



RS28

30 GALLON RIDER AUTO SCRUBBER

PARTS & OPERATING MANUAL



Thank you for purchasing a Pacific Floorcare product. Carefully inspect all components for freight damage. If such damage is discovered, file a “CONCEALED DAMAGE REPORT” immediately with the delivering carrier.

Read this manual carefully and keep it near the machine, protected from liquids and other damaging substances. Failure to follow the instructions may result in injury or damage to equipment and property.

The contents of this manual are based on the latest product information available at the time of publication. Pacific Floorcare reserves the right to make changes or improvements without being obliged to apply changes to the machines previously sold.

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30 GALLON RIDER AUTOSCRUBBER SPECIFICATIONS

| Features | Specifications | |
|--|--|--|
| Model | RS28 (Disk) | RS28 (Orbital) |
| Machine Specifications | | |
| Length | 60 in (152.4 cm) | 60 in (152.4 cm) |
| Width (w/o Squeegee) | 27 in (68.6 cm) | 27 in (68.6 cm) |
| Height | 52 in (132.1 cm) | 52 in (132.1 cm) |
| Weight w/ Std Batteries | 920 lbs (417.5 kg) | 920 lbs (417.5 kg) |
| Sound level | 65 dBA | 65 dBA |
| Construction | Rotationally Molded Polyethylene Tanks Powder Coated Steel Frame | Rotationally Molded Polyethylene Tanks Powder Coated Steel Frame |
| Drive System | | |
| Drive type | 9.84 in (250 mm) motor in wheel | 9.84 in (250 mm) motor in wheel |
| Motor horsepower | 1.13 HP / 840 W | 1.13 HP / 840 W |
| Speed Control | Throttle Pedal 5 Max Speed Settings | Throttle Pedal 5 Max Speed Settings |
| Speed (Scrubbing) | 310 fpm (5.7 km/h) | 310 fpm (5.7 km/h) |
| Speed (Transport) | 310 fpm (5.7 km/h) | 310 fpm (5.7 km/h) |
| Speed (Reverse) | 248 fpm (4.5 km/h) | 248 fpm (4.5 km/h) |
| Scrubbing Grade | 7% | 7% |
| Transport Grade (Full) | 10% | 10% |
| Transport Grade (Empty) | 19% | 19% |
| Solution Delivery System | | |
| Solution Capacity | 30 gal (133.6 l) | 30 gal (133.6 l) |
| Solution Control (Standard) | 0.1 - .8 gpm (0.005 - 0.037 kg/sec) | 0.1 - .8 gpm (0.005 - 0.037 kg/sec) |
| Solution Control Settings | 5 | 5 |
| Chemical injection (Opt'l) | 12 Settings | 12 Settings |
| Scrubbing System | | |
| Cleaning Path | 28 in (71.1 cm) | 28 in (71.1 cm) |
| Pad Brush Size | (2) 14 in (35.6 cm) Disk | 14 in (35.6 cm) x 28 in (71.1 cm) Pad |
| Pressure | 90 lbs (40.8 kg), 120 lbs (54.4 kg), 150 lbs (68 kg), 180 lbs (81.6 kg), and 210 lbs (95.3 kg) | 90 lbs (40.8 kg), 120 lbs (54.4 kg), 150 lbs (68 kg), 180 lbs (81.6 kg), and 210 lbs (95.3 kg) |
| Productivity (Per Hour) Theoretical Max | 49,238 sq-ft (4,573 sq-m) | 49,238 sq-ft (4,573 sq-m) |
| Productivity (Per Hour) Average Coverage Rate* | 25,566 sq-ft (2,378 sq-m) | 25,566 sq-ft (2,378 sq-m) |
| Recovery System | | |
| Recovery Tank Capacity | 32 gal / 121 L | 32 gal / 121 L |
| Recovery Tank Accessibility | Full Clean-out Access | Full Clean-out Access |
| Vacuum Motor | .76 Hp / 566 W, 3-Stage | .76 Hp / 566 W, 3-Stage |
| Vacuum Motor cfm/cmm | 68 cfm (1.92 cubic m/min) | 68 cfm (1.92 cubic m/min) |
| Vacuum Motor Water-lift | 71 in (180 cm) | 71 in (180 cm) |
| Squeegee Width | 33 in (84 cm) | 33 in (84 cm) |
| Squeegee Material (Std) | Linatex® | Linatex® |
| Squeegee Material (Opt'l) | PRIMOthane® | PRIMOthane® |
| Battery System | | |
| System Voltage | 24 V | 24 V |
| Battery Amp/Hour Rating (Std) | 260 Ah | 260 Ah |
| Battery Run Time (Std) | Up to 3.0 hours | Up to 3.5 hours |
| Battery Amp/Hour Rating (Opt'l) | 360 Ah | 360 Ah |
| Battery Run Time (Opt'l) | Up to 5.0 hours | Up to 5.5 hours |
| Battery Amp/Hour Rating (MF) | 250 Ah | 250 Ah |
| Battery Run Time (MF) | Up to 2.5 hours | Up to 3.0 hours |
| Charger Description | On-Board | On-Board |
| *Productivity calculations utilize key factors from ISSA 540 cleaning times handbook | | |
| Note: Specifications subject to change without notice | | |

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SAFETY INFORMATION

WARNING: A potentially hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION: A potentially hazardous situation that, if not avoided, could result in moderate injury or serious property damage.

NOTE: Information that will prevent premature equipment failure or minor property damage.

WARNING: This product can expose you to chemicals including lead and lead compounds which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

WARNING: This machine is not equipped with explosion proof motors. Never use near flammable or reactive materials, liquids, vapors or combustible dusts. Electric motors spark internally during operation and could cause a flash fire or explosion.

WARNING: Never circumvent safety devices such as circuit breakers or fuses.

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 plug in the charger cable if wall cord or battery harness is damaged.

WARNING: Disconnect battery cables before servicing.

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

WARNING: Do not use the machine as a means for transport.

WARNING: Never allow children to play on or around machine.

WARNING: Do not bump into shelves or scaffoldings, especially where there is a risk of falling objects.

WARNING: Support the machine on safety stands before working underneath.

WARNING: Do not operate the machine:

- Unless trained and authorized.
- Unless operator manual has been fully read and understood.
- While using cell phones or other electronic devices.
- Under the influence of drugs or alcohol.
- With any part of the machine not functioning properly, including electrical or mechanical safety devices.
- With the brake disabled.
- In areas where flammable vapors, liquids, or combustible dusts are present.
- In low light areas where the operators vision is impaired.
- In areas with possible falling objects.

WARNING: Before operating the machine:

- Check the machine and batteries for fluid leaks.
- Check the steering and brake systems for proper operation.

WARNING: While operating the machine:

- Operate the machine only as described in this manual.
- Allow the machine to fully stop before getting off.
- Keep all body parts inside the machine while moving.
- Do not carry passengers on the machine.
- Follow all safety instructions and guidelines specific to your facility or environment.

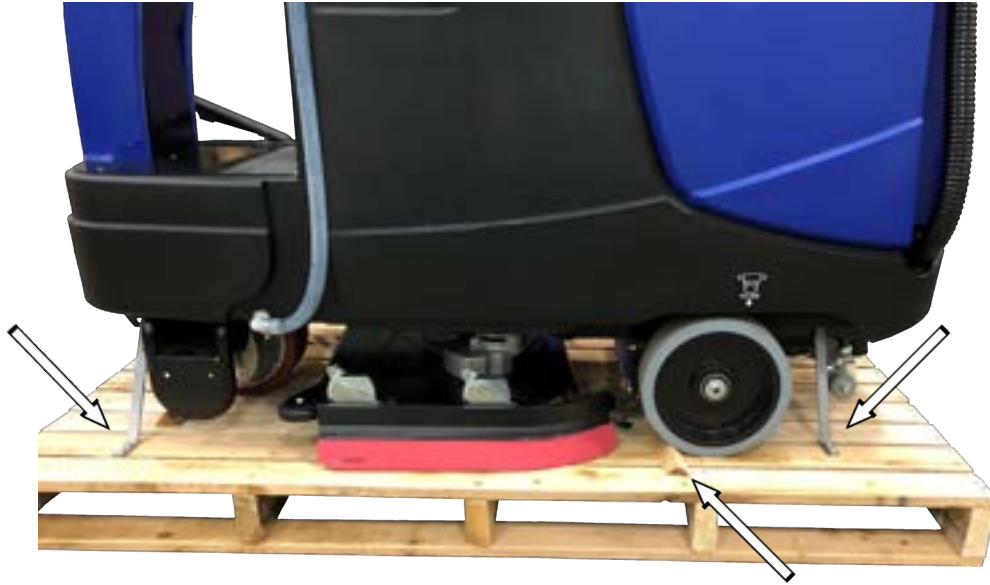
SAFETY INFORMATION

CONTINUED

- CAUTION:** Keep hands away from spinning brushes.
- CAUTION:** Do not modify the machine from its original design.
- CAUTION:** Wear non-slip shoes when operating machine.
- CAUTION:** Reduce speed when turning or operating on inclines and slippery surfaces.
- CAUTION:** Use Bromine only in your tank treatment system! Do not use chlorine. Chlorine can interact with ammonia-based detergents and cause harmful fumes.
- CAUTION:** Follow mixing and handling instructions on chemical containers.
- CAUTION:** Remove the batteries, use a jack, and get assistance before lifting the machine.
- CAUTION:** Park and service the machine on a level surface and remove the key.
- CAUTION:** Always wear protective clothing, gloves and goggles when handling and charging batteries.
- CAUTION:** Avoid moving parts and do not wear loose jackets, shirts or sleeves when servicing.
- NOTE:** Do not hose down or use a power-sprayer on the machine. Electrical malfunction may occur.
- NOTE:** All repairs must be performed by a qualified service technician using approved replacement parts.
- NOTE:** To avoid damaging the floor, do not allow the brush/pad to operate while the machine is stationary.
- NOTE:** Use a ramp with no more than a 12% incline when loading or unloading the machine.
- NOTE:** Use tie down straps to secure the machine to the truck or trailer during transport.
- NOTE:** Discontinue use and report machine damage or faulty operation immediately.
- NOTE:** Store the machine indoors where the temperature is between 32° and 104°F (0° and 40°C).
- NOTE:** Do not lower the orbital head without a pad. Doing so damages the Mighty-Lok® face.
- NOTE:** Failure to clean the BatteryShield® light pipe will limit the system's ability to read the water level and will reduce battery life.
- NOTE:** Do not use an extension cord. This will void the warranty on the charger.
- NOTE:** Batteries designed for automotive or marine and RV use are not suited for use in floor scrubbers.
- NOTE:** Use of an unapproved water supply or modification of an approved water supply can lead to battery system failure.
- NOTE:** Ensure battery charging and storage locations comply with OSHA and any governing agencies' standards based on your particular location and application.
- NOTE:** Use of caustic, high-ph, or degreasing chemicals can decrease the service life of components, including the orbital head bearing.
- NOTE:** When loading/unloading machine for transport:
- Fully drain the Solution and Recovery tanks before loading.
 - Transport the machine with the scrub head in the raised position.
 - Ensure the ramp and truck/trailer are properly rated for the weight of the machine.
 - Do not lower the Orbital Scrub Head without a pad installed.
 - Chock the wheels and tie down the machine.
 - Actuate the Manual Brake Release lever before attempting to manually push/move the machine.
- NOTE:** A valid user code must be entered into the telemetry system keypad (on all telemetry-equipped machines) before the machine can be operated.

UNPACKING THE MACHINE

1. Remove outer cardboard packaging.
2. Remove the shrink wrap securing the ramp and allow the ramp (not shown) to lower to the ground.
3. Using a #2 Philips driver, remove the screws from the front and rear wood wheel chocks.
4. Using a 3/8" socket and driver or wrench, remove the screws from the tie-down straps located at each corner of the machine.
5. Turn the machine on using the key switch and carefully drive down the ramp.
6. Install the rear squeegee assembly (refer to the RECOVERY SYSTEM of this manual).



TRANSPORTING THE MACHINE

- NOTE:** Fully drain the Solution and Recovery tanks before loading.
- NOTE:** Ensure the ramp and truck/trailer are properly rated for the weight of the machine.
- NOTE:** Use a ramp with no more than a 12% incline to load and unload the machine.
- NOTE:** Transport the machine with the scrub head in the raised position.
- NOTE:** Do not lower the Orbital Scrub Head without a pad installed. Doing so will damage the Mighty-Lok® face.
- NOTE:** Remove the rear squeegee assembly before transporting the machine.
- NOTE:** Chock the wheels and tie down the machine.
- NOTE:** Actuate the Manual Brake Release lever before attempting to manually push/move the machine.

Six (6) tie-down points (two on the front, two at the front corners, and two at the rear corners) have been provided on the frame to allow the machine to be secured during transportation.

Ensure the machine is properly secured with suitable tie-down straps before transporting the machine.



BATTERIES

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 involved, a chemical known to the State of California to cause cancer. Wash hands after handling. For more information go to www.P65Warnings.ca.gov.



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: Never circumvent safety devices such as circuit breakers or fuses.



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



CAUTION: Park and service the machine on a level surface and remove the key.

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

NOTE: All repairs must be performed by a qualified service technician using approved replacement parts.

NOTE: Failure to clean the BatteryShield® light pipe will limit the system's ability to read the water level and will reduce battery life.

NOTE: Batteries designed for automotive or marine and RV use are not suited for use in floor scrubbers.

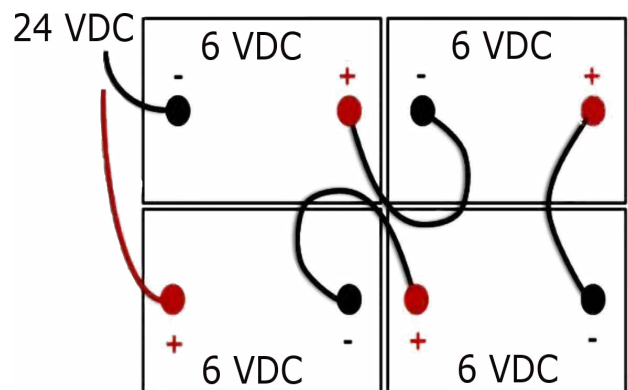
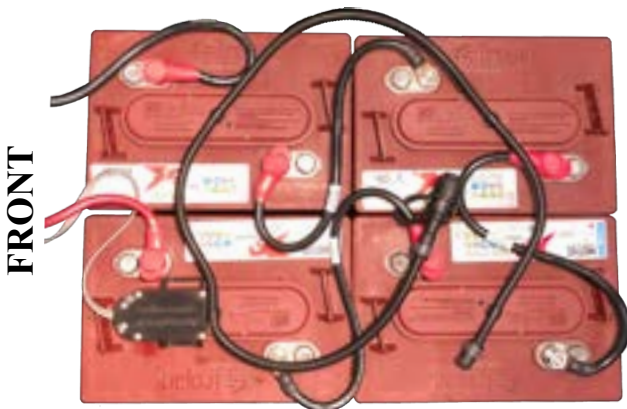
SELECTION

The machine requires four 6V Lead Acid or AGM Deep Cycle batteries designed for use in floor scrubbers applications. Maximum battery dimensions are:

- Width: 6.85" (174mm)
- Length: 12.17" (309mm)
- Height: 14.41" (366mm)

INSTALLATION

1. Open the Seat Assembly and the Recovery Tank.
2. Use a lifting device capable of lifting and transporting the batteries safely.
3. Move the batteries into position (as shown below).
4. Connect the batteries in a series to obtain an overall voltage of 24V.
5. Fully charge the batteries before use.



SERVICING LEAD ACID BATTERIES (NON-HYDROLINK® MODELS)

REQUIRED EQUIPMENT

- Eye protection
- Acid resistant gloves
- Distilled water
- Baking soda to neutralize acid spills

SAFETY

NEVER:

- Add acid to a battery.
- Smoke near batteries.
- Charge a frozen battery.
- Leave an acid spill unattended.
- Store batteries unless they are fully charged.
- Charge a battery when the temperature is above 122°F (50°C).
- Charge a flooded battery without securing vent caps on the cells.
- Place objects on top of batteries, which can cause a short circuit.

ALWAYS:

- Neutralize acid spills with baking soda and water.
- Use insulated tools to verify connections are tight.

WATERING

- If contact with electrolyte (sulfuric acid) occurs, flush with large amounts of water.
- Use only distilled water (tap water can contain contaminants that will damage the battery).
- Remove the caps and place them upside down to check electrolyte levels.
- For discharged or partially charged batteries, add just enough water to cover the plates.
- Fully charge the batteries.
- Add distilled water to a level of 1/8" (0.125") below the vent well.



CLEANING & INSPECTION

- Fluid on the top of a battery may mean it is being over-watered or overcharged.
- Check cleanliness and keep terminals and connectors free of corrosion.
- Clean with a solution of one cup baking soda to one gallon of water.
- Do not allow cleaning solution to get inside the battery.
- Rinse with water and dry with a clean cloth.
- Keep the area around batteries clean and dry.
- Properly secure all vent caps.
- Check battery cables and connections. Replace any damaged cables and tighten any loose connections.

SERVICING LEAD ACID BATTERIES WITH HYDROLINK® WATERING SYSTEM

1. Position the container of distilled water below the level of the top of the batteries to prevent siphoning.
2. Place the end of the watering system hose in the distilled water and squeeze the bulb to fill the system.
3. Remove the dust cover from the Hydrolink® snake connected to the batteries.
4. Connect the coupler on the Hydrolink® snake to the coupler on the watering system using the quick disconnect fittings.
5. While squeezing the hand pump, observe the flow indicator (spinning red balls). As the batteries begin to fill, the spinning of the flow indicator balls will slow. Batteries are full when the flow indicators completely stop spinning.

NOTE: Battery systems may take more than 1/2 gallon of water once the BatteryShield® light has illuminated. Failure to actuate the hand pump until the flow indicator stops spinning will result in batteries being under or unevenly serviced which will reduce battery life.

6. When the flow indicator stops, and not before, disconnect the coupler by depressing the push button on the watering system coupler.

NOTE: Leaving the watering system connected could result in the batteries being over filled. Disconnecting the watering system before the flow indicator stops spinning will result in batteries being under serviced and battery life will be reduced.

7. Replace the dust cover on the Hydrolink® snake.



BATTERYSHIELD® AUTOMATED WET BATTERY PROTECTION SYSTEM

Machines equipped with BatteryShield® technology have a sensor installed on one of the battery caps and a red LED indicator located on the Control Panel. This sensor monitors the water level in the batteries and the LED communicates to the operator that the batteries require servicing. When the BatteryShield® LED is lit, the scrub head is disabled until battery servicing has been performed.



- When the key switch is turned on, the BatteryShield® system will check the water level of the batteries.
 - If the LED turns off, there is sufficient water in the batteries.
 - If the LED remains on (without flashing), the batteries require servicing and the scrub head will not run.
 - If the LED flashes intermittently, the BatteryShield® light pipe must be cleaned (instructions below).

NOTE: Failure to clean the BatteryShield® light pipe will limit the system's ability to read the water level and will reduce battery life.

- If the BatteryShield® LED indicates the need for servicing, turn off the key switch and service the batteries as described above.
- After completing the Hydrolink® watering system procedure, turn the key switch back on and verify the LED turns off.

CLEANING THE BATTERYSHIELD® SENSOR LIGHT PIPE

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

NOTE: All repairs must be performed by a qualified service technician using approved replacement parts.

1. Locate and remove the battery cap with the BatteryShield® sensor module.

NOTE: Never remove the BatteryShield® sensor from the battery cap. Doing so will cause the BatteryShield® system to function improperly.

NOTE: Take care not to damage the battery cap floats or the BatteryShield® sensor light pipe.

2. Thoroughly wipe the clear BatteryShield® light pipe with a clean rag, giving special attention to the tip.

3. With the battery cap still removed, cycle the key switch on to verify that the BatteryShield® LED remains on.

4. Turn off the key switch.

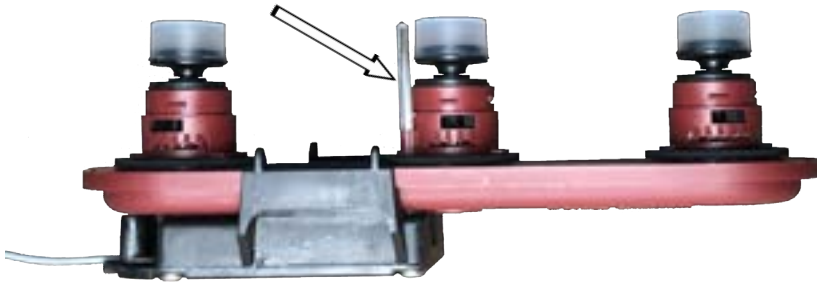
5. Carefully install the battery cap.

NOTE: Whenever the battery cap is removed, ensure the Hydrolink® snake port is fully seated in the cap when maintenance is complete.

6. Complete the Hydrolink® watering procedure described above.

7. Turn on the key switch and verify the light remains off.

8. The machine is ready for use.



CHARGING

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: Never circumvent safety devices such as circuit breakers or fuses.



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



WARNING: Do not plug in the charger cable if wall cord or battery harness is damaged.



NOTE: Do not use an extension cord with the battery charger. This will void the charger warranty.

NOTE: Ensure battery charging and storage locations comply with OSHA and any governing agencies' standards based on your particular location and application.

NOTE: Seat assembly must remain open while charging to prevent damage to the charger power cord.

