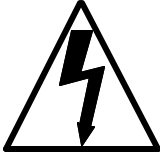
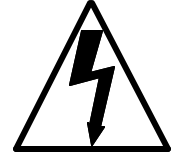


WRANGLER 20 W/D

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.

- * **NEVER** attempt to operate this machine unless you have been trained in its operation.
- * **NEVER** allow an untrained person to operate this machine.
- * Use this machine **ONLY** as described in this manual.
- * **NEVER** attempt to operate this machine if it is not working properly or has been damaged in any manner.
- * **NEVER** disconnect or modify any switch or safety device (circuit breaker) on this machine.
- * **ALWAYS** operate this machine from the rear control panel, not from the side.
- * **NEVER** drop or insert any object into any machine opening.
- * **ALWAYS** keep face, fingers, hair or any body part, or loose clothing away from any machine opening or moving part (revolving brush, pad driver, or vacuum motor).
- * **NEVER** operate this machine with any air opening blocked. Keep all air openings free of dust, lint, hair etc.
- * **NEVER** spray this machine with water or any liquids.
- * **NEVER** allow the vacuum motor or battery charging plug to get wet. The vacuum motor and battery charging plug will short out if wet.
- * **NEVER** operate this machine when battery charger is plugged in.
- * **NEVER** operate this machine in an explosive atmosphere (grain dust, flammable liquids or fumes).
- * **NEVER** use flammable liquids (gas, kerosene, solvents or thinners) to clean floor.
- * **ALWAYS** turn the brush switch **OFF** when attaching pads or brushes.
- * **NEVER** operate this machine with the splash skirt removed.
- * **NEVER** leave this machine unattended.
- * **ALWAYS** store this machine indoors in a dry, cool area.

PERSONAL INJURY AND PROPERTY DAMAGE FROM THIS MACHINE OVERTURNING, BATTERIES FALLING OUT OF THE MACHINE OR BATTERIES LEAKING ACID CAN OCCUR IF YOU DO NOT FOLLOW THESE PRECAUTIONS:

- * **ALWAYS** be sure that the ramp is secured to the vehicle before attempting to load / unload.
- * **ALWAYS** use extreme caution when operating this machine on a ramp or loading / unloading this machine into or out of a truck. Use extreme caution if the ramp is wet, oily or covered with cleaning chemicals.
- * **NEVER** turn this machine on an ramp or incline.
- * **NEVER** stop this machine on a ramp or incline.
- * **NEVER** attempt to climb a grade or operate this machine on a ramp or incline of more than 20 degrees.
- * **NEVER** park or store this machine near a dock, on ramps, near a furnace, boiler, open flame, or other high heat source.
- * **NEVER** allow this machine to freeze.
- * **NEVER** store any items on this machine.

ALL repair service must be performed by an NSS authorized distributor/service station. Use only NSS original equipment parts.

SAVE THESE INSTRUCTIONS



MACHINE INSPECTION

- * Carefully unpack the Wrangler 20 W/D, and recycle all packing materials.
- * Inspect the machine for damage or missing components. If damage is found, contact the local freight company to file a freight claim.

MACHINE COMPONENTS

Solution Tank

The solution tank is the lower part of the machine body. This tank has a capacity of **14 gallons**, and is filled by pouring the water and cleaning chemicals through the filter in the square opening in the corner of the lower tank.

Recovery Tank

The recovery tank is the upper part of the machine body. This tank has a capacity of **14 gallons**, a round, clear view lid assembly, closes the tank. In this tank is a foam sensitive float shut-off assembly, as the water level rises, the float ball will rise into the tube and shut off the air flow of the vacuum, it does not shut off the vacuum motor.

CONTROL PANEL

The operator control panel is located at the upper rear of the machine. This panel has components that control various machine function. Starting on the left side of the control panel:

- * The battery meter shows the state of charge of the batteries during operation and recharge.
- * The first toggle switch turns the brush motor "ON and OFF".
- * The next toggle switch turns the vacuum motor "ON and OFF".
- * The next toggle switch controls the direction of the machine and has three positions: forward, neutral, and reverse.
- * The last toggle switch on the right controls the speed of the machine and has three positions: low, neutral, and high.
- * The top circuit breaker is for the brush motor and is rated at 30 Amps.
- * The bottom circuit breaker is for the drive motor and is rated at 10 Amps.

BATTERY PACKAGE

The Wrangler 20 W/D is a **24 volt system** and is available with two battery packages:

- * Two (2) 12 volt batteries.
- * Four (6) volt batteries.

Consult your local NSS authorized distributor for application recommendations.

To Install The Batteries

- * Turn off all switches and place the speed and direction switches in the neutral position. Lower the brush motor to the floor. Loosen the black knob and raise the recovery tank, use the support arm to hold up the tank.
- * For ease of installing the batteries you may wish to completely remove the recovery tank. Remove the two (2) hinge pins under the front of the recovery tank.
- * The batteries are heavy - use two people to install them.
- * Refer to the wiring diagram on the back of the control panel. Align the batteries in the compartment as shown on the diagram.
- * Install the battery cables as shown on the wiring diagram. Tighten the bolts and hex nuts with a wrench.
- * Loose or improper battery connections will cause battery or machine damage and possible injury.

MACHINE OPERATION

General Information

The Wrangler 20 W/D is very maneuverable and is designed to clean as you drive the machine from behind. Follow these steps to prepare the machine for daily operation.

Always sweep the floor of debris before scrubbing. You may also need to **preclean** some types of spills or stains before scrubbing. Plan your work so that you make long, straight paths with the fewest amount of turns as possible. Remove as many obstacles as possible from the area to be cleaned. Consult your local NSS distributor for more complete procedures and chemical advice.

Caution - We recommend you wear clean tennis shoes or non-slip shoes when working with a carpet extractor. Street shoes or rubber cushion soled shoes when wet will release absorbed dirt or grease onto the wet carpet and cause resoiling. Wet shoes can also cause the operator to slip and fall when walking from wet carpet onto bare floors. Make sure you wipe your shoes dry before walking onto bare floors. Also, some carpet cleaning chemicals **may** affect bare floor finishes.

DAILY USE

To Prepare the Solution Tank:

- * **Never** use water over 140° F (60° C).
- * Lower the brush motor on to the floor, completely loosen the black knob securing the recovery tank and lift the recovery tank, use the support arm to hold the tank up.
- * Pour all liquids through the mesh filter at the left side of the solution tank. **Do Not** splash any liquids into the vacuum motor intake.
- * Put 1 to 2 gallons of clean water into the solution tank first to help dilute the chemicals and prevent excess sudsing.
- * Add the cleaning chemicals to the solution tank and fill with water as needed.
- * Carefully close the recovery tank and secure it with the black knob. Do not damage the threads by over tightening the knob.
- * Raise the brush motor off of the floor.

To Prepare the Recovery Tank:

- * **Always** use a defoamer to protect the vacuum motor of this machine, we recommend that you add at least 4 to 6 ounces of defoamer chemical into the recovery tank before resuming work. Vacuum the defoamer into the recovery tank through the squeegee vac hose.
- * Make sure that the drain plug of the recovery tank hose is closed tightly and in it's holding clip.

To Install a Pad Driver and Pad:

- * There are a wide range of pads or brushes available for the many cleaning applications of this machine. See the "Accessories" page. Turn the pad driver upside down on the floor and remove the pad holding cup.
- * Remove the center cutout of the 20" pad and place the pad on the face of the pad driver.
- * The pad *must be centered* on the driver to prevent wobbling or bouncing.
- * Install and secure the pad holding cup to the pad driver. Turn the pad driver over so that the pad faces the floor.
- * Raise the brush motor into the transport position.
- * Align the notches of the pad driver with lugs of the drive casting.
- * Turn the pad driver clockwise to lock onto the drive casting.

To Install a Brush:

- * Raise the brush motor into the transport position.
- * Align the notches of the brush with the lugs of the drive casting.
- * Turn the brush clockwise to lock onto the drive casting.

SQUEEGEE ASSEMBLY

Remove the squeegee assembly from the box and inspect for concealed damage.

The squeegee assembly has a wide, flat frame to help prevent damage, two (2) mounting knobs, and two (2) small wheels to prevent “rollover” while in reverse.

To Install the Squeegee Assembly:

- * Place the squeegee lift arm in the storage (up) position.
- * Loosen the two mounting knobs and slide the squeegee assembly onto the mounting plate. The roller wheels must face the operator.
- * Hand tighten the mounting knobs. Do **not** use pliers to tighten the knobs as this will defeat the “breakaway” design.

To Adjust the Squeegee Assembly:

As the machine is used, the squeegee blades wear out, and need to be replaced due to damage. Some adjustment may be needed.

- * Squeegee blades should lay over slightly (like a window squeegee) whenever the machine is moving.
- * Adjust the blade angle by turning the wing nut on the pivot arm.
- * Do not add any weights or other pressure to the squeegee mechanism, it will not improve the performance or service life.

MACHINE MAINTENANCE

Daily Maintenance

- * Recharge the batteries at the end of every shift.
- * Empty and rinse clean the recovery tank.
- * Remove and rinse clean the squeegee assembly.
- * Remove and rise clean the pad driver and / or brush.
- * Inspect the machine components for wear or damage. Repair or replace as needed.

Weekly Maintenance

- * Verify that all daily maintenance has been performed.
- * Inspect the battery liquid level, adjust to the proper level as needed.
- * Check all battery terminal and cable connections. Tighten as deemed necessary.
- * Clean any corrosion from the battery terminals and cables.
- * Check the solution flow to the pad driver and / or brush. Flush clean the solution tank and hose with a mixture of 8 oz. (250ml.) of white vinegar to 1 gallon (4 liter) of warm water.

Monthly Maintenance

- * Verify that all daily and weekly maintenance has been performed.
- * Lubricate the drive wheels, bearings, the caster axle, and swivel bearing. Use a high grade water resistant grease.

After every 750 Hours of Operation:

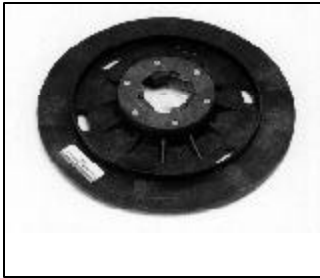
- * Inspect the drive motor (transaxle) carbon brushes for wear. Replace the brushes when they are 3/8 in. (9mm.) in length.
- * Inspect the brush drive motor carbon brushes for wear. Replace the brushes when they are 1/2 in. (13mm.) in length.
- * Inspect the vacuum motor carbon brushes for wear. Replace the brushes when they are 7/16 in. (11mm.) in length.

ACCESSORIES



CLUTCH PLATES

- 2893001 ALUMINUM CLUTCH PLATE, 4" DIAMETER, 3 HOLES
- 2890981 PLASTIC CLUTCH PLATE, 4" DIAMETER, 3 HOLES
- 2890991 ALUMINUM CLUTCH PLATE, 5" DIAMETER, 6 HOLES
- 2890101 PLASTIC CLUTCH PLATE, 5" DIAMETER, 6 HOLES
- 2890971 PLASTIC CLUTCH PLATE, 5" DIAMETER, 6 HOLES
BROWN TRU FIT
- 2890951 PLASTIC CLUTCH PLATE 5" DIAMETER, 6 HOLES
WHITE SPIN OFF



PAD CUP

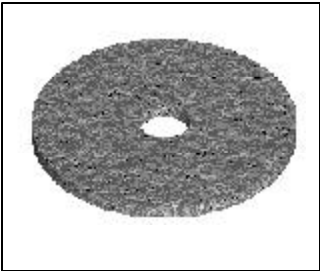
- 5990721 CREAM PAD CUP

20" PAD DRIVERS AND BRUSHES

- 2892601 20" STRUCTURAL FOAM PAD DRIVER

BURNISHING (175 TO 3000 RPM) FLOOR PADS

- 7992051 20" NSS LITE BLUE POLISH / BURNISH PAD



SCRUBBING (150 TO 300 RPM) FLOOR PADS

- 7992041 20" NSS UHS CLEAN BUFF PAD
- 7992031 20" NSS BLUE SCRUB PAD
- 7992021 20" NSS GREEN SCRUB PAD

STRIPPING (150 TO 300 RPM) FLOOR PADS

- 7992001 20" NSS BLACK STRIP PAD
- 7992011 20" NSS BROWN STRIP PAD



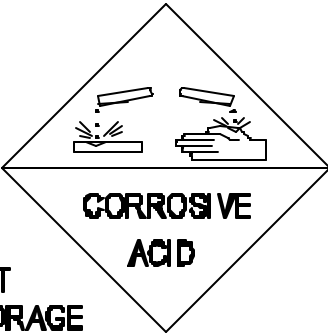
TOOL KITS

- 2392129 WRANGLER 20 WET PICK UP TOOL KIT
INCLUDES: TUBE HANDLE
VACUUM HOSE
SQUEEGEE TOOL
ALUMINIUM CONNECTOR

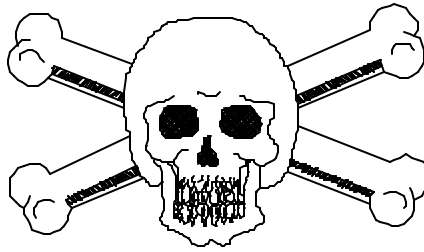
AUTHORIZED REPAIR SERVICE

Repair service for this machine must be performed by an authorized service center. Repairs performed by an unauthorized company will void the machine warranty.

