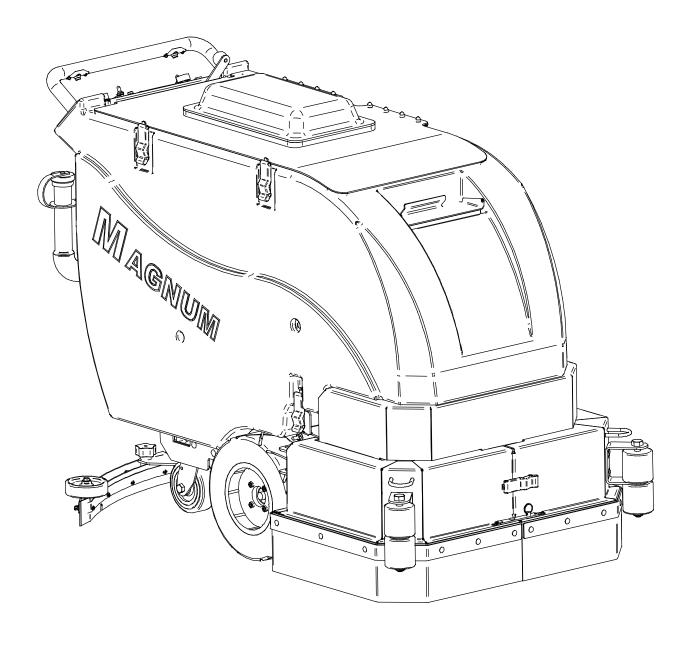
() Ш Y Ш NUZY

MAGNUM

Operator and Parts Manual



R.P.S. Corporation P.O. Box 241

Racine, Wisconsin 53401

Phone: 1-800-450-9824

Fax: 1-866-632-6961

HOW TO USE THIS MANUAL

This manual contains the following sections:

- HOW TO USE THIS MANUAL
- SAFETY
- OPERATIONS
- MAINTENANCE
- PARTS LIST

The HOW TO USE THIS MANUAL section will tell you how to find important information for ordering the correct replacement parts.

Parts may be ordered from authorized dealers. When placing an order for parts, the machine model and serial number are important.

Refer to MACHINE INFORMATION on page one of this manual, which is filled out during the installation of your machine.

The serial number of your machine is located on the lower half of the control panel of the machine. (See Picture Below)



The SAFETY section contains important information regarding hazard or unsafe practices of the machine.

Levels of hazards are identified that could result in product or personal injury, or severe injury resulting in death.

The OPERATIONS section is to familiarize the operator with the operation and function of the machine.

The MAINTENANCE section contains preventative maintenance to keep the machine and its components in good working condition. They are listed in this general order:

- Batteries
- Scrub Brushes
- Adjusting Squeegee
- Service Schedule
- Machine Trouble Shooting

The PARTS LIST section contains assembled parts illustrations and corresponding parts list. The parts lists include a number of columns of information:

- ITEM Column refers to the reference number on the parts illustration.
- PART NO. Column lists the part number for the part.
- QTY Column lists the quantity of the part used in that area of the machine.
- DESCRIPTION Column is a brief description of the part.
- COMMENTS Column for information not noted by the other columns.

NOTE: If a service or option kit is installed on your machine, be sure to keep the KIT INSTRUCTIONS which came with the kit. It contains replacement part numbers needed for ordering future parts.

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MACHINE INFORMATION

Please fill this area out at the time of installation for future reference.
Model Number
Serial Number:
Installation Date:
Installing Dealer:
Dealer Contact:
Address:
City, State, Zip:
Phone Number:

This operator and parts manual should be considered a permanent part of the unit and should remain with the unit at all times. This operator and parts manual covers all the Magnum series scrubbers. You may find descriptions and features that are not on your particular model. The information and specifications included in this publication were in effect at the time of printing. R.P.S. Corp. reserves the right to make changes without notice or incurring any obligation.

To register for warranty, fax your warranty registration form today! FAX # (886)-632-6961

R.P.S. CORPORATION P.O. BOX 368 RACINE, WI 53401 PHONE: 800-634-4060

MACHINE DELIVERY FORM

Dealer:	Inst	Installed By:			
Location: (City, State) Install Date					
	Customer Inform	ation			
Name:	Cor	ntact:			
Address:	City	City/State:Zip_			
Phone Number :	Fax	Fax Number:			
Model Number:	_ Serial Number:	F	lour Meter:_		
Squeegee Size:	Squeegee Material: Gum	Linatex	Neoprene	(circle one)	
Adjusting Controls and "I Recovery Tank Draining Shroud and Pad Remova Shroud Adjustment Solution Valve and Filter Drain Saver Feature Charging Operation Seat and Steering Whee LCD Screen Display Operation Tank Tilt Back Feature Parking Brake Override Checking Battery Electro Squeegee Hose Remova Battery Guide Poster Hu Maintenance Guide Poster	Operation (removal and cleaning of the cleanin	crubbing, So noval and Cl	queegee Dela leaning action drive)		
In addition to the items liste manual and been advised to				ine operator s	
Installed By (print)	Signature_				
Buyer's Representative (print)S	ignature			
BUYER AGREES TO PAY FOR AN		SECONDARY	TRAINING TH	AT MANUFACTURER	

COMPLETE AND FAX FORM to 866-632-6961

MACHINE SPECIFICATIONS

SPECS

BODY CONSTRUCTION

Tank Construction: Frame Construction: Drive Wheel:

Casters:

Body Dimensions $(L \times W \times H)$:

Width (squeegee):
Weight (w/out batteries):

Weight (w/ standard batteries):

BRUSH/PAD SYSTEM

Brush/Pad Diameter:

Motor Power (standard): Motor Power (HD Option):

Brush Speed: Brush Pressure:

Brush Pressure Settings:

BATTERY SYSTEM

Battery AH Rating (Standard): Battery AH Rating (Optional):

Battery Run Time:

Charger (110v / 60 Hz / auto):

SOLUTION SYSTEM

Solution Tank Capacity: Solution Flow Rate:

RECOVERY SYSTEM

Recovery Tank Capacity: Vacuum Horsepower:

Vacuum (Water Lift / Cubic ft/min):

DRIVE SYSTEM

Transaxle Description:

Speed Control:

PRODUCTIVITY

Cleaning Width & Rate/Hour:

<u>Disk</u>

(7/16") Roto-Poly 3/16" Steel (2) 12" diameter x 3-1/2" (2) 5" diameter x 2" 56" x 24" x 43" 35", 38" or 45"

489 pounds 967 pounds

26D - (2) 13 inches 30D - (2) 15 inches 34D - (2) 17 inches

(2) 0.75 hp / 270 rpm (2) 1.0 hp / 270 rpm

270 rpm 0-250 pounds (1-5) automatic

210 AH

Up to 325 amp hour Up to 5 hours 24-v / 25-amp

30-gallons 0 - 0.75 gal/min.

30-gallons 0.8 hp / 3-stage 68" / 72 cfm

0.75 hp, gear / sealed 0 – 230 ft/min

26" / 26,000 sq.feet / hour 30" / 30,000 sq.feet / hour 34" / 34,000 sq.feet / hour

Cylindrical

(7/16") Roto-Poly 3/16" Steel

(2) 12" diameter x 3-1/2" (2) 5" diameter x 2" 56" x 24" x 43" 35", 38" or 45" 494 pounds 974 pounds

24C - (2) 22" x 5.5" 27C - (2) 25" x 5.5" *30C - (2) 28" x 5.5" *34C - (2) 32" x 5.5"

(2) 0.75 hp / 350 rpm (24" & 27") (2) 1.0 hp / 350 rpm (30" & 34")

750 rpm 0-250 pounds (1-5) automatic

210 AH

Up to 325 amp hour Up to 5 hours 24-v / 25-amp

30-gallons 0 - 0.75 gal/min.

30-gallons 0.8 hp / 3-stage 68" / 72 cfm

0.75 hp, gear / sealed 0 – 230 ft/min

24" / 24,000 sq.feet / hour 27" / 27,000 sq.feet / hour 30" / 30,000 sq.feet / hour 34" / 34,000 sq.feet / hour

* HD STANDARD

R.P.S. Corporation P.O. Box 368 Racine, WI 53401

Phone: (800) 634-4060 Fax: (866) 901-3335

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COMMON WEAR PARTS

<u>ITEM</u>	MODEL	MODEL	MODEL	MODEL	MODEL	MODEL	MODEL
BRUSH TYPE	26"-DISK	30"-DISK	34"-DISK	24"-CYL	27"-CYL	30"-CYL	34"-CYL
<u>BRUSHES</u>							
SUPER-GRIT	13-421SS	15-421SS	17-421SS	N/A	N/A	N/A	N/A
TOUGH-GRIT	13-421S	15-421S	17-421S	22-521\$	25-521S	28-521\$	32-521S
MIDI-GRIT	13-421C	15-421C	17-421C	22-521C	25-521C	28-521C	32-521C
LIGHT-GRIT	13-421PS	15-421PS	17-421PS	22-521PS	25-521PS	28-521PS	32-521PS
POLY (.028)	13-421P	15-421P	17-421P	N/A	N/A	N/A	N/A
NYLON (.016)	13-421N	15-421N	17-421N	22-521N	25-521N	28-521N	32-521N
TAMPICO	13-421T	15-421T	17-421T	22-521T	25-521T	28-521T	32-521T
PAD DRIVER	13-421D	15-421D	17-421D	N/A	N/A	N/A	N/A
	'er retaining ci T: 40-423 replac	LIP: 40-433 CEMENT LOCATIN	NG CLIP FOR ALI	DISK BRUSHES			
<u>PADS</u>							
SUPER BLACK	13-422BB	15-422BB	17-422BB	N/A	N/A	N/A	N/A
BLACK	13-422B	15-422B	17-422B	N/A	N/A	N/A	N/A
BROWN	13-422BR	15-422BR	17-422BR	N/A	N/A	N/A	N/A
GREEN	13-422G	15-422G	17-422G	N/A	N/A	N/A	N/A
BLUE	13-422BL	15-422BL	17-422BL	N/A	N/A	N/A	N/A
RED	13-422R	15-422R	17-422R	N/A	N/A	N/A	N/A
WHITE	13-422W	15-422W	17-422W	N/A	N/A	N/A	N/A
SQUEEGEE KITS	<u>SIZE</u>		GUM RUBB	<u>ER</u>	LINATE	X	
	35"		25-770G		<u>25-770</u>		
	38"		28-770G		28-770	L	
	45"		290-770G	i	290-770	OL	

KIT INCLUDES: (1) Rear Blade, (1) Front Blade, and (2) Backup Wheels with hardware.

NOTE: Size is stamped into the top of the painted steel squeegee blank on 35", 38", & 45" squeegees.

MODELS MAGNUM - 24", 26" & 27": Have a 35" Squeegee unless other size is specially ordered at time of purchase.

MODELS MAGNUM - 30": Have a 38" Squeegee unless other size is specially ordered at time of purchase.

MODELS MAGNUM - 34": Have a 45" Squeegee unless other size is specially ordered at time of purchase.

NOTE: The Squeegee is designed for narrow isles and may not have the same water control around tight turns as the larger squeegees.

SAFETY MESSAGES

Your safety, and the safety of others, is very important, and operating this unit safely is an important responsibility.

To help you make informed decisions about safety, we have provided operating procedures and other safety information in the manual. This information informs you of potential hazards that could hurt you or others.

It is not practical or possible to warn you of all the hazards associated with operating this unit. You must use your own good judgment.

This machine is intended for commercial use. It is designed to be used on hard floors in an indoor environment, with the recommended pads or brushes.

1. DO NOT OPERATE UNIT:

Unless trained and authorized.
Unless operator manual is read and understood.
If unit is not in proper operating condition.

2. WHEN OPERATING UNIT:

Remove loose objects from the floor that may be projected from the revolving brushes. Keep hands and feet away from revolving brushes. Do not operate machine where flammable liquids are present. Use extreme caution when maneuvering.

3. BEFORE LEAVING:

Drain Tanks
Make sure machine is turned off.
Stop on level surfaces.
Disconnect batteries.

4. BEFORE SERVICING:

Stop on level surface, and secure machine. Disconnect batteries.

!! SAFETY PRECAUTIONS!!

<u>WARNING:</u> Hazardous voltage. Shock, burns or electrocution can result. Always disconnect the batteries before servicing machine.

<u>WARNING:</u> Batteries emit hydrogen gases. Explosion or fire can result. Keep sparks and open flames away.

<u>WARNING:</u> Charge unit in a well ventilated area, and keep battery compartment open when charging. Explosion or fire could result.

<u>WARNING:</u> Battery acid can cause burns. Wear protective eye wear and gloves when servicing batteries.

<u>WARNING:</u> Do not store outdoors or pressure wash. Prevent electronic components from getting wet.

<u>WARNING:</u> The use of parts and solutions other than that recommended by the manufacturer may cause damage or endanger people.

<u>WARNING:</u> Dress safely. Do not wear rings or metal wrist watches while working on this machine. They can cause an electrical short, which, can cause serious burns. Do not work on this machine while wearing a tie, scarf or other loose, dangling neckware or clothing. These loose items can tangle in the rotating parts and cause serious injury or even death.

<u>WARNING:</u> Do not use the machine as a step ladder or chair.

<u>WARNING:</u> Only operate this machine from the operators position. It was not designed to carry passengers.

<u>WARNING:</u> Do not operate this machine on ramps or uneven surfaces. When climbing a ramp, always drive the machine in forward straight up or down the ramp. Never drive across the incline. Do not back down or turn on ramps!

<u>WARNING:</u> Always use the charger provided by the manufacturer to charge the machine. It is an automatic charger, specifically designed to charge at the appropriate rate. If you must use a different charger, disconnect the batteries before charging. This will prevent damage to the electronic speed controller.

<u>WARNING:</u> Understand the dynamic braking system before you operate the machine on ramps. Machine may coast.

<u>WARNING:</u> Do not park the machine on ramps or slopes.

<u>WARNING:</u> Do not operate the machine if any parts have been removed or damaged.

<u>WARNING:</u> Do not remove, paint over, or destroy warning decals. If warning decals become damaged, they must be replaced.

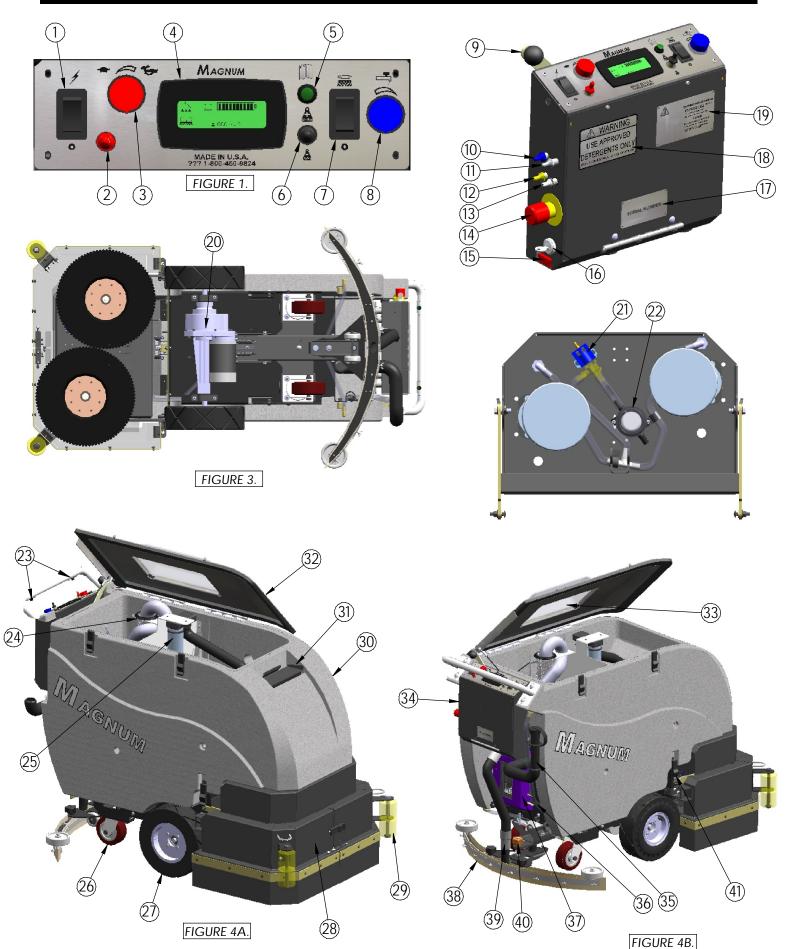
<u>WARNING:</u> Do not operate machine in unsafe condition. If the machine is in need of repair or is in any way unsafe to operate, the matter should be reported immediately to the shift supervisor. Do not operate the machine until it is returned to proper operating condition.

<u>WARNING:</u> This machine must only be operated by trained operator. As part of his or her training, they must read this manual thoroughly. If extra copies are needed, contact your local dealer.

<u>WARNING:</u> Always turn off the machine, before leaving it unattended.

<u>WARNING:</u> Do not operate over electrical floor outlets. May result in serious injury.

MACHINE CONTROLS AND FEATURES



PAGE 7

CONTROLS AND FUNCTIONS

SEE FIGURES (1-4) ON PAGE 7

SEE FIGURE 1

- 1. MAIN POWER SWITCH: Turns the machine on and off.
- 2. FORWARD/REVERSE SWITCH (RED): Controls the direction of the Traction Drive, Pull back for reverse.
- 3. SPEED CONTROL KNOB: Controls the speed of the Traction Drive, Turn counter-clockwise to reduce speed.
- 4. LCD SCREEN: Lists functions and settings of the machine. (See Page 9)
- 5. MENU CONTROL: Scrolls through different options on the LCD display, there are 3 different screens.
- 6. SCRUB DECK DOWN PRESSURE SWITCH: Controls the pressure on the Scrubdeck, push forward for more down pressure.
- 7. SCRUB DECK SWITCH: Raises and lowers the Scrubdeck.
- 8. SOLUTION FLOW CONTROL KNOB: Turn clockwise to reduce & counter-clockwise to increase flow.

SEE FIGURE 2

- 9. SQUEEGEE LIFT LEVER: Raises and lowers Squeegee.
- 10. SPRAY JET (BLUE) (OPTIONAL): Activates Spray Pump for remote Spray Wand.
- 11. ELECTRIC SQUEEGEE LIFT (GREY) (OPTIONAL): Electronically raises and lowers Squeegee.
- 12. SIDE BROOM SWITCH (YELLOW) (OPTIONAL): Turns on the Side Brooms.
- 13. "ON BOARD" SOAP SYSTEM (WHITE) (OPTIONAL): Dispenses soap into Solution Tank.
- 14. EMERGENCY STOP (OPTIONAL): Shuts off power to the machine.
- 15. CHARGER PORT: Red 50 used to receive charger input. NOTE: Only use charger provided (24 VOLT ONLY!).
- 16. KEY SWITCH (OPTIONAL): Turns power on to the machine.
- 17. SERIAL NUMBER PLATE: Machine identification.
- 18. WARNING PLATE: Detergent/Water warning.
- 19. WARNING PLATE: Explosion warning.

SEE FIGURE 3

- 20. TRACTION DRIVE: Propels machine forward/backward.
- 21. SOLUTION FLOW VALVE: Controls solution flow rate.
- 22. SOLUTION FILTER: Filters water solution prior to scrubbing.

SEE FIGURE 4A

- 23. DRIVE BUTTON: Depress to drive forward, release to stop. (starts & stops the drive motor)
- 24. "DRAIN SAVER" STRAINER: Helps prevent clogging of drain ports.
- 25. VAC SCREEN: Protects Vac Motor from debris.
- 26. CASTER: Twin casters for stability.
- 27. MAIN TIRE: Drive Tires.
- 28. JAWS: Protects Scrubdeck from collision damage.
- 29. POLYURETHANE ROLLERS: Helps protect machine when scrubbing near walls.
- 30. TANK-IN-TANK: Solution/Recovery Tank(30 gallons capacity each).
- 31. SOLUTION FILL LID: Fill port for filling Solution Tank.
- 32. RECOVERY LID: Used for flushing out Recovery Tank area with fresh water.

SEE FIGURE 4B

- 33. CLEAR COVER: For viewing inside Recovery Tank area.
- 34. CONTROL PANEL: Machine controls and access to electrical components.
- 35. RECOVERY DRAIN HOSE: Allows for controlled draining of Recovery Tank.
- 36. SOLUTION LEVEL INDICATOR & DRAIN TUBE: Shows precise level of cleaning solution in Tank & Drain Port.
- 37. "ON BOARD" BATTERY CHARGER (OPTIONAL): Recharges Batteries.
- 38. SQUEEGEE BLADE: Recovers dirty water from floor to be recovered by Vacuum Hose.
- 39. VACUUM HOSE: Vacuumizes Squeegee. NOTE: Keep free and clear of blockage.
- 40. SQUEEGEE PITCH ADJUSTMENT: Adjusts pitch of Squeegee. Deflection should be even across entire blade.
- 41. TANK LATCH: Secures tank to frame.

MACHINE SETUP

UNCRATING MACHINE

Carefully check the crate for any signs of damage and that the batteries are in the unit. To uncrate the machine, remove banding from around the crate. Take off the top and sides and dispose of properly. Carefully roll the machine off of the base. Notify the carrier immediately if concealed damage is discovered. Cylindrical brushhead is screwed to the pallet via screws located in the front solution trough. DO NOT TURN ON MACHINE UNTIL THESE SCREWS HAVE BEEN REMOVED. (SEE BELOW)



CONNECTING BATTERIES

Your machine is equipped with (2) 12-volt/205 AH, (4) 6-volt/245 AH or (4) 6-volt/325 AH, deep cycle, batteries, which form a 24 volt system.

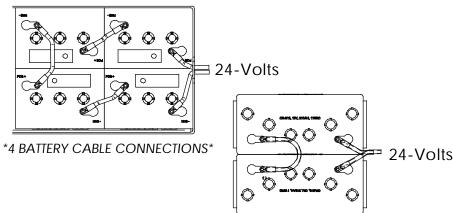
(SEE PICTURE BELOW FOR CORRECT CABLE CONNECTIONS.)

- 1. Turn all switches to the off position and remove key (if machine is equipped with optional key switch).
- 2. Turn on main power switch and check the battery condition meter to ensure correct installation.

 Charge batteries if needed. (SEE BATTERY CHARGING.)

WARNING! Batteries are a possible environmental hazard. Consult your battery supplier for safe disposal methods.

NOTE: Orientation of batteries is critical for cables to reach!



2 BATTERY CABLE CONNECTIONS

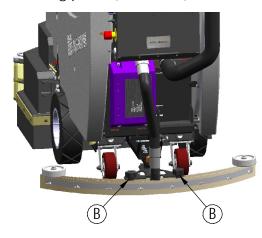
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ATTACHING SQUEEGEE

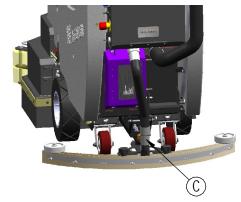
 Lower the squeegee mounting plate by rotating the lift lever "A" clockwise. (SEE BELOW)



 Loosen the two knobs "B" on the squeegee and slide them into the slots in the squeegee mounting plate. (SEE BELOW)



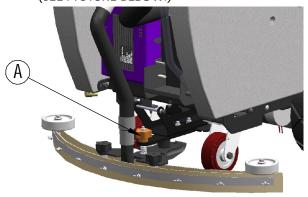
Tighten the two knobs, and connect the vacuum hose "C" from the machine to the squeegee. (SEE BELOW)



4. You may have to adjust the squeegee pitch. (SEE ADJUSTING SQUEEGEE ON NEXT PAGE.)

ADJUSTING SQUEEGEE

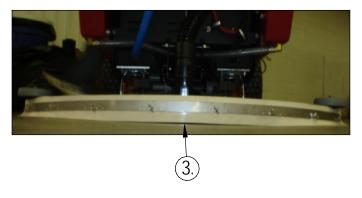
1. Turning adjustment knob "A" clock-wise (tightening) will lower tips & raise center. (SEE PICTURE BELOW.)



 This squeegee is adjusted too far back and will not pick up on the corners. *note tips off the floor*. (SEE BELOW)



 This squeegee is adjusted too far forward and will not pick up in the center. *note center spaced off the floor*. (SEE BELOW)

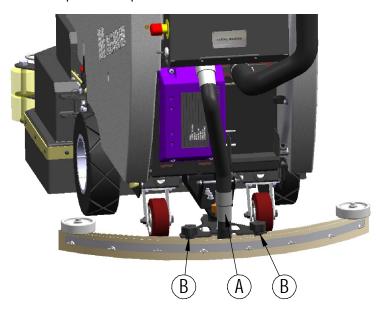


 This squeegee is adjusted just right with good deflection across the entire rear blade. (SEE BELOW)



REMOVING SQUEEGEE

- 1. With the squeegee in the up position, turn machine power off.
- 2. Disconnect vacuum hose "A" from squeegee and loosen both knobs "B". (SEE BELOW)
- 3. Pull squeegee assembly rearward from the lifting carrier.
- 4. Inspect or repair as needed and reinstall.



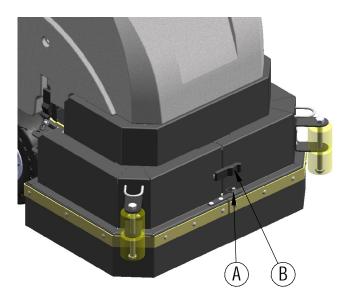
REPLACING OR ROTATE SQUEEGEE BLADES

FOR SAFETY: Before leaving or servicing machine stop on level surface, turn off machine and remove key.

- Remove the squeegee assembly from the machine. Remove blade retainer strap and remove squeegee blade.
- 2. Rotate the squeegee to new edge position or replace as required.
- 3. Install blade on the locating pins of squeegee assembly.
- 4. Install squeegee retainer strap.
- 5. Fasten and lock knobs.

<u>INSTALLING DISK PAD DRIVER OR BRUSH</u>

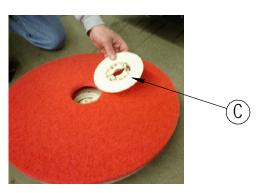
- 1. Turn on machine power.
- 2. Raise the scrub deck by depressing the brush switch (O) to the up and off position and turn machine power back off.
- 3. The machine is equipped with jaws. Remove pin "A" and undo latch "B" on front of jaws to open them. (SEE BELOW)



SCRUB BRUSHES

There are many different types of brushes available to cover applications from cleaning heavily soiled floors to polishing. A pad driver is also available to take advantage of the many cleaning pads on the market. Please refer to the following to assist in selecting the proper brush or pad for the work at hand

- 4. Select the correct pads or brushes that best meet your cleaning application. Consult your local dealer for assistance.
- Pad installation: attach pads to pad drivers before connecting drivers to motor hub. center clip "C" should click twice. (SEE BELOW)



6. Attach brushes or pads to motor hubs. Squeeze the scissor locking device and lift brush up on to the motor drive hub. Make sure the scissors close and lock once the brushes are on. (SEE BELOW)



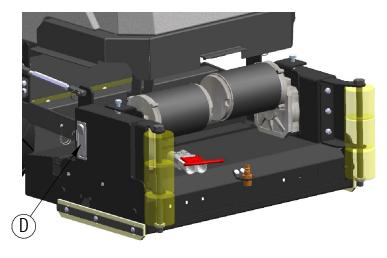
7. With brushes locked in place, close jaws, secure latch and insert pin.

Brush Type Super-grit Tough-Grit Midi-Grit Light-Grit Poly (.028) Nylon (.012) Tampico	<u>Disk</u> ## 421SS ##421S ##421C ##421PS ##421P ##421N ##421T	Cylindrical NA ##521S ##521C ##521PS NA ##521N ##521T	ABRASION Very High High High Moderate Moderate Light Light	(10 The Highest) 10 9 8 6 5 2 1	Color Red/Orange Black Blue/Grey Grey Black White Tan
Pad Driver	##421D	NA	Not Applicable		NA
<u>Pads</u> Super Black	<u>Disk</u> ##422BB	<u>Cylindrical</u> NA	<u>Level</u> Very High	(10 The Highest)	<u>Color</u> Black
Black	##422B	NA	High	8	Black
Brown	##422BR	NA	High	7	Brown
Green	##422G	NA	Medium	6	Green
Blue	##422BL	NA	Moderate	4	Blue
Red	##422R	NA	Moderate	3	Red
White	##422W	NA	Light	1	White

^{***}FOR CORRECT PAD APPLICATION, CALL YOUR LOCAL DEALER***

INSTALLING CYLINDRICAL BRUSHES

- 1. Turn on machine power.
- 2. Raise the scrub deck by depressing the brush switch (O) to the up and off position and turn machine power back off.
- 3. Disconnect batteries.
- Remove side access door "D" on each side of scubdeck. (SEE BELOW)

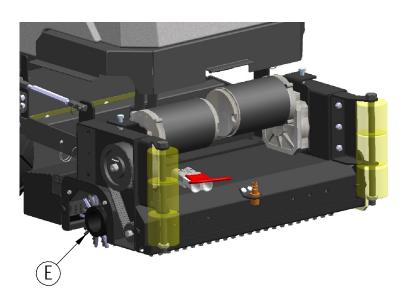


- 4. Slide brush "E" in onto brush driver on opposite side and spin until you feel it catch and drop in. (SEE BELOW)
- 5. When the brushes are engaged, replace the brush access door.
- 6. Lift up on the wipers first to close the side door and depress the latch until the door is secured.

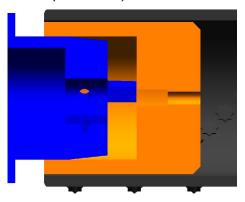
NOTE: If the brushes are not fully engaged with the drivers the brushes will be damaged.

Do not force the access door back on.

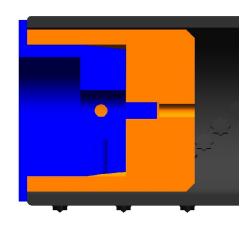
This usually indicates improper brush installation.



