



E27200 E27400  
E27300 E27500



# GENESYS™ SERIES

26", 28" and 32"  
Mid-Size Scrubber



**Operator and Parts  
Manual**

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# SPECIFICATIONS

Specifications	GeneSys™ 26D	GeneSys™ 28D	GeneSys™ 32D	GeneSys™ 280RB
Productivity (sq. ft./hour)	Up to 29,250	Up to 31,500	Up to 36,000	Up to 31,500
Cleaning Pad Width	26 in.	28 in.	32 in.	28 in.
Pad / Brush Dimensions	(2) 14 in. Disk	(2) 13 in. Disk	(2) 16 in. Disk	(1) 14 in. x 28 in. Disk
Brush Motor(s)	(2) 1.0 HP	(2) 1.0 HP	(2) 1.0 HP	(1) .75 HP
Pad Speed	300 RPM	300 RPM	300 RPM	2,000 RPM
Down Pressure	60, 120 & 180 lb.	60, 120 & 185 lb.	60, 120 & 185 lb.	60, 120 & 185 lb.
Solution Tank	25-gal.	25-gal.	25-gal.	25-gal.
Recovery Tank	28-gal.	28-gal.	28-gal.	28-gal.
Solution Flow	0 - .75 gpm	0 - .75 gpm	0 - .75 gpm	0 - .75 gpm
Battery Options	(4) 6v 260 AH Wet (4) 6v 220 AH AGM	(4) 6v 260 AH Wet (4) 6v 220 AH AGM	(4) 6v 260 AH Wet (4) 6v 220 AH AGM	(4) 6v 260 AH Wet (4) 6v 220 AH AGM
Run Time	Up to 4.5 hr.	Up to 4.5 hr.	Up to 4.0 hr.	Up to 5.5 hr.
Sound Level	<65 dBa	<65 dBa	<65 dBa	<65 dBa
Vac Motor / Filter	.72 HP / HEPA	.72 HP / HEPA	.72 HP / HEPA	.72 HP / HEPA
Machine Weight (w/260AH Batteries)	625 lb.	630 lb.	640 lb.	630 lb.
Machine Dimensions	55 in. x 28 in. x 44 in.	56 in. x 30 in. x 44 in.	59 in. x 34 in. x 44 in.	54 in. x 29 in. x 44 in.
Squeegee Width	35 in.	40 in.	45 in.	40 in.
Warranty*	10 - Years Rotomold 3 - Years Parts/Labor 180 - Days Travel 1 - Year Pro-rated Batteries	10 - Years Rotomold 3 - Years Parts/Labor 180 - Days Travel 1 - Year Pro-rated Batteries	10 - Years Rotomold 3 - Years Parts/Labor 180 - Days Travel 1 - Year Pro-rated Batteries	10 - Years Rotomold 3 - Years Parts/Labor 180 - Days Travel 1 - Year Pro-rated Batteries 3 - Years / 3,000 Hours - Isolators
<b>*See full warranty for details</b>				

## Key Options & Accessories

Fortify™ Wet Battery Protection System  
 Fortify™ Programmable timer Lock-out  
 Fortify™ Armor Telemetry & Reporting  
 Fortify™ Bluetooth Battery Diskcharger Indicator  
 Fortify™ Foam Control  
 Brush: General Purpose

**SoliChem™ Chemicals:** Daily: pH7 Ultra  
 Degreaser: Green Earth® BioActive Solutions™ Grease Solv



## SAFETY INFORMATION



**The safety instructions and guidelines below must be carefully followed in order to avoid harm to the operator and damage to the machine.**

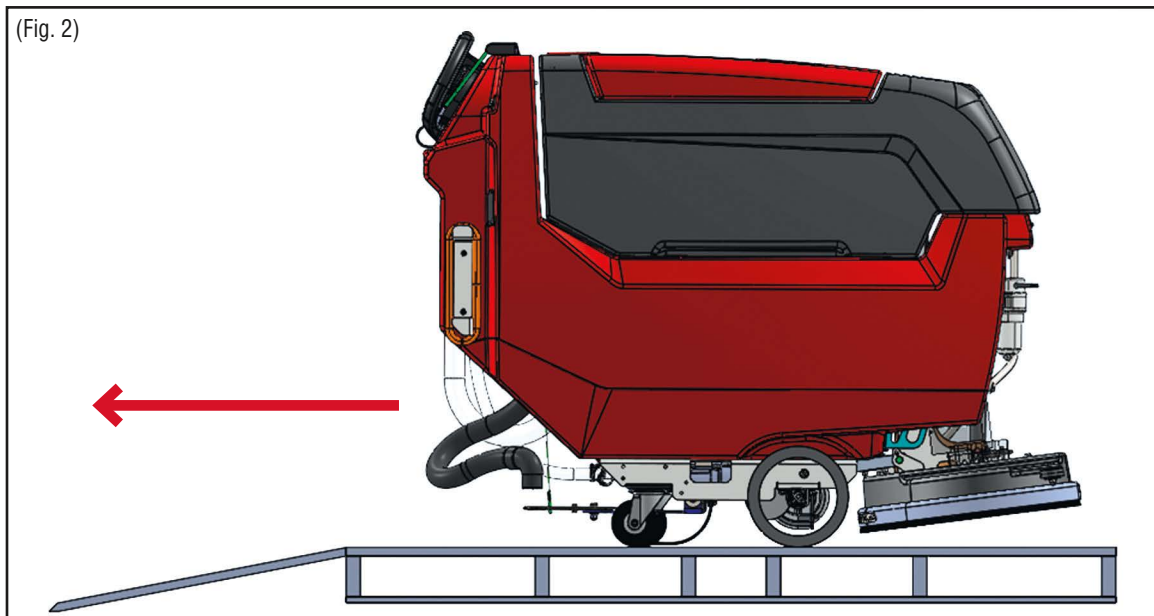
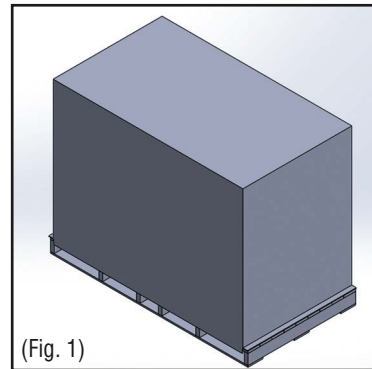
- Read all labels on the machine carefully. Do not cover them for any reason and replace them immediately if they become damaged.
- The machine must be used exclusively by authorized and trained personnel.
- When operating the machine be careful of other people.
- The machine is not designed for cleaning carpets.
- The power cable outlet must be provided with a proper ground.
- Avoid damaging the power cable of the battery charger by crushing, bending, cutting or stressing it.
- Whenever the power cable of the battery charger is damaged, immediately contact a BETCO service center.
- Do not mix different types of detergent as this may produce harmful gases.
- Do not set containers on the machine.
- Machine storage temperature is between -10°F and 130°F, never store outside under humid conditions.
- Operating conditions: room temperature between 33°F and 100°F with relative humidity between 30% to 95%.
- Only use the machine in closed areas and do not expose it directly to rain.
- Never use the machine in an explosive environment.
- Do not use the machine as a means of transport.
- Never use acidic chemicals which could damage the machine.
- Avoid running the brushes with the machine stopped; this could damage the floor.
- Never vacuum up flammable liquids.
- Never use the machine to gather dangerous powders.
- Use a powder fire extinguisher in case of fire. Do not use water.
- Do not hit against shelving or scaffolding. The operator must always be equipped with the appropriate safety device (gloves, shoes, helmet, glasses, etc.)
- Do not use the machine on surfaces with an inclination greater than the one shown on the serial plate.
- The machine is designed to wash and dry floors simultaneously. Signal the presence of wet floors with suitable signs.
- If the machine does not work properly, perform routine maintenance. Otherwise, request the assistance of the BETCO® technical service.
- When replacing parts ask for ORIGINAL spare parts from your Authorized BETCO Dealer and/or Retailer.
- Always turn off the machine and disconnect the battery connector whenever maintenance is performed.
- Never remove guards that require tools for removal.
- Never wash the machine with direct or pressurized jets of water or with corrosive substances.
- Have your BETCO service center check the machine once a year.
- To prevent the formation of scale in the solution tank filter, do not store the machine with detergent solution in the tanks.
- Before using the machine make sure that all doors and covers are positioned as shown in this operating and maintenance manual.
- When your BETCO machine is ready to be retired, the machine must be disposed of properly. It contains oils and electronic components. The machine was built using totally recyclable materials.
- Use only pads furnished with the machine or those specified in the user's manual. Use of other pads can compromise safety.
- When removing the battery, unplug the battery connection, unplug the charger and disconnect the battery terminals.
- Before recycling the machine, remove the battery.

# MACHINE PREPARATION: UNPACKING

**Note: Immediately check, when receiving the machine, that all the materials indicated on delivery documents have been received and also that the machine has not been damaged in transit. If it has been damaged, this damage must be immediately reported to the carrier and also to our customer's service department. Only acting promptly in this manner will make it possible to receive missing material and to be compensated for shipping damage.**

**INTRODUCTION This is an automatic scrubber which, via the mechanical action of the rotating brush and the chemical action of a water/detergent solution, can clean many types of hard flooring. As it advances, it also collects the dirt removed and the detergent solution used to clean the floor. The machine must be used only for this purpose. Even the best machines will only work well if used correctly and kept in good working order. We therefore suggest you read this instruction booklet carefully and re-read it whenever difficulties arise while using the machine. Please contact our technical service department or your dealers if you have any questions about the machine.**

1. Remove the outer packing from the machine's shipping pallet. (Fig. 1)
2. Inspect the machine and contents for damage. Make a freight claim if machine is damaged.
3. Remove and place contents of the box away from the pallet.
  - a. Remove interior packing materials and place away from the pallet.
  - b. Cut all banding straps from machine.
  - c. Use a screwdriver to remove squeegee blocks and squeegee.
4. Raise the recovery tank and connect the red battery plug.
5. Tuck the Squeegee hose behind the water sight hose so it doesn't get run over.
6. Fold down hinged ramp at back of machine. (Fig. 2)
7. Power the unit on with the key and raise the scrub head up to transport position.
8. Slowly reverse the machine backwards down the ramp. (Fig. 2)





# TRANSPORTING THE MACHINE: TIE DOWN PROCEDURE

If you are planning to transport the GeneSys scrubber, securing the machine(s) is key to keeping the machine(s) protected and in good working condition. Below are some suggestions for how to efficiently and effectively secure the GeneSys™ scrubbers.

The GeneSys™ design lends itself to easy trailering and tying down – it only takes two straps strategically located.



## STEP 1

Before transporting up a trailer ramp - remove the squeegee assembly and put it in an open, secure location on the trailer. If possible, wrap with a shipping blanket.



## STEP 2

Transport machine up the ramp into trailer and position it so that tie downs can be used forward and rear of the machine and lower the scrub deck (with pads on – especially the Orbital!)



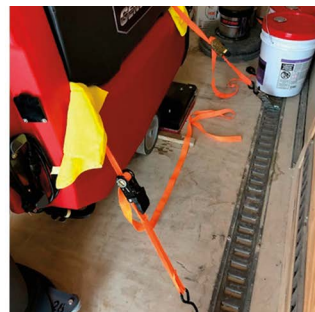
## STEP 3

Open the tank and route tie down straps across the front and rear of the battery compartment as shown here. *(Note the placement of micro-fiber cloths or other material to protect the rotomold tanks from scratches).*



## STEP 4

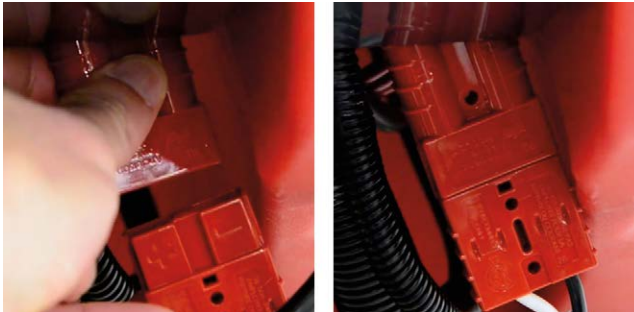
For the front straps, route them to tie down locations forward of the machine. For the rear straps, route them to tie down locations to the rear of the machine. See below. Ratchet tie down until machine is secure.



# BATTERIES

## BATTERY CONNECTION

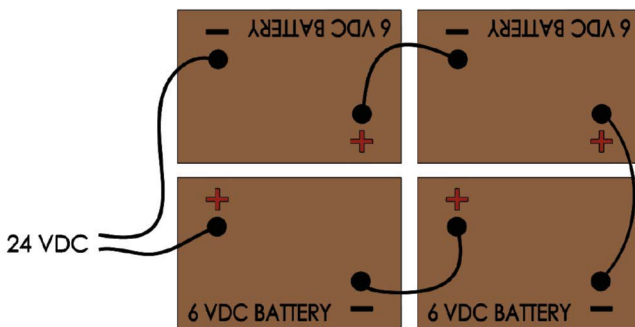
The machine will be supplied with an onboard battery charger and either four 6 V Wet or AGM batteries. The batteries must be housed in the battery compartment beneath the recovery tank. To connect the battery pack, you simply connect the two red Anderson plugs located on the right side of the back-control panel.



## BATTERY INSTALLATION/REPLACEMENT

1. Lower the squeegee and brush deck.
2. Open the recovery tank as far as it will go, using the side handle.
3. Place the four 6-volt batteries into the battery compartment as shown below.
4. Wire the batteries with battery jumpers. Torque 95-105 in-lb. (11-12 Nm) Thread: 5/16"
5. Using the supplied 9/16" wrench, tighten the nuts to the battery terminals.

**WARNING:** Perform one battery charging cycle before using the machine.



The batteries are positioned in the machine as shown for ease of wiring the batteries in series. When replacing batteries make sure to position the batteries in the same configuration.

**WARNING:** Batteries emit hydrogen and oxygen gas - Keep sparks and open flame away.

**Do not smoke near the machine - Charge batteries in a well-ventilated area with the battery compartment open.**

**WARNING:** Do not wear jewelry when working near moving or electrical components.

**CAUTION:** Always wear protective clothing, gloves and goggles when handling and charging batteries.

## LEAD ACID, WET BATTERIES ONLY

**Wet batteries need water.**

More importantly, watering must be done at the right time and in the right amount or the battery's performance and longevity suffers.

Water should always be added after fully charging the battery. Prior to charging, there should be enough water to cover the plates. If the battery has been discharged (partially or fully), the water level should also be above the plates. Keeping the water at the correct level after a full charge will prevent having to worry about the water level at a different state of charge.

Depending on the local climate, charging methods, application, etc., Betco recommends that batteries be checked no less than once a month until you get a feel for how often your batteries need watering.

## Important Things to Remember

1. Do not let the plates get exposed to air. This will damage (corrode) the plates.
2. Do not fill the water level in the filling well to the cap. This most likely will cause the battery to overflow acid, consequently losing capacity and causing a corrosive spill.
3. Do not use water with a high mineral content. Use distilled or deionized water only.

**CAUTION:** The electrolyte is a solution of acid and water so skin contact should be avoided.

# BATTERIES *continued*

## GENERAL WATERING INSTRUCTIONS

- Add water, never acid, to cells (distilled water recommended).
- DO NOT OVER WATER.
- For fully charged standard deep-cycle batteries, add water to the level of 1/8 below bottom of vent well (see diagram A below).
- For fully charged Plus Series batteries, add water to the maximum water level indicator (see diagram B below).
- If the batteries are discharged, only add water if the plates are exposed. Add just enough water to cover the plates, then charge the batteries. Once fully charged, add water to the proper level indicated above.
- After watering, secure vent caps on batteries.

**DIAGRAM A**



Add water to 0.125" below bottom of the vent well.

**DIAGRAM B**



Add water to the maximum water level indicator.

## BATTERIES *Servicing Lead Acid Batteries*

### MAINTAINING THE BATTERIES

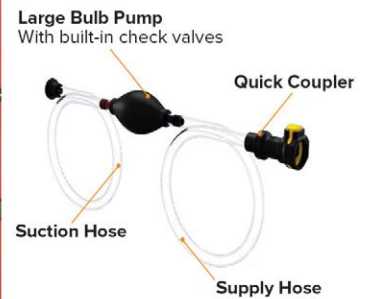
Batteries can attract dust, dirt, and grime. Keeping them clean will help spot signs of trouble when they appear and avoid problems associated with grime.

1. Check that all vent caps are tightly in place.
2. Clean the battery top with a cloth or brush and a solution of baking soda and water.
  - When cleaning, do not allow any cleaning solution or other foreign matter to get inside the battery.
3. Rinse with water and dry with a clean cloth.
4. Clean battery terminals and the inside of cable clamps using a post and clamp cleaner.
  - Clean terminals will have a bright metallic shine.
5. Reconnect the clamps to the terminals and thinly coat them with an anti-corrosive spray or silicone gel.
6. Keep the area around batteries clean and dry.

## Maintaining Lead Acid Batteries with Fortify™ Wet Battery Protection System

The wet battery protection system tells the operator when to water the batteries. This system has a sensor that's inserted into the machine's batteries with a light to tell the operator when to fill the batteries. The scrubbing functions will be disabled until watering is completed. See below watering instructions with watering system.

**! WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm, and during charging, strong inorganic acid mists containing sulfuric acid are evolved, a chemical known to the State of California to cause cancer.**



### WATERING THE BATTERIES

1. Use distilled water for filling the batteries. Place the distilled water jug below the top of the batteries to prevent siphoning. Insert the open end of the bulb pump into the jug of distilled water and prime the pump bulb by squeezing it until it is filled with water.
2. Attach the other end of the hose to the quick connect already on the batteries.
3. Squeeze the bulb to pump water into the battery cells. When the bulb becomes firm, all cells are full.



**! NOTE: Battery packs equipped with Fortify™ Wet Battery Protection may use more distilled water than expected to make the light turn off. Compress the bulb pump until is no longer compresses. Not doing so may result in uneven filling and premature battery failure.**

4. Immediately disconnect the couplers and replace the cap.

**! NOTE: Do not leave the pump and hose connected to the batteries after filling is complete.**





# CHARGING

**WARNING:** Perform one battery charging cycle before using the machine.

## ON-BOARD CHARGER

The on-board charger has three LEDs to indicate the status of the charging cycle when it is plugged in:

### SIGNAL (LED)

- Red LED flashing twice
- Green LED is flashing twice
- Red LED is on
- Yellow LED is on
- Green LED is on
- Yellow LED is flashing
- Red LED Flashing

### MEANING

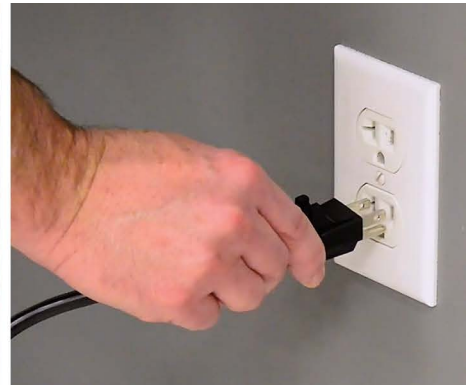
- Battery charger is set to charge LEAD-ACID batteries
- Battery charger is set to charge GEL and /or AGM batteries
- First phase of charging is in progress
- Second phase of charging is in progress
- End of charge or maintenance phase
- Issue with battery or battery not connected or output short circuit
- Safety timer exceeded internal short circuit



- Green LED Light
- Yellow LED Light
- Red LED Light



**NOTE:** Do not use an extension cord. This voids the warranty of the charger.



## BATTERY AMP HOUR RANGE

Model	Battery Voltage	Charging Current	Battery Range (5 hour)	Battery Range (20 hour)
CBHD3 12-25	24V	25A	180 ÷ 260Ah	220 ÷ 315Ah

# MACHINE PREPARATION / SETUP

## TURNING THE MACHINE ON/OFF

The key switch to turn on the machine is located on the lower control panel. Turn clockwise for on (I) and counter clockwise for off (O).

## CIRCUIT BREAKERS

Circuit breakers protect the GeneSys machine's motors. These circuit breakers will trip under misapplications of the machine. Repeatedly tripping the breaker will cause the need for motor replacement.

**⚠ NOTE: If a breaker becomes tripped simply press in the white button on the circuit breaker. This might require a cooling down period of the machine's tripped component before the breaker is allowed to be reset.**



## BATTERY METER

When the machine's key is switched to the "ON" position the battery meter gives a readout of the charge remaining on the battery pack. LED lights will reduce in number as the charge on the batteries goes down.

**⚠ NOTE: A flashing battery meter will indicate a fault.**



## SQUEEGEE INSTALLATION

1. Position the squeegee behind the machine and align the knob posts with the squeegee carrier slots.
2. Lift the squeegee and slide into the slots. (Fig. 1)
3. Tighten down the knobs to secure the squeegee. (Fig. 2)
4. Attach the vacuum hose to the squeegee. (Fig. 3)



(Fig. 1)



(Fig. 2)



(Fig. 3)

# DRIVE SYSTEM

## OPERATING THE MACHINE

1. To control the machine, place hand(s) around the console and bail. Squeezing the bail activates the transaxle drive forward and, when the scrub deck is in operating position, the brush motors and solution flow.



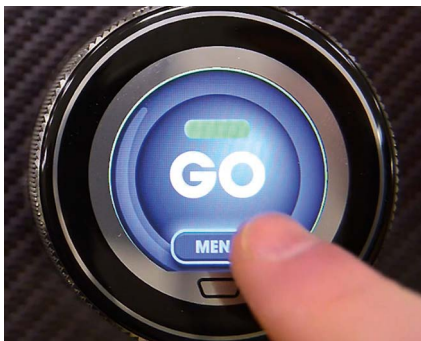
2. To reverse the machine, push the bail wire away from the console handle. To slow down or stop simply release the bail.



3. The centralized Speed Control Knob on the console handle is used to reduce or increase the machine's speed. This can be done while moving or standing still.



4. Touch Encoder equipped machines can limit the top speed of the control knob.



 **NOTE: Use good judgment when selecting a higher speed.  
Turn Clockwise to go faster / Turn Counterclockwise to go slower.**



# SOLICHEM™ SOLUTION DISTRIBUTION SYSTEM

Solid on-board chemical delivery technology removes the need to pour chemical into the solution tank. Water dissolves the SoliChem™ solid and adds the cleaning chemical directly onto the floor wetting system. The SoliChem System also alerts the operator of low SoliChem solid with an LED light.



**⚠ NOTE: Do not use pure acids in this machine.**

## FILLING SOLUTION THE TANK

1. Add water to the solution tank from the front or rear fill locations. Do not use water exceeding 120° F (48.9° Celcius)
2. While filling the machine, watch the sight tube on the back of the machine to determine when the machine is full.



## CONVENTIONAL OPERATION

1. Remove the SoliChem™ solid from the solution system (See Below).
  - a. Lift recovery tank.
  - b. Remove SoliChem canister cap.
  - c. Lift out SoliChem cage and ensure that all SoliChem solid pieces are removed from canister.
  - d. Replace SoliChem canister cap on canister.
2. Turn off SoliChem Technology.
3. Pour in properly diluted chemical into the front fill port.



# SOLUTION FLOW

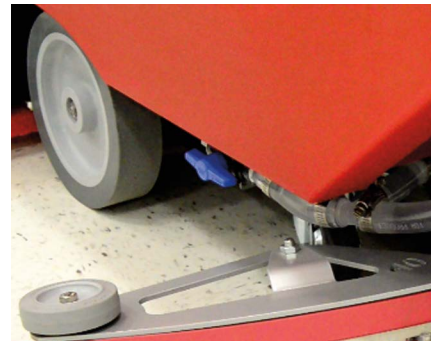
The solution control knob is located on the lower control panel left of the key. This controls the water pump and is only active when the scrub head is in an operating position. This knob adjusts water flow rate. For Touch Encoder machines, adjusting flow rate is found in the settings.



## FILTER INSPECTION AND CLEANING

**NOTE:** If there is excessive debris found in the screen and bowl then drain and flush the solution tank.

1. Close the shutoff valve for the solution tank. The screen and bowl are under the frame between the transaxle and casters on the left side of the machine.
2. Unscrew and remove the filter bowl and screen to clean and remove debris.
3. In the case of mineral deposits on the screen, descale the screen using a descaler or white vinegar as necessary.
4. Place the screen in the filter bowl, and screw the bowl into the appropriate location on the frame.





# MACHINE OPERATIONAL SETTINGS

## HEAD LIFT

1. The head lift is controlled by a lineal actuator which raises and lowers the scrub deck.
2. The standard controls knob on the console has 3 down pressure settings and transport mode. Touch encoder models have the same 3 down pressure settings.
3. Disk machines are equipped with a self-adjusting shroud and bristle skirt that virtually eliminates overspray.



## SELECTING DOWN PRESSURE

1. Low pressure: 60 lb. - Daily cleaning of normal soils.
2. Medium pressure: 120 lb. – Heavy soils or chemical-free finish removals.
3. High pressure: 180 - 185 lb. – Heavy soils, orbital finish removal or chemical stripping.



### LOW DOWN PRESSURE



### MEDIUM DOWN PRESSURE



### HIGH DOWN PRESSURE



## SCRUB HEAD DOWN PRESSURE SETTING

	26" Disk	28" Disk	32" Disk	28" Orbital
Low	60	60	60	60
Medium	120	120	120	120
High	180	185	185	185

# DISK MACHINE PAD DRIVERS AND BRUSHES

## PAD DRIVER AND BRUSH REMOVAL

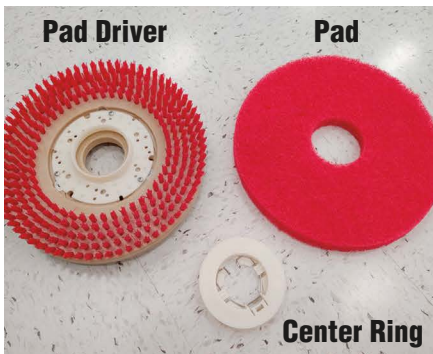
**NOTE:** DO NOT use any machine without a pad or brush. Operating a machine without a pad or brush will damage the machine.

1. Remove the pad drivers or brushes from the machine by pushing and holding the red "Auto Off" button, found in the center of the lower control panel, until the pad drivers or brushes release from the scrub deck.
2. Remove the pad drivers or brushes from under the scrub deck



## NEW PAD INSTALLATION

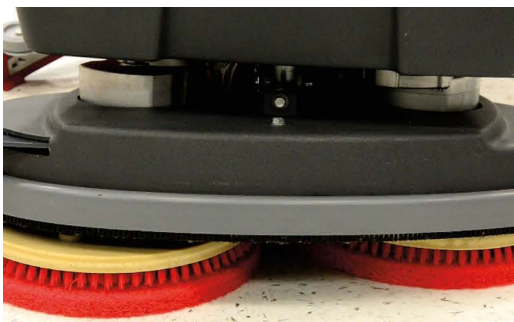
1. Release the centering ring by pressing down on the pad and squeezing the wire lock tabs of the centering ring inward until it releases.
2. Remove the old pad and any remnants from the bristles of the pad driver.
3. Place the new pad on the bristles of the pad driver, making sure to align center holes of the pad and pad driver.
4. Place the centering ring over the center of the pad and press down until the wire lock tabs click into place, securing the pad and centering ring to the pad driver.



## PAD DRIVER AND BRUSH INSTALLATION

1. Place the pad driver assemblies under the scrub deck of the machine. Try to align the assemblies under the scrub deck shroud.
2. Turn the key on and lower the head to medium or second down pressure position.
3. Turn the speed setting to the lowest position.
4. Slightly push or pull the machine to align the pad drive assemblies to help align the attachment lugs.
5. Pull the bail back to engage the pad drivers to the machine's pad drive train.
6. Once the pad drive assemblies are attached, adjust down pressure setting to perform desired application.

**NOTE:** If the pad drivers do not connect the first time return to step 4 and repeat.





# ORBITAL PADS AND ORBITAL FINISH REMOVAL

## STANDARD CLEANING OPERATIONS

**⚠ NOTE: Do NOT lower the Orbital Scrub Head without a pad attached. This will damage the scrub head.**

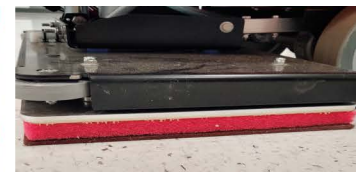
1. Attach the pad ½" in front of the scrub head and align the front corners and sides. Press the pad into position once the pad is aligned (the ½" forwarding will help in pad wetting).
2. Lower the scrub deck onto the floor once the pad is aligned.
3. Check to make sure the pad is aligned on all four sides.



## ORBITAL FINISH REMOVAL PAD SETUP

Finish removal utilizes a two-pad setup. A red or white pad acts as a "backer pad" that helps compensate for flaws and variances in the floor. The maroon pad is for surface preparation.

1. Attach the red pad to the orbital pad drive plate as shown above.
2. Wet the maroon pad prior to installation to minimize excessive friction upon initial start up.
3. Place the maroon pad on the floor and position it so that when the scrub deck is lowered the red and maroon pads are aligned and stacked.



## MACHINE SETUP FOR ORBITAL FINISH REMOVAL

1. Fill the solution tank with clean water.
2. Install the pad assembly as described above.
3. The down pressure should be on medium or high pressure; depending on condition or hardness of the finish being removed.
4. The solution flow rate should be set to a low flow rate (approximately 25% of full flow rate) for this operation to maximize finish removal, to rinse, clean the floor and pad.
5. Forward speed should be set to 25% to 50% of normal speed to ensure maximum finish removal ; approximately 50-100 feet per minute.

# RECOVERY SYSTEM

## RECOVERY TANK: Draining

1. Find an approved drain location to empty the recovery tank.
2. Lift the drain hose off of the hose hook, remove the cap (keeping it above the tank's water level), fold over the collar and lower into the drain location.
3. Let the dirty water drain by releasing the collar into the drain slowly.
4. Lift the recovery tank lid to the wide-open position.



## CLEANING THE RECOVERY TANK WHEN DRAINING

1. Rinse out the recovery tank often to prevent debris, dirt buildup and any contaminants.
2. Use a hose to remove debris and sediment from the bottom of the tank with clean water.

**⚠ NOTE: Regularly use cleaner and sanitizer with a cloth or sponge to prevent mold and mildew inside the recovery tank.**

## VACUUM BALL CAGE

1. Remove clamp (if present) and vacuum ball cage filter.
2. Rinse the filter thoroughly.
3. Replace vacuum ball cage filter and clamp (if present).



## RECOVERY SYSTEM *continued*

### FORTIFY™ FOAM CONTROL / VACUUM PROTECTION SYSTEM

Proactively control the foam and protect the vacuum fan with the Fortify foam control puck underneath the debris tray inside the recovery tank.

### FORTIFY™ FOAM CONTROL PUCK REPLACEMENT

1. Open the recovery tank lid. Remove the debris tray and flip it over.
2. Turn the puck cage counter clockwise to release it from the debris tray. Replace puck as needed. Return debris basket to recovery tank.

**⚠ CAUTION: Do not use chlorine. Harmful fumes can be created from mixed cleaners and chlorine.**



### RECOVERY LID

Leave the recovery lid open while in storage and after cleaning. This enables the recovery tank to dry quickly and reduce the chance of mold and mildew from growing.





# SQUEEGEE ASSEMBLY

## CLEANING THE SQUEEGEE BLADES

1. Remove the squeegee assembly from the machine by loosening the two knobs.
2. Thoroughly clean and rinse the underside of the squeegee frame, blades and neck
3. Wipe down and dry the squeegee to remove any water and loose debris.



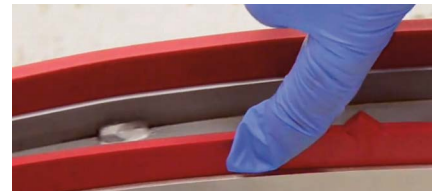
## DRIP TRAP INSPECTION

1. Inspect the drip trap on the topside of the squeegee by removing the 2 thumb screws.
2. Rinse off the drip trap and remove any debris.
3. Wipe and clean the squeegee frame before re-installing the drip trap.



## SQUEEGEE BLADES: INSPECT

1. Inspect the front and rear squeegee blades. The forward edges should be sharp and defined.
2. Worn blades should be flipped or replaced if worn halfway through the thickness.



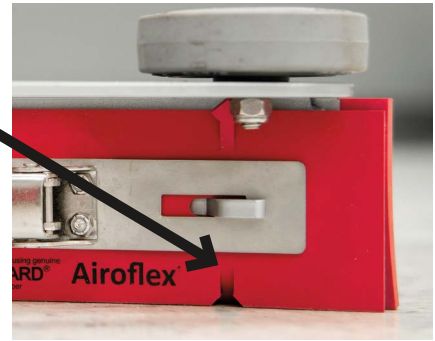
# SQUEEGEE SELECTION GUIDE

The GeneSys™ Mid-Size Scrubber comes standard with Linatex® squeegee blade material. This has been proven to be a very versatile, high performance material across multiple flooring types.

As an option, sold separately, the GeneSys™ can be equipped with Primothane® urethane squeegee blades. Both blades utilize the patented Airoflex® design that increases vacuum performance by up to 40%.



The Airoflex design features the Airoflex valves along the squeegee blade edge, which flex open when on smooth floors and close on porous or grouted tile floors to increase vacuum performance.



**⚠ NOTE: If cleaning and recovering petroleum or organic based oils, choose Primothane® regardless of floor surface.**

Floor Type	Suggested Squeegee	Comments
Vinyl Composite Tile (VCT) Grouted Tile Natural Stone Terrazzo Polished / Sealed Concrete Wood	LINATEX®	Best combination of performance, durability and wear life
Luxury Vinyl Tile (LVT) Rough Concrete	LINATEX® or PRIMOTHANE®	Both will have good performance. Primothane® will last longer if floor is highly textured.
Rubber Other Non-Slip / Grit Surfaces	PRIMOTHANE®	Best combination of performance, durability and wear life. - Additional benefit of “Ultra-Quiet” in use.

