

**2000 SERIES**

**FACTORY CAT**

## **Operator and Parts Manual**

**23 Single Disk Machine**

**21, 25, 27 Dual Disk**

**22, 26, 28 Cylindrical**

**Covers Machines With  
Central Command Type I and  
Central Command Type II Controls**

**R.P.S. Corporation  
P.O. Box 368  
Racine, Wisconsin 53401**

**Toll Free: 1-800-634-4060  
Fax: 1-262-632-6961  
[www.factorycat.com](http://www.factorycat.com)**

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## MACHINE INFORMATION

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Please fill this area out this area 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 Operators and Parts Manual should be considered a permanent part of the unit, and should remain with the unit at all times. This Operators and Parts Manual covers all the Factory Cat 21 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 and without incurring any obligation

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**TO REGISTER FOR WARRANTY, FAX YOUR DELIVERY FORM TODAY!**

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R.P.S. Corporation  
1509 Rapids Drive  
Racine, WI 53404  
Phone: 800-634-4060  
262-632-1143  
Fax: 262-632-3335  
www.factorycat.com

## MACHINE DELIVERY FORM

Dealer: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location (City, State): \_\_\_\_\_

Install Date: \_\_\_\_\_

Customer: \_\_\_\_\_

Hour Meter: \_\_\_\_\_

Contact: \_\_\_\_\_

Installed By: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Factory Cat Model Number: \_\_\_\_\_

Options: 1. \_\_\_\_\_

4. \_\_\_\_\_

2. \_\_\_\_\_

5. \_\_\_\_\_

3. \_\_\_\_\_

6. \_\_\_\_\_

Brushes: \_\_\_\_\_

Broom: \_\_\_\_\_

Soap: \_\_\_\_\_

### Buyer's Representative Has:

1. Received instruction in proper operation of this machine.
2. Received operator's manual for this machine.
3. Been made aware that any operator should read the manual before operating this machine.

Dealer Rep. Print: \_\_\_\_\_

Sign: \_\_\_\_\_

Customer Print: \_\_\_\_\_

Sign: \_\_\_\_\_



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# **MACHINE SPECIFICATIONS**

<b>Model</b>	<b>21</b>	<b>25/27</b>	<b>22/28</b>
<b><u>BODY CONSTRUCTION/DIMENSIONS</u></b>			
Tank Construction:	Roto-molded Poly	Roto-molded Poly	Roto-molded Poly
Chassis Construction:	3/16" Steel	3/16" Steel	3/16" Steel
Drive Wheel:	(2) 8" diameter x 2 "	(2) 8" diameter x 2 "	(2) 8" diameter x 2 "
Casters:	(2) 4" diameter x 1.5"	(2) 4" diameter x 1.5"	(2) 4" diameter x 1.5"
Height:	40 inches	40 inches	40 inches
Length:	50 inches	50 inches	50 inches
Width:	23 inches	26 & 28 inches	24 & 30 inches

## **BRUSH/PAD SYSTEM**

Brush/Pad Diameter:	(2) 11 inches	(2) 13 inches (2) 14 inches	(2) 22" long x 5" dia. (2) 28" long x 5" dia.
Motor Horsepower:	(2) 0.75 HP	(2) 0.75 or 1.0 HP	(1) 2.0 HP
Motor RPM:	200 or 270	270 or 350	800
Brush Down Pressure:	0-200 pounds	0-200 pounds	0-200 pounds

## **BATTERY SYSTEM**

Battery Count:	2	2	2
Battery AH Rating:	205 amp hour	205 amp hour	205 amp hour
Battery Description:	12 volt deep cycle	12 volt deep cycle	12 volt deep cycle
Battery Run Time:	Up to 4 hours	Up to 4 hours	Up to 4 hours
Charger:	25 amp automatic	25 amp automatic	25 amp automatic

## **SOLUTION SYSTEM**

Solution Tank Capacity:	26 gallons	26 gallons	26 gallons
Solutuion Flow Rate:	Up to .75 gal/min.	Up to .75 gal/min.	Up to .75 gal/min.

## **RECOVERY SYSTEM**

Recovery Tank Capacity:	26 gallons	26 gallons	26 gallons
Vacuum Horsepower:	.75, 3-stage	.75, 3-stage	.75, 3-stage
Waterlift:	67 inches	67 inches	67 inches

## **DRIVE SYSTEM**

Transaxle Description:	.3hp, sealed	.3 hp, sealed	.3 hp, sealed
Speed Control:	Variable 0-230 ft.	Variable 0-230 ft.	Variable 0-230 ft.

## **PRODUCTIVITY**

Cleaning Width	21 inches	25 inches 27 inches	22 inches 28 inches
Cleaning Rate/Hour	21,000 sq.ft./hour	25,000 sq.ft./hour 27,000 sq.ft./hour	22,000 sq.ft./hour 28,000 sq.ft./hour

## **WARRANTY**

Tanks 10 years / OEM Parts 3 years / Labor 1 year / \* Call for Details

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# COMMON WEAR PARTS

<b>ITEM</b>	<b>MODEL 21-D</b>	<b>MODEL 22-C</b>	<b>MODEL 23-D</b>	<b>MODEL 25-D</b>	<b>MODEL 26-C</b>	<b>MODEL 27-D</b>	<b>MODEL 28-C</b>
<b>BRUSH TYPE</b>	<b>DISK</b>	<b>CYLINDRICAL</b>	<b>DISK</b>	<b>DISK</b>	<b>CYLINDRICAL</b>	<b>DISK</b>	<b>CYLINDRICAL</b>

## **BRUSHES**

SUPER-GRIT	11-421SS	NA	23-421SS	13-421SS	NA	14-421SS	NA
TOUGH-GRIT	11-421S	22-521S	23-421S	13-421S	25-521S	14-421S	28-521S
MIDI-GRIT	11-421C	22-521C	23-421C	13-421C	25-521C	14-421C	28-521C
LIGHT-GRIT	11-421PS	22-521PS	23-421PS	13-421PS	25-521PS	14-421PS	28-521PS
POLY (.028)	11-421P	22-521P	23-421P	13-421P	25-521P	14-421P	28-521P
NYLON (.016)	11-421N	22-521N	23-421N	13-421N	25-521N	14-421N	28-521N
TAMPICO	11-421T	22-521T	23-421T	13-421T	25-521T	14-421T	28-521T
PAD DRIVER	11-421D	NA	23-421D	13-421D	NA	14-421D	NA

EXTRA PAD DRIVER RETAINING CLIP: 40-433

BRUSH REPAIR KIT: 40-423 REPLACEMENT LOCATING CLIP FOR ALL DISK BRUSHES

## **PADS**

SUPER BLACK	11-422BB	NA	23-422BB	13-422BB	NA	14-422BB	NA
BLACK	11-422B	NA	23-422B	13-422B	NA	14-422B	NA
BROWN	11-422BR	NA	23-422BR	13-422BR	NA	14-422BR	NA
GREEN	11-422G	NA	23-422G	13-422G	NA	14-422G	NA
BLUE	11-422BL	NA	23-422BL	13-422BL	NA	14-422BL	NA
RED	11-422R	NA	23-422R	13-422R	NA	14-422R	NA
WHITE	11-422W	NA	23-422W	13-422W	NA	14-422W	NA

<b><u>SQUEEGEE KITS</u></b>	<b><u>SIZE</u></b>	<b><u>GUM RUBBER</u></b>	<b><u>NEOPRENE</u></b>	<b><u>LINATEX</u></b>
	32"	22-770G	22-770N	22-770L
	35"	25-770G	25-770N	25-770L
	38"	28-770G	28-770N	28-770L

**KIT INCLUDES:** (1) REAR BLADE, (1) FRONT BLADE, AND (2) BACKUP WHEELS WITH HARDWARE

**NOTE:** IT IS STAMPED INTO THE TOP OF THE PLATED STEEL SQUEEGEE BLANK, ON 32", 35", AND 38" SQUEEGEES.

## **MODELS 21 & 22:**

HAVE A 32" SQUEEGEE UNLESS OTHER SIZE IS SPECIALLY ORDERED AT TIME OF PURCHASE

## **MODELS 23, 25 & 26:**

HAVE A 35" SQUEEGEE UNLESS OTHER SIZE IS SPECIALLY ORDERED AT TIME OF PURCHASE

## **MODELS 27 & 28:**

HAVE A 38" SQUEEGEE UNLESS OTHER SIZE IS SPECIALLY ORDERED AT TIME OF PURCHASE

**NOTE:** THE 32" AND 35" SQUEEGEES ARE DESIGNED FOR NARROW ISLES AND MAY NOT HAVE THE SAME WATER CONTROL AROUND TIGHT TURNS AS THE LARGER SQUEEGEES.

## **SOAP**

HEAVY DUTY DEGREASER  
CITRUS  
FREEZER  
TIRE MARK REMOVER

**CALL YOUR LOCAL DEALER FOR MORE SOAP INFORMATION**



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# SAFETY MESSAGES

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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 judgement.

This unit is intended for industrial use. It is designed to clean hard floors in an indoor environment, with the recommended pads/ brushes, and cleaning solutions.

## **1. DO NOT OPERATE UNIT:**

- \* Unless trained and authorized.
- \* Unless operator manual is read.
- \* If unit is not in proper 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 run machine where flammable liquids are present.
- \* Use extreme caution when maneuvering.

## **3. BEFORE LEAVING:**

- \* Make sure machine is turned off.
- \* Stop on level surfaces.
- \* Disconnect batteries.

## **4. BEFORE SERVICING:**

- \* Stop on level surfaces, and secure machine.
  - \* Disconnect batteries.
-

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# TROUBLE SHOOTING

<u>PROBLEM</u>	<u>CAUSE</u>	<u>SOLUTION</u>
No solution flow	No solution in tank Solution switch OFF Faulty solution solenoid Faulty solution switch	Fill solution tank Turn solution switch ON Contact local servicing dealer Contact local servicing dealer
Safety lights don't operate	Faulty lights	Contact local servicing dealer
Poor water recovery	Recovery tank is full Ball/Screen in recovery tank is clogged Vacuum hose is clogged Squeegee is clogged Squeegee blades worn Faulty vacuum hose Vac motor gasket torn Tank gasket faulty Drain plug loose Rec. tank lid loose Vac motor faulty Battery charge is 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 drain plug Tighten lid Contact local servicing dealer Charge batteries overnight
Poor water recovery on turns	Squeegee swing binding Incorrect squeegee size	Contact local servicing dealer Contact local servicing dealer
Castors noisy	Bearings dry Faulty caster	Grease caster bearings Contact local servicing dealer
Poor Traction	Excessive brush pressure Worn drive tires Heavy soap concentration	Reduce pressure with switch Contact local servicing dealer Reduce detergent ratio



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# !! SAFETY PRECAUTIONS !!

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**WARNING:** Hazardous voltage. Shock or electrocution can result. Always disconnect the batteries before servicing this machine.

**WARNING:** Batteries emit hydrogen gases, explosion or fire can result. Keep sparks and open flames away.

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

**WARNING:** Battery acid can cause burns. Wear protective eye wear and gloves when servicing batteries.

**WARNING:** Do not store outdoors or pressure wash. Do not get electrical components wet.

**WARNING:** The use of parts and solutions other than recommended by the manufacturer may cause damage.

**WARNING:** 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.

**WARNING:** Do not use the machine as a step ladder or chair.

**WARNING:** Do not ride on this machine. It was not designed to carry passengers.

**WARNING:** 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 RAMPS!**

**WARNING:** 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.

**WARNING:** Understand the dynamic braking system before you operate the machine on slick ramps. Machine does not coast. Releasing the handlebar "green" drive buttons, will automatically apply braking force, and stop the machine.

**WARNING:** Do not park the machine on ramps or slopes. This machine does not have a parking brake. It must always be parked on level ground.

**WARNING:** Do not operate the machine if any parts have been removed or damaged.

**WARNING:** Do not remove, paint over, or destroy Warning Decals. If Warning Decals become damaged, they must be replaced.

**WARNING:** 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.

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

**WARNING:** Always turn off the machine, before leaving it unattended.

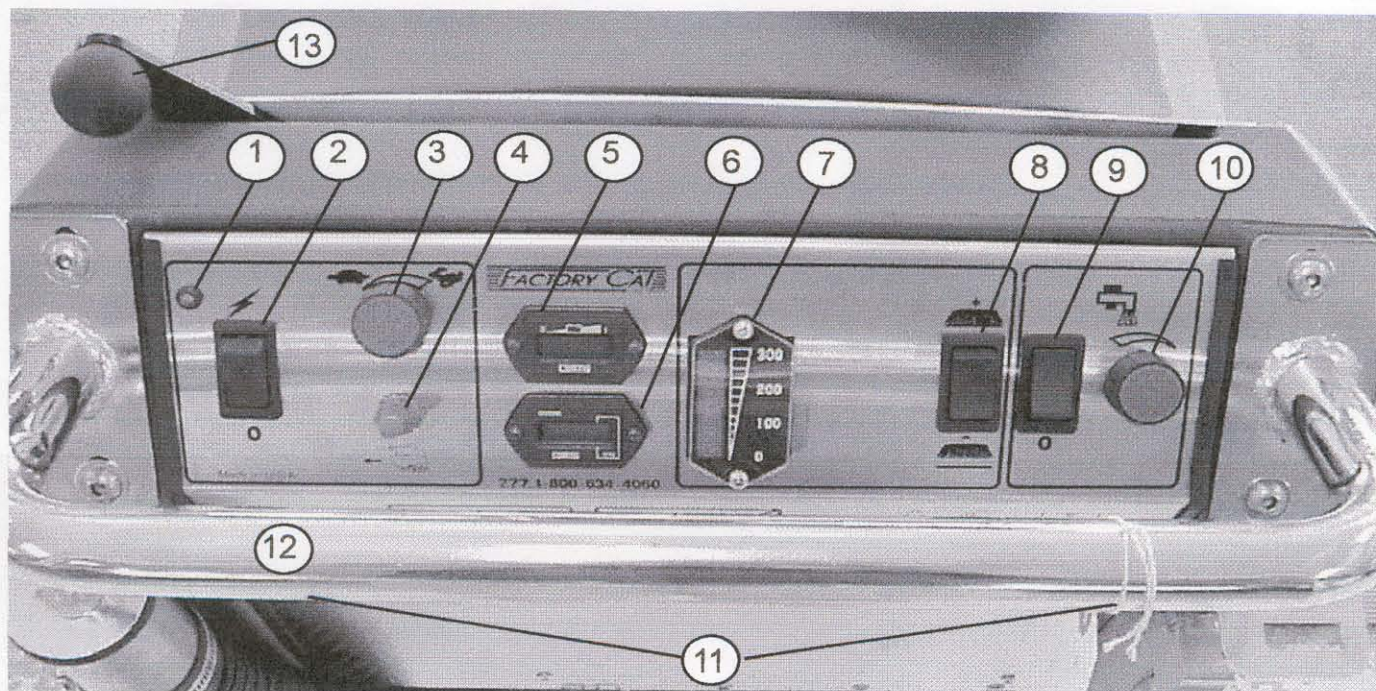
**WARNING:** Do not operate this scrubber over floor outlets. **SEVERE INJURY!**

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# CENTRAL COMMAND TYPE I CONTROLS AND FEATURES

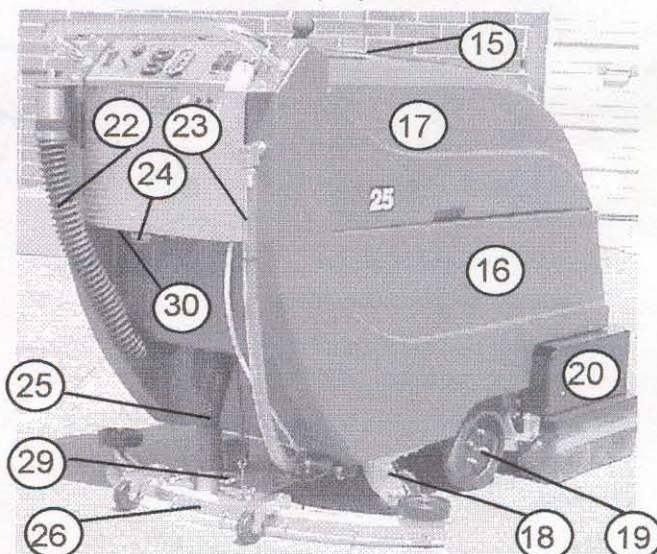
(See Central Command Type II Five Pages Ahead if Your Instrument Panel has An LCD Readout).



1. Power indicator light
2. Main power switch
3. Speed control knob
4. Reverse switch
5. Battery meter
6. Hour meter
7. Brush pressure gauge
8. Brush pressure switch
9. Solution on/off switch
10. Solution control knob

11. Drive buttons
12. Handle bar
13. Squeegee lift lever
14. Vacuum cover
15. Flush-out tank lid
16. Solution tank
17. Recovery tank
18. Rear casters
19. Drive wheels
20. Brush jaws

21. Solution fill door
22. Rec. drain hose
23. Sol. drain hose
24. Charge port
25. Vacuum hose
26. Squeegee
27. Safety lights
28. Wall rollers
29. Adjustment knob
30. Top speed limiter





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# **CONTROL FUNCTIONS**

1. Power indicator light: Indicates when machine is turned on.
  2. Main power switch: Turns the machine on and off.
  3. Speed control knob: Controls the drive speed on the machine.
  4. Reverse switch: Depress down to drive in reverse. Reverse is set at 50% speed for safety.
  5. Battery meter: Indicates relative battery charge remaining.
  6. Hour meter: This tracks total hours machine is turned on.
  7. Brush pressure gauge: Indicates relative downpressure, by showing amp draw on scrub motors.
  8. Brush pressure switch: Raises and lowers scrub head, whichs permits control of brush pressure.
  9. Solution switch: Turns solution flow ON or OFF.
  10. Solution control knob: Controls the solution flow rate, when the solution switch is on.
  11. Drive control buttons: Depress to drive forward, and release to stop.
  12. Handle bar: Use both hands to operate at all times.
  13. Squeegee lift lever: Rotate to left to raise squeegee, and to the right to lower squeegee.
  14. Vacuum cover: Permits operator to see foam, and stop before damage is done to motor.
  15. Flush-out lid: Permits access to flush out debris from recovery tank after draining.
  16. Solution tank: Holds 26 gallons of cleaning detergent. Max temp is 140 F or 60 C.
  17. Recovery tank: Holds 26 gallons of dirty recovery water. Max temp is 140 F or 60 C.
  18. Rear casters: Twin casters for stability.
  19. Drive wheels: Provide propulsion for machine.
  20. Brush jaws: Protect scrub brushes from damage, and control splashing. Open to change brushes.
  21. Solution fill door: Used to refill the solution tank with cleaning solutions.
  22. Rec. drain hose: Used to completely drain dirty recovery water from tank. Always flush out completely.
  23. Sol. drain hose: Used to drain cleaning solution, and as a level indicator of remaining solution onboard.
  24. Charge port: Red 50 used to receive charger output. NOTE: Only use charger provided.
  25. Vacuum hose: Vacuumizes squeegee. Keep free and clear of blockage for optimum performance.
  26. Squeegee: Recovers dirty water from floor. Keep clean and replace blades when worn.
  27. Safety lights: Indicates machine's main power is ON.
  28. Wall rollers: Protects machine and walls from some collision damage.
  29. Adjustment knob: Adjusts pitch of squeegee. The deflection should be even across entire blade.
  30. Top speed limiter: Used to limit the top speed of the machine.
-



# MACHINE PREP

## UNCRATING MACHINE

Carefully check the crate for any signs of damage. Check the crate to ensure that all accessories are included. Batteries are in the unit. The squeegee, brushes and other items are in the crate.