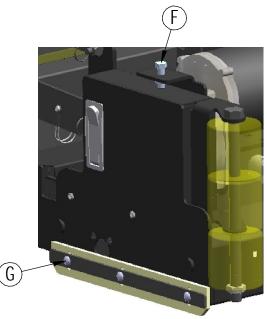
7. Brush driver shown misaligned. (SEE BELOW)



8. Brush driver shown properly aligned. (SEE BELOW)

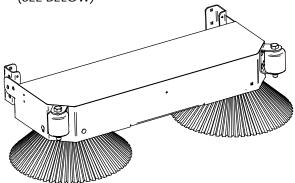


- 9. To adjust the tension of the belts turn adjustment screw "F" clock-wise to tighten, counter-clockwise to loosen. (SEE BELOW)
- 10. To adjust the height of the wipers loosen the 3 screws "G" and slide wiper blades up or down in the slots. (SEE BELOW)

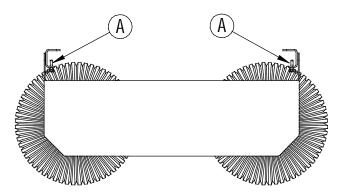


SIDE BROOM SYSTEM

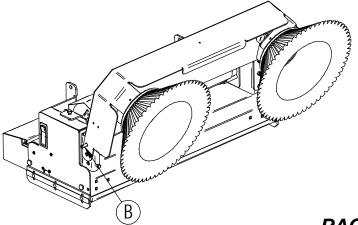
 Your machine may come equipped with the "optional" side broom system. (SEE BELOW)



- Flip side broom switch up to engage broom. (yellow toggle on left side of the control panel.) (SEE MACHINE CONTROLS ON PAGE 7.)
- To adjust side broom height turn adjustment screws "A" clock-wise to raise, counter-clockwise to lower the brooms. (SEE BELOW)



4. To move side broom system out of the way when not in use just pull the pin "B" on each side of deck and rotate side broom system to the up position and reinsert pin. (SEE BELOW)



5. Brooms adjusted to low. (SEE BELOW)



6. Brooms adjusted to high. (SEE BELOW)



7. Brooms adjusted just right. (SEE BELOW)



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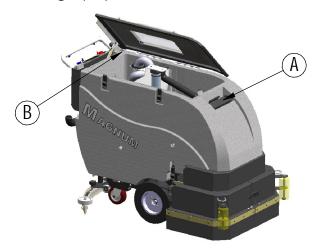
OPERATION

PRE-CLEANING CHECK LIST

Read and understand the safety section on pages 5 and 6 before operating the machine.

- Check battery condition gauge on the control panel.
 Make sure batteries are fully charged before using.
- 2. Check the condition of the pads or brushes.
- 3. Check the condition of the squeegee blades.
- Transport the machine to the filling station.
 Raise the scrubhead and squeegee when transporting.
- Turn machine off.
- 6. Fill the tank with up to 30 gallons of clean water either at front fill port "A" or rear fill port "B". Access rear fill port by raising the recovery tank lid. (SEE BELOW)
 - *The clear tube "C" at the rear of the machine indicates the amount of water in the tank. (SEE BELOW)
- 8. Add "approved" cleaning chemical. Use the proper dilution ratio indicated on the bottle. Call if unsure.

Note: Use only non-flammable commercial cleaning chemicals. Your authorized distributor can assist you in selecting a proper chemical.





OPERATING HINTS

- 1. Observe the amount of solution the machine is dispensing on the floor and adjust to the desired flow. To increase the solution flow rate, rotate the solution control knob counter-clockwise. To shut the solution off completely, just release the drive button.
- 2. Keep an eye on the clear vacuum cover to make sure there is not any foamy buildup in the recovery tank. If excess foam begins to develop, pour a recommended foam control solution into the recovery tank. Foam is usually an indication of excessive soap.
- 3. Always operate at lower speeds when scrubbing around walls and objects. You should reduce the speed, to maintain control when turning.
- 4. If squeegee starts to streak, raise and wipe the blades with a clean cloth. If the problem continues, check the blades for wear or damage, and rotate if needed. You need to presweep before scrubbing.
- 5. Change or turn over pads when dirty. Rotate the scrub brushes every week.
- 6. Stay clear of objects protruding from the floor, such as sockets, grates, for they will damage the pads and squeegee blades.
- 7. During brief stops you do not have to turn anything off, the brushes and solution will automatically stop when the drive button is released.
- 8. Always keep an eye on your gauges. They let you know the status of a particular system at a glance. If your battery gauge is reading low, you must stop immediately, and recharge. Running the batteries dead, will result in damage to the batteries.
- 9. When you run out of solution, raise the brushes, and continue to vacuum the remaining water until it is consumed. The solution sight hose is used to indicate the level of detergent remaining in the tank.
- 10. When you are ready to stop, pick up the brushes, turn off the solution switch, pick up the squeegee, and drive the machine back to the charging area. Be sure to drain both tanks before storing the machine.

ONE PASS SCRUBBING

(SEE BELOW)

- 1. Turn on machine power switch "A", make sure the speed control knob "B" is at it's lowest setting.
- 2. Lower squeegee by rotating the squeege lift lever "C" all the way to the right (vac motor will turn on automatically.)
- 3. Lower scrub head to the floor, use the top half (+) of the brush switch "D".
- 4. Turn the solution flow adjustment knob "H" to regulate the amount of solution flow.
- Begin scrubbing by depressing one of the green control buttons "D" on the handle bar.
 Adjust the speed control knob "B" to the desired setting.
- 6. Once the machine begins to move, check the down pressure on the LCD screen "F". To adjust the down pressure, push toggle switch "I" forward to increase pressure backward to decrease pressure. Start scrubbing at the #1 or #2 marks. Do not use the #4 or #5 marks without management's approval.
- 7. To operate the machine in reverse, simply pull the forward/reverse switch "E" back towards the handle bar. The reverse speed is set to approximately 50% of the forward speed.
- 8. To stop the machine, let go of the green control button "D".

<u>SCRUB ONLY</u>

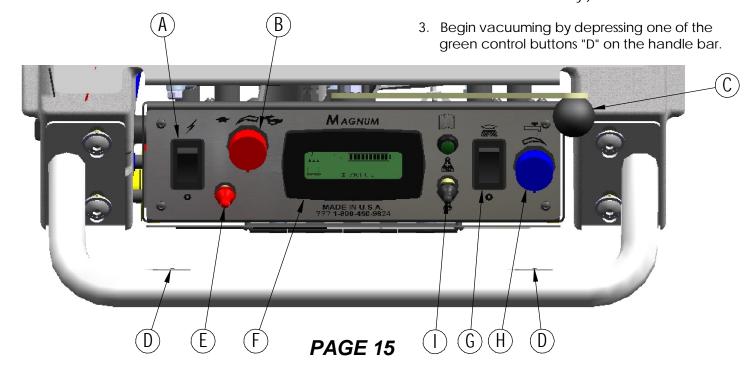
(SEE BELOW)

- 1. Turn on machine power switch "A" make sure the speed control knob "B" is at it's lowest setting.
- 2. Lower scrub head to the floor, use the top half of the brush switch "G".
- 4. Turn the solution flow adjustment knob "H" to regulate the amount of solution flow.
- 5. Begin scrubbing by depressing one of the green control buttons "D" on the handle bar. Adjust the speed control knob "B" to the desired setting.
- 6. Once the machine begins to move, check the down pressure on the LCD screen "F". To adjust the down pressure, push toggle switch "I" forward to increase pressure backward to decrease pressure. Start scrubbing at the #1 or #2 marks. Do not use the #4 or #5 marks without management's approval.
- 7. To operate the machine in reverse, simply pull the forward/reverse switch "E" back towards the handle bar. The reverse speed is set to approximately 50% of the forward speed.
- 8. To stop the machine, let go of the green control button "D".

VACUUM ONLY

(SEE BELOW)

- 1. Turn on machine power switch "A", make sure the speed control knob "B" is at it's lowest setting.
- 2. Lower squeegee by rotating the squeege lift lever "C" all the way to the right (vac motor will turn on automatically.)



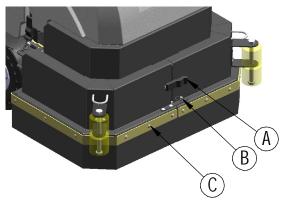
ADJUST SOLUTION FLOW

 Turn solution valve adjustment knob "A" counter-clockwise to increase solution flow, clockwise to decrease solution flow. (SEE BELOW)

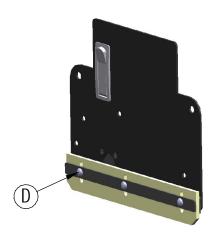


ADJUST CURTAINS/WIPERS

- 1. For Jaw curtains release latch "A" and remove pin "B" on front of jaws to open jaws. (SEE BELOW.)
- 2. Loosen curtain band screws "C".
- 3. To adjust curtain to the desired height just slide the curtain up or down in the slots and tighten screws.
- 4. Close jaws, reconnect latch and reinsert pin.



- For cylindrical side wipers loosen wiper band screws "D". (SEE BELOW)
- 2. To adjust wiper to the desired height just slide the wiper up or down in the slots and tighten screws.



DRAINING SOLUTION TANK

To drain unwanted cleaning solution from the solution tank, perform the following steps. (SEE BELOW)

- 1. Pull the clear sight tube/drain hose "A" off barbed fitting.
- 2. Rinse out tank and solution flow system with clean water.



DRAINING RECOVERY TANK

Always empty recovery tank when refilling the solution tank. You can refill the solution tank while the recovery tank is draining. To drain the recovery tank, remove drain hose from hook at rear of tank and unscrew cap. (SEE BELOW)

NOTE: LEAVE RECOVERY LID OPEN WHEN DRAINING TANK!



OPEN RECOVERY LID

- Release both latches "A" on recovery tank lid. (SEE BELOW)
- 2. Rotate lid fully open.



FLUSH RECOVERY TANK

 Rinse the recovery tank after every use. This will prevent heavy buildup on the bottom of the tank, foul odors, and clogging of the drain hose. (SEE BELOW)



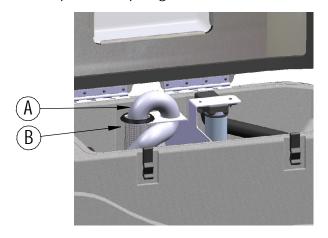
3. After rinsing, reattach drain hose "B" on hook. (SEE BELOW)



CLEAN "DRAIN SAVER"

WITH RECOVERY LID OPEN & TANK FULLY DRAINED

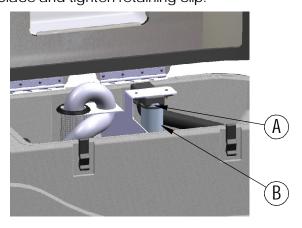
- 1. Remove 2" squeegee intake hose "A" from "Drain Saver" strainer "B". (SEE BELOW)
- 2. Remove stainless screen, dispose of debris.
- 3. Rinse screen with fresh water from the outside to the inside holding screen upside down. This will allow for better cleaning.
- 4. Replace the screen into the bracket.
- 5. Replace 2" squeegee intake hose.



CLEAN VAC SCREEN

WITH RECOVERY LID OPEN & TANK FULLY DRAINED

- Remove vac screen retaining clip "A". (SEE BELOW)
- 2. Pull vac screen and float ball assembly (B) off the vac box.
- 3. Rinse with hot water.
- 4. Dry thoroughly.
- 5. Replace vac screen onto box.
- 6. Replace and tighten retaining clip.



TIP TANK

- 1. Fully drain solution tank.
- 2. Fully drain recovery tank.
- 3. Remove squeegee.
- Unlatch tank latch "A" on each side of machine. (SEE BELOW)
- 5. Open Jaws. (SEE BELOW)
- 6. Tip tank back carefully until supported by strap. (strap not shown) (SEE BELOW)

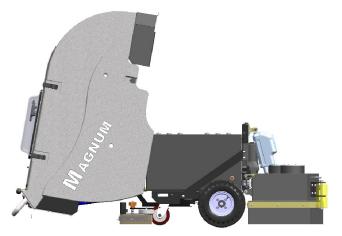




1. To raise the squeegee off the floor rotate squeege lift lever "A" counter-clock-wise all the way to the left. (SEE BELOW)



MAGNUM



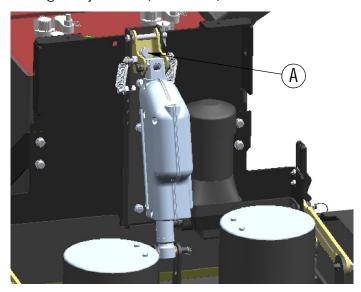
SQUEEGEE DOWN

1. To lower the squeegee to the floor rotate squeegee lift lever "B" clockwise all the way to the right. Vac motor will turn on automatically. Use with remote vac wand. (SEE BELOW)



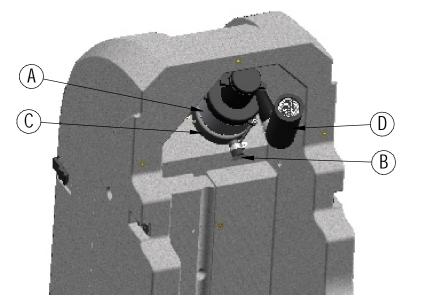
DECK HEIGHT ADJUSTMENT

To adjust deck height for brush clearance, loosen jam nut on adjustment bolt "A", turn adjustment bolt clock-wise to raise deck, counter-clockwise to lower deck. Retighten jam nut. (SEE BELOW)



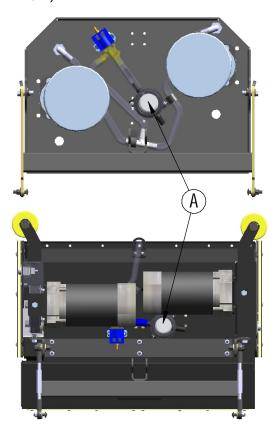
VAC MOTOR (SEE BELOW)

- The machine is equipped with a 24 volt, 3/4 hp, vac motor "A".
- 2. If foam or water gets past the recovery tank's vac screen/ball system the "UNLOADER VALVE" "B" will drain it from the "VAC BOX" "C".
- 3. The vac motor has an "optional" "FOAM MUFFLER" "D" available for quiet machine operation.



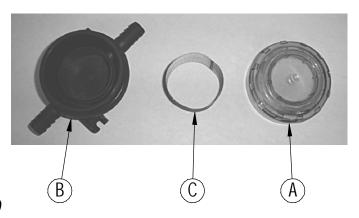
SOLUTION FILTER

1. The solution system has a "INLINE FILTER" "A" to filter out cleaning solution prior to scrubbing. (SEE BELOW)



CLEANING LUTION FILTER

- 1. To clean the "SOLUTION FILTER" Unscrew the clear cap "A" from housing "B" and remove the "STAINLESS STEEL" screen "C".
- 2. Rinse any debris from the screen with clean water.
- 3. Reinstall screen and screw cap back on tightly.



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BATTERY CHARGING

CAUTION: The following instructions are intended for the 24v charger supplied with the machine.

Do not use any other charger with this machine.

CHARGER SPECIFICATIONS

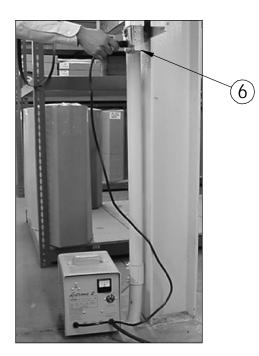
- * OUTPUT VOLTAGE OF 24 VOLTS.
- * OUTPUT CURRENT OF 25 AMPS MAX (STANDARD).
- * OUTPUT CURRENT OF 36 AMPS MAX (OPTIONAL).
- * INPUT VOLTAGE OF 110 VOLTS/60 H7.
- * AUTOMATIC SHUT OFF CIRCUIT.
- * MADE FOR DEEP CYCLE BATTERIES.

DANGER: Always charge batteries in a well ventilated area. Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and flame away. Shield eyes when servicing batteries and avoid contact with battery acid.

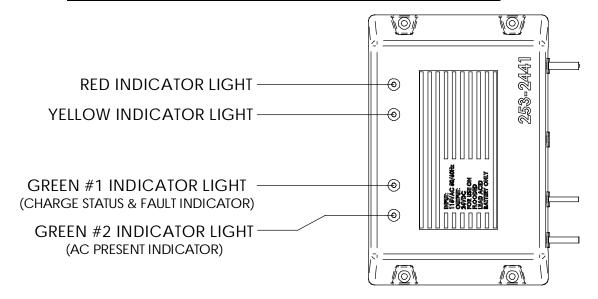
- 1. Transport machine to a well ventilated area for charging.
- 2. Turn the machine off.
- 3. CAUTION ALWAYS WEAR EYE PROTECTION WHEN BATTERIES ARE EXPOSED.
- 4. Check the water level through "pro-eye" window in each battery. (SEE TOP PICTURE.) Do not charge the machine unless the water is slightly higher than the plates. If needed, add enough distilled water to just slightly cover the plates. Be careful not to over fill. Batteries can overflow during charging. Replace caps before charging.
- 5. With the red 50 charger plug connected to the machine "FIRST" (SEE MIDDLE PICTURE.) plug the charger power cord into a grounded 110 volt standard wall outlet "SECOND". (SEE BOTTOM PICTURE.)
- 6. The charger will automatically begin charging, and automatically shut off when fully charged. (check gauge)
- 7. After the charger has turned off, unplug the charger from the wall outlet "FIRST", then unplug the red 50 charger plug from the machine "SECOND".
- 8. Recheck the cell level after charging. If needed, add distilled water up to the correct level. Be certain to replace the caps securely and to wipe off the top of the batteries with a clean cloth.







ON-BOARD CHARGER



OPERATING THE CHARGER

The LED Function Chart below describes the charging process.

NOTE: The LEDs discussed below in the table are the Charge Status LEDs.

NOTE: The AC Present LED green#2 is lit at all times when AC is connected, and off when AC is not connected.

Display	Operating Condiiton
Red = on	When the red LED is on, it indicated that your battery is discharged and the model 2820-24 is recharging the battery at the "Bulk" rate (Stage 1).
Yellow = off	This charging rate is approximately 20 Amps.
	While the red LED is on, the voltage measured (with the charger on) will
Green#1= off	be approximately 23 to 28 Volts.
	If an excessive amount of time is taken to complete this stage, the
	charger will time out and present a fault indicator. (See section 5.)
Red = on	When both the yellow and the red LED's are on, it is charging at the
	"absorption" rate. (Stage 2). During this second charging stage, the
Yellow = on	charger holds the battery voltage at approximately 29 VDC, and
	gradually reduces the amount of current delivered to the battery.
Green#1 = off	
	If an excessive amount of time is taken to complete this stage, the charger will time out and present a fault indicator. (see section 5)
	charger will time out and present a fault indicator. (See Section 3)
Red = on	When all three charge status LEDs are on, the model 2820-24 is
	charging at a "Finish" rate of 10 Amps, (Stage 3). The "Finish" stage will
Yellow = on	charge the battery up to approximately 30.5-31 VDC.
Green#1 = on	If an excessive amount of time is taken to complete this stage, the
	charger will time out and present a fault indicator. (see section 5.)
Red = off	When the green#1 LED is on, and red and yellow are off, the charge
Vollow - off	cycle is completed and the battery is ready for use. At least 100% of
Yellow = off	charge has been returned to the battery. If the battery voltage falls below approximately 24 VDC, the charger will automatically restart the charge
Green#1 = on	process.

ON-BOARD CHARGER

TROUBLESHOOTING		
Problem	Cause	Solution
1. Red LED stays on for	1. One or more defective or	Load test the batteries and replace if
more than 18 Hrs.	damaged cells.	necessary.
	2. Charger has reduced its output	2. Remove the source of the overload or
	voltage below the normal level due	short. Disconnect the charger's black
	to a DC overload or a DC short.	(NEGATIVE) ring terminal from the battery.
	3. On-board DC systems are drawing	Reapply AC power and the green LED only
	more current than the charger can	should now light.
	replace.	3. Turn off all DC equipment while
	4. Excessive ambient temperature has	charging.
	forced the charger to cutback	4. Determine the cause of the
	output current in order to self	excessive ambient temperature and
	protect.	correct.
2. The red and yellow LED's	On-board Dc systems are drawing	Turn off all DC equipment while
stay on for more than	in excess of 10 amps.	charging.
10 Hrs.	2. One or more defective or	Load test the batteries and replace
	damaged cells.	if necessary.
	3. Extremely low AC voltage at the	3. Apply a higher AC voltage source or
	battery charger.	reduce the length of the extension cord.
3. Green #1 LED stays on	Open DC output fuse.	Replace DC output fuse with a
when the battery is known	2. Faulty or contaminated terminal	Bussmann (ABC-30 or MDA-30.)
to be low.	connections.	Clean and tighten or repair all
	3. One or more defective or	terminal connections.
	damaged cells.	3. Load test the batteries and replace if
		necessary.
3. The AC Present Green#2	No AC power available at the	Connect AC power or reset the AC
LED does not turn on when	charger.	breaker on the main panel.
AC power is applied.	2. Component failure.	2. Return charger to R.P.S. Corp.
4.The yellow LED is	1. Charge cycle has timed out, charging	See fault codes below.
blinking continuously.	process took an excessive amount	
	of time.	
5. The red LED is blinking	Corrupt Microprocessor memory.	1. See fault codes below.
continuously.		2. Return charger to R.P.S. Corp.

Fault Codes:

- Flashing red LED: Corrupt program memory in microcontroller detected, charger microprocessor has become corrupted. Charger must be returned to R.P.S. Corp.
- Flashing yellow LED: Timer has expired. The 2820-24 uses a timer to independently monitor each mode of the charge cycle: bulk, absorption, and finish. If the timer expires during any of these modes of the charge cycle, there could be a problem with the battery set. The timer may expire if there is a damaged battery cell in the battery set, an abnormally high ambient temperature at the charger, or some other external fault, which prevents completion of charge cycle. These problems need to be addressed by user intervention. Charger must be AC powered down in order to reset fault condition. Before resetting the charger, investigate potential problems with battery or other external faults. Once external problem is resolved, reconnect charger output cable fuse and reconnect AC power.

5. MAINTAINING THE CHARGER

Periodically clean both battery terminals with baking soda and tighten all connections. No other maintenance on the charger is required.

BATTERY CHARGER

OPERATING MANUAL

GENERAL INFORMATION AND WARNING

- Electronic automatic battery charger with microprocessor suitable for any battery type.
- Fully automatic charging cycle with electronic setting; protected against overload, short-circuit at clamps and reversed polarity.
- Never disconnect the battery while charging: this could cause sparks.
- Never use the equipment in the rain, in areas used for washing and in damp areas.
- Before starting to charge, make sure the voltage of the equipment suits the voltage of the battery and that the selected charging curve (for lead-acid free batteries and airtight gel batteries) is correct for the type of battery to be charged. In addition, make sure the rated input voltage of the charger suits the available supply voltage and the system is equipped with grounding.
- If necessary, replace the fuse with another of the same type and value as indicated on the rating plate.
- Pay attention to any remarks of the battery manufacturer.

For lead-acid batteries with liquid electrolyte:

- Control the water level after each charging process.
- Refill with distilled water only.
- Caution! The gases generated during charging are explosive. Do not smoke in the vicinity of the batteries. When working with cables and electrical equipment, avoid open flame and sparks.
- Attention: Use protective glasses and gloves during battery maintenance. Battery acid causes injuries. In case of contact with battery acid, wash the affected parts with a lot of fresh water and consult a doctor if necessary.

CONTROLS (see figure behind the cover)

- 1. Three-digit display + symbol (1), to view A = the charging current, U = the battery voltage, h = the charging time, C = the charging ampere-hours [AH], E = the energy used [KWh].
- 2. Button for the Selection of the display mode (2): A, U, h, C, E. After about 10 seconds the display returns to the visualization of the charging current.
- 3. Red control indicator (3): when it is on, the charging cycle has started.
- 4. Yellow control indicator (4): when it is on, the final phase of the charging cycle has started.
- 5. Green control indicator (5): when it is on, the charging cycle has finished.

OPERATION

- Plug the cord into the socket.
- Connect the battery, checking the polarity.
- Now, the battery charger's display will show a sequence of details on the charger's internal programming: after the name "SPE", it will show the software release installed in the equipment, then, in sequence, the following parameters: battery voltage, charging current, charging curve number, and finally the words "GEL" or "Acd" depending on the set up charging curve being suitable for airtight gel batteries or lead-acid batteries. Make sure the type of batteries to be charged (gel or lead-acid batteries) matches the displayed details ("GEL" or "Acd", respectively). If it doesn't, contact our dealer. Now, a test is run on the battery voltage to decide if the charging process should be started or not. If the battery is not connected to the battery charger, the display will show the word "bat". The word will stay on, even if the test is failed (for instance, reversed polarities or incorrect battery connection). If the test is passed, the display will show the battery voltage for approximately 5 seconds and the battery will begin to

BATTERY CHARGER

be charged. The charging cycle progress will be shown by red (3), yellow (4), and green (5) LED indicators.

At the end of the charge, when the green indicator (5) is on, unplug the cord from the socket and operate the machine.

PROBLEMS	SOLUTIONS AND CHECKS
The battery charger does not switch on.	Check that the plug is connected to the supply mains and that the fuse is efficient.
The charging cycle does not start and the message "bat" is displayed.	Check the connection to the battery and polarity.
The yellow indicator (4) will not light up even 15 hours from the starting of the charging cycle, and the display shows E03.	Check the battery for possible faulty components.
The message E01 is displayed.	This means that the maximum voltage admissible by the battery has been exceeded. The charging is interrupted.
If the battery charger is provided with a safety thermostat and the message E02 is displayed.	This means that the maximum temperature has been exceeded. The charging is interrupted.
The message E03 is displayed.	This means that the maximum time for the charging phase has been exceeded. The charging is interrupted.
The message SCt is displayed.	This means that the total safety timer has interrupted the charging.
The message Srt is displayed.	This signals a possible internal short circuit.

<u>MAINTENANCE</u>

DAILY MAINTENANCE

- Remove and clean pads or brushes. Never use soiled pads when cleaning. Replace pads when they become packed with residue.
- 2. Remove and clean debris from the float shut-off screen located inside the recovery tank.
- 3. Drain and rinse tanks thoroughly, inspect vacuum hose for any objects obstructing the air flow. Empty drain saver screen.
- 4. Raise squeegee and wipe blades with a clean cloth. Store squeegee in the raised position to prevent damage or setting of the blades.
- 5. Wipe down machine if needed. Use a nonabrasive, non solvent cleaner, or a clean damp cloth.
- 6. Recharge the batteries if needed.

MONTHLY MAINTENANCE

- Check scrubhead and squeegee suspension cables for wear and spring tension.
- 2. Check machine for water leaks and loose nuts or bolts.
- 3. Check to see if battery cabels are tight. (tighten if needed)
- 4. Check parking brake.
- 5. Check condition of scrubdeck lifting cable.

WEEKLY MAINTENANCE

- Check battery water level in each cell of the batteries, and fill as needed. Always use distilled water to refill batteries. Batteries should be filled approximately 3/4" to 1" above the plates. Overfilling will cause the batteries to leak during charging. The charging process creates gas bubbles inside the battery, which effectively increases the volume of the electrolite.
- 2. Clean battery tops to prevent corrosion.

YEARLY MAINTENANCE

1. Call your local dealer for yearly maintenance.

STORING MACHINE

- 1. Be sure to flush the tanks out completely, and drain all water from the machine.
- 2. Remove the recovery tank lid to promote air circulation.
- 3. Raise brushes and squeegee.

PREVENTATIVE MAINTENANCE RECORDS

CUSTOMER INFORMATION							
CUSTOMER							
ADDRESS							
CITY			STATE		ZIP CC	DDE	
MACHINE INFORMATION			-				
MODEL#			SERIAI	#			
				<u> </u>			
WORK ORDER#			HOUR	WETER:			
DATTEDY CONDITION		Cell #1	Cell #2	Cell #3	Cell #4	Cell #5	Cell #6
BATTERY CONDITION Battery # 1 Hydrometer		Cell # I	Cell #2	Cell #3	Cell #4	Cell #5	Cell #6
Battery # 1 Water Condition							
Battery # 2 Hydrometer							
Battery # 2 Water condition							
Battery # 3 Hydrometer							
Battery # 3 Water Condition							
Battery # 4 Hydrometer							
Battery # 4 Water condition							
				<u>'</u>	<u>'</u>	_	<u>'</u>
Clean Battery Tops. Check B	attery Cable and	l Terminal Co	ndition				
NOTES:							
BRUSH CONDITION			D	•			
Scrub Brush Fiber Length			Rotated Bru				
Brush Drive Sockets		Good	Worn	Needs Rep			
Drive Hubs		Good	Worn	Needs Rep	Diacement		
CHECK OPERATION AND C	ONDITION OF:	IN SPEC	REPAIR	PROBLEM			
Main Power Switch or Key Sw	ritch						
Handle Bar Switches							
Speed Potentiometer							
Reverse Switch							
LCD Display							
Page Switch							
Brush Pressure Switch							
Brush Pressure Managers Lo	ck Out						
Reverse Switch							
Brush Switch							
Brush Deck Lift System							
Brush Motor							
Brush Drive Belt							
Solution Potentiometer							
Solution Solenoid							
Vacuum Motor Performance							
Vacuum Motor Performance							
Vacuum Filter		+					
Recovery Drain Hose & Plug							
Squeegee Lift System Squeegee Adjustment				1			

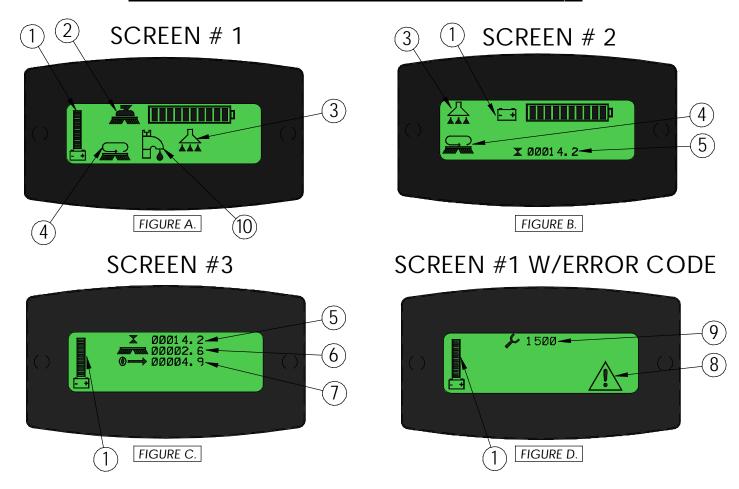
continued on next page

PREVENTATIVE MAINTENANCE RECORDS

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LCD SCREEN MENU DISPLAYS



*** USE GREEN MENU SELECTION BUTTON ON CONTROL PANEL TO CHANGE SCREENS***

FIGURES 47-50.