## REMOVE AND INSTALL THE SQUEEGEE BLADES

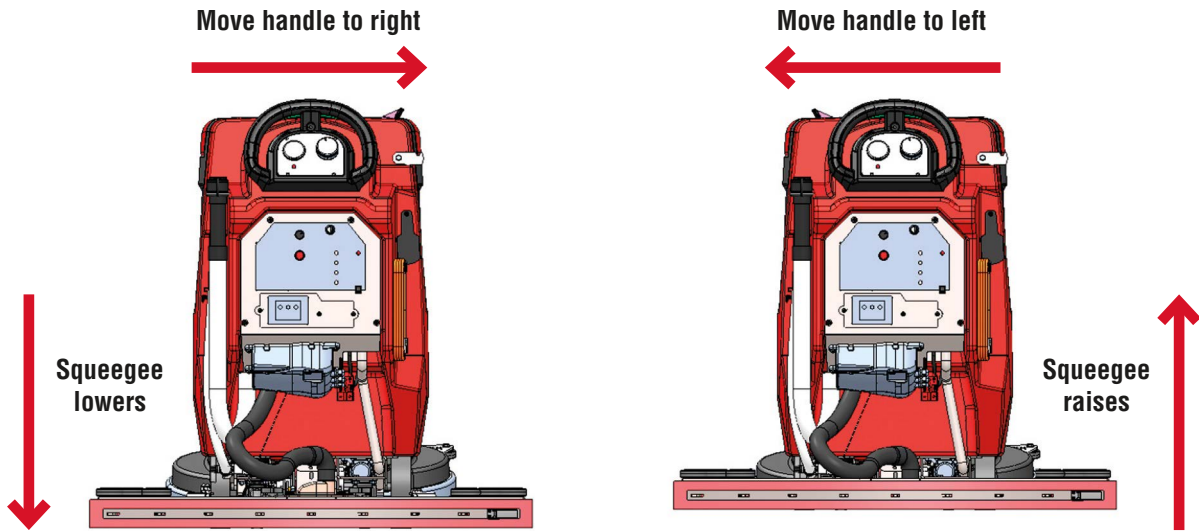
1. Release the latch and slide the band clamp off the hook on the other side.
2. Blades can be flipped length wise or top to bottom to use all four edges over the lifetime of the blade.
3. Place the blade over the assembly ensuring the holes align and replace the band clamp - make sure snug and tight when clamped.



# SQUEEGEE OPERATION

1. Lower the squeegee: Move the squeegee lever to the right. The vacuum motor will come on.
2. Raise the squeegee: Move the squeegee lever to the left. The vacuum motor will turn off after 7 seconds.

 **SQUEEGEE CASTER HEIGHT** has been set at the factory for optimal squeegee performance. **DO NOT ADJUST.**



# FORTIFY™ ARMOR™ TELEMETRY

The Betco® Genesys™ machine has an optional ARMOR™ Telemetry unit that can monitor the machine through a cellular network. The ARMOR unit is capable of monitoring daily run times, charge times, charge cycles, maintenance needs, location, and if the machine has experienced an impact. This information can be monitored by logging into Armordata.com.

## BUTTONS

<b>Maintenance Performed</b>	Press and hold to log that the machine has been maintained
<b>New Batteries Installed</b>	Press and hold to log that new batteries have been installed
<b>Silence Alarm</b>	Press to silence the alarm for 24 hours



## REGISTERING THE DEVICE

1. Locate and write down the serial number of the machine on the bottom of the recovery tank in the battery compartment.
2. Determine the facility that the machine will operate in, the person that will be monitoring the machine, and the main service contact.
3. Go to [www.armordata.com](http://www.armordata.com) and click the “Register an ARMOR Device” link under ARMOR Support
4. Fill out the form and click “Save info and register device”

**NOTE:** *The machine data will appear in the [armordata.com](http://armordata.com) dashboard on the next business day. The included 12 month free subscription will start once this process is complete.*

## OPERATION

The data that is logged by the ARMOR device can be viewed from any computer that has an internet connection. The device automatically sends its data once every day and after every charge/discharge event. If the device does not have a cellular connection, it will store the data and send as soon as it has a connection. To view the machines information, visit ARMOR's website at <http://armordata.com>.

## SETTING MAINTENANCE REMINDERS

The ARMOR device has several functions that can be performed at the machine. When maintenance is performed, press and hold the “Maintenance Performed” button to log the event. When batteries are replaced, press and hold the “New Batteries Installed” button to log the event. An end user can silence the alarm by pressing the “Silence Alarm” button, note that the alert on Armordata.com will remain. When the end user has an issue with the machine and needs assistance, they can send a notification to Armordata.com by pressing and holding the “Maintenance Performed” button and the “Silence Alarm” button at the same time.

# BLUETOOTH BATTERY GAUGE

The Betco Genesys machine has an optional Bluetooth Battery Gauge that can be accessed using a mobile device with a Bluetooth connection. This gauge indicates the current charge of the batteries and hours that the machines deck motors have operated. It is also capable of tracking the battery pack's voltage, amp draw, charge cycles, discharge cycles, and battery health.



## GAUGE DISPLAY

The gauge displays the current battery pack charge state using 9 LED indicators and the total hours of runtime for the machine. The indications are as follows

**⚠ NOTE: When the machine is charging the gauge will pulse from the 1st LED to the appropriate LED to indicate the current level of charge.**

<b>9th LED (green)</b>	Battery Pack is approximately 100% full
<b>8th LED (green)</b>	Battery Pack is approximately 90% full
<b>7th LED (green)</b>	Battery Pack is approximately 78% full
<b>6th LED (amber)</b>	Battery Pack is approximately 67% full
<b>5th LED (amber)</b>	Battery Pack is approximately 55% full
<b>4th LED (amber)</b>	Battery Pack is approximately 45% full
<b>3rd LED (red)</b>	Battery Pack is approximately 33% full
<b>2nd LED (red)</b>	Battery Pack is approximately 20% full
<b>1st LED (red)</b>	Battery Pack is approximately 10% full
<b>STANDBY MODE</b>	The appropriate LED will flash every few seconds when the machine is not in use

## BLUETOOTH CONNECTION

To connect via Bluetooth, download the ProView Link app by Pro Charging Systems from either Google Play or the Apple App Store. The device must have Bluetooth enabled and must be in Bluetooth proximity to access it.

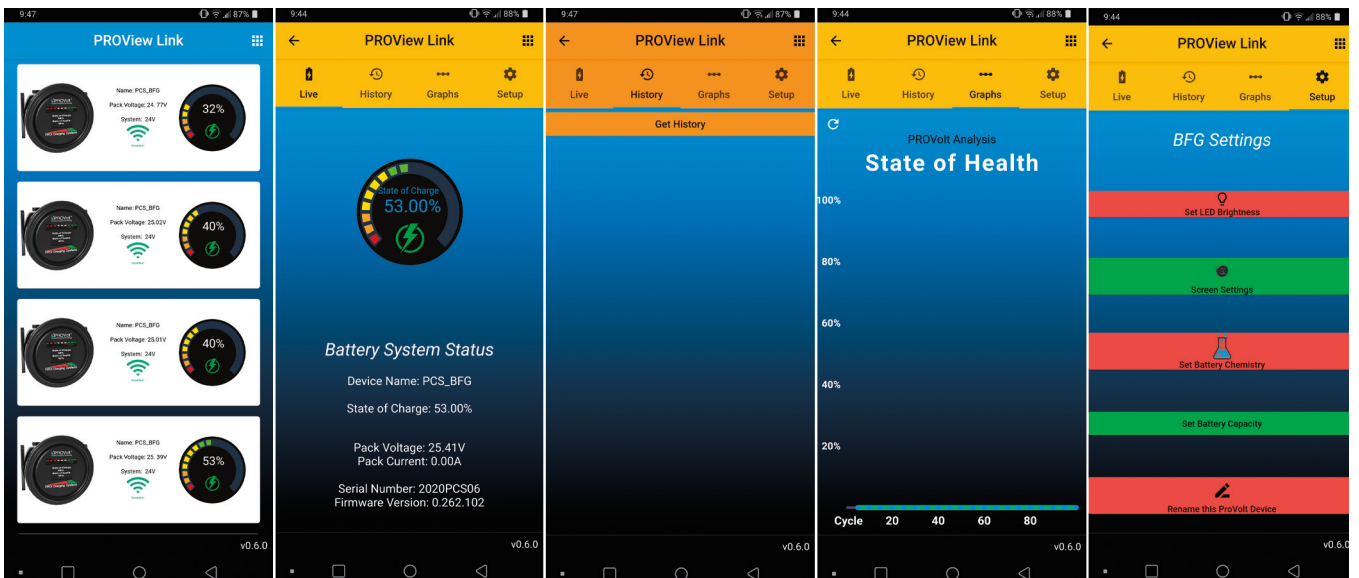
Upon launching the app, a list of gauges that are in range of Bluetooth device will be shown. This overview shows the name of the gauge, the current pack voltage, the nominal system voltage, signal strength, and current state of charge.

Selecting a gauge will bring up more detailed information and allow certain settings to be changed. The Live screen shows the device name, current state of charge, pack voltage, pack current, gauge serial number, and the firmware version. Navigate to the History, Graphs, and Setup screens by tapping the appropriate icon at the top of the screen or by swiping.

The History screen will show charge and discharge cycles that the machine has gone through. To update the screen, press "Get History" and the cycles will be shown. From this screen, the cycle data can be exported for review later.

The Graphs screen will show the state of health of the battery pack based on previous charge and discharge cycles. Note that several cycles must be completed before information populates.

The Setup screen is used to change various settings of the gauge. These settings are the LED Brightness, Screen Settings, Battery Chemistry, Battery Capacity, and the name of the gauge. Note that changing the name of the gauge will be reflected in the list of nearby gauges making it easier to select the desired machine.





# TIMER LOCKOUT

The Betco Genesys machine has an optional lockout timer that can limit the time of day, and days, that the machine can be operated. Limiting the hours that the machine can function prevents unauthorized use while not interfering with productivity. The timer is located on the back panel of the machine and is protected from tampering by a metal plate.



## BUTTONS

<b>WEEK</b>	Changes the day of the week for the clock or the days of the week for a program.
<b>HOUR</b>	Increments the hour unit up one.
<b>MIN</b>	Increments the minute unit up one.
<b>RECALL</b>	Recalls or clears the last settings of a program.
<b>CLOCK</b>	Allows adjustment of the clock when held down.
<b>PROG</b>	Indexes through each programs on/off settings.
<b>MANUAL</b>	Cycles through the machine being off, on, or in auto mode.
<b>R</b>	Resets the timer to the factory settings.

## SETTING THE TIME

1. Press the "CLOCK" button to ensure that the clock is displayed.
2. Press and hold the "CLOCK" button.
3. While holding the clock button, press the "WEEK" button until the proper day is displayed
4. Still holding the clock button, press the "HOUR" button until the correct hour is shown and repeat with the "MIN" button until the proper minute is shown.
5. Release the "CLOCK" button

**!** *NOTE: Pressing and holding the "CLOCK" button for 3 seconds switches from 12 hour time to 24 hour time and back.*

## OPERATION

The timer can store up to 16 programs that can be individually programmed. These programs are active when the timer shows "AUTO" next to the clock. The machine can be cycled to "ON", "OFF", and "AUTO" by pressing the "MANUAL" button. The machine can only be operated when the red light is illuminated on the timer. If the machine is to be used outside of the programmed time, the manual button can be pressed until "ON" is displayed. Ensure that the machine is turned back to "AUTO" to re-enable the programs.

"ON" – The machine is active and will not be disabled at any time.

"OFF" – The machine is disabled and will not be active at any time.

"AUTO" – The machine will be active when the programs on time has been reached and be disabled at the set off time.

## PROGRAMMING THE TIMER

1. Press the "PROG" button to enter programming mode.

**!** *NOTE: Pressing the "PROG" button again will cycle through the 16 programs. The program number is displayed on the left with an indication of whether the time to turn the machine on, or turn the machine off is being set.*

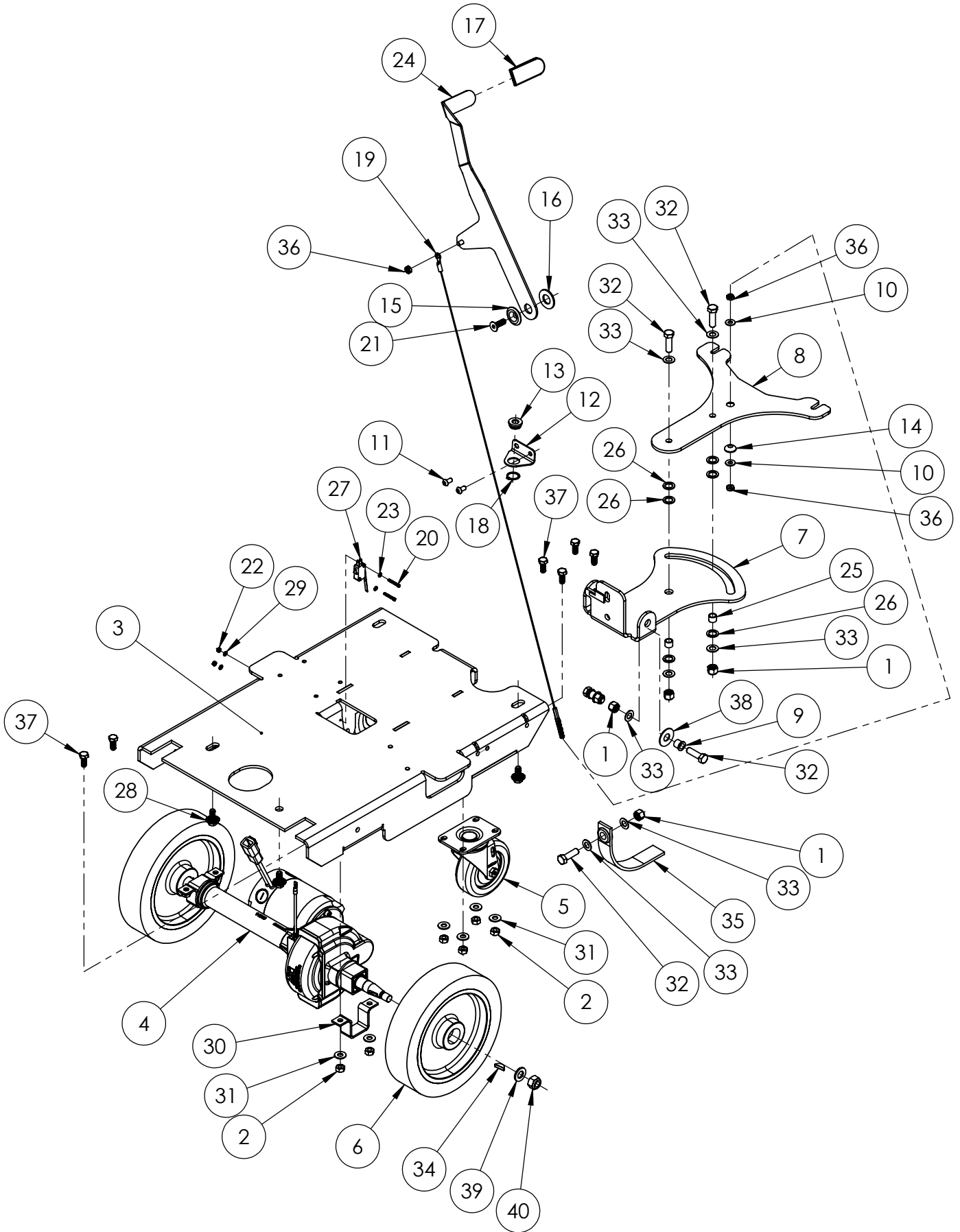
2. Cycle to the program number that is to be set and ensure on is shown on the left next to the number.
3. Press the "WEEK" button until the desired days are displayed at the top of the screen that the machine will turn on.
4. Press the "HOUR" button until the desired hour is shown and repeat with the "MIN" button until the desired minute is shown.
5. Press the "PROG" button to display the programs off time.
6. Repeat step 3 and 4 to set the off time.
7. Press the "CLOCK" button.
8. Press the "MANUAL" button until "AUTO" is shown on the right to enable the programs.