This machine is equipped with an on-board charger. The cord for the charger can be located in the cord storage compartment under the seat.

The charger status LED's (used to indicate the charger's status while plugged in) can be viewed through the view window located on the vertical kick panel below the seat.

| LED INDICATION | MEANING |
|------------------------------|--|
| GREEN flashing (2 seconds) | Charger is set for AGM batteries |
| YELLOW flashing (continuous) | Unsuitable battery connected or output short circuit |
| RED flashing (2 seconds) | Charger is set for Lead Acid batteries |
| RED flashing (continuous) | Safety timer exceeded or internal short circuit |
| Solid GREEN | The unit is fully charged |
| Solid YELLOW | Phase 2 of charging is in progress |
| Solid RED | Charging cycle has begun |



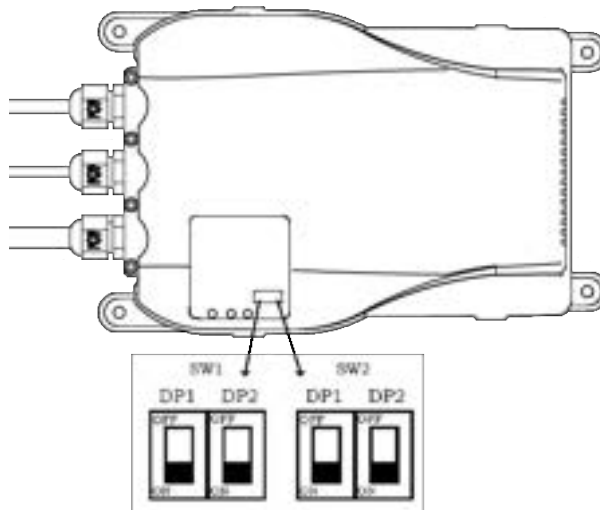
CHARGER SETTINGS

SW1: Sets the current profile of the charger to the particular battery that is installed.

| SW1 | | |
|-----|-----|---------------------------|
| DP1 | DP2 | APPLICATION |
| ON | OFF | LEAD-ACID (WET) BATTERIES |
| OFF | OFF | AGM (MAINTENANCE FREE) |

SW2: Set the current level of the charger based on the amp-hour rating for the particular batteries installed.

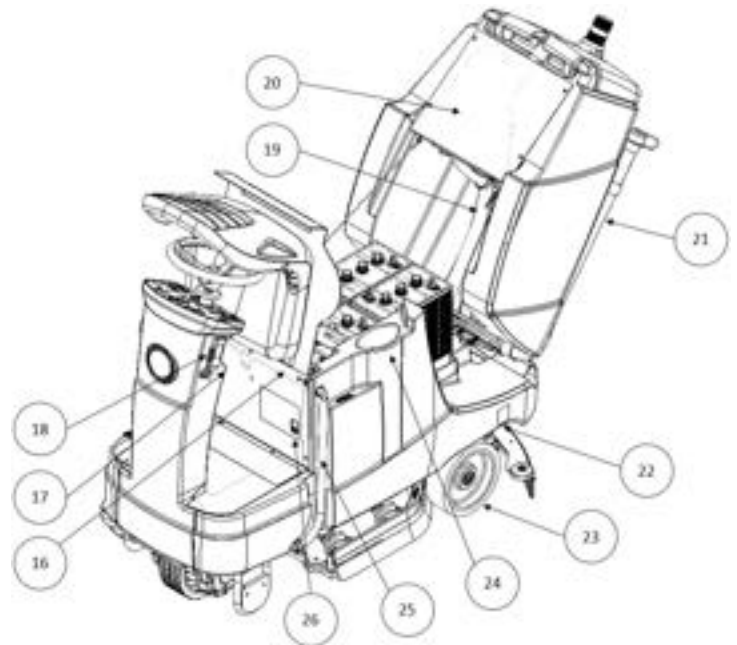
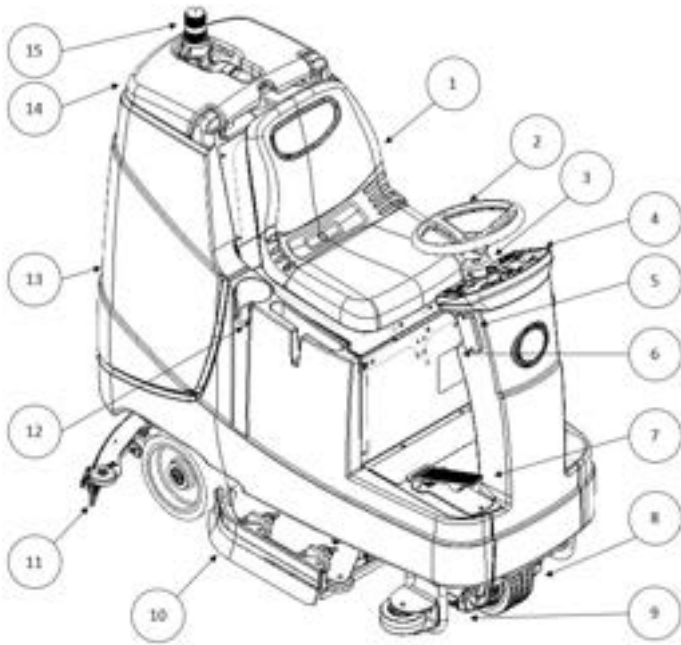
| SW2 | | |
|-----|-----|------------------|
| DP1 | DP2 | CHARGING CURRENT |
| OFF | ON | 20A |
| ON | OFF | 25A - XCF |
| OFF | OFF | 25A |



| CHARGING CURRENT | BATTERY AMP HOUR RANGE (20h) |
|------------------|------------------------------|
| 20A | 150-240 Ah |
| 25A | 220-315 Ah |

OPERATION

MACHINE OVERVIEW



1. SEAT ASSEMBLY
2. STEERING WHEEL
3. STEERING WHEEL ADJUSTMENT
4. CONTROL PANEL
5. (OPTIONAL) SCRUBSMART TELEMETRY KEY PAD
6. KEY SWITCH
7. THROTTLE PEDAL
8. DRIVE WHEEL
9. MANUAL BRAKE RELEASE
10. SIDE SQUEEGEE & SCRUB HEAD
11. SQUEEGEE ASSEMBLY
12. CUP HOLDER & TOOL STORAGE
13. RECOVERY TANK
14. RECOVERY TANK LID
15. (OPTIONAL) LAMP

16. SEAT ADJUSTMENT
17. HOUR METER & (OPTIONAL) LAMP SWITCH
18. (OPTIONAL) SCRUBSMART TELEMETRY ANTENNA
19. SQUEEGEE HOSE
20. RECOVERY VACUUM MOTOR & HEPA FILTER
(LOCATED BEHIND COVER)
21. RECOVERY DRAIN HOSE
22. SOLUTION SHUT-OFF VALVE & SOLUTION FILTER
(LOCATED UNDER SOLUTION TANK)
23. REAR WHEELS
24. SOLUTION TANK FILL PORT
25. SOLUTION TANK LEVEL INDICATOR
26. CHARGER STATUS VIEW WINDOW

CONTROL PANEL



Zone 1: Modes of Operation

- **SCRUB ONLY:** Allows the operator to run the scrub head only.
- **VACUUM ONLY:** Allows the operator to run the squeegee/vacuum system only.
- **VACUUM + SCRUB:** Allows the operator to run both the scrub head and squeegee/vacuum systems.

Zone 2: Operational Settings

- **DOWN PRESSURE:** Increases (“+”) or decreases (“-”) the down-pressure force of the scrub head.
- **SOLUTION FLOW:** Increases (“+”) or decreases (“-”) the amount of solution being dispensed at the scrub head.
- **MAX SPEED:** Increases (“+”) or decreases (“-”) the maximum speed when the throttle pedal is fully pressed.
- **CHEMICAL INJECTION (OPTIONAL):** Increases (“+”) or decreases (“-”) the ratio of chemical added to the solution as it is dispensed at the scrub head

Zone 3: Machine Status

- **BATTERY INDICATOR:** LED display indicating current battery level and/or potential machine errors. See error indicator chart.
- **SOLUTION EMPTY:** LED display indicates when the solution tank is empty.
- **BATTERYSHIELD®:** On BatteryShield® equipped machines, LED display indicates battery maintenance is required.
- **SCRUB ONLY:** LED display is lit when machine is running in SCRUB ONLY to remind operator that they are leaving a wet floor behind the machine

Zone 4: Machine Controls

- **FORWARD:** Enables the machine to drive forward.
- **REVERSE:** Enables the machine to drive in reverse.
- **HORN:** Press and hold to sound the horn.

MACHINE ERROR CODES



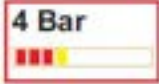
The battery needs charging or there is a bad connection to the battery. Check the connections to the battery. If the connections are good, try charging the battery.



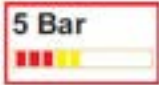
There is a bad connection to the Traction motor. Check all connections between the motor and the control system.



There is a bad connection to the Brush motor/motors. Check all connections between the motor/motors and the control system.



Refer to the 4-Bar flash sequence table below.



There is a bad connection to the Vacuum motor. Check all connections between the motor and the control system.



The control system is being inhibited from driving.



Refer to the 7-Bar flash sequence table below.



A control system trip is indicated. Make sure that all connections are secure.



Refer to the 9-Bar flash sequence table below.



Excessive voltage has been applied to the control system. This is usually caused by a poor battery connection. Check the battery connections.



1 Flash: Inspect the Head Lift System. Check that the actuator is functioning properly and that there are no mechanical interferences. Check all associated sensors, connectors, and wiring.

2 Flash: Inspect the Squeegee Lift System. Check that the actuator is functioning properly and that there are no mechanical interferences. Check all associated connectors and wiring.



1 Flash: Inspect Throttle System. Ensure that the throttle is in the rest position before switching on the machine. Check all associated connectors and wiring.

3 Flash: Inspect the Brake System. Ensure the manual brake override is not engaged.



1 Flash: Inspect the Lamp System. Check that the lamp is not damaged. Check all associated connectors and wiring.

3 Flash: Inspect the Solution Pump. Ensure that the pump is functioning properly. Check all associated connectors and wiring.

4 Flash: Inspect the Solution Valve and Hour Meter Systems. Ensure that the valve and hour meter are not damaged and are functioning properly. Check all associated connectors and wiring.

5 Flash: Inspect the Brake System. Ensure the brake is functioning properly. Check all associated connectors and wiring.

DRIVE SYSTEM

1. Turn the machine on using the key switch located on the right side of the steering column.
2. Set the desired maximum speed using the MAX SPEED selector on the Control Panel
3. Select the desired direction of travel using the FORWARD and REVERSE selectors on the Control Panel.
4. Maintain control of the Steering Wheel at all times during operation.
5. Depress the Throttle Pedal to engage the drive system.

NOTE: The speed of the machine is based on the relative amount the throttle is depressed. The MAX SPEED selector governs the maximum speed the machine will travel with the throttle fully depressed.

NOTE: The machine is equipped with a sensor which reduces the maximum speed while in sharp turns. After the steering wheel is straightened, the machine will return to the full maximum speed as regulated by the MAX SPEED selector.

The machine can be moved manually (pushed or pulled) if absolutely necessary. Before attempting to move the machine manually, fully actuate the Manual Brake Release located on the right side of the Drive Wheel. The Manual Brake Release lever must be fully actuated the entire time the machine is being moved. Failure to fully actuate the Manual Brake Release lever could cause damage to the Drive Wheel and brake system.

OPTIONAL SCRUBSMART TELEMETRY SYSTEM

The RS28 can be ordered with our ScrubSmart telemetry system, powered by Trackunit®. This system is used for asset tracking and reporting. For more information on this system and its reporting capabilities, contact your distributor or Pacific Floorcare Customer Service.

Telemetry-equipped machines have a keypad mounted on the right side of the steering column. After turning on the key switch, enter the operator code. **Failure to enter a valid operator code will prevent the machine from functioning.** Operator codes are generated and administered by your Pacific Distributor or your company's management.



SOLUTION DISTRIBUTION

FILLING THE SOLUTION TANK

Use liquid detergent in the concentration and manner specified by the manufacturer for a 30-gallon solution tank. Excess foam will damage the vacuum motor. In addition to properly-mixed low-foam detergent, use a small amount of de-foaming liquid in the recovery tank. Never use pure acids.

1. Add water and cleaning agent via the fill port located under the Seat Assembly. Water should not exceed 120°F (50°C).
2. Monitor the level of the solution through the sight tube located on the side of the machine.
3. To drain the solution tank, slide the sight tube off of the upper fitting and lower the tube into drain or mop sink.



SOLUTION FLOW

Solution flow is controlled by the SOLUTION FLOW selector located on the Control Panel. Solution is delivered at a rate of 0.1 - 0.8 gpm (0.005 - 0.037 kg/sec) based upon the SOLUTION FLOW setting and the speed of the machine (flow rate increases or decreases with machine speed to prevent over/under distribution).

When the machine senses that the solution tank is empty, the SOLUTION EMPTY LED will illuminate and the scrub head will turn off.



CHEMICAL INJECTION

For machines equipped with the optional chemical injection system:

1. Place a 1-gallon chemical container in the holder (located behind the battery compartment, under the Recovery Tank).
2. Insert the hose into the container so that the filter at the end of the hose rests on the bottom of the container.
3. Screw on the cap.
4. Match the mix ratio dial on the Control Panel to the setting (in ounces per gallon) prescribed by the chemical manufacturer.
5. Set the SOLUTION FLOW selector to the desired flow setting.
6. Operate the machine as normal.

NOTE: If the chemical is not priming, temporarily set the mix ratio to a higher setting until the chemical is delivered.

NOTE: To purge chemical, remove the hose from the chemical container, set the mix ratio dial to the highest setting, and run until the hose is drained.



INSPECTION & CLEANING

To clean out the solution tank in the case of excessive debris:

1. Close the shutoff valve (located under the left rear tire).
2. Remove the filter bowl and screen (located forward of the shutoff valve).
3. Open the shutoff valve and allow the tank to drain.
4. Rinse the solution tank thoroughly.
5. Install the filter bowl and screen.



SCRUB HEAD

Running the machine in SCRUB ONLY or VACUUM+SCRUB will lower the scrub head to the floor. The scrub head motors will begin running when the throttle pedal is depressed. Scrub head down pressure is set using the DOWN PRESSURE selector on the Control Panel. See the chart below for down-pressure forces.

| SETTING | DOWN-PRESSURE |
|---------|-------------------|
| 1 | 90 lbs (40.8 kg) |
| 2 | 120 lbs (54.4 kg) |
| 3 | 150 lbs (68 kg) |
| 4 | 180 lbs (81.6 kg) |
| 5 | 210 lbs (95.3 kg) |

ORBITAL SCRUB HEAD & CHEMICAL-FREE FINISH REMOVAL

NOTE: Do not operate the Orbital Scrub Head without a pad installed. Operating the head without a pad will damage the Mighty-Lok® face.

NOTE: Use of caustic, high-ph, or degreasing chemicals can decrease the service life of components, including the orbital head bearing.

STANDARD OPERATION

1. With power off and the Scrub Head raised, lift the Side Squeegees to the raised position.
2. Align the corners of the pad to the corners of the aluminum plate with Mighty-Lok® face and press to attach.
3. Lower the scrub deck onto the pad (by turning power on the machine and selecting SCRUB ONLY or VACUUM+SCRUB mode).
4. Ensure the pad is properly aligned front-to-back and right-to-left. Water should drip directly onto the top of the pad.
5. Lower the Side Squeegees.
6. The machine is ready for operation.



CHEMICAL-FREE FINISH REMOVAL (CFR) PAD ASSEMBLY & OPERATION

In addition to the traditional cleaning pad, a specialized surface preparation pad is required for chemical-free finish removal. The standard red scrub pad acts as a “backer” and compensates for variances in the floor.

1. Place the black retainer pad 2” back from the front of the red scrub pad.
2. Align the maroon CFR pad with the red scrub pad.
3. Ensure the pads are aligned so that the black pad is justified towards the back of the machine, so that the gap described in Step 1 is towards the front of the machine.
4. Install the pads in accordance with the instructions above for standard operation.
5. Fill the Solution Tank with clean water.
6. Set the DOWN PRESSURE selector to the maximum setting.
7. Set the SOLUTION FLOW to the medium setting. Adjust as needed to obtain the optimum finish removal using the least amount of water for effective rinsing.
8. Set the MAX SPEED selector to the lowest setting.



DISK SCRUB HEAD

STANDARD OPERATION

NOTE: Do not operate the Disk Scrub Head without a pad installed on the pad driver. Operating the head without a pad will damage the floor.

1. With power off and the Scrub Head raised, lift the Side Squeegees to the raised position.
2. Align the pad driver assemblies with the bayonet drivers on the machine.
3. Lower the scrub head onto the pad driver assemblies (by turning power onto the machine and selecting SCRUB ONLY or VACUUM+SCRUB mode).
4. Ensure the bayonet drivers are properly engaged with the pad driver assemblies.
5. Lower the Side Squeegees.
6. Drive the machine forward and listen for the bayonet drivers to lock onto the pad driver assemblies.
7. The machine is ready for operation.



DISK REMOVAL

1. With power off and the Scrub Head raised, lift the Side Squeegees to the raised position.
2. Grab the pad driver assemblies and rotate by hand to disengage from the bayonet drivers.
3. Lower the Side Squeegees.

RECOVERY SYSTEM

RECOVERY TANK

To drain and rinse the recovery tank:

1. Remove the Recovery Drain Hose from the holder and lower the end into the drain location.
2. Remove the press-fit cap from the Recovery Drain Hose, squeezing the restriction collar to control the flow.
3. As the tank drains, lean the Recovery Tank back and open the lid.
4. Using clean water, thoroughly clean and rinse out any sediment in the Recovery Tank.

NOTE: Periodically use cleaner and sanitizer with a cloth or sponge to prevent mold and mildew.

5. Inspect and clean the debris tray and the vacuum the mesh filter screen around the ball float system.
6. Leave the lid open to dry.



TANK TREATMENT SYSTEM

The Tank Treatment System (TTS) uses Bromine tablets (typically used in pools and spas) to kill the odor-causing bacteria in the tank. To ensure that the TTS is prepared to treat your recovery tank:

1. Lift the debris tray out and pinch the two tabs sticking through the underside of the tray.
2. Check the size of the Bromine puck. Replace it when it is approximately 25% of its original size.
3. Press the TTS holder and bromine puck back into the debris tray.

CAUTION: Use Bromine only! Do not use chlorine! Chlorine can interact with ammonia-based detergents to cause harmful fumes.



SQUEEGEE SYSTEM

Squeegee Blades and system should be inspected and maintained regularly to achieve peak machine performance.

REMOVAL & INSTALLATION

Install: Align the slots in the squeegee assembly with the easy-grip knobs, attach the vacuum hose, and tighten the knobs.

Remove: Loosen the easy-grip knobs, remove the vacuum hose, and remove the assembly.

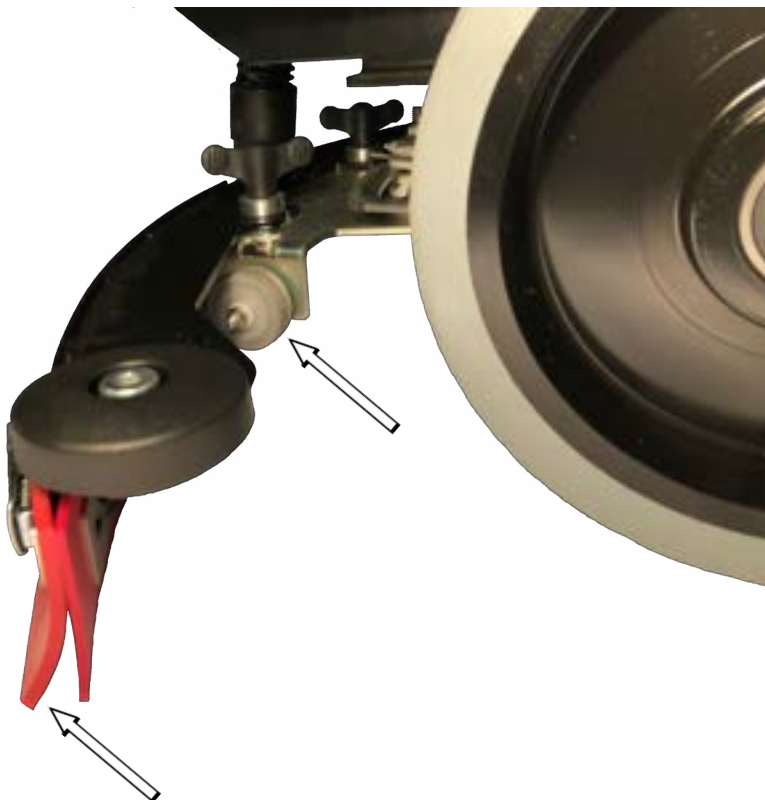


SQUEEGEE USE

Operating the machine in either VACUUM ONLY or VACUUM + SCRUB mode will cause the Squeegee Actuator to lower the assembly and the vacuum motor to turn on. Deselecting VACUUM ONLY or VACUUM + SCRUB mode will cause the squeegee assembly to lift and the vacuum motor to shut off after a 60 second delay. This delay ensures all of the recovered water is pulled into the recovery tank.