- BATTERY LEVEL INDICATOR Indicates the energy level remaining in the batteries. (SHOWN ON ALL MENU DISPLAYS)
- 2. <u>SCRUBBING DECK DOWN PRESSURE GAUGE</u> Sets the down pressure on the brushes. (SEE FIGURE A.)
- 3. <u>VACUUM ON</u> Tells you when the vacuum is on. (SEE FIGURES A. AND B.)
- 4. <u>SCRUBBING MOTORS ON</u> Tells you when the brush motors are running. (SEE FIGURES A. AND B.)
- 5. <u>KEY SWITCH HOUR METER</u> Tells you the total hours the machine has been run. (SEE FIGURES B. AND C.)
- SCRUBBING BRUSH HOUR METER Tells you the total hours the brush motors have been used. (SEE FIGURE C.)
- 7. <u>TRANSPORT HOUR METER</u> Tells you the total hours the drive system has been used. (SEE FIGURE C.)
- 8. ERROR WARNING SYMBOL Indicates when there has been a diagnostic code error. (SEE FIGURE D.)
- 9. <u>DIAGNOSTIC CODE</u> When the machine has detected an error it will display the warning symbol and a diagnostic code which tell's you what is wrong. (SEE FIGURE D.)
- 10. WATER ON Indicates that the water is turned on.

(FOR COMMAN ERROR CODES AND DESCRIPTIONS SEE PAGES 23 AND 24.)

TROUBLESHOOTING CENTRAL COMMAND

NOTE: This machine is operated by a sophisticated electronic "CONTROLLER" that has many fail-safes within it. The controller self-analyzes problems and flashes a four-digit numeric code of what is wrong in the LCD window.

Most of these codes require a technician's attention. You should not attempt repairs you are uncomfortable with, especially if you are not used to working on electronics.

The complete list of codes is published in the simplified electronic troubleshooting manual, which is available to technical people. However, we have included the basic codes that you can usually resolve yourself.



1. 1E03 AND 1E04 ERROR. Check the small safety switch next to the red plug below the dashboard. This switch will turn off the traction drive and brushes as a safety feature while the charger is plugged in. The switch may be stuck, or the plug twisted at an angle, engaging the switch. This code will also flash if the wiring becomes very wet. In this case, either wait until the wiring dries out, or call a technician.



2. 7601 AND 7602 ERROR. Pads or brushes current over load. This can can occur when the pads/brushes hit a bump in the floor. To restart the pads, turn off the key and turn it on again. To avoid this error, either slow down on bumpy parts of the floor, or reduce downpressure on the pads or brushes.



3. 1600 ERROR. Voltage exceeds the maximum. Either the batteries are mis-wired, or the charger is still plugged into the machine.

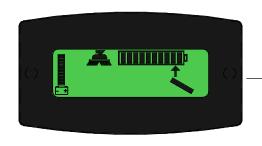


4. 7700, 7701, 7702, AND 7703 ERROR. The vacuum motor has exceeded it's authorized power limit. Turn off main power switch and turn on again to clear.

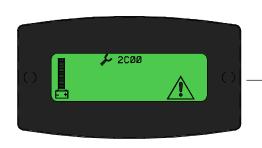
TROUBLESHOOTING CENTRAL COMMAND



5. 7900 AND 7901 ERROR. The emergency stop button is out.



6. HIGH THROTTLE ERROR. You pressed the drive button before turning on the key. Turn off the key, release the drive button and try again.



7. 2C00 AND 2C01 ERROR. Low voltage warning. Voltage has dropped down below the minimum required to operate the machine. If you wait a few minutes, the batteries may coast up a bit in voltage, allowing you to drive very slowly to the recharge station.



8. 7802 ERROR. The traction motor was used to climb a ramp, and was running up the ramp for more than the 60 seconds allowed for this. Turn off the key, turn on again, and continue. You should not use this machine to climb ramps so steep and so long that this code comes up repeatedly, or you could overheat and damage the traction motor.

- 9. All other error codes. Turn off the main power switch and disconnect the positive battery cable from the batteries for more than one minute (the time is needed to drain the controller's on-board capacitor). Reconnect the cables being sure they are tight; too loose will burn the batteries. If you overtighten the cables you can damage the battery's lead terminal. Try again.
- 10. If the problem cannot be solved by any of these remedie's call your local dealer's service department.

TROUBLE SHOOTING

<u>PROBLEM</u>	<u>CAUSE</u>	<u>SOLUTION</u>
NO POWER, NOTHING OPERATES	FAULTY POWER SWITCH BATTERIES NEED CHARGING FAULTY BATTERY LOOSE BATTERY CABLE MAIN CIRCUIT BREAKER TRIPPED	CONTACT LOCAL SERVICING DEALER SEE CHARGING BATTERIES REPLACE BATTERY TIGHTEN LOOSE CABLE WAIT 5 MINUTES FOR AUTO RESET DETERMINE CAUSE AND CORRECT
BRUSH MOTOR(S) DO NOT OPERATE	GREEN BUTTON IS NOT DEPRESSED CIRCUIT BREAKER TRIPPED CARBON BRUSHES WORN FAULTY BRUSH MOTOR OR WIRES	DEPRESS BUTTON ON HANDLE BAR RESET & REDUCE PRESSURE DETERMINE CAUSE AND CORRECT CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER
VACUUM MOTOR DOES NOT OPERATE	FAULTY VACUUM SWITCH CIRCUIT BREAKER TRIPPED FAULTY VACUUM MOTOR CARBON BRUSHES WORN	REPLACE SWITCH RESET & CHECK HOSE DETERMINE CAUSE AND CORRECT CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER
INSUFFICIENT SOLUTION FLOW	SOLUTION TANK LOW FLOW KNOB TURNED DOWN SOLUTION FILTER CLOGGED SOLUTION LINE CLOGGED SOLUTION VALVE CLOGGED	REFILL SOLUTION TANK TURN KNOB MORE OPEN REMOVE COVER AND CLEAN REMOVE AND BLOW OUT WITH COMPRESSED AIR REMOVE COVER AND CLEAN

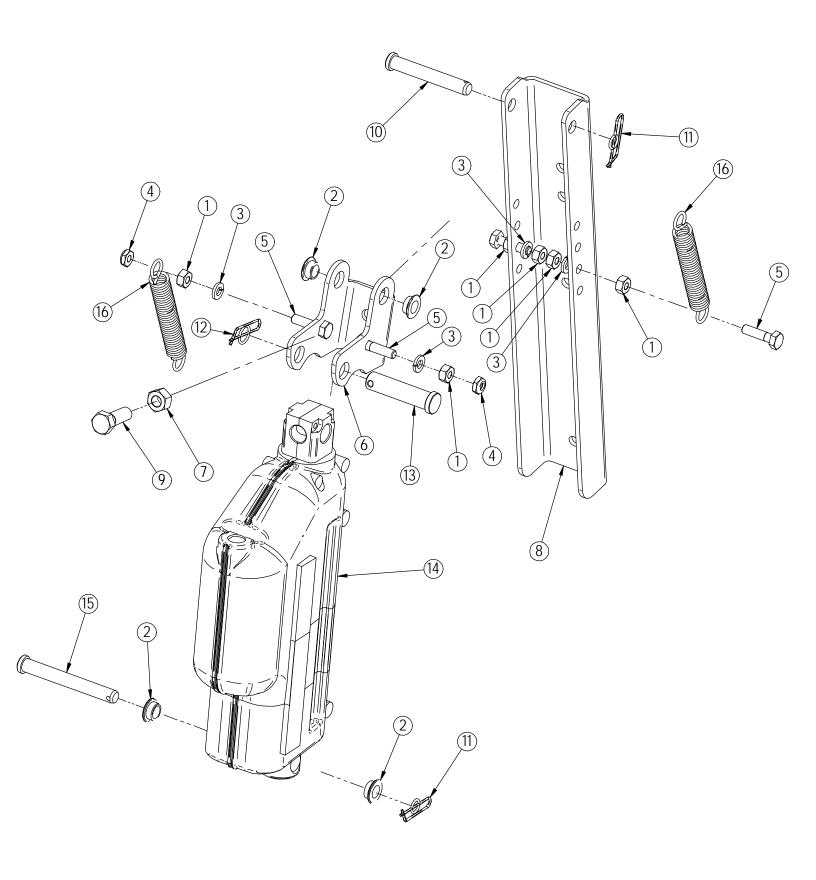
TROUBLE SHOOTING

<u>CAUSE</u>	SOLUTION
NO SOLUTION IN TANK SOLUTION SWITCH OFF SOLUTION SCREEN CLOGGED FAULTY SOLUTION SOLENOID FAULTY SOLUTION SWITCH	FILL SOLUTION TANK TURN SOLUTION SWITCH ON REMOVE AND CLEAN SCREEN CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER
RECOVERY TANK IS FULL BALL/SCREEN IS CLOGGED VACUUM HOSE IS CLOGGED SQUEEGEE IS CLOGGED SQUEEGEE BLADE IS WORN FAULTY VACUUM HOSE VACUUM MOTOR GASKET TORN TANK GASKET FAULTY DRAIN PLUG LOOSE VAC MOTOR FAULTY BATTERY CHARGE LOW	EMPTY RECOVERY TANK REMOVE SCREEN AND CLEAN REMOVE DEBRIS REMOVE DEBRIS ROTATE OR REPLACE BLADES CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER TIGHTEN PLUG CONTACT LOCAL SERVICING DEALER CHARGE BATTERIES OVERNIGHT
WIPERS WORN WIPERS CHATTER SQUEEGEE SWING IS BINDING INCORRECT SQUEEGEE SIZE	REPLACE WIPER MATERIAL TIGHTEN PIVOT POINTS CONTACT LOCAL SERVICING DEALER CONTACT LOCAL SERVICING DEALER
BEARING DRY FAULTY HUBS	GREASE BEARINGS CONTACT LOCAL SERVICING DEALER
EXCESSIVE BRUSH PRESSURE WORN DRIVE TIRE HEAVY SOAP CONCENTRATION	REDUCE PRESSURE WITH SWITCH REPLACE TIRES CONTACT LOCAL SERVICING DEALER
BATTERIES RUN DOWN BATTERIES STILL DOWN BATTERIES LOW ON WATER BATTERIES OVER CYCLED	CHARGE BATTERIES TWICE CONTACT LOCAL SERVICING DEALER FILL WITH DISTILLED WATER TO 3/4" ABOVE THE LEAD PLATES CONTACT LOCAL SERVICING DEALER
	NO SOLUTION IN TANK SOLUTION SWITCH OFF SOLUTION SCREEN CLOGGED FAULTY SOLUTION SOLENOID FAULTY SOLUTION SWITCH RECOVERY TANK IS FULL BALL/SCREEN IS CLOGGED VACUUM HOSE IS CLOGGED SQUEEGEE IS CLOGGED SQUEEGEE BLADE IS WORN FAULTY VACUUM HOSE VACUUM MOTOR GASKET TORN TANK GASKET FAULTY DRAIN PLUG LOOSE VAC MOTOR FAULTY BATTERY CHARGE LOW WIPERS WORN WIPERS WORN WIPERS CHATTER SQUEEGEE SWING IS BINDING INCORRECT SQUEEGEE SIZE BEARING DRY FAULTY HUBS EXCESSIVE BRUSH PRESSURE WORN DRIVE TIRE HEAVY SOAP CONCENTRATION BATTERIES RUN DOWN BATTERIES STILL DOWN BATTERIES LOW ON WATER

MACHINE PARTS SECTION INDEX In Order of Presentation

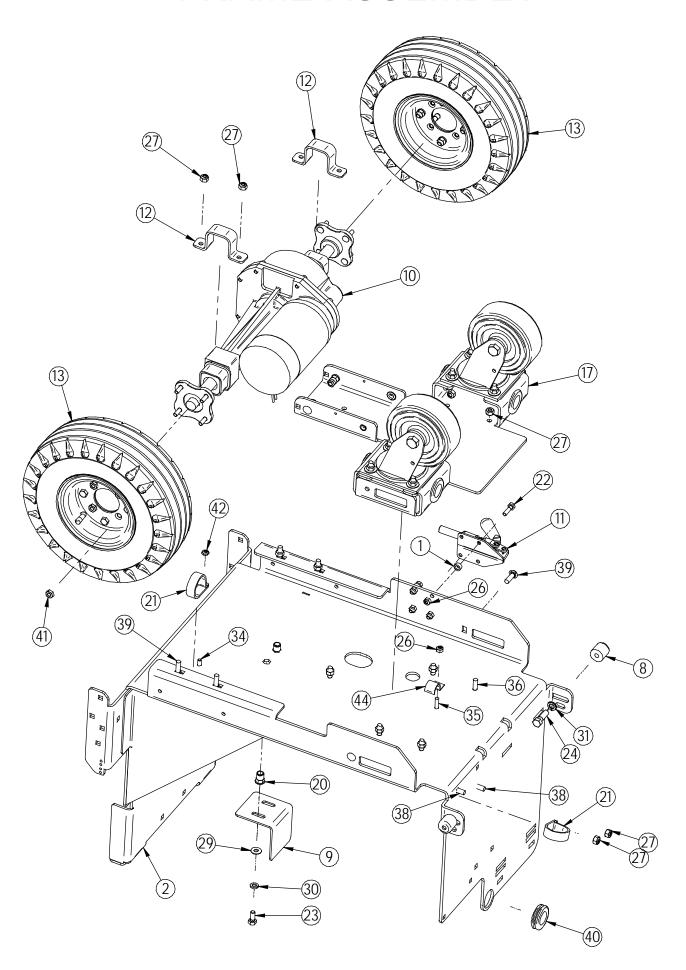
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ACTUATOR LIFT ASSEMBLY



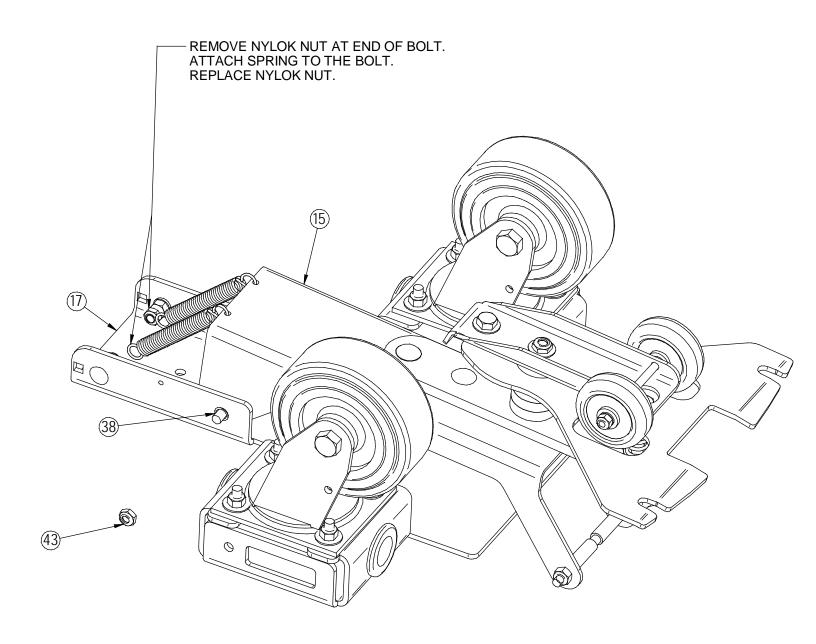
ACTUATOR LIFT ASSEMBLY

Item	Part Number	Part Description	Qty
1	H-70710	HN 1/4"- 20 SS	6
2	290-1233	3/8" ID, 1/2" OD, 1/4" LG BEARING	4
3	H-71063	LW 1/4" SS	4
4	H-NJO4C	JNYL 1/4" - 20 SS	2
5	H-70005	HCS 1/4"- 20 X 1" SS	4
6	253-1150	ACTUATOR ARM	1
7	H-70732	HN 3/8"- 24 SS	1
8	190-1155	ACTUATOR ANCHOR	1
9	H-01219	HCS 3/8"- 24 X 1 1/8" SS	1
10	H-15675	CLEVIS PIN 3/8" x 2.50"	1
11	H-RUE14	3/8" RUE RING COTTER	2
12	H-RUE22	1/2" RUE RING COTTER	1
13	H-ZCP228	CLEVIS PIN, 1/2" OD X 2" LG	1
14	253-2210	4" STROKE 24V ACTUATOR 1000 LB LOAD	1
15	H-ZCP176	CLEVIS PIN 3/8" x 3.00"	1
16	H-96544	SPRING, 4-1/8" LG, 9/16" OD	2

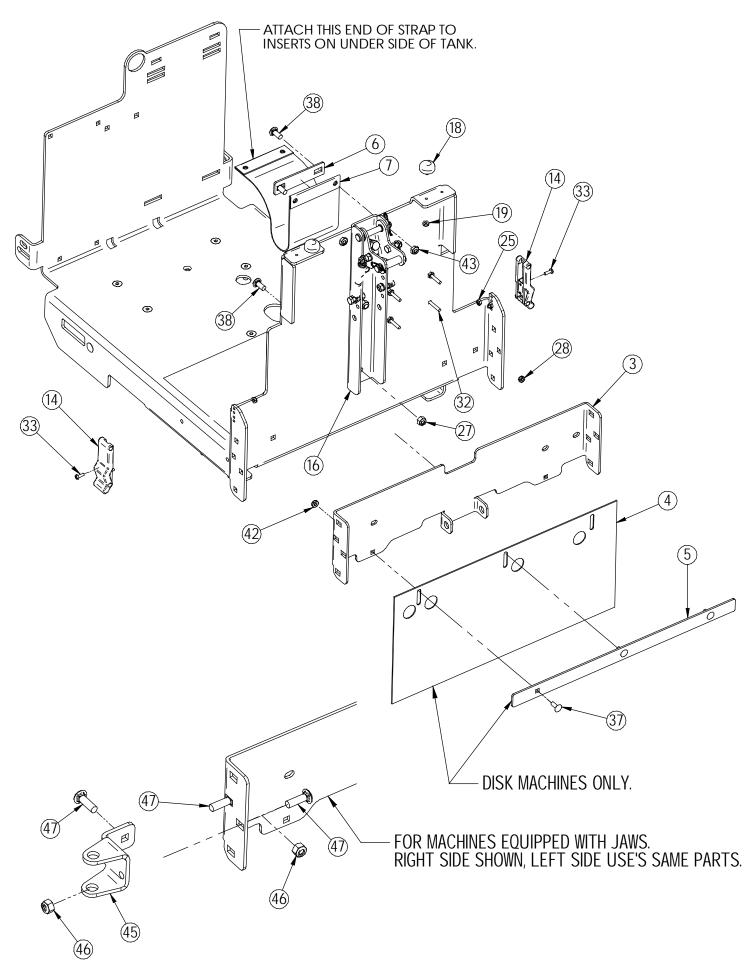


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Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
1	21-2211	SPACER 1/2 OD X 1/4"	ı		4
2	253-1000	MAINFRAME WELDMENT			1
3	253-1010	LIFT ARM SUPPORT BRACKET			1
4	253-1015	FRAME CURTAIN			1
5	253-1020	BAND, FRAME CURTAIN			1
6	253-1040	TANK STRAP SUPPORT			1
7	253-1050	TANK STRAP, 35" LG X 4" WIDE			1
8	253-1060	BOSS			2
9	253-1470	BATTERY TRAY BRACKET			1
10	253-3009	TRANS AXLE			1
11	253-4000	Parking Brake (Optional)			1
12	32-0999	AXLE MOUNT			2
13	32-3045	TIRE, BLACK, PNEUMATIC, 4.10/3.50-5	32-3040	TIRE, GRAY, PNEUMATIC, 4.10/3.50-5	2
			32-3050	TIRE, GRAY, FOAM, 4.10/3.50-5	
			32-3055 253-6190	TIRE, BLACK, FOAM, 4.10/3.50-5 TIRE, BLACK, SOLID, 3-1/2" WIDE	
14	4-124	LATCH	ZJJ-0170	TINE, DEAGN, SOCID, 3-1/2 WIDE	2
15	704	SUB #704 SQUEEGEE TRAIL ARM ASSEMBLY			1
16	707	SUB #707 ACTUATOR LIFT ASSEMBLY			1
17	739	SUB #739 CASTER FOOT ASSEMBLY			1
18	H-01201	GROMMET			4
19	H-0129155	JNYL #10-32, 18-8 S/S			2
20	H-312HCN	HCN 5/16"-18			2
21	H-3225T	RUBBER LOOP CLAMP, 1-1/2"			2
22	H-70005	HCS 1/4" - 20 X 1" SS			4
23	H-70053	HCS 5/16"- 18 X 3/4" SS			2
24	H-70107	HCS 3/8"- 16 X 1-1/4" SS			2
25	H-70856	NYLOK #8-32 SS			4
26	H-70860	NYLOK 1/4"- 20 SS			5
27	H-70861	NYLOK 5/16" - 18 SS			16
28	H-70923	KN #10-32 SS			4
29	H-71015	FW 5/16" X 3/4" SAE SS			2
30	H-71065	LW 5/16" SS			2
31	H-71067	LW 3/8" SS			2
32	H-72522	CB #10-32 X 1-1/4" SS			4
33	H-72523	RPH #8-32 X 1/2" SS			4
34	H-72706	FHP 1/4"- 20 X 5/8" SS			1
35	H-72710	FHP 1/4"- 20 X 1" SS			1
36	H-73908	FHSCS 5/16"- 18 X 1" SS			5
37	H-74418	CB 1/4"- 20 X 5/8" S/S			3
38	H-74429	CB 5/16"- 18 X 3/4" SS			9
39	H-74430	CB 5/16"- 18 X 1" SS			6
40	H-9307K74	Grommet, 1" ID X 1-3/4" od buna-n			1
41	H-FAN5	LUG NUT 5/16"-18 SS			8
42	H-NJ04C	JNYL 1/4" - 20 SS			4
43	H-NJ05C	JNYL 5/16"- 18 SS			4
44	M-9434T27	3/4" DIA 1 HOLE TUBE STRAP			1
45	253-1160	JAW HINGE, INNER			1
46	H-70861	NYLOK 5/16" - 18 SS			3
47	H-74430	CB 5/16"- 18 X 1" SS			3

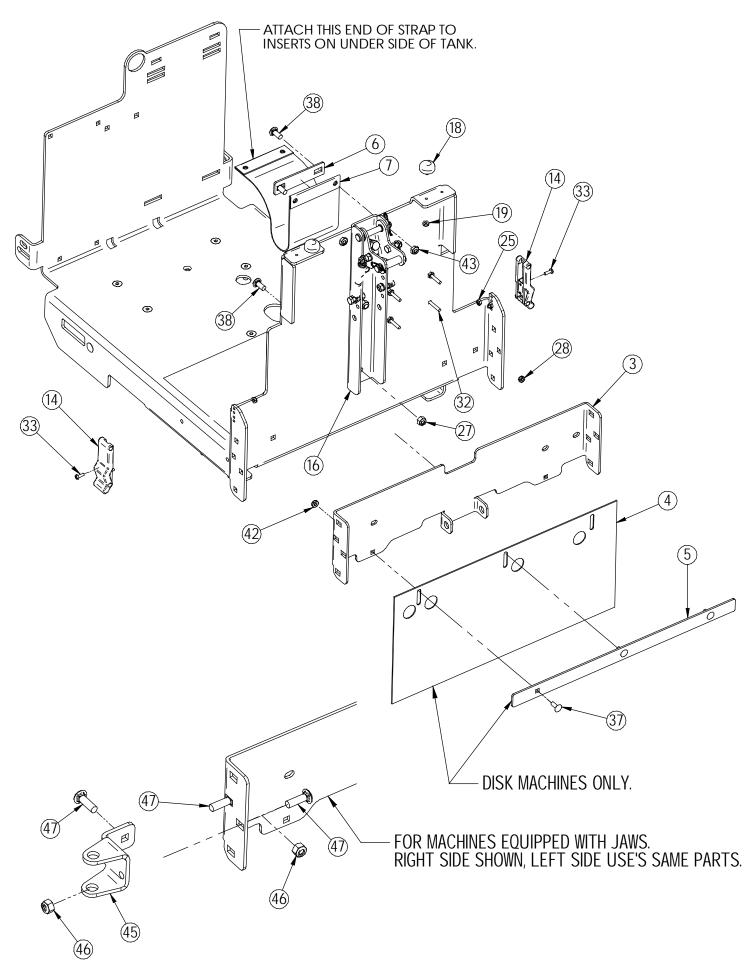


Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
1	21-2211	SPACER 1/2 OD X 1/4"	ı		4
2	253-1000	MAINFRAME WELDMENT			1
3	253-1010	LIFT ARM SUPPORT BRACKET			1
4	253-1015	FRAME CURTAIN			1
5	253-1020	BAND, FRAME CURTAIN			1
6	253-1040	TANK STRAP SUPPORT			1
7	253-1050	TANK STRAP, 35" LG X 4" WIDE			1
8	253-1060	BOSS			2
9	253-1470	BATTERY TRAY BRACKET			1
10	253-3009	TRANS AXLE			1
11	253-4000	Parking Brake (Optional)			1
12	32-0999	AXLE MOUNT			2
13	32-3045	TIRE, BLACK, PNEUMATIC, 4.10/3.50-5	32-3040	TIRE, GRAY, PNEUMATIC, 4.10/3.50-5	2
			32-3050	TIRE, GRAY, FOAM, 4.10/3.50-5	
			32-3055 253-6190	TIRE, BLACK, FOAM, 4.10/3.50-5 TIRE, BLACK, SOLID, 3-1/2" WIDE	
14	4-124	LATCH	ZJJ-0170	TINE, DEAGN, SOCID, 3-1/2 WIDE	2
15	704	SUB #704 SQUEEGEE TRAIL ARM ASSEMBLY			1
16	707	SUB #707 ACTUATOR LIFT ASSEMBLY			1
17	739	SUB #739 CASTER FOOT ASSEMBLY			1
18	H-01201	GROMMET			4
19	H-0129155	JNYL #10-32, 18-8 S/S			2
20	H-312HCN	HCN 5/16"-18			2
21	H-3225T	RUBBER LOOP CLAMP, 1-1/2"			2
22	H-70005	HCS 1/4" - 20 X 1" SS			4
23	H-70053	HCS 5/16"- 18 X 3/4" SS			2
24	H-70107	HCS 3/8"- 16 X 1-1/4" SS			2
25	H-70856	NYLOK #8-32 SS			4
26	H-70860	NYLOK 1/4"- 20 SS			5
27	H-70861	NYLOK 5/16" - 18 SS			16
28	H-70923	KN #10-32 SS			4
29	H-71015	FW 5/16" X 3/4" SAE SS			2
30	H-71065	LW 5/16" SS			2
31	H-71067	LW 3/8" SS			2
32	H-72522	CB #10-32 X 1-1/4" SS			4
33	H-72523	RPH #8-32 X 1/2" SS			4
34	H-72706	FHP 1/4"- 20 X 5/8" SS			1
35	H-72710	FHP 1/4"- 20 X 1" SS			1
36	H-73908	FHSCS 5/16"- 18 X 1" SS			5
37	H-74418	CB 1/4"- 20 X 5/8" S/S			3
38	H-74429	CB 5/16"- 18 X 3/4" SS			9
39	H-74430	CB 5/16"- 18 X 1" SS			6
40	H-9307K74	Grommet, 1" ID X 1-3/4" od buna-n			1
41	H-FAN5	LUG NUT 5/16"-18 SS			8
42	H-NJ04C	JNYL 1/4" - 20 SS			4
43	H-NJ05C	JNYL 5/16"- 18 SS			4
44	M-9434T27	3/4" DIA 1 HOLE TUBE STRAP			1
45	253-1160	JAW HINGE, INNER			1
46	H-70861	NYLOK 5/16" - 18 SS			3
47	H-74430	CB 5/16"- 18 X 1" SS			3



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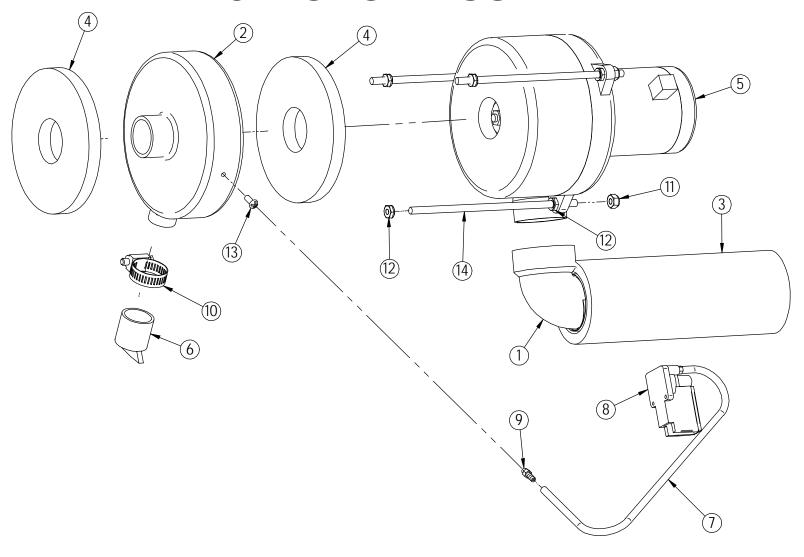
Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
1	21-2211	SPACER 1/2 OD X 1/4"	ı		4
2	253-1000	MAINFRAME WELDMENT			1
3	253-1010	LIFT ARM SUPPORT BRACKET			1
4	253-1015	FRAME CURTAIN			1
5	253-1020	BAND, FRAME CURTAIN			1
6	253-1040	TANK STRAP SUPPORT			1
7	253-1050	TANK STRAP, 35" LG X 4" WIDE			1
8	253-1060	BOSS			2
9	253-1470	BATTERY TRAY BRACKET			1
10	253-3009	TRANS AXLE			1
11	253-4000	Parking Brake (Optional)			1
12	32-0999	AXLE MOUNT			2
13	32-3045	TIRE, BLACK, PNEUMATIC, 4.10/3.50-5	32-3040	TIRE, GRAY, PNEUMATIC, 4.10/3.50-5	2
			32-3050	TIRE, GRAY, FOAM, 4.10/3.50-5	
			32-3055 253-6190	TIRE, BLACK, FOAM, 4.10/3.50-5 TIRE, BLACK, SOLID, 3-1/2" WIDE	
14	4-124	LATCH	233-0170	TINE, DEAGN, SOCID, 3-1/2 WIDE	2
15	704	SUB #704 SQUEEGEE TRAIL ARM ASSEMBLY			1
16	707	SUB #707 ACTUATOR LIFT ASSEMBLY			1
17	739	SUB #739 CASTER FOOT ASSEMBLY			1
18	H-01201	GROMMET			4
19	H-0129155	JNYL #10-32, 18-8 S/S			2
20	H-312HCN	HCN 5/16"-18			2
21	H-3225T	RUBBER LOOP CLAMP, 1-1/2"			2
22	H-70005	HCS 1/4" - 20 X 1" SS			4
23	H-70053	HCS 5/16"- 18 X 3/4" SS			2
24	H-70107	HCS 3/8"- 16 X 1-1/4" SS			2
25	H-70856	NYLOK #8-32 SS			4
26	H-70860	NYLOK 1/4"- 20 SS			5
27	H-70861	NYLOK 5/16" - 18 SS			16
28	H-70923	KN #10-32 SS			4
29	H-71015	FW 5/16" X 3/4" SAE SS			2
30	H-71065	LW 5/16" SS			2
31	H-71067	LW 3/8" SS			2
32	H-72522	CB #10-32 X 1-1/4" SS			4
33	H-72523	RPH #8-32 X 1/2" SS			4
34	H-72706	FHP 1/4"- 20 X 5/8" SS			1
35	H-72710	FHP 1/4"- 20 X 1" SS			1
36	H-73908	FHSCS 5/16"- 18 X 1" SS			5
37	H-74418	CB 1/4"- 20 X 5/8" S/S			3
38	H-74429	CB 5/16"- 18 X 3/4" SS			9
39	H-74430	CB 5/16"- 18 X 1" SS			6
40	H-9307K74	Grommet, 1" ID X 1-3/4" od buna-n			1
41	H-FAN5	LUG NUT 5/16"-18 SS			8
42	H-NJ04C	JNYL 1/4" - 20 SS			4
43	H-NJ05C	JNYL 5/16"- 18 SS			4
44	M-9434T27	3/4" DIA 1 HOLE TUBE STRAP			1
45	253-1160	JAW HINGE, INNER			1
46	H-70861	NYLOK 5/16" - 18 SS			3
47	H-74430	CB 5/16"- 18 X 1" SS			3