To uncrate the machine, remove banding from around the crate. Take off the top and sides and dispose of properly. Remove banding from machine. Remove the chocks around the drive wheels. Fold down ramp, and roll machine off of the base. **NOTIFY THE CARRIER IMMEDIATELY IF CONCEALED DAMAGE IS DISCOVERED.**

## CONNECTING BATTERIES

Your machine is equipped with two 12 volt, deep cycle, 205 amp hour batteries, which form a 24 volt system. Maximum battery dimensions are 7"w x 15"l x 14"h.

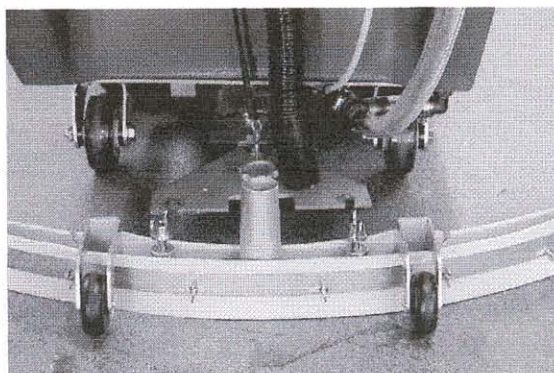
1. Turn all switches to the OFF position.
2. Hinge open the recovery tank to access the battery compartment.
3. Three of the four battery cables are connected to the batteries. Locate the loose one and connect to the open terminal. This requires a 1/2" wrench. (See Fig. 1)
4. Turn on main power switch and check the battery condition meter to ensure correct installation. Charge batteries if needed. (see: BATTERY CHARGING)



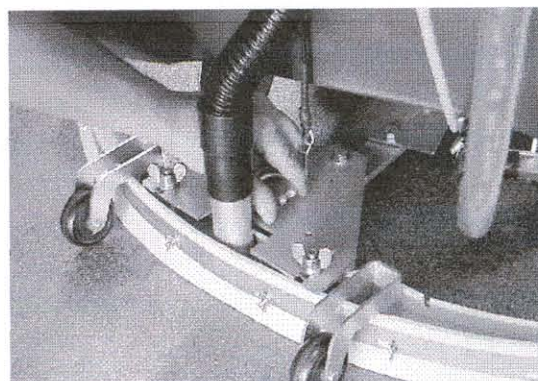
# MACHINE SETUP

## ATTACHING SQUEEGEE

1. Lower the squeegee mounting plate by sliding the lever all the way to the right. (See fig. 2)



2. Loosen the two wingnuts on the squeegee and slide them into the slots in the squeegee mounting plate. The squeegee trail wheels should face outward.
3. Tighten the two wingnuts, and connect vacuum hose from the machine to the squeegee. (See fig. 3)
4. You may need to adjust the squeegee pitch, by using the pitch adjustment knob.





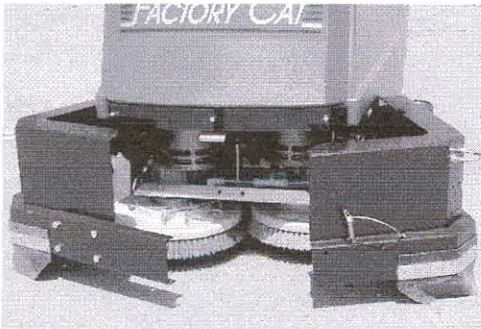
## **WARNING: TURN OFF MACHINE BEFORE INSTALLING BRUSHES.**

### **INSTALLING DISK BRUSH OR PAD**

1. Raise scrub head. Turn the machine on and press the bottom half of the brush pressure switch (-). Hold switch until the scrub head actuator raises and turns off.
2. Remove the locking pin and swing the jaws outward to access the drivers. (See fig. 4)



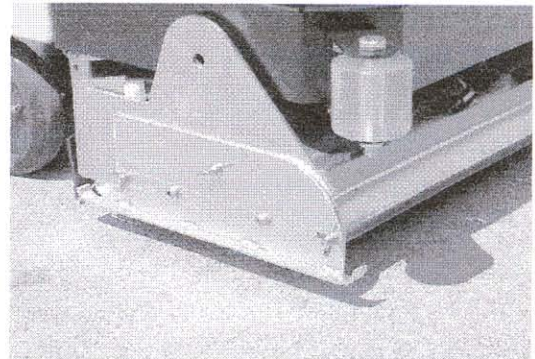
3. Select the correct pads or brushes that best meet your cleaning application. Consult your local dealer for assistance. (See fig. 10)
4. **PAD INSTALLATION** Attach pads to pad drivers before connecting drivers to motor hub. Remove the centerlock ring from the pad driver and position the pad on the pad driver, and replace the center locking ring.
5. 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 fig. 5)



6. Close the brush jaws and install the locking pin.

### **INSTALLING CYLINDRICAL BRUSH**

1. Undo the three wingnuts on the brush access door and remove the door. Be careful not to lose the wingnuts and lock washers. (See fig. 6)



2. Slide the brushes in one at a time. When you get the brush on the driver spin it with your hand until you feel it catch on the driver and then press in completely on. When both are in replace the door and the fasteners. The door should go on easily, and metal to metal. If there is any gap left before tightening, it has not been installed properly. (See fig. 7)



**NOTE: IF 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 INSTALLATION.**

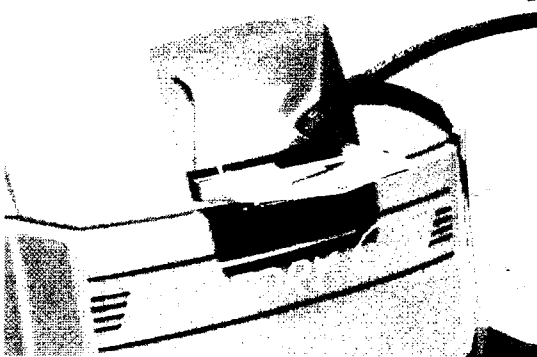


# USING CENTRAL COMMAND I EQUIPPED MACHINES

## FILLING SOLUTION TANK

1. Transport the machine to the filling station. Raise the scrubhead and squeegee when transporting.
2. Turn machine off.
3. Open solution fill door at the front of the machine and fill the tank with up to 26 gallons of clean water. The clear tube at the rear of the machine indicates the amount of water in the tank.
4. Add cleaning chemical. Use the proper dilution ratio indicated on the bottle.  
(See fig. 8)

\* Use only nonflammable commercial cleaning chemicals. Your authorized distributor can assist you in selecting a proper chemical.



## OPERATION

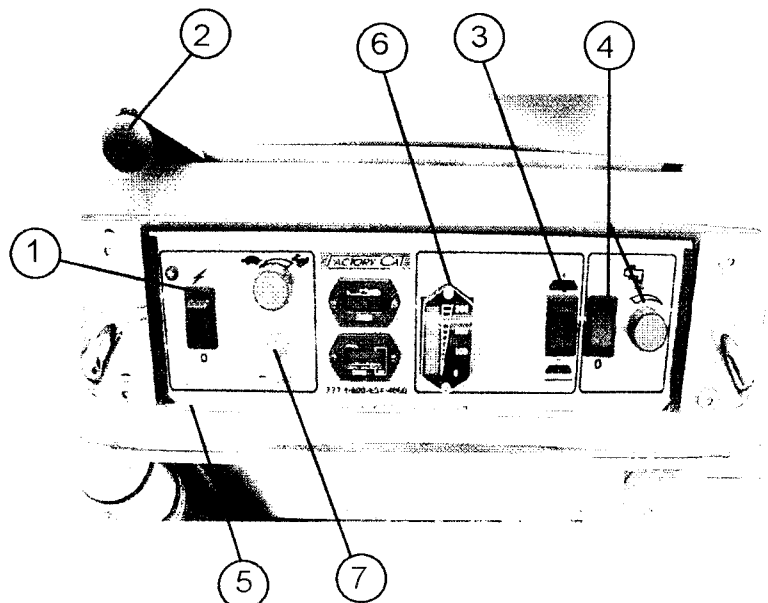
Read and understand the safety section on page 6 & 7 before operating machine.

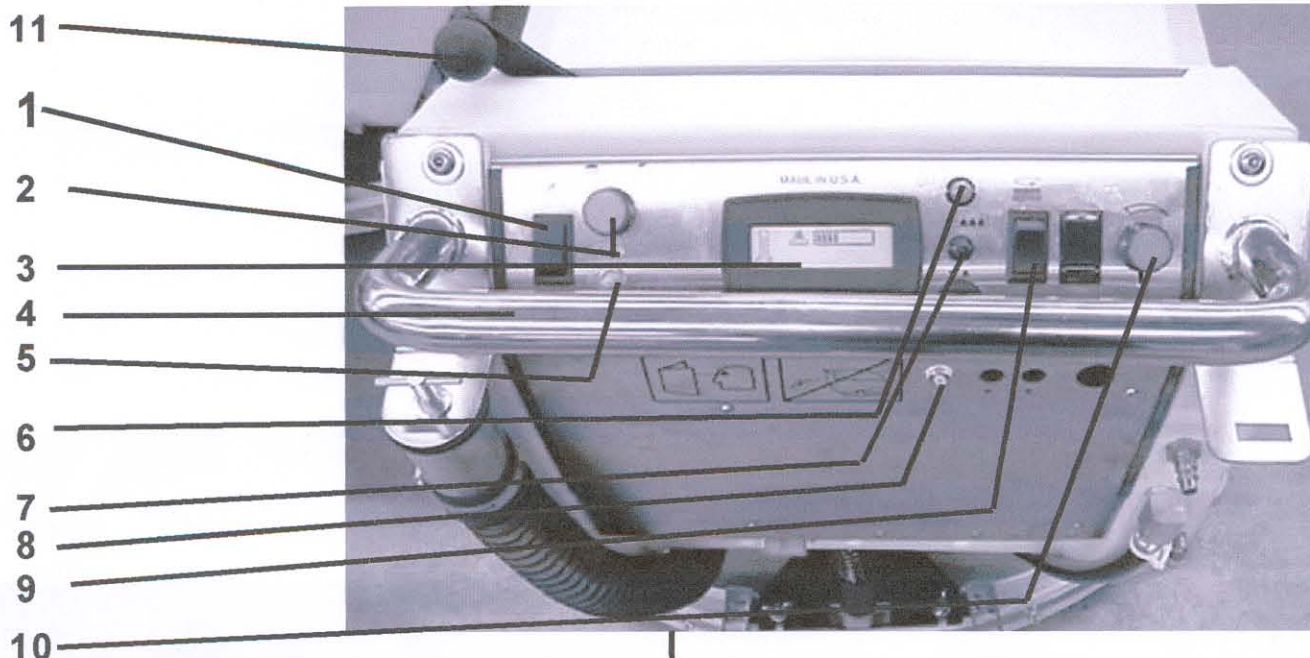
## PRE-CLEANING CHECK LIST

- \* Check battery condition gauge to make sure batteries are fully charged.
- \* Check condition of pads or brushes.
- \* Check condition of squeegee blades.

### STEPS: (See fig. 9)

1. Turn machine on, make sure the speed knob is at the lowest setting.
2. Lower squeegee by moving the lift lever all the way to the right.
3. Lower scrub head to the floor, hold the bottom half (+) of the brush pressure switch.
4. Turn on the solution switch and adjust the solution control knob to the desired setting.
5. Begin scrubbing by holding the green control buttons. Adjust the speed control knob to a desired setting.
6. Once the machine begins to move, check the down pressure gauge. Start scrubbing at the 100 mark. Make sure not to go over 200.
7. To operate machine in reverse, simply pull the reverse switch back towards the handle bar.
8. To stop the machine, let go of the green control buttons.





## USING CENTRAL COMMAND II

Units equipped with the **Central Command II** system operate differently from the earlier **Central Command I** version. **Type II** units are identified by a green LCD readout screen.

**Central Command II** automatically controls brush downpressure to permit the machine to move from a high-friction surface to a low friction without having to reset the brush pressure. It controls solution flow by turning the water valve off and on a varying number of cycles per second. And in case of technical trouble it helps technicians by indication what is wrong in form of a four digit code. The system even offers three different hour meters to better monitor maintenance.

## CONTROLS AND FUNCTIONS

**1. Power switch.** Push top of switch to turn power on. When this is done the LCD screen will light up. If you don't use the machine, power will shut itself off in a few minutes. To restart, turn switch off and on again.

**2. Speed Control.** Used in conjunction with Items 4 and 5 below. Speed control gives speeds of from zero to 3.1 MPH / 5.0KMH in forward. Reverse speed is always half that in forward direction.

**3. LCD Screen.** This readout shows battery condition, brush pressure selection, and the readings of the three hour meters. It shows visually if vacuum, brushes and solution are on. It reads out fault codes for technicians. The screen has three readouts. These are switched by pushing button 6. Toggle 7 allows a change in preselected brush pressure.

**4. Handlebar "Go" Button.** Pushing either or both of these buttons (located at the back of the handlebar) makes the machine go forward at the speed determined by Item 2 Speed Control. Releasing the button automatically stops the machine. When selected, vacuum, brushes and solution flow will turn on when you push the green button and turn off after you release it.

**5. Reverse Toggle.** This spring loaded switch is pulled toward you to reverse the machine. You do not need to press Item 4 "Go" button while doing this. Releasing the button stops the machine. Because reverse speed is half forward speed, you may need to increase speed slightly to get the machine started.



**6 = LCD screen selector button.** The first screen to turn on after keyswitch is turned on shows brush pressure and battery level and is the one to operate the machine with.

Pushing button 6 will change to other screens that show battery pressure and the three hour meters. (See illustrations attached).

**7.= Brush Pressure Selector.** The operator selects brush pressure, which reads out on the first screen. The more the gauge lights up, the higher the pressure.

**NOTE 1: Brush pressure goes to the lowest setting when you turn off the key. It must be reset if you wish a higher setting than the low one.**

**NOTE 2:** Use the lightest pressure that does the job. This will extend battery run time, and save on brush wear and wear and tear on the machine.

**8. Actuator circuit breaker.** The brush pressure automatically self corrects from surface to surface. This is done by **Central Command II's** giant electronic brain operating the actuator.

Sometimes, even the brainiest of beings make mistakes, and the actuator may exceed allowed power draw. When this occurs, this circuit breaker (marked "2" on the white button) will pop out. To restore power, turn off the machine, and wait two minutes for it to cool down. Then push the button back in.

**9. Brush on/off.** This switch turns the brushes on and off. When brushes are turned on, they will run when Item 4 green handlebar "go" button is depressed, and brushes will lower to the pressure preselected by Item 7 Brush Pressure Selector.

**10. Solution Flow Control.** The valve that controls solution flow to the brushes will only allow solution to flow when the brushes are running. How much solution (from none at all to about 0.75 gallons/3 liters per minute) is set by this blue knob. Turn to the right to SHUT OFF solution, and to the left to add solution—like a faucet.

**11. Squeegee Control.** Move this knob from left to right to lower the squeegee and to turn on the vacuum motor. The vac motor operates only after you have depressed Item 4 green "go" button. When you release the go button, or lift the squeegee back into the up position, the vacuum motor will shut off automatically after a delay of 21 seconds. This delay is there to clean out the hose that goes from the recovery tank to the squeegee.

## THE THREE LCD SCREENS

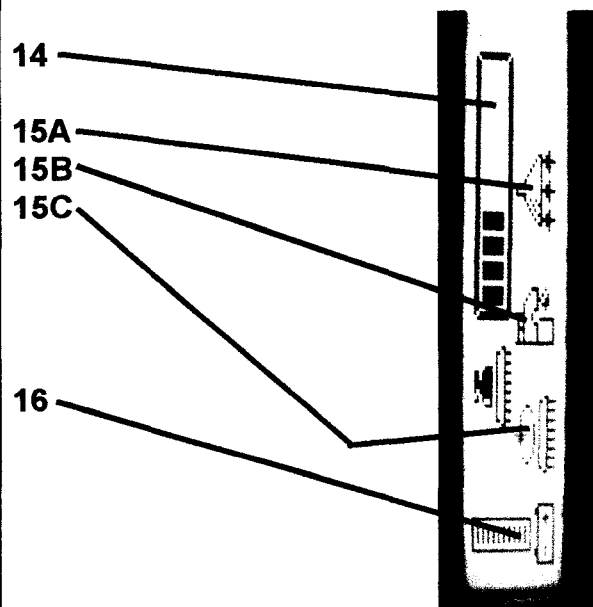
### **SCREEN 1:**

This comes on when the keyswitch is turned on.

**Item 14:** The big "Brush Pressure Gauge" shows brush pressure. Pressure can be changed by moving toggle Item 7.

**Item 15** shows what's running. It can show Vacuum (**Item A**) Solution (**Item B**) and Brushes (**Item C**)

**Item 16:** Shows battery condition. This gauge will flash at you when battery runs low. When this happens, stop working and drive back to the recharge station IMMEDIATELY because in a few minutes, machine will automatically shut down and leave you stranded.