BATTERY INSTALLATION INSTRUCTIONS



**WET
STORAGE
BATTERY**



**POISON/DANGER
CAUSES SEVERE BURNS**

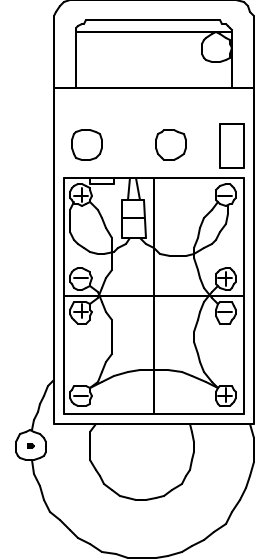
**READ BEFORE INSTALLING OR SERVICING
BATTERIES TO PREVENT PERSONAL INJURY.**

- * **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 the battery compartment opened by raising the recovery tank.
- * **Batteries generate explosive gases - keep sparks, flames, burning cigarettes, or other ignition sources away at all times.**
- * 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 into position as shown on the battery installation decal.
- * Connect the batteries as shown on the battery installation decal to avoid shorting out the batteries and the electrical system.
- * Disconnect the battery leads before performing any service or repairs.
- * **ALWAYS** make sure the battery charger is turned off when connecting / disconnecting to machine to prevent sparking.

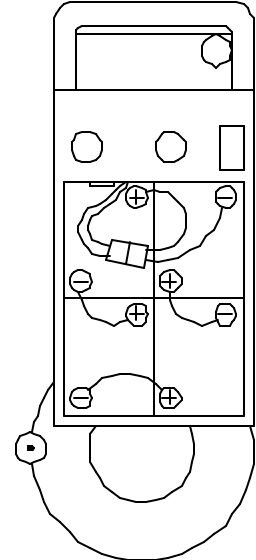
STORAGE

- * **ALWAYS** store machine indoors in a dry, cool area.
- * **ALWAYS** empty and rinse clean the solution and recovery tanks after every use.
- * **ALWAYS** remove and clean the squeegee assembly after every use.
- * **ALWAYS** remove the pad driver or brush after every use.
- * **NEVER** store machine near furnaces, boilers or open flames which may damage machine.
- * **NEVER** store any item on the machine.
- * **ALWAYS** protect the machine from freezing temperatures.