**!** *NOTE: While in the programming mode "RECALL" will disable the displayed program or load the previous setting used for that program.*

*NOTE: When setting the program to be used overnight, ensure that the off setting is the next day that the on setting is. (IE: Friday 10PM on, Saturday 8AM off).*



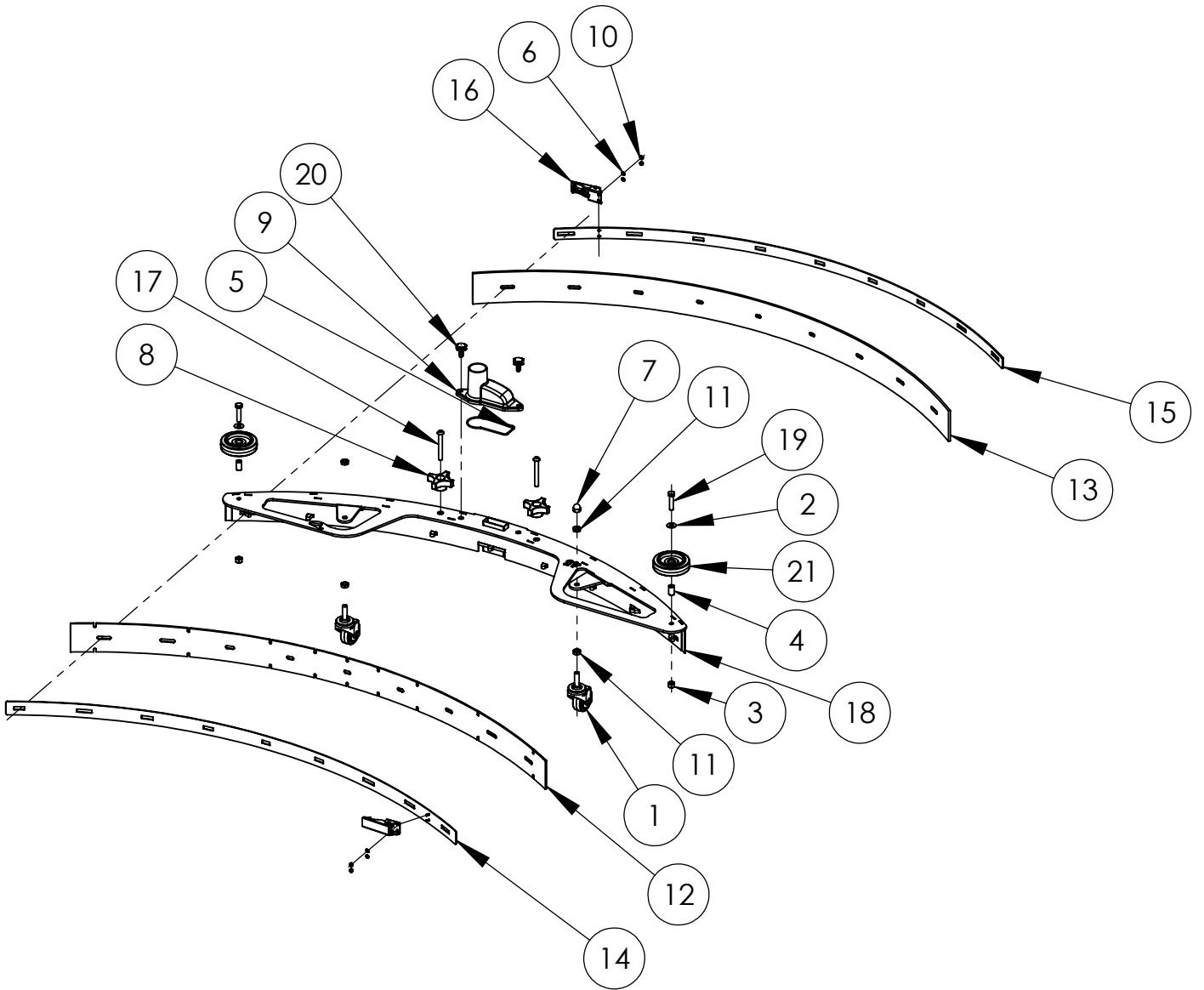
# FRAME DIAGRAM



# FRAME PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E11146	NUT, HEX, 3/8-16, NYLOC, ZINC	5	21	E28763	SCREW, FLAT HEAD, .3125-18 x 1.0 LG	1
2	E12524	NUT, HEX, .3125-18, SS	12	22	E28770	NUT, HEX, #4-40, NLYOC	2
3	E28511	FRAME WELDMENT	1	23	E28821	WASHER, LOCK, No. 4, EXT. TOOTH	2
4	E28512	TRANSAXLE	1	24	E28909	SQUEEGEE LIFT LEVER WELDMENT	1
5	E28514	Frame Caster	2	25	E28936	Sleeve Bearing	2
6	E28515	Transaxle Drive Wheel	2	26	E28937	Washer, 0.50, .505 ID x .75 OD, 0.067 Thk, Nylon	6
7	E28519	SQUEEGEE PIVOT BRACKET ASS'Y	1	27	E28952	Micro Switch	1
8	E28520	SQUEEGEE MOUNTING BRACKET	1	28	E29051	SCREW, FLANGE HD HEX, 0.31-18 x 0.75 Lg, SERRATED	4
9	E28591	Flanged Sleeve Bearing	2	29	E29368	Washer, Flat, No.4, .125ID, .312 OD, .03 HD HT	2
10	E28617	Washer, 0.25, 0.281 ID x 0.625 OD, 0.050 Thk, SS	2	30	E29400	TRANSAXLE BRACKET	2
11	E28648	Screw, Button Hd, 0.25-20 x 0.50 Lg, Hex Drive	2	31	E29403	Washer, .3125, .344ID .750OD 0.057T	12
12	E28714	CABLE GUIDE BRACKET	1	32	E29436	Bolt, Hex, .375-16 x 1.25 Lg, SS	5
13	E28715	CABLE GUIDE	1	33	E29438	Washer, 0.375, .406ID, .75OD, 0.040T	8
14	E28717	SPHERICAL WASHER	1	34	E29439	KEY, WOODRUFF, 19mm DIA x 5mm	2
15	E28718	SQUEEGEE LEVER BUSHING	1	35	E29459	STATIC STRAP	1
16	E28719	Washer, 0.656 ID x 1.312 OD x 0.094 Thk, Nylon	1	36	E29565	Nut, Hex, 0.25-20 Thin Nyloc	3
17	E28721	SQUEEGEE LEVER CAP	1	37	E81089	Bolt, Hex, 0.3125-18 x 0.75 Lg. Zinc	16
18	E28722	RETAINING RING EXT. 0.75 SHAFT X 0.046 GROOVE	1	38	E83145	Washer, Flat, 1/2" ID X 1.25" OD, Nylon	1
19	E28759	SQUEEGEE LIFT CABLE ASSY	1	39	E83702	Washer, Flat, M12, 13mm ID, 24mm OD, 2.7mm Thk	2
20	E28762	SCREW, SHCS, 4-40 x 1.0 Lg	2	40	E86489	Nut, Hex, M12 X 1.75, Nyloc	2

# SQUEEGEE DIAGRAM

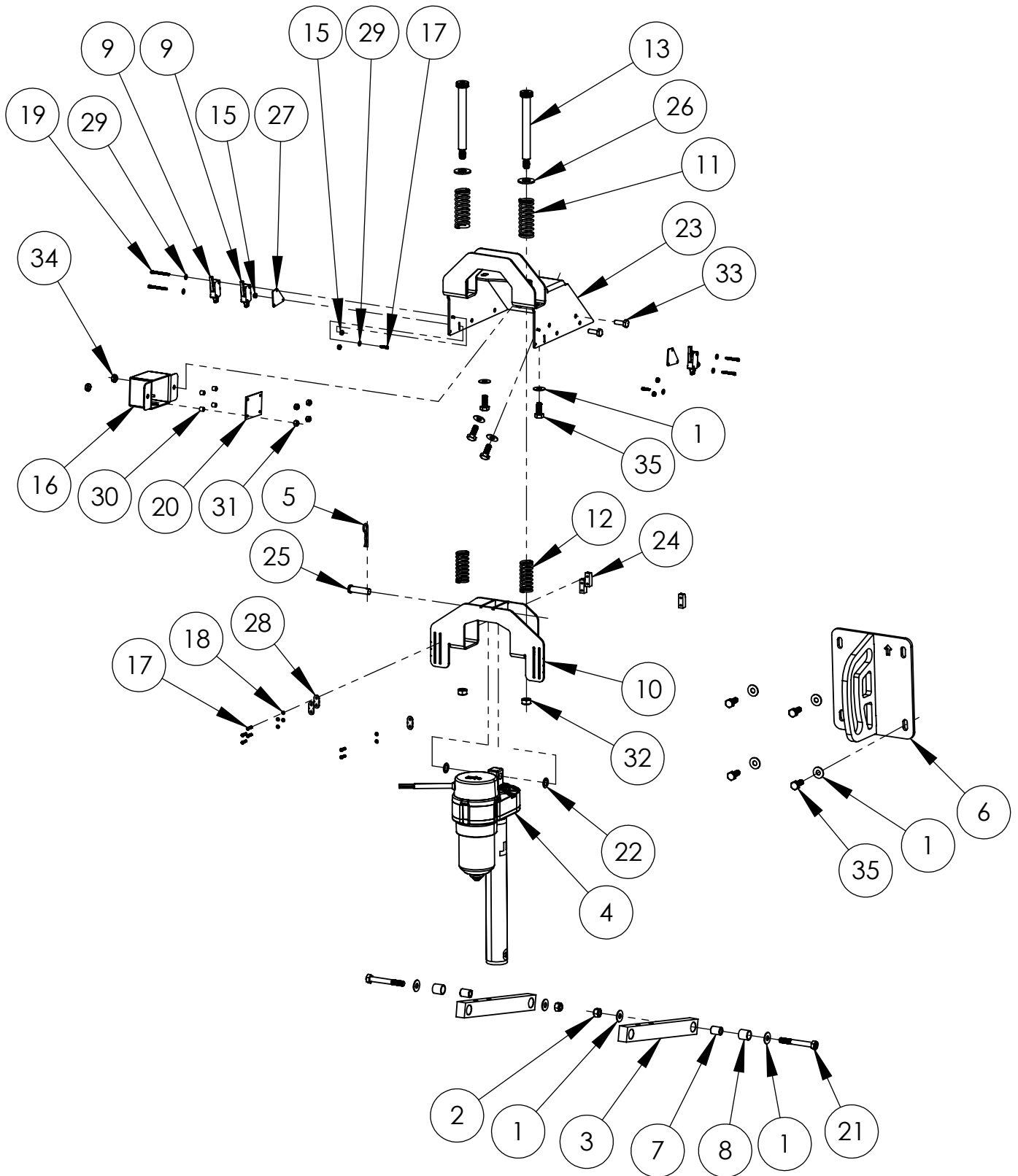




# SQUEEGEE PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E28568	2in Colson Stud Mount Swivel Caster	2	13.2	E29450	REAR SQUEEGEE BLADE, 35 in	1
2	E28622	Washer, 0.313, 0.344 ID x 0.750 OD, 0.050 Thk, SS	2	14	E29456	FRONT SQUEEGEE CLAMP, 45 in	1
3	E28624	Nut, Hex, 0.313-18, Nyloc, SS	2	14.1	E29520	FRONT SQUEEGEE CLAMP, 40 in	1
4	E28656	Oil Embedded Bushing, .4385 OD, .3125 ID, .75 Lg	2	14.2	E29451	FRONT SQUEEGEE CLAMP, 35 in	1
5	E28754	O-RING, SIZE - 151, VITON	1	15	E29457	REAR SQUEEGEE CLAMP, 45 in	1
6	E28806	WASHER, LOCK, 6-32, INTERNAL TOOTH, SS	4	15.1	E29517	REAR SQUEEGEE CLAMP, 40 in	1
7	E28851	Nut, Acorn, 0.375-16, Nylon (Black)	1	15.2	E29452	REAR SQUEEGEE CLAMP, 35 in	1
8	E28903	Squeegee Attachment Knob	2	16	E29521	OVER CENTER CLAMP	2
9	E28908	SQUEEGEE DRIP TRAP	1	17	E29547	Screw, Button Hd, .31-18 x 2.5 Lg, Hex Drive	2
10	E29397	Nut, Hex, 6-32, SS	4	18	E29551	SQUEEGEE WELDMENT, 45 in	1
11	E29398	Nut, Hex, .375-16, Thin, Zinc	4	18.1	E28501	SQUEEGEE WELDMENT, 40 in	1
12	E29454	FRONT SQUEEGEE BLADE, 45 in	1	18.2	E29552	SQUEEGEE WELDMENT, 35 in	1
12.1	E28504	FRONT SQUEEGEE BLADE, 40 in	1	19	E29553	Bolt, Hex Hd, 0.3125-18 x 1.375 Lg, SS	2
12.2	E29449	FRONT SQUEEGEE BLADE, 35 in	1	20	E29554	Thumb Screw, .25-20 x .75 Lg, SS	2
13	E29455	REAR SQUEEGEE BLADE, 45 in	1	21	EP50279	Colson Roller Wheel	2
13.1	E28502	REAR SQUEEGEE BLADE, 40 in	1				

# DISK HEAD LIFT DIAGRAM

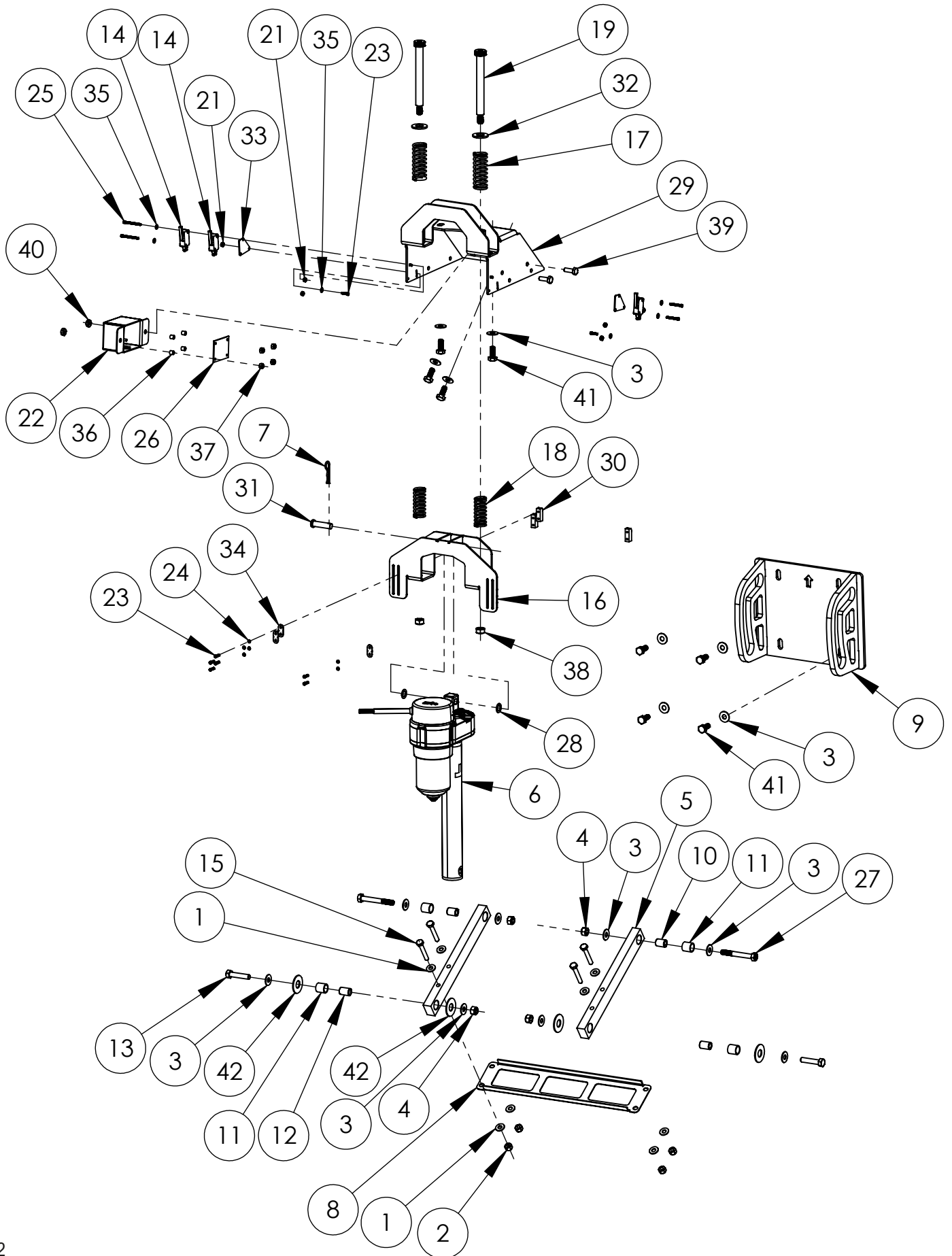


# DISK HEAD LIFT PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E28622	Washer, 0.313, 0.344 ID x 0.750 OD, 0.050 Thk, SS	12	19	E28782	SCREW, SHCS, HEX, 4-49 X 1.25 Lg	2
2	E28624	Nut, Hex, 0.313-18, Nyloc, SS	2	20	E28784	PCB, TDS SENSOR	1
3	E28625	HEAD LIFT ARM	2	21	E28822	BOLT, HEX, .313-18 x 2.5 LG, GRADE 8	2
4	E28628	Head Lift Actuator	1	22	E28830	WASHER, FLAT, .387 ID x .620 OD, Nylon	2
5	E28671	Hairpin, Cotter Pin	1	23	E29000	ACTUATOR MOUNTING BRACKET WELDMENT	1
6	E28679	DISK ROLLER TRACK WELDMENT	1	24	E29002	SWITCH CAM	3
7	E28684	SLEEVE BUSHING	2	25	E29003	CLEVIS PIN, 0.375 Dia X 1.125 Lg	1
8	E28685	Sleeve Bearing	2	26	E29005	Washer, Flat, 0.5, 0.531 ID x 1.062 OD, 0.098 Thk	2
9	E28699	Lever Action Switch 15A SPDT	3	27	E29009	SWITCH MOUNTING PLATE	2
10	E28726	ACTUATOR SPRING BRACKET WELDMENT	1	28	E29010	CAM MOUNTING PLATE	3
11	E28727	COMPRESSION SPRING UPPER	2	29	E29368	Washer, Flat, No.4, .125ID, .312 OD, .03 HD HT	6
12	E28728	COMPRESSION SPRING LOWER	2	30	E29373	Spacer, 6-32, .25 Lg, Al	4
13	E28730	SCREW, SHOULDER, 0.5 DIA, .375-16-4.25Lg	2	31	E29381	Nut, Hex, 6-32, Nyloc, Zinc	4
14	E28769	SCREW, SHCS, HEX, 4-40 X .875 Lg	2	32	E29393	Nut, Hex, .375-16, Thin, Nyloc, SS	2
15	E28770	NUT, HEX, #4-40, NLYOC	6	33	E29410	Bolt, Hex, .250-20 x 0.75 Lg	2
16	E28778	TDS SHEILD BRACKET	1	34	E29565	Nut, Hex, 0.25-20 Thin Nyloc	2
17	E28779	SCREW, SHCS, HEX, 4-40 X .4375 Lg	8	35	E81089	Bolt, Hex, 0.3125-18 x 0.75 Lg. Zinc	8
18	E28780	WASHER, SPILT LOCK, No 4, ZINC PLATED	6				