### **SCREEN 2:**

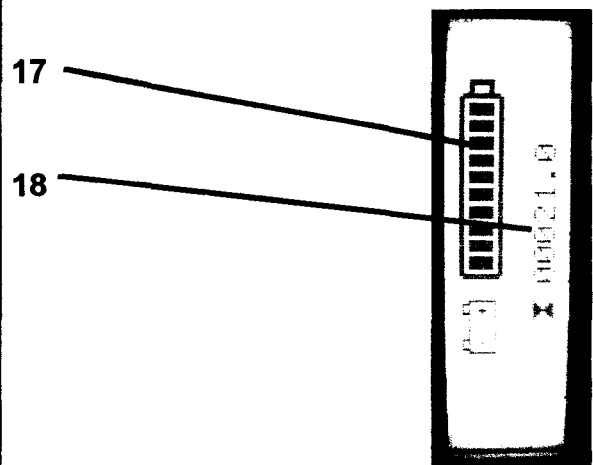
To access Screen 2, push the green screen selector button (Item 5) once.

This screen shows the battery gauge more prominently, and also shows the hour meter (to give the operator an idea of battery life consumed and remaining) but does not show brush pressure.

A common error of operators is to try to actuate brush pressure while in this screen. Toggle No. 7 will not work Item 17!

**Item 17:** Battery gauge.

**Item 18:** Keyswitch hour meter.



### **SCREEN 3:**

To access this screen from Screen 1, push the green screen selector button (Item 5) twice.

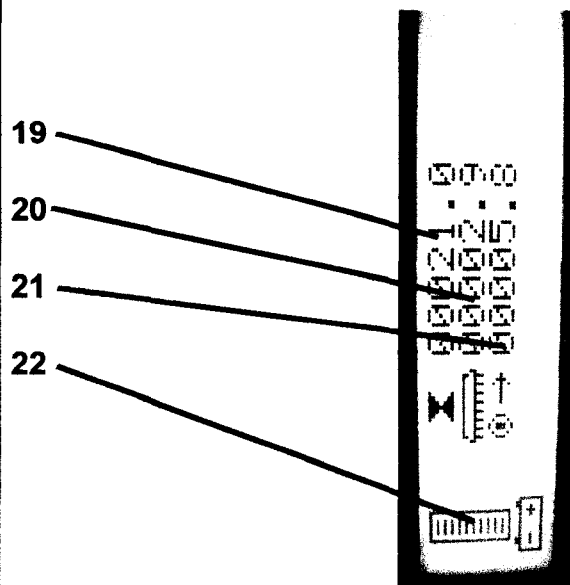
This screen shows hours of operation of keyswitch, brushes and traction (wheel drive) system. It also shows the battery gauge.

**Item 19:** Keyswitch hours.

**Item 20:** Brush hours.

**Item 21:** Traction motor hours.

**Item 22:** Battery gauge.





## **TO MOVE A CENTRAL COMMAND II MACHINE**

1. Turn on power switch.
  2. Set speed control. If you are new at this, set it to about half speed.
  3. Push green button in handlebar. Release button to stop.
- 

## **TO SCRUB WITH CENTRAL COMMAND II**

### **Normal Conditions**

1. Turn on the power switch (Item 1).
2. Turn on the brush switch.
3. Modify scrub pressure to suit the application. You can do this at any time by moving the black toggle (Item 7).

To monitor brush pressure, be sure you are in Screen One. (see pages preceeding).

4. Turn on the vacuum by lowering the squeegee.
5. Push the handlebar "go" button and brushes, solution and vacuum will operate automatically.

Release "go" button, and brushes will stop turning and lift slightly, solution will shut off, and vacuum motors will continue to run for about 21 seconds to clean out the rear tube.

4. When through scrubbing, turn off the brush and vacuum switches and let the vacuum run through its 21 second "cleanout" cycle before turning off the key.

### **Scrubbing--Special Conditions:**

You may wish to **pick up water without scrubbing**. In this case, do not turn on the brushes but lower the squeegee to on the vacuum switch.

You may wish to **"double scrub"**, that is scrub the floor back and forth a few times without using vacuum. To do this, flip on the scrub brush switch and solution switch. When the floor is wet enough, you can turn off solution and continue double scrubbing if you wish.

## 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, use the switch, or just release the drive buttons.
2. Keep an eye on the tinted vacuum cover to make sure there is not 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, pipes, 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 green control buttons are released.
8. Always keep an eye on your gauges. They are there to help you scrub more efficiently, by letting you know the status of that particular system at a glance. If your battery gauge is reading low, you must stop immediately, and recharge. Running the battery dead, will result in damage to the battery.
9. When you run out of solution, raise the brushes, and continue to vacuum the remaining water until it is consumed. The solution drain hose is also 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 machine.

Fig. 10

<u>BRUSH TYPE</u>	<u>DISK</u>	<u>CYLINDRICAL</u>	<u>LEVEL (10 The highest)</u>	<u>COLOR</u>
Super-Grit	##-421SS	NA	Very High 10	Red
Tough-Grit	##-421S	##-521S	High 9	Black
Midi-Grit	##-421C	##-521C	High 8	Blue/Grey
Butcher Wire	##-421BW	NA	High 7	Metal
Light-Grit	##-421PS	##-521PS	Moderate 6	Grey
Poly (.028)	##-421P	NA	Moderate 5	Black
Nylon (.012)	##-421N	##-521N	Light 2	White
Tampico	##-421T	##-521T	Light 1	Tan
Pad Driver	##-421D	NA	Not Applicable	NA

<u>PADS</u>	<u>DISK</u>	<u>CYLINDRICAL</u>	<u>LEVEL (10 The highest)</u>	<u>COLOR</u>
Super Black	##-422BB	NA	Very High 10	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

NOTE: These are only approximations. The customer should always try a new brush in an inconspicuous area.



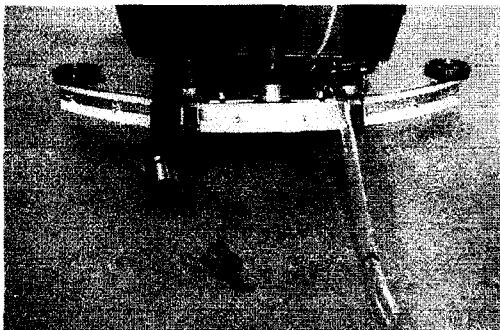
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## DRAINING TANKS

### 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, perform the following steps.

1. Remove drain hose from the expansion plug holder by turning the t-handle counter clockwise. To ensure the recovery tank is completely drained, tilt the tank at a slight angle. (See fig. 11)



2. 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.
3. Once tank is empty, put drain hose back on the plug and tighten by turning clockwise.

### DRAINING SOLUTION TANK

To drain leftover cleaning solution from the solution tank, perform the following steps. (See fig. 11)

1. Pull the clear sight tube/drain hose off of the brass barb.
2. Rinse out tank and solution flow system with clean water.

## BATTERYCHARGING

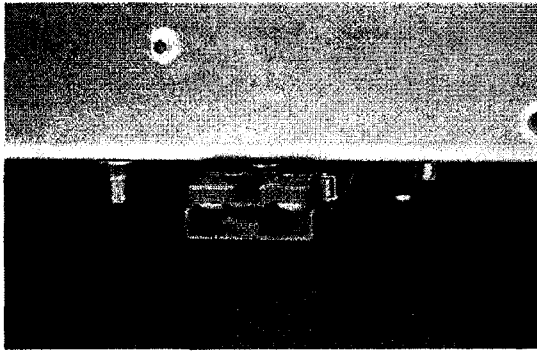
**CAUTION:** The following instructions are intended for the 24V charger supplied with the machine.

### CHARGER SPECIFICATIONS

- \* Output voltage of 24 Volts.
- \* Output current of 25 Amps max.
- \* 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. Hinge open the recovery tank to expose the batteries.
  4. Check the water level in each battery. Do not charge the machine if the water is not slightly higher than the plates. If needed, add enough distilled water to just slightly cover the plates. Do not over fill. Batteries can overflow during charging. Replace caps before charging.
  5. With the red charger plug disconnected from the machine, plug the charger power cord into a grounded wall outlet. (See fig. 12)
  6. Connect the red charger plug into the battery charging port located at the rear
-



7. The charger will automatically begin charging, and automatically shut off when fully charged.
8. After the charger has turned off, unplug the red charger plug from the machine and disconnect the charger from the wall outlet.
9. Recheck the cell levels 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.

## MAINTENANCE

### DAILY MAINTENANCE

1. 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.
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.

### WEEKLY MAINTENANCE

1. Check water level in each cell of the batteries, and fill as needed. Always use distilled water to refill batteries. Batteries should not be filled to the tops of the caps.  
  
FILL BATTERIES APPROXIMATELY 3/4" to 1" ABOVE THE LEAD PLATES. OVERFILLING WILL CAUSE THE BATTERIES TO LEAK DURING CHARGING. THE CHARGING PROCESS CREATES GAS BUBBLES INSIDE THE BATTERY, WHICH INCREASES THE VOLUME OF THE ELECTROLITE.
2. Clean battery tops to prevent corrosion.
3. Rotate brushes. Rotate the left to the right and right to left. On cylindrical models from front to back.

### MONTHLY MAINTENANCE

1. Lubricate rear casters with a water proof grease.
2. Check machine for water leaks and loose nuts and bolts.

## STORING MACHINE

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



# PREVENTATIVE MAINTENANCE RECORDS

USE THIS FORM TO MAKE COPIES FOR YOUR INTERNAL RECORDS

<u>PREVENTATIVE MAINTENANCE</u>	<u>CHECKED</u>	<u>NOTE</u>
Rotate Brushes	_____	_____
Rotate Side Brooms	_____	_____
Drain Solution Tank	_____	_____
Flush Solution System	_____	_____
Clean Solution Screen	_____	_____
Drain Recovery Tank	_____	_____
Flush Recovery Tank	_____	_____
Clean Vacuum Screen	_____	_____
Rotate Rear Squeegee Blade	_____	_____
Check Battery Water Level	_____	_____
Check Battery Voltage	_____	_____
Check Charger Condition	_____	_____
Check Battery Connections	_____	_____
Check Chemical Level	_____	_____
Check Machine Performance	_____	_____
Scrubbing Power	_____	_____
Vacuum Power	_____	_____
Controls Water on Turns	_____	_____
Gauges and Controls	_____	_____
Other: _____	_____	_____
Other: _____	_____	_____

Past Hour Meter Reading: \_\_\_\_\_

Current Hour Meter Reading: \_\_\_\_\_

Average Weekly Usage: \_\_\_\_\_

Technician Print: \_\_\_\_\_

Technician Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Manager Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# PREVENTATIVE MAINTENANCE RECORDS

USE THIS FORM TO MAKE COPIES FOR YOUR INTERNAL RECORDS

<u>PREVENTATIVE MAINTENANCE</u>	<u>CHECKED</u>	<u>NOTE</u>
Rotate Brushes	_____	_____
Rotate Side Brooms	_____	_____
Drain Solution Tank	_____	_____
Flush Solution System	_____	_____
Clean Solution Screen	_____	_____
Drain Recovery Tank	_____	_____
Flush Recovery Tank	_____	_____
Clean Vacuum Screen	_____	_____
Rotate Rear Squeegee Blade	_____	_____
Check Battery Water Level	_____	_____
Check Battery Voltage	_____	_____
Check Charger Condition	_____	_____
Check Battery Connections	_____	_____
Check Chemical Level	_____	_____
Check Machine Performance	_____	_____
Scrubbing Power	_____	_____
Vacuum Power	_____	_____
Controls Water on Turns	_____	_____
Gauges and Controls	_____	_____
Other: _____	_____	_____
Other: _____	_____	_____

Past Hour Meter Reading: \_\_\_\_\_

Current Hour Meter Reading: \_\_\_\_\_

Average Weekly Usage: \_\_\_\_\_

Technician Print: \_\_\_\_\_

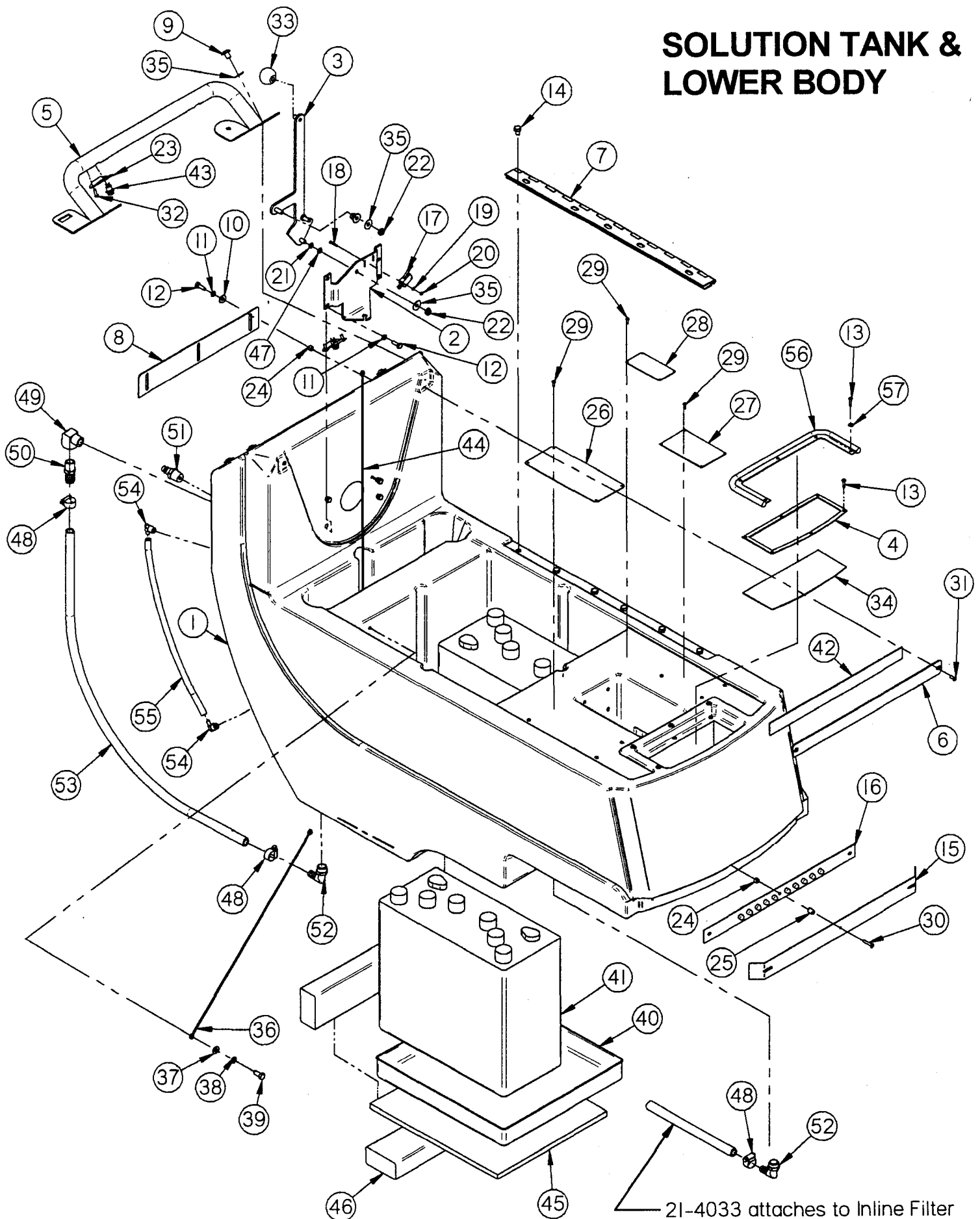
Technician Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Manager Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# SOLUTION TANK & LOWER BODY