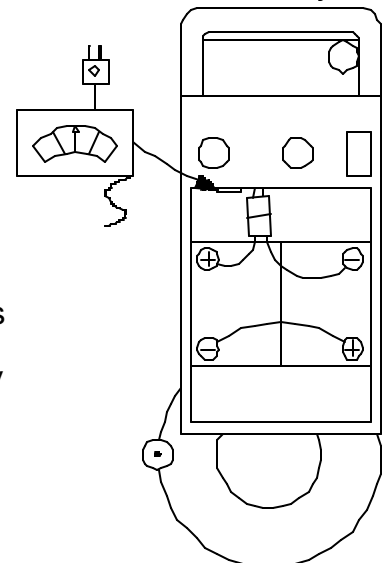
4 X 12 VOLT



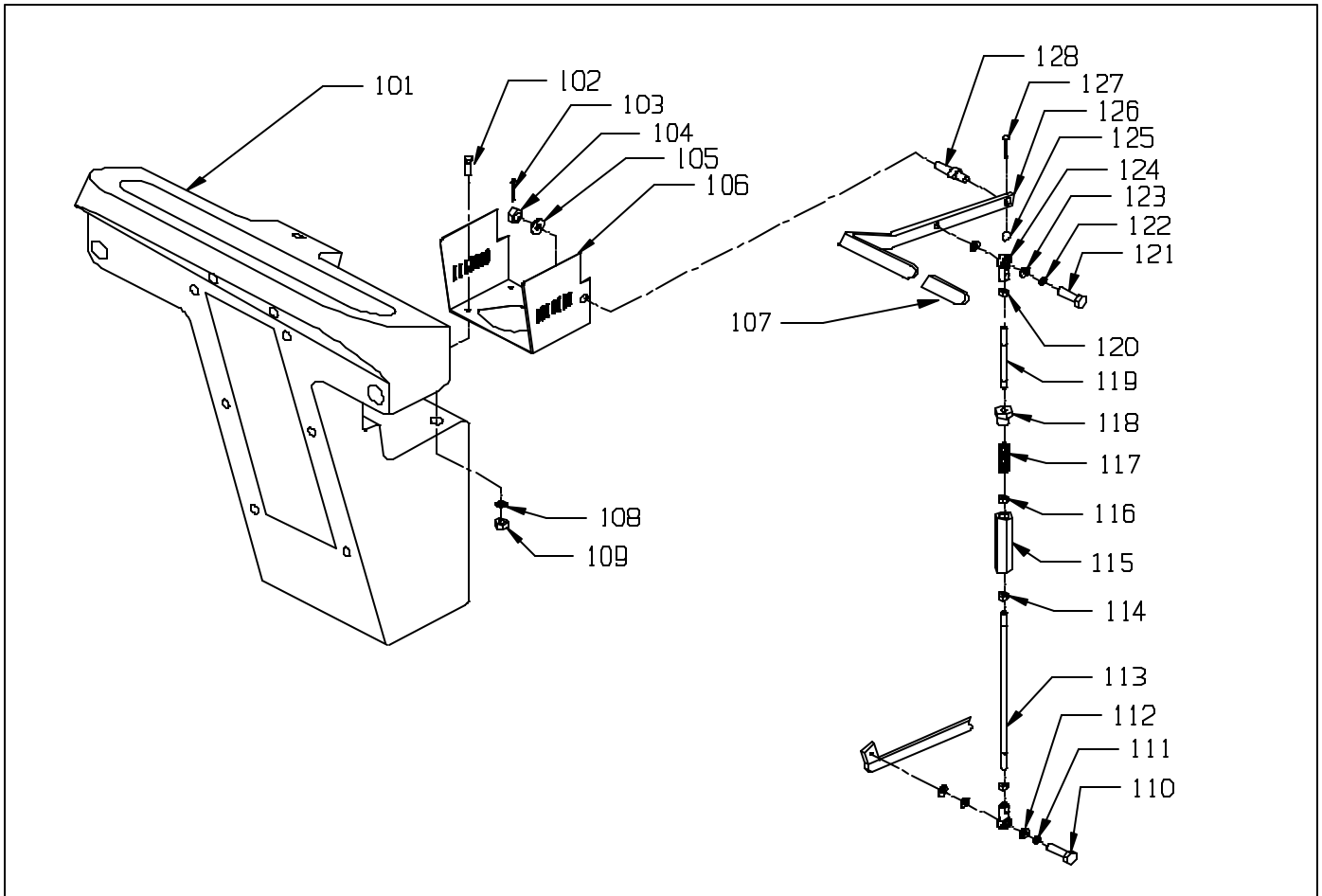
4 X 6 VOLT



2 X 12 VOLT



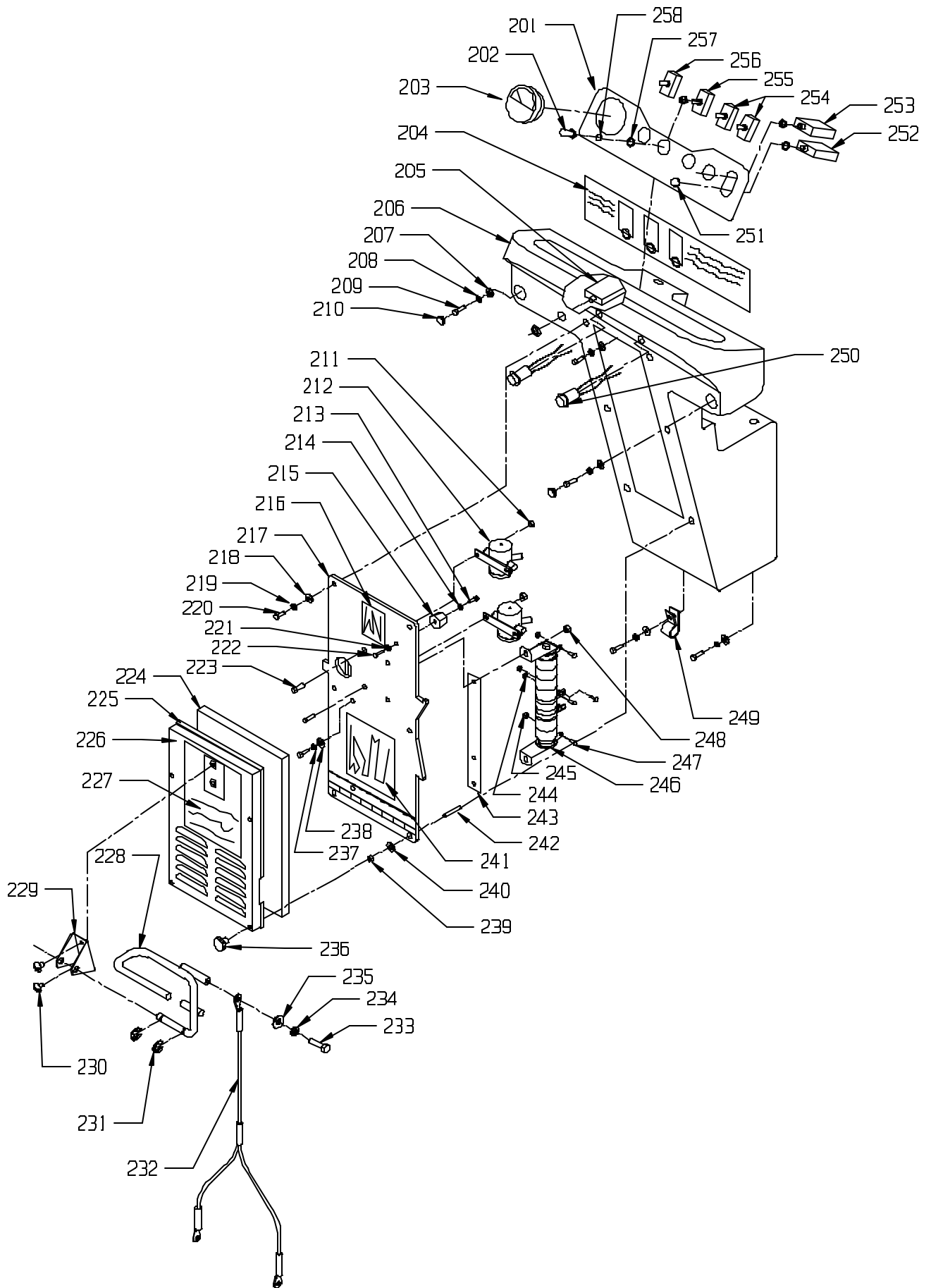
LIFT ROD ASSEMBLY



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>QUANTITY</u> |
|-------------|-----------------|---|-----------------|
| 101 | 23-9-552-1 | PANEL, CONTROL | 1 |
| 102 | 91-2-125-0 | 1/4-20 X 3/4 HEX BOLT WITH NYLON PATCH | 4 |
| 103 | 52-9-652-1 | HUMPED COTTER PIN | 1 |
| 104 | 23-9-271-1 | 1/2-13 HEX SLOTTED NUT | 1 |
| 105 | 91-2-245-0 | 17/32 I.D. X 11/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2) | 1 |
| 106 | 23-9-556-3 | BRACKET, MOUNT LIFT ARM | 1 |
| 107 | 26-9-098-1 | LIFT HANDLE GRIP | 1 |
| 108 | 91-2-093-0 | 9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 4 |
| 109 | 91-2-091-0 | 1/4-20 HEX NUT WITH STAR LOCK WASHER | 4 |
| 110 | 91-2-230-0 | 3/8-16 X 1 1/4 HEX BOLT | 1 |
| 111 | 91-2-210-0 | 3/8 SPLIT LOCK WASHER | 1 |
| 112 | 91-2-198-0 | 13/32 I.D. X 13/16 O.D. X .051/.080 THICK SAE FLAT WASHER (3/8) | 3 |
| 113 | 23-9-537-1 | LOCK DOWN LIFT ROD | 1 |
| 114 | 91-2-200-0 | 3/8-16 HEX NUT | 1 |
| 115 | 26-9-182-1 | SPRING HOUSING, BRUSH LIFT | 1 |
| 116 | 91-2-214-0 | 3/8-16 HEX NUT WITH NY-LOK INSERT | 1 |
| 117 | 26-9-184-1 | SPRING, BRUSH PRESSURE | 1 |
| 118 | 26-9-183-1 | SPRING HOUSING, RETAINER | 1 |
| 119 | 26-9-181-1 | SHORT LIFT ROD, BRUSH | 1 |
| 120 | 91-2-201-0 | 3/8-24 HEX NUT | 2 |
| 121 | 91-2-226-0 | 3/8-16 X 1 HEX BOLT | 1 |
| 122 | 91-2-210-0 | 3/8 SPLIT LOCK WASHER | 1 |
| 123 | 91-2-198-0 | 13/32 I.D. X 13/16 O.D. X .051/.080 THICK SAE FLAT WASHER (3/8) | 2 |
| 124 | 44-9-053-1 | 3/8" ROD END | 2 |
| 125 | 23-9-256-1 | CIRCLE COTTER - #CC-7 | 1 |
| 126 | 26-9-137-3 | LIFT HANDLE, BRUSH | 1 |
| 127 | 23-9-195-1 | PIN | 1 |
| 128 | 24-9-066-1 | STUD, PIVOT | 1 |

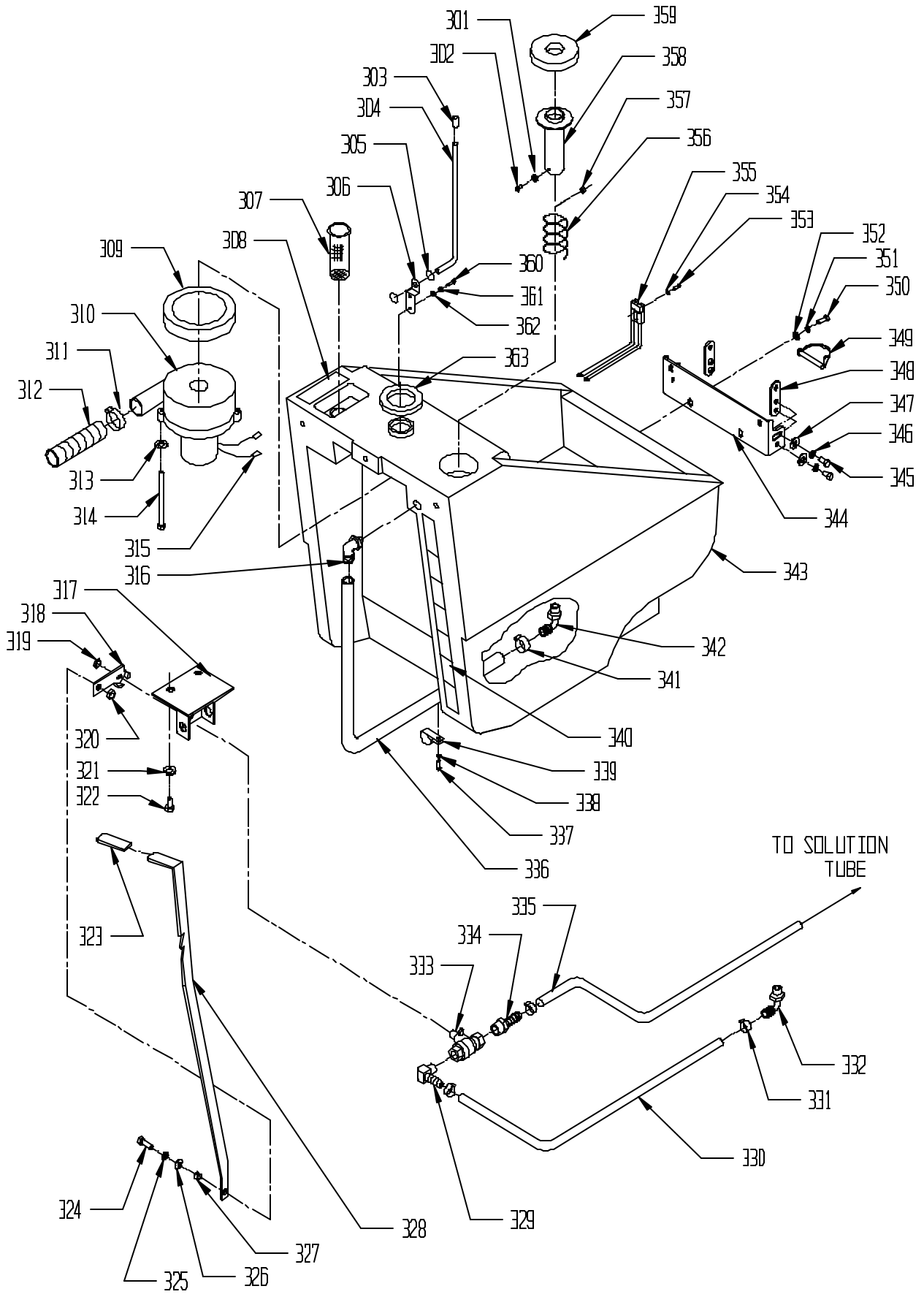
| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>QTY.</u> |
|-------------|-----------------|--|-------------|
| 201 | 23-9-553-1 | LABEL, CONTROL | 1 |
| 202 | 06-9-314-1 | RUBBER SWITCH BOOT | 4 |
| 203 | 23-9-139-1 | BATTERY METER - 24 VOLT | 1 |
| 204 | 23-9-616-1 | LABEL, BATTERY LABEL | 1 |
| 205 | 26-9-487-1 | CIRCUIT BREAKER, 6 AMP | 1 |
| 206 | 23-9-552-1 | PANEL, CONTROL | 1 |
| 207 | 91-2-140-0 | 3/8 I.D. X 7/8 O.D. X .064/.104 THICK WROUGHT WASHER (5/16) | 5 |
| 208 | 91-2-141-0 | 5/16 EXTERNAL STAR LOCK WASHER | 5 |
| 209 | 91-2-164-0 | 5/16-18 X 3/4 HEX HEAD BOLT | 5 |
| 210 | 06-9-076-1 | PLUG BUTTON | 2 |
| 211 | 91-2-091-0 | 1/4-20 HEX NUT WITH STAR LOCK WASHER | 5 |
| 212 | 23-9-135-1 | SOLENOID, 24 VOLT | 2 |
| 213 | 91-2-117-0 | 1/4-20 X 1/2 HEX HEAD BOLT | 1 |
| 214 | 91-2-097-0 | 1/4 EXTERNAL STAR LOCK WASHER | 1 |
| 215 | 44-9-056-1 | INSULATED STANDOFF | 1 |
| 216 | 23-9-605-1 | VAC MOTOR ACCESS LABEL | 1 |
| 217 | 23-9-539-3 | COVER PANEL | 1 |
| 218 | 91-2-037-0 | 7/32 I.D. X 1/2 O.D. X .032/.065 THICK SAE FLAT WASHER (#10) | 2 |
| 219 | 91-2-032-0 | #10 SPLIT LOCK WASHER | 2 |
| 220 | 91-2-072-0 | 10-32 X 3/8 ROUND HEAD PHILLIPS MACHINE SCREW | 2 |
| 221 | 91-2-097-0 | 1/4 EXTERNAL STAR LOCK WASHER | 1 |
| 222 | 91-2-116-0 | 1/4-20 X 3/8 HEX HEAD BOLT | 1 |
| 223 | 91-2-116-0 | 1/4-20 X 3/8 HEX HEAD BOLT | 6 |
| 224 | 23-9-153-1 | FILTER | 1 |
| 225 | 04-9-355-1 | C-14 BAG RING GASKET | 1 |
| 226 | 23-9-549-3 | COVER BOX | 1 |
| 227 | 23-9-543-1 | BRUSH LABEL | 1 |
| 228 | 23-9-592-1 | SQUEEGEE LIFT HANDLE | 1 |
| 229 | 13-9-079-3 | SQUEEGEE LIFT BRACKET | 1 |
| 230 | 91-2-099-0 | 1/4-20 X 3/8 TRUSS HEAD PHILLIPS MACHINE SCREW | 2 |
| 231 | 13-9-094-1 | 5/16 E RING | 2 |
| 232 | 24-9-530-1 | SQUEEGEE LIFT CABLE - 25" | 1 |
| 233 | 91-2-038-0 | 10-24 X 3/8 ROUND HEAD PHILLIPS MACHINE SCREW | 1 |
| 234 | 91-2-032-0 | #10 SPLIT LOCK WASHER | 1 |
| 235 | 91-2-037-0 | 7/32 I.D. X 1/2 O.D. X .032/.065 THICK SAE FLAT WASHER (#10) | 1 |
| 236 | 23-9-137-1 | KNURLED KNOB | 4 |
| 237 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 2 |
| 238 | 91-2-093-0 | 9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 2 |
| 239 | 91-2-069-0 | 10-32 HEX NUT WITH STAR LOCK WASHER | 4 |
| 240 | 91-2-245-0 | 17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2) | 4 |
| 241 | 23-9-618-1 | WIRE DIAGRAM DECAL | 1 |
| 242 | 23-9-249-1 | 10-32 X 1 3/4 SET SCREW | 4 |
| 243 | 23-9-577-3 | RESISTOR BRACKET | 1 |
| 244 | ———— | 10-24 SQUARE NUT | 1 |
| 245 | 91-2-036-0 | 10-24 HEX NUT WITH STAR LOCK WASHER | 3 |
| 246 | 26-9-512-1 | RESISTOR | 1 |
| 247 | 91-2-041-0 | 10-24 X 1/2 ROUND HEAD PHILLIPS MACHINE SCREW | 4 |
| 248 | 91-2-092-0 | 1/4-20 HEX NUT | 2 |
| 249 | 23-9-291-1 | HOSE/WIRE TIE DOWN | 1 |
| 250 | 23-9-522-1 | WIRE ASSEMBLY, DEADMAN SWITCH WITH RING TERMINAL | 2 |
| 251 | 48-9-247-1 | CIRCUIT BREAKER BUTTON SEAL | 2 |
| 252 | 23-9-220-1 | CIRCUIT BREAKER, 10 AMP | 1 |
| 253 | 23-9-136-1 | CIRCUIT BREAKER, 30 AMP | 1 |
| 254 | 33-9-041-1 | FORWARD / REVERSE SWITCHES | 2 |
| 255 | 27-9-204-1 | VAC MOTOR TOGGLE SWITCH | 1 |
| 256 | 44-9-110-1 | MOTOR TOGGLE SWITCH | 1 |
| 257 | 10-9-987-1 | FLAT WASHER | 4 |
| 258 | 06-9-185-1 | STAR LOCK WASHER | 4 |

