

# Operator's Manual

# CLEANSTAR 30M

## RIDE-ON AUTOMATIC SCRUBBER FOR MODEL: CS3000M



Failure to read and understand this manual before operating this machine or performing service on this machine may result in injury to the operator or nearby personnel or result in damage to the machine or nearby property. Each operator must be trained in the operation of this machine before being allowed to use it. Contact Amano Pioneer Eclipse Customer Service at 1-800-367-3550 or 1-336-372-8080 or an authorized Amano Pioneer Eclipse Distributor to inquire about training or to request a replacement manual.

La falta de leer y de entender este manual antes de usar esta máquina o de realizar servicio en esta máquina puede dar lugar a lesión al operador o al personal próximo o a resultado en daño a la máquina o propiedad próxima. Cada operador debe ser entrenado en la operación de esta máquina antes de ser permitido utilizarla. Ponerse en contacto con el servicio de Amano Pioneer Eclipse 1-800-367-3550 o 1-336-372-8080 o un distribuidor autorizado por Amano Pioneer Eclipse para investigar sobre el entrenamiento o para solicitar un manual.

Manquer de lire et de comprendre ce manuel d'utilisation avant l'utilisation de cette machine ou avant faire de maintenance sur la machine peut être résulter en blessure à l'opérateur ou au personnel proche ou peut endommagé la machine ou la propriété proche. Chaque utilisateur doit être entraîné dans l'opération de cette polisseuse avant l'utilisation. Veuillez contacter le service après-vente de Amano Pioneer Eclipse à 1-800-367-3550 ou 1-336-372-8080 et/ou un distributeur de Amano Pioneer Eclipse pour vous renseigner concernant l'entraînement ou pour obtenir un autre manuel d'utilisation.



Pioneer Eclipse®

## FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

Record This Important Information		
Date of Purchase	_____	
Purchased From	_____	
Address	_____	
City	State	Zip
_____	_____	_____
Phone	Contact	_____
_____	_____	_____
Machine Model	_____	
Machine Serial Number	_____	
Important Phone Numbers		
Medical Emergency	_____	
Police	_____	
Fire Department	_____	

In this Operation Manual you will find three statements that you must read and observe to ensure safe operation of the machine.

**DANGER!** indicates that the possibility of severe bodily injury or death can occur if DANGER! statements are ignored. Read and observe all DANGER! statements included in the Operation Manual and attached to the machine.

**WARNING!** indicates that the possibility of bodily injury to the operator and other people can occur if WARNING! statements are ignored. Read and observe all WARNING! statements included in the Operation Manual and attached to the machine.

**CAUTION!** indicates that the possibility of damage to the machine or other property can occur if CAUTION! statements are ignored. Read and observe all CAUTION! statements included in the Operation Manual and attached to the machine.

# Welcome

Congratulations on purchasing the CleanStar 30M Ride-On Autoscrubber from Amano Pioneer Eclipse.

Please read this manual carefully. It will acquaint you with the care, safe handling and operation of the CleanStar 30M.

## Contents

Machine Features.....	2	Brush Replacement.....	14
Machine Specifications.....	2	Squeegee Blade Replacement.....	14
Safety Precautions.....	3	Maintenance.....	15
Operator Responsibility.....	4 & 5	Periodical Maintenance.....	15
Operator Qualifications.....	5	Battery Maintenance.....	15 & 16
Safety and Warning Devices.....	5	Vacuum Motor Maintenance.....	16
Safety Systems.....	5	Tanks and Cover Group.....	17 & 18
Safety Diagnostic Signaling.....	5	Frame Group.....	19 & 20
Machine Preparation.....	6	Squeegee and Squeegee Lift Group.....	21 & 22
Handling of Packed Machine.....	6	Scrub Deck Group.....	23, 24, 25, & 26
Storage.....	6	Wiring Schematic.....	27, 28, 29, & 30
Unpacking the Machine.....	6	Warranty.....	31
Handling the Unpacked Machine.....	6		
Battery Installation.....	7		
Identifying the Machine.....	8		
Machine Operation.....	9		
Controls and Instruments.....	9		
Symbols on the Dashboard.....	10		
How the Machine Functions.....	11		
Preparing and Starting The Machine.....	11		
Choosing the Cleaner Solution.....	11		
Steering Column and Controls.....	12		
Squeegee Adjustment.....	13		
Draining The Tanks.....	13		

# Machine Features

- Large capacity tanks require less frequent filling and emptying
- Compact, highly maneuverable design for ease of operation
- Cleaning width 29.5" (75 cm)
- 4 hour run-time, easy access batteries
- User-friendly instrument panel
- Variable speed with dynamic braking
- Machine stops when accelerator is released
- Pads/brushes stop automatically when accelerator is released
- 4-position rear squeegee and 2-position front squeegee provide extended life
- Horn, backup alarm, and beacon light for safety
- CE approved

# Machine Specifications

**Scrubbing Rate:** 48,000 ft<sup>2</sup>/hr (4460 m<sup>2</sup>/hr)

**Pads/Brushes:** 2 x 15 in (2 x 38,5 cm)

**Scrubbing Width:** 29.5 in (75 cm)

**Squeegee Width:** 37.4 in (95 cm)

**Brush Pressure:** 100 lbs (45 kg)

**Solution Tank Capacity:** 37.0 US gal (140 liter)

**Recovery Tank Capacity:** 31.7 US gal (120 liter)

**Forward Speed:** Up to 3.7 mph (6 km/hr)

**Reverse Speed:** Up to 2.5 mph (4 km/hr)

**Slope Capability:** 10% maximum

**Brush Lift Control:** Mechanical

**Front Wheel Diameter:** 9.5" (240 mm)

**Rear Wheel Diameter:** 10" (254 mm)

**Noise Level:** < 70 dBA

**Vibration Level:** Less than 2.5 m/s<sup>2</sup>

**Pad/Brush Motor:** 700W, 32A, 24V

**Traction Motor:** 600W, 24V

**Vacuum Motor:** 550W, 24V

**Weight Without Batteries:** 408 lb (185 kg)

**Weight With 4 x 6 Volt Batteries:** 798lb (326 kg)

**Length x Width (with side skirts) x Height:** 46 in x 30.3 in x 49.6 in  
(117cm x 77cm x 126cm)

**Power Source:** Battery 6V (4)

**Voltage:** 24V

# Safety Precautions

Anyone operating the machine should read the following carefully and be informed of potentially dangerous operating conditions. Operators should be familiar with the location and use of all safety devices on the machine. Do not use the machine if it is not in proper operating condition, and report any damage or operation faults immediately.

**DANGER!** This machine has parts including the pad/brush assemblies that can cause severe injury if these parts are contacted while they are moving. Do not allow any part of the body or clothing to come in contact with these parts while they are moving. Do not try to change the pads/brushes while the machine is running. Do not allow other people to come near the machine while it is in operation. Do not allow the machine to run unattended. Do not leave the machine in a place where unauthorized or untrained personnel could use the machine. Do not run the machine with the pads/brushes off center, damaged or missing. Do not operate the machine if the machine has loose parts.

**WARNING!** Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away. Keep covers open when charging. Do not smoke around batteries. Avoid skin contact with the acid contained in the batteries. Never allow metal objects to lay across battery tops.

**WARNING!** Inspect pad holders regularly. A fractured pad holder may result in pad fragments causing injury.

**WARNING!** Use caution when operating the machine on a ramp or incline. Do not turn the machine, or leave it unattended, on a ramp or incline.

**WARNING!** Store machine inside. Keep the electrical components of the machine dry. DO NOT PRESSURE WASH MACHINE.

**WARNING!** Modifications or alterations to this machine can lead to personal injury or damage to the machine. Do not make unauthorized modifications or alterations to this machine. Amano Pioneer Eclipse assumes no liabilities for injury or damage resulting from an unauthorized modification or alteration to the machine. Any unauthorized modification or alteration to this machine voids all warranties.

**WARNING!** The motor and motor controller become hot while the machine is in operation, and for a long time after the machine is shut off, to cause severe burns. Do not touch these parts of the machine until they have cooled.

**WARNING!** Injury can occur to the eyes and body while using the machine. Safety goggles, safety shoes, and safety clothing are recommended while operating the machine.

**WARNING!** Machine vibration may cause tingling or numbness in the fingers or hands. Gloves are recommended to reduce machine vibration. If tingling or numbness persists, shut off the machine. If the vibration is caused by loose parts such as an off center pad/brush, adjust or tighten these parts before using the machine again.

**CAUTION!** Do not operate machine unless trained and authorized. Do not operate machine unless you have read and understand the operation manual. Do not operate machine in flammable or explosive areas.

**CAUTION!** Before starting machine ensure all safety devices are in place and functioning properly. Before starting machine check for proper operation.

**CAUTION!** When using machine, go slowly on inclines or slippery surfaces. Use care when operating machine in reverse. Follow all manufacturers instructions on chemical product containers when handling, mixing, or using chemical products.

**CAUTION!** When servicing machine, stay clear of moving parts. Do not wear loose clothing when working on machine. Block machine wheels before raising or jacking up machine. Use hoist stands that will support the weight of the machine. Wear eye and ear protection when using pressurized air. Disconnect battery connections before servicing machine. Use only replacement parts supplied by Amano Pioneer Eclipse or an Amano Pioneer Eclipse Authorized Distributor or Service Center.

**CAUTION!** When loading or unloading the machine for transport **use extreme caution!** Use a solid ramp rated for the machine weight and no greater than 10% slope. Only use a truck or trailer that will support the weight of the machine to transport. Block machine wheels when transporting. Tie the machine down securely to truck or trailer when transporting.

**CAUTION! DANGER!** Crushing can occur when the scrub deck is lowered. To prevent this from occurring, do not lower the scrub deck unless all potential hazards are removed.

**CAUTION! DANGER!** Crushing can occur when removing or re-installing the pad holder or brushes on the scrub deck. Before removing the pad/brush protection covers, the ignition key must be removed from the key switch on the dash panel to avoid the machine from accidentally starting.

**CAUTION! DANGER!** Crushing can occur when the solution tank is raised for ventilation when charging the batteries and/or to provide access to the battery compartment for maintenance purposes. Once the tank is raised there is no lock to prevent the tank from being lowered. Therefore the operator or service technician must be aware of his/her body parts while inside the battery compartment. NEVER raise the solution tank when it contains any fluid.

**CAUTION! DANGER!** Crushing and/or pinching can occur when operating the pedals on each side of the steering column. Use only your feet to operate the pedals that raise/lower the scrub deck or apply the brake.

**CAUTION! DANGER!** Turnover can occur when this machine is used on grades that exceed the maximum slope as specified in the operators manual.

**CAUTION! DANGER!** Turnover can occur when the machine is used to clean broken surfaces or surfaces with holes or deep depressions. DO NOT use the machine on any surface that may compromise the stability of the machine

**CAUTION! DANGER!** Explosion can occur while the batteries are recharging because of hydrogen gas that can spread. When recharging the batteries place the machine under a well-ventilated area or under a ventilation fan. Also keep machine away from any type of heat source or corrosive substances while recharging.

Amano Pioneer Eclipse is not responsible for accidents that occur to people or things caused by the improper use of this machine, e.g. using the machine on any surface that can compromise its stability.

