

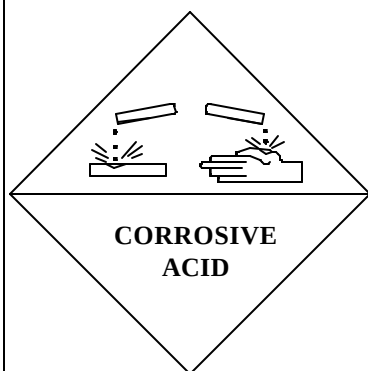
WARNING: Failure to observe these instructions can cause machine damage and possible personal injury to machine operator.

- **NEVER** spray machine with water.
- **NEVER** allow battery charging plugs to get wet. Battery charging plugs will short out if wet.
- **NEVER** operate machine when charger is plugged in.
- **NEVER** store machine near furnaces, boilers or flame which may damage machine.
- **NEVER** store any item on the machine.
- **ALWAYS** protect machine from freezing temperatures.

SAVE THESE INSTRUCTIONS

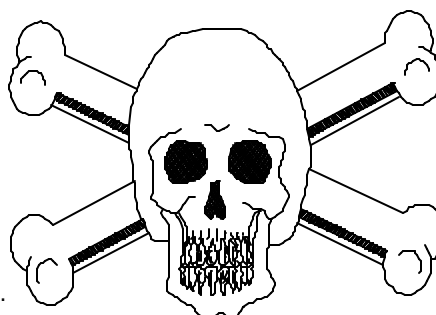


BATTERY INSTALLATION INSTRUCTIONS



WET STORAGE BATTERY

- Contains ACID, Avoid Contact.
- Antidote: EYES - Flush with water 15 minutes.
- Internal - Drink water or milk. Follow with Milk of Magnesia, beaten egg or vegetable oil.
- Call Physician.



POISON / DANGER
CAUSES SEVERE BURNS

WARNING

Read Service Manual before installing batteries or using Charger. Failure to observe the following instructions may result in damage to the machine or injury to operator or bystanders.

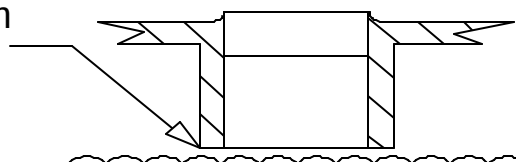
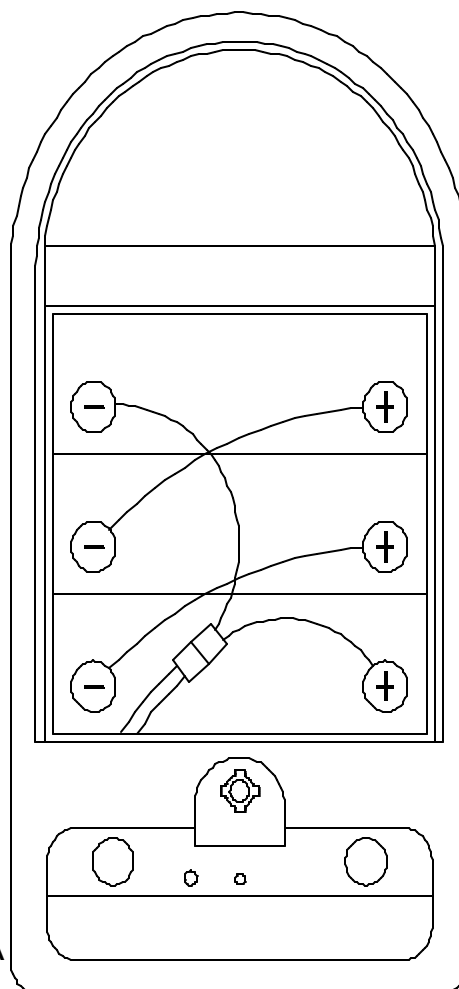
BATTERY INSTALLATION INSTRUCTIONS

- Only trained personnel should install batteries.
- Batteries are heavy use two (2) people to install.
- Wear eye protection and protective clothing.
- Turn OFF all machine switches.
- Connect batteries as shown to the right (there is also a decal in the battery compartment with this picture). Machine will not turn on if batteries are connected improperly.
- Do not lay anything on top of batteries.
- Disconnect batteries before performing any service or repairs.

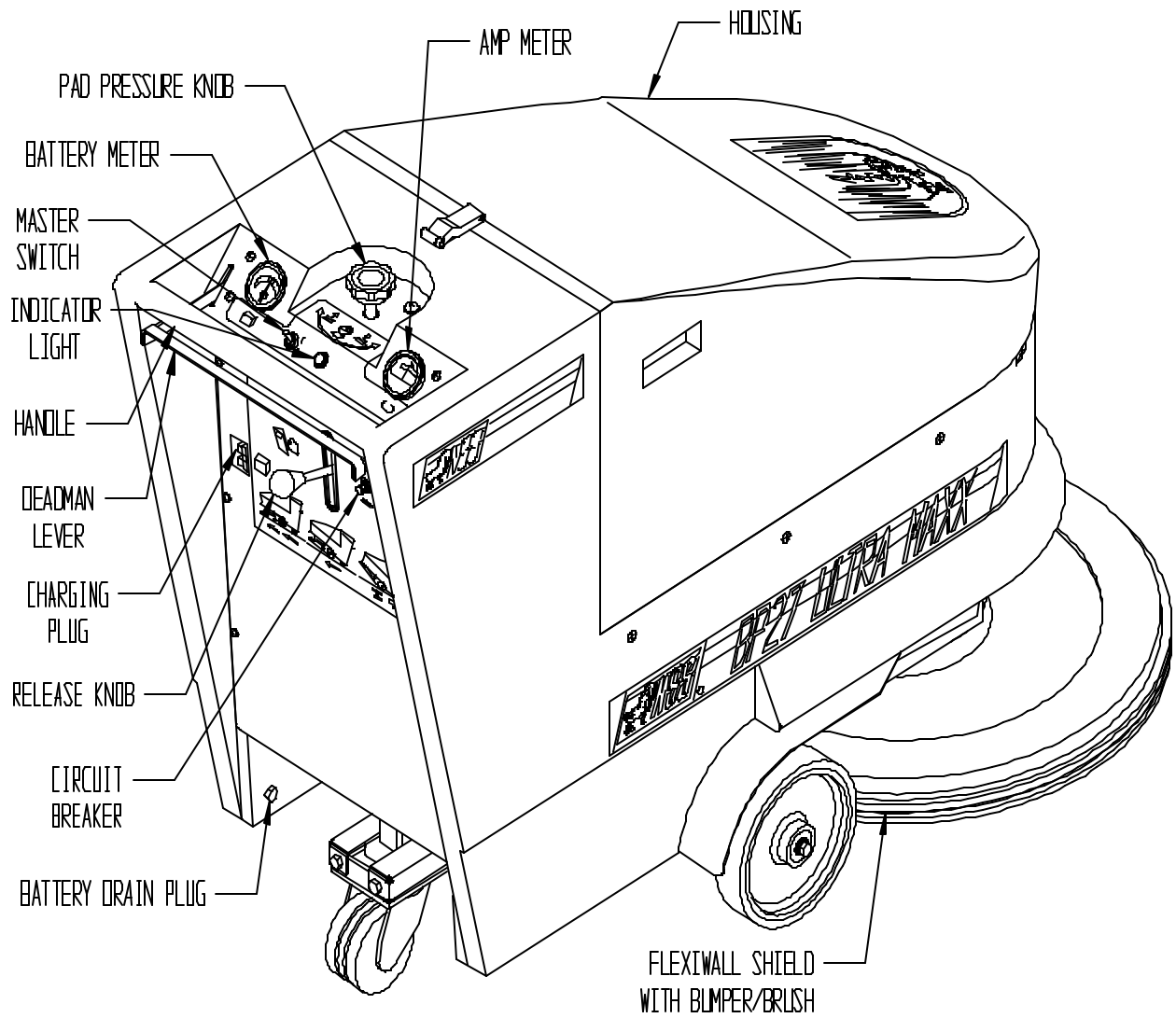
CHARGING INSTRUCTIONS

- Read instructions on charger.
- Use only 36 volt charger for 27BP Ultra Maxx.
- BEFORE charging check to insure battery water level covers battery plates.
- Charge in well ventilated area.
- EXPLOSIVE GAS - DO NOT SMOKE - STRIKE A MATCH OR CAUSE A SPARK DURING CHARGING.