CONTROL PANEL



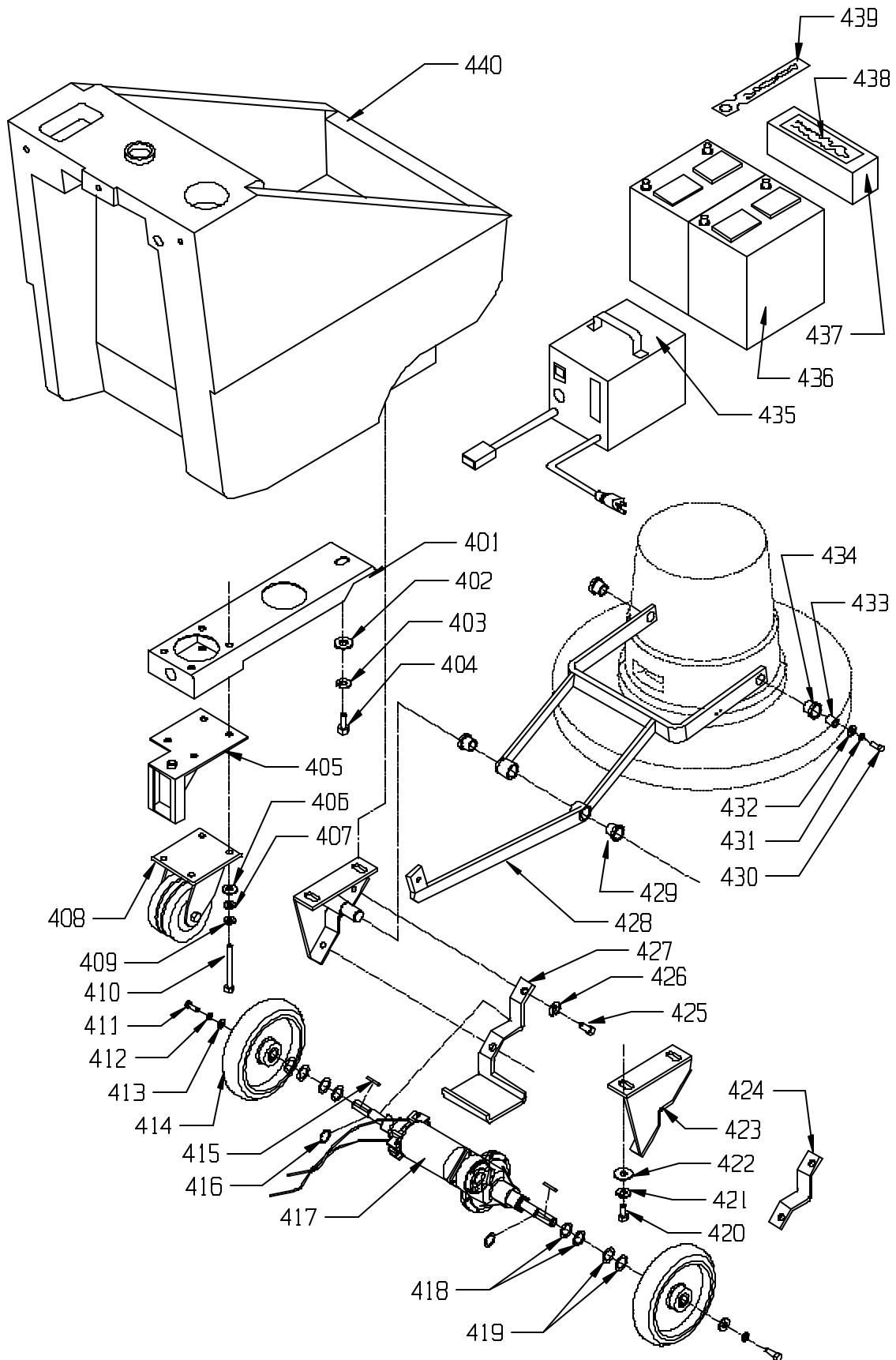
| ITEM | PART NO. | DESCRIPTION | QTY. |
|------|------------|--|------|
| 301 | 91-2-032-0 | #10 SPLIT LOCK WASHER | 1 |
| 302 | 91-2-038-0 | 10-24 X 3/8 ROUND HEAD PHILLIPS MACHINE SCREW | 1 |
| 303 | 50-9-253-1 | CAP | 1 |
| 304 | 23-9-163-6 | HOOD ROD, PLATED | 1 |
| 305 | 23-9-256-1 | CIRCLE COTTER - #CC-7 | 2 |
| 306 | 23-9-164-6 | ROD BRACKET, PLATED | 1 |
| 307 | 27-9-189-9 | SOLUTION TANK FILTER | 1 |
| | 27-9-189-1 | BAG, TANK SCREEN | 1 |
| | 27-9-176-1 | RING | 1 |
| 308 | 23-9-217-1 | DECAL CLEAN WATER | 1 |
| 309 | 46-9-010-1 | MOTOR SEAL GASKET | 1 |
| 310 | 23-9-557-1 | VAC MOTOR, 24 VOLT 3 STAGE | 1 |
| 311 | 44-9-544-1 | CLAMP, HOSE 1 9/16" TO 2 1/2" DIAMETER | 1 |
| 312 | 23-9-565-1 | HOSE, VAC MOTOR EXHAUST | 1 |
| 313 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 3 |
| 314 | 91-2-136-0 | 1/4-20 X 4 HEX BOLT | 3 |
| 315 | 23-9-264-1 | BUTT CONNECTOR, 12/10 GAGE YELLOW | 2 |
| 316 | 23-9-177-1 | 90 DEGREE HOSE BARB | 1 |
| 317 | 23-9-531-3 | BRACKET, SOLUTION VALVE | 1 |
| 318 | 23-9-547-1 | LEVER, VALVE (SHORT) | 1 |
| 319 | 91-2-153-0 | NUT, 5/16-24 HEX | 1 |
| 320 | 91-2-089-0 | 1/4-20 THIN HEX NUT WITH NY-LOK INSERT | 1 |
| 321 | 91-2-152-0 | 5/16 SPLIT LOCK WASHER | 2 |
| 322 | 91-2-164-0 | 5/16-18 X 3/4 HEX BOLT | 2 |
| 323 | 23-9-118-1 | GRIP, VALVE LEVER | 1 |
| 324 | 91-2-125-0 | 1/4-20 X 3/4 HEX BOLT WITH NYLON PATCH | 1 |
| 325 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 1 |
| 326 | 91-2-093-0 | 9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 1 |
| 327 | 27-9-128-6 | BUSHING SPACER | 1 |
| 328 | 26-9-028-3 | VALVE LEVER | 1 |
| 329 | 27-9-179-1 | 90 DEGREE HOSE BARB - 1/4 NPT | 1 |
| 330 | 23-9-597-7 | VINYL HOSE, 3/8" I.D. X 14" LONG | 1 |
| 331 | 23-9-248-1 | HOSE CLAMP, 7/32" TO 5/8" DIAMETER | 3 |
| 332 | 24-9-060-1 | FITTING, ELBOW 3/8 BARB X 1/4 MNPT | 1 |
| 333 | 13-9-153-1 | SOLUTION VALVE | 1 |
| 334 | 38-9-066-0 | HOSE BARB X 1/4" MPT | 1 |
| 335 | 23-9-598-7 | VINYL HOSE, 3/8" I.D. X 23" LONG | 1 |
| 336 | 23-9-599-7 | VINYL HOSE, 3/4" I.D. X 23" LONG | 1 |
| 337 | 91-2-164-0 | 5/16-18 X 3/4 HEX BOLT | 1 |
| 338 | 91-2-152-0 | 5/16 SPLIT LOCK WASHER | 1 |
| 339 | 23-9-576-1 | CLAMP, TUBE | 1 |
| 340 | 23-9-185-1 | SOLUTION LABEL | 1 |
| 341 | 23-9-214-1 | HOSE CLAMP, 11/16" TO 1 1/4 DIAMETER | 1 |
| 342 | 23-9-177-1 | 90 DEGREE HOSE BARB | 1 |
| 343 | 23-9-101-1 | SOLUTION TANK | 1 |
| 344 | 23-9-594-3 | HINGE BRACKET - LOWER | 1 |
| 345 | 91-2-121-0 | 1/4-20 X 5/8 HEX BOLT | 4 |
| 346 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 4 |
| 347 | 91-2-093-0 | 9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 4 |
| 348 | 23-9-593-3 | ADJUSTMENT PLATE - HINGE BRACKET | 2 |
| 349 | 23-9-165-1 | HINGE PIN | 2 |
| 350 | 91-2-125-0 | 1/4-20 X 3/4 HEX BOLT WITH NYLON PATCH | 4 |
| 351 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 4 |
| 352 | 91-2-093-0 | 9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 4 |
| 353 | 91-2-008-0 | #6-32 X 3/4 ROUND HEAD PHILLIPS MACHINE SCREW | 2 |
| 354 | 91-2-013-0 | #6 EXTERNAL STAR LOCK WASHER | 2 |
| 355 | 23-9-200-1 | CHARGER PLUG, RED 24 VOLT WITH WIRES | 1 |
| 356 | 23-9-158-1 | SPRING TUBE ADAPTER | 1 |
| 357 | 91-2-036-0 | 10-24 HEX NUT WITH STAR LOCK WASHER | 1 |
| 358 | 23-9-157-3 | TUBE ADAPTER | 1 |
| 359 | 23-9-159-1 | GASKET TUBE ADAPTER | 1 |
| 360 | 91-2-117-0 | 1/4-20 X 1/2 HEX BOLT | 2 |
| 361 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 2 |
| 362 | 91-2-093-0 | 9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 2 |
| 363 | 02-9-434-1 | TOP MOTOR SEAL - NEOPRENE | 1 |