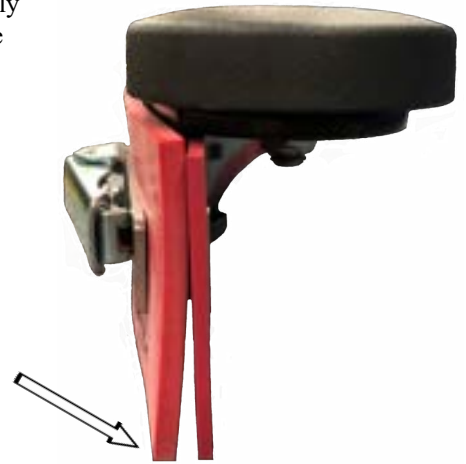
SQUEEGEE ADJUSTMENT

Improper adjustment of the squeegee blades will reduce the systems ability to properly pick up water. The leading edge of the rear squeegee blade should contact the floor at a 45° angle (similar to the image shown below). The height of the squeegee system is adjusted using the two cap head screws located next to the easy-grip knobs. Raise (by turning the screws clockwise) or lower (by turning the screws counter-clockwise) until the proper blade deflection is achieved. When the system is adjusted properly, the small gray wheels on the squeegee system should be approximately 1/32" off of the floor.



INSPECTION & CLEANING

1. Inspect both squeegee blades. Blades edges are considered worn if the edge is not clearly defined or if the edge is worn halfway through the thickness of the blade. Blades can be flipped and rotated to use all four edges.
2. Thoroughly clean the blades, frame, and neck of any debris.



SQUEEGEE BLADE REPLACEMENT

1. Release the over-center latch and slide the band clamp off the hook on the other side.
- NOTE:** Blades can be flipped and rotated so as to use all four edges.
2. Blade installation is the reverse of the removal.



RECOMMENDED MAINTENANCE

| SYSTEM | DAILY | WEEKLY | MONTHLY | BIANUALLY |
|---|-------|--------|---------|-----------|
| CONTROL PANEL/STEERING | | | | |
| INSPECT ALL CONTROLS AND HARDWARE FOR SECURITY & SERVICEABILITY | X | | | |
| VERIFY THROTTLE PEDAL FUNCTION | X | | | |
| VERIFY PROPER OPERATION OF ALL CONTROLS | X | | | |
| VERIFY FUNCTION OF STEERING SYSTEM | X | | | |
| INSPECT AND LUBRICATE U-JOINT | | | | X |
| SOLUTION DISTRIBUTION | | | | |
| VERIFY SOLUTION FLOW & ADJUSTMENT OPERATION | X | | | |
| CLEAN & INSPECT INLINE FILTER | | | X | |
| FLUSH TANK WITH FRESH WATER | | | X | |
| VERIFY FLOAT SWITCH FUNCTION BY DRAINING TANK | | X | | |
| SCRUB DECK | | | | |
| RINSE BRUSHES & PADS | X | | | |
| RINSE & DRY SCRUB DECK | X | | | |
| CLEAN MOTOR VENTS | | | X | |
| INSPECT ISOLATORS <i>*(ORBITAL ONLY)</i> | | | | X |
| INSPECT LIFT LINKAGE & ACTUATOR | | | | X |
| RECOVERY SYSTEM | | | | |
| RINSE & AIR DRY RECOVERY TANK | X | | | |
| CLEAN & INSPECT DEBRIS TRAY | X | | | |
| VERIFY DRAIN HOSE CAP IS SEALED TIGHT WHEN INSTALLED | X | | | |
| INSPECT LID SEAL | | X | | |
| INSPECT / REPLACE BROMINE PUCK | | X | | |
| INSPECT HEPA FILTER | | | | X |
| CLEAN & SANITIZE RECOVERY TANK | | | X | |
| BATTERIES AND CHARGER | | | | |
| INSPECT TERMINALS & CABLES FOR SECURITY, CORROSION & DAMAGE | | | X | |
| SERVICE LEAD ACID BATTERIES <i>*(IF EQUIPPED)</i> | | X | | |
| CLEAN BATTERYSHIELD® LIGHT PIPE <i>*(IF EQUIPPED)</i> | | | | X |
| PERFORM BATTERYSHIELD® OPERATIONAL CHECK <i>*(IF EQUIPPED)</i> | | | | X |
| SQUEEGEE ASSEMBLY | | | | |
| CLEAN & INSPECT SQUEEGEE ASSEMBLY & BLADES (SIDE & REAR) | X | | | |
| INSPECT VACUUM HOSE | | X | | |
| INSPECT & LUBRICATE SQUEEGEE LINKAGE ASSEMBLY | | | | X |
| CHASSIS AND UNDERCARRIAGE | | | | |
| CLEAN & INSPECT WHEELS | | | X | |
| CLEAN & INSPECT LINKAGES, CHASSIS & HARDWARE | | | X | |
| CLEAN & INSPECT VISIBLE WIRES FOR DAMAGE & SECURITY | | | | X |
| MISC. | | | | |
| VERIFY FUNCTION OF AMBER LIGHT <i>*(IF EQUIPPED)</i> | X | | | |
| INSPECT & LUBRICATE SEAT SLIDE ASSEMBLY | | | | X |

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RECOMMENDED SERVICE PARTS

| PART NUMBER | DESCRIPTION | MACHINE SUB-SYSTEM | WEAR ITEM | RS28 (DISK) | RS28 (ORBITAL) | OPTIONAL |
|-------------|----------------------------------|--------------------------|-----------|-------------|----------------|----------|
| 857003 | PUMP ASSY, HND, HYDROLINK | BATTERY/BATTERY CHARGING | X | | | X |
| 911758 | FUSE MIDI BOLT-DOWN 100A 32V | ELECTRICAL | | X | X | |
| 549701 | WHEEL 5X2 BALL BEARING | FRAME ASSEMBLY | | X | X | |
| 871501 | CAP, 38MM, W/ HOLE | CHEMICAL INJECTION | X | | | X |
| 5764P2 | STRAINER SUCTION VALVE | CHEMICAL INJECTION | X | | | X |
| 898505 | SENSOR ROTARY HALLEFFECT | HEAD LIFT | | X | X | |
| 223370 | FLOAT ASSY | RECOVERY | | X | X | |
| 853305 | FOAM, NOISE, VACUUM | RECOVERY | | X | X | |
| 853401 | GASKET, COVER, PRESS-IN | RECOVERY | X | X | X | |
| 854101 | HOSE DRAIN RECOVERY RIDER | RECOVERY | X | X | X | |
| 872412 | CABLE, RETENTION, TANK | RECOVERY | | X | X | |
| 873304 | FILTER, HEPA, W BRACKET & GASKET | RECOVERY | X | X | X | |
| 895004 | KIT RIDER VAC MOTOR REPL | RECOVERY | | X | X | |
| 875202 | MTR, VAC, 24VDC, 3STG | RECOVERY | | X | X | |
| 877006 | PUCK, BROMINE, 1INCH | RECOVERY | X | X | X | |
| 879201 | TRAY, DEBRIS | RECOVERY | X | X | X | |
| 879202 | TRAY, PUCK | RECOVERY | X | X | X | |
| 894101 | HOSE SQUEEGEE RIDER | RECOVERY | X | X | X | |
| 894102 | HOSE VACUUM RECOVERY RIDER | RECOVERY | X | X | X | |
| 555902 | PAD 14" BLACK STRIP CASE 5 | SCRUB HEAD | X | X | | |
| 555909 | PAD 14"X28" BLACK STRIP CASE 5 | SCRUB HEAD | X | | X | |
| 555929 | PAD 14"X28" MAROON CFR CASE 10 | SCRUB HEAD | X | | X | |
| 555942 | PAD 14" RED SCRUB CASE 5 | SCRUB HEAD | X | X | | |
| 555949 | PAD 14"X28" RED SCRUB CASE 5 | SCRUB HEAD | X | | X | |
| 555952 | PAD 14" WHITE POLISH CASE 5 | SCRUB HEAD | X | X | | |
| 555959 | PAD 14"X28" WHITE POLISH CASE 5 | SCRUB HEAD | X | | X | |
| 555969 | PAD 14"X28" TURF CASE 4 | SCRUB HEAD | X | | X | |
| 850906 | BRUSH CARBON KIT 4 PC | SCRUB HEAD | X | X | X | |
| 853803 | GUIDE, DRIVER | SCRUB HEAD | X | X | | |
| 853804 | GUIDE,PAD,PLASTIC | SCRUB HEAD | X | X | | |
| 854302 | HUB DRIVER BRUSH | SCRUB HEAD | X | X | | |
| 870901 | BRUSH, POLY, 14INCH | SCRUB HEAD | X | X | | |
| 870906 | BRUSH, GRIT, 14INCH | SCRUB HEAD | X | X | | |
| 873802 | GUIDE, DRIVER, RH | SCRUB HEAD | X | X | | |
| 875009 | KIT, PLATE, REPL, ORBIT S-28 | SCRUB HEAD | X | | X | |
| 875010 | ASSY, BEARING, REPL, ORBIT | SCRUB HEAD | X | | X | |
| 875902 | DRIVER, PAD, 14INCH | SCRUB HEAD | X | X | | |
| 875903 | PAD, MIGHTYLOK, UNIVERSAL | SCRUB HEAD | X | | X | |
| 875906 | PAD, RETAINER, 12X28 | SCRUB HEAD | X | | X | |
| 890702 | BLADE SQUEEGEE SIDE RIDER | SIDE SQUEEGEE | X | X | X | |
| 898308 | SPRING EXTENSION .500D X 1.5L SS | SIDE SQUEEGEE | X | X | X | |
| 911740 | SWITCH FLOAT | SOLUTION TANK | | X | X | |

RECOMMENDED SERVICE PARTS

| PART NUMBER | DESCRIPTION | MACHINE SUB-SYSTEM | WEAR ITEM | RS28 (DISK) | RS28 (ORBITAL) | OPTIONAL |
|-------------|------------------------------|--------------------|-----------|-------------|----------------|----------|
| 890706 | BLADE REAR 33 INCH URETHANE | SQUEEGEE | X | X | X | X |
| 890705 | BLADE FRONT 33 INCH URETHANE | SQUEEGEE | X | X | X | X |
| 890703 | BLADE REAR 33 INCH LINATEX | SQUEEGEE | X | X | X | |
| 890704 | BLADE FRONT 33 INCH LINARD | SQUEEGEE | X | X | X | |
| 898309 | SPRING TORSION RH 40 IN-LBS | SQUEEGEE LIFT | X | X | X | |
| 898310 | SPRING TORSION LH 40 IN-LBS | SQUEEGEE LIFT | X | X | X | |
| 902051 | BEARING,ROD END,.38 FEM | SQUEEGEE LIFT | | X | X | |
| 911646 | SWITCH,SNAP,W/ROLLER | STEERING COLUMN | | X | X | |
| 911647 | SWITCH KEY | STEERING COLUMN | | X | X | |

TROUBLESHOOTING GUIDE

| ISSUE | POTENTIAL CAUSE | PROPOSED SOLUTION |
|-------------------------------------|--|---|
| INSUFFICIENT WATER TO SCRUB HEAD | SOLUTION FLOW SETTING IS TOO LOW | ADJUST SOLUTION CONTROL |
| | SOLUTION TANK IS EMPTY | ADD WATER/SOLUTION TO THE TANK |
| | IN-LINE SOLUTION FILTER IS CLOGGED | REMOVE AND CLEAN THE FILTER |
| | SOLUTION TUBE IS CLOGGED, KINKED, OR DAMAGED | INSPECT TUBES |
| | SOLUTION SHUT OFF VALVE IS CLOSED | OPEN VALVE |
| | PUMP OR PUMP WIRES ARE DAMAGED | VERIFY OPERATION AND REPLACE IF NECESSARY |
| | OPERATOR CONTROL BOARD IS DAMAGED | VERIFY OPERATION AND REPLACE IF NECESSARY |
| | SOLUTION SOLENOID VALVE MAY BE FAULTY | VERIFY OPERATION AND REPLACE IF NECESSARY |
| | CHEMICAL INJECTION PUMP IS NOT RUNNING * ONLY ON MACHINES WITH OPTIONAL CHEMICAL INJECTION SYSTEM | VERIFY OPERATION AND REPLACE IF NECESSARY |
| POOR WATER RECOVERY | RECOVERY TANK IS FULL | EMPTY RECOVERY TANK |
| | DIRTY OR WORN SQUEEGEE BLADES | INSPECT AND ROTATE OR REPLACE AS REQUIRED |
| | RECOVERY HOSE LOOSE OR DAMAGED | INSPECT AND REPAIR |
| | RECOVERY HOSE OR SQUEEGEE ASSEMBLY HAS AN OBSTRUCTION | CLEAR OBSTRUCTIONS FROM RECOVERY SYSTEM |
| | DIRTY OR WORN SIDE SQUEEGEE BLADES | INSPECT AND REPLACE AS REQUIRED |
| | SQUEEGEE ASSEMBLY MAY BE OUT OF ADJUSTMENT | ADJUST AS NECESSARY |
| | STUCK OR DAMAGED BALL FLOAT | INSPECT AND REPAIR/REPLACE |
| | RECOVERY TANK LID IS NOT SEALING PROPERLY | INSPECT RECOVERY LID GASKET. REPAIR OR REPLACE IF NEEDED |
| | DRAIN HOSE CAP IS NOT INSTALLED PROPERLY | INSTALL DRAIN HOSE SECURELY |
| | CLOGGED HEPA FILTER | REMOVE AND INSPECT INSIDE AND OUTSIDE OF HEPA FILTER |
| MACHINE WILL NOT TURN ON | FAULTY KEY SWITCH | DIAGNOSE AND REPLACE |
| | DISCHARGED BATTERIES | CHARGE BATTERIES |
| | BLOWN MAIN FUSE | INSPECT AND REPLACE AS REQUIRED |
| | LOOSE OR DAMAGED WIRE | REPAIR |
| MACHINE NOT CLEANING FLOOR PROPERLY | WORN PAD OR BRUSH | INSPECT AND REPLACE AS REQUIRED |
| | WRONG PAD OR BRUSH FOR APPLICATION | CONTACT YOUR LOCAL DISTRIBUTOR FOR RECOMMENDED APPLICATION |
| | INSUFFICIENT CLEANING SOLUTION FOR APPLICATION | ADJUST THE MIXTURE AS REQUIRED |
| EXCESSIVE FOAM IN RECOVERY TANK | IMPROPER DETERGENT TYPE | USE A LOW-FOAM DETERGENT OR ADD A DE-FOAMING AGENT TO THE RECOVERY TANK. READ ALL CHEMICAL LABELS THOROUGHLY BEFORE USE |
| | MIXTURE SETTING TOO HIGH ON OPTIONAL CHEMICAL INJECTION SYSTEM | ADJUST TO A LOWER RATIO AND/OR FLOW RATE |
| VACUUM MOTOR WILL NOT RUN | VACUUM SWITCH OR WIRING MAY BE FAULTY | CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE |
| | FAULTY MAIN CONTROLLER | INSPECT AND REPLACE AS REQUIRED |

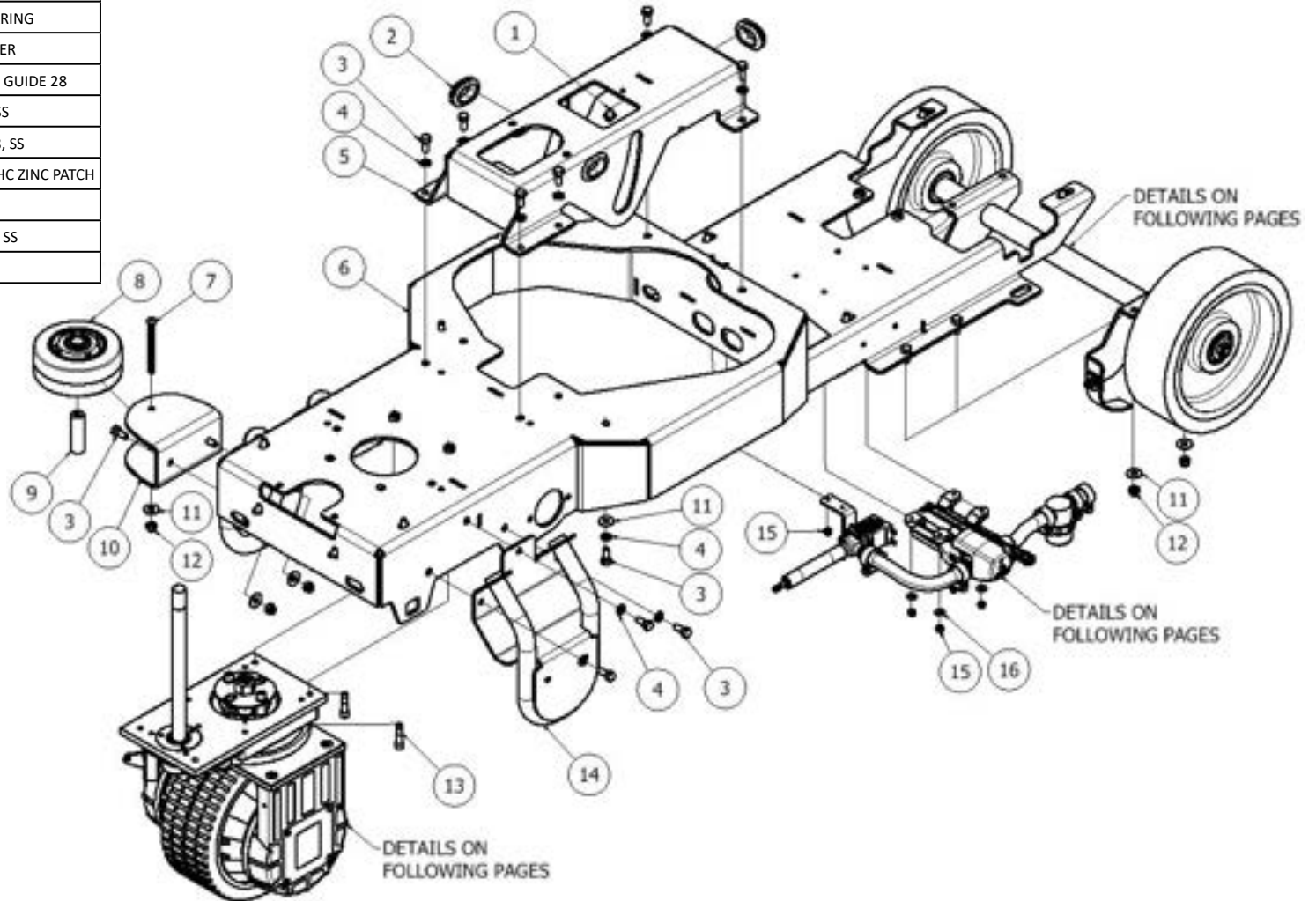
TROUBLESHOOTING GUIDE

| ISSUE | POTENTIAL CAUSE | PROPOSED SOLUTION |
|---|---|---|
| VACUUM MOTOR WILL NOT TURN OFF | STILL IN DELAY MODE | ALLOW 30-45 SECONDS FOR VACUUM TO SHUT DOWN |
| | FAULTY MAIN CONTROLLER | INSPECT AND REPLACE AS REQUIRED |
| SCRUB HEAD WILL NOT RUN | SCRUB HEAD IS STILL RAISED | LOWER SCRUB HEAD |
| | BATTERYSHIELD® LED IS ILLUMINATED AND HAS DISABLED THE SCRUB HEAD | SERVICE THE BATTERIES |
| | SOLUTION TANK IS EMPTY - LED IS ON | ADD WATER/SOLUTION TO THE TANK |
| | BRUSH MOTORS TRIPPED OVER-CURRENT PROTECTION | TURN THE MACHINE OFF AND BACK ON |
| | OPERATOR CONTROL BOARD IS DAMAGED | VERIFY OPERATION AND REPLACE IF NECESSARY |
| | HEAD LIFT POSITION SENSOR IS DAMAGED | INSPECT AND REPLACE AS REQUIRED |
| | BATTERIES ARE DISCHARGED BELOW THRESHOLD VOLTAGE | CHARGE BATTERIES |
| | SCRUB HEAD LIFT ARM SWITCH MAY BE STUCK OR FAULTY | INSPECT AND REPAIR SWITCH AS REQUIRED |
| SCRUB HEAD OVER-CURRENT PROTECTION IS TRIPPED | INADEQUATE SOLUTION FOR APPLICATION | INCREASE SOLUTION TO SCRUB HEAD |
| | SCRUB HEAD IS SET TO HEAVY DOWN PRESSURE | REDUCE DOWN PRESSURE SETTING |
| | PAD IS TOO AGGRESSIVE FOR APPLICATION | CONTACT YOUR LOCAL DISTRIBUTOR FOR RECOMMENDED APPLICATION |
| | FAULTY OR SHORTED WIRE | REPAIR |
| SCRUB HEAD WILL NOT LOWER/RISE | MECHANICAL INTERFERENCE | REPAIR |
| | SCRUB HEAD ACTUATOR POSITION SENSOR/WIRING LOOSE OR DAMAGED | INSPECT AND REPAIR. CALIBRATION OF SENSOR IS REQUIRED. |
| MACHINE WILL NOT DRIVE | MAIN FUSE MAY BE BLOWN | INSPECT AND REPLACE. IF PROBLEM PERSISTS CONTACT SERVICE TECHNICIAN |
| | BATTERY METER IS FLASHING A FAULT CODE | REFERENCE FAULT CODE AND TROUBLESHOOT AS REQUIRED |
| | BATTERIES DISCHARGED TOO LOW | CHARGE BATTERIES |
| | SEAT SWITCH IS NOT TRIPPED | INSPECT AND REPLACE AS REQUIRED |
| | THROTTLE PEDAL OR PEDAL WIRES ARE DAMAGED | VERIFY OPERATION AND REPLACE IF NECESSARY |
| | BRAKE IS NOT DISENGAGING | INSPECT AND REPLACE AS REQUIRED |
| | FAULTY CONTROLLER | CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE |
| | FAULTY WIRING | CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE |
| | TELEMETRY SYSTEM INHIBIT | ENTER VALID USER CODE |
| RUN TIME IS SHORT | BATTERIES ARE LOW ON WATER (LEAD ACID ONLY) | SERVICE BATTERIES |
| | CHARGER IS NOT SET PROPERLY FOR BATTERY TYPE | SET CHARGER TO BATTERY SPECIFICATIONS |
| | SCRUB HEAD IS IN HEAVY DOWN PRESSURE | REDUCE SCRUB HEAD PRESSURE |
| | BATTERY CHARGER IS NOT ABLE TO FINISH CHARGE CYCLE | CONFIRM A STEADY GREEN LED AFTER THE CHARGE CYCLE |
| | BATTERIES ARE DEFECTIVE OR AT THE END OF THEIR LIFE | CONTACT SERVICE TECHNICIAN TO TROUBLESHOOT AND ISOLATE |
| SQUEEGEE IS NOT LIFTING OR LOWERING | LIFT LINKAGE IS BOUND UP | LUBRICATE OR LOOSEN HORIZONTAL HARDWARE |
| | LIFT ACTUATOR IS DAMAGED | VERIFY OPERATION AND REPLACE IF NECESSARY |
| | WIRING IS DAMAGED | INSPECT AND REPAIR |