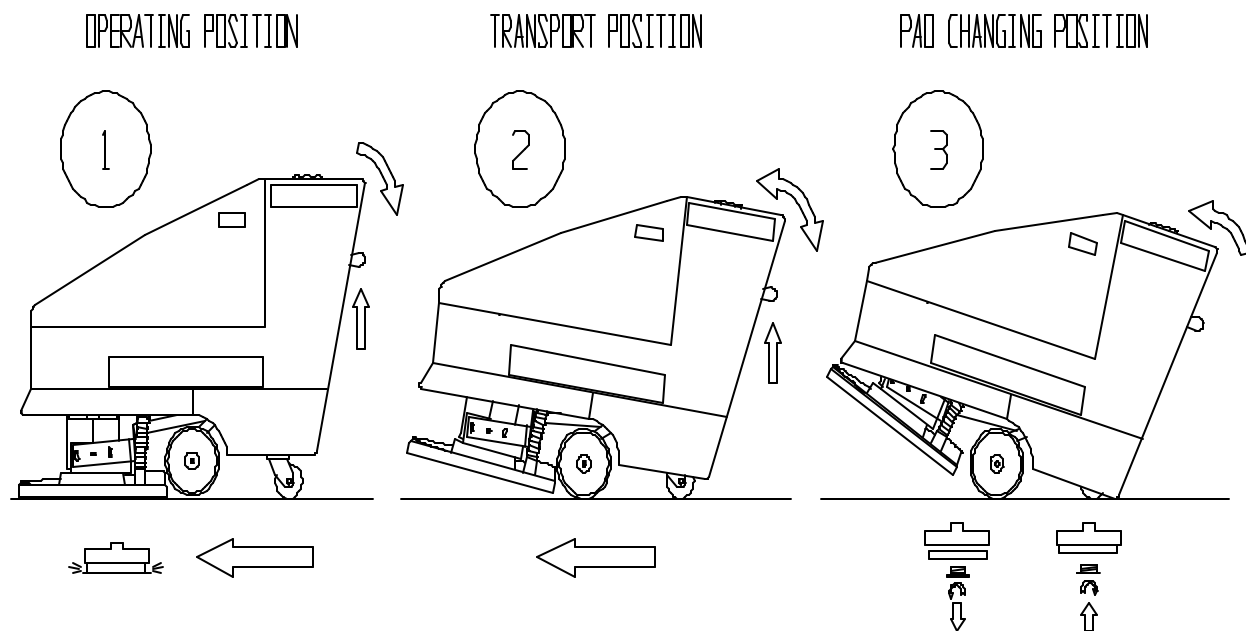
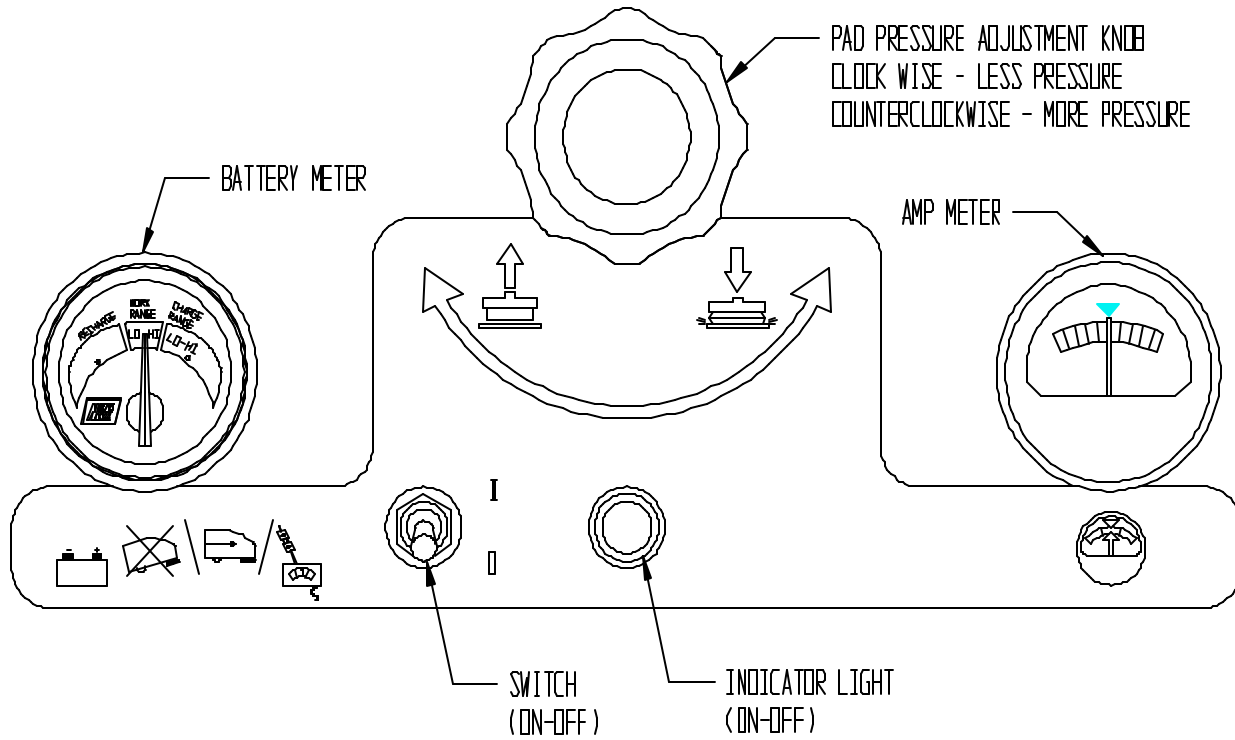
AFTER charging-if needed-fill battery to bottom of fill hole with distilled water.
DO NOT OVER FILL. Battery and machine damage may result. Wipe any acid from top of batteries clean with soap solution.



FEATURES



CONTROLS



INSTRUCTIONS

Before operating and/or attaching/detaching the pads, you must read these instructions:

- The machine can be lowered in the back, which raises up the front for ease of transportation and pad attachment / detachment.
- The machine arrives in Position No. 1 (the operating position). To lower the back of the machine to Position No. 3 (the pad changing position), hold operator handle with one hand and move the Release Knob up with other hand. Lower the machine slowly. Let go of Release Knob after machine begins to lower. The machine will stop in Position No. 2. Move Release Knob up again and lower the machine slowly to floor (Position No. 3). Pad can now be easily attached/detached.
- To raise machine to Position No. 2 (the transport position), lift up on Operator handle with both hands. The machine will stop in Position No. 2. The machine can now be transported.
- To raise the machine back to Position No. 1, lift up on Operator handle with one hand and Release Knob up with the other hand. Let go of Release Knob after machine starts to raise up. The machine will stop in Position No. 1.
- After attaching a new pad and placing machine in Operating position, adjust Pad Pressure Knob until the arrow (Below Left) points to the Release Knob.
- Push machine forward when starting to avoid possible damage to the floor.
- Increase or decrease Pad Pressure as needed, after machine starts.

Pad Installation

Remove the pad that is supplied in the battery compartment of the machine. Remove the center hole of the pad and step on the center of the pad to compress the edges around the center hole. This will allow easier installation of the pad holding cup.

With the machine in the pad changing position, No. 3, carefully center the pad on the driver. Place pad grabber in the center hole of the pad. Holding the pad grabber, turn the pad driver clockwise until the pad cup is tight and stops turning.