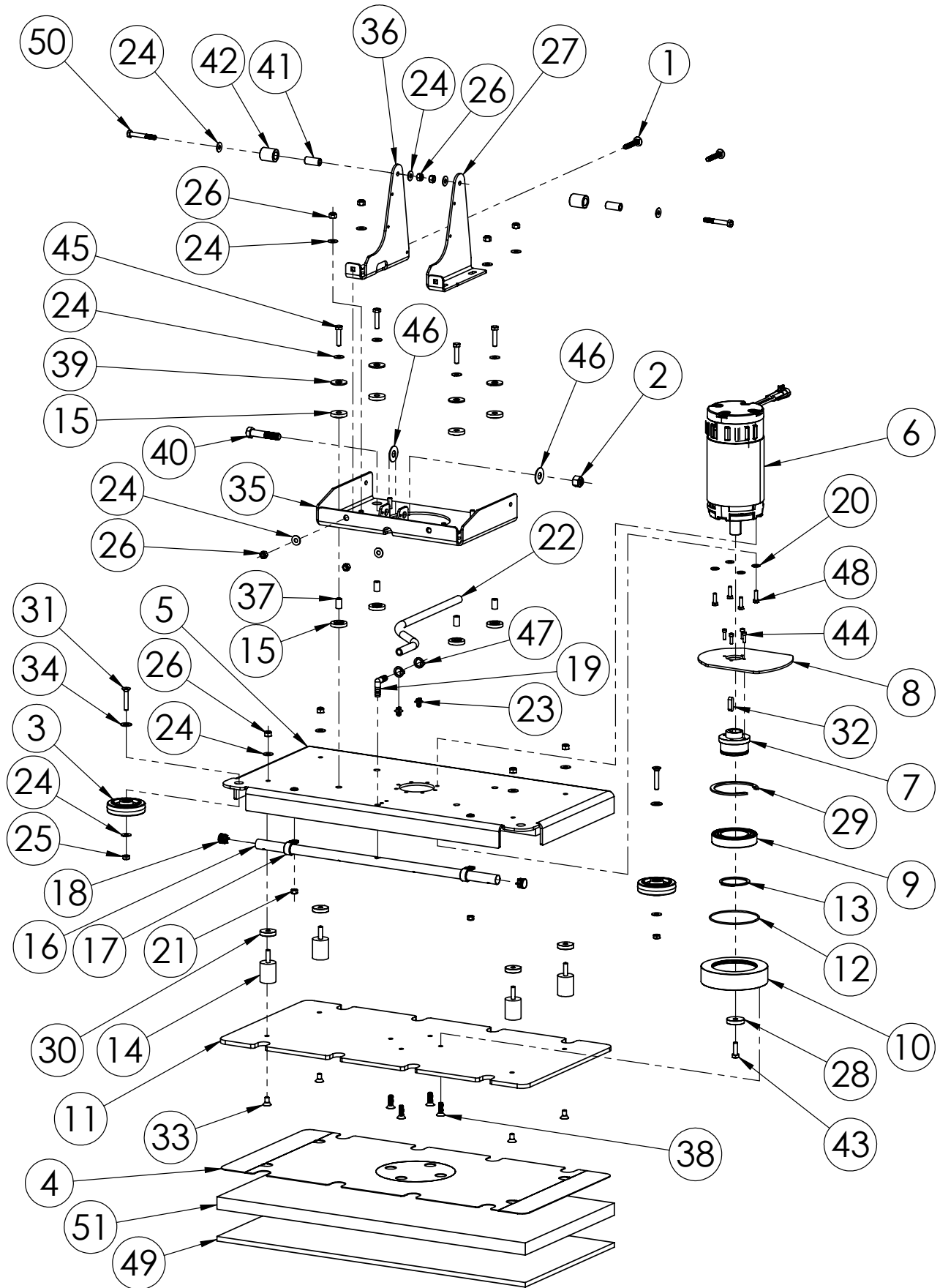
# ORBITAL HEAD LIFT DIAGRAM



# ORBITAL HEAD LIFT PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E28617	Washer, 0.25, 0.281 ID x 0.625 OD, 0.050 Thk, SS	8	22	E28778	TDS SHEILD BRACKET	1
2	E28618	Nut, Hex, Nyloc, SS	4	23	E28779	SCREW, SHCS, HEX, 4-40 X .4375 Lg	8
3	E28622	Washer, 0.313, 0.344 ID x 0.750 OD, 0.050 Thk, SS	16	24	E28780	WASHER, SPILT LOCK, No 4, ZINC PLATED	6
4	E28624	Nut, Hex, 0.313-18, Nyloc, SS	4	25	E28782	SCREW, SHCS, HEX, 4-49 X 1.25 Lg	2
5	E28625	HEAD LIFT ARM	2	26	E28784	PCB, TDS SENSOR	1
6	E28628	Head Lift Actuator	1	27	E28822	BOLT, HEX, .313-18 x 2.5 LG, GRADE 8	2
7	E28671	Hairpin, Cotter Pin	1	28	E28830	WASHER, FLAT, .387 ID x .620 OD, Nylon	2
8	E28678	LIFT ARM BRACE	1	29	E29000	ACTUATOR MOUNTING BRACKET WELDMENT	1
9	E28680	ORBITAL ROLLER TRACK WELDMENT	1	30	E29002	SWITCH CAM	3
10	E28684	SLEEVE BUSHING	2	31	E29003	CLEVIS PIN, 0.375 Dia X 1.125 Lg	1
11	E28685	Sleeve Bearing	4	32	E29005	Washer, Flat, 0.5, 0.531 ID x 1.062 OD, 0.098 Thk	2
12	E28693	SLEEVE BUSHING	2	33	E29009	SWITCH MOUNTING PLATE	2
13	E28694	Bolt, Hex, .313-18 x 1.5 Lg, Partial Thread	2	34	E29010	CAM MOUNTING PLATE	3
14	E28699	Lever Action Switch 15A SPDT	3	35	E29368	Washer, Flat, No.4, .125ID, .312 OD, .03 HD HT	6
15	E28702	Bolt, Hex, .250-20 x 1.625 Lg	4	36	E29373	Spacer, 6-32, .25 Lg, Al	4
16	E28726	ACTUATOR SPRING BRACKET WELDMENT	1	37	E29381	Nut, Hex, 6-32, Nyloc, Zinc	4
17	E28727	COMPRESSION SPRING UPPER	2	38	E29393	Nut, Hex, .375-16, Thin, Nyloc, SS	2
18	E28728	COMPRESSION SPRING LOWER	2	39	E29410	Bolt, Hex, .250-20 x 0.75 Lg	2
19	E28730	SCREW, SHOULDER, 0.5 DIA, .375-16-4.25 Lg	2	40	E29565	Nut, Hex, 0.25-20 Thin Nyloc	2
20	E28769	SCREW, SHCS, HEX, 4-40 X .875 Lg	2	41	E81089	Bolt, Hex, 0.3125-18 x 0.75 Lg. Zinc	8
21	E28770	NUT, HEX, #4-40, NLYOC	6	42	E83145	Washer, Flat, 1/2" ID X 1.25" OD, Nylon	4

# ORBITAL HEAD DIAGRAM

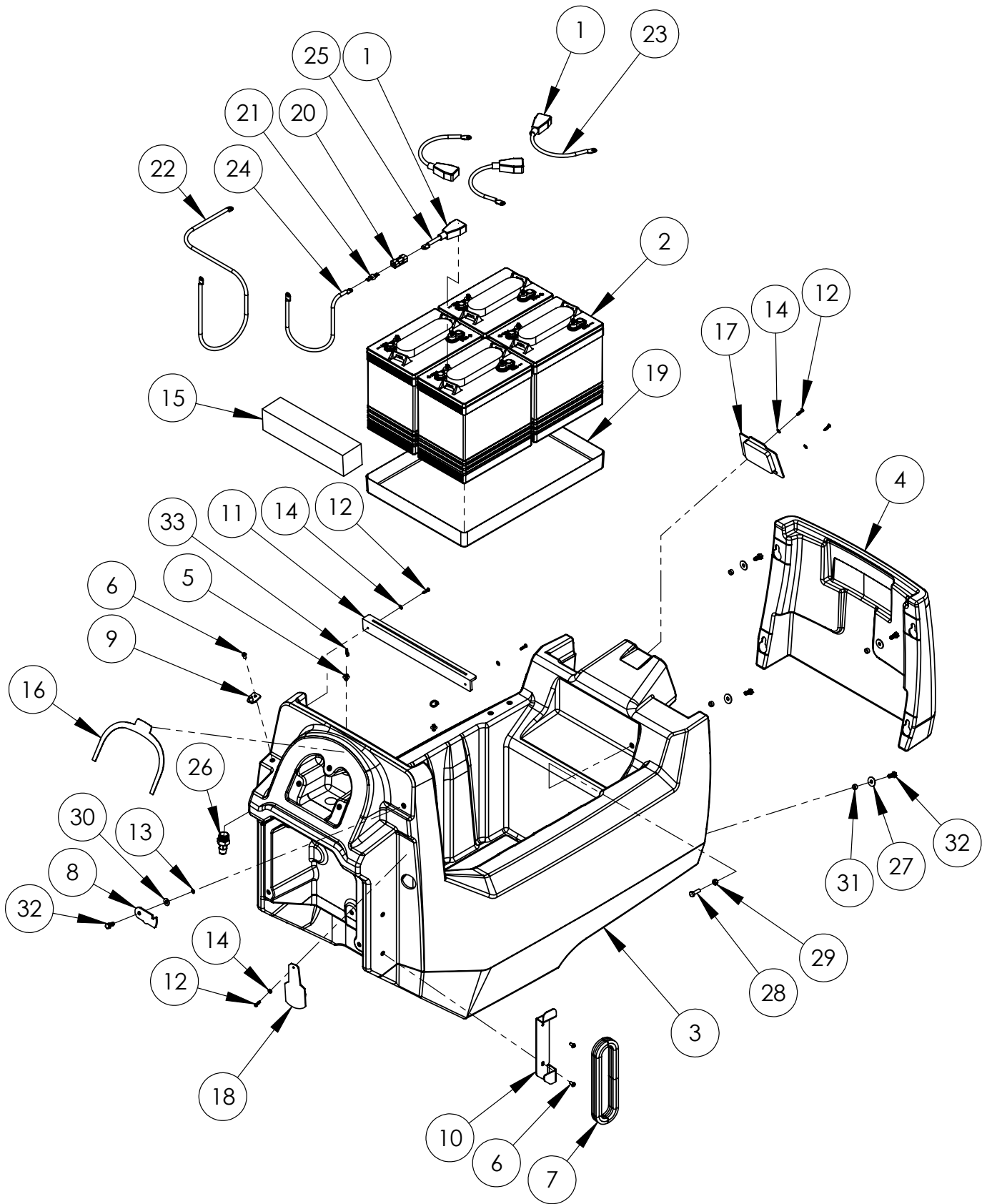


# ORBITAL HEAD PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E11043	CARRIAGE BOLT, 5/16-18 x 2.0 LG	2	27	E28630	ORBITAL HEAD ROLLER BRACKET L.H.	1
2	E12410	NUT, HEX, 1/2"-13, NYLON, GRADE 5, ZINC	1	28	E28631	HUB WASHER	1
3	E28509	3 IN ROLLER WHEEL	2	29	E28632	Retaining Ring, Int., 90mm Bore x 3.15mm Groove	1
4	E28513	PAD DRIVER FACE	1	30	E28633	ISOLATOR SPACER	4
5	E28518	ORBITAL HEAD MOTOR BRACKET WELDMENT	1	31	E28634	Screw, Flat Hd, 0.313-18 x 1.75 Lg, Hex Drive	2
6	E28521	24VDC 2200 RPM 0.75 HP Motor	1	32	E28635	MACHINE KEY, 8MM X 7MM X 28MM	1
7	E28522	ECCENTRIC BEARING HUB	1	33	E28639	Screw, Flat Hd, 0.313-18 x 0.625 Lg, Hex Drive	4
8	E28523	ORBITAL COUNTERWEIGHT BRACKET	1	34	E28640	Washer, Spring, Acetal, 0.451 I.D. X 0.848 O.D. X 0.055T	2
9	E28524	BALL BEARING, 3.543 OD x 2.165 ID x 0.709 W	1	35	E28650	ORBITAL HEAD LIFT BRACKET WELDMENT	1
10	E28525	ORBITAL BEARING HUB	1	36	E28653	ORBITAL HEAD ROLLER BRACKET R.H.	1
11	E28526	ORBITAL PAD DRIVER	1	37	E28656	Isolator Bushing	4
12	E28527	O-Ring, Buna-N, 3.737 ID x 0.103 Dia	1	38	E28763	SCREW, FLAT HEAD, .3125-18 x 1.0 LG	4
13	E28529	Retaining Ring, Ext. 55mm Shaft x 2.15mm Groove	1	39	E28764	WASHER, FLAT, .5 ID 1.25 OD	4
14	E28530	Rubber Isolator Mount, 1.563 Tall x 1.25 Dia	4	40	E28815	SCREW, HEX HEAD, 0.5 x 2.5 LG	1
15	E28531	Isolator Bushing, 1.25 OD x 0.313 ID	8	41	E28835	BUSHING ROLLER, 1.25 LG	2
16	E28533	WATER FEED MANIFOLD	1	42	E28836	ROLLER, 1.00 O.D. 1.1875 LG	2
17	E28534	Loop Clamp, 0.75 Dia	2	43	E29426	Bolt, Hex, M8 x1.25, 25mm Lg	1
18	E28535	Hole Plug, 0.59-0.70 Dia	2	44	E29431	Screw, Socket Hd, 10-24 x .625 Lg, Hex Drive	4
19	E28536	Elbow Fitting, 90 Deg, 0.375 Dia	1	45	E29553	Bolt, Hex Hd, 0.3125-18 x 1.375 Lg, SS	4
20	E28617	Washer, 0.25, 0.281 ID x 0.625 OD, 0.050 Thk, SS	4	46	E83145	Washer, Flat, 1/2" ID X 1.25" OD, Nylon	2
21	E28618	Nut, Hex, Nyloc, SS	2	47	E83523	Cable Tie, 4.125 Lg x 0.125 W	2
22	E28620	Tubing Clear 0.375 ID x 0.563 OD	2.33 FT	48	E83914	Bolt, Hex, M6 x1, 15 Lg	4
23	E28621	WIRE TIE PUSH MOUNT	2	49	E84058	Maroon Orbital Pad, 14 x 28 x 0.375	1
24	E28622	Washer, 0.313, 0.344 ID x 0.750 OD, 0.050 Thk, SS	20	50	E84556	SCREW, HEX HD, .313-16 x 2.25 LG	2
25	E28623	Nut, Hex, 0.313-18 Thin Nyloc SS	2	51	E89832	ORBITAL BACKER PAD, 28 x 14 in, RED	1
26	E28624	Nut, Hex, 0.313-18, Nyloc, SS	12				