FRAME ASSEMBLY

Page 1 of 3

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|----------------------------------|
| 1 | 1 | 895601 | MOUNT WIRE-TIE PRESS IN |
| 2 | 5 | 893801 | GROMMET PUSH-IN FOR 1.5 INCH |
| 3 | 29 | 962269 | SCREW, HEX, .31-18 X .75, SS |
| 4 | 24 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 5 | 1 | 890802 | BRACKET GUIDE HEAD |
| 6 | 1 | 893202 | FRAME WELDMENT RIDER |
| 7 | 1 | 962296 | SCREW BUTTON .31-18 X 3.50 SS |
| 8 | 1 | 549701 | WHEEL 5 INCH .75 BEARING |
| 9 | 1 | 898205 | SPACER WHEEL BUMPER |
| 10 | 1 | 890808 | BRACKET MTG WHEEL GUIDE 28 |
| 11 | 17 | W243D | WASHER, FLAT, 5/16, SS |
| 12 | 8 | 920036 | NUT, NYLOCK, 5/16-18, SS |
| 13 | 2 | 962474 | SCREW .31-18X1.25 SHC ZINC PATCH |
| 14 | 2 | 891305 | BRACE TIP FRAME |
| 15 | 6 | 920666 | NUT, NYLOCK, #10-32, SS |
| 16 | 4 | W401D | WASHER, FLAT, #10 |



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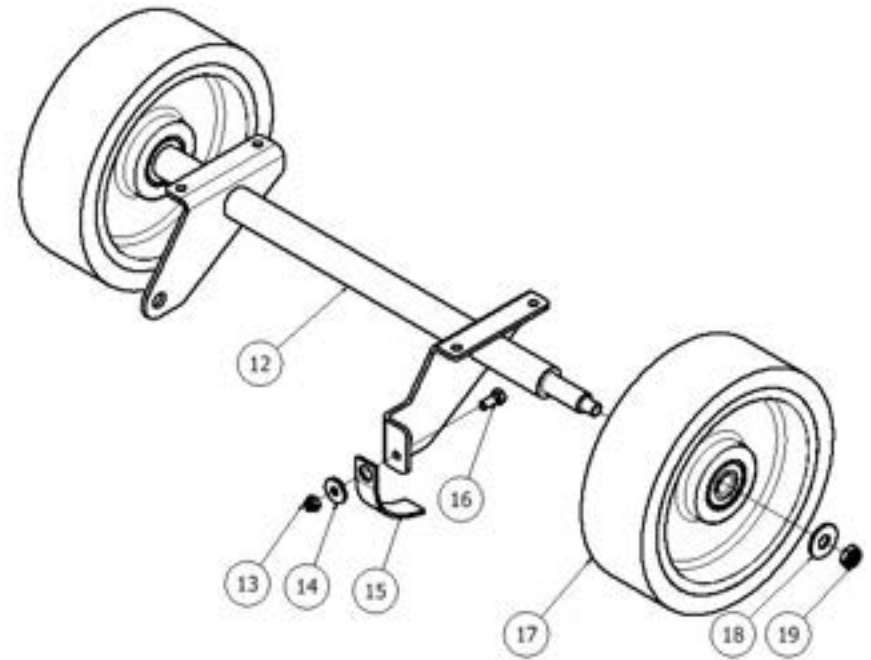
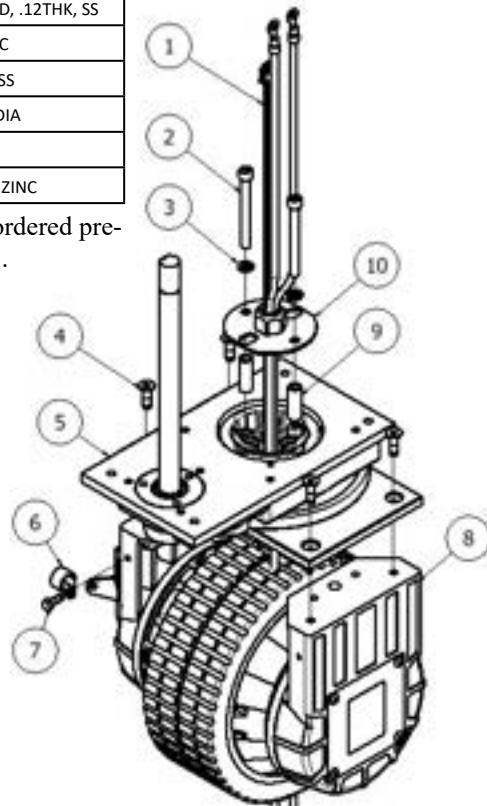
FRAME ASSEMBLY

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| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|---|
| 1* | 1 | 911734 | HARNESS DRIVE FLEXIBLE W FITTING |
| 2* | 2 | 964257 | SCREW SOCKET HEAD CAP M8 X 80 |
| 3* | 2 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 4 | 4 | 964449 | SCREW M8X25 FLAT PATCH |
| 5* | 1 | 896104 | PLATE TOP STEER MANUAL |
| 6 | 1 | 852003 | CLAMP, P-SHAPED, .62 DIA |
| 7 | 1 | 964448 | SCREW, HEX, M6 X 16, SS, PATCH |
| 8 | 1 | 899702 | WHEEL DRIVE 24V 250MM |
| 9* | 2 | 898202 | SPACER PLATE HARNESS |
| 10* | 1 | 890804 | BRACKET MOUNTING CABLE |
| 11* | 2 | 899003 | TUBE HEAT SHRINK 3:1 ADHESIVE .05 X 2.5 |
| 12 | 1 | 890502 | AXLE REAR RIDER SCRUBBER |
| 13 | 1 | 920036 | NUT, NYLOCK, 5/16-18, SS |
| 14 | 1 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 15 | 1 | 878504 | STRAP, GROUNDING, STATIC |
| 16 | 1 | 962269 | SCREW, HEX, .31-18 X .75, SS |
| 17 | 2 | 899701 | WHEEL BEARING 250MM DIA |
| 18 | 2 | W120D | WASHER FLAT .56X1.38 |
| 19 | 2 | W502D | NUT, NYLOCK, .5-13, THIN, ZINC |

*Items 1-3, 5, 9, 10 & 11 (not shown) can be ordered pre-assembled as a kit under part number 895005.

**For Brake Replacement Kit (not shown), order part number 895007.

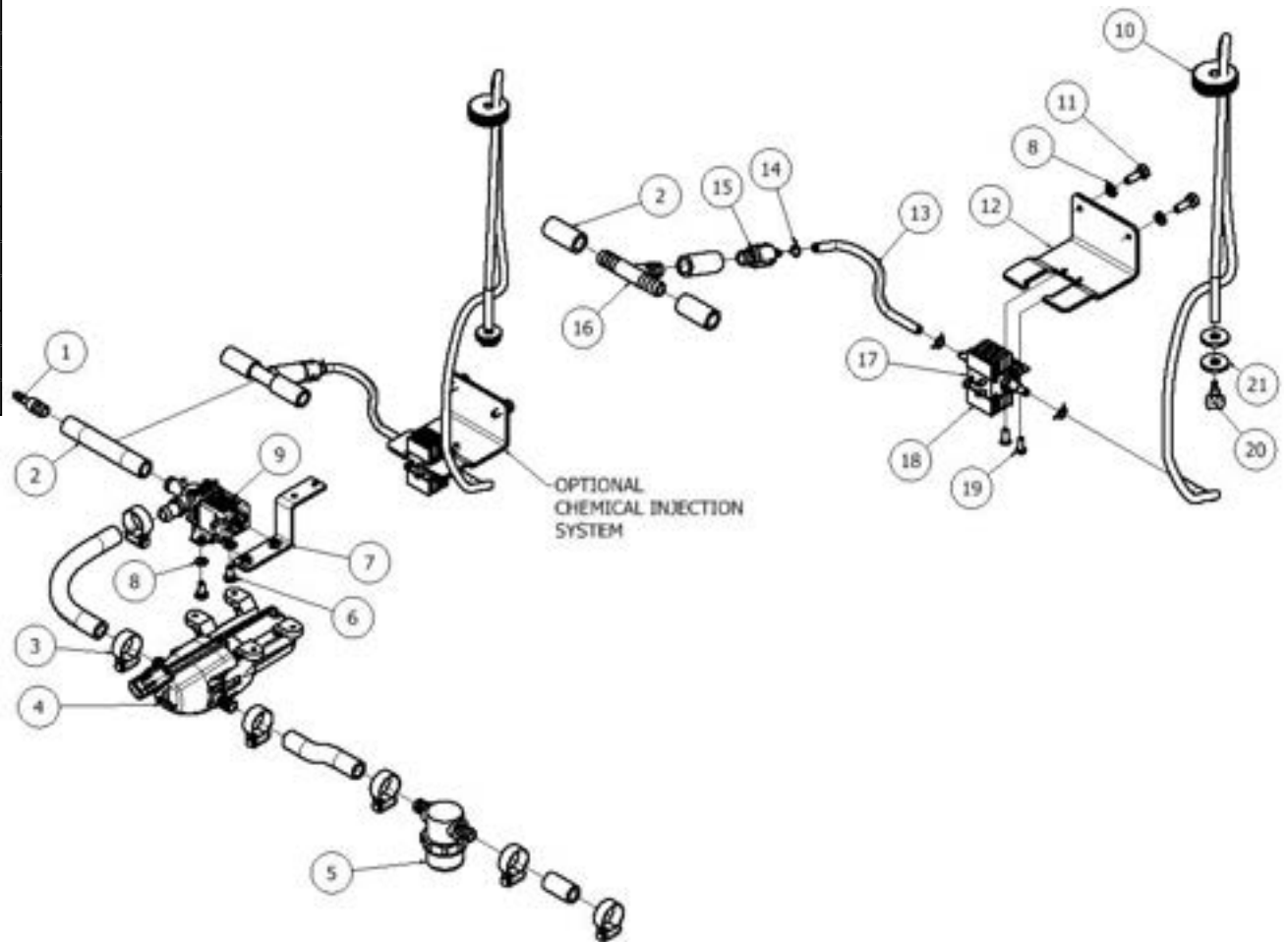


FRAME ASSEMBLY

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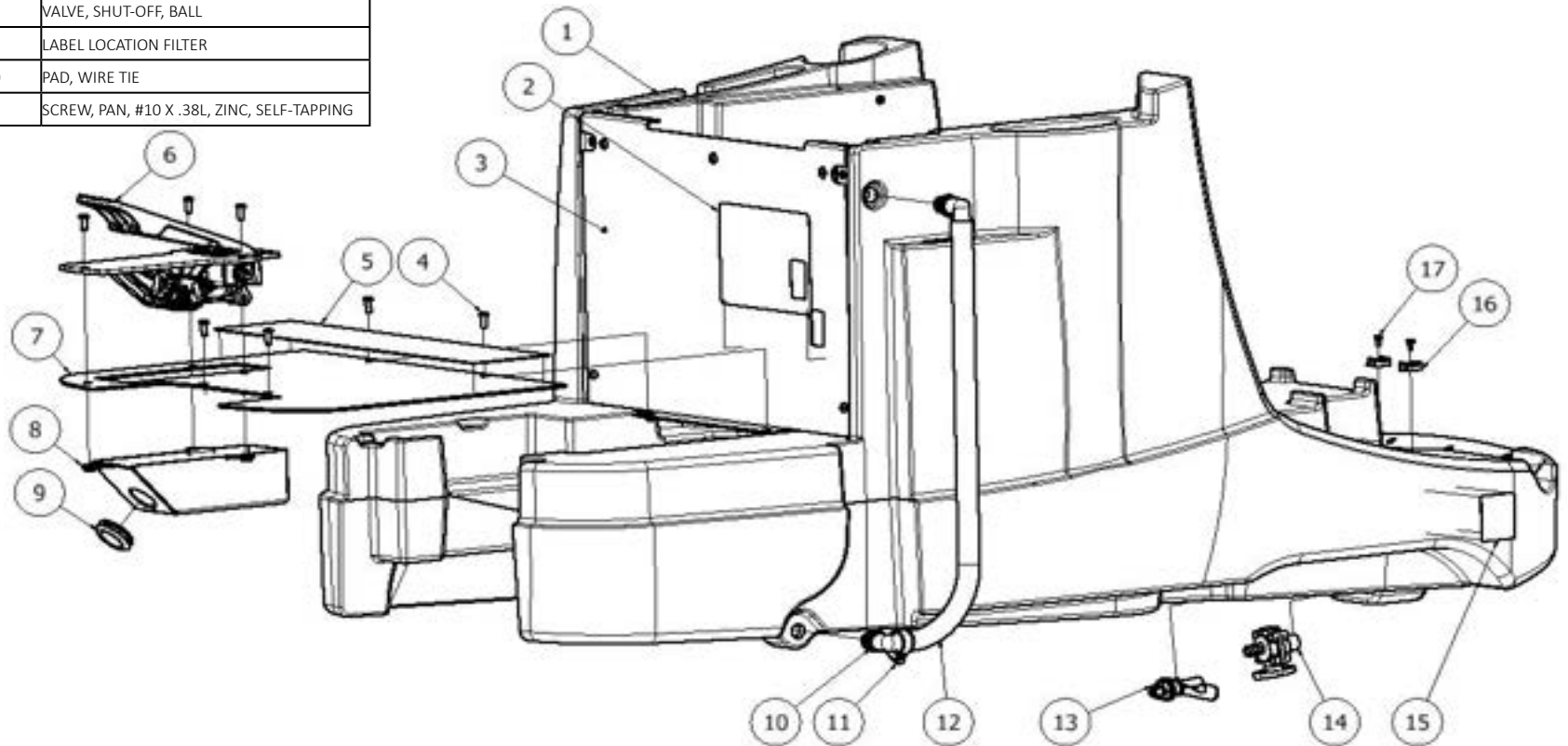
| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 853301 | FITTING, REDUCER, BM08, BM04 |
| 2 | | 224130 | TUBING 1/2" |
| 3 | 6 | S453P | CLAMP, HOSE, WORM |
| 4 | 1 | 897006 | PUMP SOLUTION 24VDC |
| 5 | 1 | 843319 | FILTER, SCREEN, BOWL |
| 6 | 2 | W169D | SCREW, HEX, .25-20 X .50 |
| 7 | 1 | 890820 | BRACKET MOUNTING VALVE |
| 8 | 4 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 9 | 1 | 859402 | VALVE SOLENOID 24V NONADJ |
| 10* | 1 | 871501 | CAP, 38MM, WITH HOLE |
| 11* | 2 | W189D | SCREW, HEX, 1/4-20 X .75, SS, PATCH |
| 12* | 1 | 870811 | BRACKET, MTG, HEAT SINK |
| 13* | | 879003 | TUBING 3/16INCH PVC |
| 14* | 3 | 872002 | CLAMP, HOSE, .31, WIRE |
| 15* | 1 | 879402 | VALVE, CHECK, .188 X .50 BARB |
| 16* | 1 | 873308 | FITTING, TEE, 0.50 INCH |
| 17* | 1 | 877002 | PUMP, 24VDC, SOLENOID, EMX08 |
| 18* | 1 | 870810 | BRACKET, HEAT SINK |
| 19* | 2 | 962363 | SCREW, PAN, #10-32 X .50, SS |
| 20* | 1 | S764P2 | FILTER, STRAINER |
| 21* | 2 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |

*Items 10-21 are only used on machines with Chemical Injection.



SOLUTION TANK

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 898602 | TANK SOLUTION RIDER |
| 2 | 1 | 895109 | LABEL INFORMATION RIDER |
| 3 | 1 | 897002 | PANEL COVER ACTUATOR |
| 4 | 13 | 962263 | SCREW, BUTT, SOCK, .25-20X.62, SS BO |
| 5 | 1 | 895114 | LABEL GRIP FOOT |
| 6 | 1 | 897004 | PEDAL ASSY LOW PROFILE |
| 7 | 1 | 896101 | PLATE FOOT RIDER |
| 8 | 1 | 894205 | HOUSING DEBRIS PEDAL |
| 9 | 1 | 893801 | GROMMET PUSH-IN FOR 1.5INCH |
| 10 | 2 | 893302 | FITTING ELBOW .5 NPT X .75 BARB |
| 11 | 1 | S453P | CLAMP, HOSE, WORM |
| 12 | 1 | 899001 | TUBE SIGHT .75 ID |
| 13 | 1 | 911740 | SWITCH FLOAT |
| 14 | 1 | 879401 | VALVE, SHUT-OFF, BALL |
| 15 | 1 | 895115 | LABEL LOCATION FILTER |
| 16 | 2 | 225670 | PAD, WIRE TIE |
| 17 | 2 | 962271 | SCREW, PAN, #10 X .38L, ZINC, SELF-TAPPING |