Caution: Pads **must** be installed concentric (evenly aligned) with the outside edge of the pad driver. Failure to follow these precautions will cause excessive machine vibration, a reduction in pad life and produce unsatisfactory burnishing results. **Failure to install the pad grabber tightly may allow the pad to be thrown from the driver. Never operate the machine without a Flexiwall Shield in position over the pad.**

Setting Pad Pressure

Pad pressure relates to buffing performance. Too much pad pressure will give uneven results and may cause circuit breaker to blow. Too light pad pressure will also give poor results and no contact with the floor. New pads are manufactured in different thickness; however, ALL pads will thin down during use and require periodic adjustment of pad. Therefore, follow procedure below:

- **ALWAYS Start with ALL** pad pressure **OFF** the floor. Increase pad pressure on the floor in small increments to prevent damage to the floor.
CAUTION: Too much pad pressure may permanently damage floor.
- The adjustment knob is a simple method of setting the pad pressure based on the thickness of the pad.
- To increase pad pressure, turn the knob counter clockwise.
- To decrease pad pressure, turn the knob clockwise.
- If the circuit breaker blows on the machine, immediately reduce pad pressure by one full turn or more on the adjustment knob clockwise. Reset circuit breaker and try machine.
NEW PADS - Always **decrease** pad pressure three turns after installing a new pad. Move machine forward while starting machine and fine tune operating amps. Failure to decrease pad pressure can cause an amp overload, blowing machine circuit breaker.

OPERATION

What Floor System Works Best With The Ultra Maxx 27BP.

Dry polishing or burnishing works best with the Ultra Maxx 27BP. Use mop on restorers rather than spray buff systems to restore the shine. Spray buffing is time consuming, uses more pads because they become loaded with floor finish, and can cause overloading of the machine's circuit breaker.

HOW THE Ultra Maxx 27BP WORKS

The Ultra Maxx 27BP utilizes a 3 HP permanent magnet motor to drive the 27" pad. The pad pressure is adjustable by turning a knob on the top of the machine, which will either increase or decrease the pad pressure. The level of pad pressure is indicated on the dial on the right-hand side of the control panel. The pad is adjusted properly when the arrow on average stays in or on the green arrow indicating proper amps. Due to imperfections in the floor, the amps will change slightly. Periodic adjustment may be necessary to keep the dial running in the green. Too much pad pressure (meter pointing in the red) may cause the circuit breaker to disconnect the circuit to the motor. If this happens, reduce the pad pressure, push the black button that says "70" and continue running the machine.

To Begin Operation

Make sure that the correct pad (7/8" to 1") x 27" has been properly installed on the pad driver with pad grabber and ring in place. You are now ready to run the machine.

WARNING: MACHINE MUST BE MOVING AT ALL TIMES WHEN PAD IS ROTATING OR FLOOR MAY BE DAMAGED.

Turn the master switch to "I", check the level of battery work range (put machine on "charge" if not in the high range). Push the machine forward slightly and squeeze the deadman switch lever to activate pad driving motor. With the machine moving forward, watch the amp meter for the average needle position on the meter. Adjust the black knob in the center of the control panel counter clockwise to increase the pad pressure. It will move the amp indicator needle more toward the right, or the red area. Adjust the knob clockwise to decrease the pad pressure, decreasing the amps which moves the needle to the left. Adjust until the amp meter needle averages in the area of the green arrow, indicating proper amps.

WARNING: NEVER OPERATE MACHINE WITH THE NEEDLE IN THE RED AREA OF THE METER, OR DAMAGE TO THE MACHINE FROM OVERLOAD MAY RESULT.

Floors that have high or low spots will cause the amp meter to enter into the red area occasionally. This is to be expected and will cause no harm to the machine. If you operate the machine continuously in the red area, the circuit breaker, in the rear panel, can and will blow, indicating too much pad pressure or load. Push the button to reset, decrease pad pressure by 2 or 3 turns or more on the adjustment knob, change or turn the pad; otherwise, damage to the machine will result. Operating the machine with higher than recommended pad pressure in the red area will shorten the operating time per battery charge. Maximum operating time can be achieved by adjusting pad pressure throughout the buffing cycle.

Battery Meter Gauge

Turn the switch to the "I" position. Check to see that light near switch is lit. With master switch on, check battery meter for charge indication. If needle is in the red area on the left side, marked "recharge", the batteries are too low to operate and should be recharged. The middle, green area, indicates whether or not the batteries are in the high or low range. The right side of the gauge indicates (when the battery charger is connected and charging and switch is on) the level of the charge in the batteries, whether high, low or in between. When needle is in the far right, red area, shown as high, charging of the batteries is complete.

MAINTENANCE

MOTOR - The motor used on the Ultra Maxx 27BP requires very little service. Using compressed air, blow the entire motor every 60 days. Pay close attention to the carbon brush area. Accumulated dirt will cause excessive carbon brush arcing, reduced brush life, poor machine performance and possible damage.

CARBON BRUSHES - Inspect every 1000 hours of use for uneven wear and pitting. Replace carbon brushes when they have worn to a length of 3/8". Failure to replace carbon brushes will cause poor machine performance and possible motor damage.

WHEELS/CASTER - Every 30 days, lubricate the wheels/caster with an industrial grade bearing grease. Failure to lubricate wheels/caster will cause the machine to maneuver with difficulty and premature failure of the wheels/caster and bearing.

PAD PRESSURE/PIVOT LINKAGE - Every 60 days, inspect ALL connections in the pad pressure adjustment and pivot linkage assembly. All linkage must move freely and smoothly to ensure proper machine operation. Lubricate each part as required with small amount of grease such as Lubriplate. Failure to lubricate these components may make it impossible to adjust the pad pressure or place the machine into all three positions.

DUST CONTROL SYSTEM - Weekly, check the vac hose for connection to the Flexiwall Shield and filter bag. When filter bag is more than one-half (1/2) full, dispose of old bag and replace with a new bag. Inspect flexiwall Shield for dents, cracks and wear. A damaged Flexiwall Shield will greatly reduce the burnishing and dust control capabilities. Dirt build up on the brush should be removed.

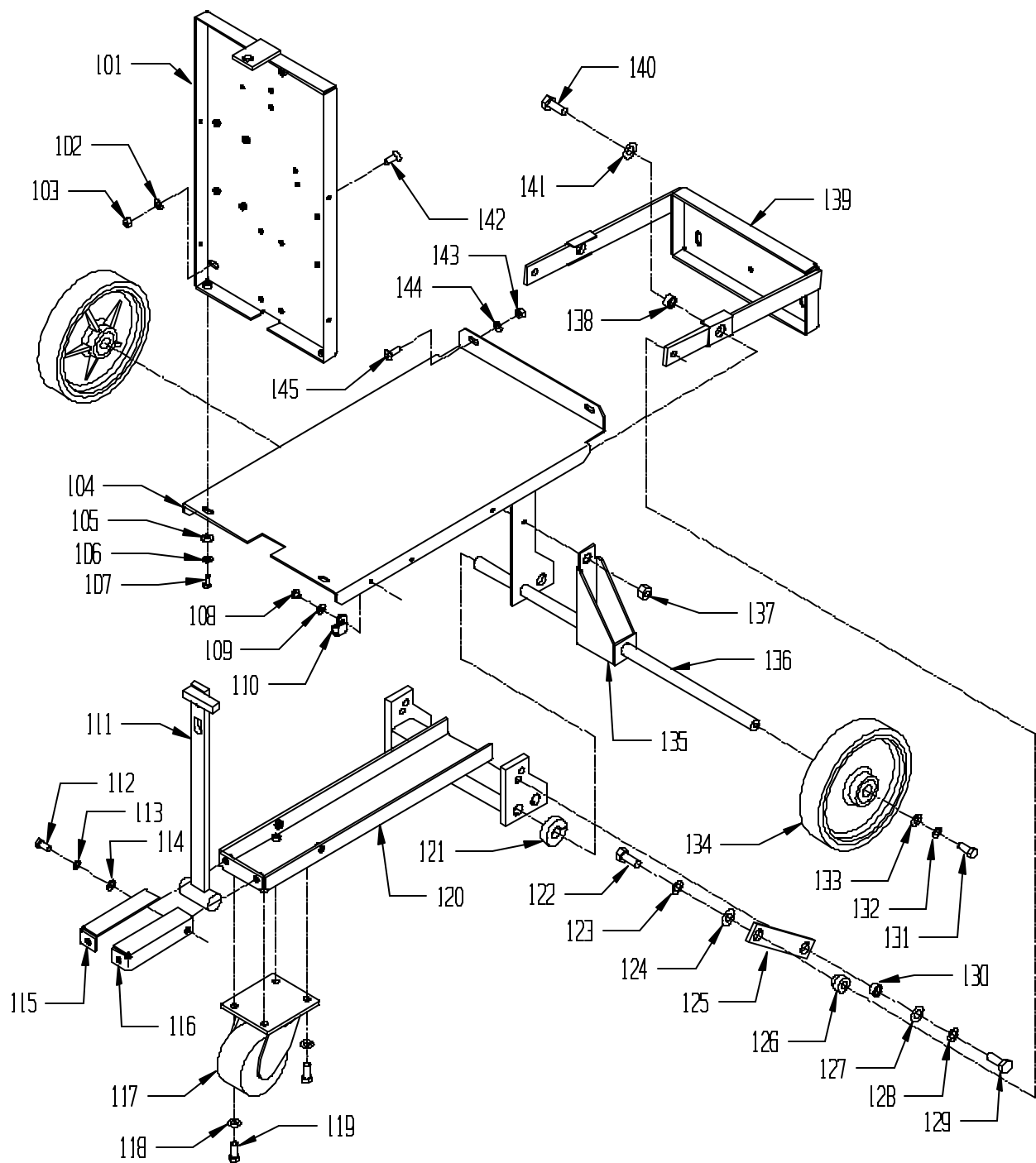
POLYETHYLENE BODY - Weekly, clean with aerosol cleaner, "Armorall" type protector or wipe with a damp cloth. Never Spray machine with water.