### ***This machine is manufactured for commercial use only.***

This machine is designed and manufactured for indoor use in scrubbing hard floor surfaces. Amano Pioneer Eclipse does not recommend use of this machine in any environment other than an indoor environment.

Amano Pioneer Eclipse battery powered floor machines are designed and manufactured for commercial floor maintenance only. This machine is designed to scrub most modern types of floors including composition tile, stone, marble, terrazzo, and resilient floor covering, and some coated wood floors.

## ***Improper Use of CleanStar 30M Scrubber***

- This machine cannot be driven by unauthorized personnel.
- This machine cannot be used to clean sloped surfaces with a grade over 5%.
- This machine cannot exceed a reverse speed of .6mph (1km/hr) when used to clean floors.
- This machine cannot be used in an area that has dangerous substances, flammable gas, flammable liquid, or any type substance with an explosive nature in close proximity.
- This machine cannot use flammable and/or explosive products to clean surfaces.
- This machine cannot be used as a means of transportation, for people and other means of transport.
- Do not remove, modify, or tamper with the safety and protection devices on this machine.
- Batteries must be charged in a well ventilated room.
- The operator must always obey all of the safety rules written in this manual.
- The operator cannot use any equipment or other device that can cause or prevent this machine from working properly.
- The components on this machine cannot be modified without authorization from Amano Pioneer Eclipse or an Authorized Distributor.
- The operator cannot use acids that can damage this machine.
- This machine cannot be used as a tractor to tow or push.

## ***Operator Responsibility***

The operator is responsible for performing the recommended daily maintenance and checkups of the machine to keep it in good working condition. The operator must inform the service mechanic or supervisor when recommended maintenance procedures are required as proscribed in the MAINTENANCE section of this manual.

Read this manual carefully before operating this machine.

FOR SAFETY: Do not operate machine before reading and understanding the operation manual.

Check the machine for shipping damage.

Keep your machine regularly maintained by following the maintenance information in this manual. We recommend taking advantage of a service contract from your Amano Pioneer Eclipse Authorized Distributor or Service Center.

Order parts and supplies only from an Authorized Amano Pioneer Eclipse Distributor. Use the parts illustration section of your manual when ordering parts.

During and after operation, perform the recommended daily and hourly procedures outlined in the Maintenance Chart.

## Operator Qualifications

All operators should be trained before using the CleanStar 30M machine. All operators must carefully read this manual and know all safety rules.

- A trained operator is responsible for the driving/control of the machine, and the cleaning/maintenance of the machine.
- A trained AmanoPioneer Eclipse technician is responsible for installation, disinstallation, mechanical parts maintenance, electrical parts maintenance, dismantling, and demolition.
- Amano Pioneer Eclipse is not responsible for any damage to people and/or things caused by the non-observance of the instructions provided within this manual.

## Safety and Warning Devices

**WARNING!** It is absolutely forbidden to tamper or disconnect safety and warning devices while the machine is working.

**Note:** It is important to inspect all safety and warning devices every six months. This inspection should be performed by qualified personnel authorized by Amano Pioneer Eclipse.

### Pad/Brush Protection Covers

The CleanStar 30M can be equipped with either two rotating nylon brushes or two pad holders. Each pad/brush is covered with a fixed guard that prevents the rotating parts from being exposed. The guards can only be removed intentionally. The machine should not be used without the guards in place.

### Emergency Seat Switch

The machine is equipped with a switch under the operators seat. Therefore the machine cannot be used without the operator properly seated.

## Warning Devices

The CleanStar 30M is equipped with several warning devices:

- A flashing yellow beacon to signal bystanders that the machine is in use.
- An intermittent backup alarm to warn bystanders that are in the proximity of the machine when it is reversing.
- A horn to allow the operator to warn anyone near the machine while it is in operation.

## Safety Systems

The machine is equipped with the following safety systems:

**Battery/Charger Plug:** The connector located on the steering column can be used as means to shutdown the machine in case of an emergency. This connector is used to charge the batteries. Remove the connector, using the handle, to disable the machine. Do not reconnect until all problems have been corrected.

**Emergency Switch:** The machine is equipped with an emergency button under the driver's seat. The machine cannot be used without the operator properly seated. The machine will stop automatically if the operator forgets to switch the machine off. The operator must sit on the machine again, switch the machine off, wait for a few seconds and start the machine again.

**Float:** Inside the recovery tank there is a float switch that stops the suction of the machine if the tank is too full. To start the machine again the operator has to empty the recovery tank.

## Safety Diagnostic Signaling

The electronic controller is equipped with a particular system which shows the machine errors through quick flashing of the diagnostic light placed on the dashboard. The number of flashes represents one of the errors listed below:

No. of flashes	Description
1	Accelerator was engaged at the time of ignition
2	Motor not stopped at the time of ignition
3	Low Battery Voltage
4	High Battery Voltage
5	Potentiometer not at zero at the time of ignition
6	Accelerator interrupted
7	Temperature overload
8	Controller programming error
9	Power control error

# Machine Preparation

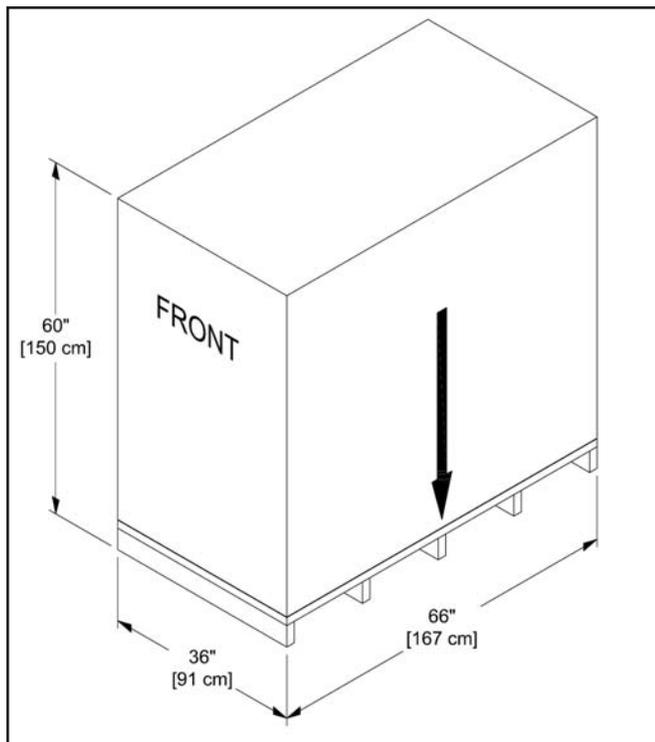
## *Proper use of the CleanStar 30M*

As soon as the machine arrives, please inspect the exterior and all moving parts to verify that no damage has occurred during transport. In case of missing or damaged parts, contact the Manufacturer or Authorized Distributor immediately.

## *Handling of Packed Machine*

The machine is supplied packed on a pallet and enclosed in a box made of plywood or cardboard. Please see the “Features and Specifications” section for information on weight and size. A black arrow shown on the illustration represents the center of gravity for the package. The forks of the lift truck or of the transpallet should be placed so that the black arrow indicated on the packing is about in the center of the forks. The palletized box should be handled with extreme caution; avoid impacts or lifting it to extreme heights without reason.

Do not stack the boxes.



# Storage

The machine must be stored in an enclosed and dry place if not immediately installed in order to keep every part safe.

Relative humidity must be lower than 80% and the storage temperature must be between 38° F and 100° F.

## *Unpacking the Machine*

1. Cut and remove the black bands holding the box to the pallet.
2. Remove the staples attaching the box to the platform at the edge of the box.
3. With two people, one at either end of the box, lift the box straight up and off the machine.
4. Remove all loose accessories from the top of the machine.
5. Cut and remove all bands that affix the machine to the pallet.
6. Push the machine off of the pallet using a wooden or metallic ramp. Use extreme caution to prevent damage.

## *Handling the Unpacked Machine*

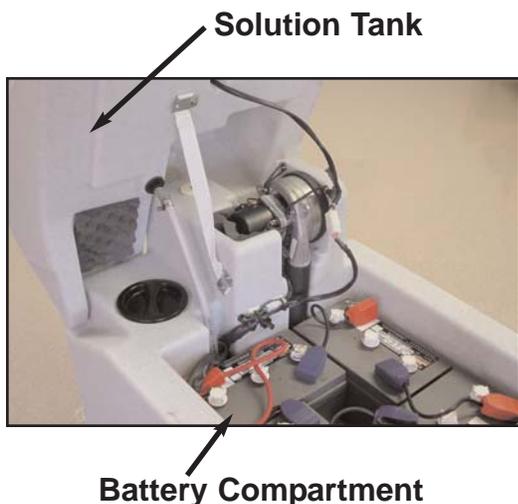
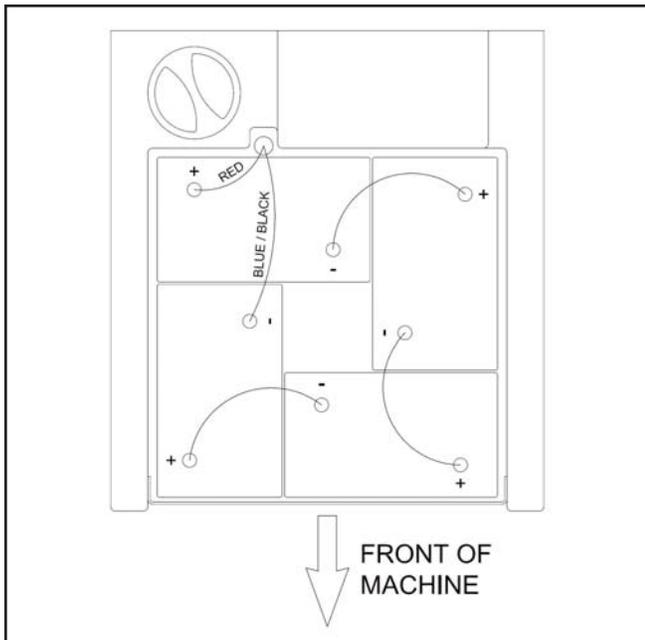
- Once the machine is unpacked, carefully inspect for damage.
- When the machine is being transported, please disconnect all of the battery cables, remove the brushes or pad drivers, and squeegee.
- When the unit is being transported over a long distance use the original packaging.

## Battery Installation

1. In order to access the battery compartment, lift the solution tank up. Do not lift the solution tank if it contains any solution. Use **CAUTION** when working under the raised solution tank.
2. Inspect the batteries carefully before installing. Make sure there are no cracks in the cases.
3. Place the batteries in their compartment as shown in the battery connection diagram.
4. For proper battery connections, contact surfaces should be clean.
5. Apply a film of grease to terminal clamps or connections.
6. Connect the batteries together as shown on the battery connection diagram.

**DANGER!** Incorrect connections of batteries can cause explosion and/or serious injury.

**Note:** Connections to (+) are RED; connections to (-) are BLUE.



**WARNING!** Batteries emit hydrogen gas when charging. Explosion or fire can result. Keep sparks and open flame away when charging. Do not invert polarities.

**CAUTION!** When handling and/or servicing the batteries or battery cables, wear protective gloves and goggles. Avoid contact with battery acid.