SOLUTION



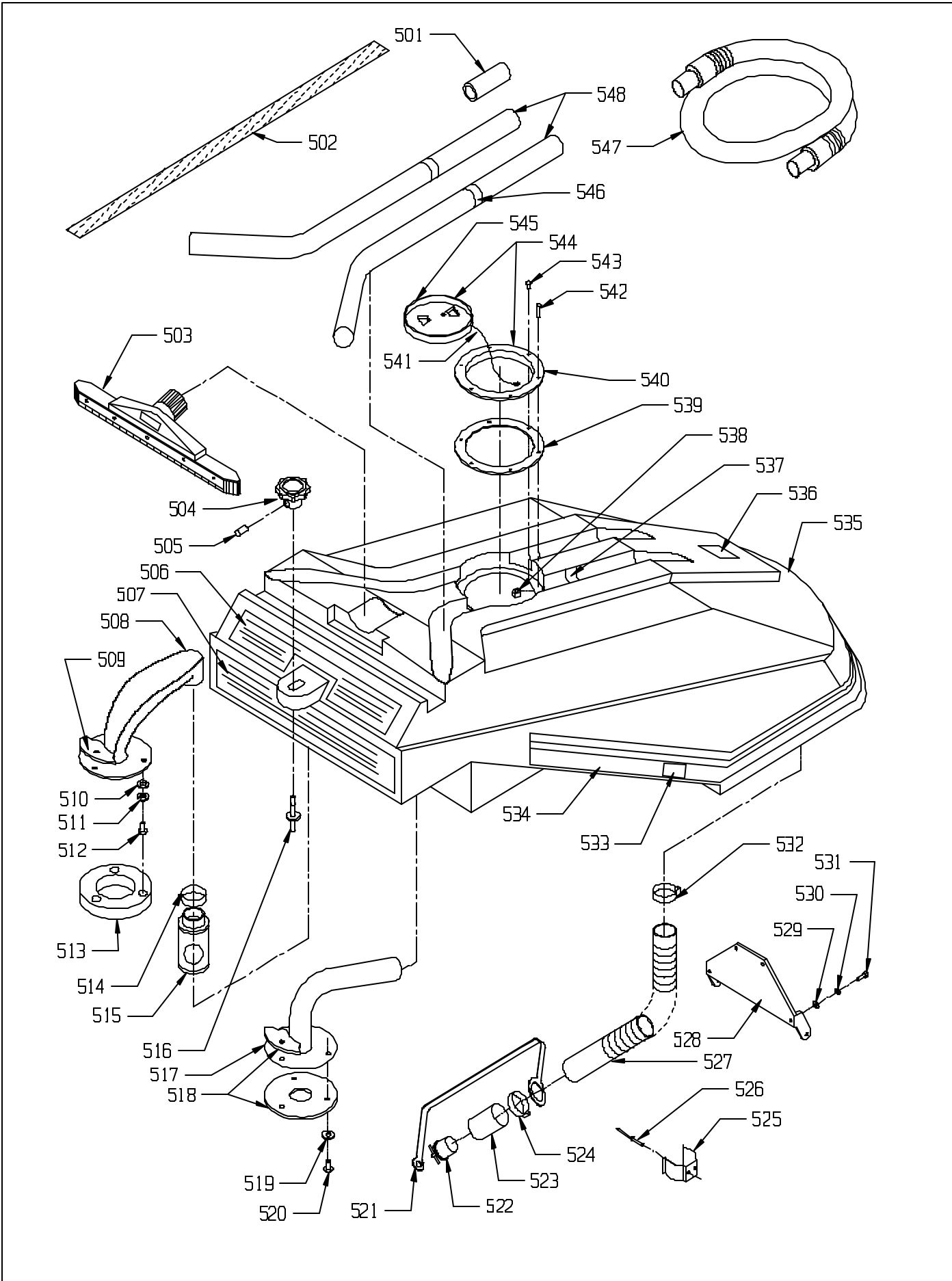
| ITEM | PART NO. | DESCRIPTION | QTY. |
|------|------------|--|------|
| 401 | 23-9-532-3 | CASTER - CHANNEL DRIVE | 1 |
| 402 | 91-2-245-0 | 17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2) | 1 |
| 403 | 91-2-242-0 | 1/2 SPLIT LOCK WASHER | 1 |
| 404 | 91-2-250-0 | 1/2-13 X 7/8 HEX BOLT | 1 |
| 405 | 23-9-574-3 | BRACKET, SQUEEGEE MOUNT | 1 |
| 406 | 52-9-354-1 | MOTOR WASHER 1" O.D. | 4 |
| 407 | 91-2-198-0 | 13/32 I.D. X 13/16 O.D. X .051/.080 THICK SAE FLAT WASHER (3/8) | 4 |
| 408 | 26-9-258-1 | 4" GRAY SOFT GREY CASTER COMPLETE | 1 |
| | 44-9-049-1 | REPLACEMENT SOFT CASTER WHEEL ONLY | 1 |
| | 44-9-050-1 | RED WHEEL 4" CASTER COMPLETE | 1 |
| | 44-9-039-1 | REPLACEMENT RED CASTER WHEEL ONLY | 1 |
| 409 | 91-2-210-0 | 3/8 SPLIT LOCK WASHER | 4 |
| 410 | 91-2-235-0 | 3/8-16 X 3 HEX BOLT | 4 |
| 411 | 91-2-226-0 | 3/8-16 X 1 HEX BOLT | 2 |
| 412 | 91-2-210-0 | 3/8 SPLIT LOCK WASHER | 2 |
| 413 | 91-2-218-0 | 7/16 I.D. X 1 3/8 O.D. X .086/.132 THICK WROUGHT WASHER (3/8) | 2 |
| 414 | 23-9-550-1 | 8 X 2 DRIVE WHEEL | 2 |
| 415 | 49-9-121-1 | KEY, MAIN AXLE SPROCKET | 2 |
| 416 | 52-9-315-1 | RETAINING RING | 2 |
| 417 | 23-9-548-1 | TRANSAXLE, 20" | 1 |
| | 24-9-522-1 | BRACKET, BRUSH WITH BRUSHES TRANSAXLE | 1 |
| | 24-9-523-1 | GEAR PARTS TRANSAXLE | 1 |
| | 24-9-524-1 | GEAR / PINION ASSEMBLY KEYED TRANSAXLE | 1 |
| | 99-9-764-1 | ANTI-SEIZE LUBRICANT, PERMATEX | |
| | 24-9-525-1 | CARBON BRUSH - TRANSAXLE | 2 |
| | 24-9-526-1 | CARBON BRUSH CAP - TRANSAXLE | 2 |
| | 24-9-527-1 | TOP MOTOR BRACKET - TRANSAXLE | 1 |
| 418 | 52-9-341-1 | 1 1/4" I.D. X .770" O.D. X .082" THICK WASHER, PLATED | 4 |
| 419 | 49-9-109-1 | NYLON WASHER | 4 |
| 420 | 91-2-250-0 | 1/2-13 X 7/8 HEX BOLT | 4 |
| 421 | 91-2-242-0 | 1/2 SPLIT LOCK WASHER | 4 |
| 422 | 91-2-245-0 | 17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2) | 4 |
| 423 | 23-9-546-3 | BRACKET, RIGHT AXLE SUPPORT | 1 |
| | 23-9-534-3 | BRACKET, LEFT AXLE SUPPORT | 1 |
| 424 | 23-9-535-3 | CLAMP, AXLE | 1 |
| 425 | 91-2-125-0 | 1/4-20 X 3/4 HEX BOLT WITH NYLON PATCH | 4 |
| 426 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 4 |
| 427 | 23-9-524-3 | AXLE STRAP WITH BRUSH GUARD | 1 |
| 428 | 23-9-529-9 | LIFT FORK ASSEMBLY (INCLUDES ITEMS 428, 429, & 434) | 1 |
| | 23-9-529-3 | LIFT FORK | 1 |
| 429 | 27-9-137-1 | FLANGE BEARING FF-838-3 | 2 |
| 430 | 91-2-254-0 | 1/2-13 X 1 1/4 HEX BOLT | 2 |
| 431 | 91-2-242-0 | 1/2 SPLIT LOCK WASHER | 2 |
| 432 | 91-2-245-0 | 17/32 I.D. X 1 1/16 O.D. X .074/.121 THICK SAE FLAT WASHER (1/2) | 2 |
| 433 | 27-9-075-6 | BUSHING SPACER | 2 |
| 434 | 27-9-076-1 | FLANGE BEARING FF-71 | 2 |
| 435 | 23-9-199-1 | 24 VOLT BATTERY CHARGER 50HZ 240 VOLT AC | 1 |
| | 23-9-201-1 | 24 VOLT BATTERY CHARGER 120 VOLT AC - GELL BATTERY | 1 |
| | 23-9-251-1 | BATTERY CHARGER 24 VOLT DC 100 VOLT AC EXPORT ONLY | 1 |
| | 23-9-294-1 | 24 VOLT BATTERY CHARGER 240 VOLT AC - GELL BATTERY | 1 |
| | 23-9-295-1 | 24 VOLT 120/250, 50/60HZ BATTERY CHARGER | 1 |
| | 23-9-607-1 | CHARGER - 24 VOLT BATTERY, 10 AMP, 120 VOLT | 1 |
| | 23-9-608-1 | CHARGER - 24 VOLT BATTERY, 25 AMP, 120 VOLT | 1 |
| 436 | 63-9-365-1 | BATTERY (12 VOLT, 145 AMP HOURS) | 2 |
| | 33-9-036-1 | BATTERY (6 VOLT, 220 AMP HOURS) | 4 |
| | 23-9-273-1 | BATTERY 12 VOLT GELL CELL 105 AMP HOURS) | 2 |
| | 23-9-282-1 | BATTERY (12 VOLT, 105 AMP HOURS, DRY) | 2 |
| 437 | 23-9-219-1 | BATTERY BLOCK | 2 |
| 438 | 23-9-246-1 | LABEL - BATTERY BLOCK | 2 |
| 439 | 23-9-276-1 | WARNING TAG - BATTERY TERMINAL | 1 |
| 440 | 23-9-101-1 | SOLUTION TANK | 1 |

CHASSIS TRANSAXLE



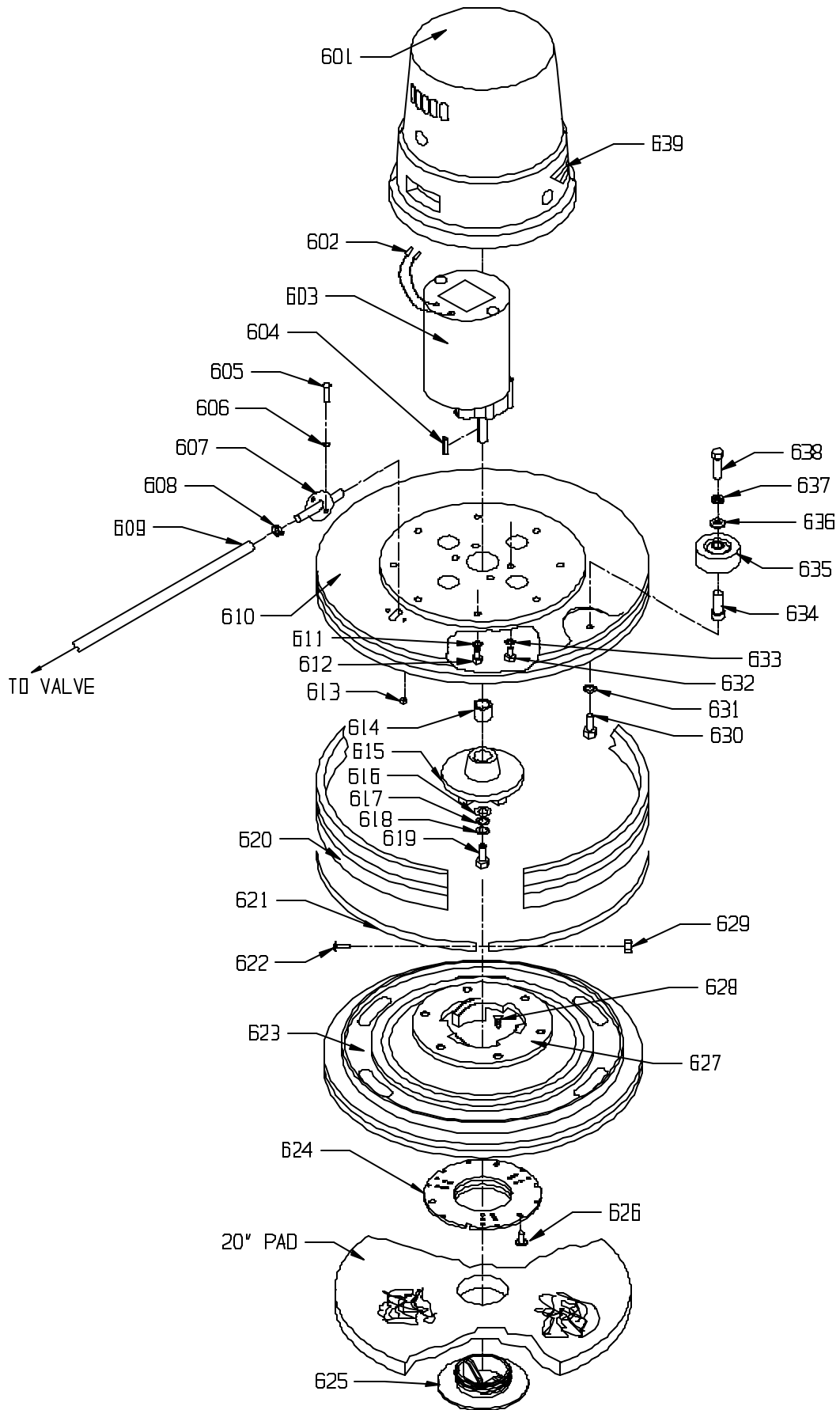
| ITEM | PART NO. | DESCRIPTION | QTY. |
|-------------|-----------------|--|-------------|
| 501 | 22-9-121-1 | 5 INCH ALUMINUM CONNECTOR | 1 |
| 502 | 23-9-124-1 | HOSE STRAP | 1 |
| 503 | 57-9-701-1 | TOOL - SQUEEGEE WITH WHEELS, 15" | 1 |
| 504 | 44-9-052-1 | LOAD ADJUST KNOB | 1 |
| 505 | 91-2-064-0 | 10-32 X 1/4 SET SCREW - CUP POINT | 1 |
| 506 | 23-9-178-1 | WARNING/OPERATE LABEL | 1 |
| 507 | 23-9-566-1 | TANK DRAIN LABEL | 1 |
| 508 | 23-9-545-1 | VACUUM TUBE | 1 |
| 509 | 23-9-161-1 | INLET TUBE GASKET | 1 |
| 510 | 91-2-093-0 | 9/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 3 |
| 511 | 91-2-097-0 | 1/4 EXTERNAL STAR LOCK WASHER | 3 |
| 512 | 91-2-100-0 | 1/4-20 X 5/8 TRUSS HEAD PHILLIPS MACHINE SCREW | 3 |
| 513 | 23-9-160-1 | GASKET, VAC TUBE | 1 |
| 514 | 48-9-267-1 | HOSE CLAMP 1 1/16" TO 2" | 1 |
| 515 | 23-9-154-1 | FLOAT SCREEN ASSEMBLY | 1 |
| 516 | 23-9-162-6 | STUD, HOOD KNOB | 1 |
| 517 | 23-9-156-3 | INLET TUBE | 1 |
| 518 | 23-9-161-1 | GASKET INLET TUBE | 2 |
| 519 | 91-2-097-0 | 1/4 EXTERNAL STAR LOCK WASHER | 3 |
| 520 | 91-2-100-0 | 1/4-20 X 5/8 TRUSS HEAD PHILLIPS SCREW | 3 |
| 521 | 27-9-188-1 | PLUG STRAP | 1 |
| 522 | 27-9-562-1 | DRAIN PLUG | 1 |
| 523 | 23-9-166-6 | HOSE TUBE | 1 |
| 524 | 23-9-216-1 | TUBE HOSE CLAMP, CRIMP-ON TYPE | 1 |
| 525 | 23-9-213-1 | SPRING CLIP, HOSE | 1 |
| 526 | 23-9-175-1 | POP RIVET 1/8" X 5/8" | 2 |
| 527 | 23-9-167-1 | DRAIN HOSE, CRUSH PROOF | 1 |
| 528 | 23-9-169-3 | UPPER HINGE | 1 |
| 529 | 91-2-093-0 | 9/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 4 |
| 530 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 4 |
| 531 | 91-2-121-0 | 1/4-20 X 5/8 HEX BOLT | 4 |
| 532 | 44-9-544-1 | HOSE CLAMP, 1 9/16" TO 2 1/2" DIAMETER | 1 |
| 533 | 23-9-554-1 | LABEL, W/D | 2 |
| 534 | 23-9-181-1 | SIDE LABEL, RIGHT | 1 |
| | 23-9-180-1 | SIDE LABEL, LEFT | 1 |
| 535 | 23-9-544-1 | TANK, RECOVERY | 1 |
| 536 | 27-9-196-1 | BATTERY COVER LABEL - NSS | 1 |
| 537 | 99-9-755-0 | VELCRO HOOK, P.S. 2" | 2 |
| 538 | 91-2-036-0 | 10-24 HEX NUT WITH STAR LOCK WASHER | 2 |
| 539 | 26-9-089-1 | RECOVERY TANK LID GASKET | 1 |
| 540 | 26-9-092-1 | LID MOUNTING RING | 1 |
| 541 | 26-9-093-1 | LID CHAIN RECOVERY TANK | 1 |
| 542 | 91-2-045-0 | 10-24 X 1 ROUND HEAD PHILLIPS MACHINE SCREW | 1 |
| 543 | 91-2-079-0 | 10 X 5/8 PAN HEAD PHILLIPS SHEET METAL SCREW | 5 |
| 544 | 26-9-088-1 | RECOVERY TANK LID ASSEMBLY (INCL. ITEMS 540, 539, 544) | 1 |
| | 26-9-088-9 | RECOVERY TANK LID & GASKET ASSY. (INCL. ITEMS 538, 539, 544) | 1 |
| 545 | 26-9-091-1 | CLEAR TANK LID | 1 |
| 546 | 99-9-756-0 | VELCRO LOOP, P.S. 6" | 2 |
| 547 | 23-9-123-1 | VACUUM HOSE | 1 |
| 548 | 57-9-033-1 | WAND - 2 PIECE, 1 1/2" | 1 |