NOTES:

BASE ASSEMBLY

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
101	64-9-111-3	CONTROL FRAME WELDMENT	1
102	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	2
103	91-2-145-0	5/16-18 HEX NUT WITH NY-LOK INSERT	2
104	64-9-078-3	BASE ASSEMBLY	1
105	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	2
106	91-2-152-0	5/16 SPLIT LOCK WASHER	2
107	91-2-164-0	5/16-18 X 3/4 HEX BOLT	2
108	91-2-100-0	1/4-20 X 5/8 TRUSS HEAD PHILLIPS MACHINE SCREW	2
109	91-2-097-0	1/4 EXTERNAL STAR LOCK WASHER	2
110	23-9-291-1	HOSE/WIRE TIE DOWN	2
111	64-9-070-1	CATCH ASSEMBLY	1
112	91-2-164-0	5/16-18 X 3/4 HEX BOLT	4
113	91-2-152-0	5/16 SPLIT LOCK WASHER	4
114	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	4
115	44-9-534-3	LEFT SUPPORT BRACKET	1
116	44-9-533-3	RIGHT SUPPORT BRACKET	1
117	26-9-258-1	4" GRAY SOFT CASTER COMPLETE	1
	44-9-049-1	WHEEL/AXLE ASSEMBLY REPLACEMENT 4" CASTER	1
118	91-2-218-0	13/32 I.D. X 13/16 O.D. X .051/.080 THICK SAE FLAT WASHER (3/8)	4
119	91-2-226-0	3/8-16 X 1 HEX BOLT	4
120	44-9-520-3	FRAME ASSEMBLY	1
121	64-9-020-1	SHAFT COLLAR LEG SUPPORT	2
122	91-2-254-0	1/2-13 X 1 1/4 HEX BOLT	2
123	91-2-242-0	1/2 SPLIT LOCK WASHER	2
124	91-2-245-0	17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2)	2
125	64-9-069-1	LIFT ARM	2
126	44-9-514-6	LIFT ARM SPACER	2
127	91-2-245-0	17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2)	2
128	91-2-242-0	1/2 SPLIT LOCK WASHER	2
129	91-2-254-0	1/2-13 X 1 1/4 HEX BOLT	2
130	44-9-279-6	BUSHING, PIVOT	2
131	91-2-226-0	3/8-16 X 1 HEX BOLT	2
132	91-2-210-0	3/8 SPLIT LOCK WASHER	2
133	91-2-218-0	13/32 I.D. X 13/16 O.D. X .051/.080 THICK SAE FLAT WASHER (3/8)	2
134	44-9-051-1	WHEEL - 8"	2
	44-9-048-1	WHEEL BEARING (TWO REQUIRED PER WHEEL)	2
135	64-9-221-1	BASE ASSEMBLY LEG EXTENDER	2
136	64-9-222-1	AXLE, BASE PLATED	1
137	91-2-249-5	1/2-13 THIN HEX NUT WITH N-LOK INSERT	2
138	44-9-279-6	BUSHING, PIVOT	2
139	44-9-516-3	PIVOT WELDMENT	1
140	91-2-254-0	1/2-13 X 1 1/4 HEX BOLT	2
141	91-2-245-0	17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2)	2
142	91-2-147-0	5/16-18 X 1 FLAT HEAD PHILLIPS MACHINE SCREW	2
143	91-2-145-0	5/16-18 HEX NUT WITH NY-LOK INSERT	2
144	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	2
145	91-2-147-0	5/16-18 X 1 FLAT HEAD PHILLIPS MACHINE SCREW	2