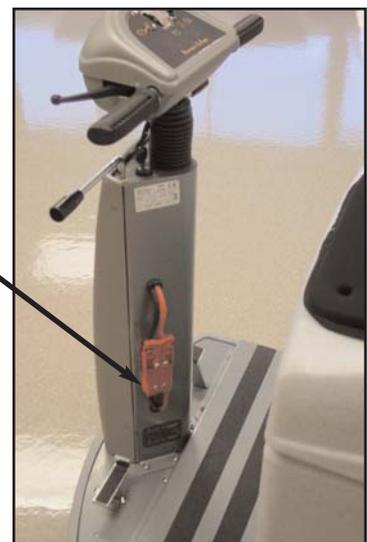
- When charging the batteries, raise the solution tank to expose the battery compartment.
- Install the battery charger in a ventilated and dry place, far from heat sources and corrosive environments. Make sure that the voltages are correct (see the data plate located on the battery charger). Protect the mains with a delayed switch or with a load fuse higher than the maximum power consumption of the battery charger. Observe the polarity of the battery socket (cables are identified by symbols + red and - black).

### PROPOSITION 65 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. Wash hands after handling.

- Disconnect the Anderson connector located on the steering column using the handle on the upper side of the connector.
- Connect the charger plug to the lower plug to charge the batteries.

Connect the Battery Charger to the Lower Side of the Anderson Connector



## Identifying the Machine

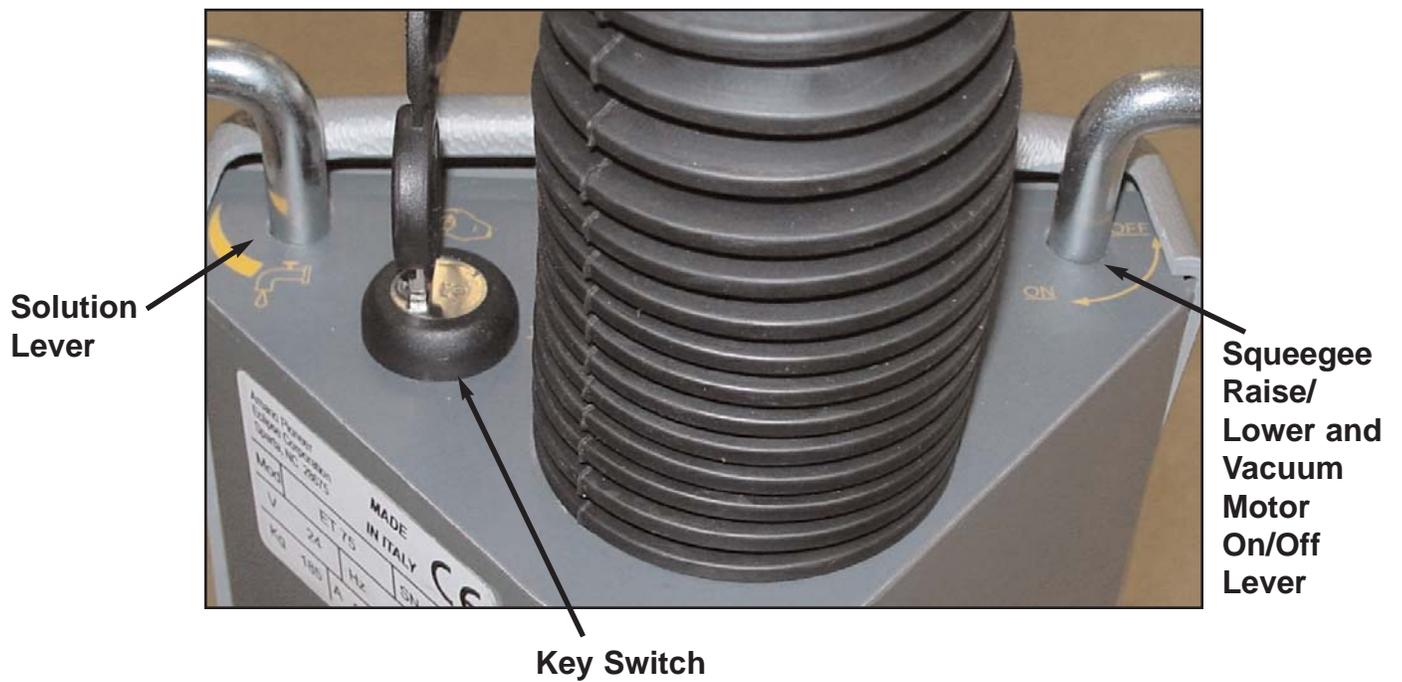
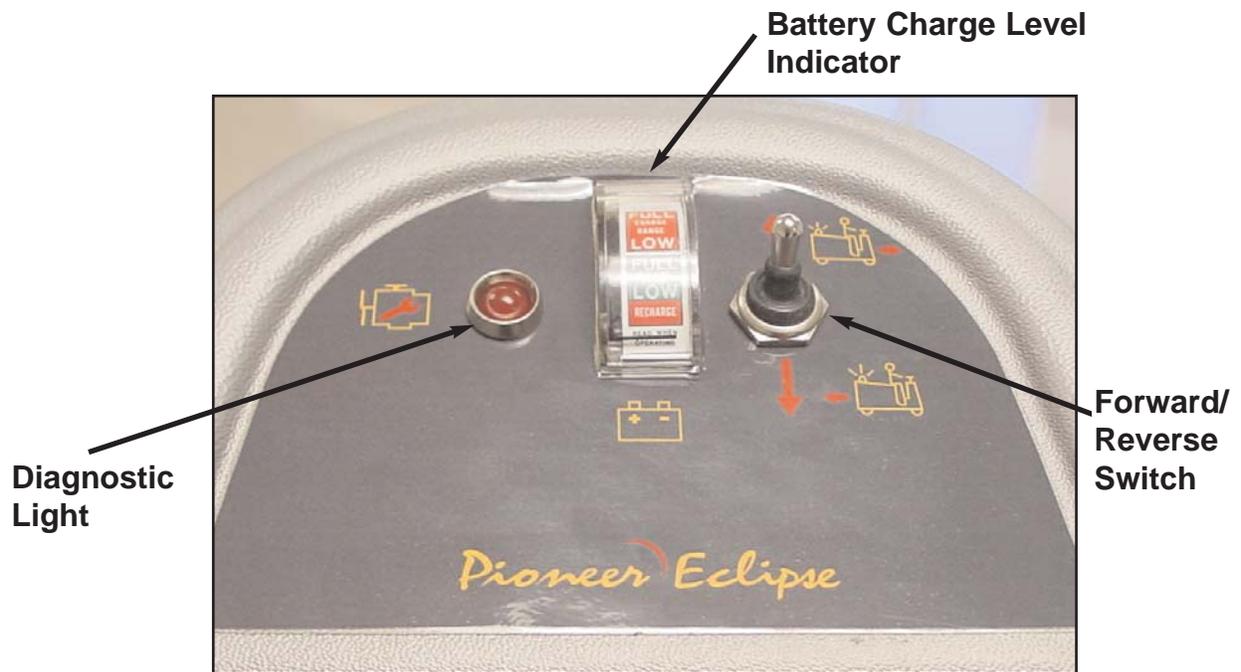
**Note:** A silver label has been placed on the side of the steering column. The label identifies the data referring to the "CE" marking. This label should never be removed.



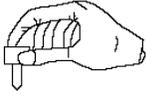
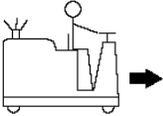
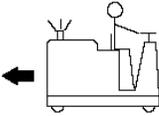
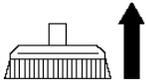
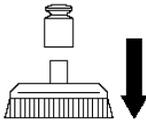
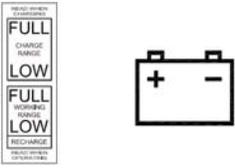
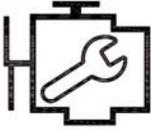
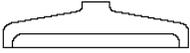
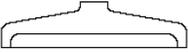
Amano Pioneer Eclipse Corporation Sparta, NC 28675		<b>MADE</b> <b>IN ITALY</b>		<b>CE</b>	
Mod	ET 75	SN	226	2006	
V	24	Hz	-		
Kg	185	A	90		kW

# Machine Operation

## Controls and Instruments



## Symbols on the Dashboard

0	OFF	i	ON
	Main switch		Horn
	Forward Gear		Reverse Gear
	Scrub Brushes Off		Scrub Brushes On
	Battery Charge Level		Diagnostic Light
<b>ON</b> 	Suction On	<b>OFF</b> 	Suction Off
	Solution Flow		

## ***How the Machine Functions***

Follow these instructions to begin operation:

1. Press the scrub brush motor pedal down and inward. The inward motion will allow the pedal to move upward and lower the scrub deck to the floor. This pedal is located on the left side of the floor board. To de-activate the scrub brush motors and raise the scrub deck, press the pedal down and outward.
2. Pull the lever on the right side of the dashboard inward to lower the squeegee and turn the vacuum motor on.
3. Pull the solution control lever on the left side of the dashboard inward. The solution flow is increased as the lever is pulled farther in. The solution valve will remain open until this lever is returned to the OFF position
4. Be sure the forward/reverse switch is in the forward position. When the accelerator lever is engaged the scrub brushes will activate. When the accelerator lever is released the scrub brushes will stop after a few seconds. This is to prevent damage to the floor.
5. Do not leave the solution valve in the ON position . The solution will continue to dispense until the solution control lever is turned to the OFF position. It is not turned ON and OFF with the scrub brushes.

## ***Preparing and Starting the Machine***

After charging, remove the Anderson connector of the battery charger from the lower side of the machine connector. Connect the plug of the machine to the battery plug. Lower the solution tank back down using extreme caution to avoid injury. With the solution tank lowered into place the operator can now fill the solution tank with water and the proper cleaning solution.

**Solution Tank Fill Cap**



## ***Choosing the Cleaner Solution***

For a proper cleaning of the floor, it is important to choose the appropriate cleaner solution. Your Amano Pioneer Eclipse Authorized Distributor can recommend the appropriate Amano Pioneer Eclipse cleaner for your particular needs. It is recommended to use a low-foaming detergent solution, or an anti-foaming additive, in order to prevent damage to the vacuum motor.

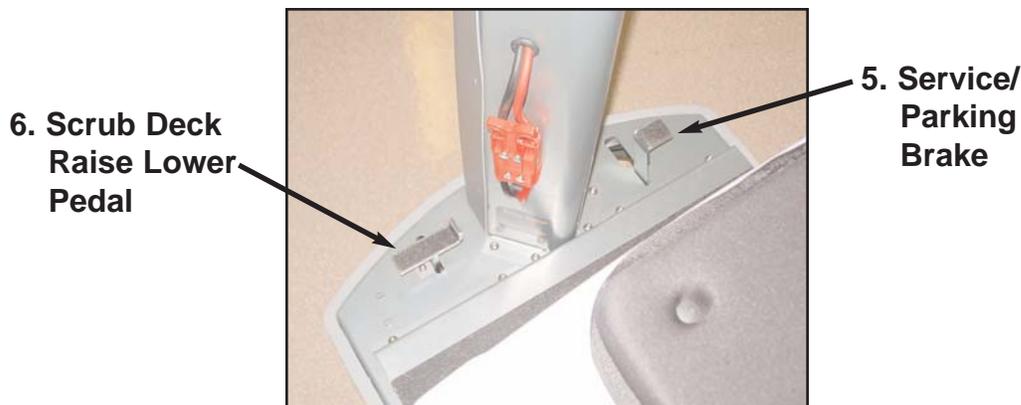
**CAUTION!** Make sure the cleaner solution is suitable for the surface. Amano Pioneer Eclipse is not responsible for damages done by too aggressive cleaning solutions.