RECOVERY TANK

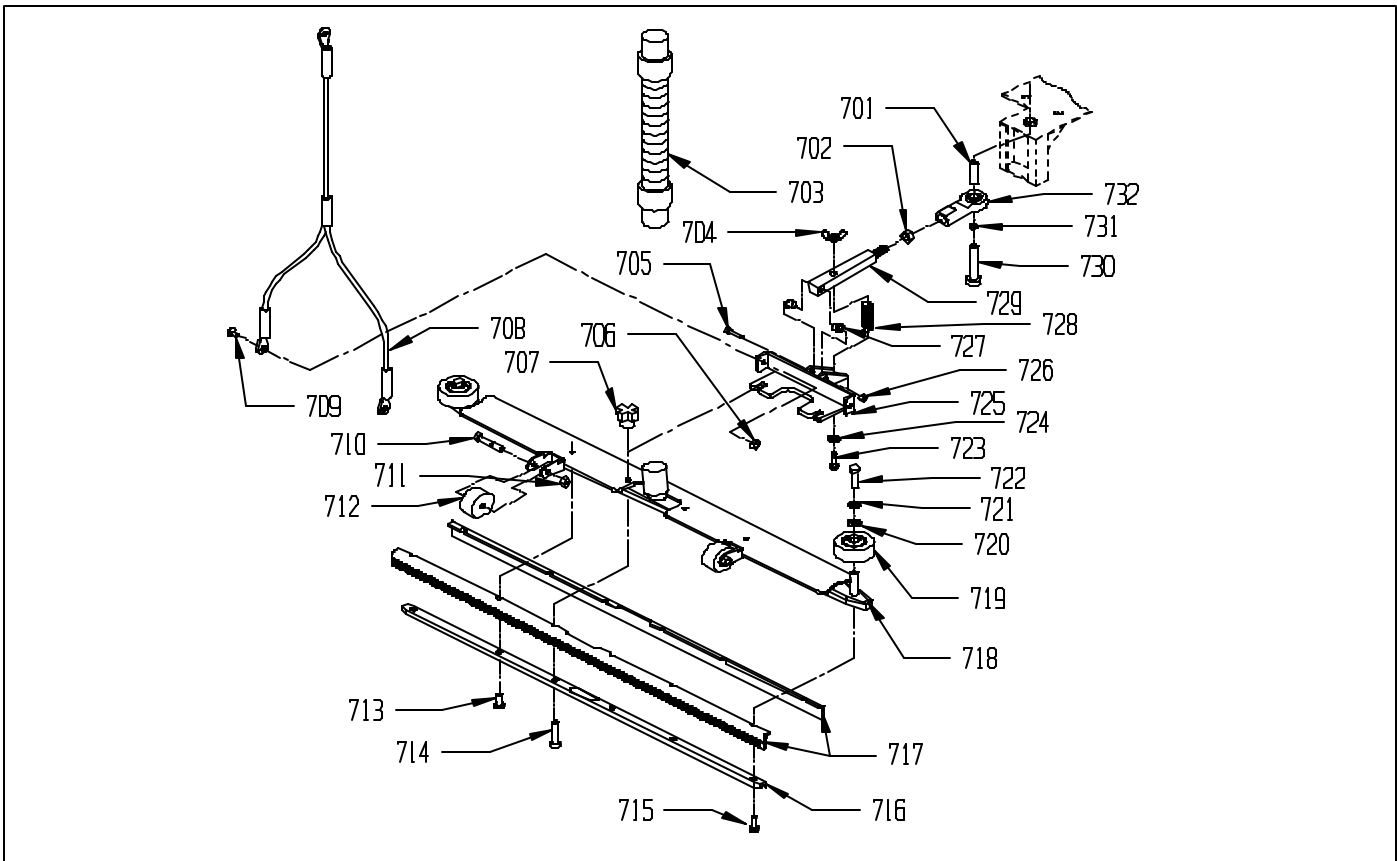


| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>QTY.</u> |
|-------------|-----------------|--|-------------|
| 601 | 23-9-303-1 | MOTOR HOUSING (IMPERIAL) | 1 |
| 602 | 23-9-299-1 | BUTT CONNECTOR | 2 |
| 603 | 23-9-300-1 | GEAR MOTOR (IMPERIAL) 3/4 HP 24 VOLT DC | 1 |
| 604 | 27-9-268-1 | KEY | 1 |
| 605 | 91-2-024-0 | 8-32 X 1/2 ROUND HEAD PHILLIPS MACHINE SCREW | 2 |
| 606 | 91-2-018-0 | #8 INTERNAL STAR LOCK WASHER | 2 |
| 607 | 23-9-113-6 | WATER FEED TUBE | 1 |
| 608 | 23-9-248-1 | HOSE CLAMP 7/32" TO 5/8" DIAMETER. | 1 |
| 609 | 87-9-107-0 | VINYL HOSE, 3/8" I.D. X 1/2" O.D. X 23" LONG | 1 |
| 610 | 23-9-304-3 | SKIRT (IMPERIAL) | 1 |
| 611 | 91-2-152-0 | 5/16 SPLIT LOCK WASHER | 8 |
| 612 | 91-2-164-0 | 5/16-18 X 3/4 HEX HEAD BOLT | 8 |
| 613 | 91-2-019-0 | 8-32 HEX NUT WITH STAR LOCK WASHER | 2 |
| 614 | 23-9-306-1 | SPACER FOR IMPERIAL MOTOR | 1 |
| 615 | 23-9-305-2 | CLUTCH CASTING (IMPERIAL) | 1 |
| 616 | 52-9-354-1 | MOTOR WASHER 1" O.D. | 1 |
| 617 | 91-2-139-0 | 11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16) | 1 |
| 618 | 91-2-152-0 | 5/16 SPLIT LOCK WASHER | 1 |
| 619 | 91-2-164-0 | 5/16-18 X 3/4 HEX BOLT | 1 |
| 620 | 23-9-112-1 | BUMPER GUARD | 1 |
| 621 | 23-9-170-2 | SKIRT BAND | 1 |
| 622 | 91-2-045-0 | 10-24 X 1 ROUND HEAD PHILLIPS MACHINE SCREW | 1 |
| 623 | 28-9-260-1 | PAD DRIVER | 1 |
| 624 | 52-9-769-1 | PAD HOLDER BASE (YELLOW) | 1 |
| 625 | 44-9-548-1 | LOCK RING DEEP (YELLOW) | 1 |
| | 59-9-072-1 | SPRING CLIP PAD HOLDER SET (WHITE) | 1 |
| 626 | 91-2-079-0 | #10 X 5/8 PAN HEAD PHILLIPS SHEET METAL SCREW | 3 |
| 627 | 28-9-010-1 | CLUTCH PLATE, PLASTIC 5" DIAMETER 6 HOLES | 1 |
| | 28-9-097-1 | 6 HOLES, PLASTIC CLUTCH PLATE - BROWN, TRU FIT | 1 |
| | 28-9-095-1 | 6 HOLES, 5" DIAMETER, PLASTIC CLUTCH PLATE - WHITE SPINOFF | 1 |
| 628 | ————— | 10 X 1 FLAT HEAD SCREW | 6 |
| 629 | 91-2-035-0 | 10-24 HEX NUT WITH NY-LOK INSERT | 1 |
| 630 | 91-2-156-0 | 5/16-18 X 1/2 HEX BOLT | 1 |
| 631 | 91-2-141-0 | 5/16 EXTERNAL STAR LOCK WASHER | 1 |
| 632 | 91-2-222-0 | 3/8-16 X 3/4 HEX BOLT | 4 |
| 633 | 91-2-210-0 | 3/8 SPLIT LOCK WASHER | 4 |
| 634 | 23-9-227-6 | BUMPER WHEEL AXLE | 1 |
| 635 | 27-9-028-1 | 3" BUMPER WHEEL | 1 |
| 636 | 91-2-139-0 | 11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16) | 1 |
| 637 | 91-2-141-0 | 5/16 EXTERNAL STAR LOCK WASHER | 1 |
| 638 | 91-2-156-0 | 5/16-18 X 1/2 HEX BOLT | 1 |
| 639 | 23-9-184-1 | MOTOR STRIPE LABEL | 1 |