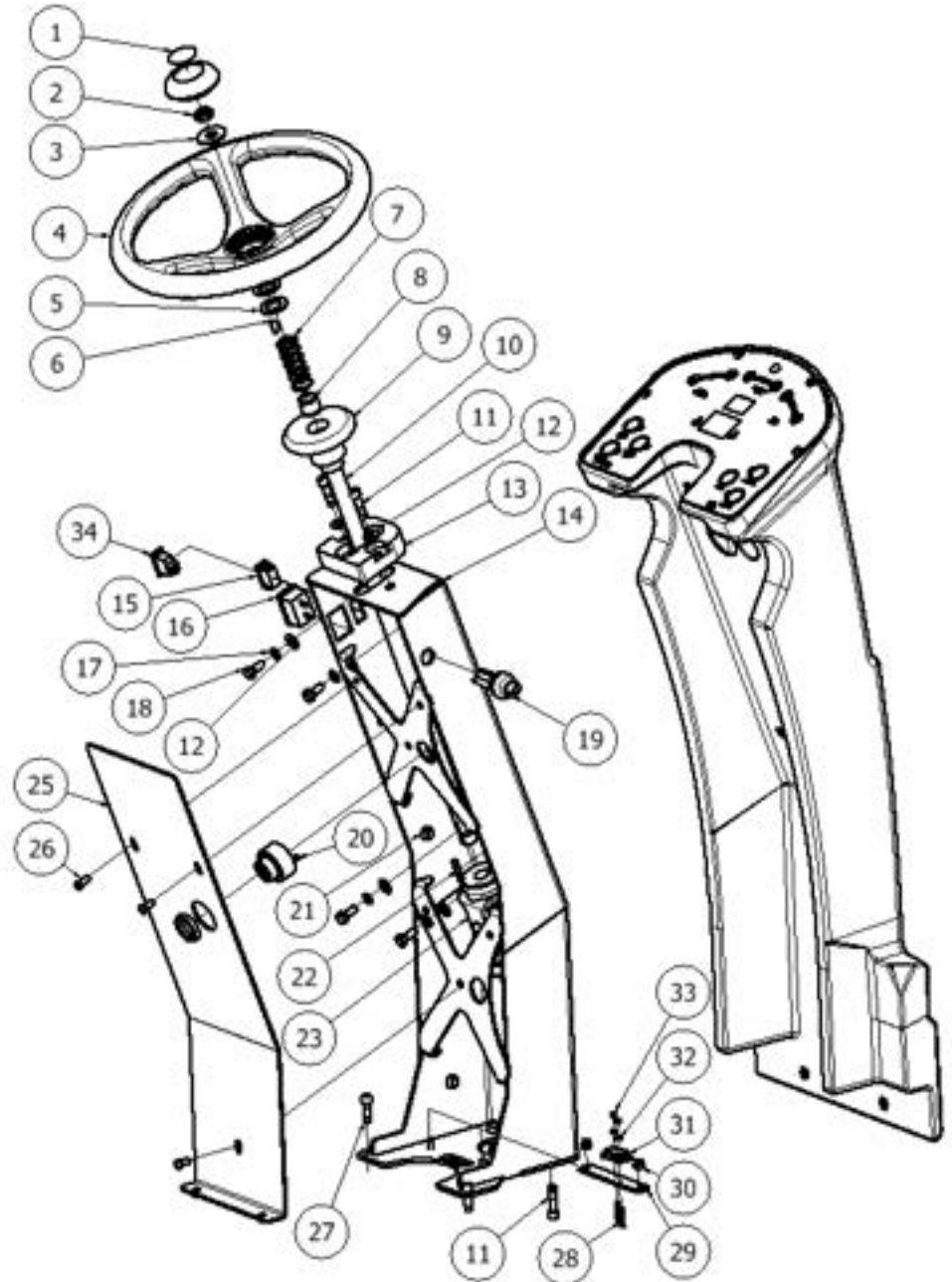


STEERING COLUMN

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| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|---|
| 1 | 1 | 895117 | LABEL STEERING WHEEL PACIFIC |
| 2 | 1 | W502D | NUT, NYLOCK, .5-13, THIN, ZINC |
| 3 | 1 | W120D | WASHER FLAT .56X1.38 |
| 4 | 1 | 899703 | WHEEL STEERING 12INCH RIDER |
| 5 | 2 | 980027 | WASHER FLAT .765 ID 1.312 OD PLASTIC |
| 6 | 1 | 915007 | KEY, WOODRUFF, 5MM |
| 7 | 1 | 898306 | SPRING COMPRESSION 2.5L .98OD |
| 8 | 1 | 891311 | BEARING PLAIN PRETENSION |
| 9 | 1 | 894302 | HUB ADJUSTMENT STEERING |
| 10 | 1 | 897705 | SHAFT STEERING RIDER |
| 11 | 4 | 962474 | SCREW .31-18X1.25 SHC ZINC PATCH |
| 12 | 6 | W243D | WASHER, FLAT, 5/16, SS |
| 13 | 1 | 891308 | BLOCK BEARING STEERING |
| 14 | 1 | 893201 | FRAME COLUMN STEERING |
| 15 | 1 | S519PB | SWITCH BLANKS BLACK TA-10 |
| 16 | 1 | 911661 | METER, HOUR, DIGITAL |
| 17 | 4 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 18 | 4 | 962269 | SCREW, HEX, .31-18 X .75, SS |
| 19 | 1 | 911647 | SWITCH KEY |
| 20 | 1 | 890501 | ALARM AUDIBLE BACKUP |
| 21 | 4 | 895601 | MOUNT WIRE-TIE PRESS IN |
| 22 | 2 | 915002 | KEY 3/16 SQ X 1 1/8 LG |
| 23 | 1 | 894901 | JOINT UNIVERSAL .75IN |
| 24 | 4 | 962298 | SCREW SET .25-20 X .5 BL KNURLED W PATCH (FOR U-JOINT. NOT SHOWN) |
| 25 | 1 | 892301 | COVER COLUMN STEERING |
| 26 | 3 | 962263 | SCREW, BUTT, SOCK, .25-20X.62, SS BO |
| 27 | 2 | 962279 | SCREW, SOCKET CAP, .31X1.0, SS |
| 28 | 2 | 962273 | SCREW, PAN, #4-40 X .88, ZINC |
| 29 | 1 | 890817 | BRACKET MTG SWITCH STEERING |
| 30 | 2 | 920011 | NUT, NYLOCK, 1/4-20, ZINC |
| 31 | 1 | 911646 | SWITCH, SNAP, WITH ROLLER |
| 32 | 2 | 980682 | WASHER, FLAT, #4, ZINC |
| 33 | 2 | W385D | NUT, NYLOCK, #4-40, ZINC |
| 34* | 1 | 911089 | SWITCH, ROCKER, 20A 125 VAC |

*Item 34 is only used on machines with the Lamp option and is used in place of Item 15.



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STEERING COLUMN

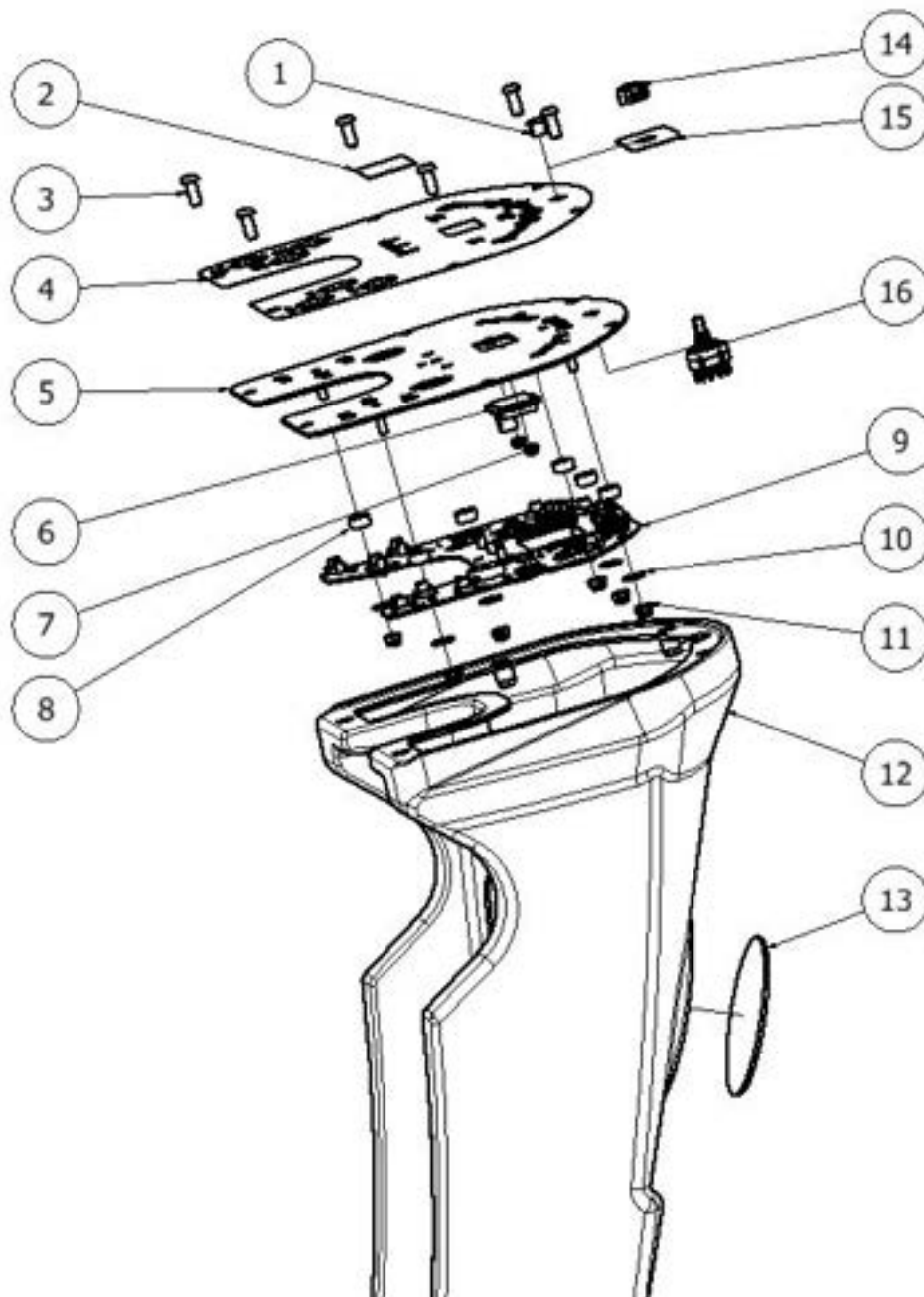
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| ITEM | QTY | PART NUMBER | DESCRIPTION |
|-------|-----|-------------|--------------------------------------|
| 1 | 1 | 896806 | PLUG HOLE PLASTIC .375 INCH |
| 2* | 1 | 895110 | LABEL COVER BATTERYSHIELD |
| 3 | 6 | 962263 | SCREW, BUTT, SOCK, .25-20X.62, SS BO |
| 4 | 1 | 895101 | LABEL CONTROL RIDER |
| 5 | 1 | 897001 | PANEL CONTROL OPERATOR |
| 6 | 1 | 911621 | METER, BATTERY |
| 7 | 2 | 920034 | NUT, NYLOCK, #6-32, SS |
| 8 | 6 | 878208 | SPACER PLASTIC #10 X .25 THICK |
| 9 | 1 | 892403 | CONTROLLER OPERATOR RIDER |
| 10 | 6 | W401D | WASHER, FLAT, #10 |
| 11 | 6 | 920666 | NUT, NYLOCK, #10-32, SS |
| 12*** | 1 | 898502 | SHROUD COLUMN STEERING RIDER |
| 12*** | 1 | 898509 | SHROUD STEERING RIDER CLEAN-N-PAY |
| 13 | 1 | 895113 | LABEL PACIFIC 4INCH ROUND |
| 14** | 1 | 875001 | KNOB, .25 BORE, SMALL |
| 15** | 1 | 895111 | LABEL CONTROL SOLUTION |
| 16** | 1 | 911748 | SWITCH ROTARY 12-POS WITH HARNESS |

* Items 2 is only used on machines not equipped with BatteryShield®.

**Items 14, 15, & 16 are only used on machines with Chemical Injection and are used in place of Item 1.

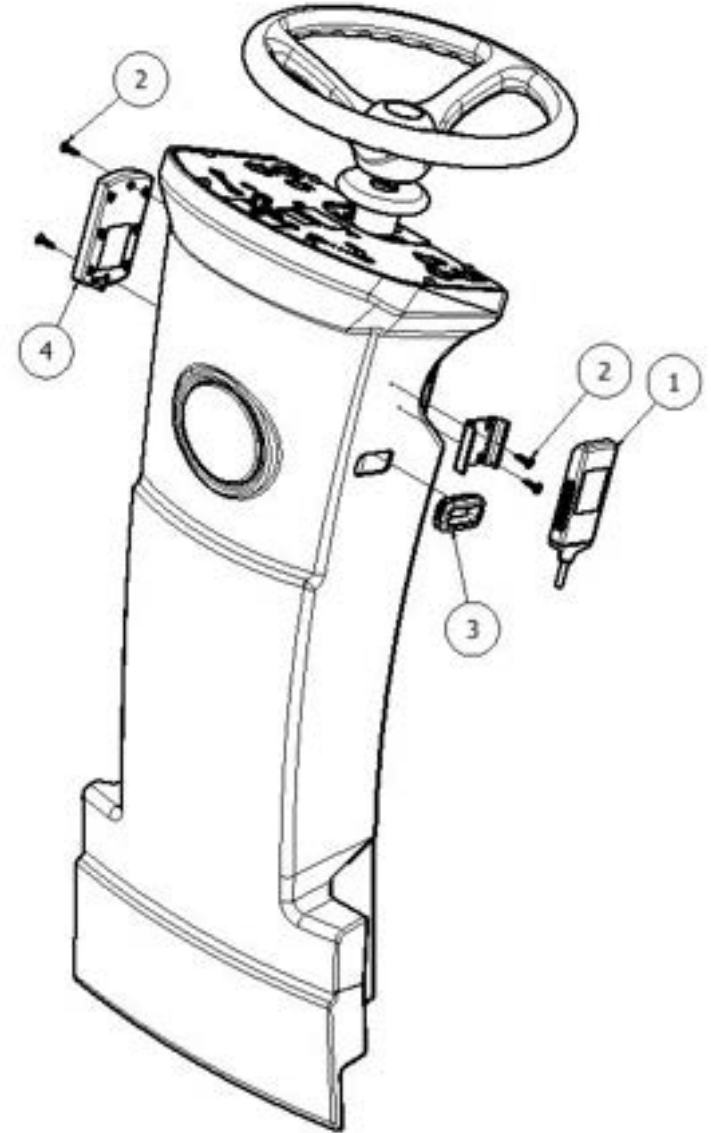
***Item 12 is dependent on machine model. 898509 used only on models equipped with the optional ScrubSmart telemetry system.



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OPTIONAL SCRUBSMART TELEMETRY

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--------------------------------|
| 1 | 1 | 899203 | TRANSMITTER TELEMETRY TRACKING |
| 2 | 4 | 962480 | SCREW RHSM #8 0.75 SS |
| 3 | 1 | 893801 | GROMMET PUSH-IN FOR 1.5INCH |
| 4 | 1 | 895002 | KEYPAD TELEMETRY TRACKING |

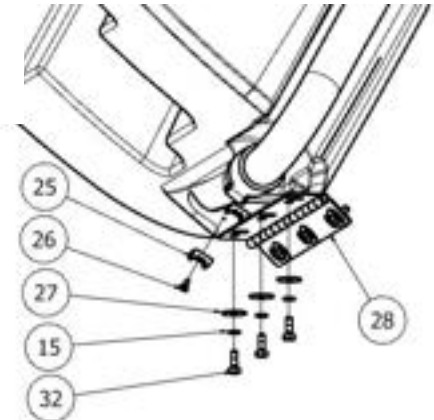
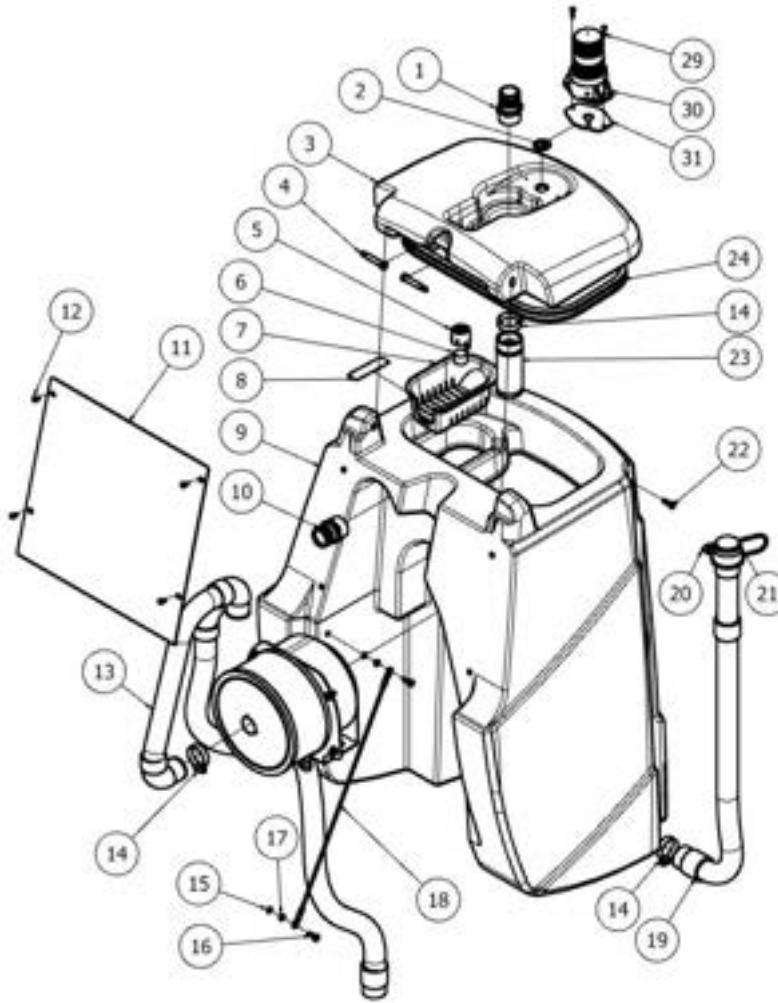


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RECOVERY SYSTEM

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| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 853304 | FITTING, STR, BM24, PM20 |
| 2 | 1 | 856803 | PLUG HOLE 1 INCH BLACK |
| 3 | 1 | 892303 | COVER RECOVERY RIDER |
| 4 | 2 | 962462 | SCREW SHLDR .38 DIA X 1.75 .31-18 SS PATCH |
| 5 | 1 | 879202 | TRAY, PUCK |
| 6 | 1 | 877006 | PUCK, BROMINE, 1 INCH |
| 7 | 1 | 879201 | TRAY, DEBRIS |
| 8 | 1 | 875110 | LABEL, INSTRUCT, BROMINE |
| 9 | 1 | 898601 | TANK RECOVERY RIDER |
| 10 | 1 | 853308 | FITTING, MODIFIED |
| 11 | 1 | 892302 | COVER HOSE RECOVERY |
| 12 | 4 | 962250 | SCREW BHCS .25-20 X .50 SS BL |
| 13 | 1 | 894102 | HOSE VACUUM RECOVERY |
| 14 | 3 | S611A | CLAMP HOSE 1.0- 2.0 SS |
| 15 | 8 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 16 | 8 | W189D | SCREW HH .25-20 X .75 SS |
| 17 | 2 | 920037 | NUT HEX .25-20 SS THIN |
| 18 | 1 | 872412 | CABLE RETENTION MID LONG |
| 19 | 1 | 854104 | HOSE DRAIN CAPPED CHEM RESIST |
| 19 | 1 | 854101 | HOSE DRAIN WITH CAP |
| 20 | 1 | 858506 | STRAP SUPPORT HOSE- REPL STRAP |
| 21 | 1 | 851501 | CAP HOSE DRAIN-REPL CAP |
| 22 | 1 | 962455 | SCREW THPS .25-20 X 1.0 ZINC BL |
| 23 | 1 | 223370 | FLOAT, SHUTOFF |
| 24 | 1 | 853401 | GASKET, COVER, PRESS-IN |
| 25 | 2 | 225670 | PAD, WIRE TIE |
| 26 | 2 | 962271 | SCREW PHPS 10 X .38 ZINC TAPPING |
| 27 | 6 | W311D | WASHER FENDER .25 X 1.0 ZINC.ipt |
| 28 | 1 | 894501 | HINGE TANK RECOVERY RIDER |
| 29 | 2 | 962030 | SCREW PHPS 10 X .75 ZINC DRILLING |
| 30 | 1 | 895102 | LAMP STROBE AMBER |
| 31 | 1 | 893403 | GASKET LAMP AMBER |
| 32 | 6 | 962204 | SCREW HH .25-20 X .75 SS W PATCH |



*Chemical resistant hose is an optional accessory.
 **Items 29, 30, & 31 are only used on machines equipped with the optional lamp and are used in place of Item 2.

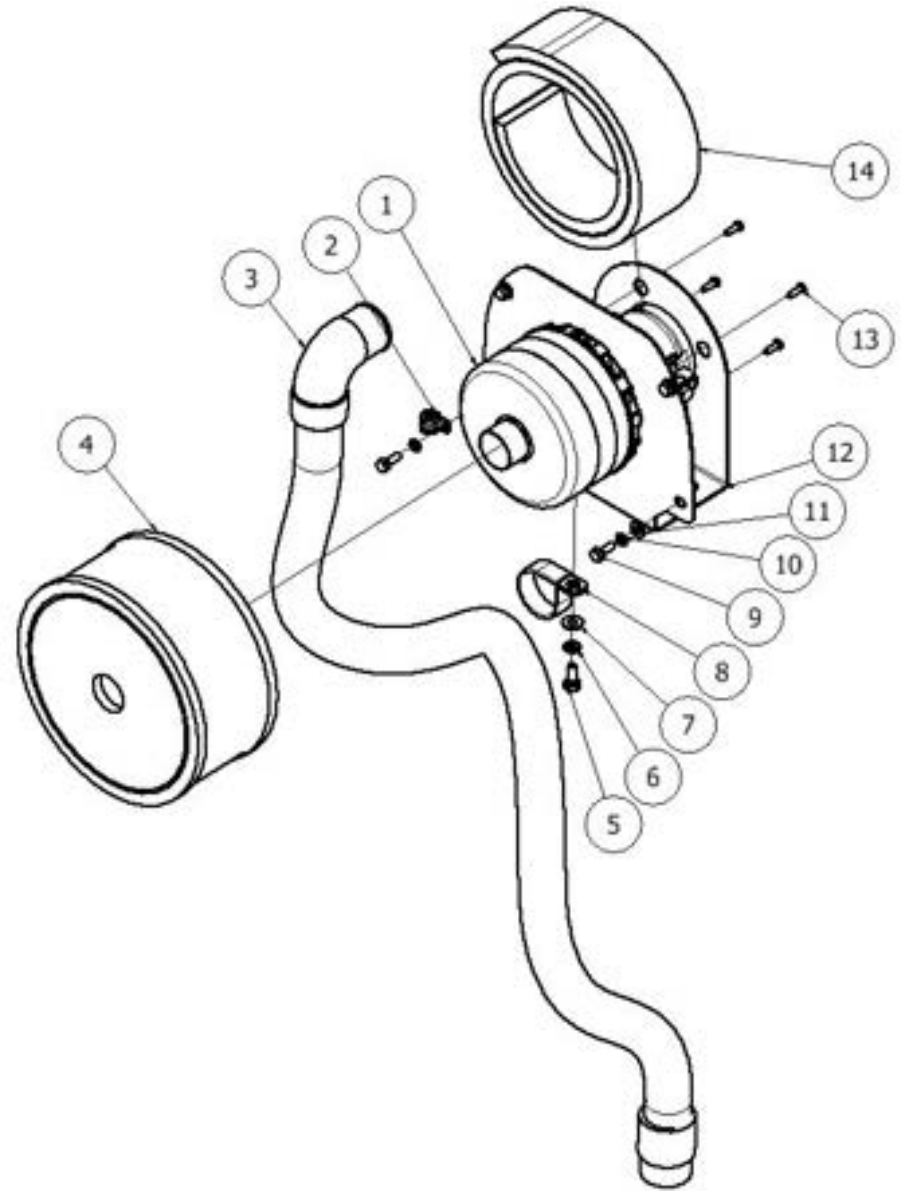
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RECOVERY SYSTEM