## Steering Column and Controls

1. **Steering Pod:** is used to turn the machine either left or right.
2. **Acceleration Lever:** This lever will propel the machine in either forward or reverse. The speed of the machine is variable. The more the lever is pulled, the faster the unit will travel.
  - The scrub brushes will not activate until the acceleration lever is depressed. When the machine stops, after a few seconds the scrub brushes will stop.
  - The machine will not travel in reverse with the squeegee in the down position.
  - The acceleration lever does not turn the solution ON and OFF. This must be manually turned off by the operator.
3. **Solution Control Lever:** Turns the solution ON and OFF. It also controls the amount of solution being delivered to the floor.
4. **Squeegee Lever:** This lever will lower the squeegee and also turn the vacuum motor on. This lever must be in the raised position before traveling in reverse.



5. **Service/Parking Brake:** To apply the parking brake press pedal down. To release the parking brake, press pedal down and move to the right. When machine is not in use, being serviced, maintained, or being transported, make sure the parking brake is set.
6. **Scrub Deck Raise/Lower Pedal:** To raise the scrub deck, press the pedal down and to the left with your foot. This will lock the deck in the upright position. To lower the scrub deck, press the pedal down slightly, while pushing the pedal to the right all in one motion. Slowly lower the scrub deck to the floor. When the scrub deck is lowered, the scrub brushes will not engage until the machine is propelled in either forward or reverse.

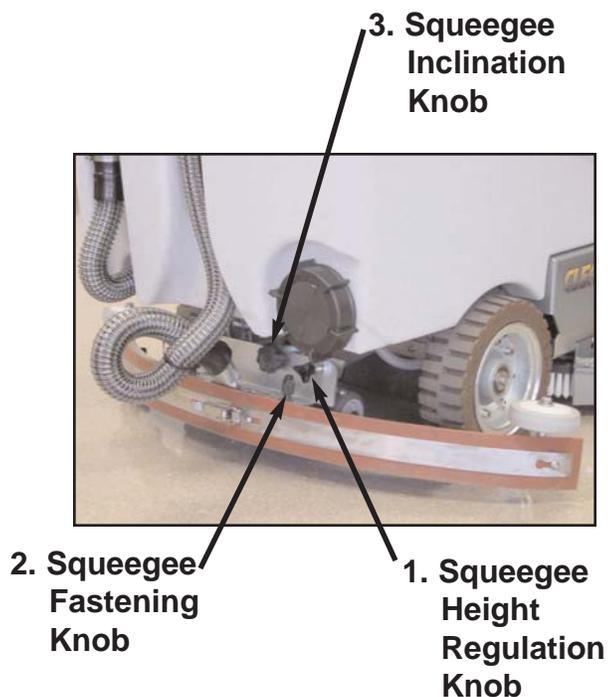


## Squeegee Adjustment

- The squeegee must be adjusted to get a perfectly dry floor. The machine is equipped with a parabolic shaped squeegee. This type of squeegee performs very well in collecting water from the floor to the suction hose, but is particularly sensitive to the levelness to the floor.
- Remove the ignition key from the dashboard to avoid the machine from being started.
- The angle of the squeegee can be adjusted by turning the knob indicated by (#3) in the detail. The ideal angle of the rear squeegee blade is approximately 45°-60° to floor.
- To adjust the squeegee pressure, adjust the position of the wheels. Raise them to increase the pressure or lower to decrease. If the pressure is too high, the rear blade will touch the floor with its side surface, and not with its edge. If the pressure is too low, the edge doesn't work well and leaves water on the floor, particularly on an uneven floor. See item (#1) in the detail.
- To remove the squeegee, this may be necessary to pass through a door opening, loosen the knobs that retain the squeegee to the machine. See item (#2).

**Note:** Drying may be affected if suction hose is not properly working. In this case:

- A. Thoroughly clean the suction hoses, inlets, filters and the squeegee itself.
- B. Check vacuum motor operation.
- C. Confirm that all inspection openings of the tank are closed.



## Draining The Tanks

The CleanStar 30 is equipped with two drain hoses. One is for the solution tank on the left side of the back of the machine. The other is for the recovery tank on the lower left side of the back of the machine. At the end of the scrubbing operation, drain excess solution from the solution tank and dirty liquid from the recovery tank by means of the hoses. Rinse both tanks after each use, and thoroughly clean the tanks at least once a week. Check and clean the rubber gasket located in the recovery tank cap every week.

**Solution Tank Drain Hose**

**Squeegee Suction Hose**

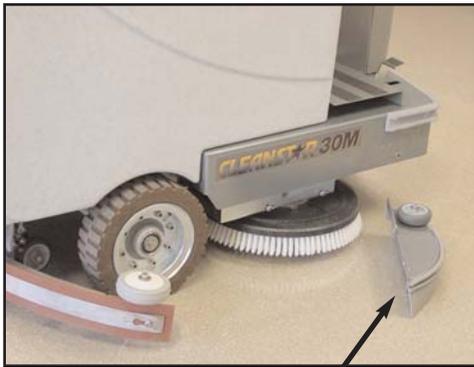


**Recovery Tank Discharge Hose and Valve**

**Recovery Tank Clean-Out**

## Brush Replacement

1. Remove the ignition key from the dashboard in order to avoid the accidental start of the machine.
2. Remove the side skirts by lifting upward and out. The skirts are retained with a bolt and a keyhole slot.
3. Remove the brushes by turning them until you can see the pull pins. When the pins are pulled the brushes can be removed.
4. Set the new brush up; place it under the hexagonal support and press it upward.
5. After replacing the brushes, replace the side skirts. Be sure they are fully installed before operation.

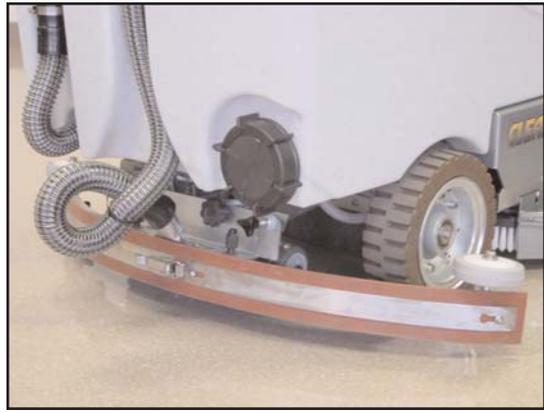


Side Skirt

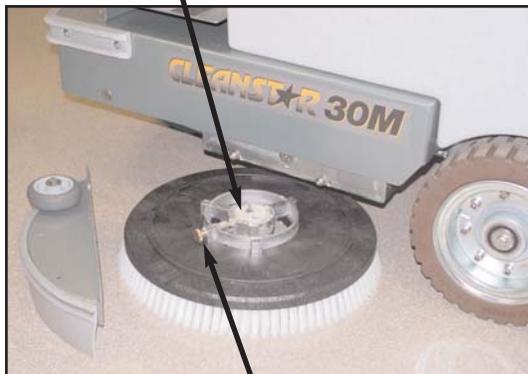
## Squeegee Blade Replacement

Squeegee blades must be replaced when their edges are worn.

1. Remove the squeegee from the machine.
2. Loosen the latch and remove the straps that retain the rear squeegee blade.
3. Replace the rear squeegee blade and re-install the steel straps.
4. To change the front squeegee blade, remove the knobs that hold the squeegee and strap.
5. Replace the front squeegee blade and re-install the steel band.



## Hexagonal Support



Pull Pin

# Maintenance

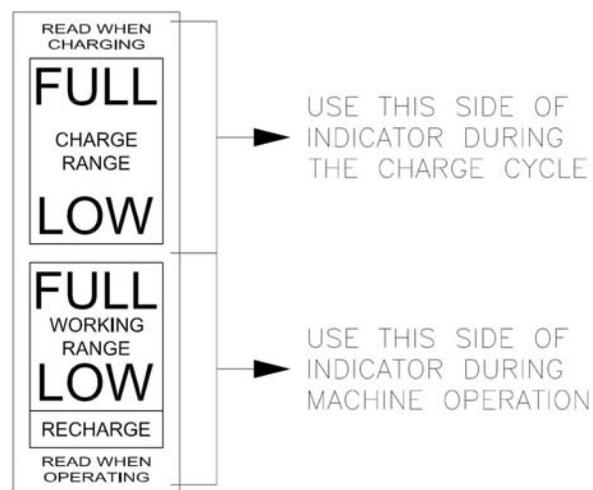
## Periodical Maintenance

Periodical maintenance is very important. Only qualified personnel authorized by Amano Pioneer Eclipse should perform each maintenance task and repair operation.

Operation	Interval	Operator
Clean the Recovery Tank	Daily	Operator
Clean the Vacuum Motor Filter	Daily	Operator
Clean the Squeegee Blades	Weekly	Operator
Clean the Squeegee Suction Hose	Weekly	Operator
Inspect the Squeegee Blades	Every 15 Days	Operator
Check the Water Level in the Batteries	Every 15 Days	Operator
Check the Recovery Tank Gasket	Every Month	Operator
Clean Solution Tank	Every Month	Operator
Check and Regulate the Braking System	Every 3 Months	Trained Technician
Check the Battery Cable Connections	Weekly	Operator
Check the Brushes of Each Motor	Every Year	Trained Technician
Check the Safety Devices	Every 6 Months	Trained Technician
Check the Electrical System	Every 2 Years	Trained Technician
Complete Check Up	Every 5 Years	Trained Technician

\*These items must be performed with the proper tools and training. Contact a Amano Pioneer Eclipse factory certified technician unless you have the proper equipment and mechanical proficiency.

## Battery Maintenance



### Safety:

- Keep flames, sparks, or metal objects away from batteries.
- Always wear protective clothing, gloves, and goggles when handling batteries.
- Check that all terminals are properly tightened; terminals that are too tight or too loose could result in post breakage, meltdown, or fire.

### Inspection and Cleaning:

- Keep batteries clean and dry from residue.
- Check that all vent caps are tight.
- Use a solution of baking soda and water to clean if there is acid residue on batteries or corrosion on the terminals. DO NOT ALLOW ANY BAKING SODA SOLUTION TO ENTER THE BATTERIES.
- Terminal protectors, protective spray, or petroleum jelly should be applied to terminals to reduce corrosion.
- Replace any worn or damaged wires.

### Watering:

- Add distilled water, never acid to cells.
- DO NOT OVERWATER!
- Always keep battery caps on, except when adding water or taking hydrometer readings.
- If the batteries are fully charged, add water to a level of 1/8" below bottom of fill well.
- If the batteries are discharged, add water to a level just above the plates.
- After watering, replace and tighten all vent caps.

### Storage:

- Batteries should be fully charged prior to and during storage.
- Never store discharged batteries.
- Store batteries in a cool, dry place.
- Recharge batteries before putting them back into service.

### Charge Limits:

- It is not necessary to charge the batteries if the hydrometry, after a work day, is not under 1.240 (28 Be).
- The maximum suggested temperature is 113° F (45° C).
- If the electrolyte temperature exceeds more than 50° F (10° C) above the outside temperature, the batteries can be overcharged.