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Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
1	21-2211	SPACER 1/2 OD X 1/4"	ı		4
2	253-1000	MAINFRAME WELDMENT			1
3	253-1010	LIFT ARM SUPPORT BRACKET			1
4	253-1015	FRAME CURTAIN			1
5	253-1020	BAND, FRAME CURTAIN			1
6	253-1040	TANK STRAP SUPPORT			1
7	253-1050	TANK STRAP, 35" LG X 4" WIDE			1
8	253-1060	BOSS			2
9	253-1470	BATTERY TRAY BRACKET			1
10	253-3009	TRANS AXLE			1
11	253-4000	Parking Brake (Optional)			1
12	32-0999	AXLE MOUNT			2
13	32-3045	TIRE, BLACK, PNEUMATIC, 4.10/3.50-5	32-3040	TIRE, GRAY, PNEUMATIC, 4.10/3.50-5	2
			32-3050	TIRE, GRAY, FOAM, 4.10/3.50-5	
			32-3055 253-6190	TIRE, BLACK, FOAM, 4.10/3.50-5 TIRE, BLACK, SOLID, 3-1/2" WIDE	
14	4-124	LATCH	ZJJ-0170	TINE, DEAGN, SOCID, 3-1/2 WIDE	2
15	704	SUB #704 SQUEEGEE TRAIL ARM ASSEMBLY			1
16	707	SUB #707 ACTUATOR LIFT ASSEMBLY			1
17	739	SUB #739 CASTER FOOT ASSEMBLY			1
18	H-01201	GROMMET			4
19	H-0129155	JNYL #10-32, 18-8 S/S			2
20	H-312HCN	HCN 5/16"-18			2
21	H-3225T	RUBBER LOOP CLAMP, 1-1/2"			2
22	H-70005	HCS 1/4" - 20 X 1" SS			4
23	H-70053	HCS 5/16"- 18 X 3/4" SS			2
24	H-70107	HCS 3/8"- 16 X 1-1/4" SS			2
25	H-70856	NYLOK #8-32 SS			4
26	H-70860	NYLOK 1/4"- 20 SS			5
27	H-70861	NYLOK 5/16" - 18 SS			16
28	H-70923	KN #10-32 SS			4
29	H-71015	FW 5/16" X 3/4" SAE SS			2
30	H-71065	LW 5/16" SS			2
31	H-71067	LW 3/8" SS			2
32	H-72522	CB #10-32 X 1-1/4" SS			4
33	H-72523	RPH #8-32 X 1/2" SS			4
34	H-72706	FHP 1/4"- 20 X 5/8" SS			1
35	H-72710	FHP 1/4"- 20 X 1" SS			1
36	H-73908	FHSCS 5/16"- 18 X 1" SS			5
37	H-74418	CB 1/4"- 20 X 5/8" S/S			3
38	H-74429	CB 5/16"- 18 X 3/4" SS			9
39	H-74430	CB 5/16"- 18 X 1" SS			6
40	H-9307K74	Grommet, 1" ID X 1-3/4" od buna-n			1
41	H-FAN5	LUG NUT 5/16"-18 SS			8
42	H-NJ04C	JNYL 1/4" - 20 SS			4
43	H-NJ05C	JNYL 5/16"- 18 SS			4
44	M-9434T27	3/4" DIA 1 HOLE TUBE STRAP			1
45	253-1160	JAW HINGE, INNER			1
46	H-70861	NYLOK 5/16" - 18 SS			3
47	H-74430	CB 5/16"- 18 X 1" SS			3

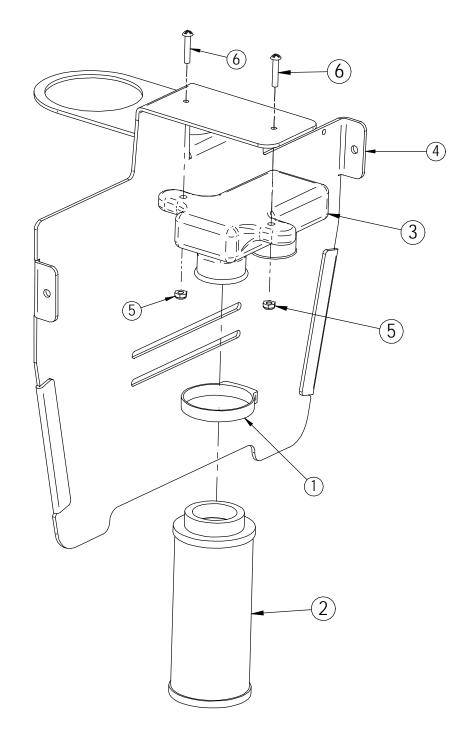
VAC MOTOR ASSEMBLY



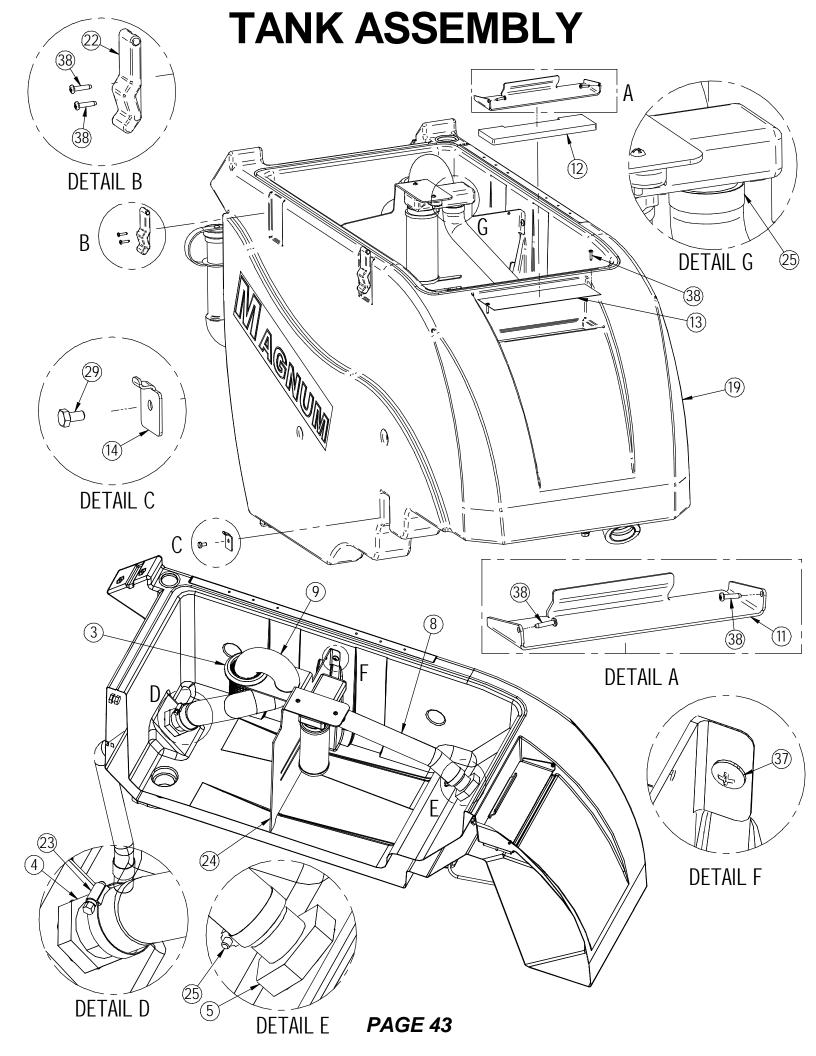
Item	Part Number	Part Description	Optional	Qtv
1	190-1225	1.50 X 90 DEG STREET ELBOW	Optional	1
2	190-1450	VAC BOX		1
3	190-2502	VACUUM FAN MUFFLER, 8" LG	Optional	1
4	190-3002	VAC MOTOR GASKET		2
5	190-5250	VAC MOTOR, 3/4 HP, TANGENTAL		1
6	253-1505	LOADER VALVE		1
7	253-8006	CLEAR TUBE, 1/8" ID X 1/4" OD X ? LG	Optional	1
8	390-2328	SWITCH, VACUUM SHUTOFF	Optional	1
9	390-2328A	VACUUM SWITCH BARB	Optional	1
10	H-62005	CLAMP 5/8"- 1-1/2" SS		1
11	H-70860	NYLOK 1/4"- 20 SS		3
12	H-70925	KN 1/4-20 S/S		6
13	H-72563	RPH #10-32 X 1/2" SS		1
14	H-W1579194	1/4-20 X 7" FT STUD S/S		3

NOTE: ITEMS 1 & 3 ARE OPTION #253-27 MUFFLER PACKAGE. ITEMS 7, 8, 9 ARE OPTION #253-28 VACUUM ELECTRIC SHUT-OFF.

TANK BAFFLE ASSEMBLY



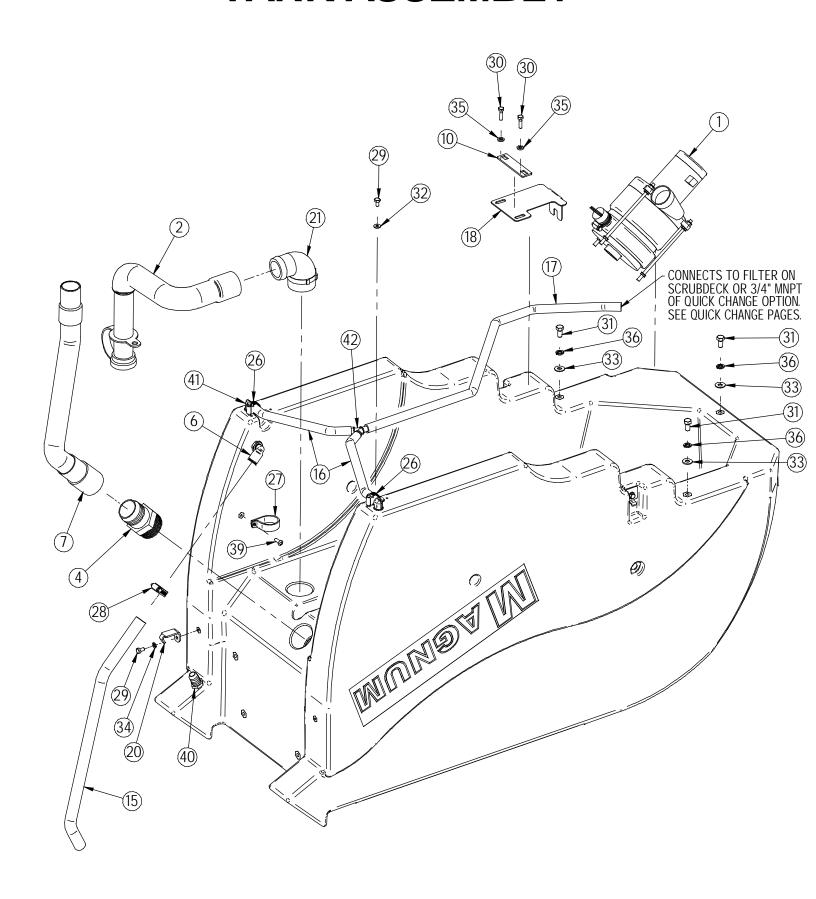
Item	Part Number	Part Description	Qty
1	21-4028	SNAP GRIP CLAMP	1
2	21-4085	VAC SCREEN	1
3	21-7060	VAC BOX	1
4	253-1130	BAFFLE	1
5	H-70858	NYLOK #10-32 SS	2
6	H-72566	RPH #10-32 X 1" SS	2



TANK ASSEMBLY

Item	Part Number	Part Description	Alternate P/N	Alternate Description	Qty
1		VAC MOTOR ASSEMBLY		<u></u>	1
2	170-7210	DRAIN HOSE			1
3	170-8911	SCREEN STRAINER, 4-1/4" LG			1
4	190-1210	2.0" MNPT X 2.0" BARB, PVC			2
5	190-1215	2.0" MNPT X 1.50" BARB, PVC			1
6	190-5779	ELBOW, MALE 1/2" NPT X 1/2" TUBE OD, GLASS FILLED NYLON			1
7	253-0111	HOSE, 1.50" ID X 38.50" LG.			1
8	253-0120	1-1/2" ID X 19" LG WIRE REINF. BLACK HOSE, NO CUFFS			1
9	253-0121	2.0" ID x 27.0" LG MW255 GRAY MG HOSE, NO CUFFS			1
10	253-1040	TANK STRAP SUPPORT			1
11	253-1180	SOLUTION FILL LID			1
12	253-1190	SOLUTION FILL LID GASKET			1
13	253-1220	SCREEN			1
14	253-1240	CLIP			2
15	253-1370	CLEAR HOSE, 3/4" ID X 1.0" OD X 26" LG			1
16	253-1604	1/2" ID X 11-1/2" LG WIRE REINF. CLEAR TUBE			2
17	253-1605	1/2" ID X 36-1/2" LG WIRE REINF. CLEAR TUBE			1
18	253-4100	WIRE PLATE			1
19	253-4140	SOLUTION/RECOVERY TANK	253-4141	RED TANK	1
20	253-9491	HOOK			1
21	290-7040	2" NPT X 2" BARB ELBOW, BLACK			1
22	4-124	LATCH			2
23	5-719	CLAMP 1 9/16 - 2 1/2 " SS			1
24	738	SUB #738 MAGNUM TANK BAFFLE			1
25	H-0427612	CLAMP 3/4"- 1-3/4" SS			2
26	H-081	CLAMP 7/16"- 25/32" SS			2
27	H-3225T	RUBBER LOOP CLAMP, 1-1/2"			1
28	H-62005	CLAMP 5/8"- 1-1/2" SS			1
29	H-70001	HCS 1/4"-20 X 1/2 SS"			4
30	H-70005	HCS 1/4"- 20 X 1" SS			2
31	H-70103	HCS 3/8"-16 X 3/4" SS			3
32	H-71013	FNW 1/4" X 5/8" SS			3
33	H-71017	FW 3/8" X 7/8" SS			3
34	H-71063	LW 1/4" SS			1
35	H-71065	LW 5/16" SS			2
36	H-71067	LW 3/8" SS			3
37	H-71894	#14 X 1" SELF TAPPING SCREW			2
38	H-72916	PPH SMS #8 X 3/4" SS			8
39	H-73754	BHSCS 1/4 - 20 X 3/4" SS			1
40	M-5346K68	1/2" MNPT X 3/4" BARB, BRASS			1
41	M-53525K58	ELBOW, 1/2" MNPT X 1/2" BARB, BRASS			2
42	M-5463K727	WYE, 1/2", NYLON			1

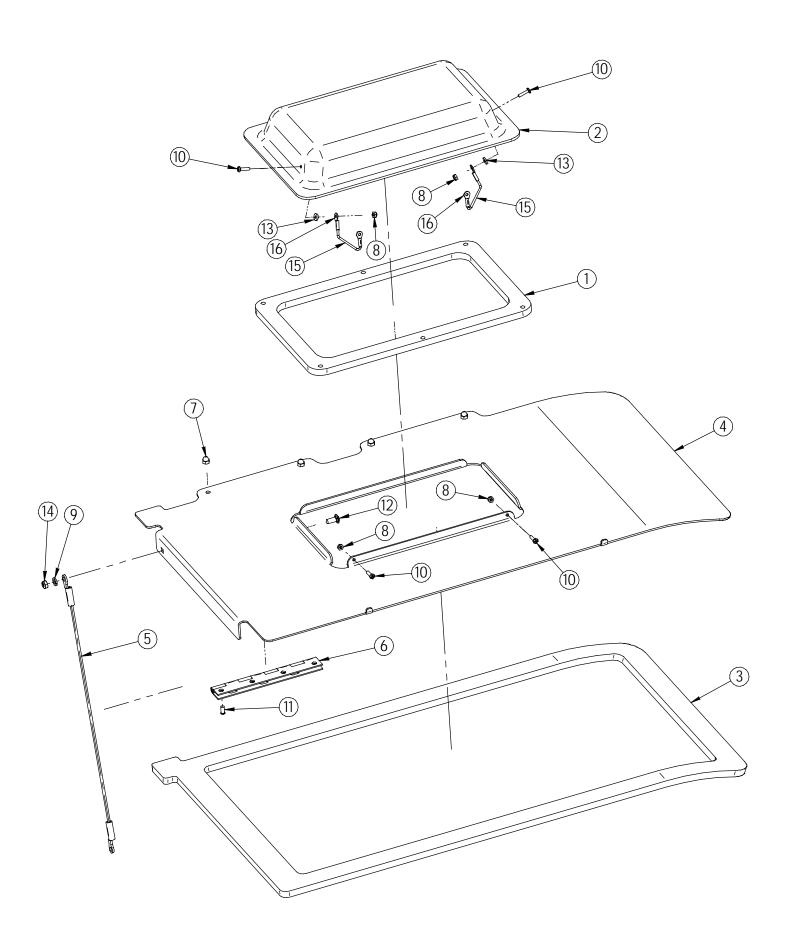
TANK ASSEMBLY



TANK ASSEMBLY

Item	Part Number	Part Description	Alternate P/N	Alternate Description	Qty
1		VAC MOTOR ASSEMBLY		'	1
2	170-7210	DRAIN HOSE			1
3	170-8911	SCREEN STRAINER, 4-1/4" LG			1
4	190-1210	2.0" MNPT X 2.0" BARB, PVC			2
5	190-1215	2.0" MNPT X 1.50" BARB, PVC			1
6	190-5779	ELBOW, MALE 1/2" NPT X 1/2" TUBE OD, GLASS FILLED NYLON			1
7	253-0111	HOSE, 1.50" ID X 38.50" LG.			1
8	253-0120	1-1/2" ID X 19" LG WIRE REINF. BLACK HOSE, NO CUFFS			1
9	253-0121	2.0" ID x 27.0" LG MW255 GRAY MG HOSE, NO CUFFS			1
10	253-1040	TANK STRAP SUPPORT			1
11	253-1180	SOLUTION FILL LID			1
12	253-1190	SOLUTION FILL LID GASKET			1
13	253-1220	SCREEN			1
14	253-1240	CLIP			2
15	253-1370	CLEAR HOSE, 3/4" ID X 1.0" OD X 26" LG			1
16	253-1604	1/2" ID X 11-1/2" LG WIRE REINF. CLEAR TUBE			2
17	253-1605	1/2" ID X 36-1/2" LG WIRE REINF. CLEAR TUBE			1
18	253-4100	WIRE PLATE			1
19	253-4140	SOLUTION/RECOVERY TANK	253-4141	RED TANK	1
20	253-9491	НООК			1
21	290-7040	2" NPT X 2" BARB ELBOW, BLACK			1
22	4-124	LATCH			2
23	5-719	CLAMP 1 9/16 - 2 1/2 " SS			1
24	738	SUB #738 MAGNUM TANK BAFFLE			1
25	H-0427612	CLAMP 3/4"- 1-3/4" SS			2
26	H-081	CLAMP 7/16"- 25/32" SS			2
27	H-3225T	RUBBER LOOP CLAMP, 1-1/2"			1
28	H-62005	CLAMP 5/8"- 1-1/2" SS			1
29	H-70001	HCS 1/4"-20 X 1/2 SS"			4
30	H-70005	HCS 1/4"- 20 X 1" SS			2
31	H-70103	HCS 3/8"-16 X 3/4" SS			3
32	H-71013	FNW 1/4" X 5/8" SS			3
33	H-71017	FW 3/8" X 7/8" SS			3
34	H-71063	LW 1/4" SS			1
35	H-71065	LW 5/16" SS			2
36	H-71067	LW 3/8" SS			3
37	H-71894	#14 X 1" SELF TAPPING SCREW			2
38	H-72916	PPH SMS #8 X 3/4" SS			8
39	H-73754	BHSCS 1/4 - 20 X 3/4" SS			1
40	M-5346K68	1/2" MNPT X 3/4" BARB, BRASS			1
41	M-53525K58	ELBOW, 1/2" MNPT X 1/2" BARB, BRASS			2
42	M-5463K727	WYE, 1/2", NYLON			1

TANK LID ASSEMBLY

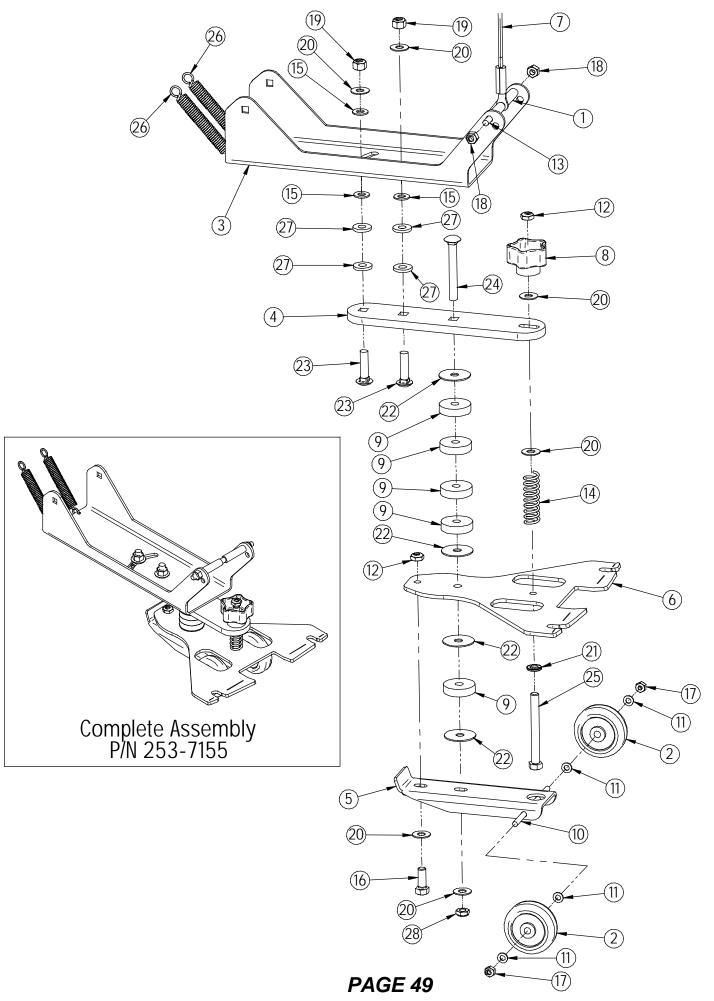


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TANK LID ASSEMBLY

Item	Part Number	Part Description	Alternate P/N	Alternate Description	Qty
1	190-1075	TANK CLEAR COVER GASKET		·	1
2	190-1410	VAC FORMED CLEAR COVER		INCLUDES GASKET	1
3	253-1070	RECOVERY TANK LID GASKET			1
4	253-1400	Tank Lid, S/S	253-1401	GRANITE FINISH	1
5	253-1450	RECOVERY TANK CABLE, 20"			1
6	32-8000	8" CONTINUOUS HINGE			2
7	H-37708	1/4-20 LC ACORN NUT			4
8	H-70858	NYLOK #10-32 SS			4
9	H-71065	LW 5/16" SS			1
10	H-72416	PPHMS #10-32 X 3/4" S/S			4
11	H-73752	BHSCS 1/4-20 X 1/2"			4
12	H-74429	CB 5/16"- 18 X 3/4" SS			1
13	H-90133	.170 ID X .50 OD X .093 TH			2
		NEOPRENE WASHER			
14	H-NJ05C	JNYL 5/16"- 18 SS			1
15	M-3606T23	RND BEAD CHAIN, SIZE #13, S/S			2
16	M-3606T36	END COUPLING FOR SIZE 13 RND BEAD CHAIN, S/S			4

SQUEEGEE TRAIL ARM ASSEMBLY

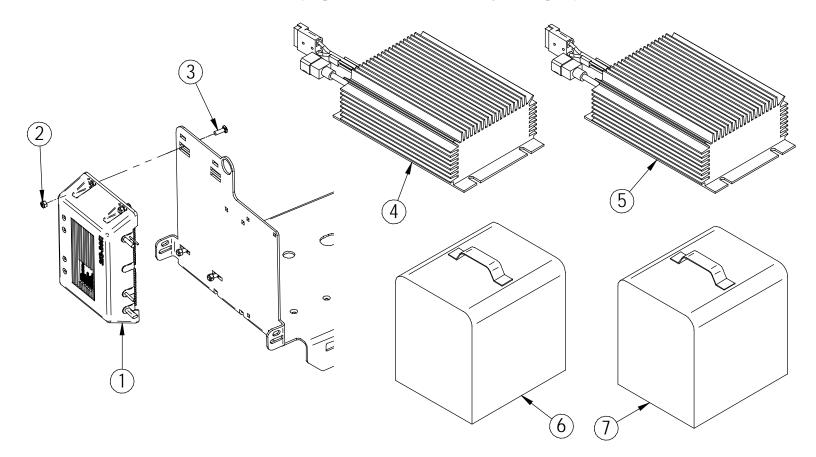


SQUEEGEE TRAIL ARM ASSEMBLY

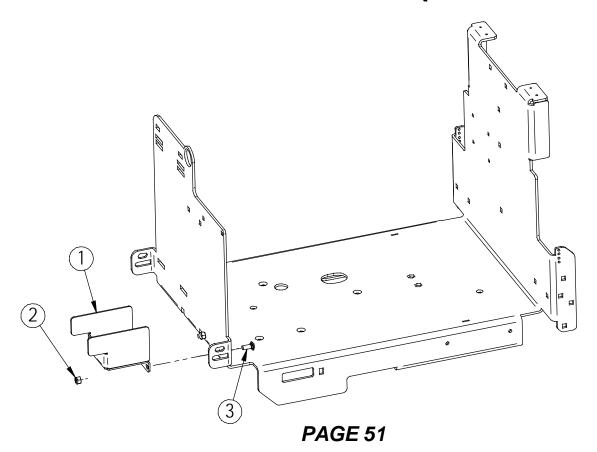
Item	Part Number	Part Description	Qty
1	190-1055	TUBE, 5/16" ID X 7/16" OD X 1-5/8" LG	2
2	21-7570	BACK UP WHEEL (GREY)	2
3	253-7140	SQUEEGEE SWING PLATE	1
4	253-7150	SQUEEGEE TRAIL ARM	1
5	253-7220	SQUEEGEE TRAIL MOUNT	1
6	253-7610	SQUEEGEE TRIANGLE PLATE	1
7	253-7890	SQUEEGEE LIFT CABLE, 27-5/8"	1
8	290-5787	STAR KNOB, 3/8-24 THREAD	1
9	4-446	GROMMET-3/8 ID X 1-1/2 OD X .375	5
10	H-00221	FTS 1/4"- 20 X 5" SS	1
11	H-00283	FW 1/4" NYLON	4
12	H-0171004	JNYL 3/8- 24 SS	2
13	H-10097811	5/16-18 X 5" DOUBLE ENDED STUD S/S	1
14	H-111	SPRING, 1/2" ID X 2-1/2" LG	1
15	H-4440024	FW 3/8" X 3/4" NYLON	3
16	H-70142	HCS 3/8"- 24 X 1" S/S	1
17	H-70860	NYLOK 1/4"- 20 SS	2
18	H-70861	NYLOK 5/16" - 18 SS	2
19	H-70862	NYLOK 3/8"-16 SS	2
20	H-71017	FW 3/8" X 7/8" SS	6
21	H-71067	LW 3/8" SS	1
22	H-71217	FNW 3/8" X 1-1/2" SS	4
23	H-74438	CB 3/8"- 16 X 1-1/2" SS	2
24	H-74441	CB 3/8"- 16 X 3.0" SS	1
25	H-92865A227	HCS 3/8"- 24 X 3.5" SS	1
26	H-96544	SPRING, 4-1/8" LG, 9/16 OD, (42E)	2
27	H-98025	FW 3/8" GRADE 8	4
28	H-NJ06C	JNYL 3/8-16 SS	1

BATTERY CHARGER OPTIONS

NOTE: See Battery Packs page 94 for which charger to use. Refer to pages 107-108 for Battery Charger parts list.



ON-BOARD SOAP (OPTIONAL)



BATTERY CHARGER OPTIONS

NOTE: See Battery Packs page 94 for which charger to use. Refer to pages 107-108 for Battery Charger parts list.