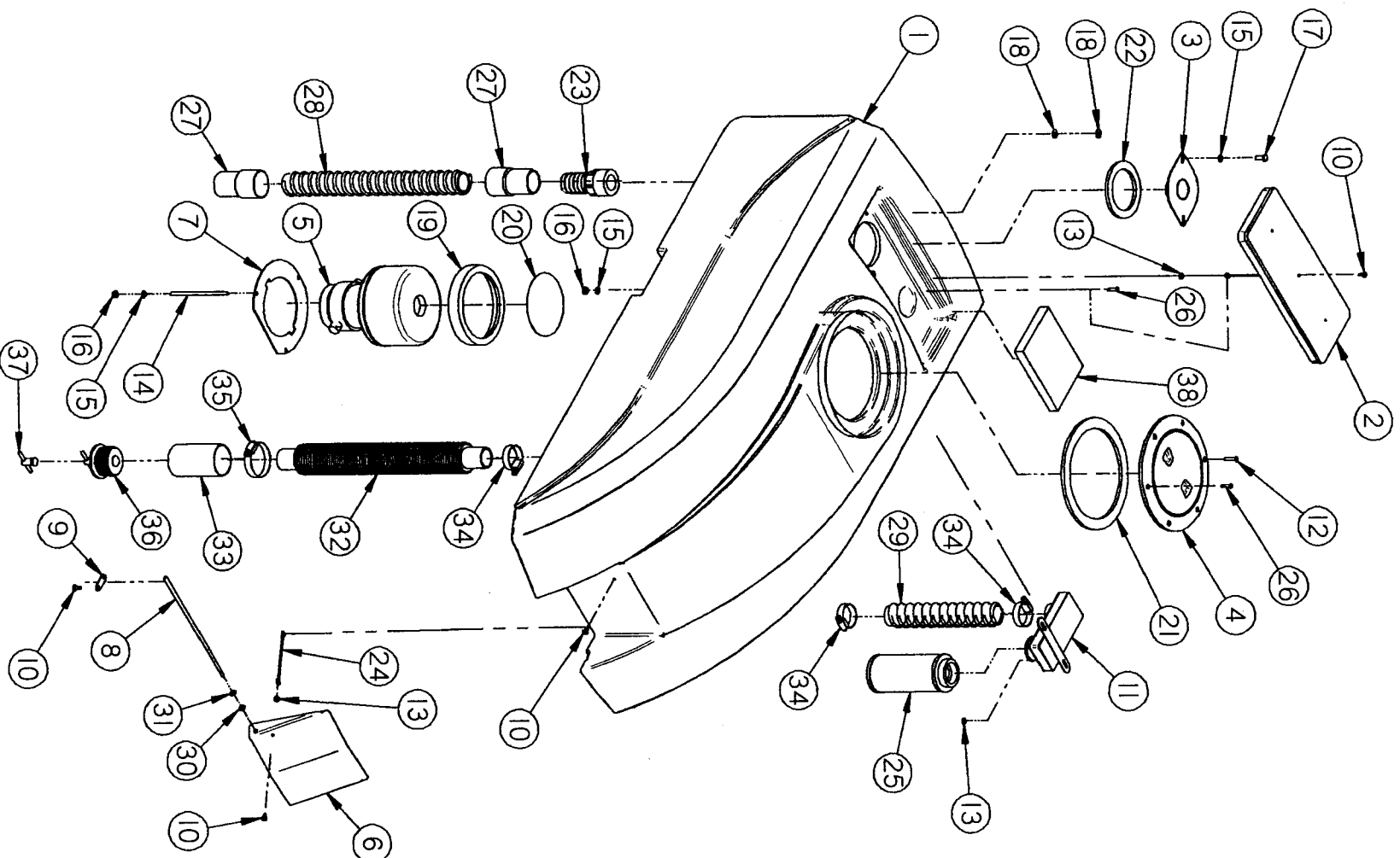




Item	Part #	Description	Qty
1	21-4140 21-4141	SOLUTION TANK, RED SOLUTION TANK, YELLOW	1
2	21-7110	PIVOT & GUIDE	1
3	21-7100	SQUEEGEE LEVER	1
4	21-4025	FILL SCREEN FRAME	1
5	21-1180	HANDLEBAR	1
6	21-7120	LIFT LEVER RETAINER	1
7	21-8000	HINGE 24" SS	1
8	21-2030	LATCH BAR	1
9	H-73811	BHSCS 3/8"- 16 X 1/2" SS	4
10	H-33004	FW 1/4" USS	3
11	H-33618	LW 1/4"	7
12	H-13003	HCS 1/4"-20 X 3/4"	7
13	H-72916	PPH SMS #8 X 3/4" SS	11
14	H-13051	HCS 5/16"- 18 X 1/2"	6
15	21-2800	LIGHT GUARD	1
16	21-2810	SAFETY LIGHT (OPTIONAL)	1
17	21-2230	MICRO SWITCH	1
18	H-28667	PHP MS 4-40 X 3/4"	2
19	H-33066	FW #4 SAE	2
20	H-37006	NYLOK #4-40	2
21	H-00283	1/4" NYLON WASHER	1
22	H-NJ05C	JNYL 5/16"- 18 SS	4
23	7-228	SWITCH MNT PLATE	2
24	H-00302	1/4" NYLON SPACER	6
25	H-00303	1/2" NYLON SPACER	3
26	21-1032	WARNING PLATE	1
27	5-728	DETERGENT WARNING PLATE	1
28	4-101	SERIAL NUMBER PLATE	1
29	H-72904	STS #6 X 1/2" SS	9
30	H-72537	PHP MS 10-32 X 1 1/4" SS	3
31	H-29048	RPH #10-32 X 1/2"	2
32	H-28878	RPH #8-32 X 1/2"	4
33	21-7101	LIFT KNOB	1
34	21-4020	FRONT FILL SCREEN	1
35	H-71016	FW 5/16" X 7/8" USS	7
36	21-7040	TANK CABLE	1
37	H-33080	FW 5/16" SAE	1
38	H-33620	LW 5/16"	1

Item	Part #	Description	Qty
39	H-13053	HCS 5/16"-18 X 3/4"	1
40	8-148	BATTERY TRAY	1
41	2-271	J 185 H BATTERY 12 V 205 AH	2
42	21-7105	HDPE WEAR STRIP	1
43	7-229	PUSH BUTTON SWITCH	2
44	21-7190	SQUEEGEE LIFT CABLE	1
45	21-1380	BATTERY UNDRLAYMENT	1
46	21-1381	14" 2 X 4 SPACER	2
47	H-00282	1/4" NYLON WASHER	1
48	H-081	CLAMP 7/16"- 25/32" SS	3
49	21-4042	1/2 STREET ELBOW	1
50	21-4043	1/2 NPT TO 3/4 BARB	1
51	21-4048	1/2 MNPT TO 3/8 PLUG, BR.	1
52	5-447	1/2 NPT X 1/2" BARB ELBOW	2
53	21-4026	1/2" ID X 28" BLACK TUBING (Sol. Drain Hose)	1
54	290-4149	1/4" NPT X 1/4" BARB X 90 DEG	2
55	21-4150	1/4" ID CLEAR TUBE	1
56	21-4021	FILTER SCREEN GASKET	1
57	H-78009	FW 3/16" X 7/16" SS	5

# RECOVERY TANK & UPPER BODY



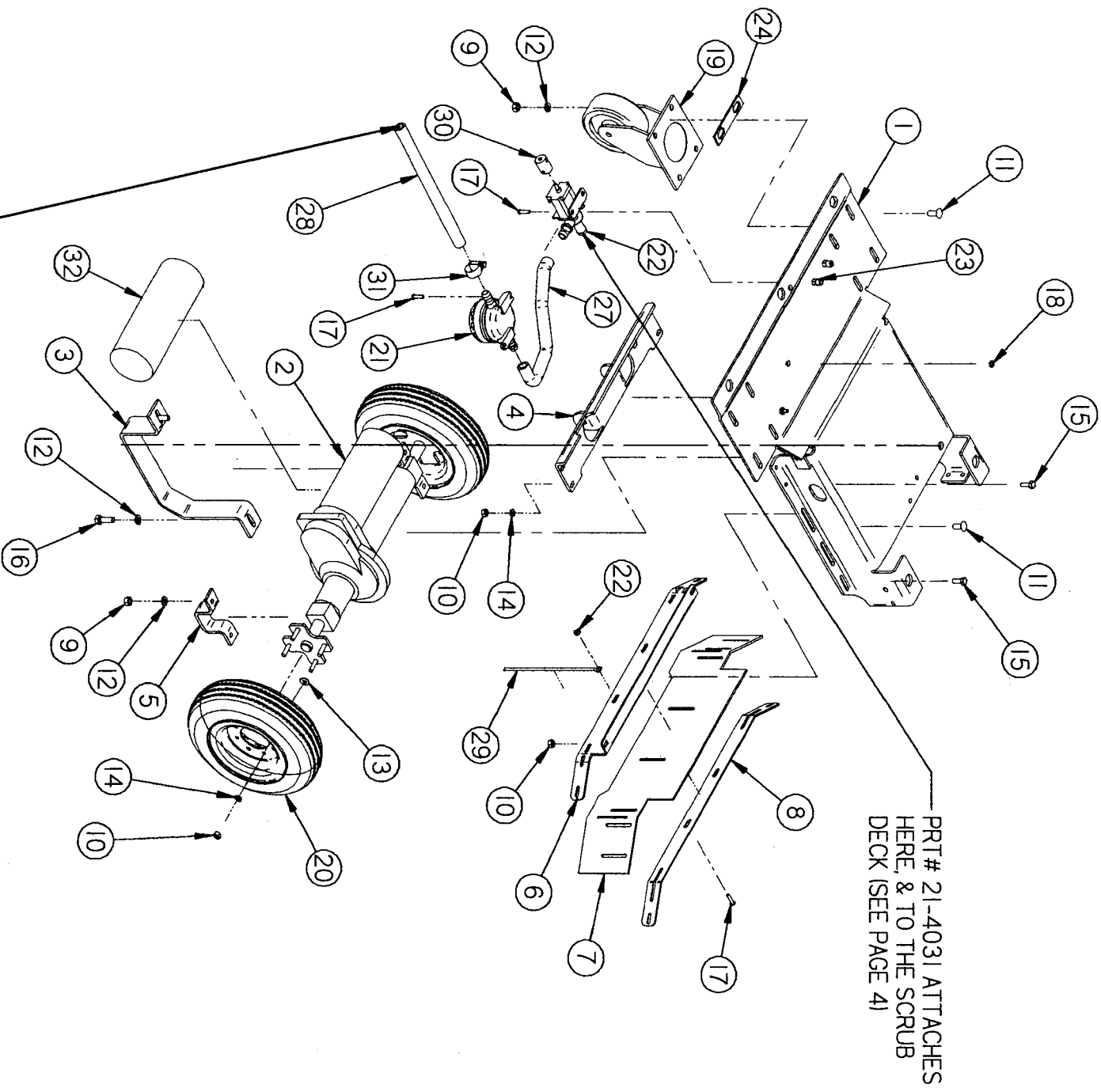
Item #	Part #	Description	Qty
1	21-7010 21-7011	RECOVERY TANK, RED RECOVERY TANK, YELLOW	1
2	21-4051	REC TANK VAC COVER, GASKET & LANYARD	1
3	21-4080	STRAINER	1
4	7-425	TANK SCREW ON LID W/GASKET	1
5	5-225	VAC MOTOR	1
6	21-4010	SOLUTION FILL DOOR	1
7	38-734	BLOWER RING	1
8	21-4000	FILL DOOR PIVOT ROD	1
9	21-5020	FILL DOOR CLIP	2
10	H-72563	RHP MS 10-32 X 1/2" SS	7
11	21-7060	BOX ASSEMBLY	1
12	H-72567	RHP 10-32 X 1 1/4" SS	2
13	H-70858	NYLOK NUT 10-32 SS	4
14	H-00221	1/4-20 X 5" THRD STUD SS	3
15	H-71063	LOCK WASHER 1/4 SS	8
16	H-70710	HEX NUT 1/4-20 SS	6
17	H-70003	BOLT 1/4 -20 X 3/4" SS	2
18	H-71013	SAE FW 1/4 SS	4
19	5-708A	VAC MOTOR GASKET	1
20	21-4095	VAC MOTOR SCREEN	1
21	38-742	SCREW ON LID GASKET	1
22	38-738	STRAINER GASKET	1
23	21-4075	1 1/2 NPT X 1 1/2 M H. BARB	1
24	21-4060	LANYARD	1
25	21-4085	VAC SCREEN	1
26	H-72916	PH STS #8-32 X 3/4" SS	5
27	21-4072	HOSE CUFF, 1 1/2"	2
28	21-4074	VAC HOSE, 31"	1
29	21-4073	VAC HOSE, 19"	1
30	H-00282	1/4" NYLON WASHER	2
31	H-00283	1/4" NYLON WASHER	2
32	21-7000	DRAIN HOSE	1
33	5-720	DRAIN HOSE END TUBE	1
34	H-0427612	CLAMP 3/4 - 1 3/4" SS	3
35	5-719	CLAMP 1 9/16 - 2 1/2 " SS	1
36	5-727	DRAIN HOSE PLUG	1
37	5-727T	T-HANDLE	1
38	21-4086	VAC BOX FILTER	1

**NOTE:**

GASKET FOR ITEM 2 SOLD  
SEPARATELY UNDER PART  
NUMBER: 21-4090.



# CHASSIS



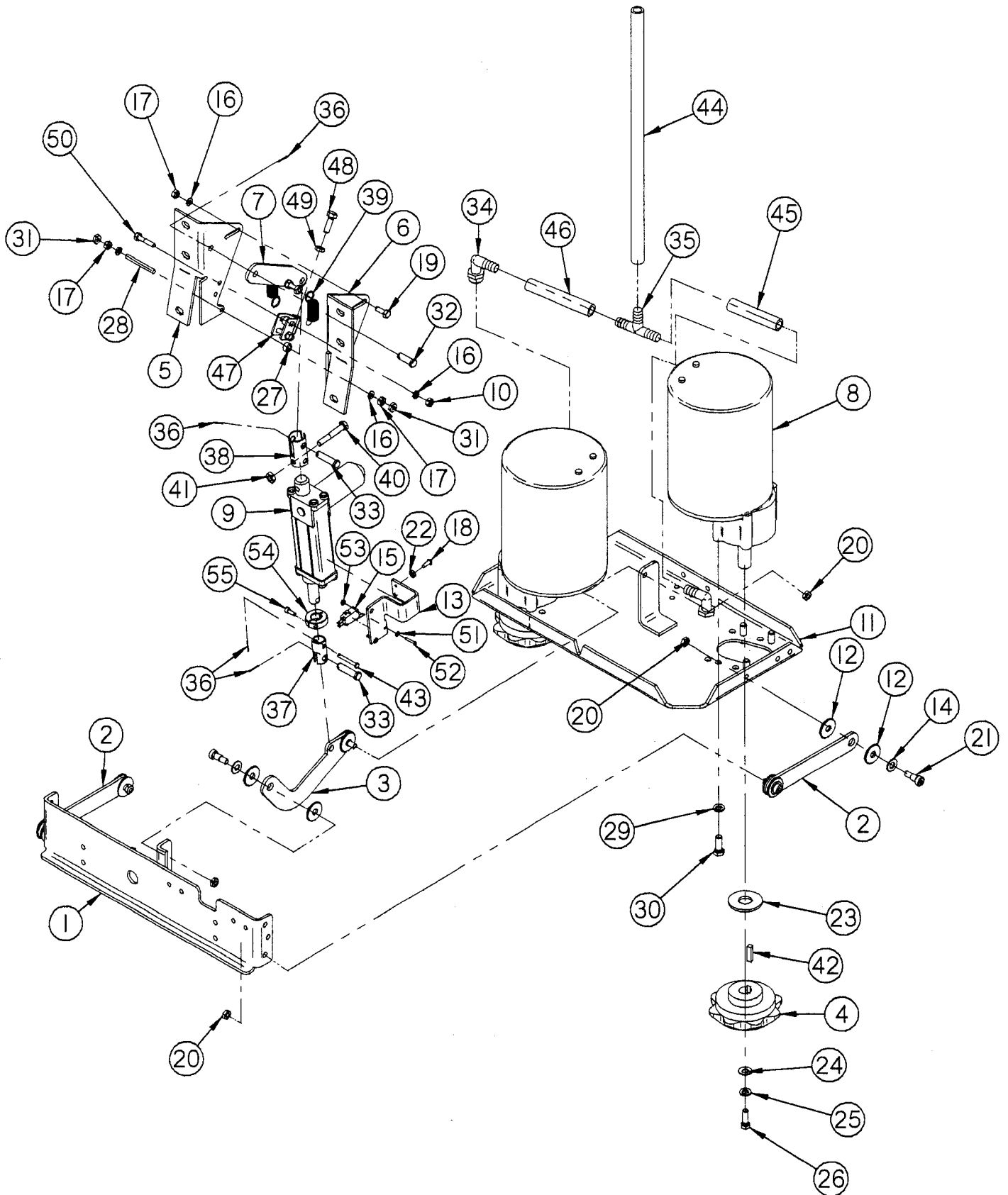
Item #	Part #	Description	Qty
1	21-1000	MAIN FRAME	1
2	21-3000	TRANSAXLE	1
3	21-1020	MOTOR GUARD	1
4	21-7130	SQUEEGEE CROSS MEMBER	1
5	21-1010	AXLE MOUNT	2
6	21-1051	REAR SPLASH BRACKET	1
7	21-1055	SPLASH CURTAIN	1
8	21-1052	REAR CURTAIN CLAMP	1
9	H-36104	HN 5/16"-18	12
10	H-70710	HN 1/4"- 20 SS	8
11	H-21253	CB 5/16"- 18 X 3/4"	12
12	H-33620	LW 5/16"	14
13	H-71013	FW 1/4" X 5/8" SS	2
14	H-71063	LW 1/4" SS	6
15	H-70003	HCS 1/4"- 20 X 3/4" SS	6
16	H-13055	HCS 5/16"-18 X 1"	2
17	H-72565	RPH #10-32 X 3/4" SS	12
18	H-70858	NYLOK #10-32 SS	10
19	21-3020 21-3030	CASTER CASTER NON-MRKG	2
20	21-3010 21-3040 21-3050	DRIVE TIRE, P7 DRIVE TIRE NON-MRK PNEUM DRIVE TIRE, NON-MARKING, FOAM FILLED	2
21	5-913	INLINE FILTER	1
22	21-4500	ADJUSTABLE SOLUTION FLOW VALVE	1
23	H-250HCN	HCN 1/4"-20	2
24	7-128	CASTER SPACER (W/GREY TIRES ONLY)	4
25	21-2270	SOLUTION CABLE ( NOT SHOWN SEE NOTE)	1
26	21-2260	SHEATHING ( NOT SHOWN SEE NOTE)	1
27	21-4032	1/2" ID CLEAR TUBE	1
28	21-4033	1/2" ID CLEAR TUBE X 16-1/2"	1
29	22-2860	7" FLAT BRAIDED CABLE	1

Item #	Part #	Description	Qty
30	21-5011	LOWER COUPLER	1
31	H-081	CLAMP 7/16"- 25/32" SS	3
32	21-3000M	TRANSAXLE MOTOR, 24V	1

NOTE:  
ITEMS 25, 26, 30  
NOT USED ON CURRENT PRODUCTION.