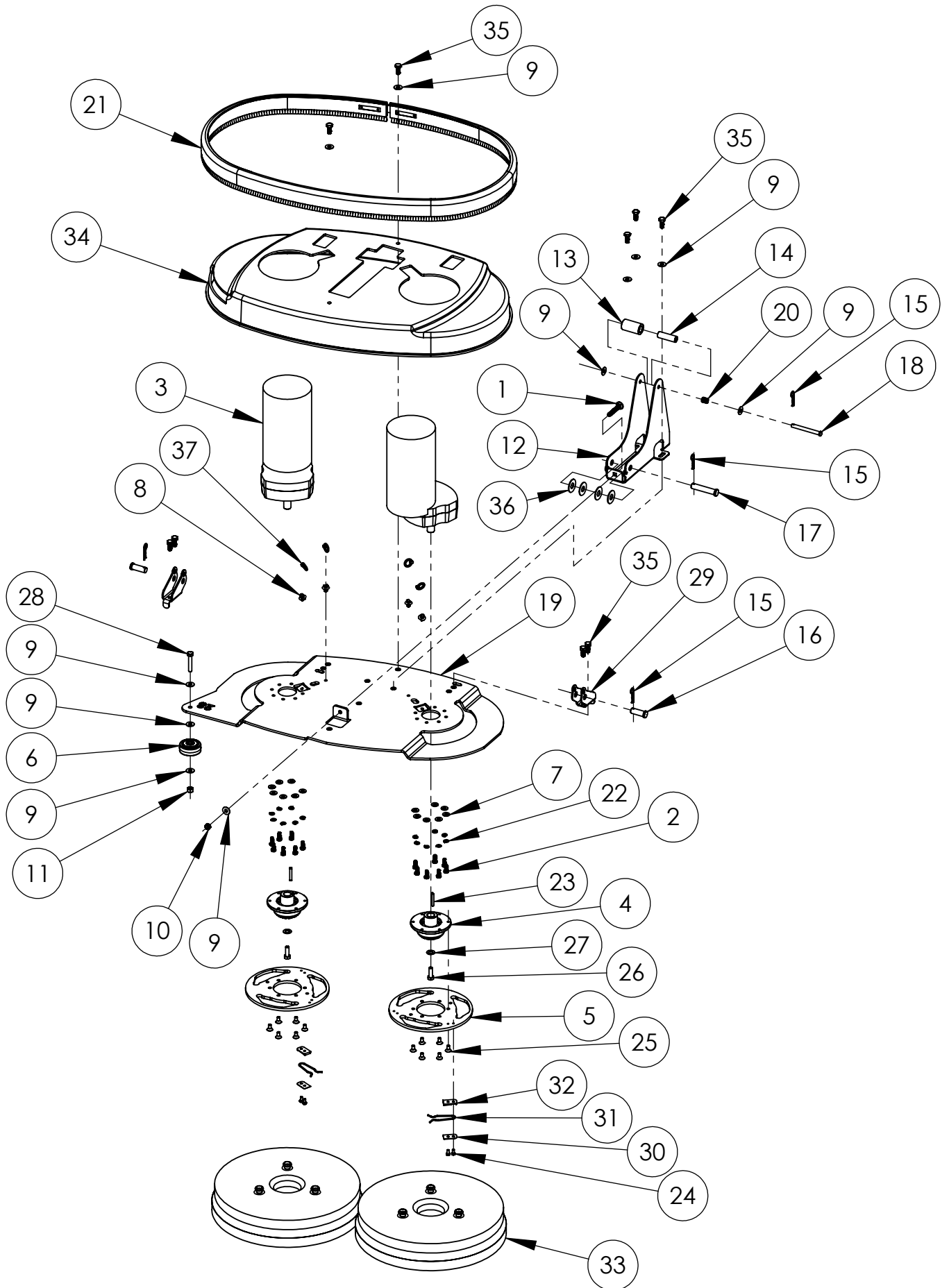
# SOLUTION TANK DIAGRAM



# SOLUTION TANK PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E12543	TERMINAL PROTECTOR, RED STRAIGHT	4	18	E28837	REAR FILL COVER	1
2	E28506	Battery Trojan T145	4	19	E28959	BATTERY TRAY (ACCESSORY)	1
3	E28563	SOLUTION TANK	1	20	E28974	FUSE HOLDER	1
4	E28579	SOLUTION TANK FRONT COVER	1	21	E28975	FUSE, 100A	1
5	E28621	WIRE TIE PUSH MOUNT	2	22	E29201	BATTERY CABLE 34in - BLACK	1
6	E28648	Screw, Button Hd, 0.25-20 x 0.50 Lg, Hex Drive	3	23	E29203	BATTERY CABLE 12in - BLACK	3
7	E28704	Battery Charger Cord	1	24	E29202	BATTERY CABLE 23in - RED	1
8	E28707	SQUEEGEE HANGER BRACKET	1	25	E29204	BATTERY CABLE 5in - RED	1
9	E28712	DRAIN CUFF HANGER	1	26	E29305	FITTING, BARBED TUBE, .75 ID x .75 MALE NPT, PLASTIC	1
10	E28737	CHARGER CORD WRAP BRACKET	1	27	E29388	Washer, .3125, .344ID, 1.0OD	4
11	E28756	SQUEEGEE LEVER GUIDE	1	28	E29392	Bolt, Hex, .3125-18 x 1.00 Lg	1
12	E28761	Screw, Torx Head, No. 8, Thread forming for Plastic	5	29	E29402	NUT, HEX, .3125-18, SS	1
13	E28765	WASHER, WAVE, .32 ID .437 OD	1	30	E29403	Washer, .3125, .344ID .750OD 0.057T	1
14	E28775	Washer, NO 10, 0.203ID 0.438OD 0.03T SS	5	31	E29579	Spacer, .315 ID, .50 OD, .25 Lg	4
15	E28785	BATTERY, FOAM SPACER	1	32	E81089	Bolt, Hex, 0.3125-18 x 0.75 Lg. Zinc	5
16	E28823	GASKET, MS GENESYS HANDLE	1	33	E83523	Cable Tie, 4.125 Lg x 0.125 W	2
17	E28825	FRONT FILL COVER	1				

# DISK HEAD DIAGRAM

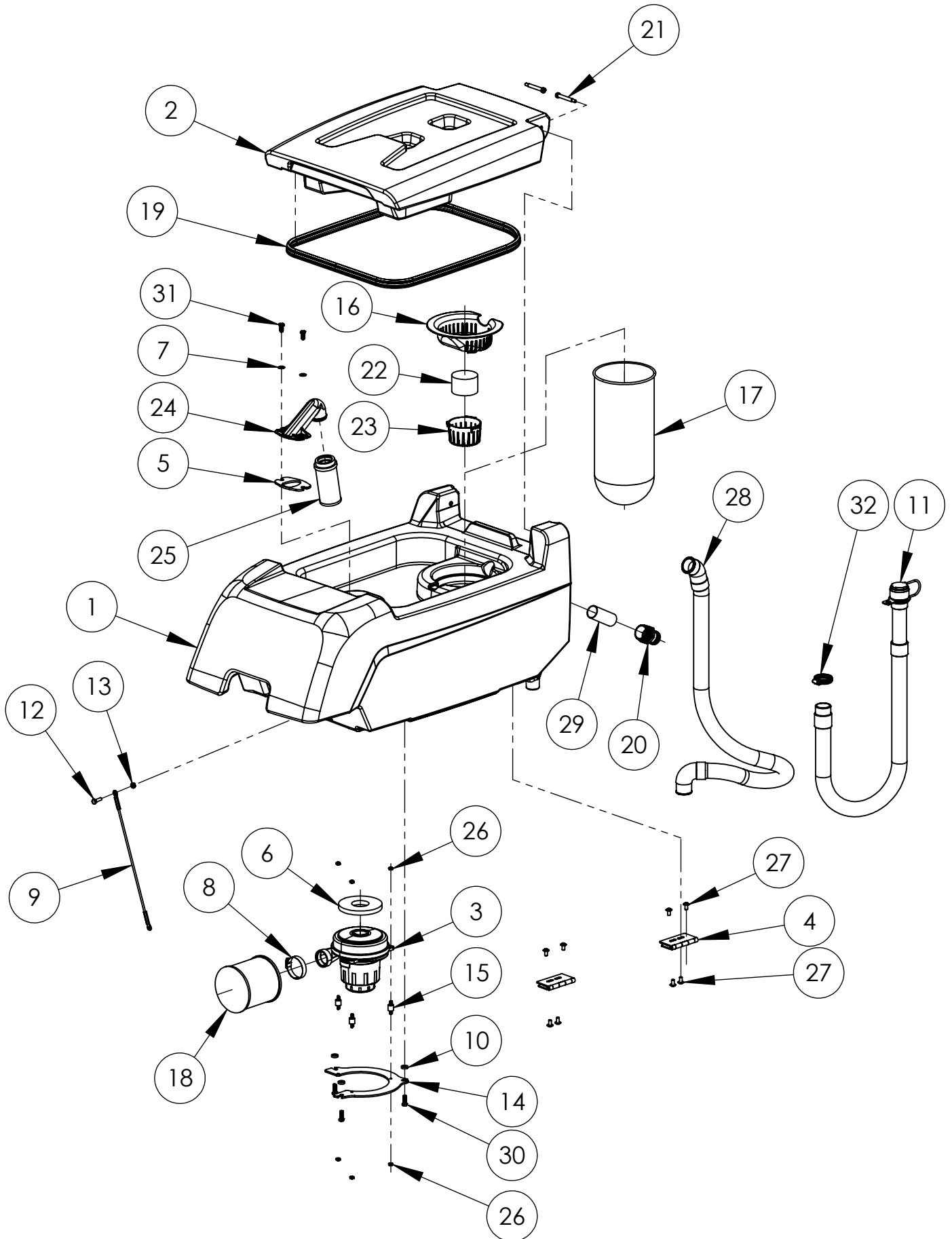


# DISK HEAD PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E11043	CARRIAGE BOLT, 5/16-18 x 2.0 LG	1	21.1	E29342	DISK HEAD SKIRT ASSEMBLY, 28 in	1
2	E20087	Screw, Hex Head, M6 x 1.0, 16mm LG, SS	14	21.2	E29341	DISK HEAD SKIRT ASSEMBLY, 26 in	1
3	E28541	MRP15 Amer Motor	2	22	E29385	Washer, Lock, 6mm	14
4	E28588	DISK ALIGNMENT COUPLER	2	23	E29389	MACHINE, KEY 5MM X 5MM	2
5	E28589	DISK ENGAGEMENT PLATE	2	24	E29390	Bolt, Hex, 10-24 x .375 Lg	4
6	E28598	COLSON ROLLER WHEEL 2IN	1	25	E29391	Screw, Flat Hd. 0.25-20 x .375 Lg Hex Drive	12
7	E28617	Washer, 0.25, 0.281 ID x 0.625 OD, 0.050 Thk, SS	14	26	E29426	Bolt, Hex, M8 x1.25, 25mm Lg	2
8	E28621	WIRE TIE PUSH MOUNT	4	27	E29438	Washer, 0.375, .406ID, .75OD, 0.040T	2
9	E28622	Washer, 0.313, 0.344 ID x 0.750 OD, 0.050 Thk, SS	11	28	E29513	Bolt, Hex, 0.313-18 x 1.75 Lg	1
10	E28623	Nut, Hex, 0.313-18 Thin Nyloc SS	1	29	E29514	LIFT ARM PIVOT BRACKET	2
11	E28624	Nut, Hex, 0.313-18, Nyloc, SS	1	30	E29515	SPRING SHIM FOR LUG	2
12	E28654	DISK HEAD ROLLER BRACKET	1	31	E29518	DISK LOCK WIRE SPRING CLIP	2
13	E28663	ROLLER, 1.00 OD	1	32	E29519	LUG SPRING RETAINER	2
14	E28664	BUSHING ROLLER	1	33	E29539	Malish Pad Driver Assembly, 16 in	2
15	E28671	Hairpin, Cotter Pin	4	33.1	E29535	Malish Pad Driver Assembly, 14 in	2
16	E28697	CLEVIS PIN, 0.5 DIA X 1.125 LG	2	33.2	E29537	Malish Pad Driver Assembly, 13 in	2
17	E28699	Clevis Pin, 0.5 Dia X 2.25 Lg	1	34	E29572	DISK HEAD SHROUD, 32 in	1
18	E28783	CLEVIS PIN, .313 X 3.00 Lg	1	34.1	E29570	DISK HEAD SHROUD, 28 in	1
19	E28934	DISK HEAD FRAME WELDMENT, 32 in	1	34.2	E29571	DISK HEAD SHROUD, 26 in	1
19.1	E28916	DISK HEAD FRAME WELDMENT, 28 in	1	35	E81089	Bolt, Hex, 0.3125-18 x 0.75 Lg. Zinc	9
19.2	E28933	DISK HEAD FRAME WELDMENT, 26 in	1	36	E83145	Washer, Flat, 1/2" ID X 1.25" OD, Nylon	4
20	E29328	SPRING, COMPRESSION, .5 OD .376 ID .75 LG	1	37	E83523	Cable Tie, 4.125 Lg x 0.125 W	4
21	E29343	DISK HEAD SKIRT ASSEMBLY, 32 in	1				



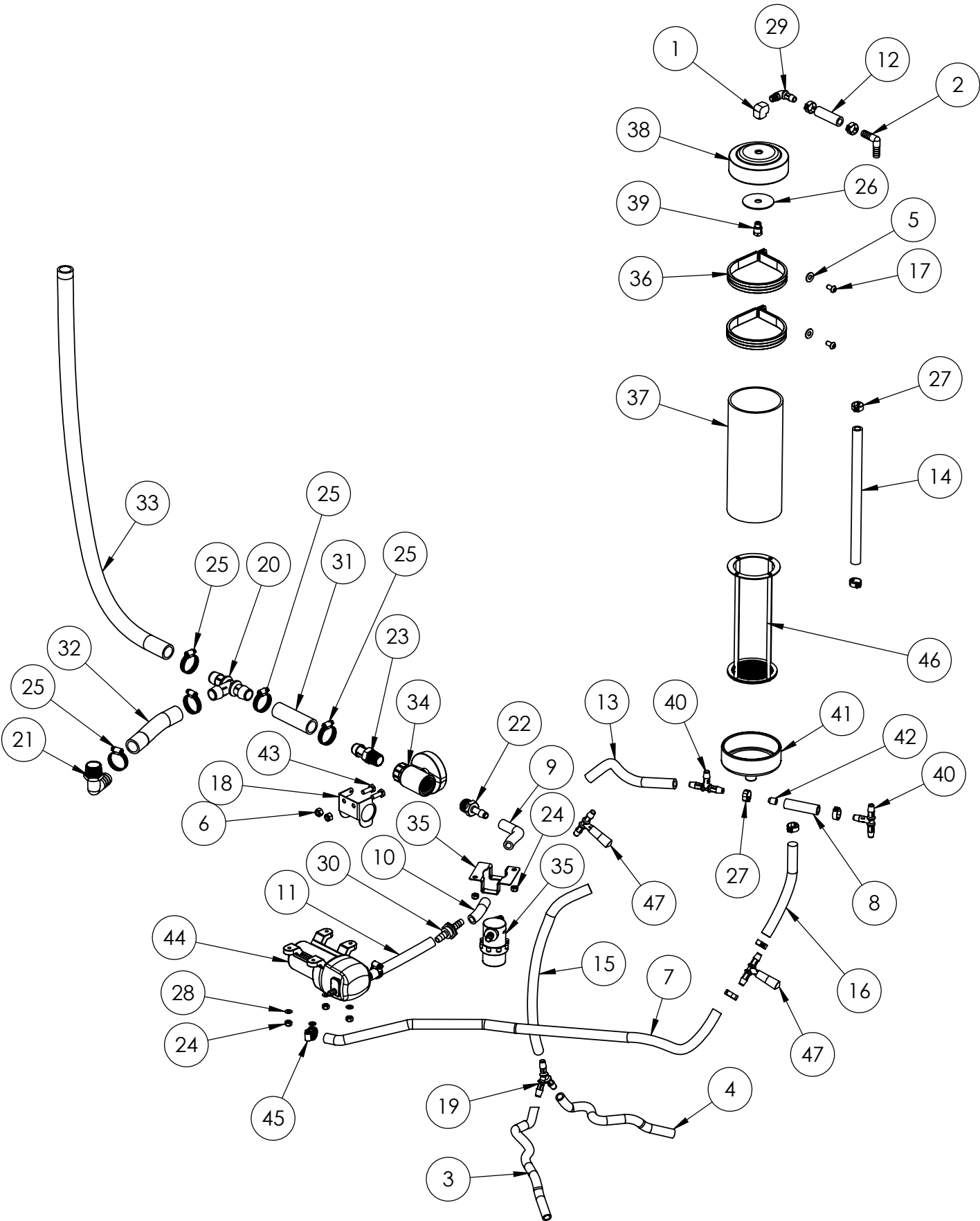
# RECOVERY TANK DIAGRAM



# RECOVERY TANK PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E28575	RECOVERY TANK	1	17	E29526	CreteRx Debris Sock	1
2	E28577	RECOVERY TANK COVER	1	18	E29527	HEPA Filter	1
3	E28581	Vacuum Fan 6.6d 24VDC 2-Stage	1	19	E29528	RECOVERY TANK LID SEAL	1
4	E28596	Hinge Assembly	2	20	E29531	1.5IN BARBED TUBE FITTING	1
5	E28607	FLOAT MOUNT GASKET	1	21	E29558	Screw, Shoulder .313-18 .375OD x 2.25 Lg	2
6	E28608	VACUUM FAN GASKET	1	22	E29560	DEFOAMING CHEMICAL PUCK	1
7	E28622	Washer, 0.313, 0.344 ID x 0.750 OD, 0.050 Thk, SS	2	23	E29561	DEFOAMING CHEMICAL PUCK HOLDER	1
8	E28755	CLAMP, HOSE, 1.56 - 2.5, .5W	1	24	E29562	FLOAT BALL CAGE MOUNT	1
9	E28760	RECOVERY TANK CABLE	1	25	E29563	Ball Float Shut-Off	1
10	E28850	SPACER-0.7500 OD x 0.188 ID, Aluminum	3	26	E29565	Nut, Hex, 0.25-20 Thin Nyloc	6
11	E28921	RECOVERY TANK DRAIN HOSE	1	27	E29569	Bolt, Flanged Button Head, 0.313-18 x .625 Lg, SS	8
12	E29392	Bolt, Hex, .3125-18 x 1.00 Lg	1	28	E29576	SQUEEGEE VACUUM HOSE	1
13	E29402	NUT, HEX, .3125-18, SS	1	29	E29577	RECOVERY TANK INLET TUBE	1
14	E29523	VACUUM MOUNT BRACKET	1	30	E81072	Hex Head Screw 0.3125-18 x 1.00 Lg	3
15	E29524	.25-20 Dual Stud Isolator	3	31	E81089	Bolt, Hex, 0.3125-18 x 0.75 Lg, Zinc	2
16	E29525	DEBRIS TRAY	1	32	E83966	CLAMP, HOSE, 2.000 ID x 0.500 ID	1