NOTE: Japan & Korea Not Included

Item	Part Number	Part Description	Qty
1	253-2441	CHARGER, SEALED, 20A	1
2	H-70861	NYLOK 5/16" - 18 SS	4
3	H-74430	CB 5/16"- 18 X 1" SS	4

Ite	em	Part Number	Part Description	Optional P/N	Optional Description	Qty
	4	253-2445	CHARGER; (Wet Batteries)	253-2450	CHARGER, 115V, 60Hz	1
		North	AC: (115V / 60Hz)	North	(Maintenance Free)	
		American	DC: (24V / 25A)	American		

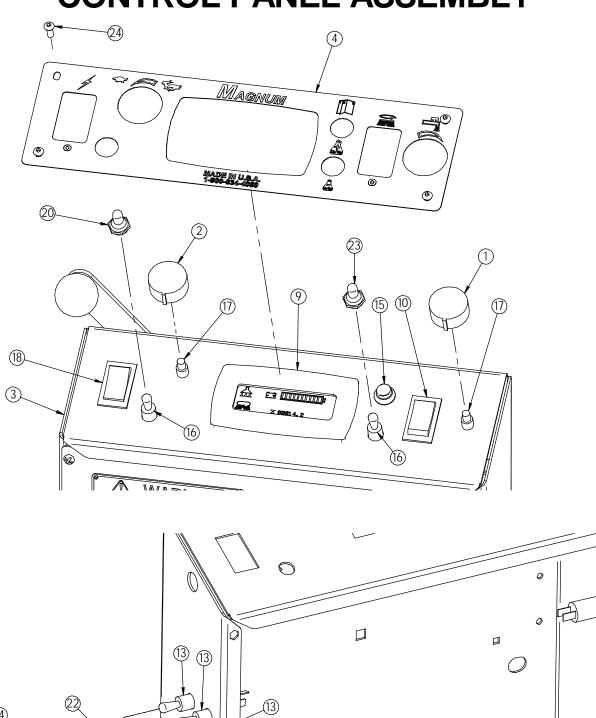
Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
5	253-2442 Export	CHARGER; (Wet Batteries) AC: (220V / 50Hz) DC: (24V / 25A)	253-2451 Export	CHARGER, 220V / 50Hz, (Maintenance Free)	1

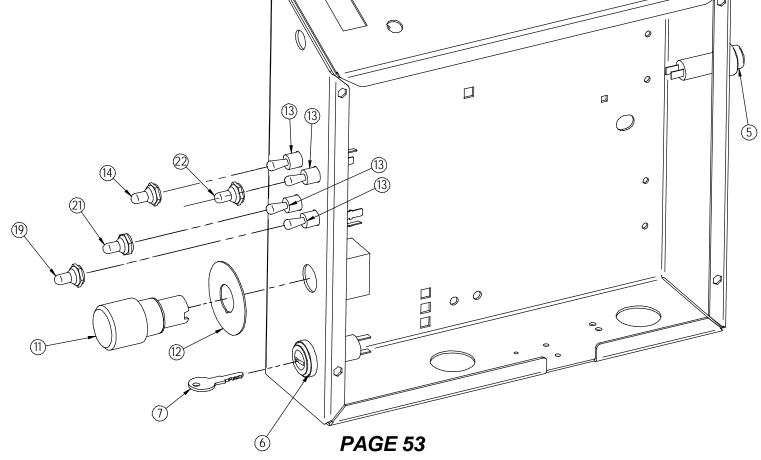
Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
6	7-244	CHARGER, 24v, 36A,	7-251	CHARGER, 220V, 36A,	1
	North	110-VOLT	Export	220-VOLT	
	American				

Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
7	21-2440 North American	CHARGER, 24V, 25A, 110-VOLT	21-2442 Export	CHARGER, 24V, 25A, 220-VOLT	1

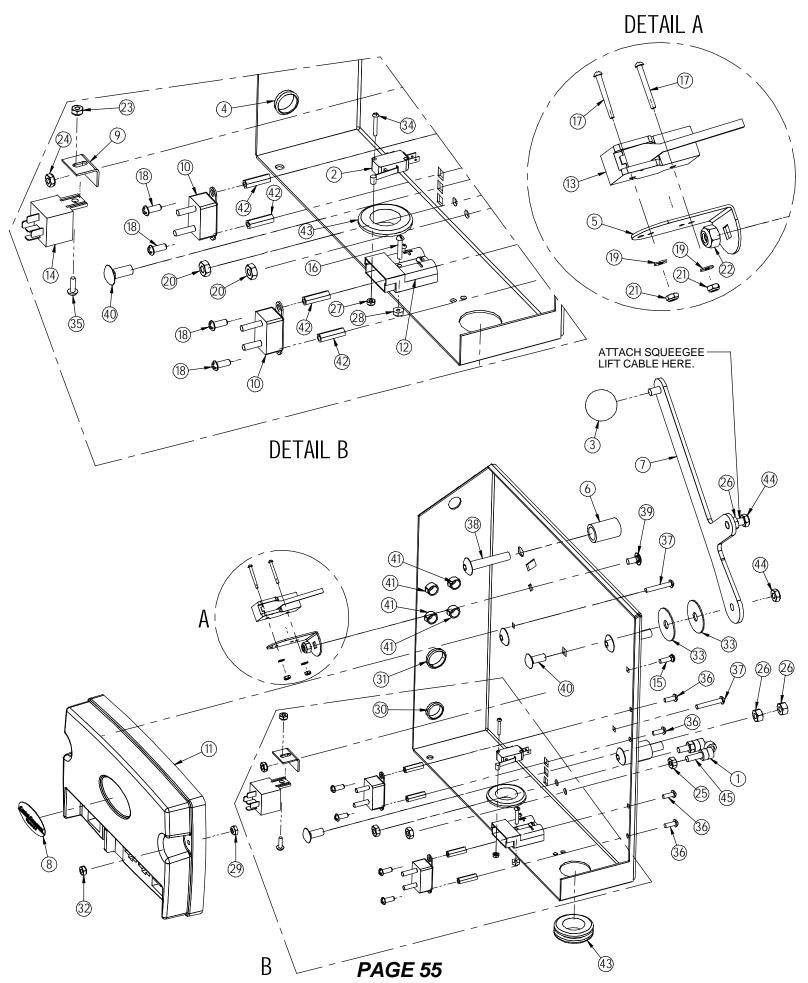
ON-BOARD SOAP (OPTIONAL)

Item	Part Number	Part Description	Qty
1	253-1770	SOAP TRAY, SINGLE ROUND JUG	1
2	H-70861	NYLOK 5/16" - 18 SS	2
3	H-74429	CB 5/16"- 18 X 3/4" SS	2

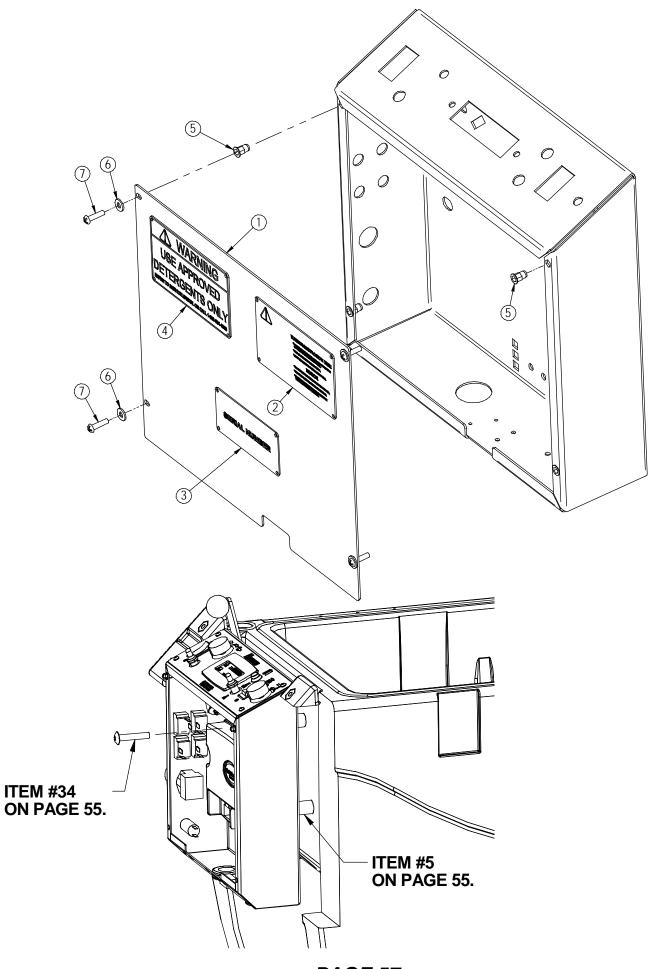




Item	Part Number	Part Description	Qty	Options
1	21-4510	SOLUTION CONTROL KNOB, BLUE	1	
2	21-4520	SPEED CONTROL KNOB, RED	1	
3	253-2010	CONTROL PANEL BOX	1	
4	253-2013	CONTROL PANEL TOP PLATE	1	
5	253-2300	CHARGER STATUS INDICATOR	1	
6	290-234	KEY SWITCH	1	OPTIONAL
7	290-234A	KEY SET (REPLACE)	1	OPTIONAL
8	290-2815	CIR. Breaker - 15a, 24v	1	
9	290-2891	LCD SCREEN	1	
10	5-234	SWITCH, ROCKER, DPDT, ON/ON	1	
11	5-300	EMERGENCY SHUT OFF	1	OPTIONAL
12	5-301	EMERGENCY LEGEND PLATE	1	OPTIONAL
13	5-892	TOGGLE, ON-OFF SPST	4	OPTIONAL
14	5-892A	PROTECTIVE BOOT, TOGGLE SWITCH, (GRAY)	1	OPTIONAL
15	7-229	PUSH BUTTON SWITCH	1	
16	7-283	SWITCH, TOGGLE, MOM/OFF/MOM (DPDT)	2	
17	7-292	5K POTENTIOMETER	2	
18	8-231	SWITCH, ON-OFF ROCKER SPST	1	
19	H-01195	PROTECTIVE BOOT, TOGGLE SWITCH, (WHITE)	1	OPTIONAL
20	H-01196	PROTECTIVE BOOT, TOGGLE SWITCH, (RED)	1	
21	H-01197	PROTECTIVE BOOT, TOGGLE SWITCH, (YELLOW)	1	OPTIONAL
22	H-01199	PROTECTIVE BOOT, TOGGLE SWITCH, (BLUE)	1	OPTIONAL
23	H-01200	PROTECTIVE BOOT, TOGGLE SWITCH, (BLACK)	1	
24	H-73743	BHSCS 10-32 X 1/2" SS	1	



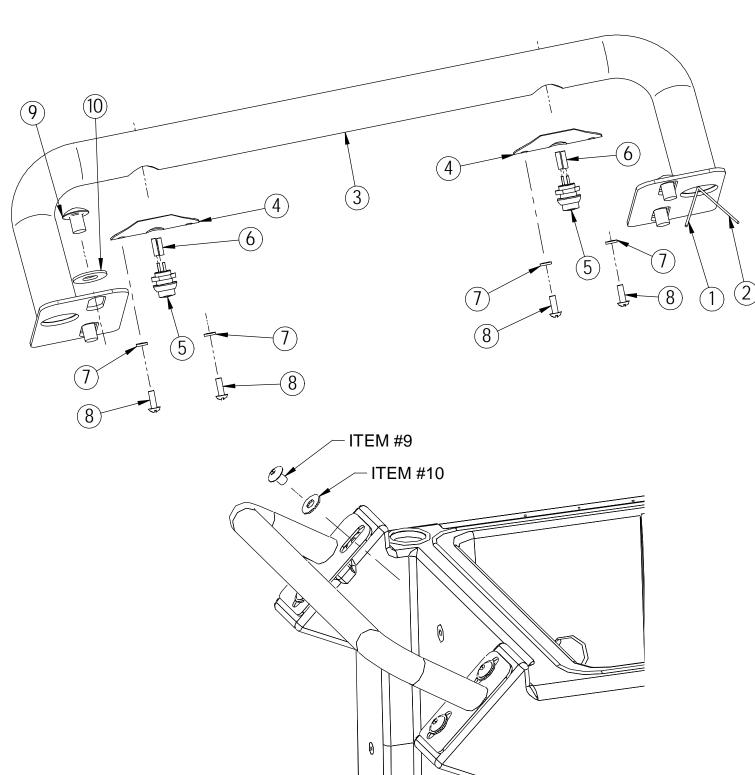
Item	Part Number	Part Description	Qty	Options
1	21-2211	SPACER 1/2 OD X 1/4"	5	
2	21-2230	MICRO SWITCH	1	OPTIONAL
3	21-7101	LIFT KNOB	1	0
4	253-2010	CONTROL PANEL BOX	1	
5	253-2020	BRACKET, LIMIT SWITCH	1	
6	253-2700	SPACER, 1-1/4" LG	1	
7	253-7100	SQUEEGEE LIFT LEVER	1	
8	290-1504	VERSION 3.0 DECAL	1	
9	290-2020	BRACKET	1	
10	290-2815	CIR. BREAKER - 15A, 24V	2	
11	290-2899	COMPUTER CONTROL V3	1	
12	4-257	CONNECTOR, RED 50, WITH CONTACTS	1	
13	5-223	LIMIT SWITCH	1	
14	5-293	15 AMP RELAY	1	
15	H-0172519	CB #10-32 X 5/8" SS	1	
16	H-27315	RSL #6-32 X 3/4"	2	
17	H-28678	RPH #4-40 X 1"	2	
18	H-29048	RPH #10-32 X 1/2"	4	
19	H-33066	FW #4 SAE	2	
20	H-36202	JN 1/4"- 20	2	
21	H-37006	NYLOK #4-40	2	
22	H-37018	NYLOK 1/4"-20	1	
23	H-37406	KN #8-32	1	
24	H-37408	KN #10-32	1	
25	H-70710	HN 1/4"- 20 SS	2	
26	H-70711	HN 5/16"- 18 SS	3	
27	H-70854	NYLOK #4-40 SS	2	
28	H-70855	NYLOK #6-32 SS	2	
29	H-70858	NYLOK #10-32 SS	2	
30	H-70888	HOLE PLUG 3/4"	1	OPTIONAL
31	H-70889	HOLE PLUG 7/8"	1	OPTIONAL
32	H-70923	KN #10-32 SS	2	
33	H-71217	FNW 3/8" X 1-1/2" SS	2	
34	H-72489	RPH #4-40 X 3/4"	2	
35	H-72523	RPH #8-32 X 1/2" SS	1	
36	H-72563	RPH #10-32 X 1/2" SS	4	
37	H-73747	RPH #10-32 X 1 1/4" SS	2	
38	H-73819	BHSCS 3/8"- 16 X 2" S/S	3	
39	H-74417	CB 1/4"- 20 X .5" SS	1	
40	H-74429	CB 5/16"- 18 X 3/4" SS	2	
41	H-85985	HOLE PLUG 1/2"	4	OPTIONAL
42	H-90308	10-32 X 7/8" STANDOFF	4	
43	H-9307K74	GROMMET, 1" ID X 1-3/4" OD BUNA-N	2	
44	H-NJ05C	JNYL 5/16"- 18 SS	1	
45	M-8896T91	U-BOLT, 1/4-20 X 9/16 ID X 1-1/4" LG, S/S	1	



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Item	Part Number	Part Description	Qty	Options
1	253-2006	CONTROL PANEL COVER	1	
2	253-7280	EXPLOSION WARNING PLATE	1	
3	4-101	SERIAL NUMBER PLATE	1	
4	5-728	DETERGENT WARNING PLATE	1	
5	H-1032HCN	HCN #10-32	4	
6	H-71009	FW #10 SS	4	
7	H-72565	RPH #10-32 X 3/4" SS	4	

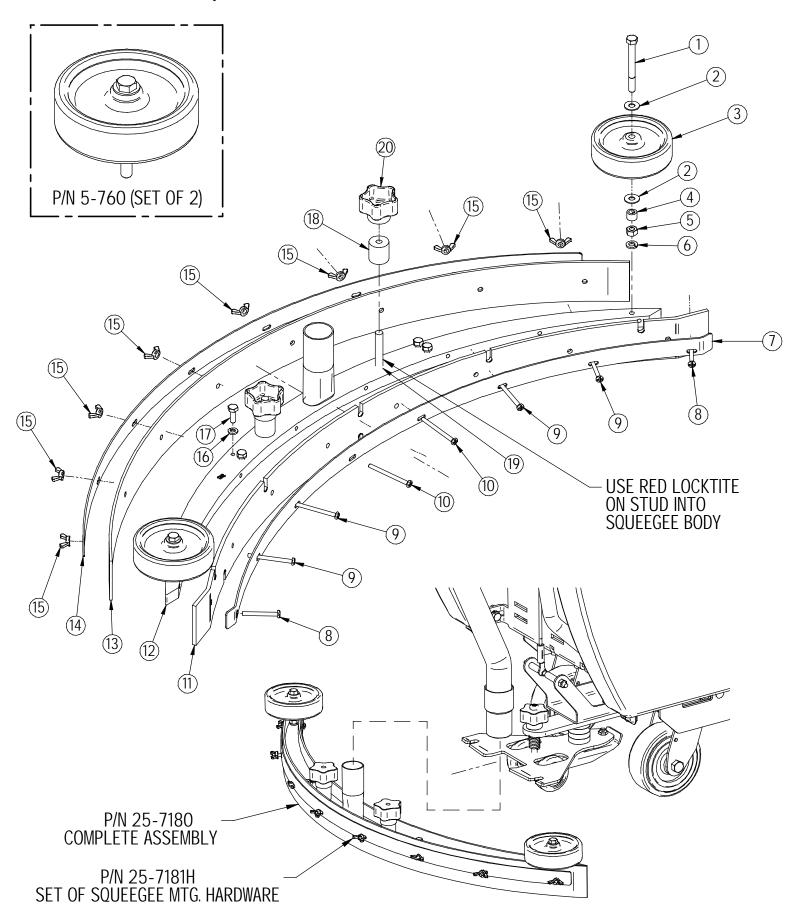
HANDLE BAR ASSEMBLY



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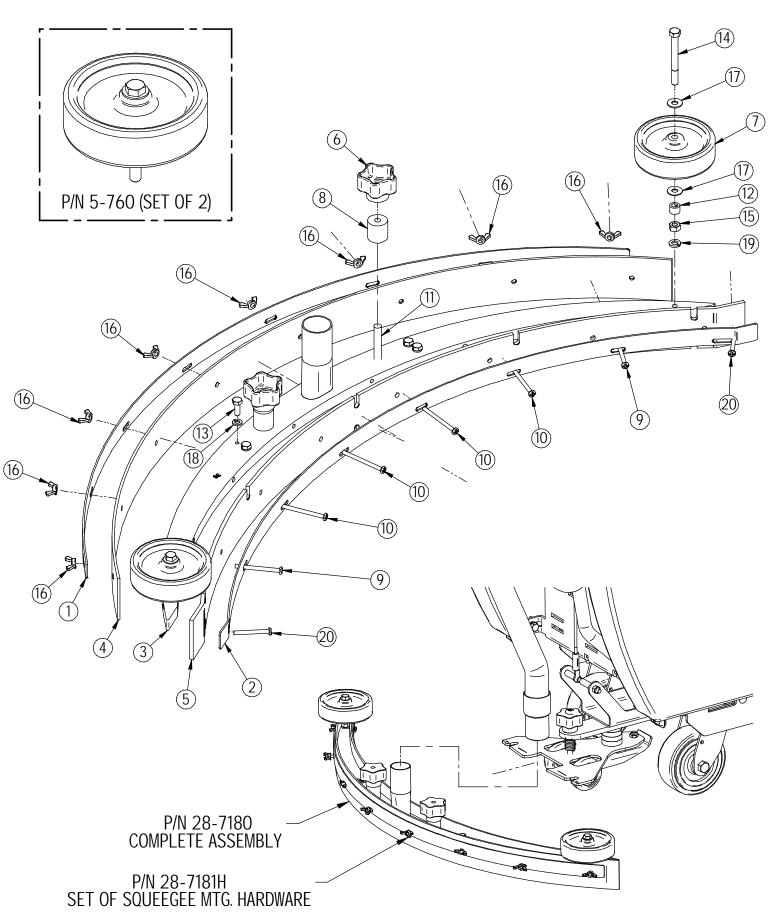
HANDLE BAR ASSEMBLY

Item	Part Number	Part Description	Qty
1	253-1191	22 GA RED WIRE, 35" LG	1
2	253-1192	22 GA BLACK WIRE, 35" LG	1
3	253-1280	HANDLEBAR	1
4	7-228	SWITCH MOUNT PLATE	2
5	7-229	PUSH BUTTON SWITCH	2
6	H-108	HEAT SHRINK	4
7	H-71059	LW #10, SS	4
8	H-72523	RPH #8-32 X 1/2" SS	4
9	H-73811	BHSCS 3/8"- 16 X 1/2" SS	4
10	H-99001	FW 3/8" SS	4

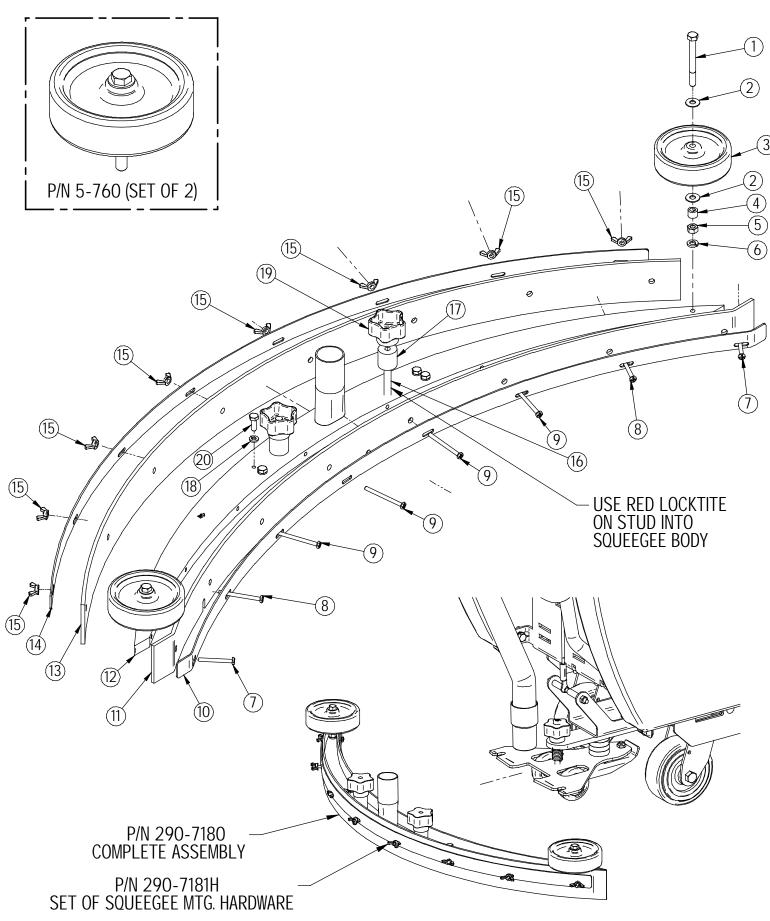


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Item	Part No.	Part Description	Qty
1	H-70065	HCS 5/16"- 18 X 3" SS	2
2	H-71015	FW 5/16" X 3/4" SAE SS	4
3	5-760B	4" SIDE WHEEL (GREY)	2
4	H-33371	5/16" ID SHAFT COLLAR	2
5	H-70711	HN 5/16"- 18 SS	2
6	H-71065	LW 5/16" SS	2
7	25-7170	SQUEEGEE BAND, FRONT	1
8	H-72555	PPH #10-32 X 1 3/4" SS	2
9	H-00249	PPH #10-32 X 2 1/4" SS	4
10	H-00288	PPH #10-32 X 2 1/2" SS	2
11	25-755G	35 IN. FRONT SQUEEGEE BLADE (GUM)	1
12	25-7181	35" SQUEEGEE BODY	1
13	25-754G	35 IN. REAR SQUEEGEE BLADE (GUM)	1
14	25-7160	squeegee Band, Rear	1
15	H-70908	WINGNUT 10-32 SS	8
16	H-71063	LW 1/4" SS	4
17	H-70003	HCS 1/4"- 20 X 3/4" SS	4
18	5-846	STANDOFF, 1.03"	2
19	H-00568	STUD 3/8"- 16 X 2 1/2" SS	2
20	290-5786	Star Knob, 3/8-16 Thread	2



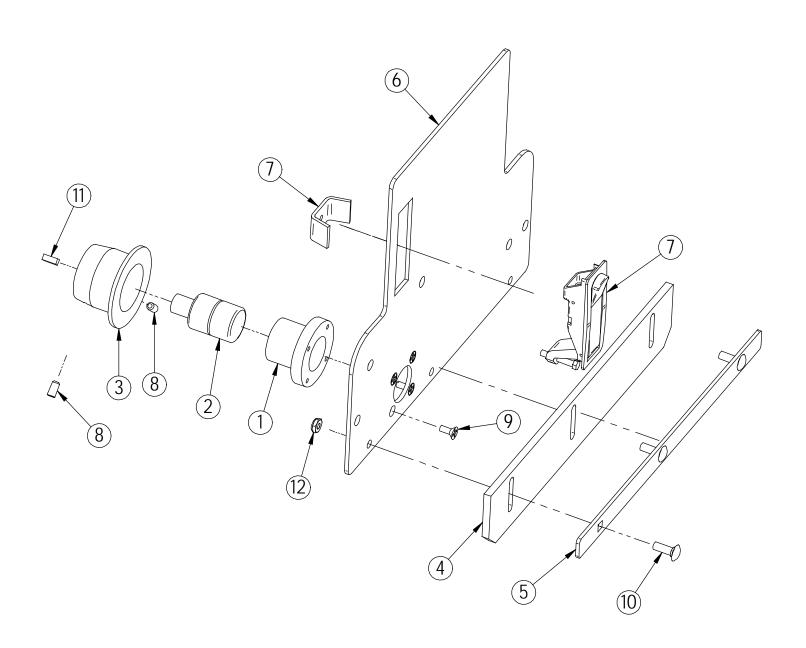
Item	Part No.	Part Description	Qty,
1	28-7160	38" SQUEEGEE BAND, REAR	1
2	28-7170	38" SQUEEGEE BAND, FRONT	1
3	28-7181	38" SQUEEGEE BODY	1
4	28-754G	38 IN. REAR SQUEEGEE BLADE (GUM)	1
5	28-755G	38 IN. FRNT SQUEEGEE BLADE (GUM)	1
6	290-5786	STAR KNOB, 3/8-16 THREAD	2
7	5-760B	4" SIDE WHEEL (GREY)	2
8	5-846	STANDOFF, 1.03"	2
9	H-00249	PPH #10-32 X 2 1/4" SS	2
10	H-00288	PPH #10-32 X 2 1/2" SS	4
11	H-00568	STUD 3/8"- 16 X 2 1/2" SS	2
12	H-33371	5/16" ID SHAFT COLLAR	2
13	H-70003	HCS 1/4"- 20 X 3/4" SS	4
14	H-70065	HCS 5/16"- 18 X 3" SS	2
15	H-70711	HN 5/16"- 18 SS	2
16	H-70908	WINGNUT 10-32 SS	8
17	H-71015	FW 5/16" X 3/4" SAE SS	4
18	H-71063	LW 1/4" SS	4
19	H-71065	LW 5/16" SS	2
20	H-72555	PPH #10-32 X 1 3/4" SS	2



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Item	Part Nunber	Part Description	Qty
1	H-70065	HCS 5/16"- 18 X 3" SS	2
2	H-71015	FW 5/16" X 3/4" SAE SS	4
3	5-760B	4" SIDE WHEEL (GREY)	2
4	H-33371	5/16" ID SHAFT COLLAR	2
5	H-70711	HN 5/16"- 18 SS	2
6	H-71065	LW 5/16" SS	2
7	H-72555	PPH #10-32 X 1 3/4" SS	2
8	H-00249	PPH #10-32 X 2 1/4" SS	2
9	H-00288	PPH #10-32 X 2 1/2" SS	4
10	290-7170	SQUEEGEE BAND, FRONT	1
11	290-756G	FRONT SQUEEGEE BLADE	1
12	290-7181	45" SQUEEGEE BODY	1
13	7-753G	REAR BLADE	1
14	290-7160	SQUEEGEE BAND, REAR	1
15	H-70908	WINGNUT 10-32 SS	8
16	H-00568	STUD 3/8"- 16 X 2 1/2" SS	2
17	5-846	STANDOFF, 1.03"	2
18	H-71063	LW 1/4" SS	4
19	290-5786	STAR KNOB, 3/8-16 THREAD	2
20	H-70003	HCS 1/4"- 20 X 3/4" SS	4

CYLINDRICAL DOOR ASSEMBLY

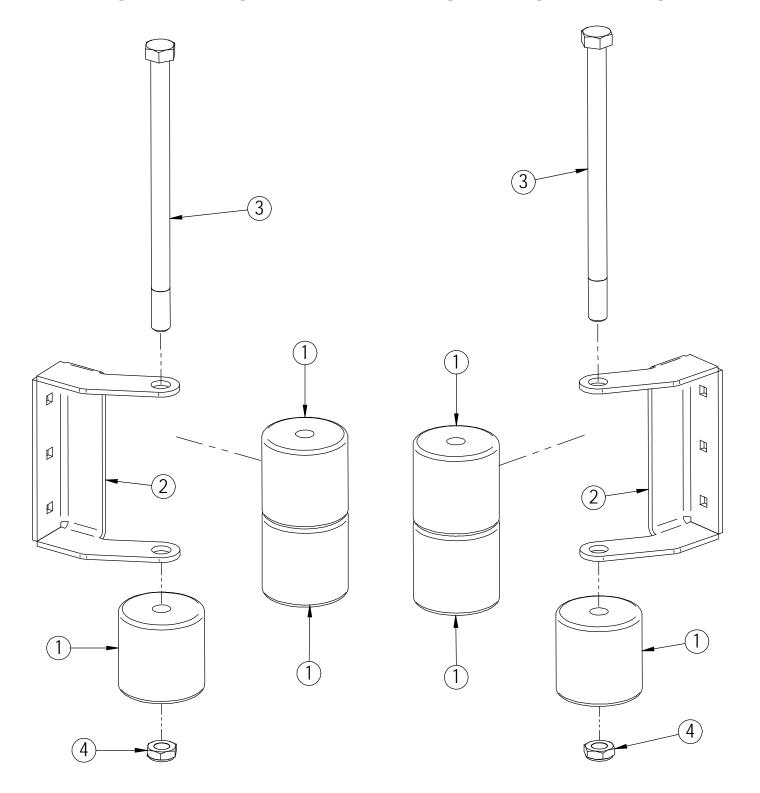


CYLINDRICAL DOOR ASSEMBLY

Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
1	1-305	BEARING HOUSING		•	1
2	253-8241	IDLER BEARING			1
3	253-8370 CYLINDRICAL BRUSH IDLER				1
4	253-9010	CYLINDRICAL WIPER			1
5	253-9015	WIPER BAND			1
6	253-9022	DRIVE COVER	253-5022	DRIVE COVER, S/S	1
7	5-130	DOOR LATCH			1
8	H-25382	SETSCREW, KCP, 1/4"-20 X 1/2"			2
9	H-72682	FHP #10-32 X 1/2" SS			4
10	H-74419	CB 1/4"- 20 X .75" SS			3
11	H-K1432	3/16" X 1/2" KEY			1
12	H-NJO4C	JNYL 1/4" - 20 SS			3