NOTE:  
ITEMS 25 & 26 ATTACH TO ITEM 30

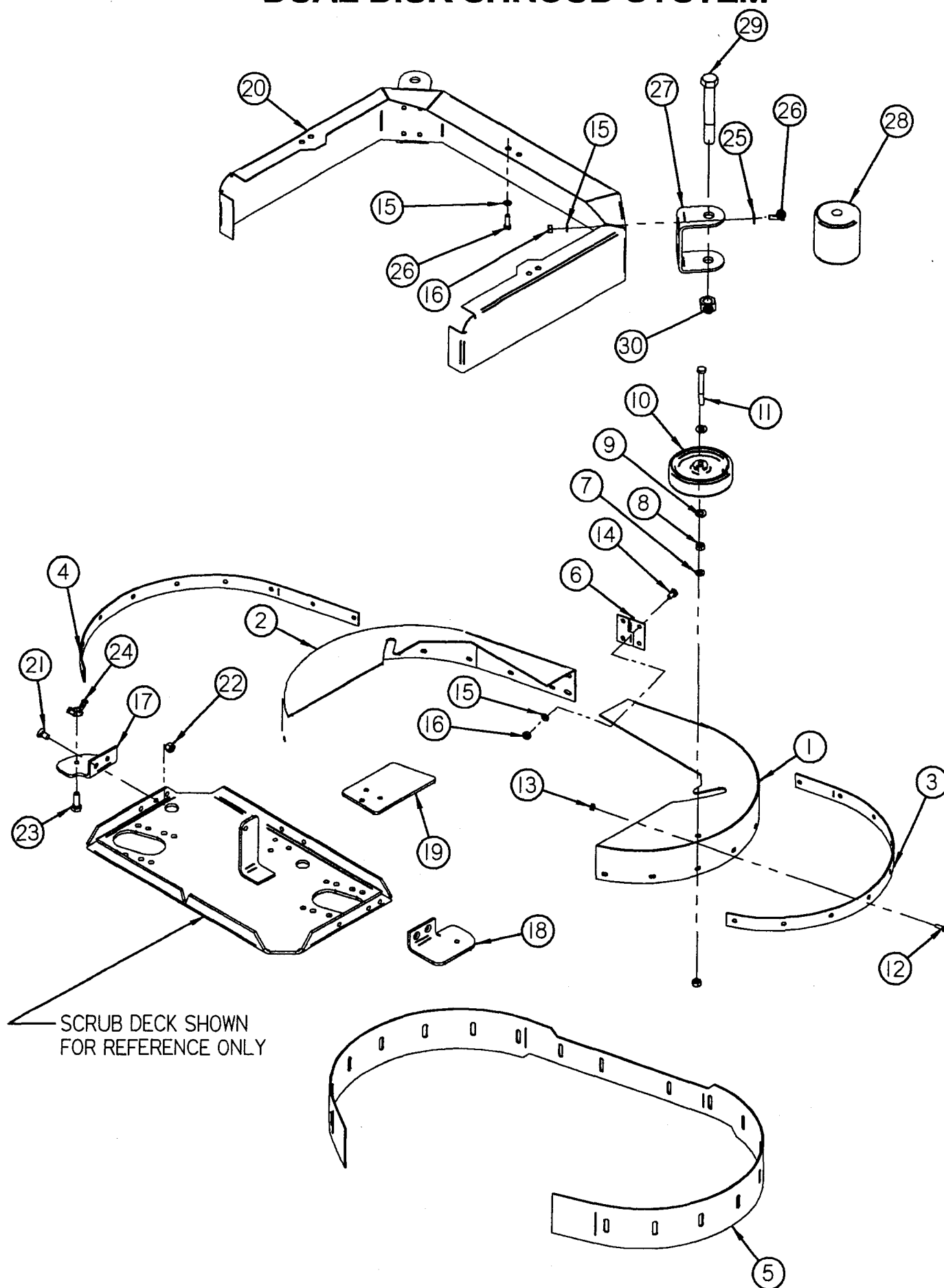
# DUAL DISK BRUSH HEADS





Item	Part #	Description	Qty	Item	Part #	Description	Qty
1	21-1030-00	CENTER PIVOT	1	37	21-1049	ACTUATOR LINK, LOWER	1
2	21-1050	PARALLEL LINK	2	38	21-1048	ACTUATOR LINK, UPPER	1
3	21-1070	CENTER ARM	1	39	21-6000	DOWN PRESSURE SPRING	2
4	21-5000	BRUSH DRIVER	2	40	H-13061	HCS 5/16 -18 X 2"	1
5	21-1080	FIXED ACTUATOR, L	1	41	H-37021	NYLOCK NUT 5/16 X 18	1
6	21-1081	FIXED ACTUATOR, R	1	42	5-431A	1/4" X 1" KEY	2
7	21-1060	ACTUATOR ANCHOR	1	43	H-66010	CLEVIS 3/16" X 1 1/2"	1
8	21-2500	MOTOR 3/4 HP X 270 RPM	2	44	21-4031	1/2" TUBE X 18"	1
	38-222	MOTOR 1 HP X 350 RPM		45	21-4035	1/2" TUBE X 3 1/2" (21")	1
9	21-2210	DISK ACTUATOR	1		25-4035	1/2" TUBE X 4" (25-27")	
10	H-36102	HN 1/4"- 20	2	46	21-4034	1/2" TUBE X 4 1/2" (21")	1
11	21-1041	MODEL 21 DECK	1		25-4034	1/2" TUBE X 5 1/8" (25-27")	
	25-1041	MODEL 25/27 DECK					
12	H-76063	WASHER 3/8 NYLON	12	47	22-1087	ANCHOR STOP	1
13	22-2220	SWITCH CLAMP	1	48	H-13055	HCS 5/16"- 18 X 1"	1
14	H-71017	WASHER 3/8 X 7/8 SS	6	49	H-36204	JN 5/16"- 18	1
15	21-2230	MICRO SWITCH	1	50	H-13007	HCS 1/4"- 20 X 1 1/4"	2
16	H-33618	LW 1/4"	2	51	H-33066	FW #4 SAE	2
16	H-71063	LW 1/4" SS	5	52	H-72490	RPH #4-40 X 0.75"	2
17	H-70710	HN 1/4"- 20 SS	5	53	H-37006	NYLOK NUT, #4-40	2
18	H-29048	RPH #10-32 X 1/2"	2	54	H-34267	SHAFT COLLAR, 5/8" ID	1
19	H-70003	HCS 1/4"- 20 X 3/4" SS	1	55	H-93164	#10-32 X 1/2"	1
20	H-NJ05C	JAM NYLOCK 5/16-18 SS	6				
21	H-74121	SHOULDER BOLT 3/8 SS	6				
22	H-37408	KN #10-32	2				
23	H-00222	FW 3/4 X 1 1/8 X 3/32 SS	2				
24	H-99001	WASHER 3/8 SS	2				
25	H-71065	LOCK WASHER 3/8 SS	2				
26	H-70055	HCS 5/16-18 X 1" SS	2				
27	21-2211	SPACER 1/2 OD X 1/4"	2				
28	H-00116	STUD 1/4-20 X 2 1/4" SS	2				
29	H-71067	LOCK WASHER 3/8 SS	8				
30	H-70055	HCS 3/8-16 X 1" SS	8				
31	H-NJ04C	JAM NYLOCK 1/4-20 SS	4				
32	H-ZCPI42	CLEVIS PIN 3/8 X 1"	1				
33	H-ZCPI54	CLEVIS PIN 3/8 X 1 1/2"	2				
34	5-447	1/2 NPT X 1/2" BARB ELBOW	2				
35	5-446	1/2 " PLASTIC BARB TEE	1				
36	H-RUE14	3/8 RUE RING COTTER	4				

# DUAL DISK SHROUD SYSTEM

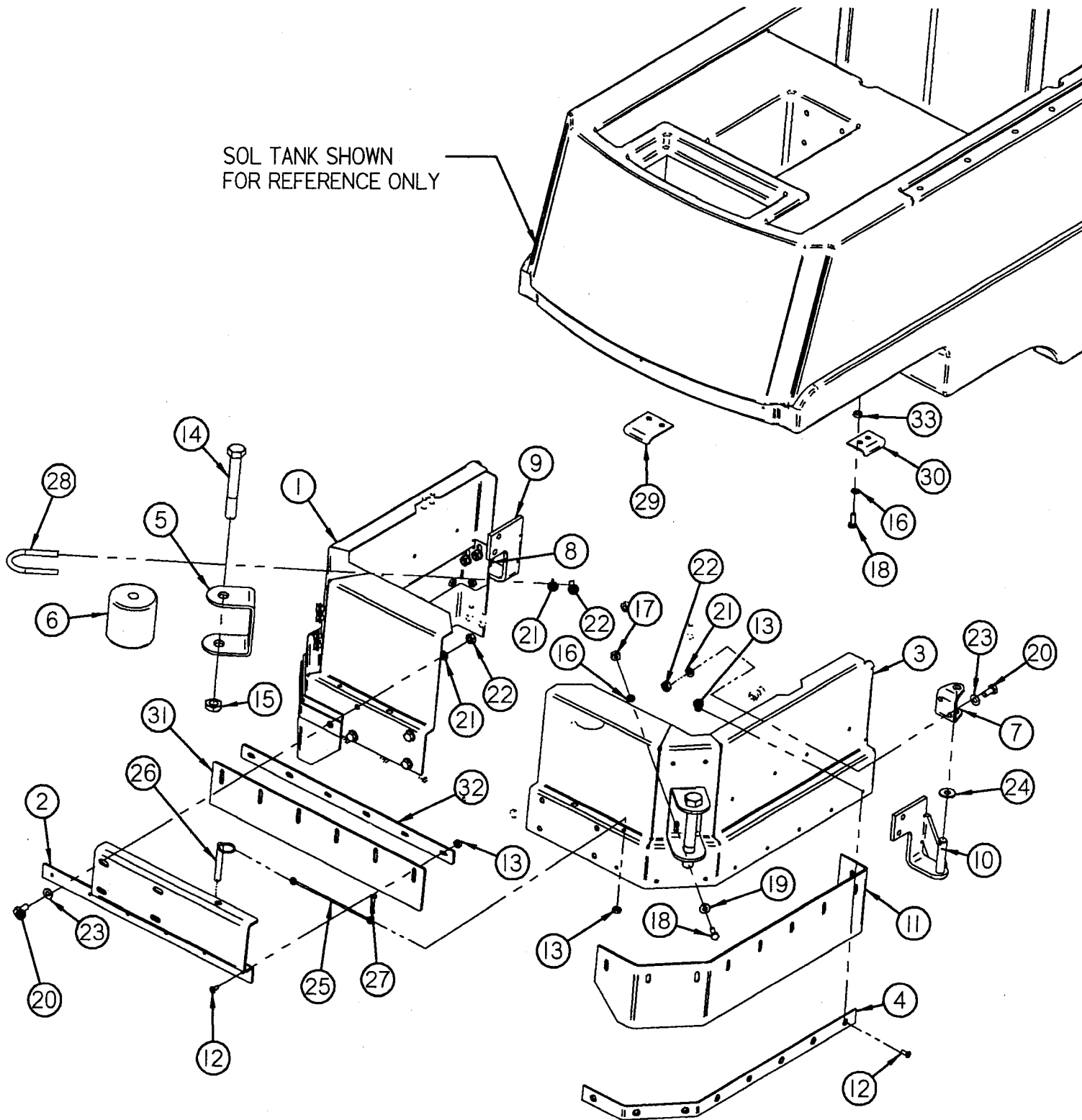


Item #	Part #	Description	Qty	Item #	Part #	Description	Qty
1	21-1111	21" SHROUD R	1	29	H-11321	HEX BOLT 5/8-11 X 4 1/2	2
	25-1111	25" SHROUD R		30	H-37038	JAM NYLOK 5/8-11	2
	27-1111	27" SHROUD R					
2	21-1101	21" SHROUD L	1				
	25-1101	25" SHROUD L					
	27-1101	27" SHROUD L					
3	21-1124	21" SHROUD BAND R	1				
	25-1124	25" SHROUD BAND R					
	27-1124	27" SHROUD BAND R					
4	21-1136	21" SHROUD BAND L	1				
	25-1136	25" SHROUD BAND L					
	27-1136	27" SHROUD BAND L					
5	21-1165	21" SHROUD CURTAIN	1				
	25-1165	25" SHROUD CURTAIN					
	27-1165	27" SHROUD CURTAIN					
6	21-1115	SHROUD HINGE	1				
7	H-33620	5/16 LOCK WASHER	1				
8	H-36104	5/16-18 HEX NUT	2				
9	H-33080	5/16 SAE WASHER	2				
10	5-760B	SIDE WHEELS	1				
11	H-13063	5/16-18 X 2 1/2 HCS	1				
12	H-72683	FHP MS 10-32 X 5/8 SS	18				
13	H-70858	NYLOK NUT 10-32 SS	18				
14	H-70001	HCS 1/4-20 X 1/2 SS	4				
15	H-71063	LOCK WASHER 1/4 SS	15				
16	H-70710	HEX NUT 1/4-20 SS	9				
17	21-1120	SHROUD MNT L 21"	1				
	27-1120	SHROUD MNT L 25/27"					
18	21-1130	SHROUD MNT R 21"	1				
	27-1130	SHROUD MNT R 25/27"					
19	21-1138	FRNT SHROUD MNT	1				
20	21-1142	FRONT BUMPER	1				
21	H-72706	CS 1/4-20 X 5/8 SS	7				
22	H-NJ04C	JAM NYLOK 1/4-20	7				
23	H-70105	HCS 3/8-16 X 1 SS	2				
24	5-786	WINGNUT 3/8-16 NICKEL	2				
25	H-71013	SAE FW 1/4 SS	6				
26	H-70003	HCS 1/4-20 X 3/4 SS	11				
27	21-1126	ROLLER BRACKET	2				
28	21-1127	ROLLER	2				



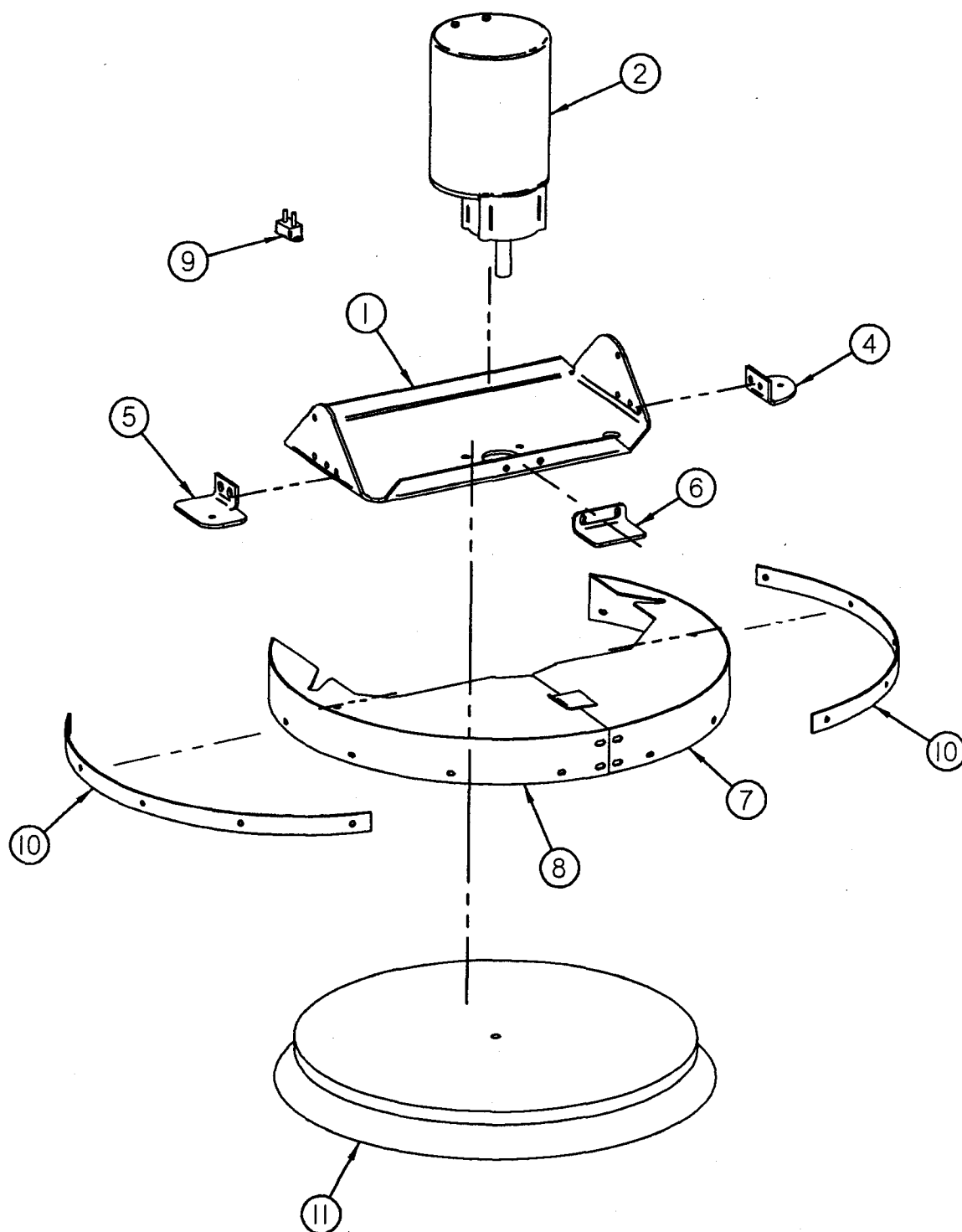
# DUAL DISK "JAW" SYSTEM

SOL TANK SHOWN  
FOR REFERENCE ONLY



Item #	Part #	Description	Qty
1	21-1100	JAW, RH 21	1
	25-1100	JAW, RH 25	
	27-1100	JAW, RH 27	
2	21-1102	LOCK CHANNEL 21	1
	25-1102	LOCK CHANNEL 25/27	
3	21-1110	JAW, LH 21	1
	25-1110	JAW, LH 25	
	27-1110	JAW, LH 27	
4	21-1125	JAW BAND 21	2
	25-1125	JAW BAND 25	
	27-1125	JAW BAND 27	
5	21-1126	ROLLER BRACKET	2
6	21-1127	ROLLER	2
7	21-1151	FEMALE HINGE, L	1
8	21-1150	FEMALE HINGE, R	1
9	21-1140	MALE HINGE R	1
10	21-1141	MALE HINGE L	1
11	21-1170	JAW SKIRT 21	2
	25-1170	JAW SKIRT 25	
	27-1170	JAW SKIRT 27	
12	H-72683	FH P MS 10-32 X 5/8" SS	22
13	H-70858	NYLOK NUT 10-32 SS	25
14	H-11321	HB 5/8"- 11 X 4 1/2"	2
15	H-37038	JNYL 5/8"- 11	2
16	H-71063	L W 1/4 SS	14
17	H-70710	NUT 1/4-20 SS	8
18	H-70003	BOLT 1/4 -20 X 3/4" SS	14
19	H-71013	SAE FW 1/4 SS	8
20	H-70053	HHCS 5/16-18 X 3/4" SS	8
21	H-71065	LW 5/16 SS	12
22	H-70711	NUT 5/16-18 SS	12
23	H-33080	SAE FW 5/16	8
24	H-76063	NYLON WASHER 3/8	2
25	21-4060	LANYARD	1
26	H-DRI54	3/8 X 2" RING PIN	1
27	H-29055	PPH MS 10-32 X 5/8" SS	1
28	H-42223	5/16-18 X 2 1/4" U BOLT	2
29	21-2100	FRONT CLIP	1
30	21-2101	SIDE CLIP	2
31	25-1104	CHANNEL CURTAIN (W/25-1102)	1
32	25-1103	CHANNEL BAND (W/25-1102)	1
33	H-94639	1/2 X 3/16" NYLON SPACER	6