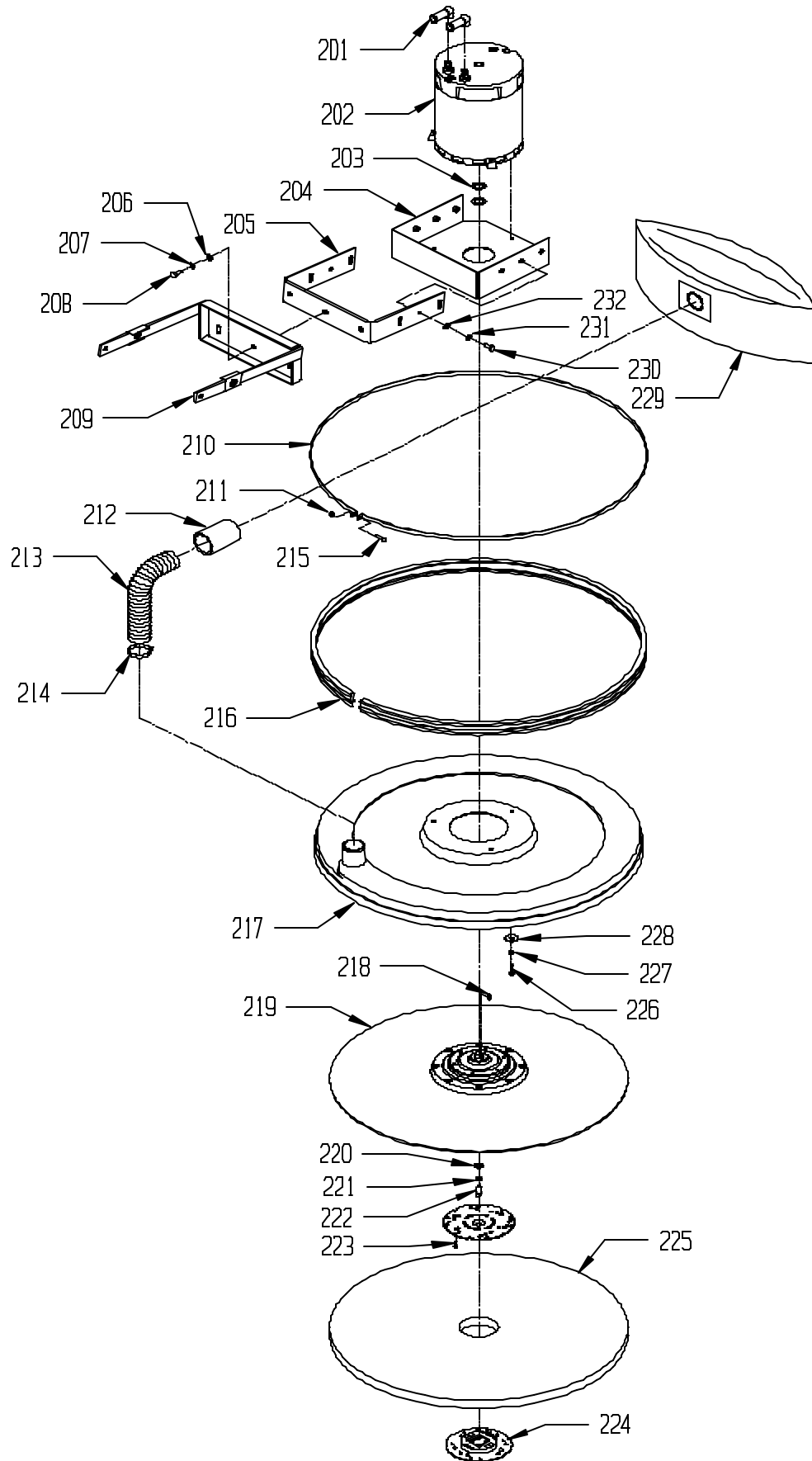
BASE ASSEMBLY



SHIELD AND PAD DRIVER ASSEMBLY

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
201	64-9-205-1	RUBBER STUD TERMINAL BOOT	2
202	64-9-225-1	MOTOR 36 VOLT, 1500 RPM, 3 HP	1
203	52-9-341-1	1 1/4 X .770 X .082 WASHER	2
204	44-9-266-3	MOTOR MOUNT	1
205	44-9-261-3	FORK	1
206	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	3
207	91-2-152-0	5/16 SPLIT LOCK WASHER	3
208	91-2-164-0	5/16-18 X 3/4 HEX BOLT	3
209	44-9-516-3	PIVOT WELDMENT	1
210	65-9-255-2	BUMPER STRAP 27	1
211	91-2-035-0	10-24 HEX NUT WITH NY-LOK INSERT	1
212	44-9-553-1	END CUFF - 2"	1
213	44-9-554-1	HOSE, 2" DIAMETER X 3 FEET LONG	1
214	44-9-544-1	HOSE CLAMP, 1 9/16" - 2 1/2" DIAMETER	1
215	91-2-045-0	10-24 X 1 ROUND HEAD PHILLIPS MACHINE SCREW	1
216	65-9-253-1	BUMPER/BRUSH 27	1
217	65-9-137-9	FLEXIWALL SHIELD 27 ASSEMBLY	1
218	44-9-289-1	MOTOR KEY	1
219	65-9-030-8	PAD DRIVER 27 ASSEMBLY	1
220	52-9-354-1	MOTOR WASHER 1" O.D., STAINLESS	1
221	91-2-152-0	5/16 SPLIT LOCK WASHER	1
222	91-2-149-0	5/16-24 X 7/8 HEX BOLT	1
223	91-2-081-0	10 X 1/2 SHEET METAL SCREW	3
224	59-9-072-1	SPRING CLIP PAD HOLDER SET	1
	59-9-060-1	BIG MOUTH PAD GRABBER ASSEMBLY	1
	59-9-061-1	BIG MOUTH - MALE THREAD PORTION	1
225	65-9-270-1	27" LUST LITE BURN PAD - CASE (5)	1
226	91-2-098-0	1/4-20 X 1 SOCKET HEAD CAP SCREW	3
227	91-2-088-0	1/4 SPLIT LOCK WASHER	3
228	91-2-095-0	1/4 FENDER WASHER	3
229	57-9-609-9	PAPER BAG - 6 PACK	1
230	91-2-164-0	5/16-18 X 3/4 HEX BOLT	6
231	91-2-152-0	5/16 SPLIT LOCK WASHER	6
232	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	6