LEFT & RIGHT TOWER ROLLER

LEFT TOWER ROLLER RIGHT TOWER ROLLER



LEFT & RIGHT TOWER ROLLER

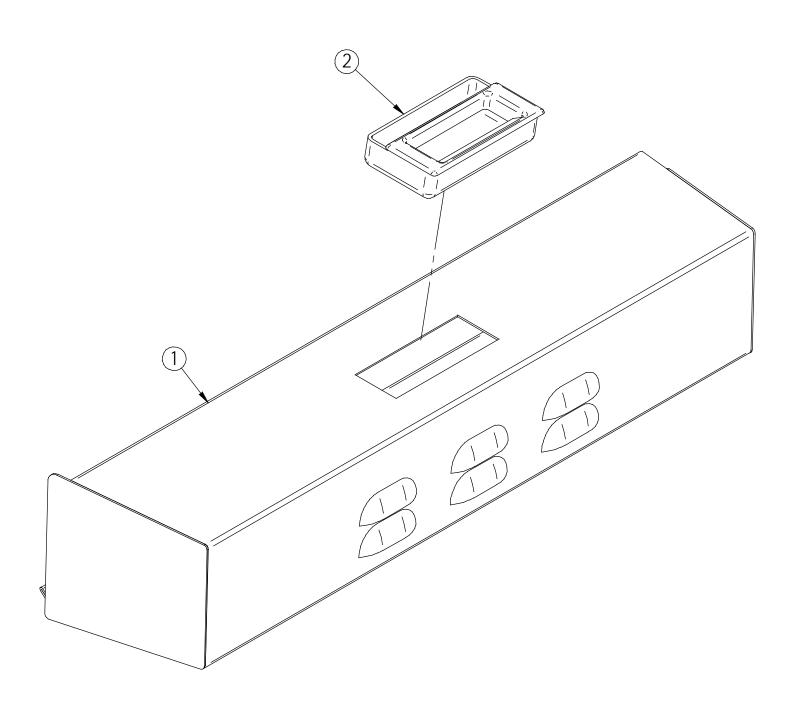
LEFT TOWER ROLLER

Item	Part Number	Part Description	Qty
1	21-1127	ROLLER	3
2	253-1128	ROLLER BRACKET	1
3	H-11333	HB 5/8"- 11 X 10"	1
4	H-37038	JNYL 5/8"- 11	1

RIGHT TOWER ROLLER

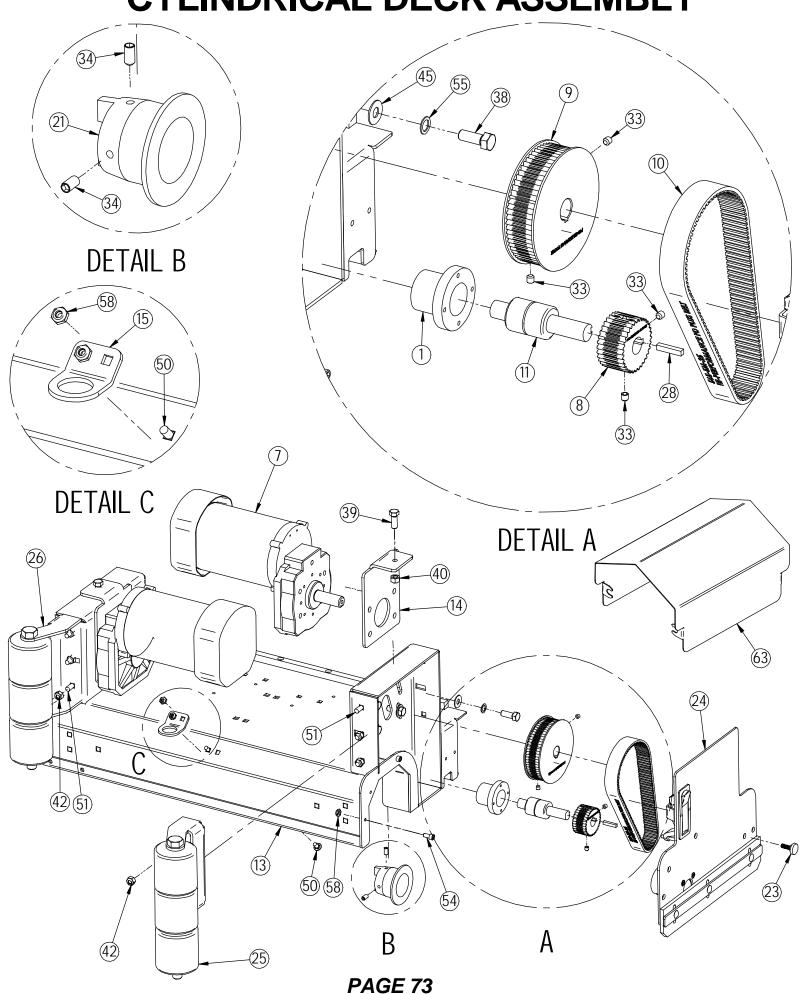
Item	Part Number	Part Description	Qty
1	21-1127	ROLLER	3
2	253-1128	ROLLER BRACKET	1
3	H-11333	HB 5/8"- 11 X 10"	1
4	H-37038	JNYL 5/8"- 11	1

CYLINDRICAL HOPPER ASSEMBLY



CYLINDRICAL HOPPER ASSEMBLY

Item	Part Description	24" P/N Painted	24" P/N STAINLESS	27" P/N Painted	27" P/N STAINLESS	30" P/N PAINTED	30" P/N STAINLESS	34" P/N PAINTED	34" P/N STAINLESS	Qty
1	24" HOPPER				253-5051					1
2	RECESSED HANDLE	5-849								1

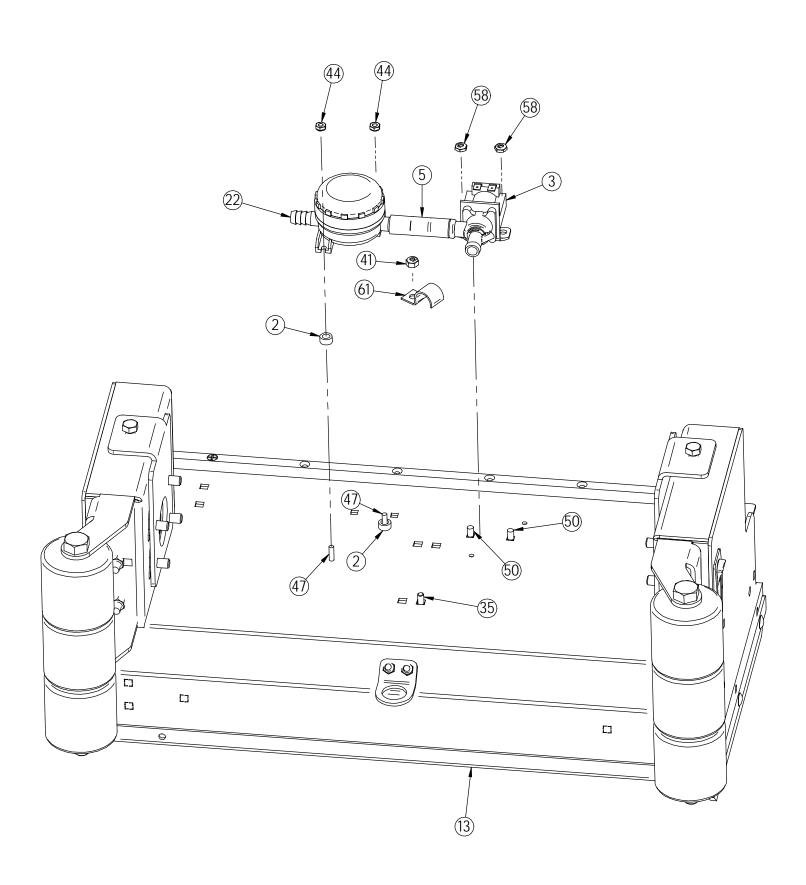


Item	Part Description	24" P/N Painted	24" P/N STAINLESS	27" P/N Painted	27" P/N Stainless	30" P/N PAINTED	30" P/N Stainless	34" P/N Painted	34" P/N Stainless	Qty
1	BEARING HOUSING	1-305	STAINLLSS	FAINTLD	STAINLESS	FAINTLD	STAINLESS	FAINTLD	STAINLLSS	2
2	SPACER 1/2 OD X 1/4"	21-2211								2
3	ADJUSTABLE SOLUTION FLOW VALVE	21-4500				1				1
4	HOPPER RAIL	22-8320	22-8320	25-8320	25-8320	28-8320	28-8320	32-8320	32-8320	1
5	1/2" ID X 2-3/4" LG WIRE REINF. CLEAR TUBE	253-1606	22 0020	20 0020	23 0320	20 0020	20 0020	32 0320	32 0320	1
6	1/2" ID X 12-1/4" LG WIRE REINF. CLEAR TUBE	253-1607				1				1
7 *	MOTOR, 24V, 3/4 HP, 350 RPM	253-211	253-211	253-211	253-211	253-2222	253-2222	253-2222	253-2222	2
8	TIMING SPROCKET 32 TOOTH	253-8215	200 2	200 2	200 2	200 2222	200 2222	200 2222	200 2222	2
9	TIMING SPROCKET 68 TOOTH	253-8225				1				2
10	565-5M-25 HI-PERFORMANCE PD PLUS BELT	253-8230								2
11	DRIVE BEARING	253-8240				1				2
12	ADJUSTABLE LATERAL ARM	253-8440								2
13	CYLINDRICAL BRUSHHEAD, 24"	253-9000	253-5000	253-9027	253-5027	253-9030	253-5030	253-9034	253-5034	1
14	MOTOR ADJ BRACKET	253-9002								2
15	QUICK DISCONNECT BRACKET	253-9003				1				1
16	CYLINDRICAL LIFTING BRACKET, LH, 24"	253-9070	253-9070	253-9072	253-9072	253-9074	253-9074	253-9076	253-9076	1
17	CYLINDRICAL LIFTING BRACKET, RH, 24"	253-9071	253-9071	253-9073	253-9073	253-9075	253-9075	253-9077	253-9077	1
18	SCRUBDECK LIFT ARM, CYLINDRICAL	253-9590	1 2 1 3 1 1	1		1		1	1	1
19	3/8" ID, 1/2" OD, 1/4" LG BEARING	290-1233	<u> </u>			1		<u> </u>		4
20	BATTERY QUICK DISCONNECT	390-2575	<u> </u>			1		<u> </u>		1
21	BROOM DRIVER	5-837								2
22	INLINE FILTER	5-913								1
23	1/4-20 X 3/4" W/KNOB	7-420B								2
24	SUB #710 CYLINDRICAL DOOR	710	748	710	748	710	748	710	748	2
25	SUB #711 LEFT TOWER ROLLER	711								1
26	SUB #712 RIGHT TOWER ROLLER	712	<u> </u>			i –		<u> </u>		1
27	SUB #715 24" CYLINDRICAL HOPPER	715	744	718	745	731	746	735	747	1
28	3/16" X 1" KEY	H-01125								2
29	JNYL #10-32, 18-8 S/S	H-0129155								8
30	BHSCS 1/4 - 20 X 1" SS W/PELLET	H-02223								2
31	3/8" ID, 1/2" OD, 3/8" LG, 3/32" HEAD, FLANGE BEARING	H-25335								4
32	.312 ID X .375 OD X .50 LG BEARING SLEEVE	H-25336								4
33	SETSCREW, KCP, 1/4"-20 X 1/4"	H-25379								8
34	SETSCREW, KCP, 1/4"-20 X 1/2"	H-25382								4
35	HCS 1/4"-20 X 1/2 SS"	H-70001								1
36	HCS 3/8"- 16 X 1-1/4" SS	H-70107								2
37	HCS 3/8"- 16 X 1-1/2" SS	H-70109								2
38	HCS 3/8"-24 X 3/4" SS	H-70141								8
39	HCS 3/8"- 24 X 1" S/S	H-70142								2
40	HN 3/8"- 24 SS	H-70732								2
41	NYLOK 1/4"- 20 SS	H-70860								1
42	NYLOK 5/16" - 18 SS	H-70861								18
43	NYLOK 3/8"-16 SS	H-70862								4
44	KN #10-32 SS	H-70923								2
45	FW 3/8" X 7/8" SS	H-71017								8
46	FW 3/8" X 7/8" SS	H-71017								4
47	RPH #10-32 X 3/4" SS	H-72565								2
48	FHP #10-32 X 1/2" SS	H-72682								2
49	FHP 10-32 X 3/4" SS	H-72684								1
50	CB 1/4"- 20 X .5" SS	H-74417								4
51	CB 5/16"- 18 X 3/4" SS	H-74429								16
52	CB 5/16"- 18 X 1-1/4" SS	H-74431								4
53	FW 5/16" X 3/4" SS	H-78015								5
54	SHCS 1/4-20 X 1/2 SS	H-79041				ļ				4
55	WASHER, SERRATED BELLEVILLE, 3/8", S/S	H-90895				ļ				8
56	FW 3/8" GRADE 8	H-98025								4
57	3/16" X 1/2" KEY	H-K1432								2
58	JNYL 1/4" - 20 SS	H-NJO4C								9
59	JNYL 5/16"- 18 SS	H-NJ05C								2
60	GROMMET, 3/4" ID X 1-3/8" OD BUNA-N	M-9307K81				ļ				2
61	3/4" DIA 1 HOLE TUBE STRAP	M-9434T27				<u> </u>				1
62 63	SHIM, 1/2" ID X 3/4" OD X 1/16" THICK, S/S	M-98126A739								4
	MOTOR COVER	253-2221	1							

NOTE: ALL DECK SIZES USE THE SAME PARTS UNLESS OTHERWISE INDICATED IN COLUMNS ABOVE.

MOTOR P/N 253-2222 LISTED ABOVE IS 24-VOLT, 1 HP, 350 RPM. THIS MOTOR USE'S (8) HCS 3/8-16 X 1", P/N H-70105. MOTOR COVER P/N 253-2221 IS ONLY USED WITH MOTOR P/N 253-2222. SEE COMMON WEAR PARTS PAGE FOR BRUSH SELECTION.

^{* (}OPTIONAL) HD PACKAGE FOR 27" DECKS USE MOTOR P/N 253-2222.



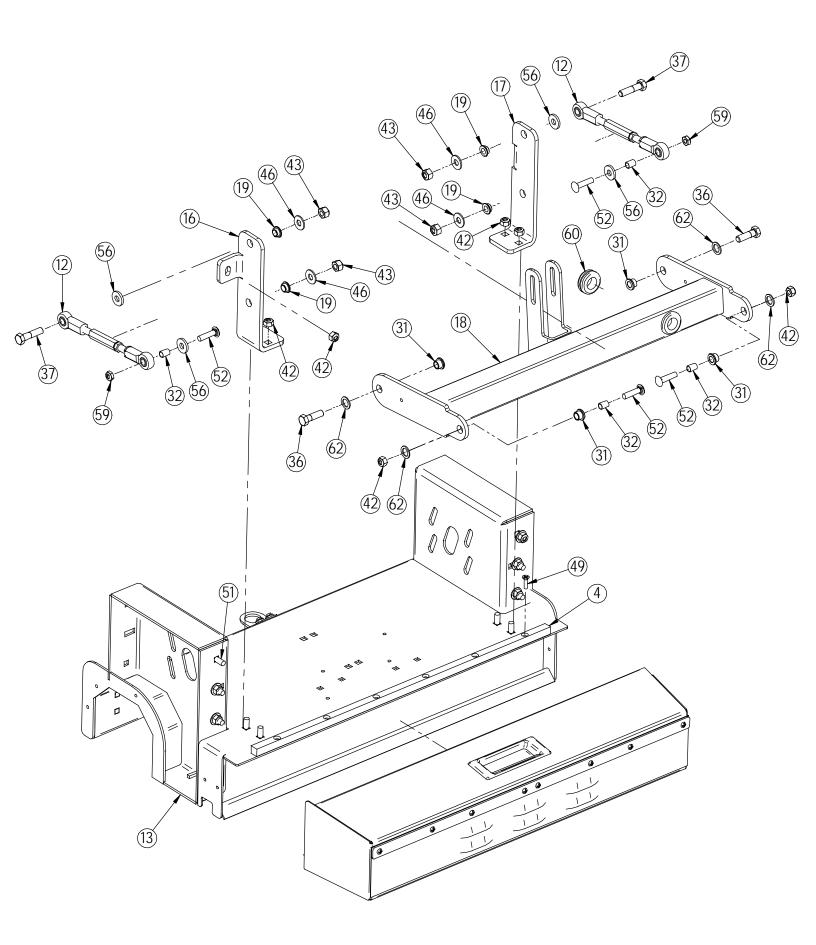
Item	Part Description	24" P/N Painted	24" P/N STAINLESS	27" P/N Painted	27" P/N Stainless	30" P/N Painted	30" P/N Stainless	34" P/N Painted	34" P/N Stainless	Qty
1	BEARING HOUSING	1-305	JIMINELSS	TAINTED	JIMINEEJJ	TAINTED	JIMINEEJJ	TAINTED	JIMINEEJJ	2
2	SPACER 1/2 OD X 1/4"	21-2211								2
3	ADJUSTABLE SOLUTION FLOW VALVE	21-4500								1
4	HOPPER RAIL	22-8320	22-8320	25-8320	25-8320	28-8320	28-8320	32-8320	32-8320	1
5	1/2" ID X 2-3/4" LG WIRE REINF. CLEAR TUBE	253-1606				1				1
6	1/2" ID X 12-1/4" LG WIRE REINF. CLEAR TUBE	253-1607								1
7 *	MOTOR, 24V, 3/4 HP, 350 RPM	253-211	253-211	253-211	253-211	253-2222	253-2222	253-2222	253-2222	2
8	TIMING SPROCKET 32 TOOTH	253-8215								2
9	TIMING SPROCKET 68 TOOTH	253-8225								2
10	565-5M-25 HI-PERFORMANCE PD PLUS BELT	253-8230								2
11	DRIVE BEARING	253-8240								2
12	ADJUSTABLE LATERAL ARM	253-8440								2
13	CYLINDRICAL BRUSHHEAD, 24"	253-9000	253-5000	253-9027	253-5027	253-9030	253-5030	253-9034	253-5034	1
14	MOTOR ADJ BRACKET	253-9002								2
15	QUICK DISCONNECT BRACKET	253-9003								1
16	CYLINDRICAL LIFTING BRACKET, LH, 24"	253-9070	253-9070	253-9072	253-9072	253-9074	253-9074	253-9076	253-9076	1
17	CYLINDRICAL LIFTING BRACKET, RH, 24"	253-9071	253-9071	253-9073	253-9073	253-9075	253-9075	253-9077	253-9077	1
18	SCRUBDECK LIFT ARM, CYLINDRICAL	253-9590								1
19	3/8" ID, 1/2" OD, 1/4" LG BEARING	290-1233								4
20	BATTERY QUICK DISCONNECT	390-2575								1
21	BROOM DRIVER	5-837								2
22	INLINE FILTER	5-913								1
23	1/4-20 X 3/4" W/KNOB	7-420B								2
24	SUB #710 CYLINDRICAL DOOR	710	748	710	748	710	748	710	748	2
25	SUB #711 LEFT TOWER ROLLER	711								1
26	SUB #712 RIGHT TOWER ROLLER	712								1
27	SUB #715 24" CYLINDRICAL HOPPER	715	744	718	745	731	746	735	747	1
28	3/16" X 1" KEY	H-01125				ļ				2
29	JNYL #10-32, 18-8 S/S	H-0129155								8
30	BHSCS 1/4 - 20 X 1" SS W/PELLET	H-02223								2
31	3/8" ID, 1/2" OD, 3/8" LG, 3/32" HEAD, FLANGE BEARING	H-25335								4
32	.312 ID X .375 OD X .50 LG BEARING SLEEVE	H-25336 H-25379				-				8
33	SETSCREW, KCP, 1/4"-20 X 1/4" SETSCREW, KCP, 1/4"-20 X 1/2"	H-25379 H-25382								_
35	HCS 1/4"-20 X 1/2 SS"	H-25382 H-70001						-		4
36	HCS 3/8" - 16 X 1-1/4" SS	H-70107								2
37	HCS 3/8" - 16 X 1-1/4" 33	H-70107				-				2
38	HCS 3/8"-24 X 3/4" SS	H-70104								8
39	HCS 3/8"- 24 X 1" S/S	H-70141								2
40	HN 3/8"- 24 SS	H-70732								2
41	NYLOK 1/4"- 20 SS	H-70860				1				1
42	NYLOK 1/4 20 33 NYLOK 5/16" - 18 SS	H-70861								18
43	NYLOK 3/18"-16 SS	H-70862								4
44	KN #10-32 SS	H-70923								2
45	FW 3/8" X 7/8" SS	H-71017						<u> </u>		8
46	FW 3/8" X 7/8" SS	H-71017								4
47	RPH #10-32 X 3/4" SS	H-72565								2
48	FHP #10-32 X 1/2" SS	H-72682								2
49	FHP 10-32 X 3/4" SS	H-72684								1
50	CB 1/4"- 20 X .5" SS	H-74417								4
51	CB 5/16"- 18 X 3/4" SS	H-74429								16
52	CB 5/16"- 18 X 1-1/4" SS	H-74431								4
53	FW 5/16" X 3/4" SS	H-78015								5
54	SHCS 1/4-20 X 1/2 SS	H-79041								4
55	WASHER, SERRATED BELLEVILLE, 3/8", S/S	H-90895								8
56	FW 3/8" GRADE 8	H-98025								4
57	3/16" X 1/2" KEY	H-K1432								2
58	JNYL 1/4" - 20 SS	H-NJO4C								9
59	JNYL 5/16"- 18 SS	H-NJ05C								2
60	GROMMET, 3/4" ID X 1-3/8" OD BUNA-N	M-9307K81								2
61	3/4" DIA 1 HOLE TUBE STRAP	M-9434T27								1
62	SHIM, 1/2" ID X 3/4" OD X 1/16" THICK, S/S	M-98126A739								4
63	MOTOR COVER	253-2221	I							

NOTE: ALL DECK SIZES USE THE SAME PARTS UNLESS OTHERWISE INDICATED IN COLUMNS ABOVE.

MOTOR P/N 253-2222 LISTED ABOVE IS 24-VOLT, 1 HP, 350 RPM. THIS MOTOR USE'S (8) HCS 3/8-16 X 1", P/N H-70105. MOTOR COVER P/N 253-2221 IS ONLY USED WITH MOTOR P/N 253-2222.

SEE COMMON WEAR PARTS PAGE FOR BRUSH SELECTION.

^{* (}OPTIONAL) HD PACKAGE FOR 27" DECKS USE MOTOR P/N 253-2222.

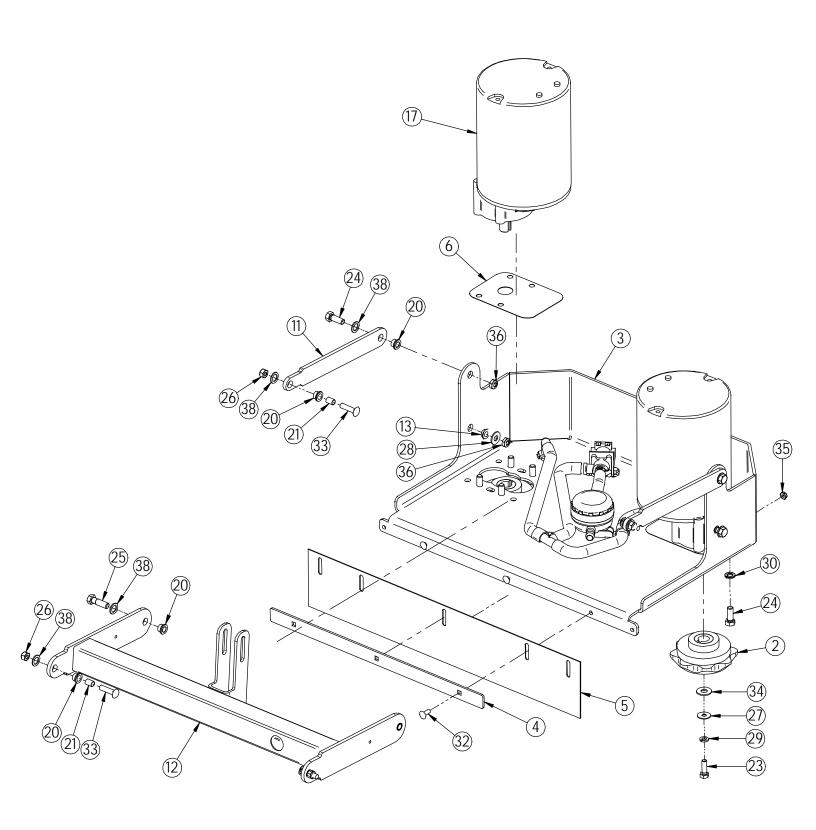


Item	Part Description	24" P/N Painted	24" P/N STAINLESS	27" P/N Painted	27" P/N Stainless	30" P/N Painted	30" P/N Stainless	34" P/N Painted	34" P/N Stainless	Qty
1	BEARING HOUSING	1-305	JIMINELIJ	TAINTED	JIMINEEJJ	TAINTED	JIMINEEJJ	TAINTED	JIMINEEJJ	2
2	SPACER 1/2 OD X 1/4"	21-2211								2
3	ADJUSTABLE SOLUTION FLOW VALVE	21-4500								1
4	HOPPER RAIL	22-8320	22-8320	25-8320	25-8320	28-8320	28-8320	32-8320	32-8320	1
5	1/2" ID X 2-3/4" LG WIRE REINF. CLEAR TUBE	253-1606								1
6	1/2" ID X 12-1/4" LG WIRE REINF. CLEAR TUBE	253-1607								1
7 *	MOTOR, 24V, 3/4 HP, 350 RPM	253-211	253-211	253-211	253-211	253-2222	253-2222	253-2222	253-2222	2
8	TIMING SPROCKET 32 TOOTH	253-8215								2
9	TIMING SPROCKET 68 TOOTH	253-8225								2
10	565-5M-25 HI-PERFORMANCE PD PLUS BELT	253-8230								2
11	DRIVE BEARING	253-8240								2
12	ADJUSTABLE LATERAL ARM	253-8440								2
13	CYLINDRICAL BRUSHHEAD, 24"	253-9000	253-5000	253-9027	253-5027	253-9030	253-5030	253-9034	253-5034	1
14	MOTOR ADJ BRACKET	253-9002								2
15	QUICK DISCONNECT BRACKET	253-9003								1
16	CYLINDRICAL LIFTING BRACKET, LH, 24"	253-9070	253-9070	253-9072	253-9072	253-9074	253-9074	253-9076	253-9076	1
17	CYLINDRICAL LIFTING BRACKET, RH, 24"	253-9071	253-9071	253-9073	253-9073	253-9075	253-9075	253-9077	253-9077	1
18	SCRUBDECK LIFT ARM, CYLINDRICAL	253-9590								1
19	3/8" ID, 1/2" OD, 1/4" LG BEARING	290-1233								4
20	BATTERY QUICK DISCONNECT	390-2575								1
21	BROOM DRIVER	5-837								2
22	INLINE FILTER	5-913								1
23	1/4-20 X 3/4" W/KNOB	7-420B								2
24	SUB #710 CYLINDRICAL DOOR	710	748	710	748	710	748	710	748	2
25	SUB #711 LEFT TOWER ROLLER	711								1
26	SUB #712 RIGHT TOWER ROLLER	712								1
27	SUB #715 24" CYLINDRICAL HOPPER	715	744	718	745	731	746	735	747	1
28	3/16" X 1" KEY	H-01125				ļ				2
29	JNYL #10-32, 18-8 S/S	H-0129155								8
30	BHSCS 1/4 - 20 X 1" SS W/PELLET	H-02223								2
31	3/8" ID, 1/2" OD, 3/8" LG, 3/32" HEAD, FLANGE BEARING	H-25335								4
32	.312 ID X .375 OD X .50 LG BEARING SLEEVE	H-25336 H-25379				-				8
33	SETSCREW, KCP, 1/4"-20 X 1/4" SETSCREW, KCP, 1/4"-20 X 1/2"	H-25379 H-25382								_
35	HCS 1/4"-20 X 1/2 SS"	H-25382 H-70001						-		4
36	HCS 3/8" - 16 X 1-1/4" SS	H-70107								2
37	HCS 3/8" - 16 X 1-1/4" 33	H-70107				-				2
38	HCS 3/8"-24 X 3/4" SS	H-70104								8
39	HCS 3/8"- 24 X 1" S/S	H-70141								2
40	HN 3/8"- 24 SS	H-70732								2
41	NYLOK 1/4"- 20 SS	H-70860				1				1
42	NYLOK 1/4 20 33	H-70861								18
43	NYLOK 3/18"-16 SS	H-70862								4
44	KN #10-32 SS	H-70923								2
45	FW 3/8" X 7/8" SS	H-71017						<u> </u>		8
46	FW 3/8" X 7/8" SS	H-71017								4
47	RPH #10-32 X 3/4" SS	H-72565								2
48	FHP #10-32 X 1/2" SS	H-72682								2
49	FHP 10-32 X 3/4" SS	H-72684								1
50	CB 1/4"- 20 X .5" SS	H-74417								4
51	CB 5/16"- 18 X 3/4" SS	H-74429								16
52	CB 5/16"- 18 X 1-1/4" SS	H-74431								4
53	FW 5/16" X 3/4" SS	H-78015								5
54	SHCS 1/4-20 X 1/2 SS	H-79041								4
55	WASHER, SERRATED BELLEVILLE, 3/8", S/S	H-90895								8
56	FW 3/8" GRADE 8	H-98025								4
57	3/16" X 1/2" KEY	H-K1432								2
58	JNYL 1/4" - 20 SS	H-NJO4C								9
59	JNYL 5/16"- 18 SS	H-NJ05C								2
60	GROMMET, 3/4" ID X 1-3/8" OD BUNA-N	M-9307K81								2
61	3/4" DIA 1 HOLE TUBE STRAP	M-9434T27								1
62	SHIM, 1/2" ID X 3/4" OD X 1/16" THICK, S/S	M-98126A739								4
63	MOTOR COVER	253-2221	I							

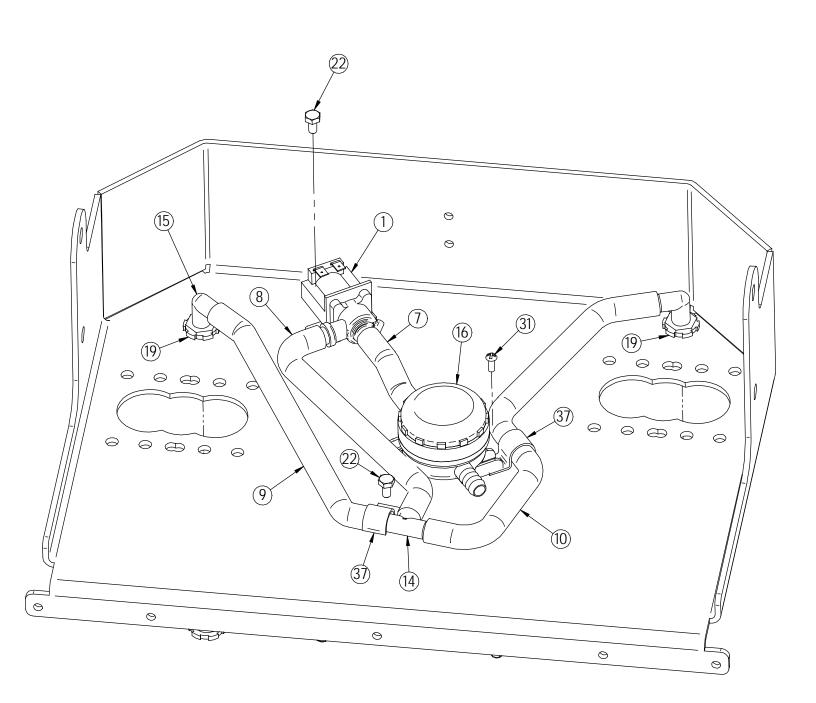
NOTE: ALL DECK SIZES USE THE SAME PARTS UNLESS OTHERWISE INDICATED IN COLUMNS ABOVE.