## 23" SINGLE DISK BRUSH HEAD





# SPECIAL PARTS

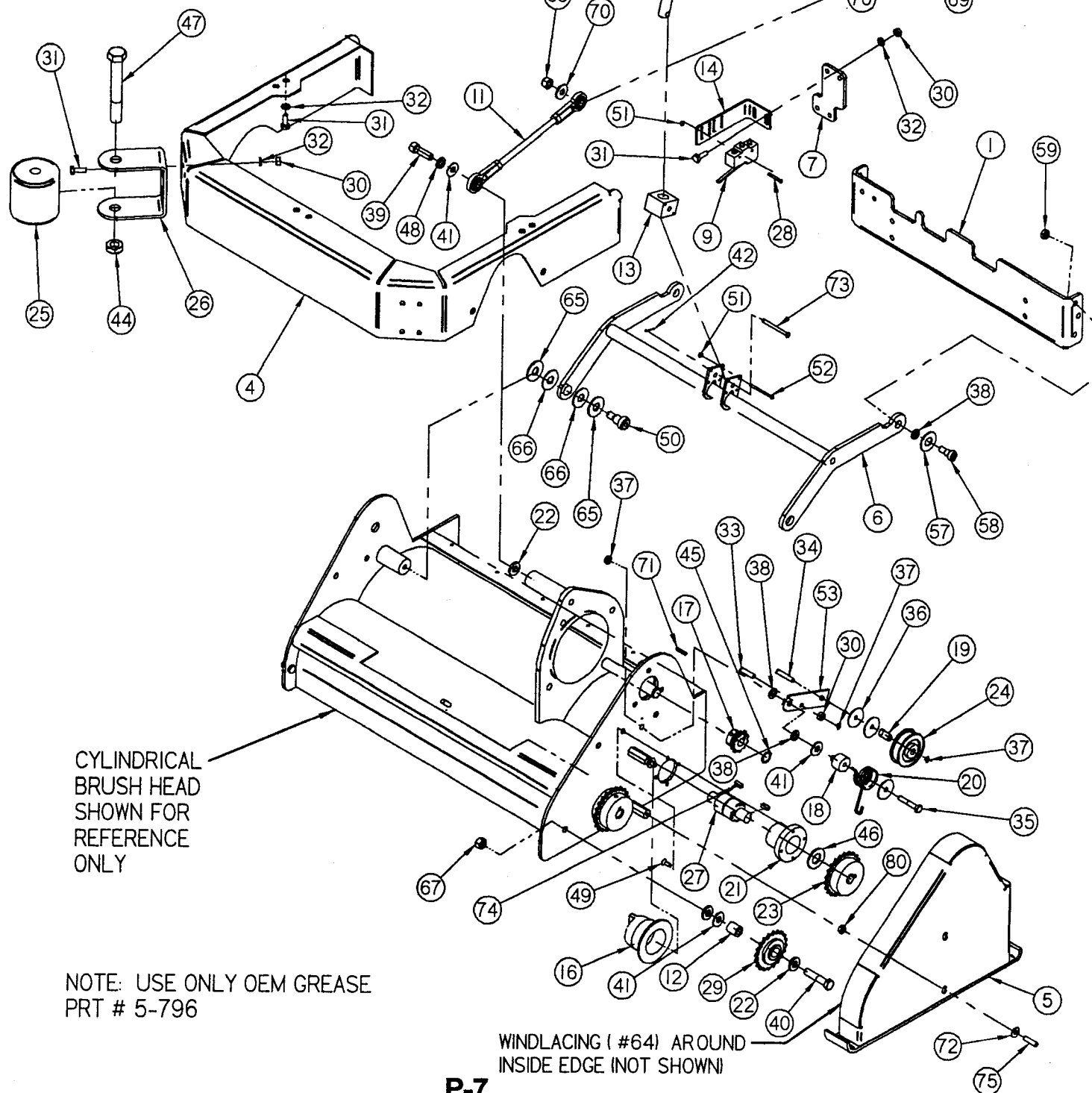
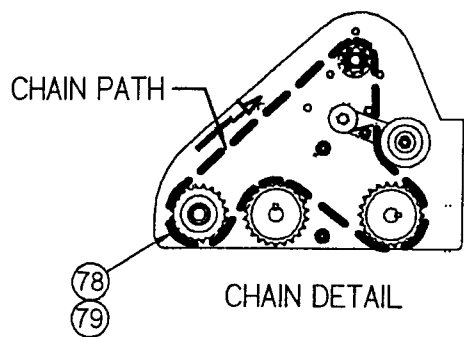
Item No.	Part Number	Part Description	Qty
1	23-1041-01	SCRUB DECK	1
2	5-222	MOTOR 1 HP X 200 RPM	1
3	23-1165	BRUSH SHROUD CURTAIN (NOT SHOWN)	1
4	27-1120	SHROUD MOUNT L	1
5	27-1130	SHROUD MOUNT R	1
6	23-1138	FRONT SHROUD MOUNT	1
7	23-1101	LEFT BRUSH SHROUD	1
8	23-1111	RIGHT BRUSH SHROUD	1
9	8-285A	CIR. BREAKER - 40A	1
10	23-1136	SKIRT BAND	2
11	Nylon - 23-42IN Light Grit - 23-42IPS Midi Grit - 23-42IC Tough Grit - 23-42IS	BRUSH	1
12	Pad Driver - 23-42ID White - 23-422W Green - 23-422G Red - 23-422R Blue - 23-422BL Brown - 23-422BR Black - 23-422B Super Black - 23-422BB	PAD (NOT SHOWN)	1

CHAIN PATH

CHAIN DETAIL

78

79



NOTE: USE ONLY OEM GREASE  
PRT # 5-796

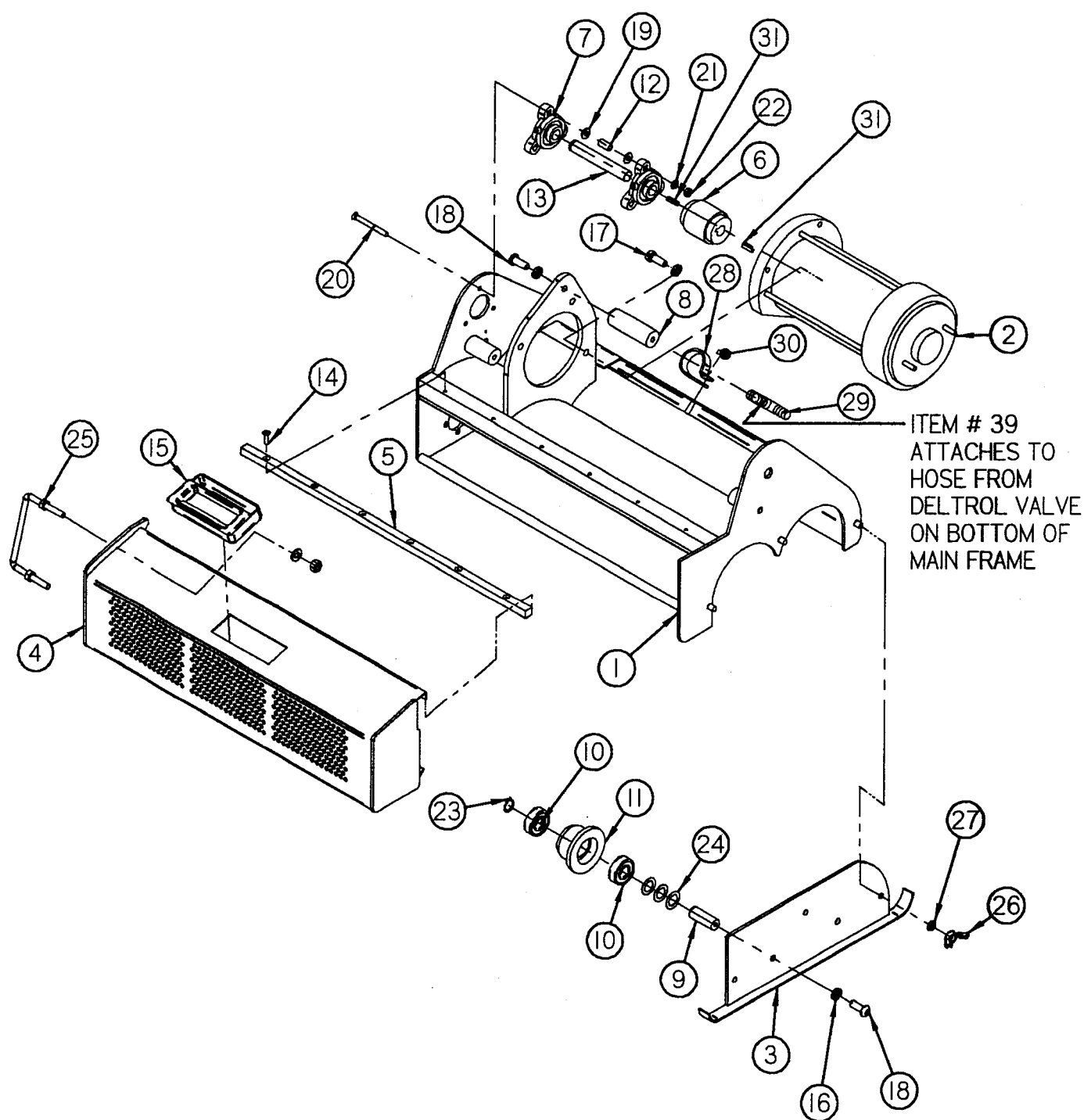
WINDLACING ( #64) AROUND  
INSIDE EDGE (NOT SHOWN)

Item #	Part #	Description	Qty
1	22-1030	CENTER PIVOT	1
2	22-1081	FIXED ACTUATOR, R	1
3	22-1080	FIXED ACTUATOR, L	1
4	22-1142A	BANDEAU COVER	1
5	22-9021	CHAIN GUARD	1
6	22-9020	LIFT ARM ASSEMBLY	1
7	22-9110	SWITCH MNT PLATE	1
8	22-2210	CYLINDRICAL ACTUATOR	1
9	5-223	LIMIT SWITCH	1
10	22-1060	ACTUATOR ANCHOR	1
11	22-8430	ADJ. LATERAL ARM	1
12	5-793	IDLER SPACER	1
13	22-5010	LIFT BLOCK	1
14	21-5010	SWITCH MOUNT	1
15	22-5011	ACTUATOR LINK	1
16	5-837	BROOM DRIVER	2
17	5-826	10 TOOTH SPROCKET	1
18	5-798	SPRING PIVOT	1
19	5-822	Spacer, 1/4" ID, 3/8" OD, 11/16" Long	1
20	4-319	TENSION SPRING	1
21	1-305	BEARING HOUSING	2
22	H-98025	WASHER 3/8 GRADE 8	3
23	5-828	22 TOOTH SPROCKET	2
24	4-317	IDLER PULLEY	1
25	21-1127	ROLLER	2
26	22-1126	ROLLER BRACKET	2
27	5-824	DRIVE BEARING	2
28	H-28678	RPH #4-40 X 1"	2
29	5-827	20 TOOTH SPROCKET	1
30	H-70710	HN 1/4"- 20 SS	13
31	H-70003	HCS 1/4"- 20 X 3/4" SS	18
32	H-71063	LW 1/4" SS	18
33	H-00272	SCS 1/4"- 20 X 1.0"	1
34	H-93580	SCS 1/4"- 20 X 1 1/4"	1
35	H-15009	HCS 1/4"- 20 X 1-1/2" GRADE 8	1
36	H-33208	F W 1/4" X 1 1/4"	4
37	H-NJ04C	JNYL 1/4" - 20 SS	5
38	H-76063	FW 3/8" NYLON	4
39	H-73541	SHCS 3/8"- 16 X 1 1/4" SS	1
40	H-70145	HCS 3/8-24 X 1 3/4" SS	1

Item #	Part #	Description	Qty
41	H-71017	FW 3/8" SS	4
42	H-HAIR2	HAIR SPRING COTTER PIN	1
43	H-13005	HCS 1/4"-20 X 1"	2
44	H-37038	JNYL 5/8"- 11	2
45	H-68013	5/8 SNAP RING	1
46	H-00279	WASHER 5/8 TEFLON	2
47	H-11321	HB 5/8"- 11 X 4 1/2"	2
48	H-71067	LW 3/8" SS	1
49	H-72682	FHP 10-32 X 1/2" SS	8
50	H-25452	SB 1/2" X 1/2" SS	2
51	H-37006	NYLOK #4-40	4
52	H-00388	PPH MS #4-40 X 1 3/4"	2
53	22-7970	MOVABLE IDLER ARM	1
54	H-33618	LW 1/4"	2
55	21-2211	SPACER 1/2 OD X 1/4"	2
56	H-36102	HN 1/4"-20	2
57	H-71021	FW 3/8" X 7/8" SS	2
58	H-25444	SB 3/8" X 3/8" SS	2
59	H-NJ05C	JNYL 5/16"- 18 SS	2
60	H-RUE14	3/8 RUE RING COTTER	1
61	H-37021	NYLOK 5/16"-18	1
62	H-ZCPI54	CLEVIS PIN 3/8 X 1 1/2"	1
63	H-13061	HCS 5/16"- 18 X 2"	1
64	5-845A	WINDLACING - (WEATHER STRIPPING)	1
65	H-71021	FW 1/2" USS	4
66	H-95611	FW 1/2" PVC	4
67	H-70732	HN 3/8"- 24 SS	1
68	H-37024	NYLOK 3/8"-16	1
69	H-13105	HCS 3/8"- 16 X 1"	1
70	H-33008	FW 3/8" USS	2
71	H-01343	1/8" X 1/8" X 3/4" KEY	1
72	H-71013	FW 1/4" X 5/8" SS	2
73	H-66012	CLEVIS 3/16 X 2"	1
74	H-K1432	3/16" X 1/2" KEY	4
75	H-255HD	STUD 1/4"- 20 X 1"	2
76	22-1087	ANCHOR STOP	1
77	H-02223	BHSCS 1/4 - 20 X 1" SS W/PELLET	1
78	22-8300	DRIVE CHAIN	1
79	5-831	MASTER LINK	1
80	H-36202	JN 1/4"- 20	2

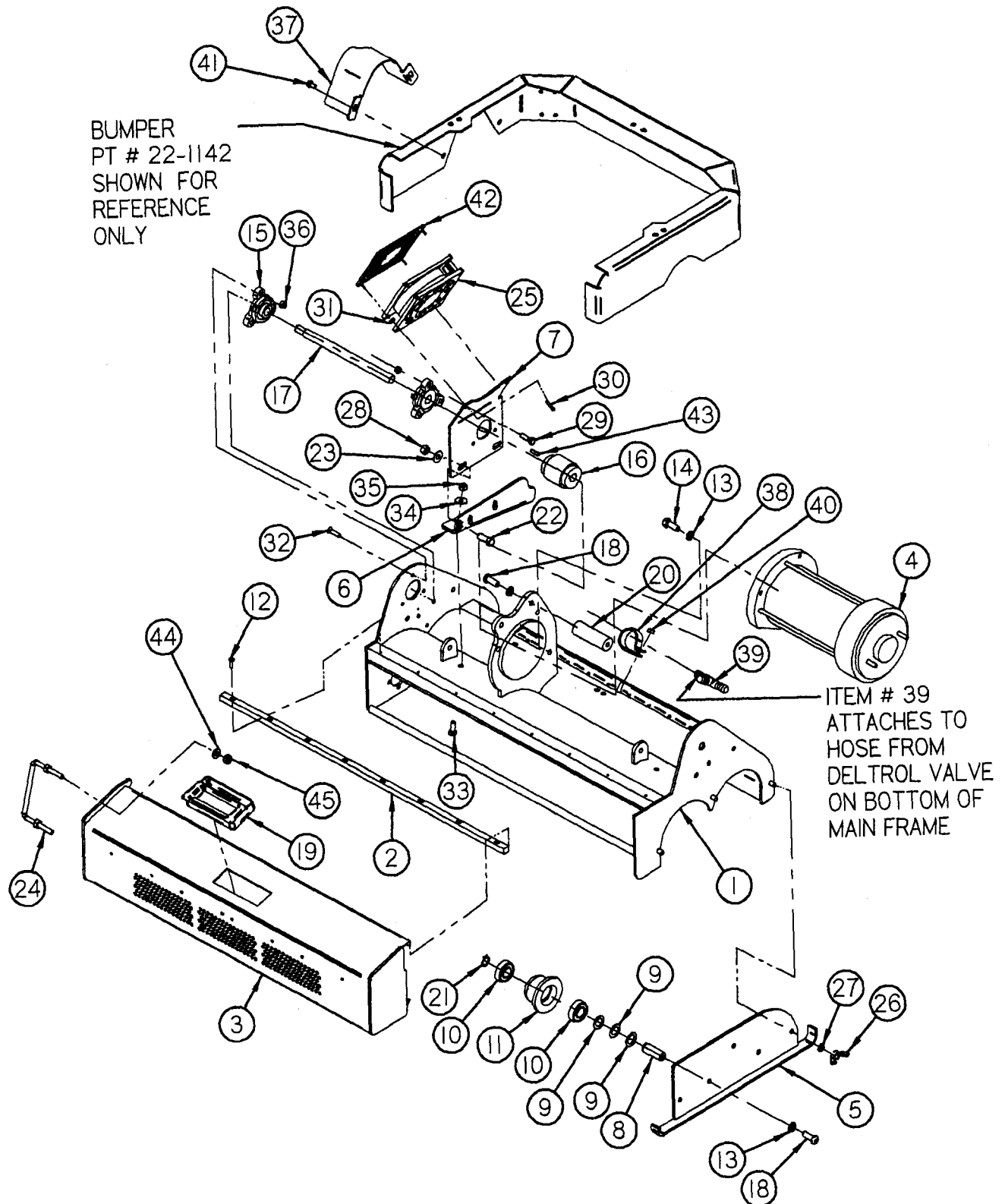


# 22" BRUSH HEAD (ONLY)



Item #	Part #	Description	Qty
1	22-9000	CYL BRUSH HEAD	1
2	22-2110	2 HP MOTOR	1
3	5-801	IDLER DOOR	1
4	22-9050	22" HOPPER	1
5	22-8320	HOPPER RAIL	1
6	8-613	FLEXIBLE COUPLER	1
7	5-829	FLANGE BEARING	2
8	22-9812	UPPER STANDOFF	1
9	5-858	IDLER SHAFT	2
10	1-421	IDLER BEARING	4
11	5-838	BRUSH IDLER	2
12	22-9814	3/4" SPACER	3
13	22-3010	DRIVE SHAFT	1
14	H-72684	FHP 10-32 X 3/4" SS	6
15	5-849	HOPPER HANDLE	1
16	H-71067	LW 3/8" SS	6
17	H-70105	HCS 3/8"- 16 X 1" SS	3
18	H-73815	BH SCHS 3/8-16 X 1" SS	3
19	H-33078	WASHER 1/4 SAE SS	6
20	H-72722	FHP MS 1/4-20 X 2 1/2" SS	3
21	H-17063	LOCKWASHER 1/4 SS	3
22	H-NJ04C	JAM NYLOCK 1/4-20 SS	3
23	H-35313	17mm SNAP RING	2
24	H-17002	FW 17mm NYLON	6
25	5-834	HOPPER HANDLE	1
26	H-70911	WINGNUT 5/16-18 SS	3
27	H-71065	LW 5/16" SS	3
28	H-3225T5	RUBBER LOOP CLAMP	1
29	5-446	1/2 " PLASTIC BARBED TEE	1
30	H-70710	HN 1/4"- 20 SS	1
31	H-00270	3/16" X 3/4" KEY	2
32	H-33622	LW 3/8"	2
33	H-36106	HN 3/8"- 16	2