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| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|-------------------------------------|
| 1* | 1 | 875202 | MOTOR, VAC, 24VDC, PERIP |
| 2 | 1 | 852101 | CLAMP, WIRE, P-SHAPED |
| 3 | 1 | 894101 | HOSE SQUEEGEE RIDER STRAIGHT CUFF |
| 4 | 1 | 873304 | FILTER, HEPA, MID |
| 5 | 1 | 962269 | SCREW, HEX, .31-18 X .75, SS |
| 6 | 1 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 7 | 1 | W243D | WASHER, FLAT, 5/16, SS |
| 8 | 1 | 892001 | CLAMP LOOP RUBBER 1.75 INCH |
| 9 | 4 | W189D | SCREW, HEX, 1/4-20 X .75, SS, PATCH |
| 10 | 4 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 11 | 3 | W104D | WASHER, FLAT, .25 |
| 12 | 1 | 890807 | BRACKET MTG MOTOR VACUUM |
| 13 | 4 | 964224 | SCREW, PAN, #10 X .5, SELF TAPPING |
| 14* | 1 | 853305 | FOAM, NOISE, VACUUM |

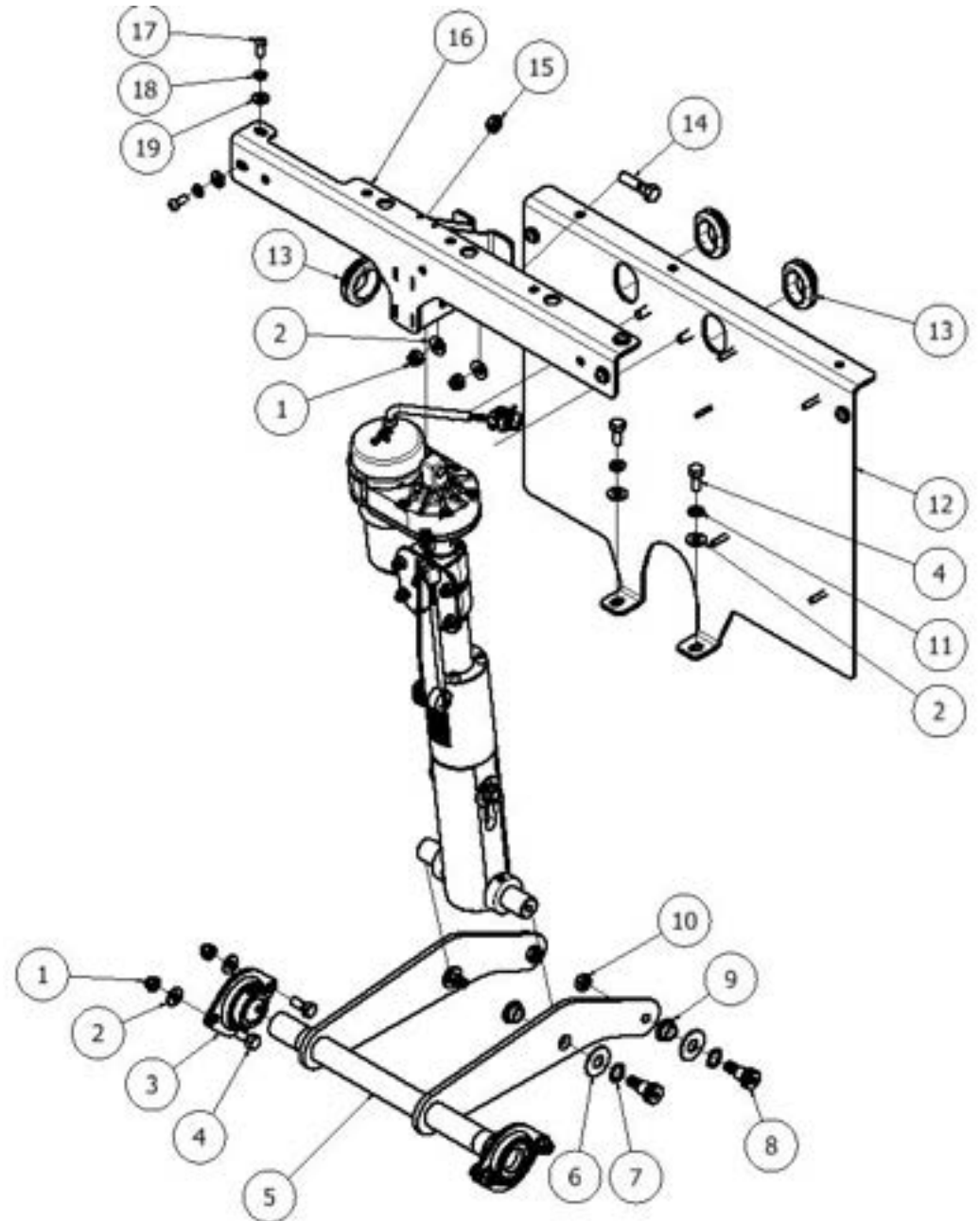
*Items 1 & 14 can be ordered as a kit under part number 895004.



HEAD LIFT

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| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--------------------------------------|
| 1 | 6 | 920036 | NUT, NYLOCK, 5/16-18, SS |
| 2 | 8 | W243D | WASHER, FLAT, 5/16, SS |
| 3 | 2 | 902057 | BEARING 2-BOLT FLANGE 1INCH |
| 4 | 6 | 962269 | SCREW, HEX, .31-18 X .75, SS |
| 5 | 1 | 897703 | SHAFT LIFT HEAD RIDER |
| 6 | 4 | 980612 | WASHER, NYL, .50 X 1.25 X .062 |
| 7 | 4 | 980093 | WASHER, WAVE, .50INCH |
| 8 | 4 | 962465 | SCREW, SHOULDER, .50 X .50 |
| 9 | 4 | 871101 | BUSHING, FLANGE, .50IN |
| 10 | 2 | 920035 | NUT, NYLOCK, .38-16, SS |
| 11 | 2 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 12 | 1 | 890811 | BRACKET SUPPORT ACTUATOR HEAD |
| 13 | 4 | 893801 | GROMMET PUSH-IN FOR 1.5INCH |
| 14 | 1 | 962075 | SCREW, HEX, 3/8-16 X 1.5, SS |
| 15 | 1 | 920032 | NUT .38-16 NYLOCK THIN ZINC |
| 16 | 1 | 891309 | BRACE SUPPORT ACTUATOR |
| 17 | 6 | 962263 | SCREW, BUTT, SOCK, .25-20X.62, SS BO |
| 18 | 6 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 19 | 8 | W104D | WASHER, FLAT, .25 |

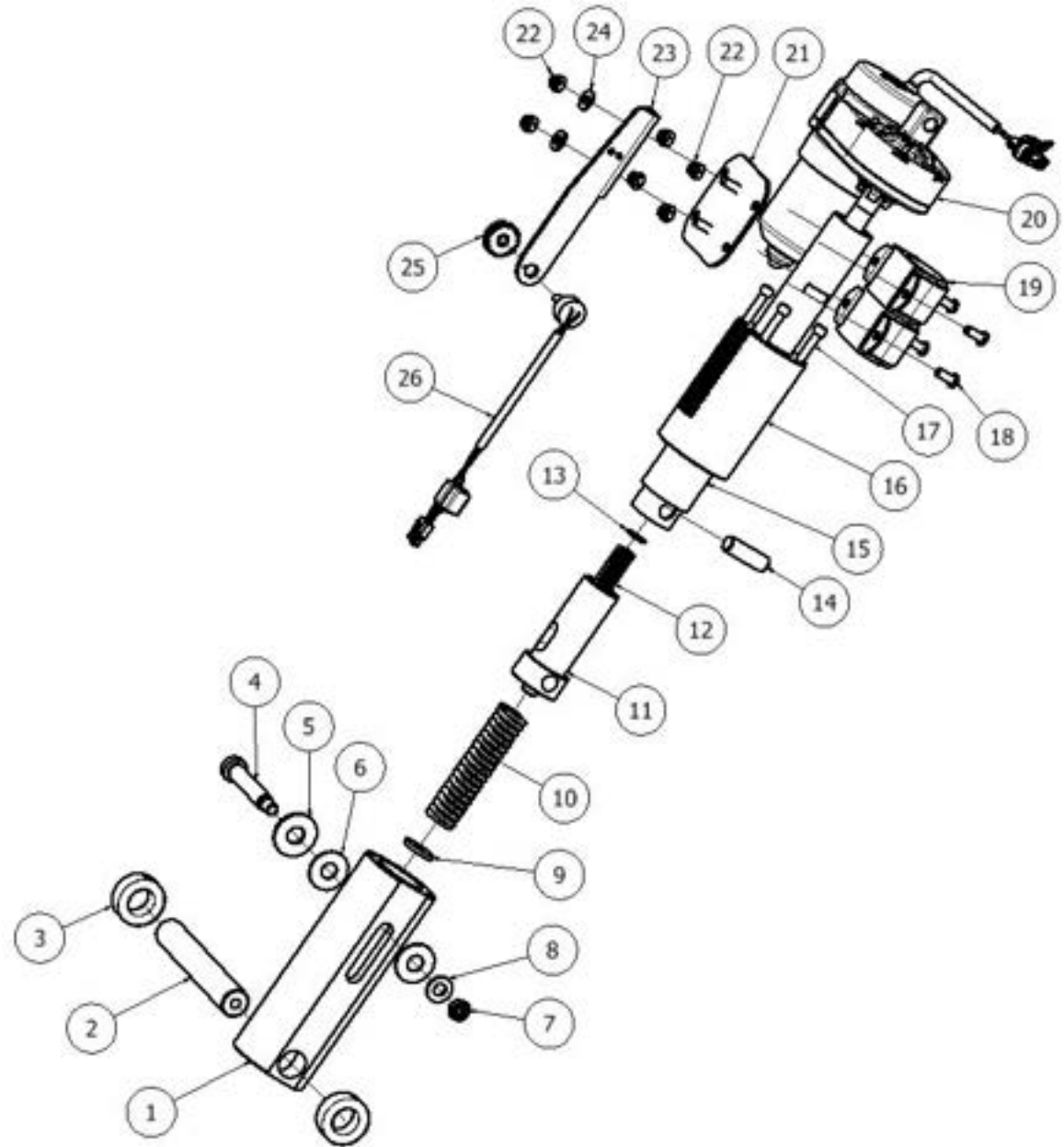


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HEAD LIFT

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PRIOR TO SERIAL NUMBER 129537

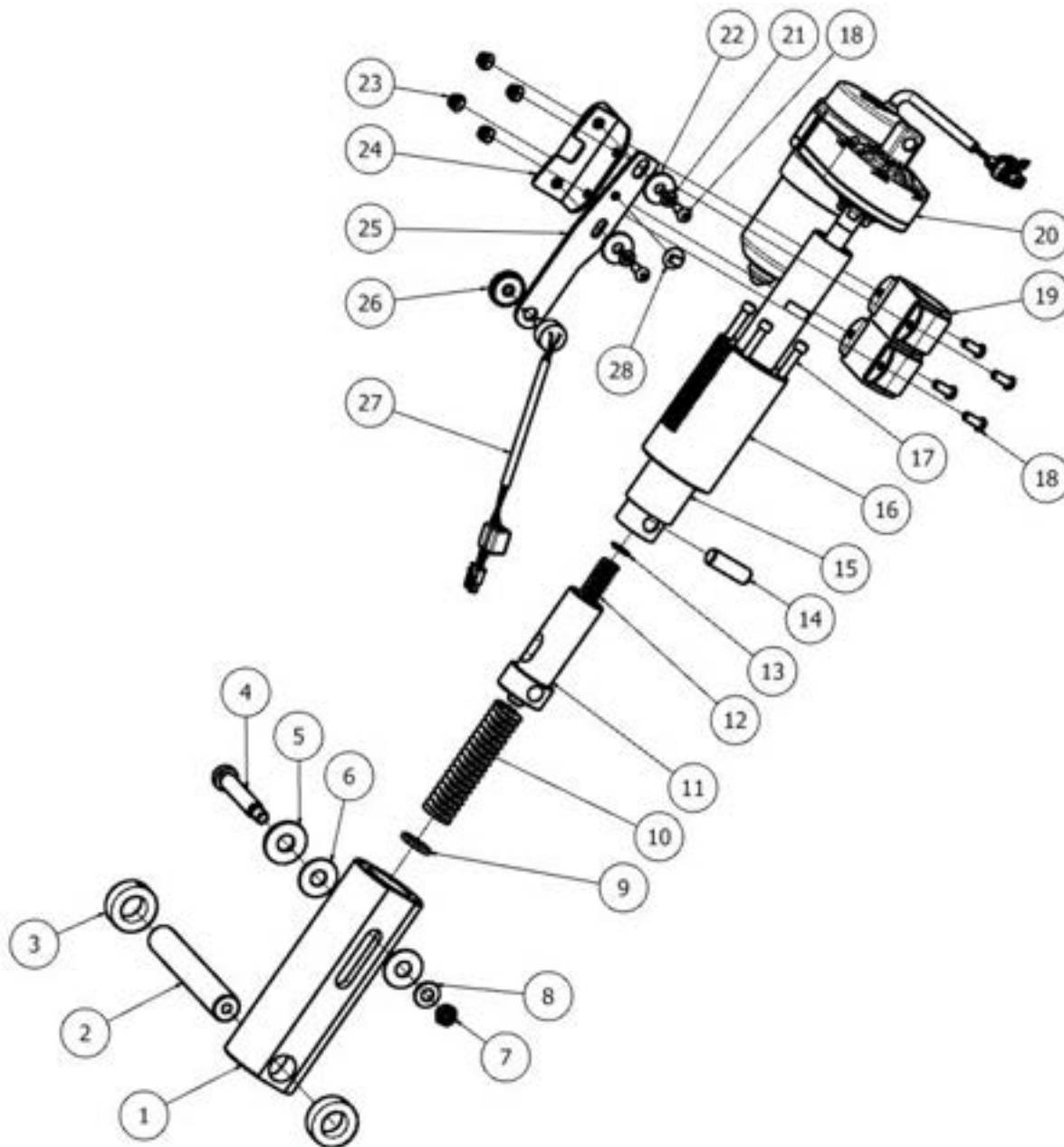
| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 892402 | CYLINDER HOUSING SPRING |
| 2 | 1 | 897702 | SHAFT LIFT HEAD |
| 3 | 2 | 892404 | COLLAR SHAFT .875 DIA |
| 4 | 1 | 962294 | SCREW SHOULDER .50 D X 2.5 L |
| 5 | 1 | W120D | WASHER FLAT .56X1.38 |
| 6 | 2 | 980612 | WASHER, NYL, .50 X 1.25 X .062 |
| 7 | 1 | 920035 | NUT, NYLOCK, .38-16, SS |
| 8 | 1 | 980003 | WASHER, FLAT, .38 |
| 9 | 1 | 980106 | WASHER, FLAT, .25ID, 1.0OD, .12THK, SS |
| 10 | 1 | 898305 | SPRING COMPRESSION DIE |
| 11 | 1 | 890201 | ADAPTER ACTUATOR SHAFT |
| 12 | 1 | 898307 | SPRING COMPRESSION .62 D X 2.0 L |
| 13 | 1 | 897301 | RING RETAINING INTERNAL .62 DIA |
| 14 | 1 | 896703 | PIN DOWEL .50 DIA X 1.75 LONG |
| 15 | 2 | 891103 | BUSHING PLAIN PLASTIC 35MM |
| 16 | 1 | 891501 | CAP SPRING ACTUATOR |
| 17 | 4 | 962295 | SCREW SOCKET .25-20 X 5.0L |
| 18 | 4 | 962263 | SCREW, BUTT, SOCK, .25-20X.62, SS BO |
| 19 | 2 | 542002 | CLAMP U-SHAPED WITH RUBBER |
| 20 | 1 | 890503 | ACTUATOR 600LB 24VDC |
| 21 | 1 | 890821 | BRACKET MOUNTING CLAMP |
| 22 | 6 | 920011 | NUT, NYLOCK, 1/4-20, ZINC |
| 23 | 1 | 890818 | BRACKET MTG POTENTIOMETER |
| 24 | 2 | W104D | WASHER, FLAT, .25 |
| 25 | 1 | 893501 | GEAR .25 BORE 24 T 24 P |
| 26 | 1 | 898505 | SENSOR ROTARY HALL EFFECT |



HEAD LIFT

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AFTER SERIAL NUMBER 129537

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 892402 | CYLINDER HOUSING SPRING |
| 2 | 1 | 897702 | SHAFT LIFT HEAD |
| 3 | 2 | 892404 | COLLAR SHAFT .875 DIA |
| 4 | 1 | 962294 | SCREW SHOULDER .50 D X 2.5 L |
| 5 | 1 | W120D | WASHER FLAT .56X1.38 |
| 6 | 2 | 980612 | WASHER, NYL, .50 X 1.25 X .062 |
| 7 | 1 | 920035 | NUT, NYLOCK, .38-16, SS |
| 8 | 1 | 980003 | WASHER, FLAT, .38 |
| 9 | 1 | 980106 | WASHER, FLAT, .25ID, 1.0OD, .12THK, SS |
| 10 | 1 | 898305 | SPRING COMPRESSION DIE |
| 11 | 1 | 890201 | ADAPTER ACTUATOR SHAFT |
| 12 | 1 | 898307 | SPRING COMPRESSION .62 D X 2.0 L |
| 13 | 1 | 897301 | RING RETAINING INTERNAL .62 DIA |
| 14 | 1 | 896703 | PIN DOWEL .50 DIA X 1.75 LONG |
| 15 | 2 | 891103 | BUSHING PLAIN PLASTIC 35MM |
| 16 | 1 | 891501 | CAP SPRING ACTUATOR |
| 17 | 4 | 962295 | SCREW SOCKET .25-20 X 5.0L |
| 18 | 4 | 962263 | SCREW BHCS .25-20 X .63 SS BL |
| 19 | 2 | 542002 | CLAMP U-SHAPED WITH RUBBER |
| 20 | 1 | 890503 | ACTUATOR 600LB 24VDC |
| 21 | 8 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 22 | 2 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 23 | 4 | 920011 | NUT, NYLOCK, 1/4-20, ZINC |
| 24 | 1 | 890824 | BRACKET MOUNTING CLAMP |
| 25 | 1 | 890825 | BRACKET MOUNTING SENSOR |
| 26 | 1 | 893501 | GEAR .25 BORE 24 T 24 P |
| 27 | 1 | 898505 | SENSOR ROTARY HALL EFFECT |
| 28 | 1 | 895601 | MOUNT WIRE-TIE PRESS IN |



*Items 1–25 can be purchased as a pre-assembled kit under part number 895011.

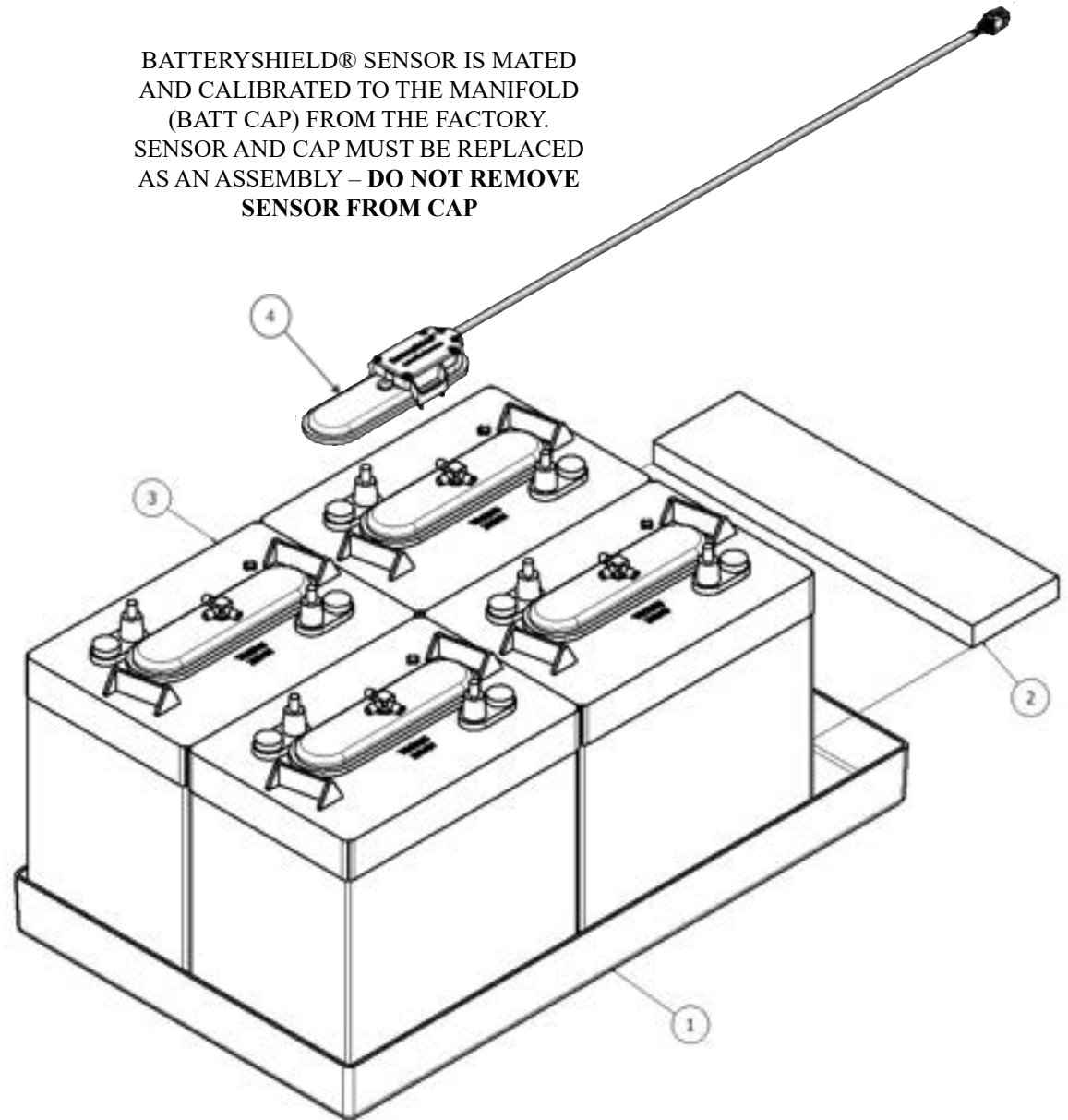
BATTERY

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 899201 | TRAY BATTERY SCRUBBER MEDIUM |
| 2 | 1 | 898208 | FOAM SPACER BATTERY RIDER |
| 3* | 4 | 891310 | BATTERY LA 6V 360AH |
| 3* | 4 | 871302 | BATTERY, 6V, 250AH, AGM |
| 3* | 4 | 871301 | BATTERY, 6V, 260AH, LA |
| 3* | 0 | NONE | N/A |
| 4 | 1 | 878520 | SENSOR ASSY BATTERYSHIELD FIELD REPLACE |
| 5 | 1 | 857003 | PUMP ASSY, HND, HYDROLINK |
| 6** | 1 | 855605 | MANIFOLD INDIV HYDROLINK (BATT CAP) |
| 7** | 1 | 879002 | COMPLETE SET MANIFOLD (BATT CAP), SERVICE TUBE, & PUMP |

*Item 3 is dependent upon machine model.