MOTOR P/N 253-2222 LISTED ABOVE IS 24-VOLT, 1 HP, 350 RPM. THIS MOTOR USE'S (8) HCS 3/8-16 X 1", P/N H-70105. MOTOR COVER P/N 253-2221 IS ONLY USED WITH MOTOR P/N 253-2222.

^{* (}OPTIONAL) HD PACKAGE FOR 27" DECKS USE MOTOR P/N 253-2222.

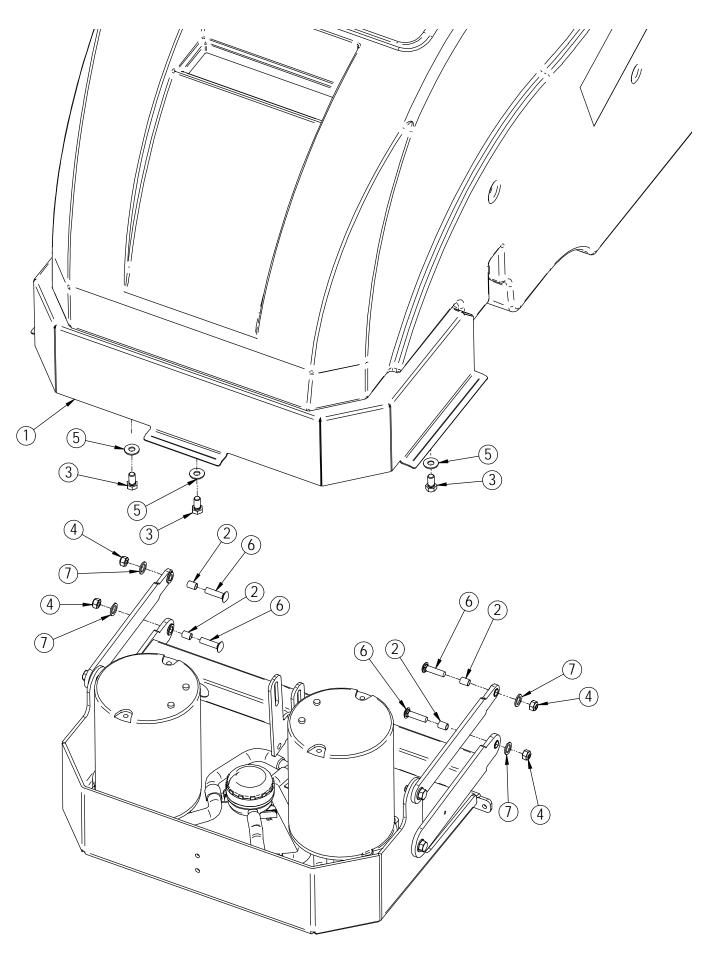


Item		Stainless P/N	Part Description	Comments	Optional P/N	Optional Description	Qty
1	21-4500		ADJUSTABLE SOLUTION FLOW VALVE				1
2	21-5000		BRUSH DRIVER				2
3	253-0402	253-0405	DISK SCRUB DECK				1
4	253-1020		BAND, FRAME CURTAIN				1
5	253-1090		DISK DECK CURTAIN				1
6	253-1140		BRUSH MOTOR CAP	OPTIONAL			2
7	253-1600		1/2" ID X 3-3/4" LG WIRE REINF. CLEAR TUBE				1
8	253-1601		1/2" ID X 9-1/4" LG WIRE REINF. CLEAR TUBE				1
9	253-1602		1/2" ID X 12-1/4" LG WIRE REINF. CLEAR TUBE				1
10	253-1603		1/2" ID X 16-1/4" LG WIRE REINF. CLEAR TUBE				1
11	253-4025		LATERAL ARM				2
12	253-9586		SCRUBDECK LIFT ARM, DISK				1
13	290-1233		3/8" ID, 1/2" OD, 1/4" LG BEARING				2
14	5-446		1/2 " PLASTIC BARB TEE				1
15	5-447		1/2 NPT X 1/2" BARB ELBOW				2
16	5-913		INLINE FILTER				1
17	7-222		MOTOR, 24-V, 3/4 HP, 200 RPM		5-222	MOTOR, 24-V, 1 HP, 200 RPM	2
18	H-0129155		JNYL #10-32, 18-8 S/S				2
19	H-07005		1/2" NPT LOCKNUT				4
20	H-25335		3/8" ID, 1/2" OD, 3/8" LG, 3/32" HEAD, FLANGE BEARING				8
21	H-25336		.312 ID X .375 OD X .50 LG BEARING SLEEVE				4
22	H-70001		HCS 1/4"-20 X 1/2 SS"				3
23	H-70055		HCS 5/16"- 18 X 1" SS				2
24	H-70105		HCS 3/8"- 16 X 1" SS				10
25	H-70107		HCS 3/8"- 16 X 1-1/4" SS				2
26	H-70861		NYLOK 5/16" - 18 SS				4
27	H-71016		FW 5/16" X 7/8" SS				2
28	H-71017		FW 3/8" X 7/8" SS				2
29	H-71065		LW 5/16" SS				2
30	H-71067		LW 3/8" SS				8
31	H-72563		RPH #10-32 X 1/2" SS				2
32	H-74418		CB 1/4"- 20 X 5/8" S/S				3
33	H-74431		CB 5/16"- 18 X 1-1/4" SS				4
34	H-99001		FW 3/8" SS				2
35	H-NJ04C		JNYL 1/4" - 20 SS				6
36	H-NJ06C		JNYL 3/8- 16 SS				4
37	M-9434T27		3/4" DIA 1 HOLE TUBE STRAP				2
38	M-98126A739		SHIM, 1/2" ID X 3/4" OD X 1/16" THICK, S/S				8



Item		Stainless P/N	Part Description	Comments	Optional P/N	Optional Description	Qty
1	21-4500		ADJUSTABLE SOLUTION FLOW VALVE				1
2	21-5000		BRUSH DRIVER				2
3	253-0402	253-0405	DISK SCRUB DECK				1
4	253-1020		BAND, FRAME CURTAIN				1
5	253-1090		DISK DECK CURTAIN				1
6	253-1140		BRUSH MOTOR CAP	OPTIONAL			2
7	253-1600		1/2" ID X 3-3/4" LG WIRE REINF. CLEAR TUBE				1
8	253-1601		1/2" ID X 9-1/4" LG WIRE REINF. CLEAR TUBE				1
9	253-1602		1/2" ID X 12-1/4" LG WIRE REINF. CLEAR TUBE				1
10	253-1603		1/2" ID X 16-1/4" LG WIRE REINF. CLEAR TUBE				1
11	253-4025		LATERAL ARM				2
12	253-9586		SCRUBDECK LIFT ARM, DISK				1
13	290-1233		3/8" ID, 1/2" OD, 1/4" LG BEARING				2
14	5-446		1/2 " PLASTIC BARB TEE				1
15	5-447		1/2 NPT X 1/2" BARB ELBOW				2
16	5-913		INLINE FILTER				1
17	7-222		MOTOR, 24-V, 3/4 HP, 200 RPM		5-222	MOTOR, 24-V, 1 HP, 200 RPM	2
18	H-0129155		JNYL #10-32, 18-8 S/S				2
19	H-07005		1/2" NPT LOCKNUT				4
20	H-25335		3/8" ID, 1/2" OD, 3/8" LG, 3/32" HEAD, FLANGE BEARING				8
21	H-25336		.312 ID X .375 OD X .50 LG BEARING SLEEVE				4
22	H-70001		HCS 1/4"-20 X 1/2 SS"				3
23	H-70055		HCS 5/16"- 18 X 1" SS				2
24	H-70105		HCS 3/8"- 16 X 1" SS				10
25	H-70107		HCS 3/8"- 16 X 1-1/4" SS				2
26	H-70861		NYLOK 5/16" - 18 SS				4
27	H-71016		FW 5/16" X 7/8" SS				2
28	H-71017		FW 3/8" X 7/8" SS				2
29	H-71065		LW 5/16" SS				2
30	H-71067		LW 3/8" SS				8
31	H-72563		RPH #10-32 X 1/2" SS				2
32	H-74418		CB 1/4"- 20 X 5/8" S/S				3
33	H-74431		CB 5/16"- 18 X 1-1/4" SS				4
34	H-99001		FW 3/8" SS				2
35	H-NJO4C		JNYL 1/4" - 20 SS				6
36	H-NJ06C		JNYL 3/8- 16 SS				4
37	M-9434T27		3/4" DIA 1 HOLE TUBE STRAP				2
	M-98126A739		SHIM, 1/2" ID X 3/4" OD X 1/16" THICK, S/S				8

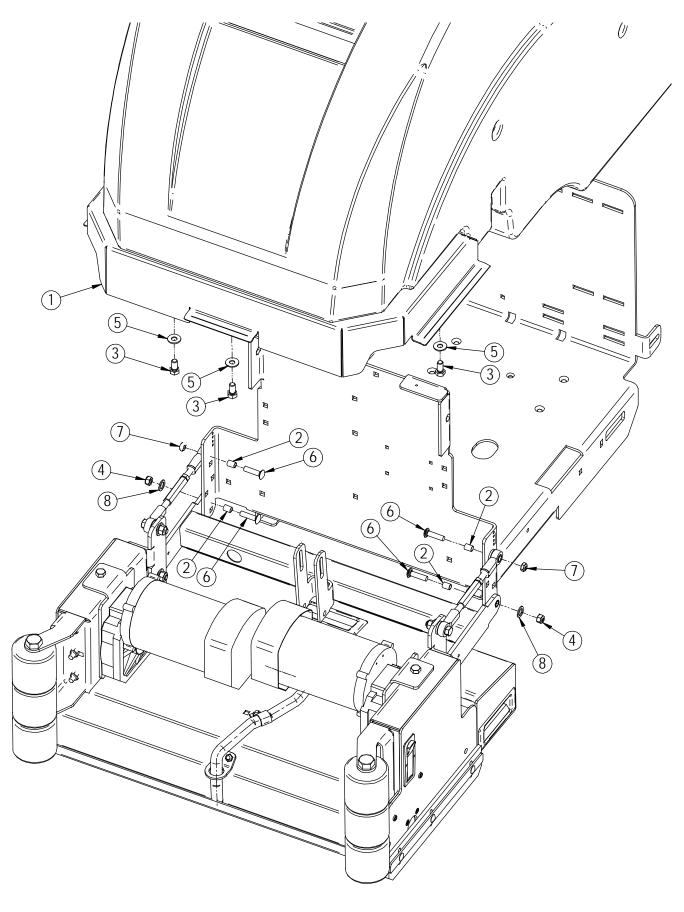
ATTACH DISK SCUBDECK & BANDEAU COVER



ATTACH DISK SCUBDECK & BANDEAU COVER

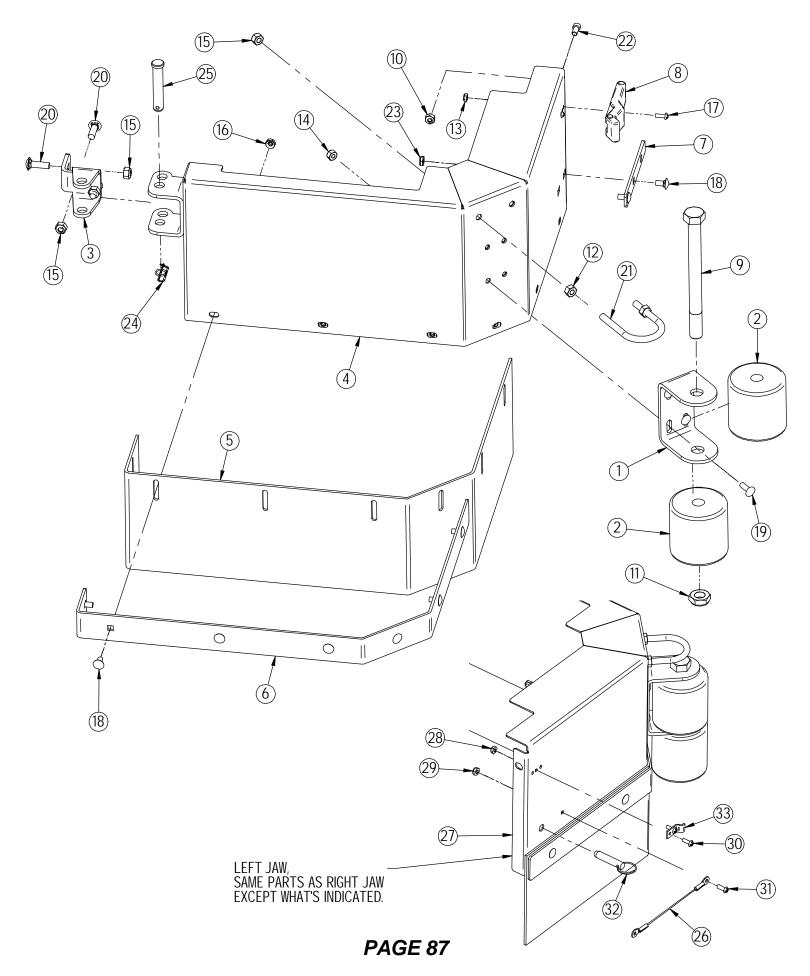
Item	Part Number	Part Description	Qty
1	253-1142	Bandeau Cover, disk	1
2	H-25336	.312 ID X .375 OD X .50 LG BEARING SLEEVE	4
3	H-70103	HCS 3/8"-16 X 3/4" SS	3
4	H-70861	NYLOK 5/16" - 18 SS	4
5	H-71017	FW 3/8" X 7/8" SS	3
6	H-74431	CB 5/16"- 18 X 1-1/4" SS	4
7	M-98126A739	SHIM, 1/2" ID X 3/4" OD X 1/16" THICK, S/S	4

ATTACH CYLINDRICAL SCUBDECK & BANDEAU COVER

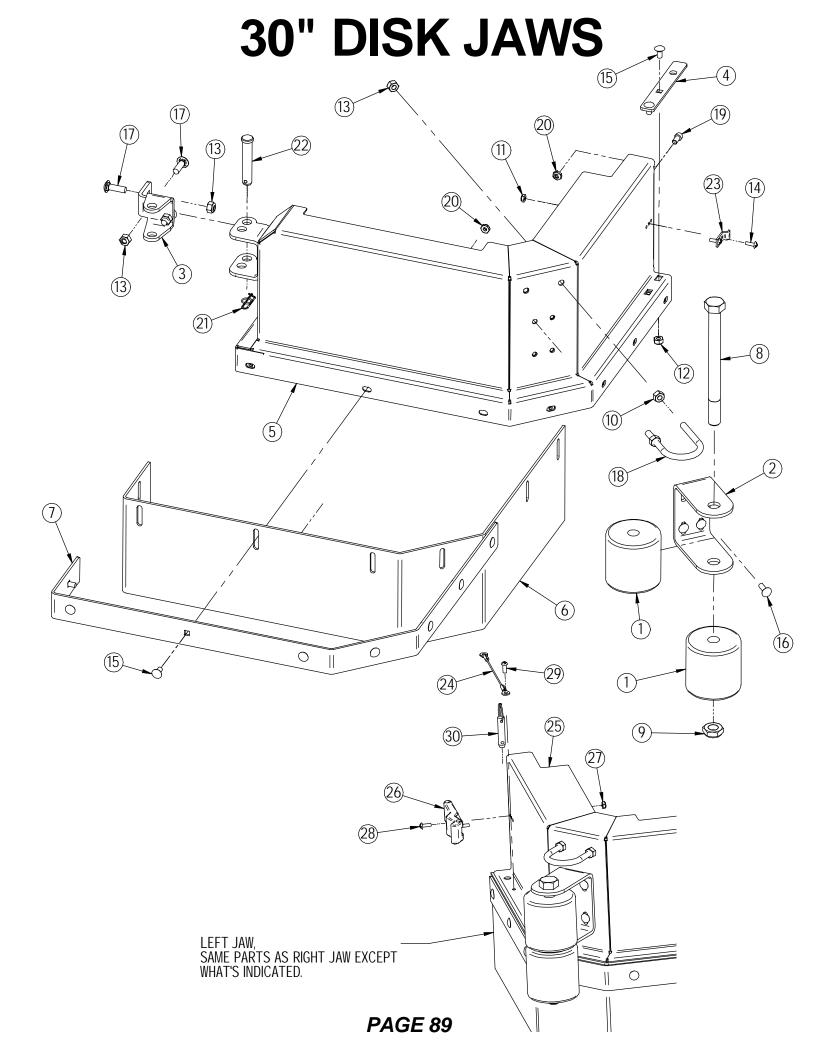


ATTACH CYLINDRICAL SCUBDECK & BANDEAU COVER

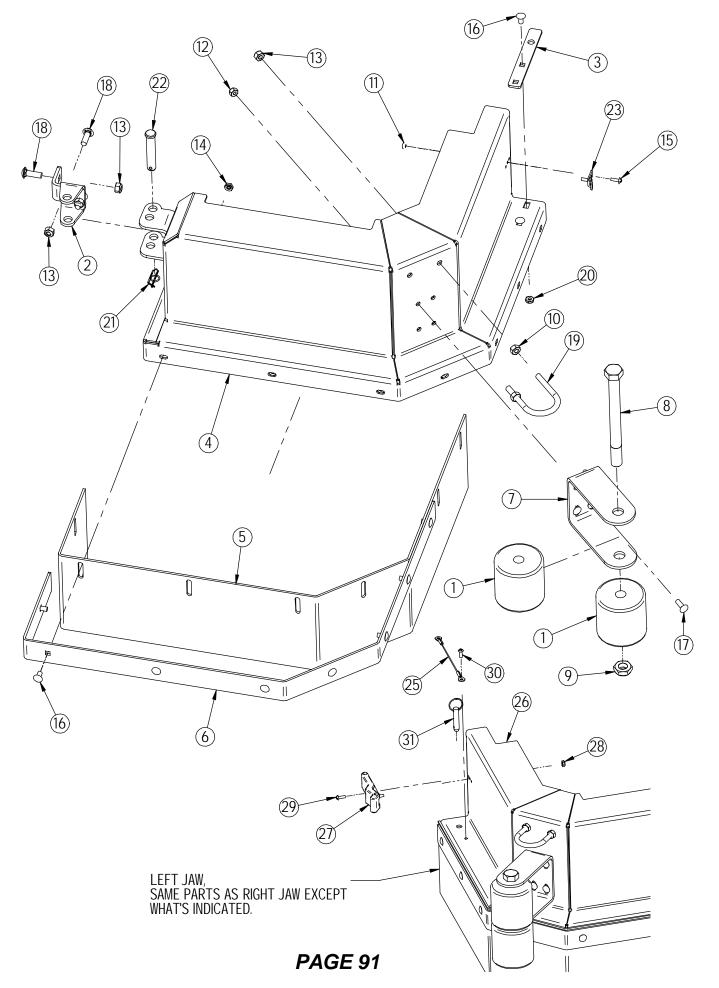
Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
1	253-1143	BANDEAU COVER, CYLINDRICAL	253-1144	BANDEAU COVER, SIDE BROOMS	1
2	H-25336	.312 ID X .375 OD X .50 LG BEARING SLEEVE			4
3	H-70103	HCS 3/8"-16 X 3/4" SS			3
4	H-70861	NYLOK 5/16" - 18 SS			2
5	H-71017	FW 3/8" X 7/8" SS			3
6	H-74431	CB 5/16"- 18 X 1-1/4" SS			4
7	H-NJ05C	JNYL 5/16"- 18 SS			2
8	M-98126A739	SHIM, 1/2" ID X 3/4" OD X 1/16" THICK, S/S			2



Item	Part Number	Part Description	Qty
1	21-1126	ROLLER BRACKET	1
2	21-1127	ROLLER	2
3	253-1160	JAW HINGE, INNER	1
4	253-1300	JAW WELDMENT RIGHT, 13"	1
5	253-1320	CURTAIN, JAW 13"	1
6	253-1330	BAND, JAW CURTAIN, 13"	1
7	253-1350	JAW LOCK	1
8	4-124	LATCH	1
9	H-13327	HB 5/8"- 11 X 7.0"	1
10	H-37018	NYLOK 1/4"-20	1
11	H-37038	JNYL 5/8"- 11	1
12	H-70711	HN 5/16"- 18 SS	2
13	H-70856	NYLOK #8-32 SS	2
14	H-70860	NYLOK 1/4"- 20 SS	4
15	H-70861	NYLOK 5/16" - 18 SS	5
16	H-70925	KN 1/4-20 S/S	7
17	H-72523	RPH #8-32 X 1/2" SS	2
18	H-74417	CB 1/4"- 20 X .5" SS	9
19	H-74419	CB 1/4"- 20 X .75" SS	4
20	H-74430	CB 5/16"- 18 X 1" SS	3
21	H-74631	5/16-18 X 2 1/4" SS U BOLT	1
22	H-79041	SHCS 1/4-20 X 1/2 SS	1
23	H-NJO4C	JNYL 1/4" - 20 SS	2
24	H-RUE22	1/2" RUE RING COTTER	1
25	H-ZCP234	1/2" X 2 5/8" CLEVIS PIN	1
26	21-4060	6" LANYARD	1
27	253-1310	JAW WELDMENT LEFT, 13"	1
28	H-70856	NYLOK #8-32 SS	1
29	H-70858	NYLOK #10-32 SS	1
30	H-72523	RPH #8-32 X 1/2" SS	1
31	H-72563	RPH #10-32 X 1/2" SS	1
32	H-ZCP142	Det ring pin, 3/8" x 1"	1
33	N/S/S	CLIP, LATCH	1



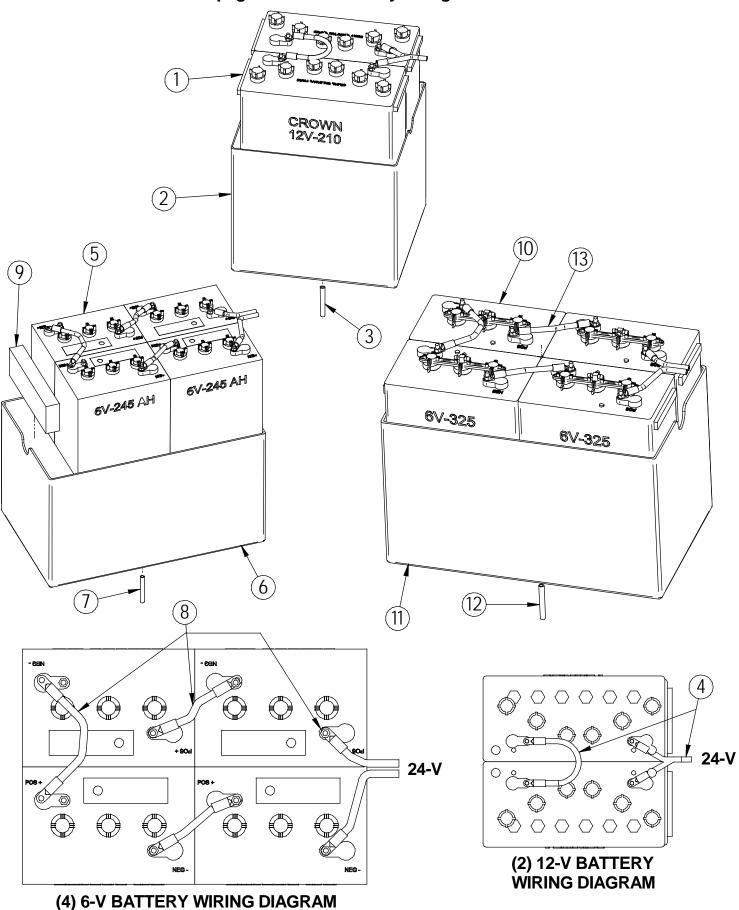
Item	Part Number	Part Description	Qty
1	21-1127	ROLLER	2
2	22-1126	ROLLER BRACKET	1
3	253-1160	JAW HINGE, INNER	1
4	253-1350	JAW LOCK	1
5	253-1500	JAW WELDMENT RIGHT, 15"	1
6	253-1520	CURTAIN, JAW	1
7	253-1530	BAND, JAW CURTAIN, 15"	1
8	H-13327	HB 5/8"- 11 X 7.0"	1
9	H-37038	JNYL 5/8"- 11	1
10	H-70711	HN 5/16"- 18 SS	2
11	H-70856	NYLOK #8-32 SS	
12	H-70860	NYLOK 1/4"- 20 SS	6
13	H-70861	NYLOK 5/16" - 18 SS	5
14	H-72523	RPH #8-32 X 1/2" SS	2
15	H-74417	CB 1/4"- 20 X .5" SS	10
16	H-74419	CB 1/4"- 20 X .75" SS	4
17	H-74430	CB 5/16"- 18 X 1" SS	3
18	H-74631	5/16-18 X 2 1/4" SS U BOLT	1
19	H-79041	SHCS 1/4-20 X 1/2 SS	1
20	H-NJO4C	JNYL 1/4" - 20 SS	9
21	H-RUE22	1/2" RUE RING COTTER	1
22	H-ZCP234	1/2" X 2 5/8" CLEVIS PIN	1
23	N/S/S	CLIP, LATCH	1
24	21-4060	6" LANYARD	1
25	253-1510	JAW WELDMENT LEFT, 15"	1
26	4-124	LATCH	1
27	H-70856	NYLOK #8-32 SS	1
28	H-72523	RPH #8-32 X 1/2" SS	1
29	H-72563	RPH #10-32 X 1/2" SS	1
30	H-ZCP142	DET RING PIN, 3/8" X 1"	1



Item	Part Number	Part Description	Qty
1	21-1127	ROLLER	2
2	253-1160	Jaw Hinge, inner	1
3	253-1350	JAW LOCK	1
4	253-1700	JAW WELDMENT RIGHT, 17"	1
5	253-1720	CURTAIN, JAW 17"	1
6	253-1730	BAND, JAW CURTAIN, 17"	1
7	28-1125	ROLLER BRACKET	1
8	H-13327	HB 5/8"- 11 X 7.0"	1
9	H-37038	JNYL 5/8"- 11	1
10	H-70711	HN 5/16"- 18 SS	2
11	H-70856	NYLOK #8-32 SS	2
12	H-70860	NYLOK 1/4"- 20 SS	4
13	H-70861	NYLOK 5/16" - 18 SS	5
14	H-70925	KN 1/4-20 S/S	8
15	H-72523	RPH #8-32 X 1/2" SS	2
16	H-74417	CB 1/4"- 20 X .5" SS	10
17	H-74419	CB 1/4"- 20 X .75" SS	4
18	H-74430	CB 5/16"- 18 X 1" SS	3
19	H-74631	5/16-18 X 2 1/4" SS U BOLT	1
20	H-NJO4C	JNYL 1/4" - 20 SS	2
21	H-RUE22	1/2" RUE RING COTTER	1
22	H-ZCP234	1/2" X 2 5/8" CLEVIS PIN	1
23	N/S/S	CLIP, LATCH	1
25	21-4060	6" LANYARD	1
26	253-1710	JAW WELDMENT LEFT, 17"	1
27	4-124	LATCH	1
28	H-70856	NYLOK #8-32 SS	1
29	H-72523	RPH #8-32 X 1/2" SS	1
30	H-72563	RPH #10-32 X 1/2" SS	1
31	H-ZCP142	DET RING PIN, 3/8" X 1"	1

BATTERY PACKS

Refer to pages 51-52 for Battery Charger Information.



BATTERY PACKS

Refer to pages 51-52 for Battery Charger Information.