# 26" & 28" BRUSH HEAD (ONLY)

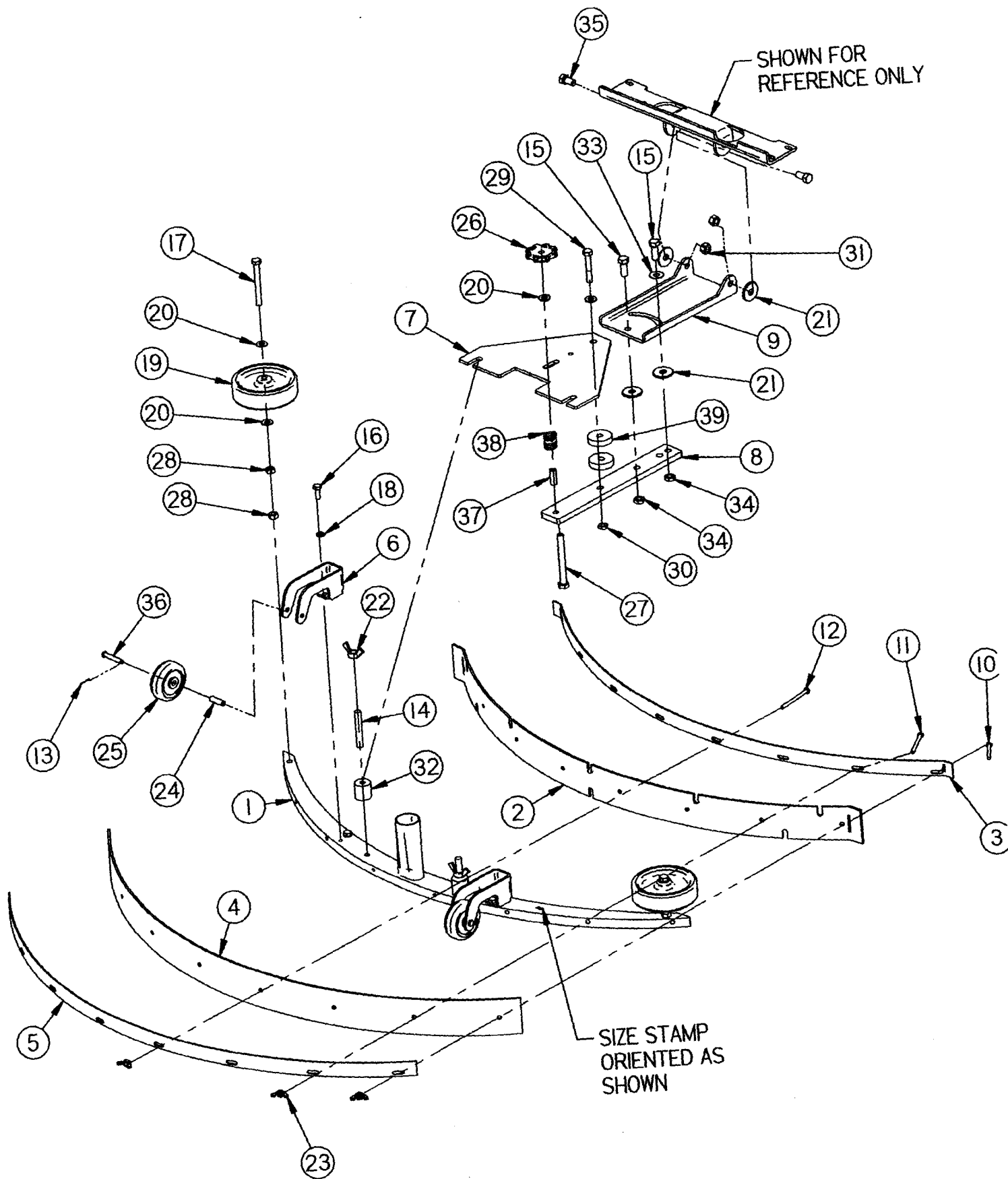


Item #	Part #	Description	Qty
1	25-9000 28-9000	26" CYL BRUSH HEAD 28" CYL BRUSH HEAD	1
2	25-8320 28-8320	26" HOPPER RAIL 28" HOPPER RAIL	1
3	25-9050 28-9050	26" HOPPER 28" HOPPER	1
4	22-2110	2 HP MOTOR	1
5	5-801	IDLER DOOR	1
6	28-9005	FAN PLATE MOUNT	1
7	28-9001	FAN MOUNT PLATE	1
8	5-858	IDLER SHAFT	2
9	H-17002	FW 17mm NYLON	6
10	I-421	IDLER BEARING	4
11	5-838	BRUSH IDLER	2
12	H-72684	FHP 10-32 X 3/4" SS	8
13	H-71067	LOCKWASHER 3/8 SS	6
14	H-70105	HCS 3/8-16 X 1" SS	3
15	5-829	FLANGE BEARING	2
16	8-613	FLEXIBLE COUPLER	1
17	290-8355 290-8360	DRIVE SHAFT, 26" CYL DRIVE SHAFT, 28" CYL	1
18	H-73815	BH SCHS 3/8-16 X 1" SS	3
19	5-849	HOPPER HANDLE	1
20	22-9812	UPPER STANDOFF	1
21	H-35313	17mm SNAP RING	2
22	H-70105	HB 3/8"- 16 X 1" SS	2
23	H-71017	FW 3/8" SS	2
24	5-834	HOPPER HANDLE	1
25	5-212	COOLING FAN	1
26	H-70911	WINGNUT 5/16"- 18 SS	3
27	H-71065	LW 5/16" SS	3
28	H-77862	NYLOK 3/8"- 16 SS	2
29	H-70005	HCS 1/4"- 20 X 1" SS	3
30	H-27390	RSL #8-32 X 3/4"	2
31	H-37012	NYLOK #8-32	2
32	H-72710	FHP 1/4"- 20 X 1"	3
33	H-13053	HCS 5/16"- 18 X 3/4"	2
34	H-71016	FW 5/16" X 7/8" USS	2
35	H-37021	NYLOK 5/16"- 18	2

Item #	Part #	Description	Qty
36	H-70860	NYLOK 1/4"- 20 SS	6
37	28-9002	SHAFT GUARD	1
38	H-3225T5	RUBBER LOOP CLAMP	1
39	5-446	1/2 " PLASTIC BARBED TEE	1
40	H-70710	HN 1/4"- 20 SS	1
41	H-13001	HCS 1/4"- 20 X 1/2"	2
42	5-212A	FAN COVER	1
43	H-00270	3/16" X 3/4" KEY	2
44	H-33622	LW 3/8"	2
45	H-36106	HN 3/8"- 16	2



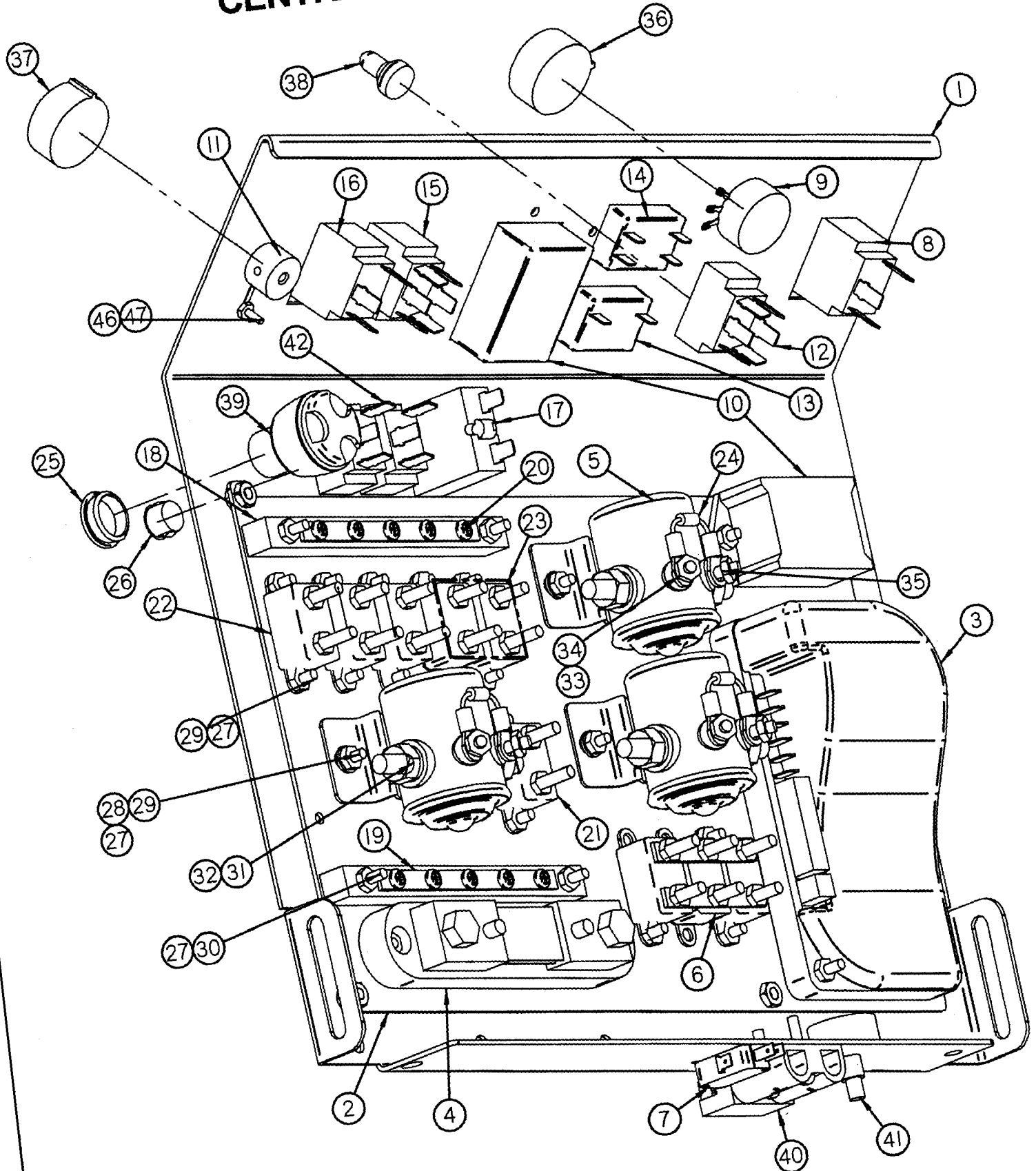
# SQUEEGEE SUSPENSION



Item	Part Number	Part Description	Qty
1	22-7181	30" SQUEEGEE WELDMENT	1
	25-7181	35" SQUEEGEE WELDMENT	
	28-7181	38" SQUEEGEE WELDMENT	
	290-7181	45" SQUEEGEE WELDMENT	
2	22-755G	30" SQUEEGEE BLADE, FRONT	1
	25-755G	35" SQUEEGEE BLADE, FRONT	
	28-755G	38" SQUEEGEE BLADE, FRONT	
	290-756G	45" SQUEEGEE BLADE, FRONT	
3	22-7170	30" SQUEEGEE BAND, FRONT	1
	25-7170	35" SQUEEGEE BAND, FRONT	
	28-7170	38" SQUEEGEE BAND, FRONT	
	290-7170	45" SQUEEGEE BAND, FRONT	
4	22-754G	30" SQUEEGEE BLADE, REAR	1
	25-754G	35" SQUEEGEE BAND, REAR	
	28-754G	38" SQUEEGEE BLADE, REAR	
	7-753G	45" SQUEEGEE BLADE, REAR	
5	22-7160	30" SQUEEGEE BAND, REAR	1
	25-7160	35" SQUEEGEE BAND, REAR	
	28-7160	38" SQUEEGEE BAND, REAR	
	290-7160	45" SQUEEGEE BAND, REAR	
6	21-7220	SQUEEGEE TRAIL MOUNTS	2
7	21-7610	SQUEEGEE TRIANGLE PLATE	1
8	21-7150	SQUEEGEE TRAIL ARM	1
9	21-7140	SQUEEGEE SWING PLATE	1
10	H-72555	PPH #10-32 X 1 3/4" SS	2
11	H-00249	PPH #10-32 X 2 1/4" SS	4
12	H-00288	PPH #10-32 X 2 1/2" SS	2
13	H-RUE8	1/4" RUE RING COTTER	2
14	H-00568	STUD 3/8"- 16 X 2 1/2" SS	2
15	H-70105	HCS 3/8"- 16 X 1" SS	2
16	H-70003	HCS 1/4"- 20 X 3/4" SS	4
17	H-10831	HCS 5/16"- 18 X 3" FT	2
18	H-71063	LW 1/4" SS	4
19	5-760B	SIDE WHEEL (GREY)	2
20	H-33080	FW 5/16" SAE	6
21	H-76063	FW 5/16" NYLON	4
22	5-786	WINGNUT 3/8"-16 NICKEL	2
23	H-70908	WINGNUT 10-32 SS	8
24	5-757B	BUSHING .255" X 1.03"	2
25	21-7570	BACK UP WHEEL (GREY)	2
26	21-7205	PALM GRIP KNOB, 3/8-24	1
27	H-10055	HCS 3/8"- 24 X 3.5" SS	1
28	H-36104	HN 5/16"-18	4
29	H-13061	HCS 5/16"- 18 X 2"	1
30	H-70811	JAM NUT 5/16-18 SS	1

Item	Part Number	Part Description	Qty
31	H-36106	HN 3/8"-16	2
32	5-846	PIVOT SHAFT	2
33	H-71017	FW 3/8" X 7/8" SS	1
34	H-70812	JAM NUT 3/8-16 SS	2
35	H-70103	HCS 3/8"-16 X 3/4" SS	2
36	HZCP44	CLEVIS PIN 1/4 X 1 1/2"	2
37	7-782C	5/16 CLEAR TUBING	1
38	21-7240	SPRING	1
39	4-446	GROMMET-3/8 ID X 1-1/2 OD X .375	3