# SOLUTION SYSTEM DIAGRAM



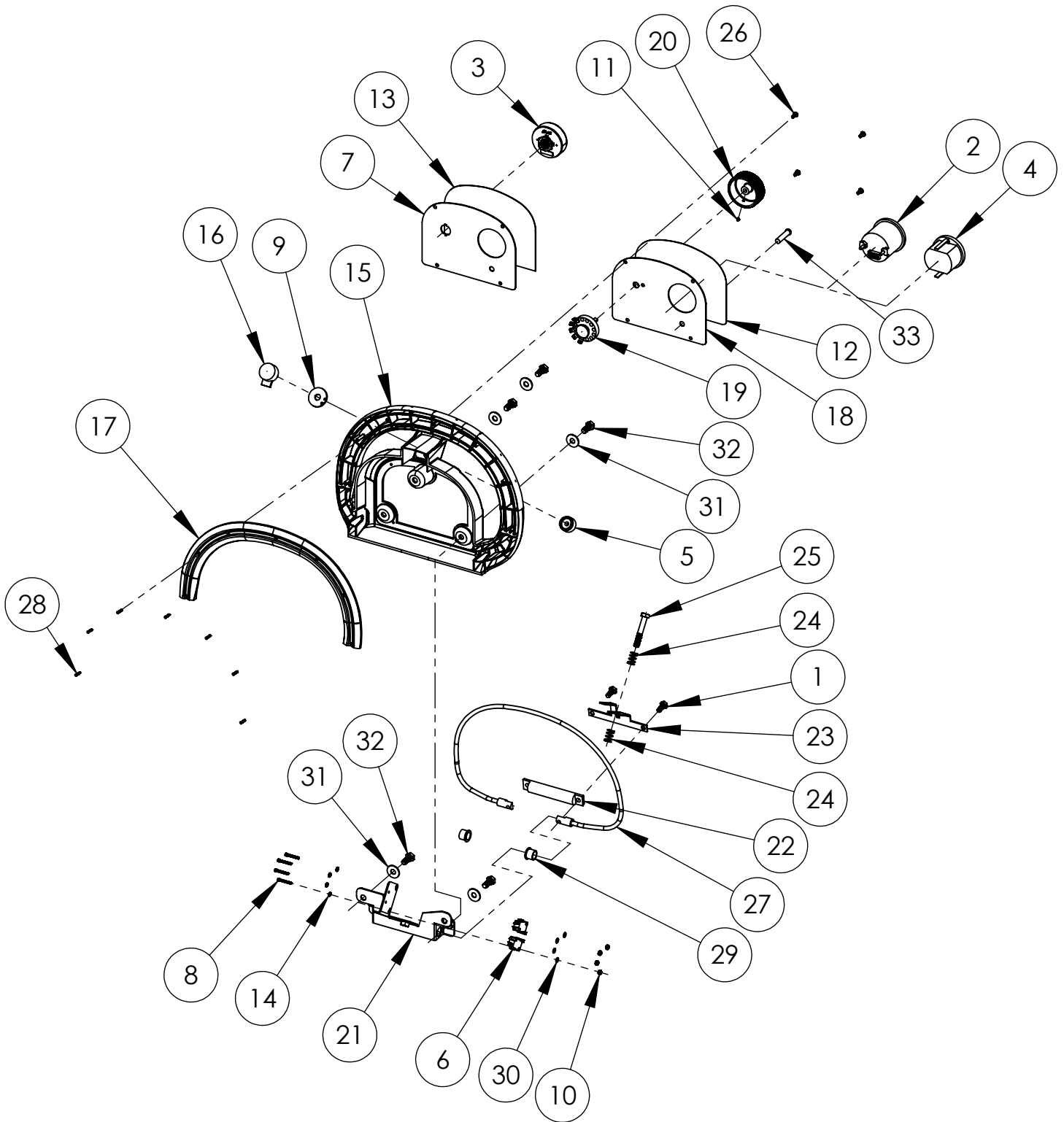
# SOLUTION SYSTEM PARTS LISTING

Item#	Part #	Description	Qty.
1	E28320	Female Threaded 90 Elbow	1
2	E28536	Elbow Fitting 90 Deg 0.313 Dia	1
3	E28609	Water Delivery Tube	1.17FT
4	E28609	Water Delivery Tube	1.17FT
5	E28617	Washer, 0.25, 0.281 ID x 0.625 OD, 0.050 Thk, SS	2
6	E28618	Nut, Hex, Nyloc, SS	2
7	E28620-01	TUBING, 3/8" ID x 9/16" OD	2.67FT
8	E28620-02	TUBING, 3/8" ID x 9/16" OD	.5FT
9	E28620-03	TUBING, 3/8" ID x 9/16" OD	.38FT
10	E28620-04	TUBING, 3/8" ID x 9/16" OD	.21FT
11	E28620-05	TUBING, 3/8" ID x 9/16" OD	.42FT
12	E28620-06	TUBING, 3/8" ID x 9/16" OD	.17FT
13	E28620-07	TUBING, 3/8" ID x 9/16" OD	.46FT
14	E28620-08	TUBING, 3/8" ID x 9/16" OD	.81FT
15	E28620-09	TUBING, 3/8" ID x 9/16" OD	.46FT
16	E28620-10	TUBING, 3/8" ID x 9/16" OD	.5FT
17	E28648	Screw, Button Hd, 0.25-20 x 0.50 Lg, Hex Drive	2
18	E28746	BRACKET, BALL VALVE-SOLUTION TANK	1
19	E28747	TUBING FITTING WYE REDUCER .375 TO .375	1
20	E28749	Hose Fitting 0.75 Plastic Tee	1
21	E28750	Hose Fitting 0.75 Plastic 90 Female	1
22	E28751	Hose Fitting 0.375 Barb / 0.5 Pipe	1
23	E28752	Hose Fitting 0.75 Barb / 0.75 Pipe	1
24	E28753	NUT, NYLON LOCK #10-24, SS	6

Item#	Part #	Description	Qty.
25	E28766	CLAMP, HOSE, .6875-1.25, .3125W	5
26	E28767	WASHER, FENDER, .406 ID - 1.25 OD	1
27	E28773	CLAMP, SINGLE PINCH	9
28	E28775	Washer, NO 10, 0.203ID 0.438OD 0.03T SS	4
29	E28786	HOSE FITTING, ELBOW 3/8 X 24 NPT	1
30	E28816	Check Valve 0.375 Barb Plastic	1
31	E28922-01	.75 ID Hose	.5FT
32	E28922-02	.75 ID Hose	.5FT
33	E28922-03	.75 ID Hose	2.25FT
34	E28940	Ball Valve	1
35	E28942	IN-LINE STRAINER	1
36	E28969	Loop Clamp	2
37	E29306	CLEAR PVC TUBE	1
38	E29307	TOP CHEM TUBE END CAP	1
39	E29313	Spraying Systems Nozzle 1/8HH3.5	1
40	E29315	Chemical Resistant Barbed Fitting	2
41	E29316	BOTTOM CHEM TUBE END CAP	1
42	E29345	Restriction Plug_Chem Bypass	1
43	E29410	Bolt, Hex, .250-20 x 0.75 Lg	2
44	E29601	Pump	1
45	E89720	CLAMP, HOSE, 1.625, SS	2
46	EP50276	Chem Puck Cage	1
47	EP50282	TDS Sensor Assembly	2



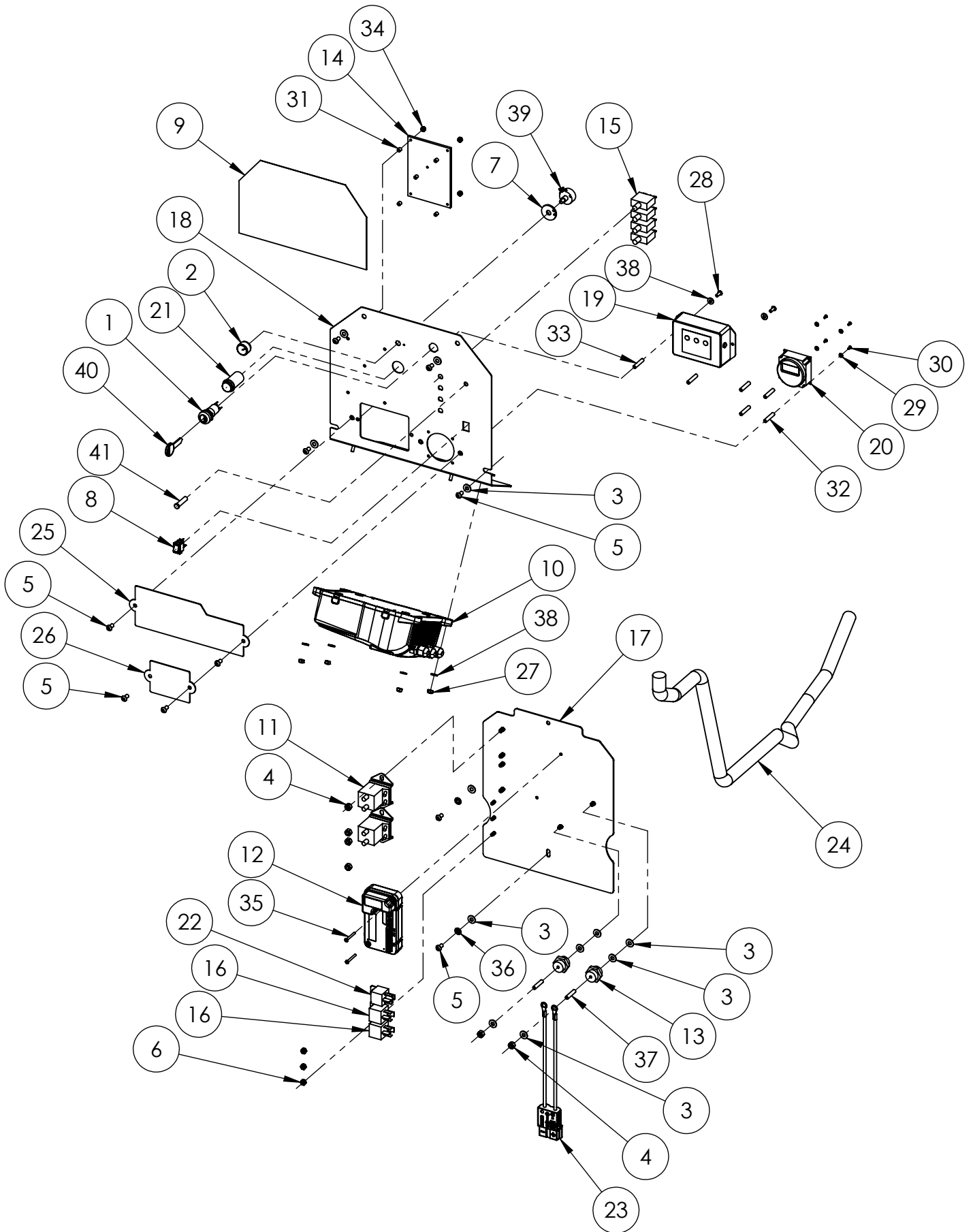
# CONSOLE DIAGRAM



# CONSOLE PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E10734	HEX HEAD BOLT 1/4-20 x 5/8 LG	2	17	E29301	HANDLE BACK	1
2	E12630	BATTERY GUAGE	1	18	E29322	CLUSTER PANEL	1
3	E28590	Touch Encoder - Grayhill	1	19	E29323	ROTARY SWITCH	1
4	E28605	PCS Battery Guage	1	20	E29324	DOWN PRESSURE KNOB	1
4.1	E28980	Pro Charging Systems BDI Harness		21	E29325	HANDLE BRACKET WELDMENT	1
5	E28606	Potentiometer Knob	1	22	E29326	BAIL PIVOT	1
6	E28699	Lever Action Switch 15A SPDT	2	23	E29327	HANDLE BAIL ARM	1
7	E28741	CLUSTER PANEL - PREMIUM	1	24	E29328	SPRING, COMPRESSION, .5 OD .376 ID .75 LG	2
8	E28762	SCREW, SHCS, 4-40 x 1.0 Lg	4	25	E29329	SCREW, HEX, .3125-18 x 2 LG	1
9	E28768	POT SPACER AND PIN ASS'Y	1	26	E29334	SCREW, TORX HEAD, NO. 8, THREAD FORMING FOR PLASTIC	4
10	E28770	NUT, HEX, #4-40, NLYOC	4	27	E29335	HANDLE BAIL WELDMENT	1
11	E28788	SCREW, SET, CUP-POINT No. 5-40 x .1875 LG	1	28	E29336	SCREW, TORX HEAD, No. 2, THREAD FORMING FOR PLASTIC	7
12	E28794	DECAL, CONTROL PANEL, STANDARD	1	29	E29337	BEARING, FLANGED SLEEVE, .75 OD .5 ID .5 LG	2
13	E28795	DECAL, CONTROL PANEL, TOUCH ENCODER	1	30	E29368	Washer, Flat, No.4, .125ID, .312 OD, .03 HD HT	4
14	E28821	WASHER, LOCK, No. 4, EXT. TOOTH	4	31	E81062	Flat Washer 0.3125 Zinc	5
15	E28915	HANDLE	1	32	E81089	Bolt, Hex, 0.3125-18 x 0.75 Lg. Zinc	5
16	E28955	Speed Potentiometer	1	33	EP50281	INDICATOR LED	1

# ELECTRICAL ENCLOSURE DIAGRAM



# ELECTRICAL ENCLOSURE PARTS LISTING

Item#	Part #	Description	Qty.	Item#	Part #	Description	Qty.
1	E12629	Key Switch w/ 2 Keys	1	22	E28978	40A RELAY	1
2	E28606	Potentiometer Knob	1	23	E28979	Charger Harness	1
3	E28617	Washer, 0.25, 0.281 ID x 0.625 OD, 0.050 Thk, SS	12	24	E29200	Machine Harness Standard Disk	1
4	E28618	Nut, Hex, Nyloc, SS	6	24.1	E29210	Machine Harness Standard Orbital	1
5	E28648	Screw, Button Hd, 0.25-20 x 0.50 Lg, Hex Drive	10	24.2	E28817	Machine Harness Premium Disk	1
6	E28753	NUT, NYLON LOCK #10-24, SS	3	24.3	E28818	Machine Harness Premium Orbital	1
7	E28768	POT SPACER AND PIN ASS'Y	1	25	E29363	PLATE, TIMER, ARMOR COVER	1
8	E28781	SWITCH, BLACK ROCKER	1	26	E29364	PLATE, TIMER COVER	1
9	E28793	DECAL, BACK PANEL	1	27	E29366	Nut, Hex, 10-32 Nyloc Thin ZP	4
10	E28907	SPE CHARGER	1	28	E29367	Screw, Button Hd, 10-32 x .50 Lg ZP	2
11	E28924	Contact, 100A 24V	2	29	E29368	Washer, Flat, No.4, .125ID, .312 OD, .03 HD HT	4
12	E28949	Controller, I-Drive	1	30	E29369	Screw, Button Hd, 4-40 x .25 Lg ZP	4
13	E28950	Electrical Standoff	2	31	E29373	Spacer, 6-32, .25 Lg, Al	5
14	E28951	Standard Control Board	1	32	E29374	Spacer, 4-40, 1.25 Lg Al	4
14.1	E28820	Premium Control Board	1	33	E29375	Spacer, 10-32, 1.25 Lg Al	2
15	E28954	30A Breaker	4	34	E29381	Nut, Hex, 6-32, Nyloc, Zinc	4
16	E28956	80A Relay	2	35	E29382	Screw, Pan Hd 6-32 x 1.25 Lg Phillips Drive	2
17	E28963	ELECTRICAL BACK PANEL	1	36	E29446	Washer, Int. Tooth 0.25, 0.256ID 0.540D 0.034T	2
18	E28964	ELECTRICAL FRONT PANEL	1	37	E29447	Screw, Set, Cup-Point 0.25-20 x 1.25 Lg	2
19	E28965	Armor Device (ACCESSORY)	1	38	E29580	Washer, No. 10, .50 OD, .21 ID, .06 HD HT	6
19.1	EP50283	Wire Harness, Armor	1	39	E29706	POTENTIOMETER - SOLUTION CONTROL	1
20	E28966	Machine Timer (ACCESSORY)	1	40	E89382	KEY, SWITCH	1
20.1	E28976	Timer Option Harness	1	41	EP50281	INDICATOR LED	1
21	E28967	Auto on/off Button	1				