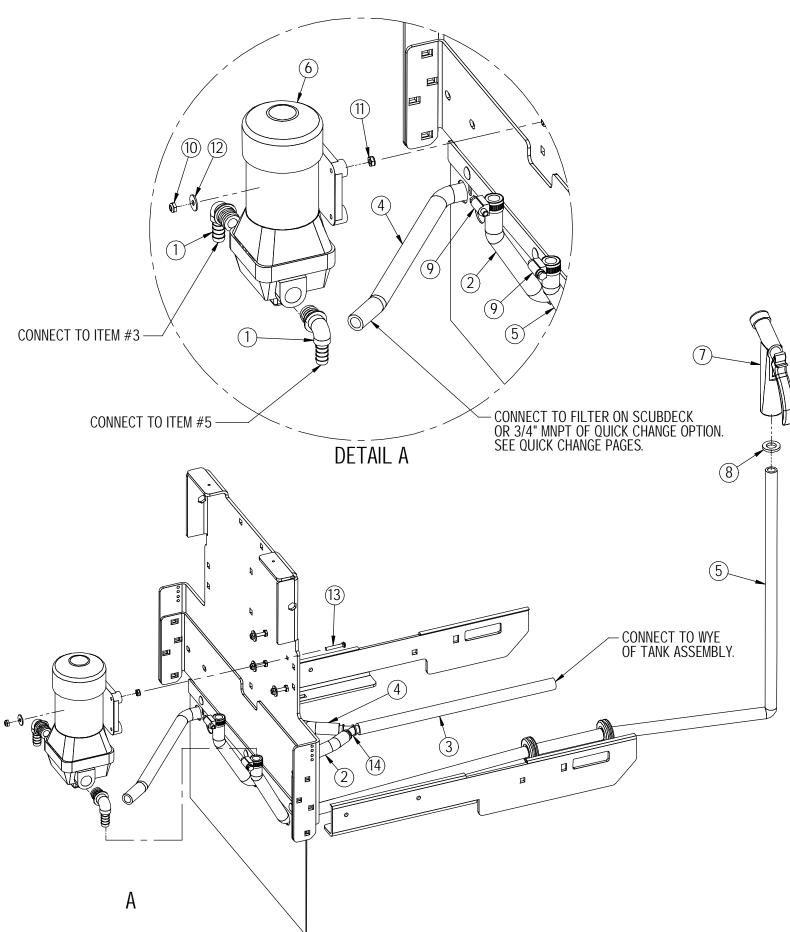
Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
1	2-271	BATTERY, CR-210, 12 V, 210 AH, 110 RC	2-272	BATTERY, 12-V, 185 AH, AGM	2
2	21-0000	2000 SERIES BATTERY TRAY			1
3	253-1608	BLACK HOSE, 3-1/4" LG			1
4	253-1900	WIRE HARNESS, COMPLETE			1

Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
5	250-2110	BATTERY 6 V 245 AH	250-2112	Battery, 6-V, 305 AH, AGM	4
			250-2114	BATTERY, 6-V, 250 AH, AGM	
6	253-1480	MAGNUM SERIES BATTERY TRAY			1
7	253-1608	BLACK HOSE, 3-1/4" LG			1
8	253-1901	WIRE HARNESS, COMPLETE			1
9	290-1490	BATTERY SPACER, 11.0"			1

Item	Part Number	Part Description	Optional P/N	Optional Description	Qty
10	250-2111	BATTERY, 6-V, 325 AH			4
11	253-1480	MAGNUM SERIES BATTERY TRAY			1
12	253-1608	BLACK HOSE, 3-1/4" LG			1
13	253-1901	WIRE HARNESS, COMPLETE			1

WHIC	H BATTERY CHARGI	ER TO USE WITH E	BATTERY SELECTIO	N
BATTERY P/N	ON-BOARD	ON-BOARD	OFF-BOARD	OFF-BOARD
	CHARGER P/N	CHARGER P/N	CHARGER P/N	CHARGER P/N
	(North American)	(Export)	(North American)	(Export)
2-271, 210AH	253-2445	253-2442	21-2440	21-2442
STANDARD				
2-272 M.F.	253-2445	253-2442	21-2440	21-2442
250-2110, 245AH	253-2445	253-2442	21-2440	21-2442
OPTION				
250-2111, 325AH	N/A	N/A	7-244	7-251
OPTION				
250-2112 M.F.	N/A	N/A	7-244	7-251
250-2114 M.F.	253-2445	253-2442	21-2440	21-2442

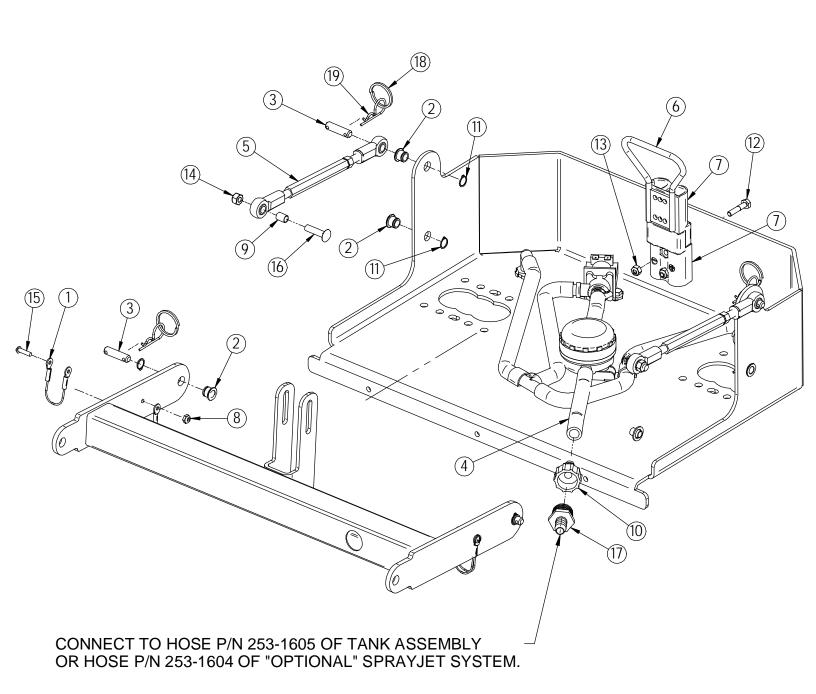
OPTION #253-10 SPRAYJET SYSTEM



OPTION #253-10 SPRAYJET SYSTEM

Item	Part Number	Part Description	Qty
1	21-1601	1/2" BARBED ELBOW (PLASTIC)	2
2	253-1609	1/2" ID X 12-1/4 " LG WIRE REINF. CLEAR TUBE	1
3	253-1613	1/2" ID X 13-1/2" LG WIRE REINF. CLEAR TUBE	1
4	253-1614	1/2" ID X 24" LG WIRE REINF. CLEAR TUBE	1
5	290-8960	GARDEN HOSE	1
6	5-891	PUMP, WATER JET	1
7	5-895	SPRAY NOZZLE	1
8	H-0491686	.625 ID X 1.125 OD RUBBER WASHER	1
9	H-62005	HOSE CLAMP 5/8"- 1-1/2" SS	2
10	H-70858	NYLOK #10-32 SS	4
11	H-70923	KN #10-32 SS	4
12	H-71010	FW #10 .218 x .687 S/S	4
13	H-72522	CB #10-32 X 1-1/4" SS	4
14	M-5463K727	WYE, 1/2", NYLON	1

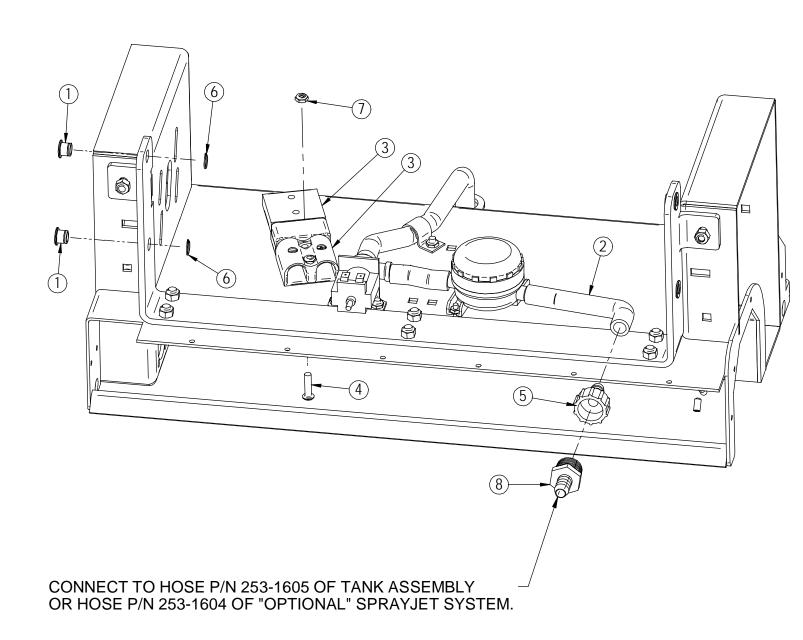
QUICK CHANGE OPTION - DISK SETUP



QUICK CHANGE OPTION - DISK SETUP

Item	Part Number	Part Description	Qty
1	21-4060	6" LANYARD	4
2	253-1030	3/8" ID, 1/2" OD, 3/8" LG, FLANGE BEARING	6
3	253-1045	PIN, 3/8" X 1-1/2", S/S	4
4	253-1611	1/2" ID X 7" LG WIRE REINF. CLEAR TUBE	1
5	28-8430	ADJUSTABLE LATERAL ARM	2
6	390-2572	CONNECTOR HANDLE	1
7	390-2575	175 GREY CONNECTOR WITH 1/O CONTACTS	2
8	H-0129155	JNYL #10-32, 18-8 S/S	2
9	H-25336	.312 ID X .375 OD X .50 LG BEARING SLEEVE	2
10	H-63003	SWIVEL ADAPTER, 3/4" FEMALE NPT X 1/2" BARB	1
11	H-68011	SNAPRING .5"	5
12	H-70007	HCS 1/4"- 20 X 1.25" SS	2
13	H-70860	NYLOK 1/4"- 20 SS	2
14	H-70861	NYLOK 5/16" - 18 SS	2
15	H-72565	RPH #10-32 X 3/4" SS	2
16	H-74431	CB 5/16"- 18 X 1-1/4" SS	2
17	M-5372K126	3/4" MNPT X 1/2" BARB, NYLON	1
18	M-90177A222	SPLIT RING, 1-3/8" OD X 1.159" ID X .142 THICK	4
19	M-92391A054	HAIRPIN, 3/8" - 7/16" X 1-7/8" S/S	4

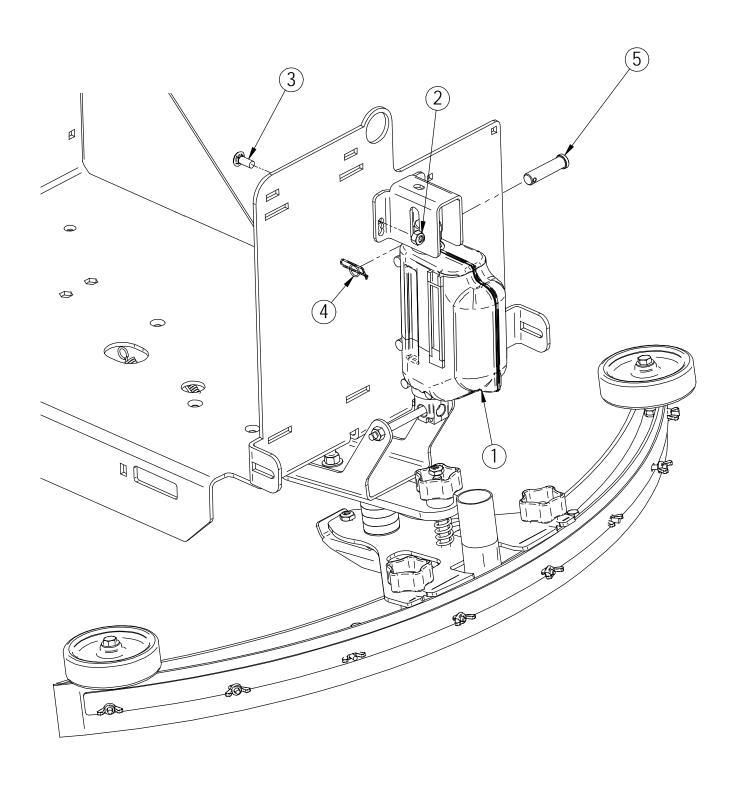
QUICK CHANGE OPTION - CYL SETUP



QUICK CHANGE OPTION - CYL SETUP

Item	Part Number	Part Description	Qty
1	253-1030	3/8" ID, 1/2" OD, 3/8" LG, FLANGE BEARING	2
2	253-1612	1/2" ID X 7" LG WIRE REINF. CLEAR TUBE	1
3	390-2575	175 GREY CONNECTOR WITH 1/O CONTACTS	2
4	H-02223	BHSCS 1/4 - 20 X 1" SS W/PELLET	2
5	H-63003	SWIVEL ADAPTER, 3/4" FEMALE NPT X 1/2" BARB	1
6	H-68011	SNAPRING .5"	3
7	H-NJO4C	JNYL 1/4" - 20 SS	2
8	M-5372K126	3/4" MNPT X 1/2" BARB, NYLON	1

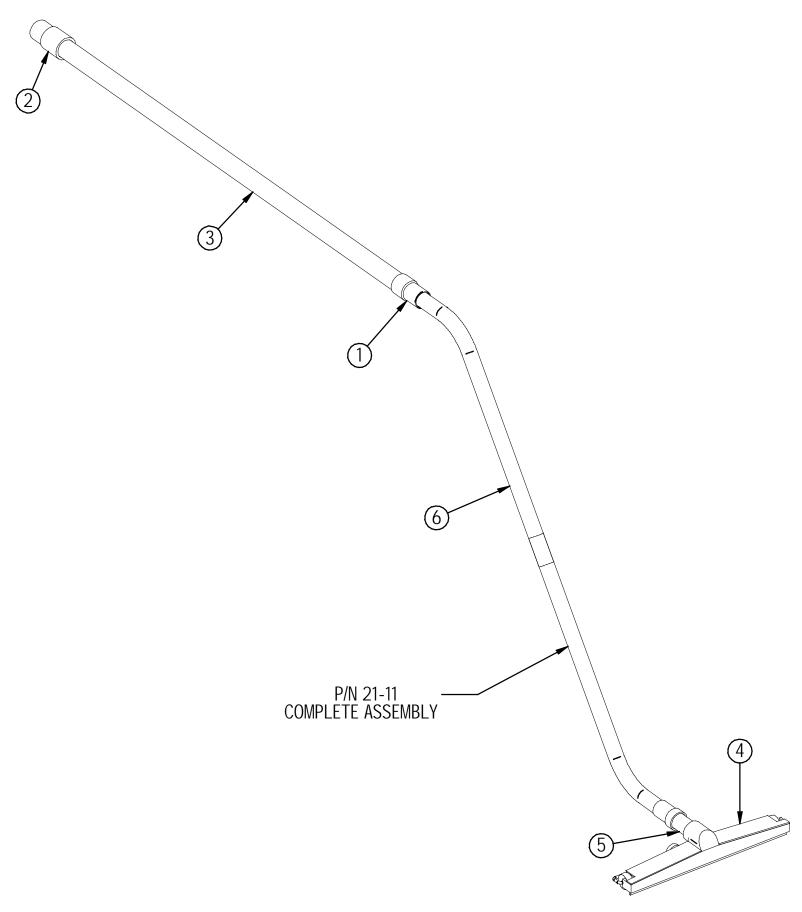
OPTIONAL - ELECTRIC SQUEEGEE LIFT



OPTIONAL - ELECTRIC SQUEEGEE LIFT

Item	Part Number	Part Description	Qty
1	253-2240	2" STROKE 24V ACTUATOR 450 LB LOAD	1
2	H-70861	NYLOK 5/16" - 18 SS	2
3	H-74429	CB 5/16"- 18 X 3/4" SS	2
4	H-RUE22	1/2" RUE RING COTTER	1
5	H-ZCP228	CLEVIS PIN, 1/2" OD X 2" LG	1

VAC WAND KIT (OPTIONAL)

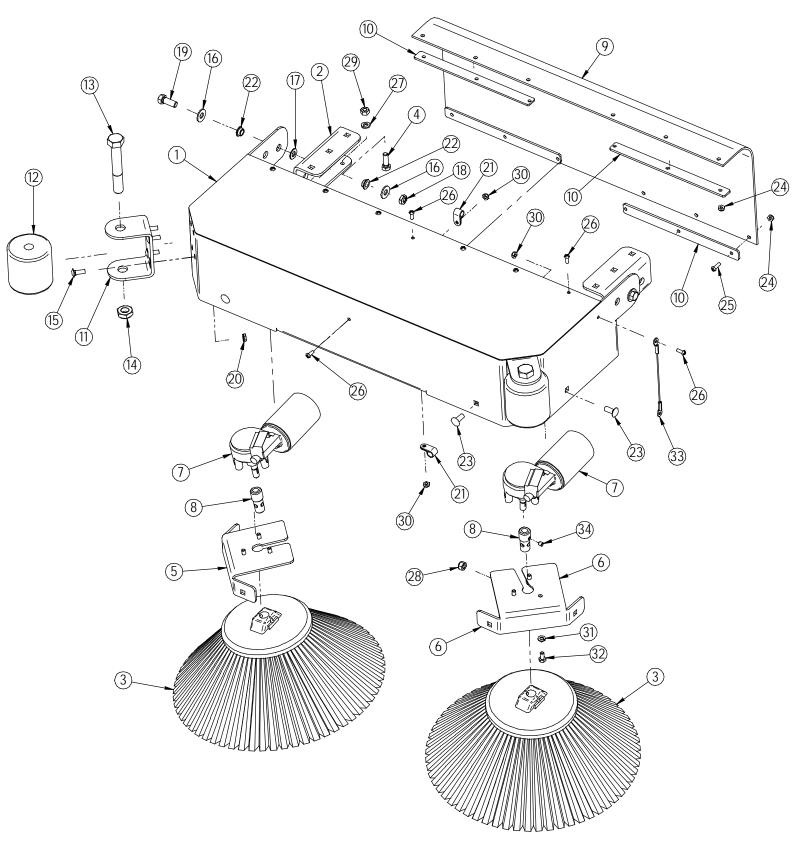


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VAC WAND KIT (OPTIONAL)

Item	Part Number	Part Description	Qty
1	21-4072	HOSE CUFF, 1 1/2"	1
2	290-7212	1-1/2" - 2" HOSE CUFF	1
3	5-883	Hose, Vacuum, 1-1/2" x 15', W/Cuffs	1
4	5-889	VACUUM NOZZLE	1
5	7-884	COUPLER, S/S	1
6	7-887	TWO PIECE CHROME VAC WAND	1

SIDE BROOMS (OPTIONAL)



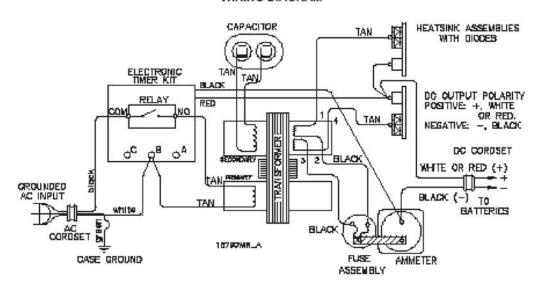
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SIDE BROOMS (OPTIONAL)

Item	Part No.	Part Description	Qty.
1	253-4422	27" SIDE BROOM LIFT ARM	1
2	253-4435	SIDE BRROM LIFT BRACKET	2
3	1-402	SIDE BROOM POLYPROPYLENE	2
4	H-70055	HCS 5/16"- 18 X 1" SS	2
2 3 4 5 6 7 8	253-4427	BRACKET, RIGHT	1
6	253-4428	BRACKET, LEFT	1
7	8-220	SIDE BROOM MOTOR	2
8	253-2443	COUPLER	2
9	253-4429	SIDE BROOM CURTAIN	1
10	4-529	CURTAIN CLAMP	4
11	21-1126	ROLLER BRACKET	2
12	21-1127	ROLLER	2
13	H-11319	HB 5/8"- 11 X 4"	2
14	H-37038	JNYL 5/8"- 11	2
15	H-74419	CB 1/4"- 20 X .75" SS	8
16	H-71017	FW 3/8" X 7/8" SS	4
17	290-1247	FW BRONZE .75 OD X .375 ID X .0625 THK	2
18	H-NJ06C	JNYL 3/8-16 SS	2
19	H-70105	HCS 3/8"- 16 X 1" SS	2
20	H-70925	KN 1/4-20 S/S	8
21	H-0127288	#6 3/8" RUBBER LOOP CLAMP	2
22	290-1233	3/8" ID, 1/2" OD, 1/4" LG BEARING	4
23	H-74429	CB 5/16"- 18 X 3/4" SS	4
24	H-0129155	JNYL #10-32, 18-8 S/S	12
25	H-71614	RPH #10-32 X 5/8" SS	6
26	H-72563	RPH #10-32 X 1/2" SS	10
27	H-71065	LW 5/16" SS	2
28	H-70861	NYLOK 5/16" - 18 SS	4
29	H-70711	HN 5/16"- 18 SS	2
30	H-70858	NYLOK #10-32 SS	4
31	H-71063	LW #6 SS	6
32	H-38558	HCS M6-1.0 X 14	6
33	21-4060	6" Lanyard	2
34	H-25379	SETSCREW, KCP, 1/4"-20 X 1/4"	2



WIRING DIAGRAM

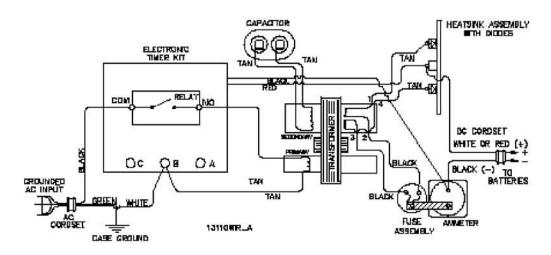


PARTS LIST FOR POWERCAT CHARGER PART# 7-243 115 VAC / 60 HZ 24 VDC 36A

PART NO.	QTY.	DESCRIPTION
7-244A	1	CASE ASSEMBLY
7-224TR	1	TRANSFORMER ASSEMBLY
7-244B	1	CAPACITOR, 6 MFD, 660 VAC
7-244H	2	HEATSINK ASSEMBLY W/ 2 DIODES IN PARALLEL
7-244F	1	FUSE ASSEMBLY
7-244G	1	AMMETER, 50 AMP, W/ CORNER MOUNTING STUDS
7-244T	1	ELECTRONIC, TIMER ASSEMBLY
7-244C	1	CORDSET BUSHING, 7W-2, FOR INPUT CORDSET
7-244D	1	CORDSET BUSHING, 8P-2, FOR OUTPUT CORDSET
7-244E	1	AC CORDSET, 14/3, 86" W/ 125V/15A PLUG
7-244J	1	DC CORDSET, 10/2, 108", W/ SB50 RED PLUG
7-244K	1	DC CORDSET, 10/2, 108", W/ SB175 RED PLUG



WIRING DIAGRAM



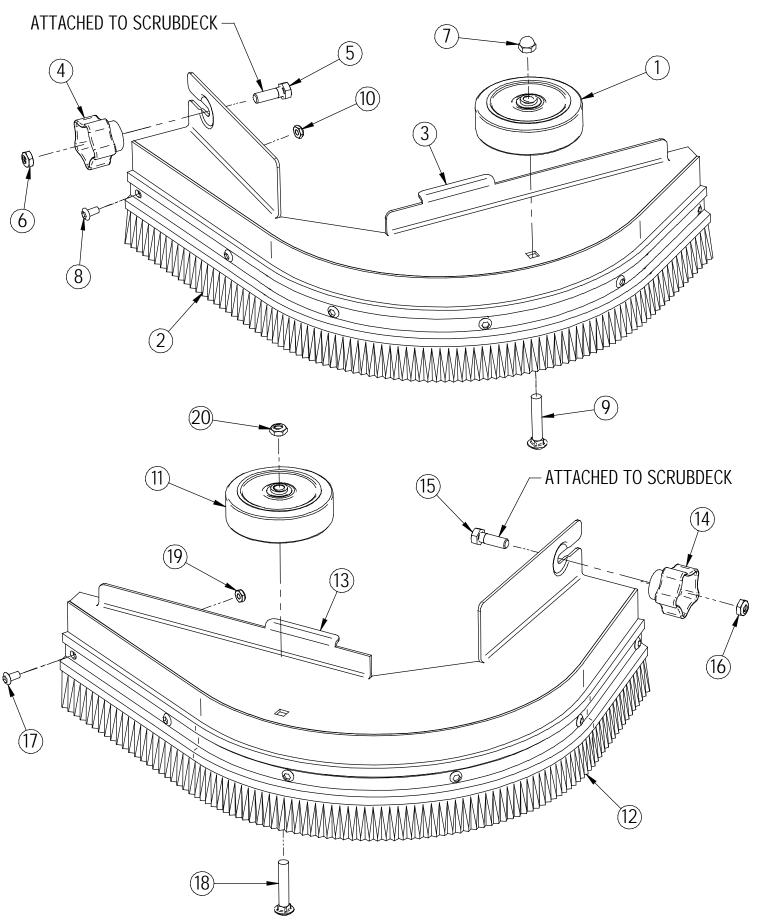
PARTS LIST FOR POWERCAT CHARGER PART# 21-2440 115 VAC / 60 HZ 24 VDC 25 A

	PART NO.	QTY.	DESCRIPTION
	21-2448	1	CASE ASSEMBLY
	21-2447	1	TRANSFORMER ASSEMBLY
	21-2445	1	HEATSINK ASSEMBLY, W/ DIODES
	21-2448	1	AMMETER
	21-2440T	1	ELECTRONIC TIMER ASSEMBLY
*	7-244M	1	RELAY, FOR TIMER ASSEMBLY
**	7-244RE	1	RELAY, FOR TIMER ASSEMBLY
	7-244B	1	CAPACITOR, 6.0 MFD, 680 VAC
	21-2444	1	FUSE ASSEMBLY
	7-244C	1	BUSHING, 7W-2, INSULATOR FOR DC CORD
	21-2449	1	BUSHING, 7K-2, INSULATOR FOR AC CORD
	21-2450	1	CORDSET, AC, 14/3, 80", MOLDED PLUG
	21-2451	1	CORDSET, DC, 12/2, W/ RED 50 AMP ANDERSON
	S/O	1	CORDSET, DC, 12/2, W/ RED 175 AMP ANDERSON
	4-257	1	PLUG ASSEMBLY, DC, RED 50 AMP ANDERSON PLUG
	5-260	1	PLUG ASSEMBLY, DC, RED 175 AMP ANDERSON PLUG

^{*} FOR USE WITH CHARGERS BUILT BEFORE 47/03

VI.0 R.P.S. Corporation Racine, WI 53404 1-800-634-4060 factorycat.com tomcatequip.com

^{**} FOR USE WITH CHARGERS BUILT AFTER 47/03



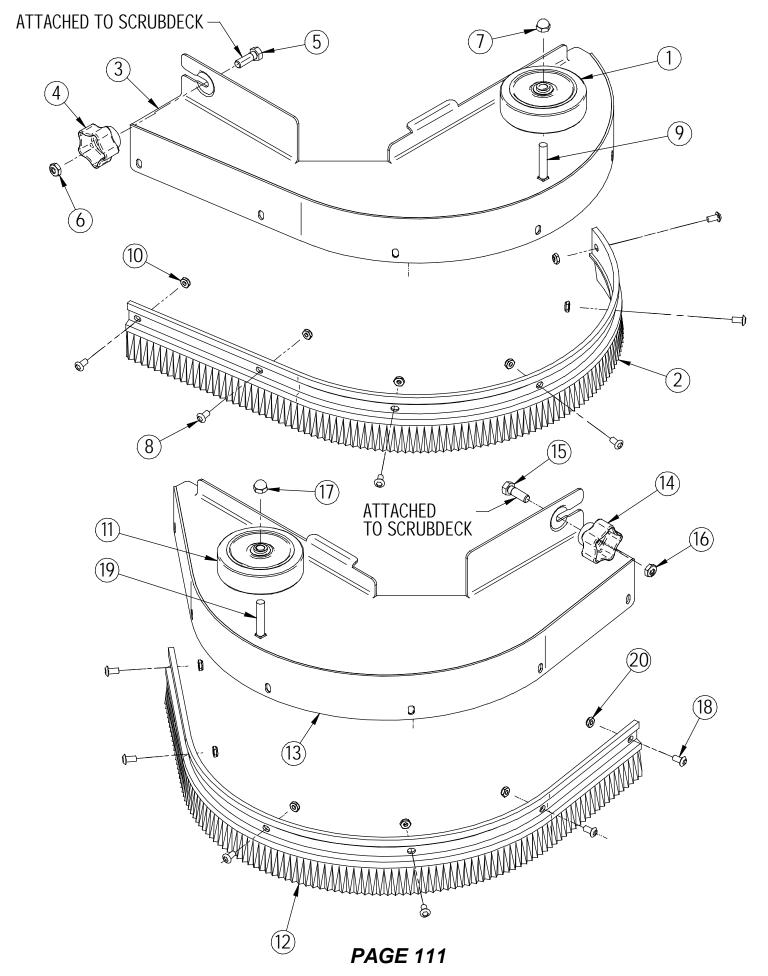
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LEFT SHROUD

Item	Part Number	Part Description	Qty
1	190-3030	4.0" WHEEL (GRAY)	1
2	253-0018	SHROUD CURTAIN, LH	1
3	253-1108	SHROUD 30" (LH)	1
4	290-5787	STAR KNOB, 3/8-24 THREAD	1
5	H-01219	HCS 3/8"- 24 X 1 1/8" SS	1
6	H-0171004	JNYL 3/8- 24 SS	1
7	H-37710	3/8-16 LC ACORN NUT, NICKEL	1
8	H-73752	BHSCS 1/4 - 20 X 5/8" SS	6
9	H-74439	CB 3/8"- 16 X 2.0" SS	1
10	H-NJO4C	JNYL 1/4" - 20 SS	6

RIGHT SHROUD

Item	Part Number	Part Description	Qty
11	190-3030	4.0" WHEEL (GRAY)	1
12	253-0019	SHROUD CURTAIN, RH	1
13	253-1109	SHROUD 30" (RH)	1
14	290-5787	STAR KNOB, 3/8-24 THREAD	1
15	H-01219	HCS 3/8"- 24 X 1 1/8" SS	1
16	H-0171004	JNYL 3/8- 24 SS	1
17	H-73752	BHSCS 1/4 - 20 X 5/8" SS	6
18	H-74439	CB 3/8"- 16 X 2.0" SS	1
19	H-NJO4C	JNYL 1/4" - 20 SS	6
20	H-NJ06C	JNYL 3/8-16 SS	1



LEFT SHROUD

Item	Part Number	Part Description	Qty
1	190-3030	4.0" WHEEL (GRAY)	1
2	253-0015	SHROUD CURTAIN, 34" LH	1
3	253-1110	SHROUD 34" (LH)	1
4	290-5787	STAR KNOB, 3/8-24 THREAD	1
5	H-01219	HCS 3/8"- 24 X 1 1/8" SS	1
6	H-0171004	JNYL 3/8- 24 SS	1
7	H-37710	3/8-16 LC ACORN NUT, NICKEL	1
8	H-73752	BHSCS 1/4 - 20 X 5/8" SS	6
9	H-74439	CB 3/8"- 16 X 2.0" SS	1
10	H-NJO4C	JNYL 1/4" - 20 SS	6

RIGHT SHROUD

Item	Part Number	Part Description	Qty
11	190-3030	4.0" WHEEL (GRAY)	1
12	253-0016	SHROUD CURTAIN, 34" RH	1
13	253-1111	SHROUD 34" (RH)	1
14	290-5787	STAR KNOB, 3/8-24 THREAD	1
15	H-01219	HCS 3/8"- 24 X 1 1/8" SS	1
16	H-0171004	JNYL 3/8- 24 SS	1
17	H-37710	3/8-16 LC ACORN NUT, NICKEL	1
18	H-73752	BHSCS 1/4 - 20 X 5/8" SS	6
19	H-74439	CB 3/8"- 16 X 2.0" SS	1
20	H-NJO4C	JNYL 1/4" - 20 SS	6