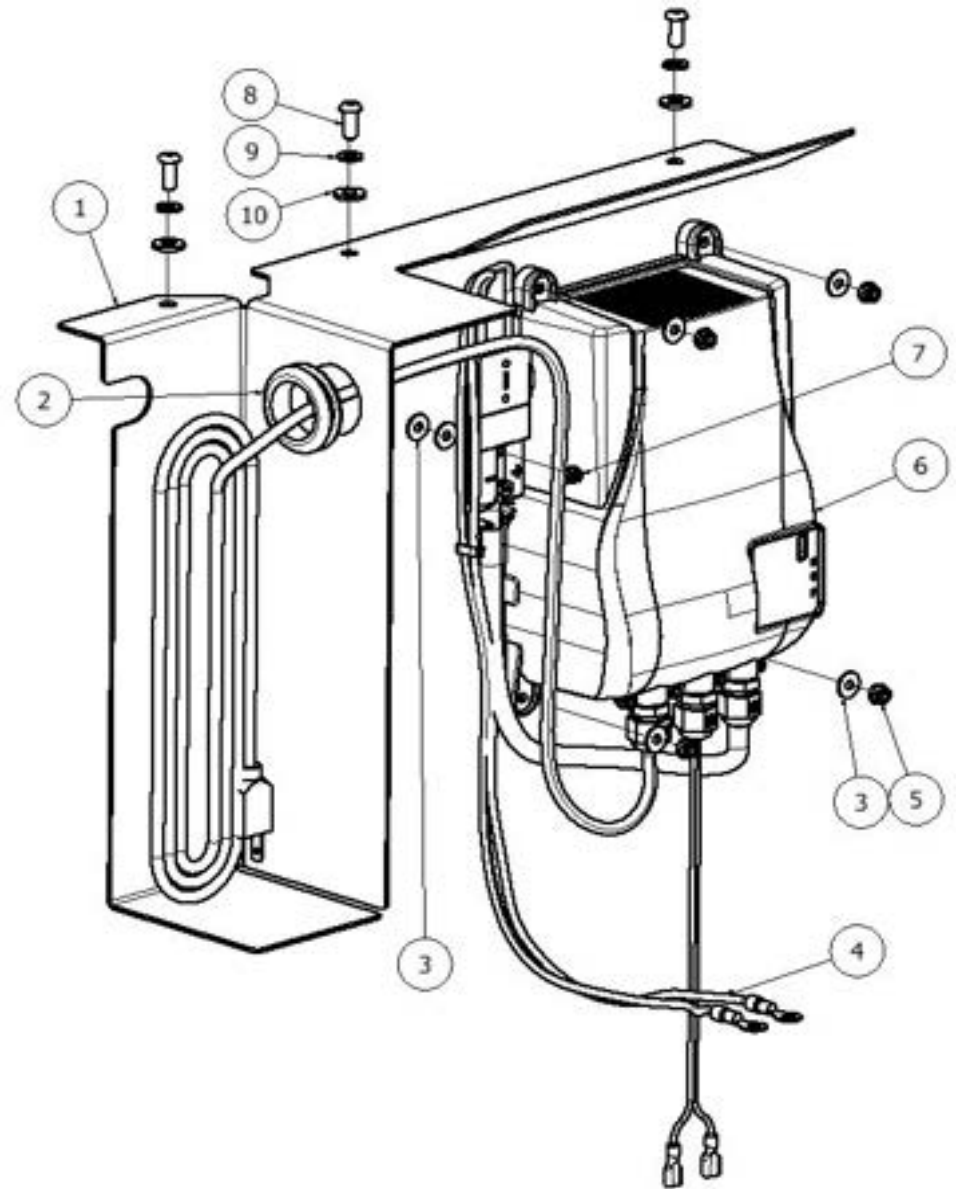
**Items 6 & 7 are not shown.

BATTERYSHIELD® SENSOR IS MATED AND CALIBRATED TO THE MANIFOLD (BATT CAP) FROM THE FACTORY. SENSOR AND CAP MUST BE REPLACED AS AN ASSEMBLY – **DO NOT REMOVE SENSOR FROM CAP**



BATTERY CHARGER

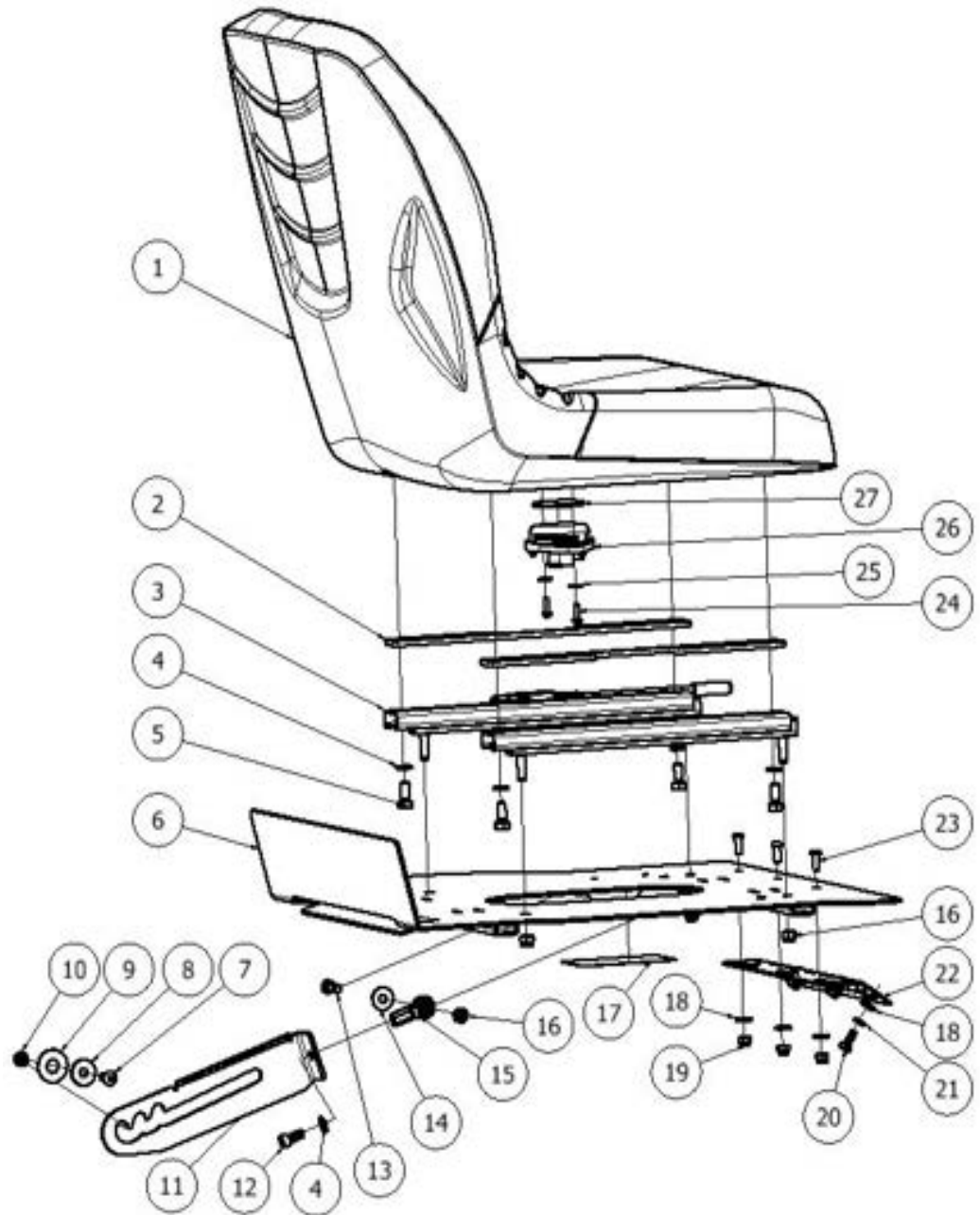
| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--------------------------------------|
| 1 | 1 | 890812 | BRACKET SUPPORT CORD |
| 2 | 1 | 893801 | GROMMET PUSH-IN FOR 1.5INCH |
| 3 | 6 | W401D | WASHER, FLAT, #10 |
| 4 | 1 | 911645 | HARNESS, CHARGER, POST |
| 5 | 4 | 920666 | NUT, NYLOCK, #10-32, SS |
| 6 | 1 | 852407 | CHARGER, 24V, ONBRD, CULUS |
| 7 | 1 | 920034 | NUT, NYLOCK, #6-32, SS |
| 8 | 3 | 962263 | SCREW, BUTT, SOCK, .25-20X.62, SS BO |
| 9 | 3 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 10 | 3 | W104D | WASHER, FLAT, .25 |



SEAT ASSEMBLY PRIOR TO SERIAL NUMBER 122392

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|---|
| 1 | 1 | 898501 | SEAT SCRUBBER RIDER |
| 2 | 2 | 898210 | SPACER SEAT |
| 3 | 1 | 897501 | RAIL ASSEMBLY SEAT ADJUSTABLE |
| 4 | 5 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 5 | 4 | 962269 | SCREW, HEX, .31-18 X .75, SS |
| 6 | 1 | 890815 | BRACKET SUPPORT SEAT |
| 7 | 1 | 962265 | SCREW, BUTTON, SOCKET, .31-18 X .75, SS |
| 8 | 1 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 9 | 1 | 980612 | WASHER, NYL, .50 X 1.25 X .062 |
| 10 | 1 | 853802 | GUIDE, SPACER, ROUND |
| 11 | 1 | 898503 | STAND COVER SEAT |
| 12 | 1 | 962027 | SCREW SHCS .31-24 X .625 ZINC |
| 13 | 1 | 962279 | SCREW, SOCKET CAP, .31X1.0, SS |
| 14 | 1 | 980007 | WASHER FLAT .31 ZINC |
| 15 | 1 | 902050 | BEARING, ROD END, .31-24 |
| 16 | 5 | 920036 | NUT, NYLOCK, 5/16-18, SS |
| 17 | 1 | 875103 | LABEL, INSTRUCTION, BATTERY |
| 18 | 6 | W104D | WASHER, FLAT, .25 |
| 19 | 3 | 920011 | NUT, NYLOCK, 1/4-20, ZINC |
| 20 | 3 | 962068 | SCREW .25-20X.63 HEX ZINC |
| 21 | 3 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 22 | 1 | 894501 | HINGE TANK RECOVERY RIDER |
| 23 | 3 | 962263 | SCREW, BUTT, SOCK, .25-20X.62, SS BO |
| 24 | 2 | 964224 | SCREW, PAN, #10 X .5, SELF TAPPING |
| 25 | 2 | W401D | WASHER, FLAT, #10 |
| 26* | 1 | 911744 | SWITCH SEAT NO |
| 27* | 1 | 898212 | SPACER SEAT SWITCH |

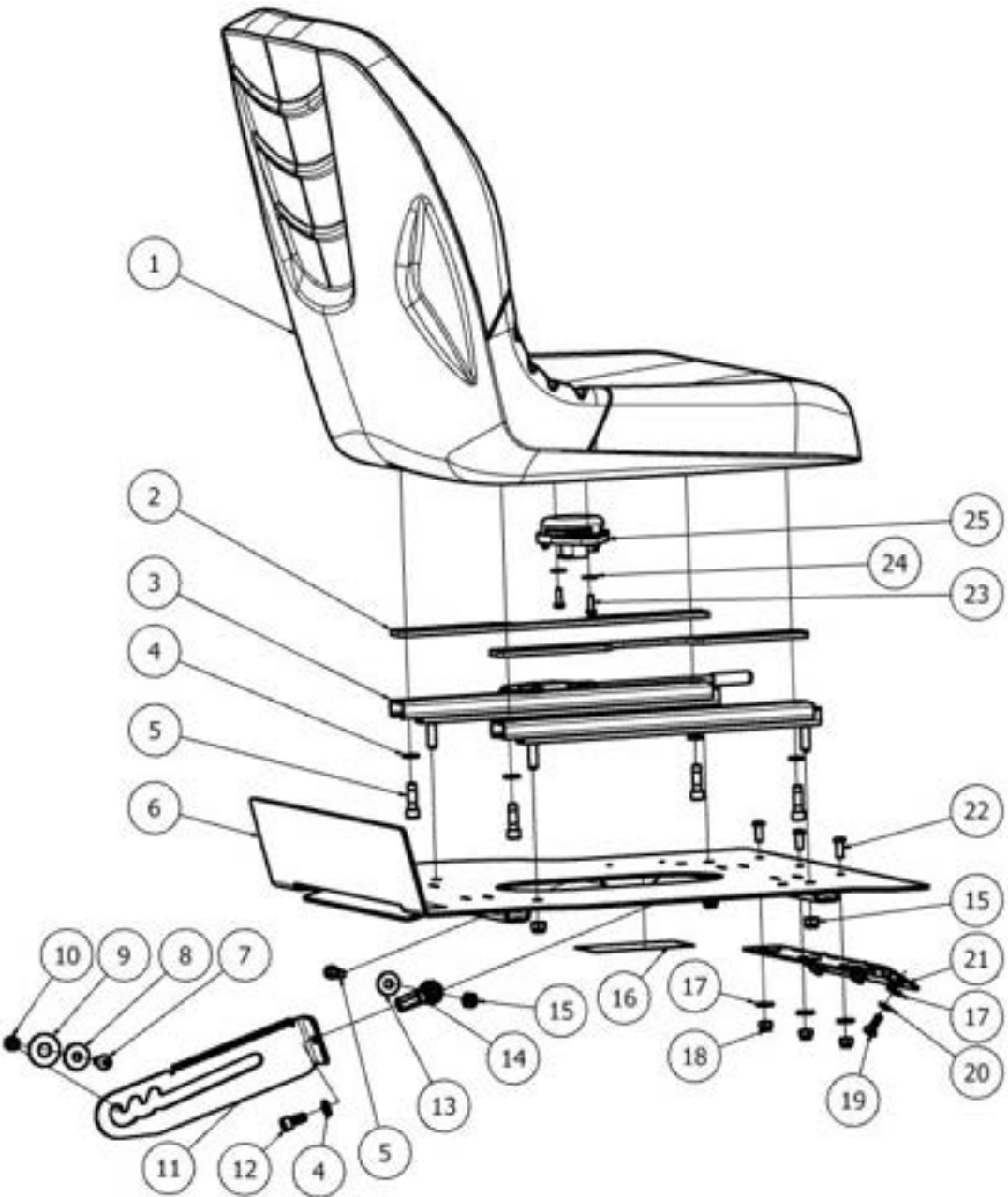
*Items 26 & 27 can be ordered as a kit under part number 895006.



SEAT ASSEMBLY

BETWEEN SERIAL NUMBERS 122392 & 133036

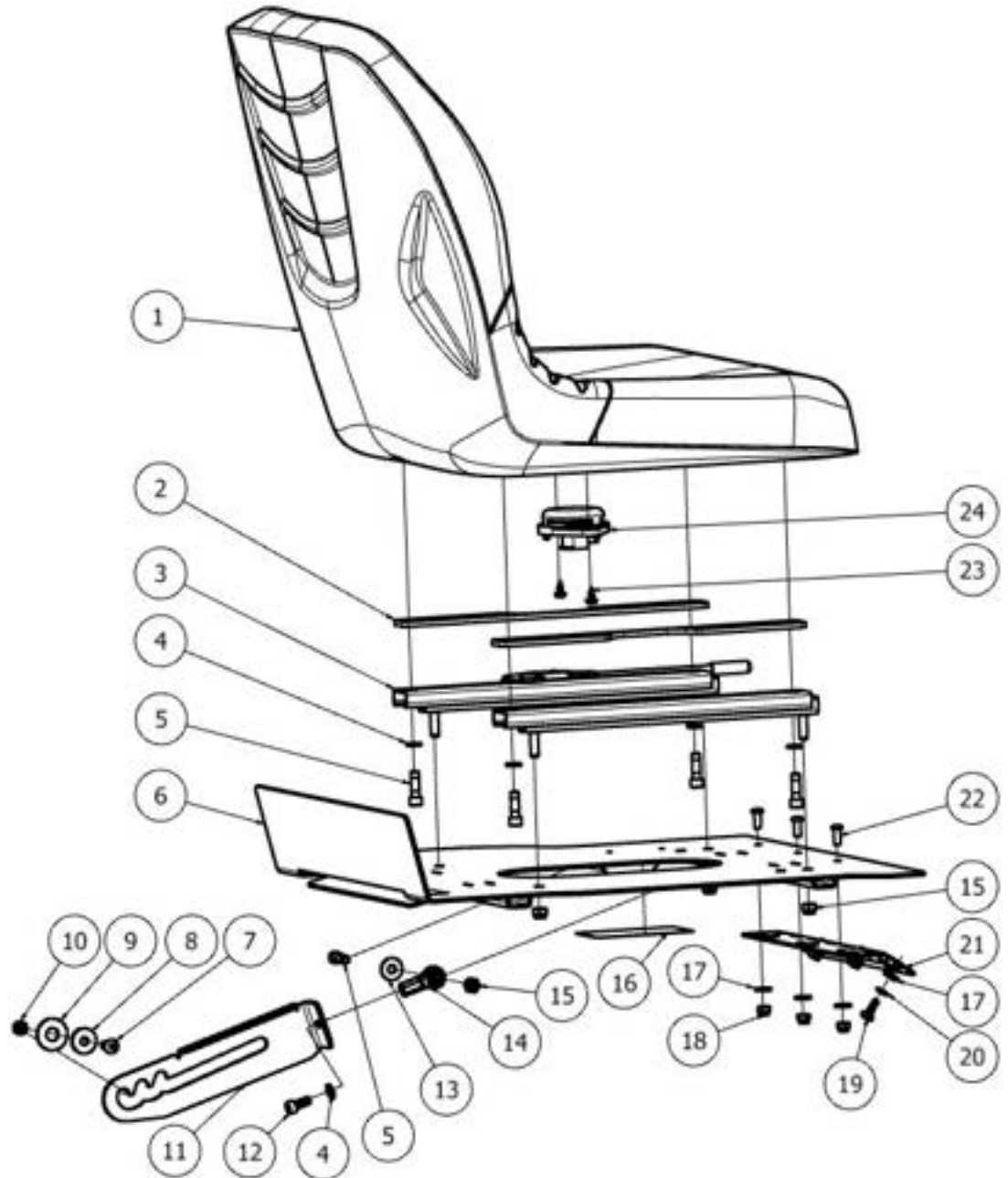
| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 898501 | SEAT SCRUBBER RIDER |
| 2 | 2 | 898210 | SPACER SEAT |
| 3 | 1 | 897501 | RAIL ASSEMBLY SEAT ADJUSTABLE |
| 4 | 5 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 5 | 5 | 962279 | SCREW SHCS .31-18 X 1.0 SS PATCH |
| 6 | 1 | 890815 | BRACKET SUPPORT SEAT |
| 7 | 1 | 962265 | SCREW BHCS .31-18 X .75 SS PATCH |
| 8 | 1 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 9 | 1 | 980612 | WASHER, NYL, .50 X 1.25 X .062 |
| 10 | 1 | 853802 | GUIDE, SPACER, ROUND |
| 11 | 1 | 898503 | STAND COVER SEAT |
| 12 | 1 | 962027 | SCREW SHCS .31-24 X .625 ZINC |
| 13 | 1 | 980007 | WASHER FLAT .31 ZINC |
| 14 | 1 | 902050 | BEARING, ROD END, .31-24 |
| 15 | 5 | 920036 | NUT HEX .31-18 NYLOCK SS |
| 16 | 1 | 875103 | LABEL, INSTRUCTION, BATTERY |
| 17 | 6 | W104D | WASHER, FLAT, .25 |
| 18 | 3 | 920011 | NUT HEX .25-20 NYLOCK ZINC |
| 19 | 3 | 962068 | SCREW HH .25-20 X .63 ZINC |
| 20 | 3 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 21 | 1 | 894501 | HINGE TANK RECOVERY RIDER |
| 22 | 3 | 962263 | SCREW BHCS .25-20 X .63 SS BL |
| 23 | 2 | 964224 | SCREW PHPS M5.5 X 16 ZINC PLASTIC |
| 24 | 2 | W401D | WASHER, FLAT, #10 |
| 25 | 1 | 911744 | SWITCH SEAT NO |