BRUSH HEAD ASSEMBLY

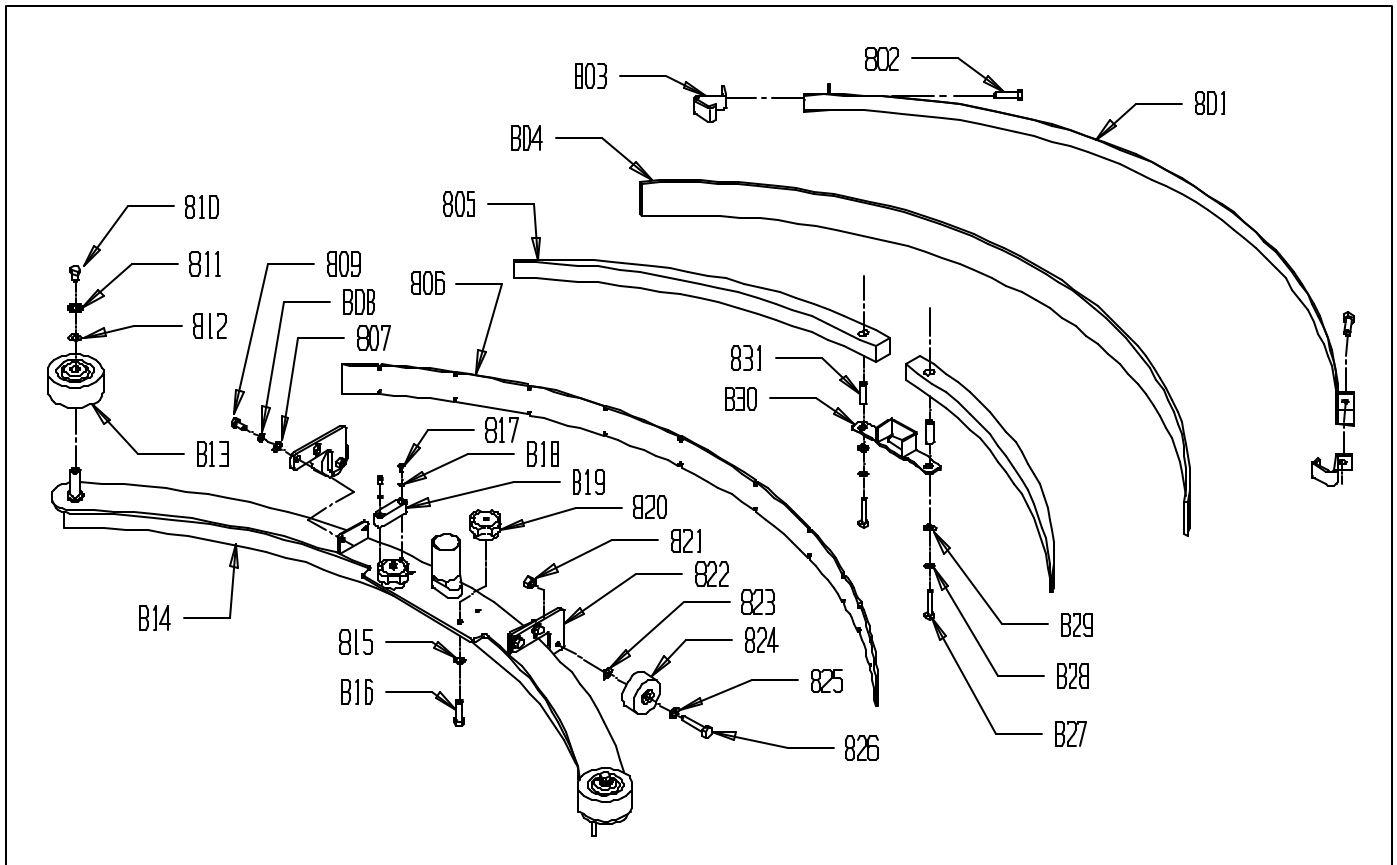


SQUEEGEE ASSEMBLY



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>QTY.</u> |
|-------------|-----------------|--|-------------|
| 701 | 24-9-059-1 | SPACER, SQUEEGEE PIVOT | 1 |
| 702 | 91-2-267-0 | 1/2-20 HEX JAM NUT | 1 |
| 703 | 26-9-059-1 | SQUEEGEE VAC HOSE WITH CUFFS | 1 |
| 704 | 91-2-144-0 | 5/16-18 WING NUT | 1 |
| 705 | 91-2-234-0 | 3/8-16 X 2 HEX BOLT | 1 |
| 706 | 91-2-090-0 | 1/4-20 HEX NUT WITH NY-LOK INSERT | 2 |
| 707 | 27-9-100-2 | SQUEEGEE KNOB | 2 |
| 708 | 24-9-530-1 | SQUEEGEE LIFT CABLE | 1 |
| 709 | 91-2-101-0 | 1/4-20 X 3/4 TRUSS HEAD PHILLIPS MACHINE SCREW | 2 |
| 710 | 91-2-176-0 | 5/16-18 X 1 3/4 HEX BOLT | 2 |
| 711 | 91-2-145-0 | 5/16-18 HEX NUT WITH NY-LOK INSERT | 2 |
| 712 | 30-9-674-1 | WHEEL, BUMPER - SMALL, GRAY | 2 |
| 713 | 91-2-188-0 | 5/16-18 X 3/4 SOCKET HEAD CAP SCREW | 2 |
| 714 | 91-2-192-0 | 5/16-18 X 1 1/2 SOCKET HEAD CAP SCREW | 2 |
| 715 | 91-2-188-0 | 5/16-18 X 3/4 SOCKET HEAD CAP SCREW | 2 |
| 716 | 26-9-253-3 | INNER CHANNEL SQUEEGEE NARROW MOUNT | 1 |
| 717 | 27-9-106-1 | 32" REPLACEABLE SQUEEGEE BLADES, SET OF 2 | 1 |
| 718 | 26-9-252-3 | HOUSING, NARROW MOUNT SQUEEGEE | 1 |
| | 26-9-253-9 | SQUEEGEE ASSEMBLY NARROW MOUNT | 1 |
| 719 | 27-9-028-1 | 3" BUMPER WHEEL | 2 |
| 720 | 91-2-139-0 | 11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16) | 2 |
| 721 | 91-2-141-0 | 5/16 EXTERNAL STAR LOCK WASHER | 2 |
| 722 | 91-2-156-0 | 5/16-18 X 1/2 HEX BOLT | 2 |
| 723 | 91-2-213-0 | 5/16-18 X 2 1/4 HEX BOLT | 1 |
| 724 | 91-2-152-0 | WASHER, 5/16 SPLIT LOCK | 1 |
| 725 | 13-9-017-1 | SQUEEGEE BRACKET | 1 |
| 726 | 91-2-214-0 | 3/8-16 HEX NUT WITH NY-LOK INSERT | 1 |
| 727 | 13-9-117-1 | BUSHING, SQUEEGEE SHAFT | 2 |
| 728 | 36-9-558-1 | HEIGHT ADJUSTING SPRING | 1 |
| 729 | 13-9-015-6 | SQUEEGEE SHAFT | 1 |
| 730 | 91-2-266-0 | 1/2-13 X 3 HEX BOLT WITH NY-LOK PATCH | 1 |
| 731 | 10-9-098-1 | SWITCH GUARD SPACER | 1 |
| 732 | 23-9-194-1 | BALL JOINT | 1 |

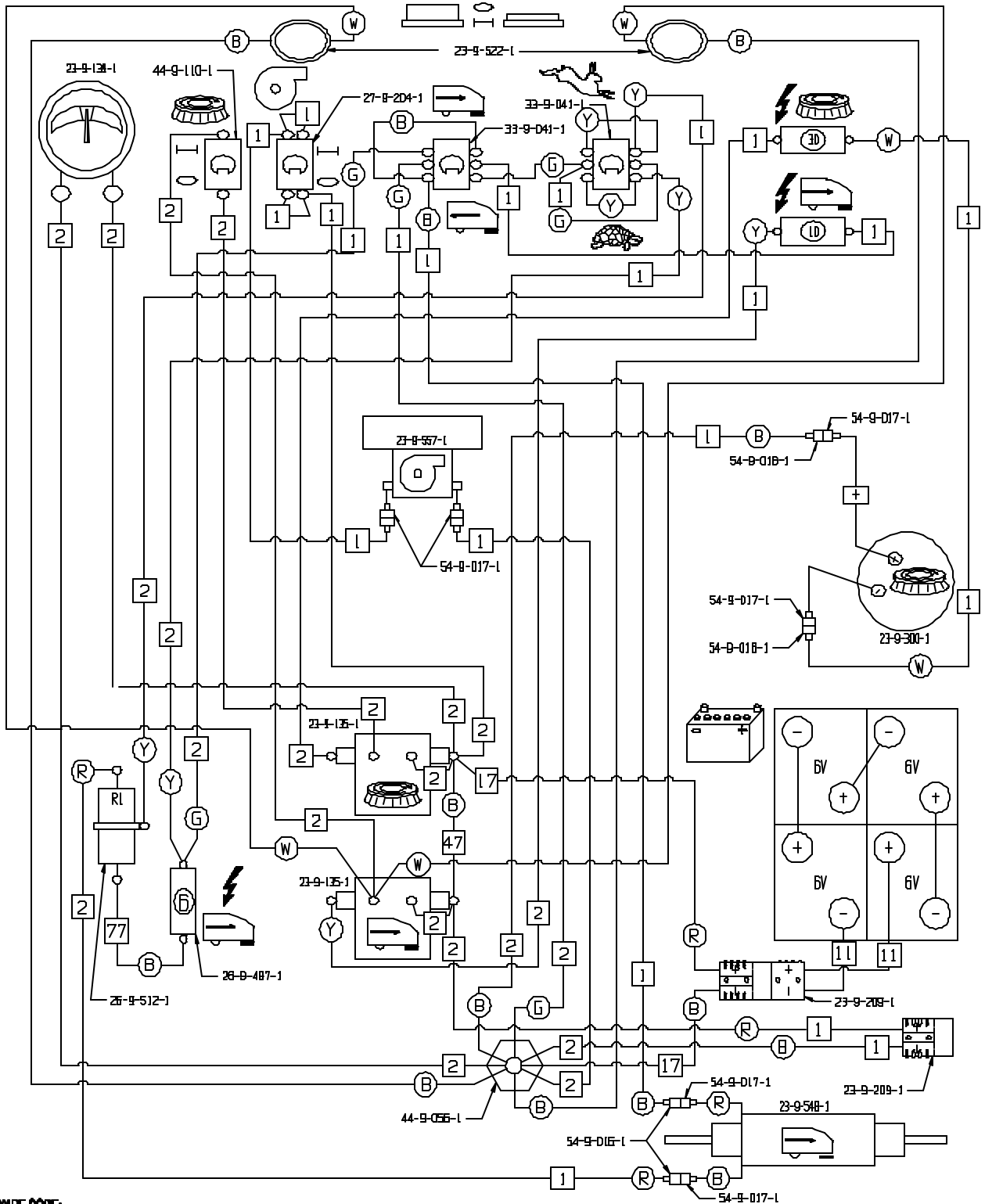
CURVED SQUEEGEE ASSEMBLY



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>QTY.</u> |
|-------------|-----------------|--|-------------|
| | 24-9-249-9 | CURVED SQUEEGEE COMPLETE | 1 |
| 801 | 24-9-255-1 | REAR SECURING STRAP | 1 |
| 802 | 91-2-172-0 | 5/16-18 X 1 1/4 FULL THREADED HEX HEAD BOLT | 2 |
| 803 | 24-9-256-1 | HOOKED END | 2 |
| 804 | 24-9-253-1 | REAR BLADE | 1 |
| 805 | 24-9-251-1 | CENTER WEDGE | 2 |
| 806 | 24-9-252-1 | FRONT BLADE | 1 |
| 807 | 91-2-121-0 | 1/4-20 X 5/8 HEX BOLT | 4 |
| 808 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 4 |
| 809 | 91-2-093-0 | 9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 4 |
| 810 | 91-2-156-0 | 5/16-18 X 1/2 HEX BOLT | 2 |
| 811 | 91-2-141-0 | 5/16 EXTERNAL STAR LOCK WASHER | 2 |
| 812 | 91-2-139-0 | 11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16) | 2 |
| 813 | 27-9-028-1 | BUMPER WHEEL | 2 |
| 814 | 24-9-250-3 | MAIN HOUSING | 1 |
| | 24-9-249-9 | CURVED SQUEEGEE ASSEMBLY | 1 |
| 815 | 91-2-152-0 | 5/16 SPLIT LOCK WASHER | 2 |
| 816 | 91-2-172-0 | 5/16-18 X 1 1/4 FULL THREADED HEX HEAD BOLT | 2 |
| 817 | 91-2-007-0 | 6-32 X 3/8 ROUND HEAD PHILLIPS MACHINE SCREW | 2 |
| 818 | 91-2-003-0 | #6 SPLIT LOCK WASHER | 2 |
| 819 | 24-9-258-1 | SQUEEGEE LEVEL | 1 |
| 820 | 27-9-100-2 | SQUEEGEE KNOB | 2 |
| 821 | 91-2-145-0 | 5/16-18 HEX NUT WITH NY-LOK INSERT | 2 |
| 822 | 24-9-257-1 | DOLLY WHEEL MOUNTING BRACKET | 2 |
| 823 | 91-2-139-0 | 11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16) | 2 |
| 824 | 30-9-674-1 | ROLLER WHEEL | 2 |
| 825 | 91-2-139-0 | 11/32 I.D. X 11/16 O.D. X .051/.080 THICK SAE FLAT WASHER (5/16) | 2 |
| 826 | 91-2-176-0 | 5/16-18 X 1 3/4 HEX BOLT | 2 |
| 827 | 91-2-128-0 | 1/4-20 X 1 1/2 HEX BOLT | 2 |
| 828 | 91-2-088-0 | 1/4 SPLIT LOCK WASHER | 2 |
| 829 | 91-2-093-0 | 9/32 I.D. X 5/8 O.D. X .051/.080 THICK SAE FLAT WASHER (1/4) | 2 |
| 830 | 24-9-254-1 | CENTER HOLD DOWN | 1 |
| 831 | 24-9-259-1 | CENTER HOLD DOWN SPACER | 2 |