## Vacuum Motor Maintenance

The vacuum motors must be checked and cleaned. The brushes should be checked every six months and replaced if necessary.

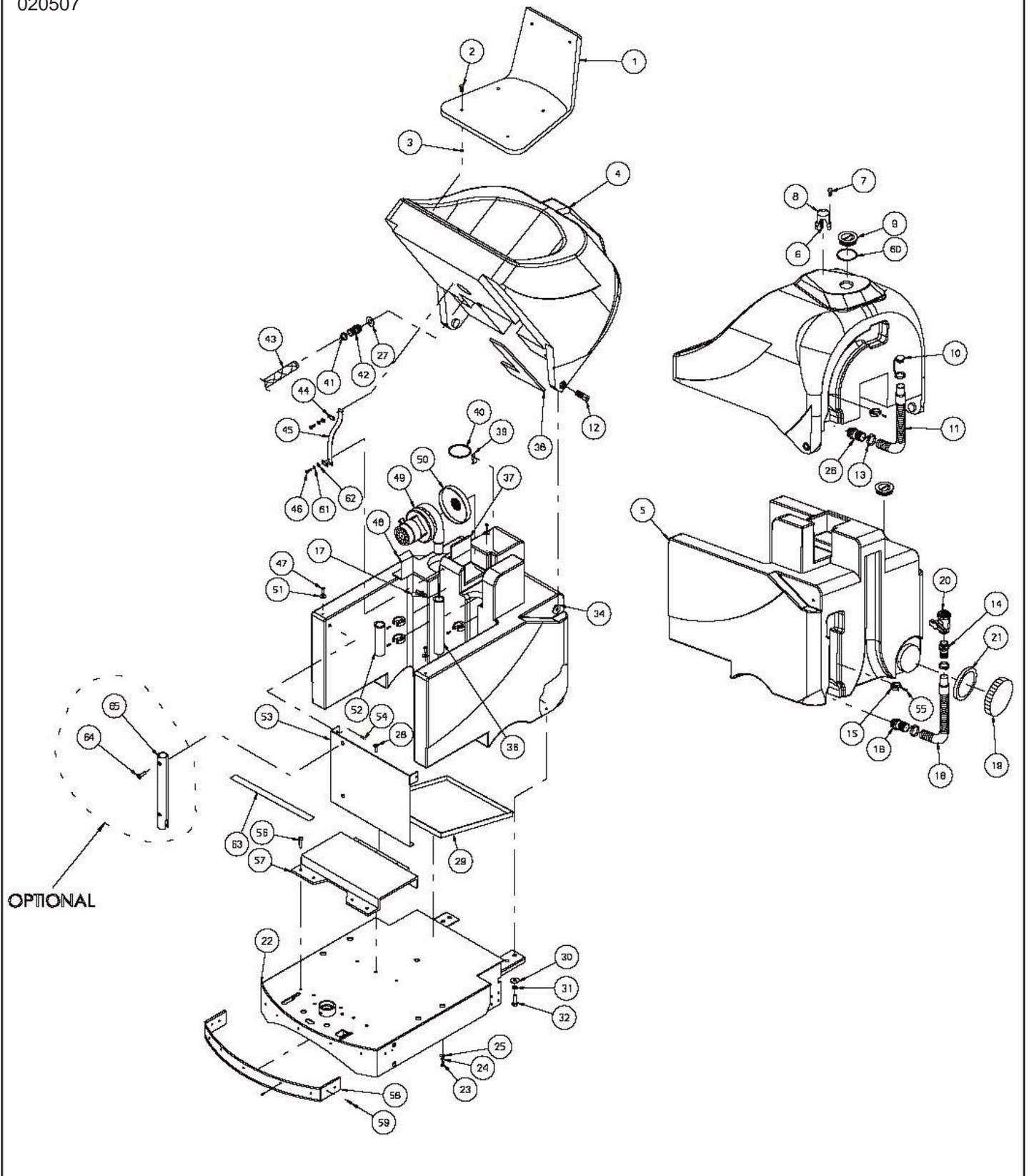
To maintain the vacuum motor, follow these instructions:

After removing the key from the dashboard, remove the vacuum motor by unhooking the rubber straps and unplug the connection plug. Remove the sponge filter under the motor so that it can be cleaned and replaced. Check the suction fan from the hole located in the front part of the vacuum motor. By a visual check, the fan should appear undamaged and well cleaned. To check the brushes, first remove the plastic cap, then unscrew the screws and remove the two plastic brush supports. Once checked, the brushes can be easily remounted by reassembling all elements.



# Tanks and Cover Group: CleanStar 30

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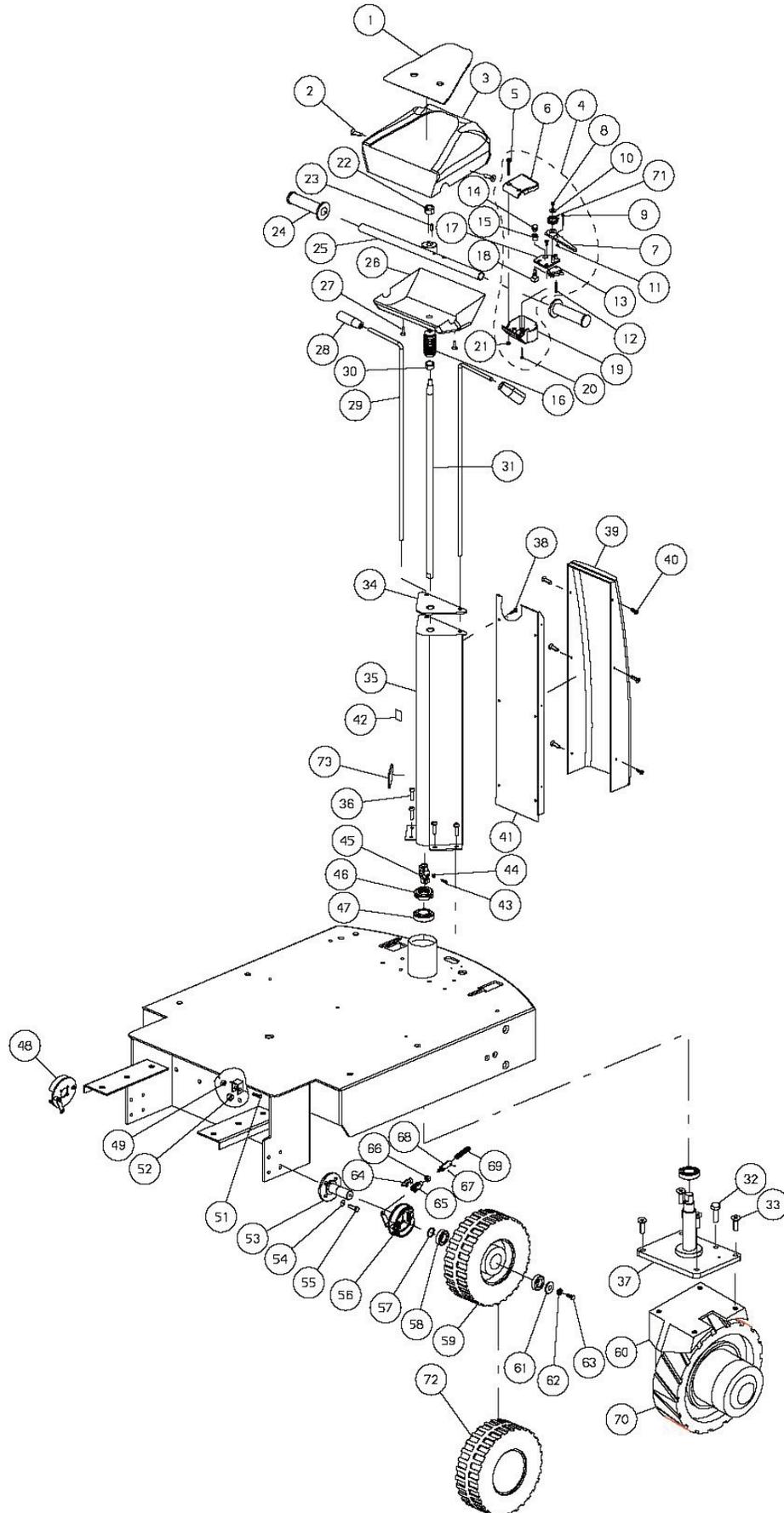


# Tanks and Cover Group: CleanStar 30

Ref. Part #	Description	Qty.	Ref. Part #	Description	Qty.	
1	MI256	1	51	DT154	TANK SPACER	3
2	VA671	6	52	TB286	PIPE	1
3	MI242	1	53	LM530	SHEET	1
4	SB188	1	54	VA424	SCREW	4
5	SB187	1	55	VS421	SCREW	5
6	PY758	1	56	VB474	COUNTERSUNK SCREW	4
7	VA258	3	57	PA249	STAINLESS STEEL FOOT	1
8	PY757	1	58	BP290	FRONT BUMPER	1
9	TA034	2	59	VB478	SCREW	9
10	TA002	1	60	GR112	GASKET	2
11	TB284	1	61	RO453	LOCK WASHER	4
12	PE272	2	62	RO402	LOCK WASHER	4
13	FS011	3	63	BP330	ANTI-SLIP COVERING	2
14	RC025	1	64	VV412	SCREW	2
15	ML022	5	65	TB321	BATTERY CHARGER CABLES PIPE	1
16	RC189	1				
17	GL014	1				
18	TB281	1				
19	TA038	1				
20	RB023	1				
21	GR145	1				
22	TP135	1				
23	VE461	4				
24	RO455	4				
25	RO502	4				
26	RC188	1				
27	GR140	1				
28	VS423	3				
29	SB190	1				
30	RO502	4				
31	RO455	4				
32	VE462	4				
34	DT203	2				
36	HH006	1				
37	IS024	1				
38	IS023	1				
39	PY610	2				
40	GI032	2				
41	FS012	1				
42	RC184	1				
43	TB285	1				
44	ST139	2				
45	CC019	1				
46	VE422	4				
47	VA424	3				
48	ST140	1				
49	MO399	1				
50	GL019	1				