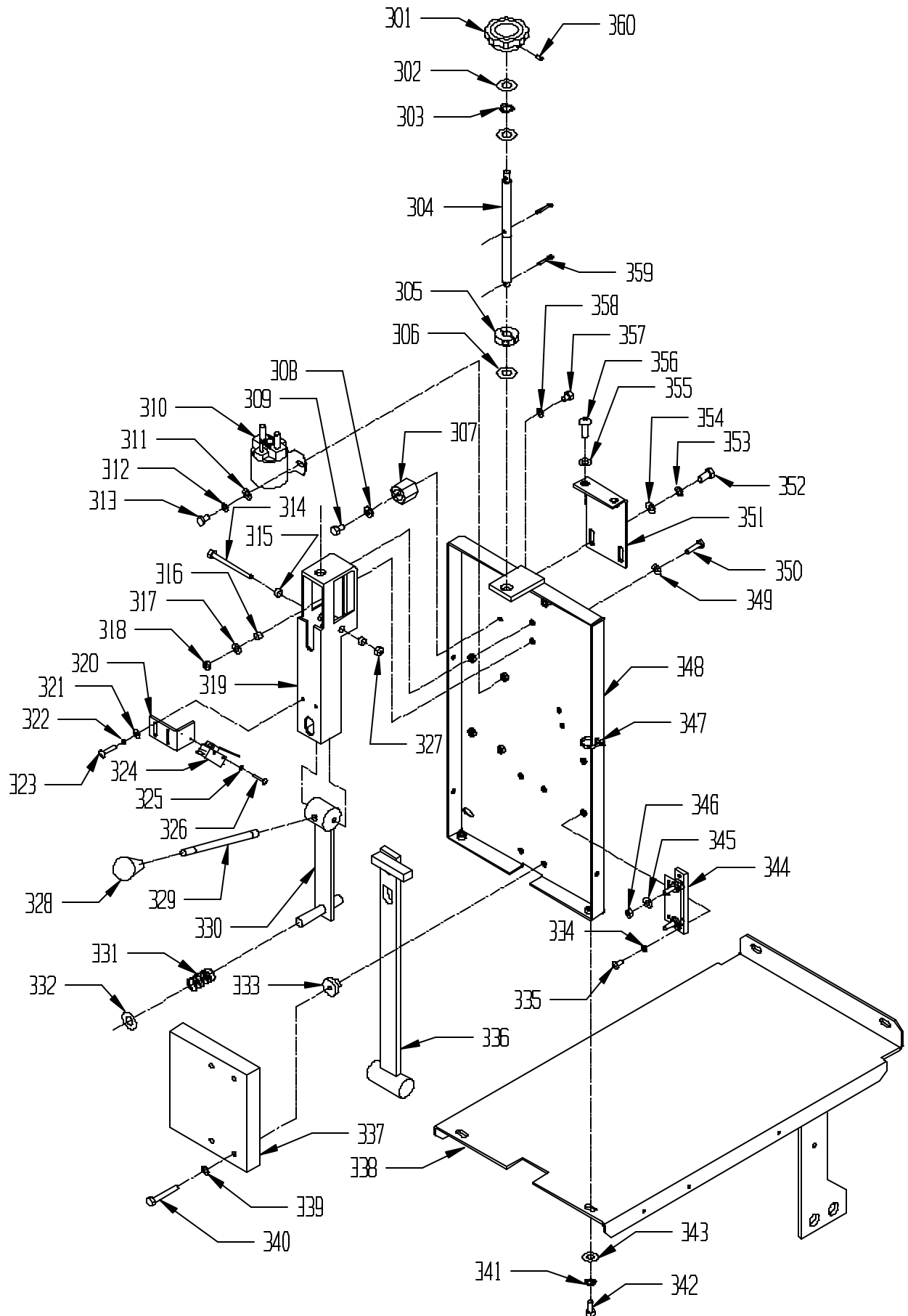
SHIELD AND PAD DRIVER ASSEMBLY



CONTROL FRAME ASSEMBLY

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
301	44-9-052-1	LOAD ADJUST KNOB (INCLUDES SET SCREW)	1
302	91-2-245-0	17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2)	2
303	52-9-457-1	1/2" BOWED WASHER	1
304	64-9-061-1	ADJUSTMENT ROD	1
305	64-9-062-1	ADJUSTMENT ROD COLLAR	1
306	91-2-218-0	13/32 I.D. X 13/16 O.D. X .051/.080 THICK SAE FLAT WASHER (3/8)	1
307	44-9-056-1	INSULATED STANDOFF	1
308	91-2-097-1	1/4 EXTERNAL STAR LOCK WASHER	1
309	91-2-121-0	1/4-20 X 5/8 HEX BOLT	1
310	44-9-101-1	SOLENOID, 36 VOLT	1
311	91-2-093-0	9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4)	2
312	91-2-088-0	1/4 SPLIT LOCK WASHER	2
313	91-2-117-0	1/4-20 X 1/2 HEX BOLT	2
314	44-9-092-1	1/4-20 X 2 1/2 HEX BOLT GR. 8	1
315	27-9-128-6	BUSHING SPACER	2
316	27-9-128-6	BUSHING SPACER	2
317	91-2-093-0	9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4)	2
318	91-2-090-0	1/4-20 HEX NUT WITH NY-LOK INSERT	2
319	64-9-060-1	ADJUSTMENT BRACKET WELDMENT	1
320	44-9-532-6	SWITCH BRACKET	1
321	91-2-037-0	7/32 I.D. X 1/2 O.D. X .032/.065 THICK SAE FLAT WASHER (10)	2
322	91-2-032-0	10 SPLIT LOCK WASHER	2
323	91-2-046-0	10-24 X 1 1/4 ROUND HEAD PHILLIPS MACHINE SCREW	2
324	44-9-107-1	SNAP SWITCH	1
325	91-2-013-0	#6 EXTERNAL STAR LOCK WASHER	2
326	91-2-009-0	6-32 X 7/8 PAN HEAD PHILLIPS MACHINE SCREW	2
327	91-2-090-0	1/4-20 HEX NUT WITH NY-LOK INSERT	2
328	44-9-060-1	KNOB, RAISE/LOWER ROD	1
329	64-9-010-1	LATCH HANDLE	1
330	64-9-009-3	LATCH ASSEMBLY	1
331	44-9-063-1	COMPRESSION SPRING	1
332	91-2-245-0	17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2)	2
333	44-9-535-6	SPACER GUIDE	4
334	91-2-032-0	#10 SPLIT LOCK WASHER	2
335	91-2-041-0	10-24 X 1/2 ROUND HEAD PHILLIPS MACHINE SCREW	2
336	64-9-070-1	CATCH ASSEMBLY	1
337	64-9-227-3	COUNTERPOISE	1
338	64-9-078-3	BASE ASSEMBLY	1
339	91-2-088-0	1/4 SPLIT LOCK WASHER	4
340	50-9-430-1	1/4-20 X 2 HEX BOLT	4
341	91-2-152-0	5/16 SPLIT LOCK WASHER	2
342	91-2-164-0	5/16-18 X 3/4 HEX BOLT	2
343	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	2
344	44-9-103-1	SHUNT	1
345	91-2-097-1	1/4 EXTERNAL STAR LOCK WASHER	2
346	91-2-092-0	1/4-20 HEX NUT	2
347	27-9-267-1	WIRE TIE 5 1/2" LONG	6
348	64-9-111-3	CONTROL FRAME WELDMENT	1
349	91-2-097-1	1/4 EXTERNAL STAR LOCK WASHER	2
350	91-2-127-0	1/4-20 X 1 HEX BOLT	2
351	44-9-280-3	TOP SUPPORT BRACKET	1
352	91-2-164-0	5/16-18 X 3/4 HEX BOLT	2
353	91-2-152-0	5/16 SPLIT LOCK WASHER	2
354	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	2
355	91-2-140-0	3/8 I.D. X 7/8 O.D. X .064/.104 THICK WROUGHT WASHER (5/16)	2
356	91-2-148-0	5/16-18 X 1 ROUND HEAD PHILLIPS MACHINE SCREW	2
357	91-2-116-0	1/4-20 X 3/8 HEX BOLT	1
358	91-2-088-0	1/4 SPLIT LOCK WASHER	4
359	91-2-031-0	COTTER PIN 1/8 X 3/4	2
360	91-2-064-0	10-32 X 1/4 SET SCREW - CUP POINT	1