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>QTY.</u> |
|-------------|-----------------|---|-------------|
| 1 | 23-9-523-1 | COMPLETE MAIN WIRE HARNESS | 1 |
| 2 | 23-9-521-1 | COMPLETE BACK WIRE HARNESS | 1 |
| 11 | 23-9-614-1 | WIRE ASSEMBLY ANDERSON TO POSITIVE / NEGATIVE BATTERY | 1 |
| 17 | 23-9-615-1 | WIRE ASSEMBLY ANDERSON TO SOLENOID / STANDOFF | 1 |
| 47 | 27-9-214-1 | CABLE ASSEMBLY #6 X 6" | 1 |
| 77 | 26-9-489-1 | WIRE ASSEMBLY RESISTOR TO CIRCUIT BREAKER | 1 |
| 97 | 23-9-198-1 | BATTERY JUMPER 3/8 RING | 5 |
| | 26-9-487-1 | CIRCUIT BREAKER 6 AMP | 1 |
| | 23-9-136-1 | CIRCUIT BREAKER 24 VOLT 30 AMP | 1 |
| | 23-9-220-1 | CIRCUIT BREAKER 115 VOLT 10 AMP | 1 |
| | 23-9-135-1 | SOLENOID CONTACTOR 24 VOLT | 1 |
| | 23-9-139-1 | BATTERY METER | 1 |
| | 23-9-209-1 | CHARGER PLUG ONLY, RED 24 VOLT | 1 |
| | 23-9-548-1 | TRANSAXLE, 20" | 1 |
| | 23-9-522-9 | DEADMAN BUTTON SWITCH WITH RING TERMINALS | 2 |
| | 23-9-557-1 | VAC MOTOR 24 VOLT 3 STAGE | 1 |
| | 23-9-300-1 | BRUSH DRIVE MOTOR | 1 |
| | 27-9-204-1 | VAC MOTOR SWITCH | 1 |
| | 33-9-041-1 | FORWARD / REVERSE SWITCH | 2 |
| | 44-9-056-1 | INSULATED STAND OFF | 1 |
| | 44-9-110-1 | TOGGLE SWITCH | 1 |
| | 54-9-016-1 | 1/4 FEMALE TERMINAL FULLY INSULATED 16-14 GAGE | 4 |
| | 54-9-017-1 | 1/4 MALE SPADE TERMINAL FULLY INSULATED 16-14 GAGE | 6 |
| | 26-9-512-1 | RESISTOR | 1 |
| | 35-9-084-1 | WIRE TIE, 11" LONG | 1 |

WIRING DIAGRAM

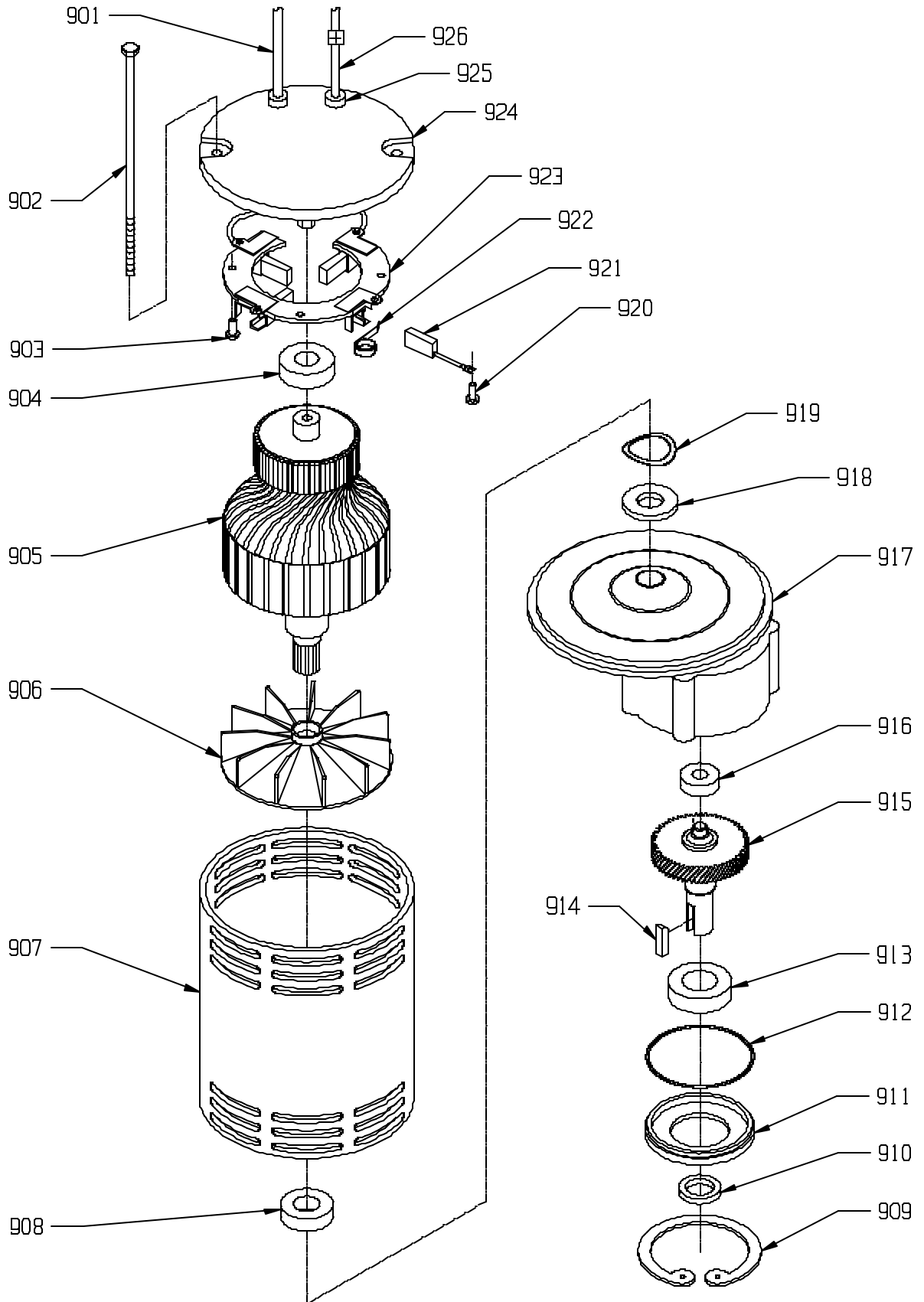


WIRE CODE:
B = BLACK
G = GREEN
R = RED
W = WHITE
Y = YELLOW

WRANGLER 20 W/D 24 VOLT SYSTEM

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u> | <u>QTY.</u> |
|-------------|-----------------|--|-------------|
| | 23-9-300-1 | COMPLETE MOTOR ASSEMBLY | 1 |
| 901 | 33-9-122-1 | NEGATIVE LEAD | 1 |
| 902 | 33-9-120-1 | THRU BOLT 1/4-20 X 7 3/4 | 2 |
| 903 | ————— | 10-24 X 1/2 SELF TAP ROUND HEAD SLOTTED SCREW | 2 |
| 904 | 50-9-204-1 | TOP END BEARING | 1 |
| 905 | 23-9-325-1 | ARMATURE ASSEMBLY, INCLUDES VENT FAN AND BEARINGS | 1 |
| 906 | 33-9-119-1 | ARMATURE VENT FAN | 1 |
| 907 | 33-9-104-1 | STATOR FRAME ASSEMBLY WITH MAGNETS | 1 |
| 908 | 33-9-105-1 | BOTTOM END BEARING | 1 |
| 909 | 33-9-117-1 | SNAP RING | 1 |
| 910 | 33-9-116-1 | OIL SEAL, SMALL | 1 |
| 911 | 33-9-115-1 | END CAP | 1 |
| 912 | 33-9-114-1 | "O" RING | 1 |
| 913 | 33-9-113-1 | BOTTOM BEARING, LARGE | 1 |
| 914 | 27-9-268-1 | MOTOR KEY, 1/4 X 1/4 X 1 | 1 |
| 915 | 33-9-112-1 | GEAR SHAFT | 1 |
| 916 | 33-9-111-1 | TOP BEARING, SMALL | 1 |
| 917 | 33-9-110-1 | GEAR BOX - HOUSING ONLY | 1 |
| | 33-9-118-1 | GEAR BOX ASSEMBLY, (INCLUDES ITEMS 17-26) | 1 |
| 918 | 33-9-109-1 | OIL SEAL, LARGE | 1 |
| 919 | 27-9-759-1 | HELICAL WASHER | 1 |
| 920 | ————— | 10-32 X 1/2 PAN HEAD SLOTTED SCREW, BRASS | 4 |
| 921 | 33-9-108-1 | CARBON BRUSH | 4 |
| 922 | 27-9-757-1 | CARBON BRUSH SPRING | 4 |
| 923 | 33-9-102-1 | BRUSH BOARD ASSEMBLY, INCL. CARBON BRUSHES & SPRINGS | 1 |
| 924 | 33-9-100-1 | TOP END BRACKET ONLY | 1 |
| | 33-9-101-1 | TOP END BRACKET WITH BRUSH BOARD ASSEMBLY | 1 |
| 925 | 33-9-107-1 | STRAIN RELIEF | 2 |
| 926 | 33-9-121-1 | POSITIVE LEAD | 1 |

BRUSH GEAR MOTOR



| PROBLEM | TROUBLESHOOTING CAUSE | SOLUTION |
|---|--|---|
| No Solution Flow. | The solution valve is closed. Obstruction in the solution hose. Solution valve or linkage damaged. Solution tank is empty. | Open the solution valve. Remove the obstruction. Repair/replace the valve linkage. Fill the tank. |
| Solution Flow Does Not Stop. | The solution valve is open. Solution valve or linkage damage. Solution valve is dirty. Damaged seat and washer in valve. The valve stem is dirty. | Close the solution valve. Repair/replace the valve linkage. Clean the solution valve. Replace valve. Clean and lubricate valve stem. |
| Will Not Pick Up Any Water From Floor. | Squeegee is up. Vac motor switch is "off". Recovery tank is full. Vacuum shut-off float is stuck. Obstruction/damage in the squeegee, squeegee hose or standpipe. Leaking over gasket. Vac motor is not running. | Lower squeegee. Turn vac motor switch "on". Empty tank. Open float valve/remove obstruction. Remove obstruction/repair damage. Remove old gasket/replace. Have an authorized serviceman repair. |
| Will Not Pick Up All of the Water From the Floor. | Squeegee blade is worn/damaged. Obstruction/damage in the squeegee, squeegee hose or standpipe. Squeegee pressure needs adjustment. Vacuum motor worn out. | Reverse/replace squeegee blade. Remove obstruction/repair damage. Adjust pressure. Repair/replace vac motor. |
| Batteries Do Not Seem To Run Long Enough. | Tops of batteries are dirty/wet. Battery terminals are dirty/damaged. Electrolyte level is too low. Batteries are not fully charged. Charger is damaged. Battery is defective. | Clean/dry, charge batteries. Clean terminals and connectors, replace damaged cables. Charge. Add distilled water and charge. Charge batteries for 8 hours. Have an authorized serviceman repair. Check cell voltage while discharging. |
| Cleaning Is Not Even. | Brush/pads are worn. Damage to brush assembly, casters or solution valve. Motor is not running. | Replace. Have an authorized serviceman repair. Repair wiring, replace switch, replace carbon brushes. Reset circuit breaker button. |
| Machine Does Not Run. | The machine loses power. | Reset circuit breaker. Check battery connections. |

NOTE: If problems remain after taking the above steps, contact your local authorized service station for further evaluation and repair.



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