# Frame Group: CleanStar 30

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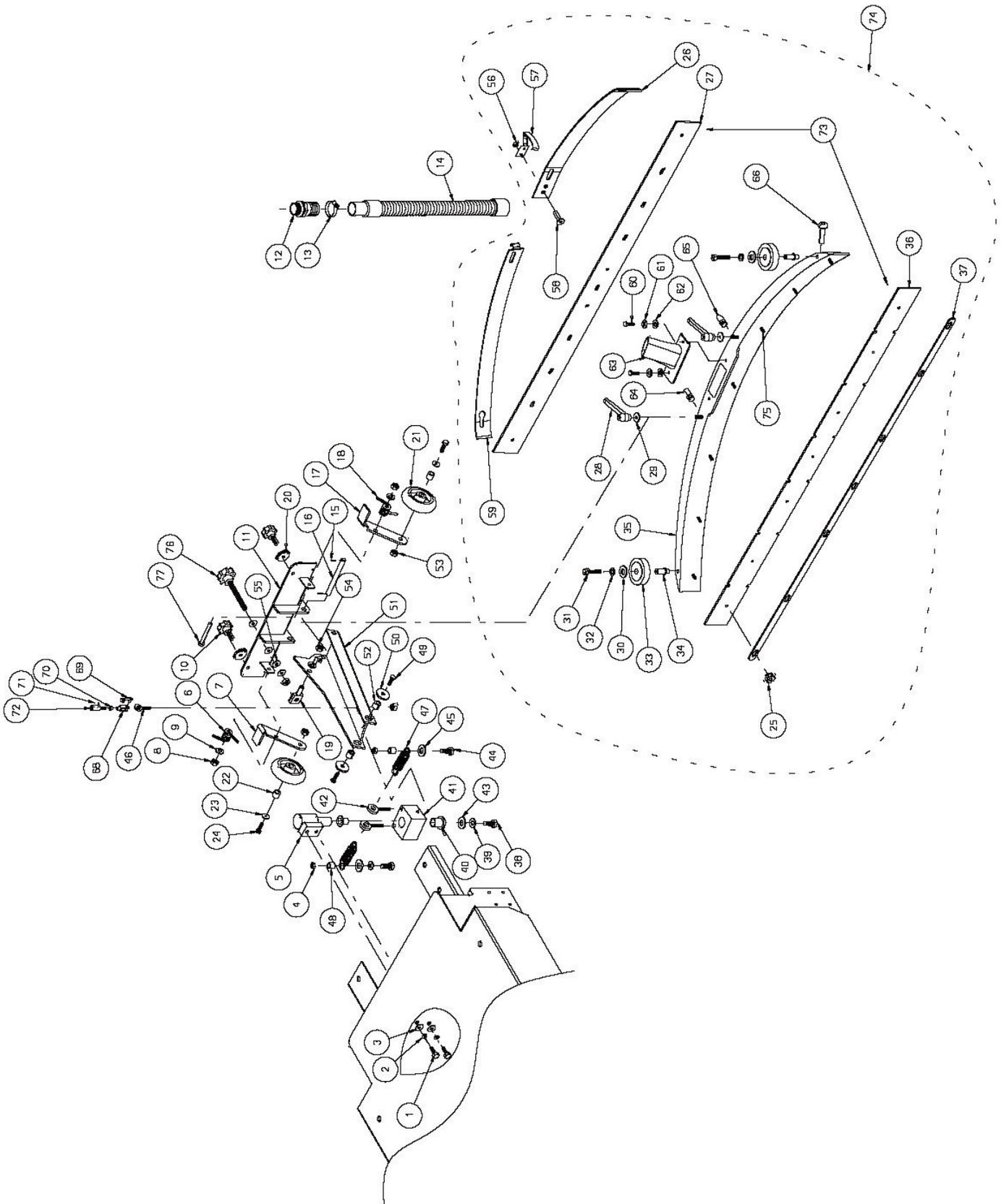
# Frame Group: CleanStar 30

Ref. Part #	Description	Qty.	
1	TG136	DASHBOARD STICKER	1
2	VA401	SCREW	2
3	CO240	DASHBOARD COVER	1
4	KIT609	FEED LEVER KIT	2
5	VS419	SCREW	4
6	CO175	COVER	2
7	LV297	DRIVE LEVER	2
8	VA264	SELF THREADING SCREW	2
9	VA401	SCREW	4
10	RO501	WASHER	2
11	DD401	NUT	2
12	VS428	SCREW	2
13	IN009	MICROSWITCH	2
14	IG023	PLASTIC GEAR	2
15	BO071	POTENTIOMETER BUSH	2
16	MV5008	BELLOWS	1
17	SU455	PLASTIC BASE	2
18	PY805	POTENTIOMETER	2
19	CO176	COVER	2
20	VA407	SCREW	2
21	DD452	SELF-LOCKING NUT	4
22	DD407	LOCK NUT	1
23	CH011	TONGUE	1
24	MN060	GRIP	2
25	MN076	HANDLEBAR	1
26	CO241	DASHBOARD LOCKUP	1
27	VS413	SCREW	2
28	VP071	KNOB D 10	2
29	LV359	SQUEEGEE UP LEVER	2
30	BN003	NYRELAN BUSH D19.05mm	1
31	AL108	STEERING WHEEL SHAFT	1
32	VB457	SCREW	1
33	VV467	SCREW	4
34	TG138	STICKER	1
35	LM524	SHEET	1
36	VB474	COUNTERSUNK SCREW	4
37	PE262	PIN	1
38	VS421	SCREW	6
39	CA206	FRONT CASE	1
40	VS410	SCREW	6
41	LM526	LOCKUP SHEET	1
42	TG139	HORN STICKER	1
43	VE464	SCREW	2
44	DD405	NUT	2
45	GN010	STEERING JOINT	1
46	DD267	SELF-LOCKING RING NUT	1
47	CS074	BEARING	2
48	FN029	LEFT BRAKING MASS	1
49	DD454	SELF-LOCKING NUT	1
51	VE462	SCREW	1
52	DT041	SPACER	1

Ref. Part #	Description	Qty.	
53	PE261	PIN	2
54	RO455	LOCK WASHER	8
55	VB434	SCREW	8
56	FN028	RIGHT BRAKING MASS	1
57	SG019	SEEGER RING	2
58	CS041	BALL BEARING	4
59	RT164	IDLE REAR WHEEL	2
60	MO385	24V 700W DRIVING WHEEL	1
61	MV016	SPECIAL WASHER	2
62	RO455	LOCK WASHER	2
63	VE461	SCREW	2
64	MI077	PIN	2
65	SN008	JOINT	2
66	DD405	LOCK NUT	2
67	VG020	DOWEL	4
68	MI115	WIRE TERMINAL	2
69	ML150	SPRING L=45	2
70	RT170	RING IN RUBBER	1
71	ML125	SPRING	2
72	RT169	RING IN RUBBER	2
73	TG151	BRUSHES PLATE LIFTING STICKER	1

# Squeegee and Squeegee Lift Group: CleanStar 30

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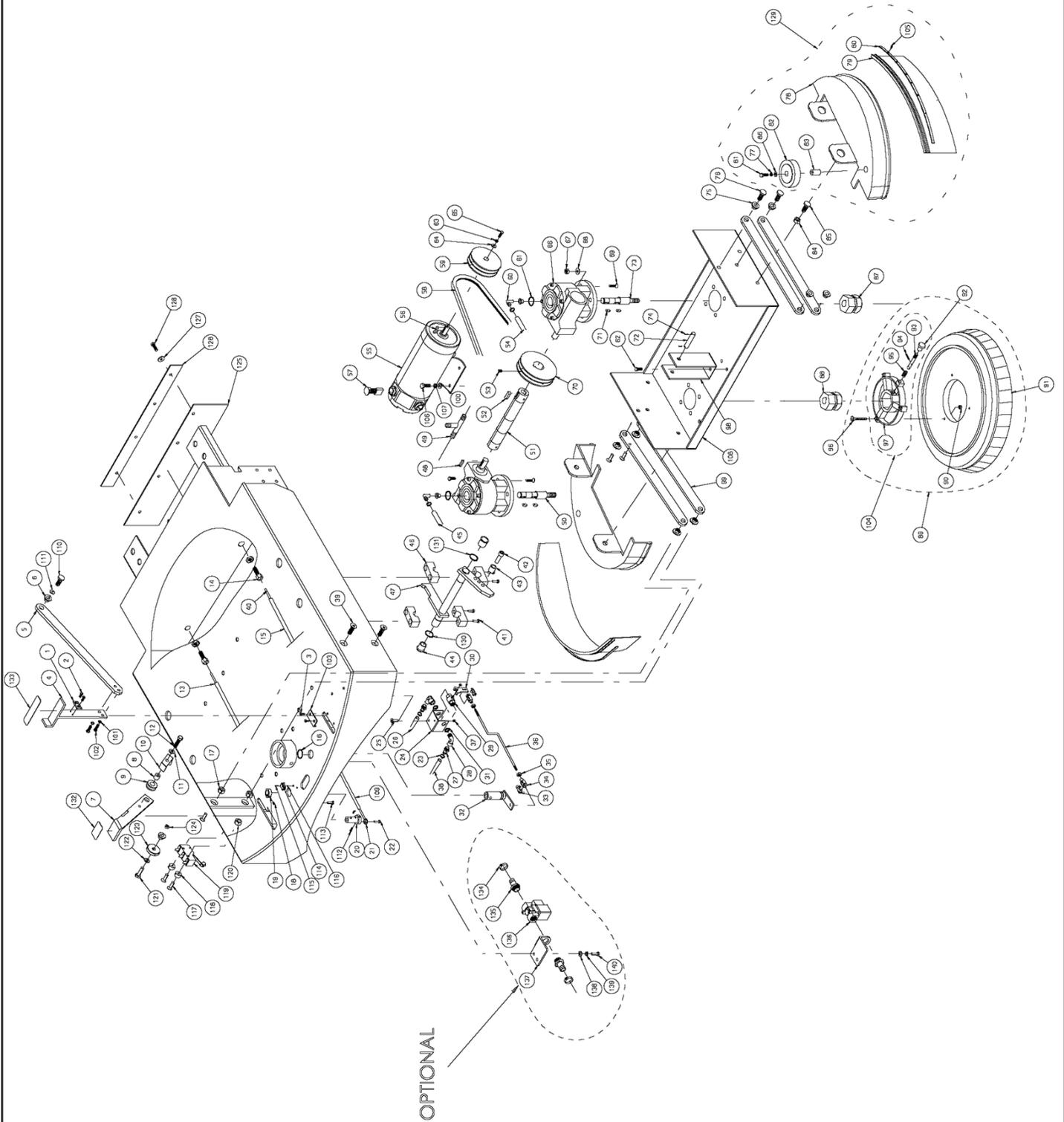
# Squeegee and Squeegee Lift Group: CleanStar 30

Ref. Part #	Description	Qty.	
1	VE462	SCREW	2
2	RO455	LOCK WASHER	2
3	RO502	LOCK WASHER	2
4	DD454	SELF LOCKING NUT	2
5	PE266	SQUEEGEE PIN	1
6	ML156	PRESSION SPRING SQUEEGEE	1
7	PT336	PRESSION PLATE SQUEEGEE	1
8	DD454	SELF LOCKING NUT	2
9	RO404	LOCK WASHER	2
10	VP077	KNOB	2
11	SU604	SQUEEGEE SUPPORT	1
12	RC044	PIPE FITTING	1
13	FS011	FLOAT, SUPPORT CLAMP	1
14	TB292	SQUEEGEE PIPE D, 40L	1
15	CP202	SPLIT PIN	2
16	PE267	SQUEEGEE PIN	1
17	PT335	PRESSION PLATE SQUEEGEE	1
18	ML157	PRESSION SPRING SQUEEGEE	1
19	PE180	SQUEEGEE REGULATION PIN	1
20	GH006	TILT ADJ. RING NUT	2
21	RT063	WHEEL	2
22	BO105	BUSHING	2
23	RO502	LOCK WASHER	2
24	VE467	HEXAGONAL SCREW	2
25	VP015	KNOB	7
26	LM565	SQUEEGEE LEFT REAR BAND	1
27	BP302	SQUEEGEE REAR BLADE	1
28	VP048	KNOB	2
29	MV016	SPECIAL WASHER	2
30	RO502	LOCK WASHER	2
31	VB450	SCREW	2
32	RO455	LOCK WASHER	2
33	RT056	SHOCKPROOF WHEEL 100x	2
34	BO109	BUSH	2
35	SQ065	ET/75 STAINLESS STEEL	1
36	BP301	SQUEEGEE FRONT BLADE	1
37	LM563	SQUEEGEE FRONT BAND	1
38	VE460	SCREW	1
39	RO455	LOCK WASHER	1
40	BN003	NYRELAN BUSH D19,05mm	2
41	SU560	SUPPORT	1
42	MI180	BELT TIE-ROD	2
43	MV016	SPECIAL WASHER	1
44	VE468	SCREW	2
45	RO502	LOCK WASHER	2
46	MI288	BELT TIE-ROD	1
47	ML096	SQUEEGEE PRESS. SPRING	2
48	BO105	BUSHING	2
49	VE461	SCREW	2
50	RO502	LOCK WASHER	2
51	LM615	SHEET	1
52	BO135	BUSH	2