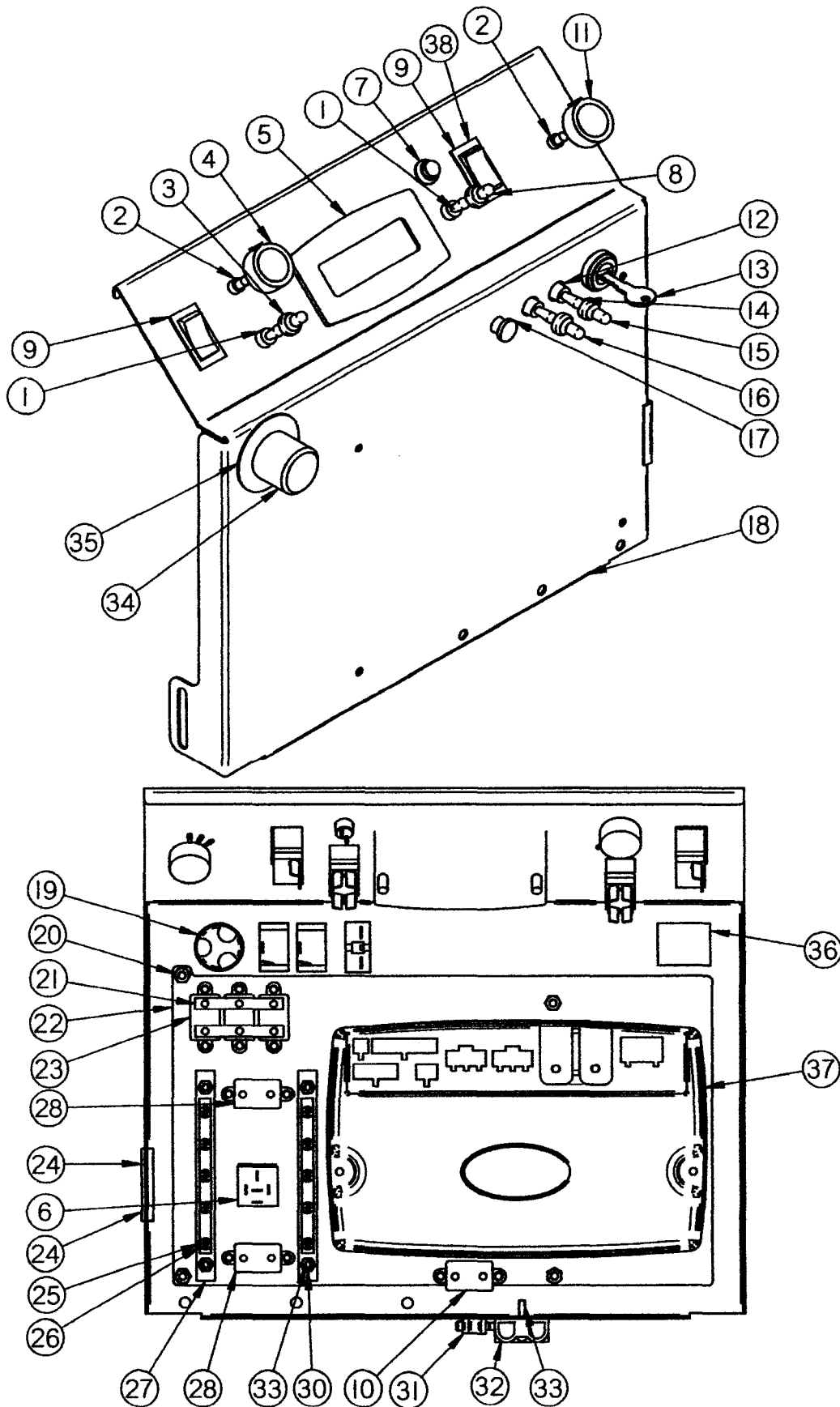
# CENTRAL COMMAND TYPE 1



Item #	Part #	Description	Qty	Item #	Part #	Description	Qty
1	21-2000	CONTROL PANEL	1	37	21-4510	CONTROL KNOB, BLUE	1
	21-2002	CONTROL PANEL EURO.		38	5-892A	SWITCH COVER	3
2	21-2010	COMPONENT PLATE	1	39	4-234	KEY SWITCH	1
3	21-2200	SPEED CONTROLLER	1	40	4-257	CONNECTOR, RED 50	1
4	5-295	SHUNT	1	41	21-2310	100K POTENTIOMETER	1
5	8-283	RELAY, 80 AMP	3	42	5-892	TOGGLE, ON-OFF SPST	2
6	8-285	CIR. BREAKER - 120A	1	43	8-235	KEY SET (REPLACE) (NOT SHOWN)	1
7	21-2230	MICRO SWITCH	1	44	21-2006	WINDLACING (NOT SHOWN) (WEATHER STRIPPING)	1
8	21-2280	SWITCH ON/OFF SPST(GREEN)	1	45	21-2005	1" X 16.5" NYLON STRAP (NOT SHOWN)	1
9	7-292	5K POTENTIOMETER	1	46	H-73410	HCS 4-40 X 1/2" SS	1
10	5-236	DOWN PRESS GAUGE MOD/LED	1	47	H-37006	NYLOK NUT 4-40	1
11	7-446	BRASS COUPLER	1				
12	7-283	TOGGLE, MOM-OFF-MOM,DPDT	1				
13	8-262	HOUR METER	1				
14	8-261	BATTERY GAUGE	1				
15	5-233	SWITCH MOM-OFF-MOM DPDT	1				
16	21-2290	SWITCH ON/OFF SPST(BLUE)	1				
17	7-837	FUSE RESETTABLE 1 AMP	1				
18	7-287	BUSS BAR UHMW	2				
19	E-5HBB	5 HOLE BUSS BAR	2				
20	H-31290	STS #8 X 1/2	10				
21	7-286	CIR. BREAKER - 25A	1				
22	8-284	CIR. BREAKER - 6A	3				
23	7-285A	CIR. BREAKER - 30A (STD)	2				
	8-285	CIR. BREAKER -40A (HD)	1				
	5-289	CIR. BREAKER - 50A (22CY)	1				
	21-2850	CIR. BREAKER - 60A (28CY)					
24	5-270	EMF SUPPRESSION DIODE	3				
25	H-9563K	HOLE PLUG 3/4"	1				
26	H-85985	HOLE PULG 1/2"	2				
27	H-37406	KEPS NUT 8-32	49				
28	H-33072	WASHER #8 SAE	6				
29	H-37406	RHP MS #8-32 X 1/2"	25				
30	H-28902	RHP MS #8-32 X 1"	8				
31	H-33620	LOCK WASHER 5/16	6				
32	H-36154	HEX NUT 5/16-24	6				
33	H-33614	LOCK WASHER #10	3				
34	H-36030	HEX NUT 10-32	3				
35	H-37408	KEPS NUT 10-32	11				
36	21-4520	CONTROL KNOB, RED	1				



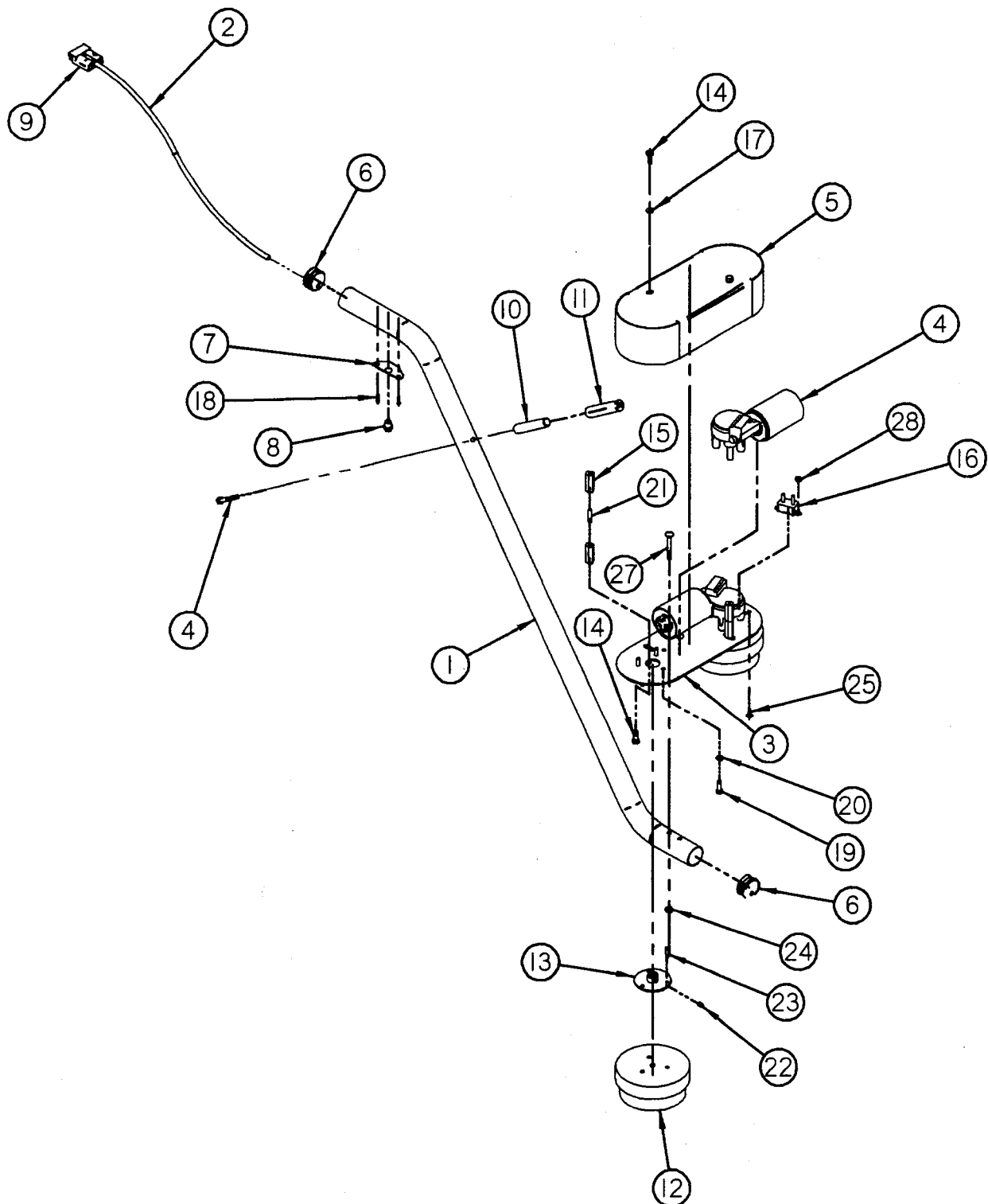
# CENTRAL COMMAND II



Item	Part No	Part Description	Comments	Qty
1	7-283	SWITCH, TOGGLE, MOM/OFF/MOM (DPDT)		2
2	7-292	5K POTENTIOMETER		2
3	H-01196	PROTECTIVE BOOT, TOGGLE SWITCH, (RED)		1
4	21-4520	SPEED CONTROL KNOB, RED		1
5	290-2891	LCD SCREEN		1
6	5-293	15 AMP RELAY		1
7	7-229	PUSH BUTTON SWITCH		1
8	H-01200	PROTECTIVE BOOT, TOGGLE SWITCH, (BLACK)	DOWN PRESSURE	1
9	8-231	SWITCH, ON-OFF ROCKER SPST	USED ON MACHINES WITH SERIAL # 210-5200 OR LOWER & 21-6100 OR LOWER	2
10	7-285A	CIRCUIT BREAKER - 30A		1
11	21-4510	SOLUTION CONTROL KNOB, BLUE		1
12	H-85985	HOLE PLUG 1/2"		2
13	8-235	KEY SET (REPLACE)		1
14	5-892	TOGGLE, ON-OFF SPST		2
15	H-01199	PROTECTIVE BOOT, TOGGLE SWITCH, (BLUE)	SPRAY HOSE	1
16	H-01198	PROTECTIVE BOOT, TOGGLE SWITCH, (GREEN)	RECYCLING	1
17	7-837	FUSE RESETTABLE 2 AMP		1
18	21-2008	CONTROL PANEL		1
19	4-234	KEY SWITCH		1
20	H-37408	KEPS NUT 10-32		8
21	E-3HBB	3 HOLE BUSS BAR		2
22	21-2007	COMPONENT PLATE		1
23	5-289	CIR BREAKER 24V 50A		3
24	21-2006	WINDLACING (NOT SHOWN) (WEATHER STRIP)		1
25	H-31290	PPH SMS #8 X 1/2"		10
26	E-5HBB	5 HOLE BUSS BAR		2
27	7-287	BUSS BAR UHMW		2
28	290-2815	CIR. BREAKER - 15A, 24V		2
29	H-28902	RPH #8-32 X 1"		4
30	H-37406	KN #8-32		4
31	21-2230	MICRO SWITCH		1
32	4-257	CONNECTOR, RED 50		1
33	H-28902	RHP MS #8-32 X 1"		1
34	5-300	EMERGENCY SHUT OFF (OPT)		1
35	5-301	EMERG LEGEND PLATE (OPT)		1
36	5-302	EMERG CONTACT BLK (OPT)		1
37	290-2899	COMPUTER CONTROL V3	USED ON MACHINES WITH SERIAL # 210-5201 OR GREATER & 21-6101 OR GREATER	1
38	5-234	SWITCH, ROCKER, DPDT, ON/ON	USED ON MACHINES WITH SERIAL # 210-5201 OR GREATER & 21-6101 OR GREATER	1
39	290-2890	COMPUTER CONTROL V2	USED ON MACHINES WITH SERIAL # 210-5200 OR LOWER & 21-6100 OR LOWER	1

HARNESS LIST		
Harness	DESCRIPTION	Part No.
	<i>Harnesses not illustrated</i>	
1	20 PIN CONNECTOR	21-2314
2	14 PIN CONNECTOR	21-2315
3	6 PIN CONNECTOR	21-2316
4	VAC OUTPUT	21-2317
5	TRACTION OUTPUT	21-2318
6	BRUSH OUTPUT CYLINDRICAL	22-2319
7	COOLING FAN ADDER	28-2319
	<i>(Adds to Harness # 6 for Mod 28)</i>	
8	BRUSH OUTPUT DISK	21-2320
9	LOW DRAW CIRCUITS	21-2321
	<i>Actuator, solution valve, lights, etc</i>	
10	CHARGE CIRCUIT	21-2322
11	BATTERY CABLE SET	21-2323

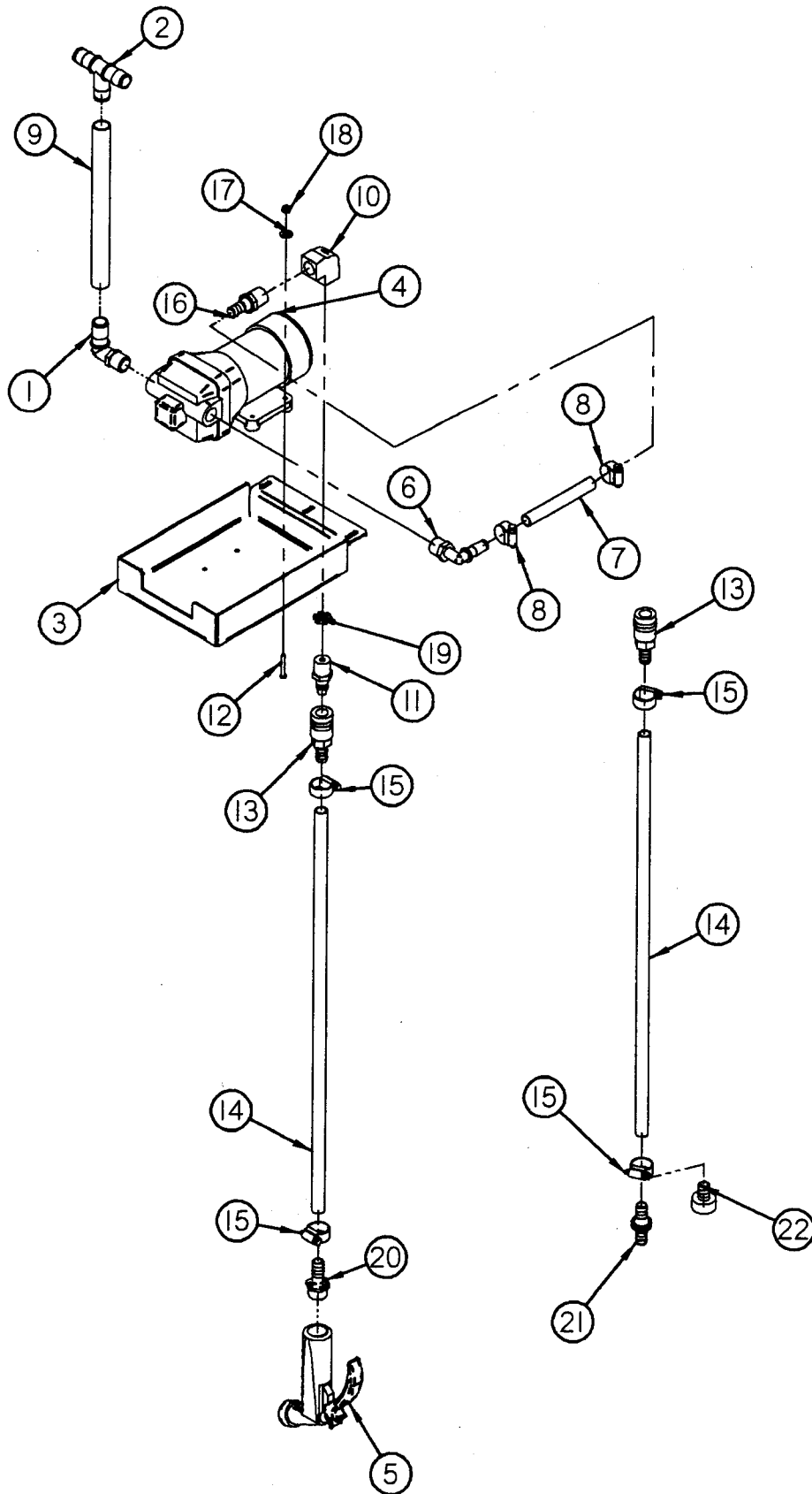
## SCRUB WAND (OPTIONAL)



Item	Part Number	Part Description	Qty
1	21-9903	WAND	1
2	21-9906	POWER CORD	1
3	21-9901	SCRUB DECK	1
4	8-221	SIDE BROOM MOTOR	2
5	21-9902	MOTOR COVER	1
6	21-9905	END PLUG	2
7	7-228	SWITCH MNT PLATE	1
8	7-229	PUSH BUTTON SWITCH	1
9	4-257	CONNECTOR, RED 50	1
10	8-452	LIFT HANDLE	1
11	4-448	HANDLE GRIP	1
12	21-9921	5" DISK BRUSH	2
13	21-9904	BRUSH DRIVER	2
14	H-13003	HCS 1/4"- 20 X 3/4"	4
15	5-872	STAND OFF	4
16	8-284	CIR. BREAKER - 6A, 24V	1
17	H-33618	LW 1/4"	2
18	H-27378	RSL #8-32 X 1/2"	2
19	H-38558	M6 METRIC BOLT	6
20	H-40381	LW #6 METRIC	6
21	H-255HD	STUD 1/4"- 20 X 1"	2
22	H-25328	SSS CP 1/4"- 20 X 3/8"	2
23	H-27390	RSL #8-32 X 3/4"	6
24	H-37018	NYLOK 1/4"- 20	2
25	H-29049	PPH #10-32 X 1/2"	2
26	H-13011	HCS 1/4"- 20 X 2"	1
27	H-21161	CB 1/4"- 20 X 2.0"	2
28	H-37408	KN #10-32	2



# SPRAY JET SYSTEM (OPTIONAL)



Part #	Description	Title	Quantity
1	21-1602	3/4 BARB ELBOW	1
2	21-4045	3/4 BARB TEE	1
3	21-2004B	SPRAY JET BOX	1
4	5-891	PUMP, WATER JET	1
5	5-895	SPRAY NOZZEL	1
6	21-1601	1/2 BARB ELBOW	1
7	21-1604	4 1/2" BLUE HOSE	1
8	H-081	CLAMP 7/16"- 25/32" SS	2
9	21-1603	9 1/2" CLEAR HOSE	1
10	21-1613	1/2 STREET ELBOW	1
11	214048	1/2 MNPT TO 3/8 PLUG, NUT CUP.	1
12	H-73747	RPH #10-32 X 1 1/4" SS	4
13	21-1607	QUICK RELESE BARB	2
14	21-1605	5' BLUE HOSE	2
15	21-1609	CLAMP 1/2"- 29/32" SS	4
16	21-1606	1/2 MNTP X 1/2 BARB	1
17	H-71009	FW #10 SS	4
18	H-70858	NYLOCK #10-32 SS	4
19	H-07005	1/2 LOCKNUT	1
20	21-1608	1/2 BARB X 3/4 GHT MALE	1
21	21-1611	HOSE CONNECTOR	1
22	21-1610	GARDEN HOSE CONNECTION	1