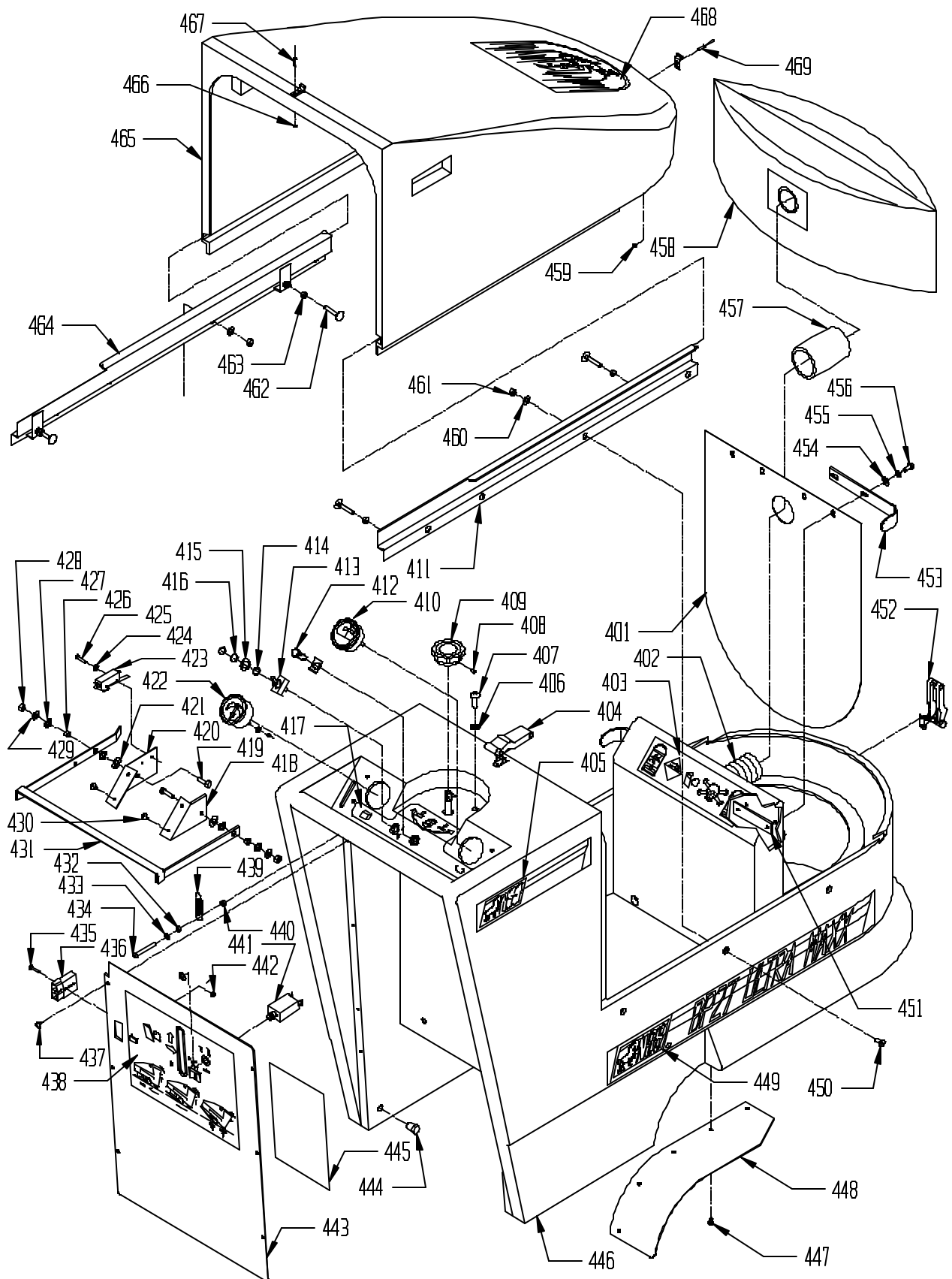
CONTROL FRAME ASSEMBLY



HOUSING ASSEMBLY

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
401	64-9-226-1	RUBBER MOTOR COVER	1
402	44-9-554-1	HOSE 2" DIAMETER X 3 FEET LONG	1
403	64-9-176-1	BATTERY WARNING LABEL	1
404	64-9-117-1	SOFT DRAW LATCH WITH CONCEALED KEEPER	1
405	64-9-251-1	BP 27 ULTRA MAXX SIDE DECAL	2
406	91-2-140-0	3/8 I.D. X 7/8 O.D. X .064/.104 THICK WROUGHT WASHER (5/16)	2
407	91-2-148-0	5/16-18 X 1 ROUND HEAD PHILLIPS MACHINE SCREW	2
408	91-2-064-0	10-32 X 1/4 SET SCREW - CUP POINT	1
409	44-9-052-1	LOAD ADJUST KNOB (INCLUDES SET SCREW)	1
410	44-9-104-1	AMP METER	1
411	64-9-113-1	SLIDE RAIL, RIGHT	1
412	44-9-109-1	INDICATOR LIGHT - RED LENS/48VDC	1
413	44-9-110-1	TOGGLE SWITCH, MOTOR	1
414	07-9-882-1	5/8 HEX NUT	1
415	10-9-987-1	STAINLESS FLAT WASHER	1
416	06-9-185-1	LOCK WASHER	1
417	64-9-029-1	DASH PANEL DECAL	1
418	44-9-290-1	SWITCH PLATE - RIGHT	1
419	91-2-127-0	1/4-20 X 1 HEX BOLT	2
420	44-9-288-1	SWITCH PLATE - LEFT	1
421	91-2-218-0	13/32 I.D. X 13/16 O.D. X .051/.080 THICK SAE FLAT WASHER (3/8)	2
422	44-9-105-1	BATTERY METER 36VOLT	1
423	44-9-107-1	SNAP SWITCH	1
424	91-2-004-0	#6 INTERNAL STAR LOCK WASHER	2
425	91-2-009-0	6-32 X 7/8 PAN HEAD PHILLIPS MACHINE SCREW	2
426	27-9-128-6	BUSHING SPACER	2
427	44-9-062-1	3/8 SPRING WASHER	4
428	91-2-090-0	1/4-20 HEX NUT WITH NY-LOK INSERT	2
429	91-2-093-0	9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4)	2
430	91-2-051-0	10-24 X 1/2 TRUSS HEAD PHILLIPS MACHINE SCREW	4
431	44-9-304-6	HANDLE	1
432	91-2-036-0	10-24 HEX NUT WITH STAR LOCK WASHER	1
433	91-2-037-0	7/32 I.D. X 1/2 O.D. X .032/.065 THICK SAE FLAT WASHER (10)	1
434	91-2-048-0	10-24 X 1 3/4 ROUND HEAD PHILLIPS MACHINE SCREW	1
435	91-2-009-0	6-32 X 7/8 PAN HEAD PHILLIPS MACHINE SCREW	2
436	44-9-190-1	CHARGER PLUG ONLY - GRAY 36 VOLT	1
	64-9-082-1	WIRE ASSEMBLY, ANDERSON TO SOLENOID/STANDOFF 36 VOLT	1
437	91-2-079-0	#10 X 5/8 PAN HEAD PHILLIPS SHEET METAL SCREW	8
438	64-9-109-1	LABEL PAD POSITION	1
439	44-9-064-1	EXTENSION SPRING	1
440	91-2-035-0	10-24 HEX NUT WITH NY-LOK INSERT	1
441	44-9-070-1	CIRCUIT BREAKER - 70 AMP/ETA - 2500 BP	1
442	91-2-002-0	6-32 HEX NUT WITH STAR LOCK WASHER	2
443	64-9-027-3	REAR COVER PANEL	1
444	64-9-095-1	1/4 MIPT PLUG	2
445	64-9-189-1	WIRING DIAGRAM DECAL	1
446	64-9-001-1	HOUSING WITH SLIDE RAILS	1
447	91-2-079-0	#10 X 5/8 PAN HEAD PHILLIPS SHEET METAL SCREW	10
448	64-9-224-3	RIGHT FENDER	1
	64-9-223-3	LEFT FENDER	1
449	64-9-252-1	BP 27 ULTRA MAXX SIDE LABEL	2
450	91-2-103-7	1/4-20 X 5/8 FLAT HEAD PHILLIPS HEAD PHILLIPS MACHINE SCREW	6
451	64-9-121-1	TAPPING PLATE	2
452	64-9-117-1	SOFT DRAW LATCH WITH CONCEALED KEEPER	1
453	64-9-119-3	HOOD STOP / SUPPORT BRACKET	2
454	91-2-093-0	9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4)	4
455	91-2-088-0	1/4 SPLIT LOCK WASHER	4
456	91-2-127-0	1/4-20 X 1 HEX BOLT	4
457	44-9-553-1	END CUFF - 2"	1
458	57-9-609-9	PAPER BAG - 6 PACK	1
459	59-9-032-1	WASHER, 5/32 I.D. STEEL	4
460	91-2-093-0	9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4)	6
461	91-2-090-0	1/4-20 HEX NUT WITH NY-LOK INSERT	6
462	91-2-103-9	1/4-20 X 1 1/2 ELEVATOR BOLT - ZINC PLATED	4
463	91-2-092-0	1/4-20 HEX NUT	4
464	64-9-114-1	SLIDE RAIL, LEFT	1
465	64-9-074-1	HOUSING, HOOD ONLY	1
466	59-9-032-1	WASHER, 5/32 I.D. STEEL	4
467	59-9-031-1	POP RIVET, 5/32 I.D.	4
468	64-9-035-1	HOOD DECAL	1
469	59-9-031-1	POP RIVET, 5/32 I.D.	4