Ref. Part #	Description	Qty.	
53	DD454	SELF-LOCKING NUT	2
54	DD455	SELF-LOCKING NUT	1
55	RO314	LOCK WASHER	1
56	DD402	LOCK NUT	1
57	CC5000	FILTER COVER HOOK	1
58	VS405	SCREW	1
59	LM564	SQUEEGEE RIGHT REAR BAND	1
60	VE442	SCREW	2
61	RO454	LOCK WASHER	2
62	RO403	LOCK WASHER	2
63	SB165	SUCTION MOUTH	1
64	PE275	CENTRAL PIN	1
65	MI154	SCREWS STUD	1
66	VB474	COUNTERSUNK SCREW	2
67	DD404	LOCK NUT	1
68	SN003	JOINT	1
69	MI005	PIN W. SPRING	1
70	DD405	LOCK NUT	1
71	VG020	DOWEL	2
72	MI115	WIRE TERMINAL	1
73	KIT730	BLADES KIT	1
74	KIT732	SQUEEGEE COMPLETE	1
75	MI121	THREAD	7
76	VP058	KNOB	1
77	VE470	SCREW	2

# Scrub Deck Group: CleanStar 30

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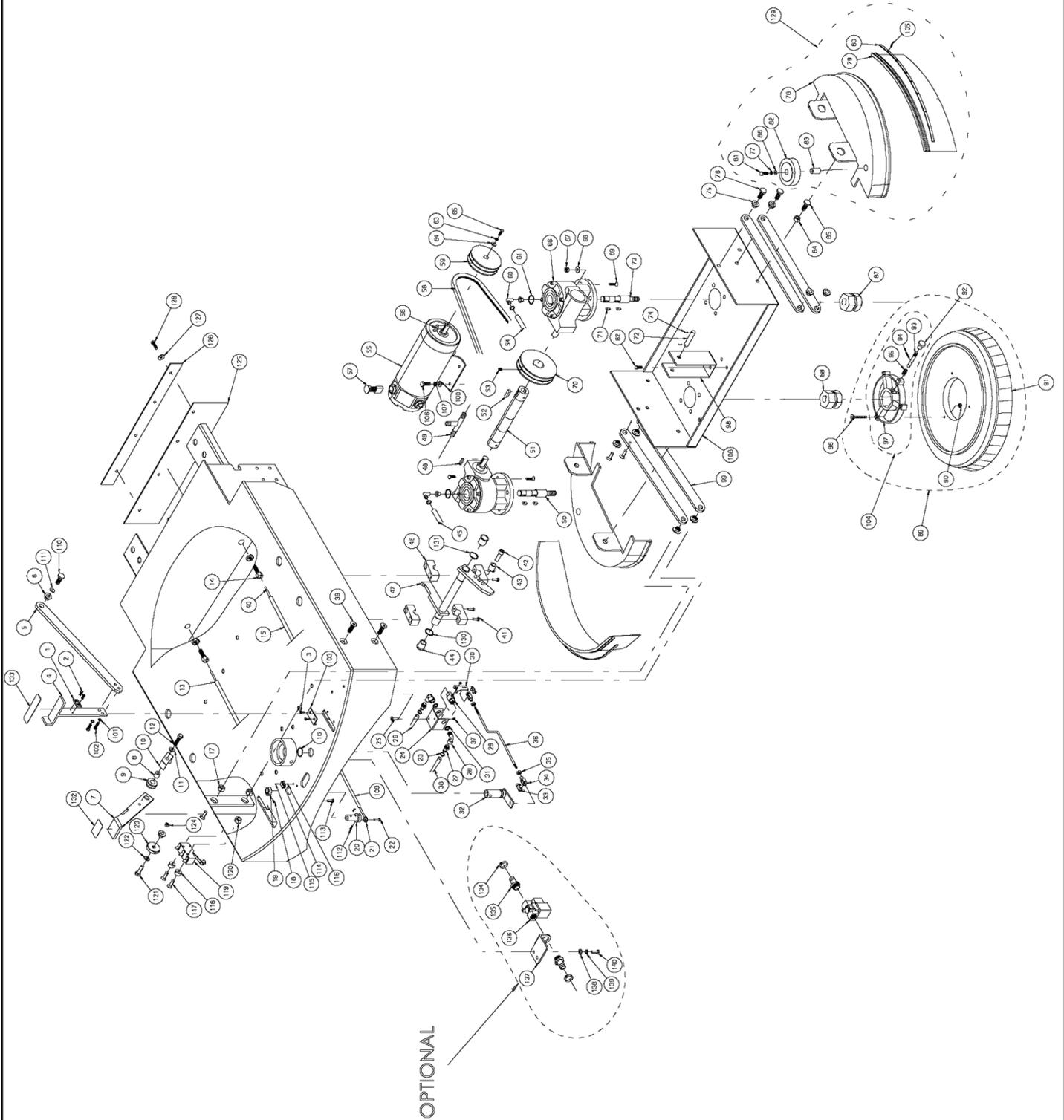
# Scrub Deck Group: CleanStar 30

Ref. Part #	Description	Qty.	Ref. Part #	Description	Qty.	
1	PT313	PLATE	1	57 MP244	CHARCOAL	4
2	VS411	SCREW	2	58 CI043	BELT	1
3	VS421	SCREW	2	59 PP117	PULLEY	1
4	LV357	LEVER	1	60 RC190	UNION	2
5	LV356	LIFTING LEVER	1	61 SG019	SEEGER RING	2
6	BO038	BR. GR. SUSP. LEV. BUSH	6	62 VB431	SCREW	2
7	LV361	BRAKE LEVER	1	63 RO453	LOCK WASHER	1
8	BO135	BUSH	1	64 RO503	LOCK WASHER	1
9	PP036	WIRE PULLEY	1	65 VE422	SCREW	1
10	PT290	CABLE FASTENING PLATE	1	66 RD017	REDUCTION GEAR	2
11	RO455	LOCK WASHER	1	67 DD455	SELF-LOCKING NUT	8
12	VE461	SCREW	1	68 RO405	LOCK WASHER	8
13	MI263	RIGHT SHEATH	1	69 VV467	SCREW	8
14	MI130	BRAKE WIRE REGULATOR	2	70 PP118	PULLEY	1
15	MI264	LEFT SHEATH	1	71 CH049	TONGUE	4
16	SG016	SEEGER	2	72 PE265	PULLEY	1
17	DD455	SELF-LOCKING NUT	4	73 AL115	RIGHT BRUSHES SHAFT	1
18	VG023	DOWEL	2	74 CP202	SPLIT PIN	2
19	DT193	SPACER	1	75 BO147	BUSH	4
20	PE263	ECCENTRIC PIN	1	76 VV467	SCREW	4
21	MI266	SQUEEGEE UP CABLE	1	77 RO455	LOCK WASHER	2
22	VV439	SCREW	1	78 CA240	SIDE BRUSHES CASE	2
23	FS002	CLAMP 12/20	2	79 BP288	BUMPER	2
24	ST053	SUPPORT	1	80 LM556	BUMPER BAND	2
25	VS414	SCREW	2	81 VE470	SCREW	2
26	TB288	SOLUTION PIPE	1	82 RT063	WHEEL	2
27	RC002	UNION	2	83 BO105	BUSHING	2
28	RC073	UNION	2	84 DD405	LOCK NUT	4
29	RB007	SOLUTION VALVE	1	85 VB474	COUNTERSUNK SCREW	4
30	LV367	SOLUTION COCK LEVER	1	86 RO502	LOCK WASHER	2
31	GH007	SOLUTION VALVE RING NUT	2	87 AL117	SHAFT	1
32	PE264	PIN	1	88 AL118	SHAFT	1
33	MI028	PIN	2	89 KIT264	HEX. NYLON BRUSH 15"	1
34	SN002	JOINT	2	89 KIT264A	HEX. STEEL BRUSH 15"	2
35	DD404	LOCK NUT	2	89 KIT264B	HEX. "BROOM" BRUSH 15"	2
36	TI173	TIE ROD	1	89 KIT264C	TYNEX BRUSH 15"	2
37	DD452	SELF LOCKING NUT	2	89 KIT264Y	HEX. NYLON-STEEL BRUSH	2
38	TB285	BRUSHES SOLUTION PIPE	1	89 KIT265	PAD HOLDER ASSY. 15"	2
39	VV472	COUNTERSUNK SCREW	4	90 DD452	SELF-LOCKING NUT	4
40	MI267	BRAKE CABLE	1	91 SZ003	BRUSH, NYLON	2
41	VB432	SCREW	4	91 SZ003A	BRUSH, STEEL	2
42	VB442	SCREW M10x30 UNI5931	1	91 SZ004B	BRUSH, "BROOM"	2
43	DT194	SPACER	1	91 SZ004C	BRUSH, TYNEX	2
44	BN003	NYRELAN BUSH D19, 05mm	2	91 SZ004Y	BRUSH, NYLON-STEEL	2
45	TB289	RIGHT SOLUTION PIPE	1	91 TS006	PAD HOLDERS 15"	2
46	SU069	SUPPORT	4	92 GH008	BRUSH CONN. RING NUT	2
47	AL107	SHAFT	1	93 PE064	BRUSH CONNECTION PIN	2
48	CH011	TONGUE	2	94 SP002	TENSION PIN	2
49	RC005	T UNION	1	95 ML042	SPRING	2
50	AL116	LEFT BRUSHES SHAFT	1	96 VS422	SCREW	6
51	AL114	RATIOMOTORS SHAFT	1	97 FL004	HEX. BRUSH CONN. FLANGE	2
52	CH5002	TONGUE	1	98 SU559	PLATE UP SUPPORT	1
53	VG016	DOWEL	2	99 LV271	BRUSH LEVER	4
54	TB290	LEFT SOLUTION PIPE	1	100 RO502	LOCK WASHER	4
55	MO282	BRUSH ENGINE	1	101 RO455	LOCK WASHER	2
56	CH011	TONGUE	1	102 VB430	SCREW	2

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# Scrub Deck Group Continued: CleanStar 30