# GENESYS™ RECOMMENDED SERVICE PARTS

PART #	PART NAME	DIAGRAM	WEAR ITEM	26D	28D	32D	280RB	OPTIONAL PARTS	Stocked by Distributor & Service Company
E29459	Static Strap	FRAME	X	X	X	X	X		X
E29449	Front Squeegee Blade 35in	SQUEEGEE	X	X					X
E29450	Rear Squeegee Blade 35in	SQUEEGEE	X	X					X
E28504	Front Squeegee Blade 40in	SQUEEGEE	X		X				X
E28502	Rear Squeegee Blade 40in	SQUEEGEE	X		X				X
E29454	Front Squeegee Blade 45in	SQUEEGEE	X			X			X
E29455	Rear Squeegee Blade 45in	SQUEEGEE	X			X			X
E28903	Squeegee Attachment Knob	SQUEEGEE		X	X	X	X		X
E28784	PCB, TDS Sensor	HEAD LIFT		X	X	X	X		X
E28526	Orbital Pad Driver	ORBITAL					X		X
E28513	Pad Driver Face	ORBITAL					X		X
E89832	Orbital Backer Pad 14 x 28	ORBITAL	X				X		X
E28530	Rubber Isolator Mount 1.563 Tall x 1.25 Dia	ORBITAL					X		X
E28633	Isolator Spacer	ORBITAL					X		X
E28531	Isolator Bushing 1.25 OD x 0.313 ID	ORBITAL					X		X
E28656	Isolator Bushing	ORBITAL					X		X
E28506	Battery Trojan T145	SOLUTION TANK	X	X	X	X	X		X
E88031	Battery, AGM, Crown 220	SOLUTION TANK						X	X
E28704	Charger Cord	SOLUTION TANK		X	X	X	X		X
E28785	Battery Spacer, Foam	SOLUTION TANK		X	X	X	X		X
E29571	Disk Head Shroud - 26	DISK HEAD		X					X
E29536	13in Malish Brush Assembly	DISK HEAD	X	X					X
E29537	13in Malish Pad Driver Assembly	DISK HEAD	X	X					X
E29570	Disk Head Shroud - 28	DISK HEAD			X				X
E29534	14in Malish Brush Assembly	DISK HEAD	X		X				X
E29535	14in Malish Pad Driver Assembly	DISK HEAD	X		X				X
E29572	Disk Head Shroud - 32	DISK HEAD				X			X
E29538	16in Malish Brush Assembly	DISK HEAD	X			X			X
E29539	16in Malish Pad Driver Assembly	DISK HEAD	X			X			X
E29527	HEPA Filter	RECOVERY TANK	X	X	X	X	X		X
E29563	Ball Float Shut-Off	RECOVERY TANK		X	X	X	X		X
E29562	Float Ball Cage Mount	RECOVERY TANK		X	X	X	X		X
E29525	Debris Tray	RECOVERY TANK	X	X	X	X	X		X
E29601	Pump	SOLUTION DELIVERY	X	X	X	X	X		X
EP50276	Chem Puck Cage	SOLUTION DELIVERY	X	X	X	X	X		X
E29313	Spray Nozzle	SOLUTION DELIVERY	X	X	X	X	X		X
F092486	Solichem/Defoamer Combo	SOLUTION DELIVERY		X	X	X	X		X
E28975	Fuse	ELECT. ENCLOSURE	X	X	X	X	X		X
E28954	30A Breaker	ELECT. ENCLOSURE		X	X	X	X		X
E12629	Key Switch w/ 2 Keys	ELECT. ENCLOSURE		X	X	X	X		X
E28956	80A Relay	ELECT. ENCLOSURE		X	X	X	X		X
E28978	40A Relay	ELECT. ENCLOSURE		X	X	X	X		X
E28907	SPE Charger	ELECT. ENCLOSURE		X	X	X	X		X

# GENESYS™ RECOMMENDED MAINTENANCE

SYSTEM	REFERENCE SECTION	DAILY	WEEKLY	MONTHLY	SIX MONTHS
<b>CONTROL PANEL</b>					
INSPECT ALL CONTROLS AND HARDWARE FOR SECURITY & SERVICEABILITY	PARTS DIAGRAMS	X			
VERIFY PROPER OPERATION OF ALL CONTROLS	ALL	X			
<b>SOLUTION DISTRIBUTION</b>					
VERIFY SOLUTION FLOW AND ADJUSTMENT OPERATION	SOLUTION DISTRIBUTION	X			
CLEAN AND INSPECT INLINE FILTER	SOLUTION DISTRIBUTION			X	
FLUSH TANK WITH FRESH WATER	SOLUTION DISTRIBUTION			X	
<b>SCRUB DECK</b>					
RINSE BRUSHES AND PADS	SCRUB DECK SETUP	X			
RINSE AND DRY SCRUB DECK	SCRUB DECK SETUP	X			
CLEAN MOTOR VENTS	PARTS DIAGRAMS			X	
INSPECT INSOLATORS ( ORBITAL ONLY)	PARTS DIAGRAMS				X
INSPECT LIFT LINKAGE AND PIVOTS	SCRUB DECK SETUP				X
<b>RECOVERY SYSTEM</b>					
RINSE OUT AND LET THE RECOVERY TANK AIR DRY	RECOVERY SYSTEM	X			
CLEAN AND INSPECT DEBRIS TRAY	RECOVERY SYSTEM	X			
VERIFY DRAIN HOSE CAP IS SEALED TIGHT WHEN INSTALLED	RECOVERY SYSTEM	X			
INSPECT LID SEAL	RECOVERY SYSTEM		X		
INSPECT/REPLACE DEFOAMER PUCK AS NEEDED	RECOVERY SYSTEM		X		
INSPECT HEPA FILTER	RECOVERY SYSTEM				X
CLEAN AND SANITIZE RECOVERY TANK	RECOVERY SYSTEM			X	
<b>BATTERIES AND CHARGER</b>					
INSPECT CABLES & TERMINALS FOR CORROSION, SECURITY & DAMAGE	BATTERIES			X	
SERVICE LEAD ACID BATTERIES IF APPLICABLE	BATTERIES		X		
CLEAN ONBOARD CHARGER VENTS IF APPLICABLE	PARTS DIAGRAMS			X	
INSPECT WET BATTERY PROTECTION SYSTEM	BATTERIES				X
<b>SQUEEGEE ASSEMBLY</b>					
CLEAN AND INSPECT THE BLADES AND ENTIRE SQUEEGEE ASSEMBLY	RECOVERY SYSTEM	X			
INSPECT VACUUM HOSE	RECOVERY SYSTEM		X		
<b>FRAME AND CHASSIS COMPONENTS</b>					
CLEAN AND INSPECT WHEELS AND CASTORS	PARTS DIAGRAMS			X	
CLEAN AND INSPECT LINKAGE, CHASSIS AND HARDWARE	PARTS DIAGRAMS			X	
CLEAN AND INSPECT VISIBLE WIRES FOR DAMAGE AND SECURITY	PARTS DIAGRAMS				X

# TROUBLESHOOTING GUIDE

ISSUE	POTENTIAL CAUSE	PROPOSED SOLUTION	MANUAL SECTION
INSUFFICIENT WATER TO SCRUB HEAD	SOLUTION SETTING TOO LOW	ADJUST SOLUTION CONTROL	SOLUTION DISTRIBUTION
	SOLUTION TANK IS EMPTY	ADD WATER TO THE SOLUTION TANK	SOLUTION DISTRIBUTION
	SOLUTION TUBE IS KINKED OR CLOGGED	INSPECT TUBES	SOLUTION DISTRIBUTION
	SOLUTION SHUTOFF VALVE IS CLOSED	OPEN VALVE	SOLUTION DISTRIBUTION
	SOLUTION PUMP IS NOT FUNCTIONING	VERIFY OPERATION AND/OR REPLACE PUMP	PARTS DIAGRAM
	STRAINER SCREEN IS CLOGGED	CLEAN OUT STRAINER BOWL AND SCREEN	PARTS DIAGRAM
POOR WATER RECOVERY	RECOVER TANK IS FULL	EMPTY RECOVERY TANK	RECOVERY SYSTEM
	DIRTY OR WORN SQUEEGEE BLADES	INSPECT/ROTATE/REPLACE AS REQUIRED	RECOVERY SYSTEM
	RECOVERY HOSE LOOSE OR KINKED	INSPECT/REPAIR/REPLACE	RECOVERY SYSTEM
	RECOVERY HOSE OR SQUEEGEE IS OBSTRUCTED	CLEAR OBSTRUCTION FOR SYSTEM	RECOVERY SYSTEM
	SQUEEGEE ASSEMBLY MAY BE OUT OF ADJUSTMENT	ADJUST AS NECESSARY	RECOVERY SYSTEM
	STUCK OR DAMAGED BALL FLOAT	INSPECT/REPAIR OR REPLACE	RECOVERY SYSTEM
	RECOVERY TANK LID IS NOT SEALING PROPERLY	INSPECT SEAL AND REPLACE IF DAMAGED	PARTS DIAGRAM
	DRAIN HOSE CAP IS NOT INSTALLED PROPERLY	INSTALL DRAIN HOSE SECURELY	RECOVERY SYSTEM
	CLOGGED HEPA FILTER	REMOVE AND INSPECT INSIDE AND OUTSIDE OF HEPA FILTER. REPLACE IF DAMAGED.	PARTS DIAGRAM
	LOW BATTERY VOLTAGE	CHARGER BATTERIES	CHARGING
MACHINE WILL NOT TURN ON	FAULTY KEY SWITCH	DIAGNOSE AND REPLACE	WIRING DIAGRAM
	DISCHARGED BATTERIES	CHARGE BATTERIES	CHARGING
	LOOSE OR DAMAGED WIRE/CONNECTION	ADJUST THE MIXTURE AS REQUIRED	SOLUTION DISTRIBUTION
MACHINE IS NOT CLEANING PROPERLY	WORN PAD OR BRUSH	INSPECT AND REPLACE AS REQUIRED	SCRUB DECK SETUP
	WRONG PAD OR BRUSH FOR APPLICATION	CONTACT YOUR LOCAL DISTRIBUTOR FOR RECOMMENDED APPLICATION	SCRUB DECK SETUP
	INSUFFICIENT CLEANING SOLUTION FOR APPLICATION	ADJUST THE MIXTURE AS REQUIRED	SOLUTION DISTRIBUTION
VACUUM MOTOR WILL NOT SHUT OFF	STILL IN DELAY MODE	ALLOW 7 SECONDS TO SHUT DOWN	RECOVERY SYSTEM
	VACUUM RELAY MAY BE FAULTY	CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE	WIRING DIAGRAM
SCRUB HEAD WILL NOT RUN	SCRUB HEAD WILL NOT RAISE	LOWER SCRUB HEAD	SCRUB DECK SETUP
	BATTERY PROTECTION IS INDICATING LOW WATER	SERVICE THE BATTERIES	BATTERIES
	BATTERIES ARE LOWER THAN ALLOWABLE	CHARGE BATTERIES	CHARGING
	CIRCUIT BREAKER FOR THE BRUSH MOTORS IS TRIPPED	SEE THE NEXT SECTION TITLED "SCRUB HEAD CIRCUIT BREAKERS"	TROUBLESHOOTING TABLE
	BAIL SWITCH IN HANDLE MAY BE FAULTY	INSPECT AND REPLACE AS REQUIRED	PARTS DIAGRAM
	BATTERY RELAY MAY BE FAULTY	CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE	WIRING DIAGRAM
SCRUB HEAD CIRCUIT BREAKER IS TRIPPED	INADEQUATE SOLUTION FOR APPLICATION	INCREASE SOLUTION TO SCRUB HEAD	PRE-USE SETUP
	SCRUB HEAD IS SET ON HEAVY DOWN PRESSURE	REDUCE DOWN PRESSURE SETTING	PRE-USE SETUP
	PAD IS TOO AGGRESSIVE FOR APPLICATION	CONTACT YOUR LOCAL DISTRIBUTOR FOR RECOMMENDED APPLICATION	PRE-USE SETUP
	FAULTY OR SHORTED WIRE	REPAIR	WIRING DIAGRAM
	WEAK CIRCUIT BREAKER	CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE. THE CIRCUIT BREAKER SHOULD NOT TRIP BELOW IT'S STATED RATING.	PARTS DIAGRAM
MACHINE WILL NOT DRIVE	CIRCUIT BREAKER MAY BE TRIPPED	INSPECT AND RESET. IF PROBLEM PERSISTS CONTACT YOUR SERVICE TECHNICIAN	PRE-USE SETUP
	BATTERY METER IS FLASHING A FAULT CODE	REFERENCE FAULT CODE AND TROUBLESHOOT AS REQUIRED	PRE-USE SETUP
	BATTERIES DISCHARGED TOO LOW	CHARGE THE BATTERIES	CHARGING
	SPEED KNOB TURNED ALL THE WAY DOWN	INCREASE SPEED SETTING	DRIVE SYSTEM
	FAULTY CONTROLLER	CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE	WIRING DIAGRAM
	FAULTY WIRING	CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE	WIRING DIAGRAM
RUN TIME IS SHORT	BATTERIES ARE LOW ON WATER(LEAD ACID ONLY)	SERVICE BATTERIES	BATTERIES
	CHARGER IS NOT PROPERLY SET FOR BATTERIES	SET CHARGER TO BATTERY SPECIFICATIONS	CHARGING
	SCRUB HEAD IS IN HIGH DOWN PRESSURE	REDUCE SCRUB HEAD PRESSURE	PRE-USE SETUP
	BATTERY CHARGER IS NOT ABLE TO FINISH CHARGE CYCLE	CONFIRM A STEADY GREEN LIGHT AFTER THE CHARGE CYCLE(BEFORE UNPLUGGING FROM THE OUTLET)	BATTERIES



# BETCO US WARRANTY POLICY

## 10 year coverage

Subject to the conditions stated below, Betco warrants parts and labor on rotationally molded polyethylene tanks/housings and injection molded vacuum head assemblies to be free from defects in materials and workmanship for a period of ten years to the original purchaser.

## 3 Year Coverage

Subject to the conditions stated below, Betco warrants parts and labor on all other Betco components to be free from defects in materials and workmanship for a period of three years to the original purchaser.

- Lithium Ion battery for MotoMop™ is a full 3 years

## 1 Year Coverage

Subject to the conditions stated below, Betco offers a limited warranty on parts and labor on the following equipment: parts and accessories to be free from defects in materials and workmanship for a period of one year to the original purchaser.

- PowerUp™ 14 Upright Vacuum: #E29990-00
- Bac Pac Lite Vacuum: #85903-00
- FiberPRO® Floor Dryer: #85507-00
- WORKMAN™ Series Vacuums: #85024-00, #85025-00, #83012-00, #85027-00
- All Tools and Accessories
- All Battery Chargers
- Deep cycle batteries are pro-rated for 1 year

### **Allowable Travel Time Warranty Reimbursement:**

Eligible equipment: All battery and propane powered equipment products. Warranty period: 90 days (GeneSys™ Mid-Size Scrubber: 180-days) from date of sale to the original purchaser. A maximum 180 mile round trip at 50 cents per mile will be allowed for warranty consideration.

### **Propane Machine Warranty:**

Kawasaki/Subaru engines are warranted by Kawasaki/Subaru for a period of 2 years against manufacturer defects. All other components (except wear items)\* are warranted by Betco for a period of 3 years.

**\*Wear Items exempt from Warranty consideration include but may not be limited to: power cords, transport wheels, vacuum bags, belts, squeegee blades, pad drivers, clutch plates, handle grips, filters, screens, throttle cables, brushes and carbon brushes.**

Subject to the conditions and exceptions stated in this warranty, Betco warrants the Betco products to be free from defects in material and workmanship, under normal use and service, for the periods listed under the warranty policy to the original purchaser. At any time during the warranty period, Betco will furnish replacement parts for the Betco parts to the original purchaser. Such parts will be furnished and charged including transportation costs, to the original owner through any Betco authorized Service Distributor. If the original part is returned within the warranty policy period from date of delivery for inspection by Betco and is found to be defective the owner will be credited for the cost of replacement parts plus shipping and handling. Replacement parts that have become defective through wear or abuse are not included in this warranty.

This warranty does not apply to damage or defect caused by accident, misuse, negligence, fire, or to any Betco product which has been serviced or repaired by other than an authorized Betco Service Distributor or Betco factory personnel. This warranty is void if products are used for any purpose other than that which was intended. There are no other warranties expressed or implied. In no event shall Betco be liable for incidental or consequential damages or any damage to person or property. (Please note some states do not allow the exclusion or limitations for incidental and consequential damages).