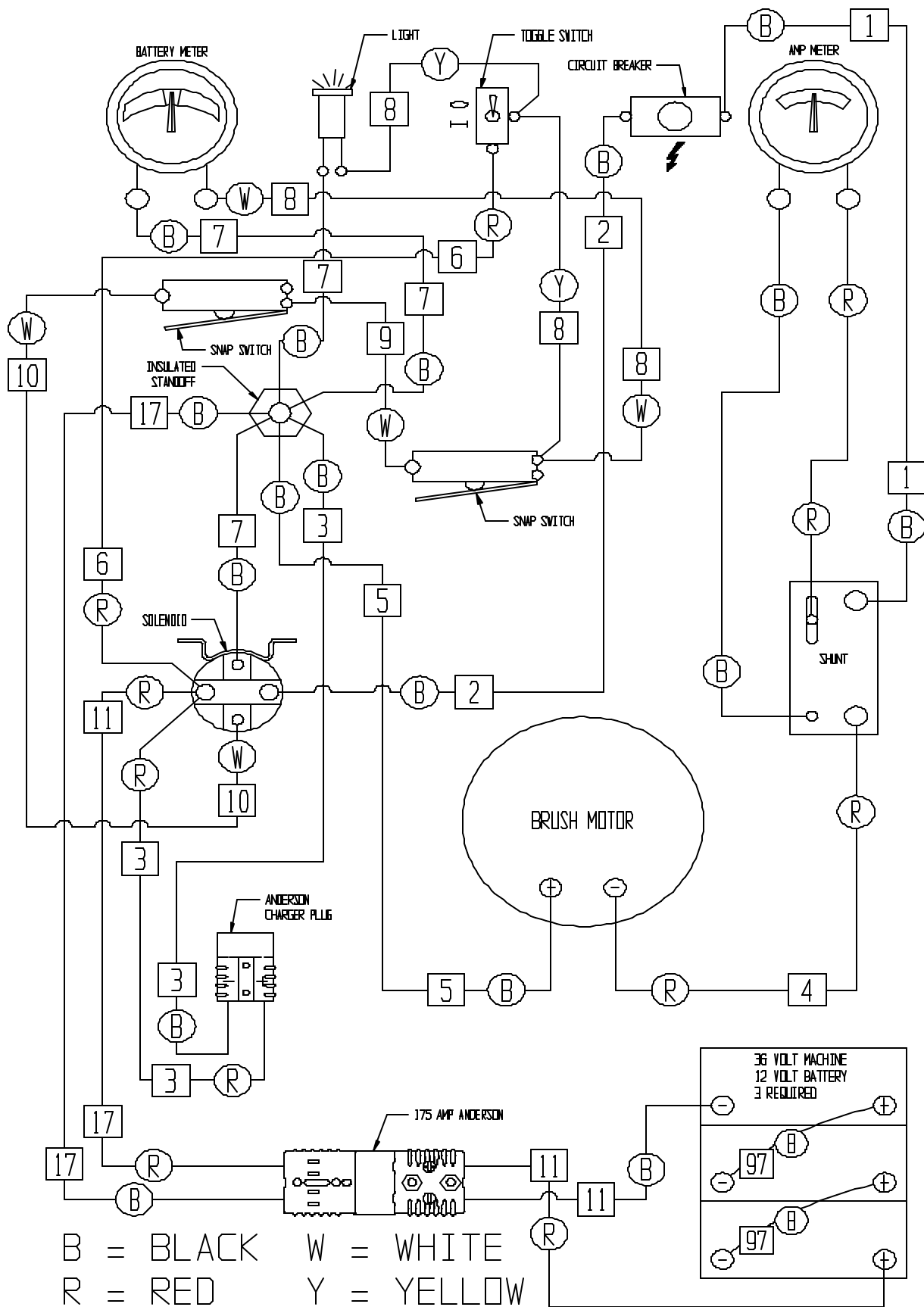
HOUSING ASSEMBLY



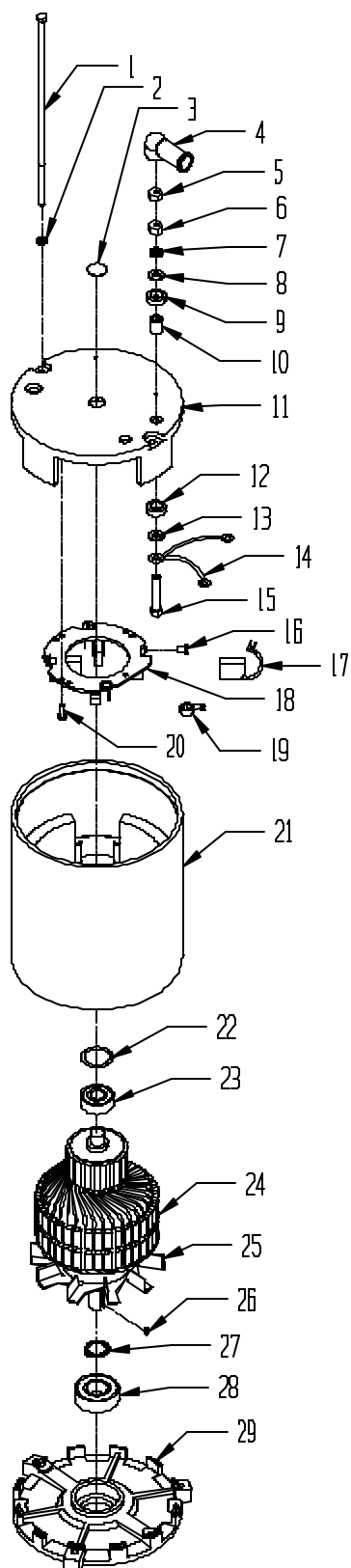
WIRING DIAGRAM

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	64-9-080-1	WIRE ASSEMBLY, BREAKER TO SHUNT	1
2	64-9-081-1	WIRE ASSEMBLY, SOLENOID TO BREAKER	1
3	64-9-082-1	WIRE ASSEMBLY, ANDERSON TO SOLENOID / STANDOFF	1
4	64-9-083-1	WIRE ASSEMBLY, SHUNT TO MOTOR	1
5	64-9-084-1	WIRE ASSEMBLY, MOTOR TO STANDOFF	1
6	64-9-085-1	WIRE ASSEMBLY, SOLENOID TO MAIN SWITCH	1
7	64-9-086-1	WIRE ASSEMBLY, SOLENOID/LIGHT/VOLT METER TO STANDOFF	1
8	64-9-087-1	WIRE ASSEMBLY, SAFETY SWITCH TO VOLT METER / MAIN SWITCH TO LIGHT	1
9	64-9-088-1	WIRE ASSEMBLY, HANDLE SWITCH TO SAFETY SWITCH	1
10	64-9-089-1	WIRE ASSEMBLY, SOLENOID TO HANDLE SWITCH	1
11	64-9-182-1	WIRE ASSEMBLY, ANDERSON TO POSITIVE/NEGATIVE BATTERY	1
17	64-9-183-1	WIRE ASSEMBLY, ANDERSON TO SOLENOID/STANDOFF	1
97	23-9-198-1	BATTERY JUMPER 3/8" RING #97	2
—	27-9-267-1	WIRE TIE, 5 1/2" LONG	6
—	44-9-056-1	INSULATED STANDOFF	1
—	44-9-070-1	CIRCUIT BREAKER - 70 AMP/ETA	1
—	44-9-101-1	SOLENOID, 36 VOLT	1
—	44-9-103-1	SHUNT	1
—	44-9-104-1	AMP METER	1
—	44-9-105-1	BATTERY METER 36 VOLT	1
—	44-9-106-1	BATTERY, 205 AMP/HR, 12 VOLT	3
—	44-9-107-1	SNAP SWITCH	2
—	44-9-109-1	INDICATOR LIGHT - RED LENS/48VDC	1
—	44-9-110-1	TOGGLE SWITCH, MOTOR	1
—	44-9-190-1	CHARGER PLUG ONLY - GRAY 36 VOLT	1
—	44-9-562-1	BATTERY, 185 AMP/HR, 12 VOLT, DRY	3
—	64-9-225-1	MOTOR 36 VOLT - 1500 RPM, 3 HP	1
—	64-9-184-1	175 AMP ANDERSON WITH CONTACTS GRAY 36 VOLT	2

WIRING DIAGRAM



MOTOR



ITEM	PART NO.	DESCRIPTION	QTY.
1	64-9-228-1	1/4-20 X 9 1/2 HEX HEAD BOLT (A-100016-04)	2
2	91-2-088-0	1/4 SPLIT LOCK WASHER	2
3		PLUG (NOT AVAILABLE)	1
4	64-9-205-1	RUBBER BOOT, STUD TERMINAL	2
5	44-9-162-1	5/16-18 THIN HEX NUT, BRASS	2
6	44-9-163-1	5/16-18 HEX NUT, BRASS	2
7	91-2-152-0	5/16 SPLIT LOCK WASHER	2
8	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	2
9	44-9-164-1	INSULATION WASHER	2
10	44-9-165-1	INSULATION SPACER	2
11	44-9-166-1	TOP END BELL	1
12	44-9-164-1	INSULATION WASHER	2
13	91-2-139-0	11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16)	2
14		LEAD HARNESS ASSEMBLY (NOT AVAILABLE)	2
15	44-9-167-1	5/16-18 X 1 3/4 HEX BOLT, BRASS	2
16		10-32 X 3/8 SCREW, BRASS BINDING HEAD (NOT AVAILABLE)	4
17	44-9-169-1	CARBON BRUSH	4
18	44-9-168-1	BRUSH RING ASSEMBLY	1
19	44-9-170-1	BRUSH SPRING	4
20	91-2-074-0	10-32 X 3/8 TRUSS HEAD PHILLIPS MACHINE SCREW	2
21	64-9-229-1	COMPLETE STATOR ASSEMBLY WITH BAFFLE	1
22	53-9-344-1	THRUST WASHER	1
23	50-9-204-1	TOP BEARING	1
24	64-9-230-1	COMPLETE ARMATURE ASSEMBLY W1-9005	1
25	44-9-173-1	VENT FAN	1
26	44-9-289-1	KEY	1
27	44-9-175-1	RETAINING RING	1
28	44-9-084-1	BOTTOM BEARING	1
29	44-9-174-1	BOTTOM END BELL	1

TROUBLE SHOOTING

PROBLEM	CAUSE	SOLUTION
Pad Does Not Turn	Low Battery Charge.	Recharge Batteries.
	Loose Battery Cable.	Tighten & Clamp battery Cables.
	Circuit Breaker Has Tripped.	Reduce Pad Pressure/Change Pad Reset Breaker.
	Worn Motor Carbon Brushes.	Change Carbon Brushes.
	Pad Load Adjustment Knob Out Of Adjustment.	Adjust Knob Until Motor Will Turn On.
	Micro-switch Not Engaged.	Adjust Mounting Bracket.
Machine Pushes Hard	Worn Wheel Or Caster.	Grease Wheels Or Replace.
Uneven Floor Buffing	Worn Pad.	Change pad.
	Motor out of Alignment.	Call NSS Service Center For Repair.
Machine Vibrates	Pad Is Torn Or Not Centered.	Center pad. Change Pad. Use Correct Pad. Check Pad Driver For Damage & Replace If Necessary.
Circuit Breaker Trips	Pad Pressure Too Heavy.	Reduce Pad Pressure. Run Machine In Green Area of AMP Meter.
	Spray Buffing.	Do Not Spray Buff With BP27 ULTRA MAXX.
	Pad Rubbing On Flexiwall Shield	Realign Pad On Driver Or Replace with new pad. Check Pad size.
Short Running Time On Battery Charge	Dead Cell In Battery Excessive Pad Pressure. Incorrect Pad.	Test Batteries And Replace. Reduce Pad Pressure. Use NSS Pads Or Recommended Equivalent.
Battery Charger Does Not Turn On	Connection Not Made Between Battery Charger And Machine	Check Anderson Connecters For Proper Contact On Both Charger And Machine.
	Improper Charger Sequence.	Read Instructions On Battery Charger Or In Instruction Manual.



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