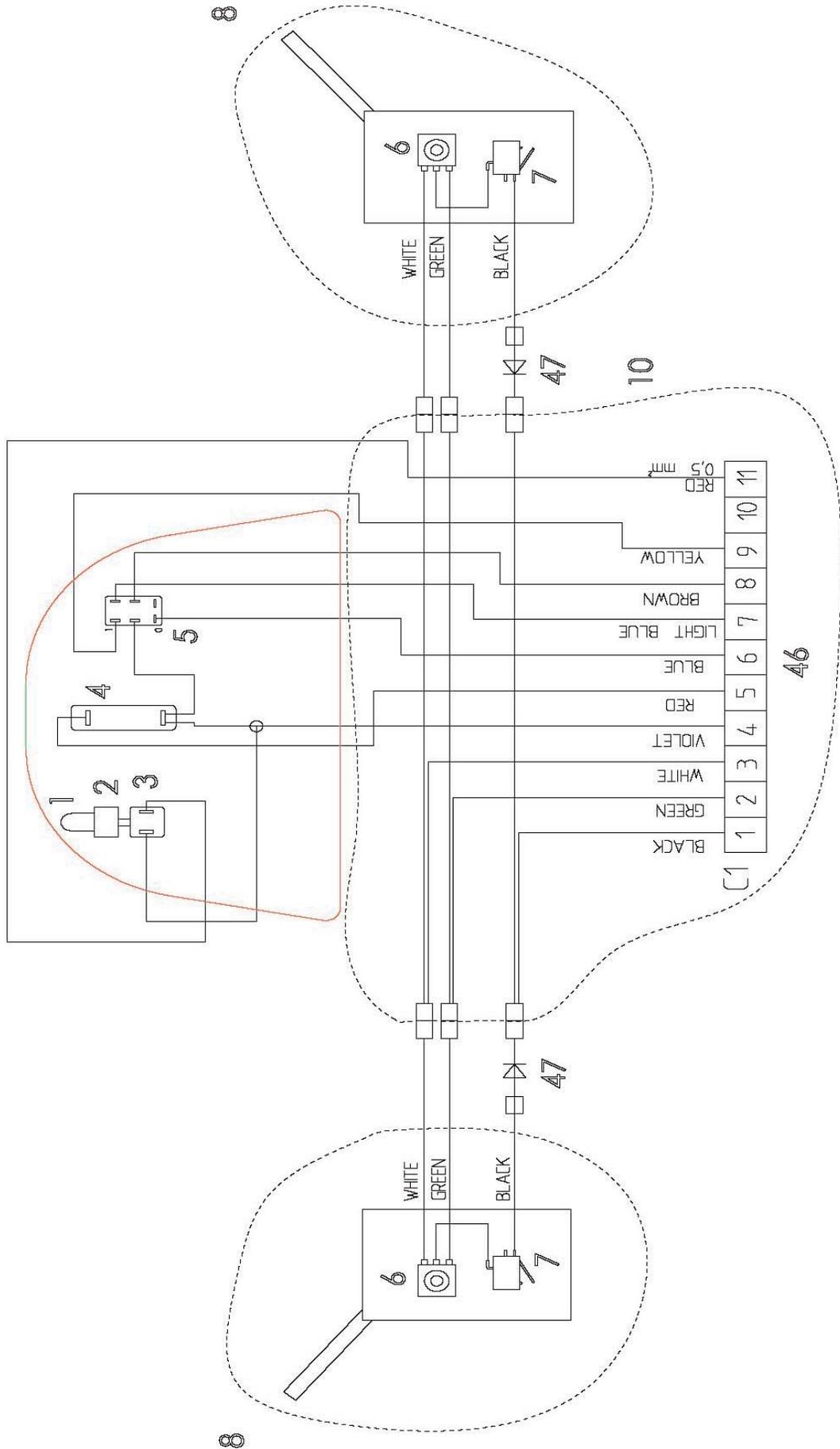
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## Scrub Deck Group Continued: CleanStar 30

Ref. Part #	Description	Qty.
103 PT314	PLATE	1
104 KIT161	HEX. BRUSH CONNECTION	2
105 VC402	SCREW	10
106 VB430	SCREW	4
107 RO455	LOCK WASHER	4
108 LM528	BRUSHES PLATE SHEET	1
109 MI265	SHEATH	1
110 VE492	SCREW	1
111 RO456	LOCK WASHER	1
112 VC409	SCREW	2
113 VG023	DOWEL	1
114 IN009	MICROSWITCH	1
115 VC435	SCREW	2
116 DD401	NUT	2
117 VS422	SCREW	2
118 DT0009	SPACER	2
119 IN020	MICROSWITCH AM 15039	1
120 DD452	SELF-LOCKING NUT	2
121 VE480	SCREW	1
122 RO456	LOCK WASHER	1
123 DT108	SPACER	1
124 DD406	LOCK NUT	1
125 MI275	REAR ANTI-SPLASH BLACK	1
126 LM566	REAR LISTEL	1
127 RO501	LOCK WASHER	4
128 VE440	SCREW	4
129 KIT737	BRUSH CASE KIT	1
130 SG103	SEGEER	1
131 SG016	SEGEER	1
132 BP328	ANTI-SLIP COVERING	1
133 BP329	ANTI-SLIP COVERING	1
134 FS002	CLAMP 12/22	2
135 RC185	UNION	2
136 RB015	SOLENOID VALVE	1
137 PT337	SOLENOID VALVE	1
138 RO403	LOCK WASHER	2
139 RO454	LOCK WASHER	2
140 VE442	SCREW	2

020507







# Wiring Schematic: CleanStar 30

Ref. Part #	Description	Qty.	
1	LP030	RED LED	1
2	LP031	BULB SOCKET	1
3	PY710	2-WAY-CONNECTOR	1
4	PY197	AMPEROMETER 24V	1
5	IN063	6 PIN SNAP SWITCH	1
6	PY805	POTENTIOMETER	2
7	IN009	MICRO SWITCH	3
8	KIT609	FEED LEVER KIT	2
9	CW250	CABLE	1
10	CW251	DASHBOARD CABLE	1
11	SL020	RELAY	3
12	PY756	MALE 11-POLE CONNECTOR	1
13	PY711	2-WAY CONNECTOR	3
14	IN053	PRESS SWITCH	1
15	IN064	KEY SWITCH	1
16	PY779	CARD	1
17	PY300	2-POLE CONNECTOR	3
18	PY534	HANDLE	1
19	CW240	BATTERY CABLE	1
20	MO282	BRUSH ENGINE	1
21	PY533	PLUG	2
22	CW242	BRUSHES ENGINE CABLE	1
23	PY5180	REVERSE BUZZER	1
24	MO399	SUCTION MOTOR	1
25	MO385	24V 700W DRIVING WHEEL	1
26	PY263	TERMINAL BOARD SUPPORT	3
27	PY657	80A FUSE	1
28	CW238	DRIVING WHEEL CABLE	1
29	CW235	BATTERY CABLE	1
30	SL021	RELAY SUPPORT	3
31	GL014	ELECTRIC FLOAT	1
32	PY300	2-POLE CONNECTOR	1
33	CW237	SUCTION ENGINE CABLE	1
34	PY299	2-POLE CONNECTOR	4
35	CW239	FLASHING LIGHT CABLE	1
36	CW236	BRUSHES CABLE	1
37	PY698	CONNECTOR	1
38	PY699	CONNECTOR	1
39	CW241	BRUSHES SWITCH CABLE	1
40	KIT703	2-WAY CONNECTOR KIT	2
41	KIT710	2-WAY CONNECTOR KIT	2
42	PY757	24V 21W FLASHING LIGHT	1
43	IN020	MICROSWITCH AM 15039	1
44	PY808	SEAT MICROSWITCH	1
45	PY758	24V 21W BULB	1
46	PY755	FEMALE 11-POLE CONNECTOR	1
47	PY778	DIODE	2
48	PY710	2-WAY CONNECTOR	1
49	PY764	FUSE	1
50	MP278400	CHARGER, BATTERY, SCR, 24V, 25A	1
	MP280600	CHARGER, BATTERY, SCR, 24V, 25A	1
		EURO 230V	1
51	MP222600	BATTERY, 6V, DEEP CYCLE, LEAD ACID, 250A (NOT SHOWN)	4



## Limited Warranty

*CleanStar 30M - CS3000M*

### To Qualify for this warranty:

- 1) Machine must be registered at the time of purchase on a form provided by Amano Pioneer Eclipse Corporation. Your Amano Pioneer Eclipse Distributor is responsible for the registration of your machine. Please cooperate with your distributor in supplying necessary information on the card.
- 2) The machine must have been purchased from Amano Pioneer Eclipse or an authorized Amano Pioneer Eclipse Distributor.
- 3) This warranty extends to the original purchaser only and is not transferable to subsequent owners.

### TIME PERIODS

TEN (10) YEAR WARRANTY -- THE MOLDED BODY is warranted to be free from defects in material and workmanship for a period of ten (10) years from the date of purchase by the original owners.

THREE (3) YEAR WARRANTY -- THE FRAME is warranted to be free from defects in material and workmanship for a period of three (3) years from the date of purchase by the original owners.

TWO (2) YEAR WARRANTY -- ALL REMAINING COMPONENTS are warranted to be free from defects in material and workmanship for a period of two (2) years from the date of purchase by the original owners. (See Exclusions.)

### EXCLUSIONS (Not Covered by Warranty)

- 1) Parts that fail through normal wear by reason of their characteristics (pads, brushes, belts, bumpers, body molding, seating, skirting, or other consumable parts).
- 2) This warranty does not extend to parts affected by misuse, neglect, abuse or improper maintenance. All defective parts must be returned to the Distributor for credit.
- 3) Batteries warranted by battery manufacturer for one (1) year (Prorated).

### THE OBLIGATION OF AMANO PIONEER ECLIPSE CORPORATION

- 1) The obligation of Amano Pioneer Eclipse under this warranty is limited to repairing or replacing, at its option, any part which is proven to be defective in material or workmanship under normal use for the applicable period stated above.
- 2) Warranty repairs will be made by your Amano Pioneer Eclipse Distributor without charge for parts and labor.
- 3) Parts repaired or replaced under this warranty are warranted only during the balance of the original warranty period. All defective parts replaced under these warranties become the property of Amano Pioneer Eclipse.

### WARRANTY SERVICE

To obtain warranty service, take your machine and proof of purchase to any authorized Amano Pioneer Eclipse Distributor, preferably to the distributor from whom the machine was purchased. For the Distributor in your area, call Amano Pioneer Eclipse Customer Service Department at 800-367-3550. If you are dissatisfied with the service that you receive, call or write Amano Pioneer Eclipse Customer Service Department for further assistance.

### DISCLAIMER OF CONSEQUENTIAL

AMANO PIONEER ECLIPSE DISCLAIMS ANY RESPONSIBILITY FOR LOSS OF USER TIME OF THE AMANO PIONEER ECLIPSE MACHINE OF ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGE EXCEPT AS STATED IN THE WARRANTY APPLICABLE TO EACH MACHINE. EXCEPT AS STATED IN SUCH WARRANTIES, THE COMPANY DOES NOT OTHERWISE WARRANTY ANY MACHINE AND NO WARRANTY, EXPRESS, IMPLIED OR STATUTORY IS MADE BY THE COMPANY.

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[www.pioneer-eclipse.com](http://www.pioneer-eclipse.com)

Article #: \_\_\_\_\_

Serial #: \_\_\_\_\_

DOM: \_\_\_\_\_

Made in Italy

Machines Directive:	98/37/EC
Electro Magnetic Compatibility Directive:	89/336/EC
Directive on Restrictions of Dangerous Substances:	2002/95/EC
Directive on Exposure of Workers to Vibrations:	2002/44/EC
Harmonized Standard Applied:	EN 292/1, EN292/2,