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SEAT ASSEMBLY AFTER SERIAL NUMBER 133036

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 898501 | SEAT SCRUBBER RIDER |
| 2 | 2 | 898210 | SPACER SEAT |
| 3 | 1 | 897501 | RAIL ASSEMBLY SEAT ADJUSTABLE |
| 4 | 5 | 980094 | WASHER SPLIT LOCK .31 SS |
| 5 | 5 | 962279 | SCREW SHCS .31-18 X 1.0 SS PATCH |
| 6 | 1 | 890815 | BRACKET SUPPORT SEAT |
| 7 | 1 | 962265 | SCREW BHCS .31-18 X .75 SS PATCH |
| 8 | 1 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 9 | 1 | 980612 | WASHER, NYL, .50 X 1.25 X .062 |
| 10 | 1 | 853802 | GUIDE, SPACER, ROUND |
| 11 | 1 | 898503 | STAND COVER SEAT |
| 12 | 1 | 962027 | SCREW SHCS .31-24 X .625 ZINC |
| 13 | 1 | 980007 | WASHER FLAT .31 ZINC |
| 14 | 1 | 902050 | BEARING, ROD END, .31-24 |
| 15 | 5 | 920036 | NUT HEX .31-18 NYLOCK SS |
| 16 | 1 | 875103 | LABEL, INSTRUCTION, BATTERY |
| 17 | 6 | W104D | WASHER, FLAT, .25 |
| 18 | 3 | 920011 | NUT HEX .25-20 NYLOCK ZINC |
| 19 | 3 | 962068 | SCREW HH .25-20 X .63 ZINC |
| 20 | 3 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 21 | 1 | 894501 | HINGE TANK RECOVERY RIDER |
| 22 | 3 | 962263 | SCREW BHCS .25-20 X .63 SS BL |
| 23 | 2 | 964006 | SCREW PHPS M6.3 X 13 ZINC TAPPING |
| 24 | 1 | 911744 | SWITCH SEAT NO |

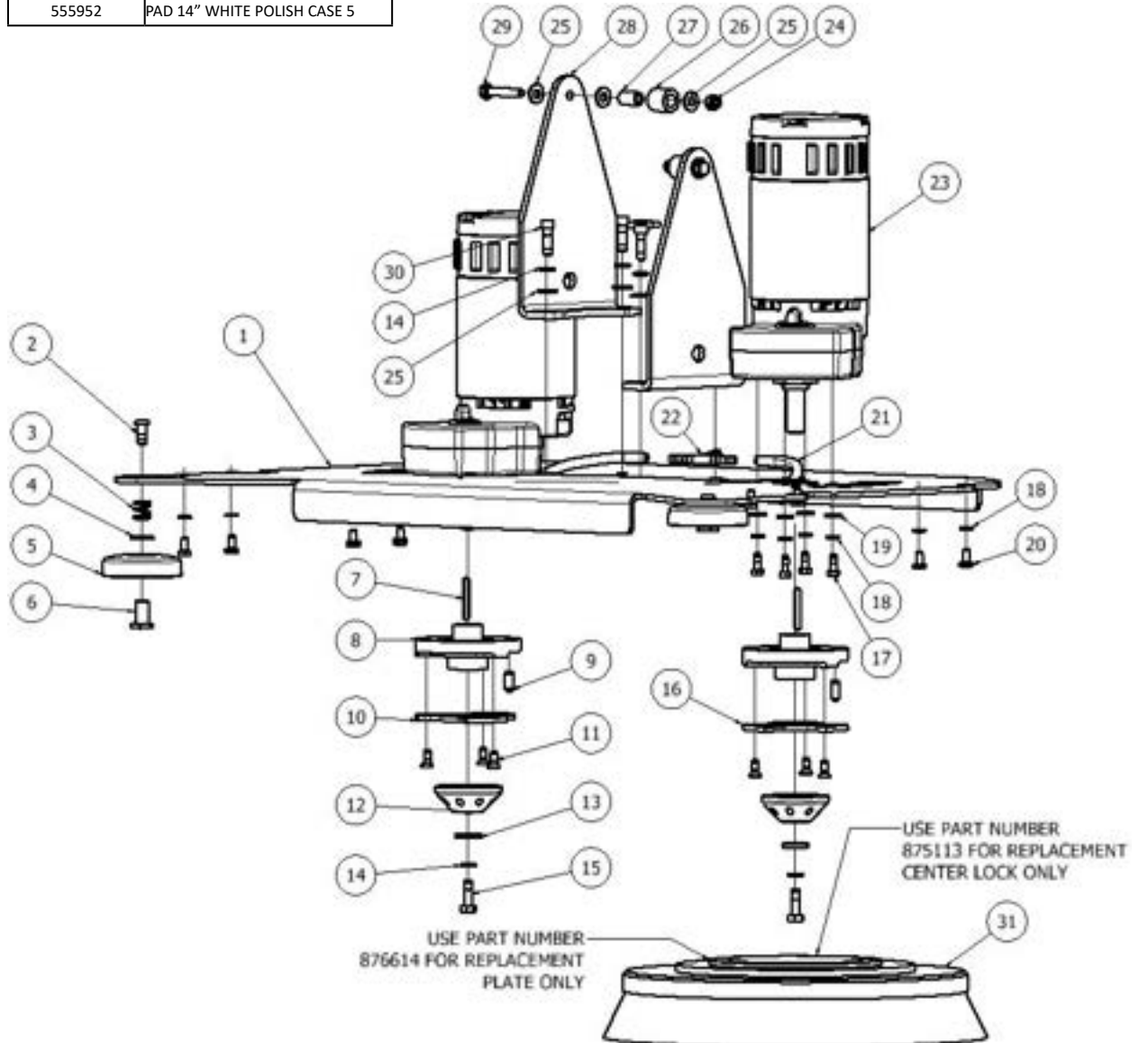


DISK SCRUB HEAD

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 896102 | PLATE MTG 28INCH RIDER |
| 2* | 2 | 962265 | SCREW, BUTTON, SOCKET, .31-18 X .75, SS |
| 3* | 2 | 878302 | SPRING COMPR .62L X .66DIA |
| 4* | 2 | 980643 | WASHER NYLON 1/2 ID |
| 5* | 2 | 859703 | WHEEL, GUIDE |
| 6* | 2 | 878209 | SPACER WHEEL GUIDE |
| 7 | 2 | 915008 | KEY, SQUARE, 5MM X 5 X 40MM |
| 8 | 2 | 854302 | HUB, DRIVER, BRUSH |
| 9 | 2 | 857009 | PLUNGER BALL PRESS-IN |
| 10 | 1 | 853803 | GUIDE, DRIVER |
| 11 | 6 | 962274 | SCREW, FLAT, SOCK, .25-20X.62, SS, PATCH |
| 12 | 2 | 853804 | GUIDE, PAD, PLASTIC |
| 13 | 2 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 14 | 6 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 15 | 2 | 962466 | SCREW, HEX, M8-1.25 X 25, SS, PATCH |
| 16 | 1 | 873802 | GUIDE, DRIVER, RH |
| 17 | 8 | 964448 | SCREW, HEX, M6 X 16, SS, PATCH |
| 18 | 16 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 19 | 8 | W104D | WASHER, FLAT, .25 |
| 20 | 8 | W169D | SCREW, HEX, .25-20 X .50 |
| 21 | 26" | 204179 | TUBING, 1/4" |
| 22 | 3 | 873301 | FITTING, TEE, .25INCH |
| 23 | 2 | 875201 | MOTOR, GEAR, BRUSH MRP15 |
| 24 | 2 | 920012 | NUT, NYLOCK, 5/16-18, ZINC |
| 25 | 10 | W243D | WASHER, FLAT, 5/16, SS |
| 26 | 2 | 857501 | ROLLER, PLASTIC |
| 27 | 2 | 858203 | SPACER, WHEEL, GUIDE |
| 28 | 2 | 890813 | BRACKET SUPPORT HEAD |
| 29 | 2 | 962270 | SCREW, HEX, 5/16-18X1.75,SS |
| 30 | 4 | 962279 | SCREW, SOCKET CAP, .31X1.0, SS |
| 31 | 2 | 870901 | BRUSH, POLY, 14 INCH |
| 32 | 2 | 870904 | BRUSH, NYLON, 14 INCH - NOT SHOWN |
| 33 | 2 | 875902 | DRIVER, PAD, 14INCH - NOT SHOWN |

AVAILABLE PADS

| PART NUMBER | DESCRIPTION |
|-------------|-----------------------------|
| 555902 | PAD 14" BLACK STRIP CASE 5 |
| 555942 | PAD 14" RED SCRUB CASE 5 |
| 555952 | PAD 14" WHITE POLISH CASE 5 |

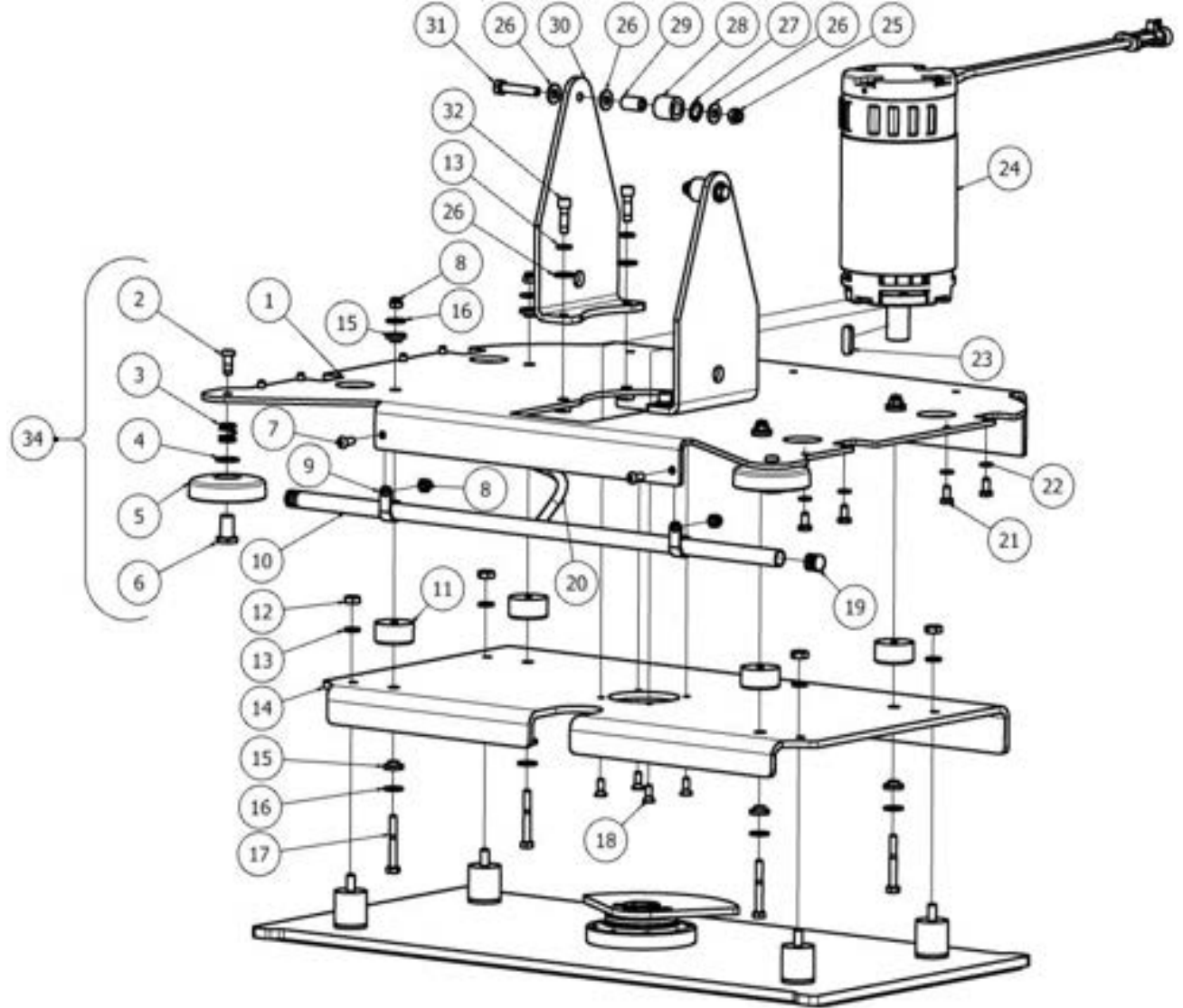


*Items 2–6 can be ordered as a kit under part number 855022.

ORBITAL SCRUB HEAD

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| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|---|
| 1 | 1 | 890805 | BRACKET MTG HEAD ORBITAL |
| 2 | 2 | 962265 | SCREW BHCS .31-18 X .75 SS PATCH |
| 3 | 2 | 878302 | SPRING COMPR .62L X .66DIA |
| 4 | 2 | 980643 | WASHER NYLON 1/2 ID |
| 5 | 2 | 859703 | WHEEL, GUIDE |
| 6 | 2 | 878209 | SPACER WHEEL GUIDE |
| 7 | 2 | 962263 | SCREW BHCS .25-20 X .63 SS BL |
| 8 | 6 | 920665 | NUT HEX .25-20 NYLOCK SS |
| 9 | 2 | 852003 | CLAMP, P-SHAPED, .62 DIA |
| 10 | 1 | 879005 | TUBE DISTRIBUTION |
| 11 | 4 | 858205 | SPACER, RUBBER |
| 12 | 4 | W405D | NUT HEX .31-18 SS |
| 13 | 8 | 980094 | WASHER SPLIT LOCK .31 SS |
| 14 | 1 | 876609 | PLATE, MOUNTING, MOTOR |
| 15 | 8 | 851101 | BUSHING, RUBBER |
| 16 | 8 | 980004 | WASHER FLAT .25 ZINC |
| 17 | 4 | W117D | SCREW HH .25-20 X 2 SS |
| 18 | 4 | 964009 | SCREW FHCS M6 X 16 SS PATCH |
| 19 | 2 | 856802 | PLUG .62 TUBE |
| 20 | 12" | 204179 | TUBING, 1/4" |
| 21 | 8 | W169D | SCREW HH .25-20 X .5 SS |
| 22 | 8 | 980002 | WASHER, LOCK, SPLIT, .25 |
| 23 | 1 | 915006 | KEY, 8MM X 7MM X 28MM |
| 24 | 1 | 855204 | MOTOR, 24V, 2200 RPM, 1HP |
| 25 | 2 | 920012 | NUT HEX .31-18 NYLOCK ZINC |
| 26 | 10 | W243D | WASHER, FLAT, 5/16, SS |
| 27 | 2 | 980093 | WASHER WAVE .50 |
| 28 | 2 | 857501 | ROLLER, PLASTIC |
| 29 | 2 | 858203 | SPACER, WHEEL, GUIDE |
| 30 | 2 | 890813 | BRACKET SUPPORT HEAD |
| 31 | 2 | 962270 | SCREW HH .31-18 X 1.75 SS |
| 32 | 4 | 962279 | SCREW SHCS .31-18 X 1.0 SS PATCH |
| 33 | 1 | 850906 | BRUSH CARBON KIT 4 PC |
| 34 | 1 | 855022 | KIT GUIDE WHEEL REPLACEMENT ANTI-RATTLE |



*Items 2–6 can be ordered as a kit under part number 855022.

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ORBITAL SCRUB HEAD

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| ITEM | QTY | PART NUMBER | DESCRIPTION |
|-------|-----|-------------|---|
| 1* | 1 | 876607 | PLATE, ORBITAL, 28 INCH |
| 2* | 1 | 875903 | PAD, MIGHTYLOK ADH, 14X28 |
| 3** | 12 | 962278 | SCREW, SOCKET, FLT, .31-18X.88, SS, PATCH |
| 4** | 4 | 980108 | WASHER, FLAT, .31ID, 1.25OD, .12THK, SS |
| 5** | 4 | 855604 | MOUNT, ISOLATOR, .31THD |
| 6*** | 1 | 964447 | SCREW, FLT, M8 X 16, SS |
| 7*** | 1 | 875801 | O-RING, EPDM, 233 |
| 8*** | 4 | 962274 | SCREW, FLAT, SOCK, .25-20X.62, SS, PATCH |
| 9*** | 1 | 876611 | PLATE, RETAINING, BEARING |
| 10*** | 1 | N/A | ASSY, BEARING, REPL, ORBIT |
| 11*** | 1 | 547604 | SEAL BEARING ORBITAL |
| 12 | 1 | 876608 | PLATE, BALANCE, 28 INCH |

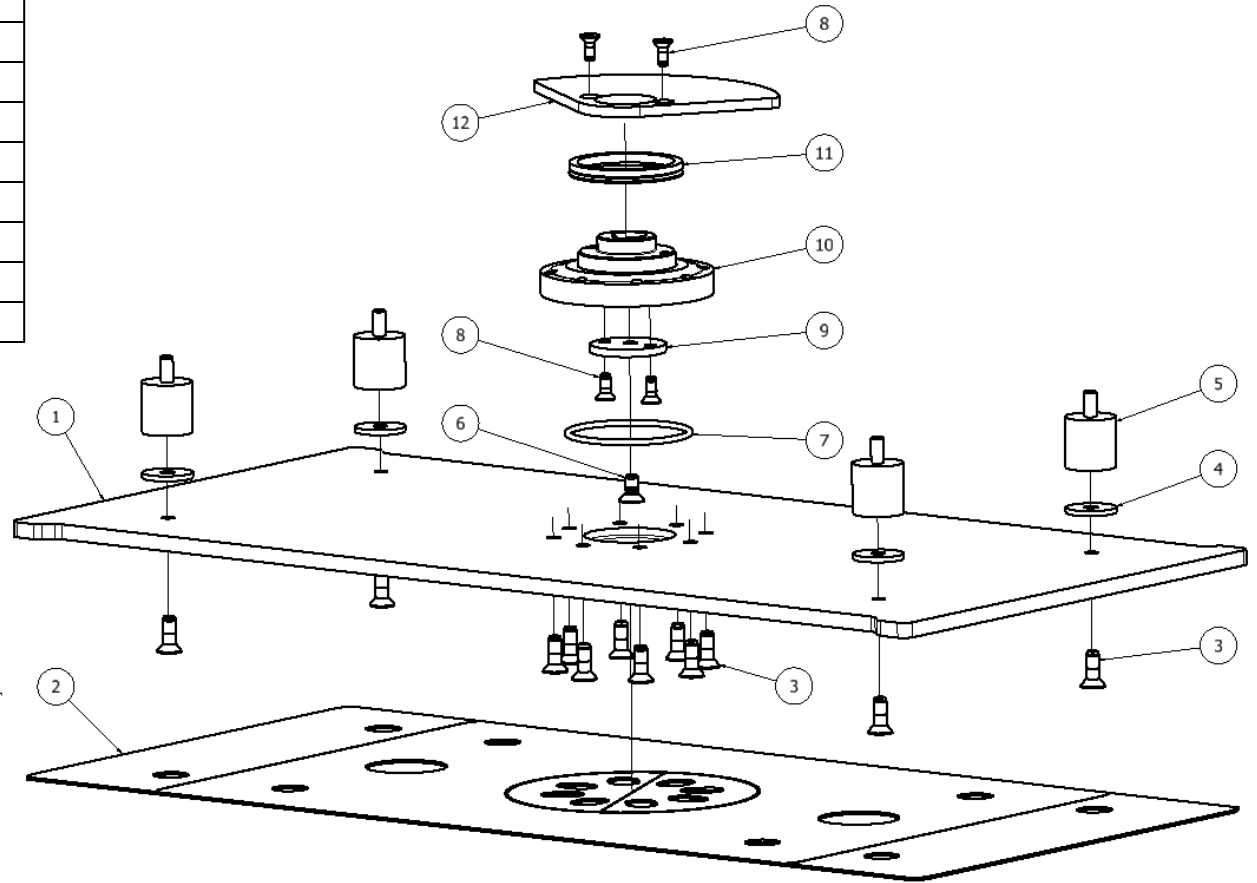
*ITEMS 1 & 2 CAN BE ORDERED PRE-ASSEMBLED AS A KIT UNDER PART NUMBER 875009 - KIT, PLATE, REPL, ORBIT.

**ITEMS 3, 4, & 5 CAN BE ORDERED AS A KIT UNDER

PART NUMBER 855027 - KIT ISOLATOR SET OF 4 W/ STD HWD.

***ITEMS 6-11 CAN BE ORDERED AS A KIT UNDER PART NUMBER 875010 - ASSY, BEARING, REPL, ORBIT.

NOTE: PRIOR TO SERIAL NUMBER 125673, SEAL (ITEM 11) WAS NOT PROVIDED. SEAL CAN BE ADDED WHEN THE BEARING ASSEMBLY IS REPLACED.



AVAILABLE PADS

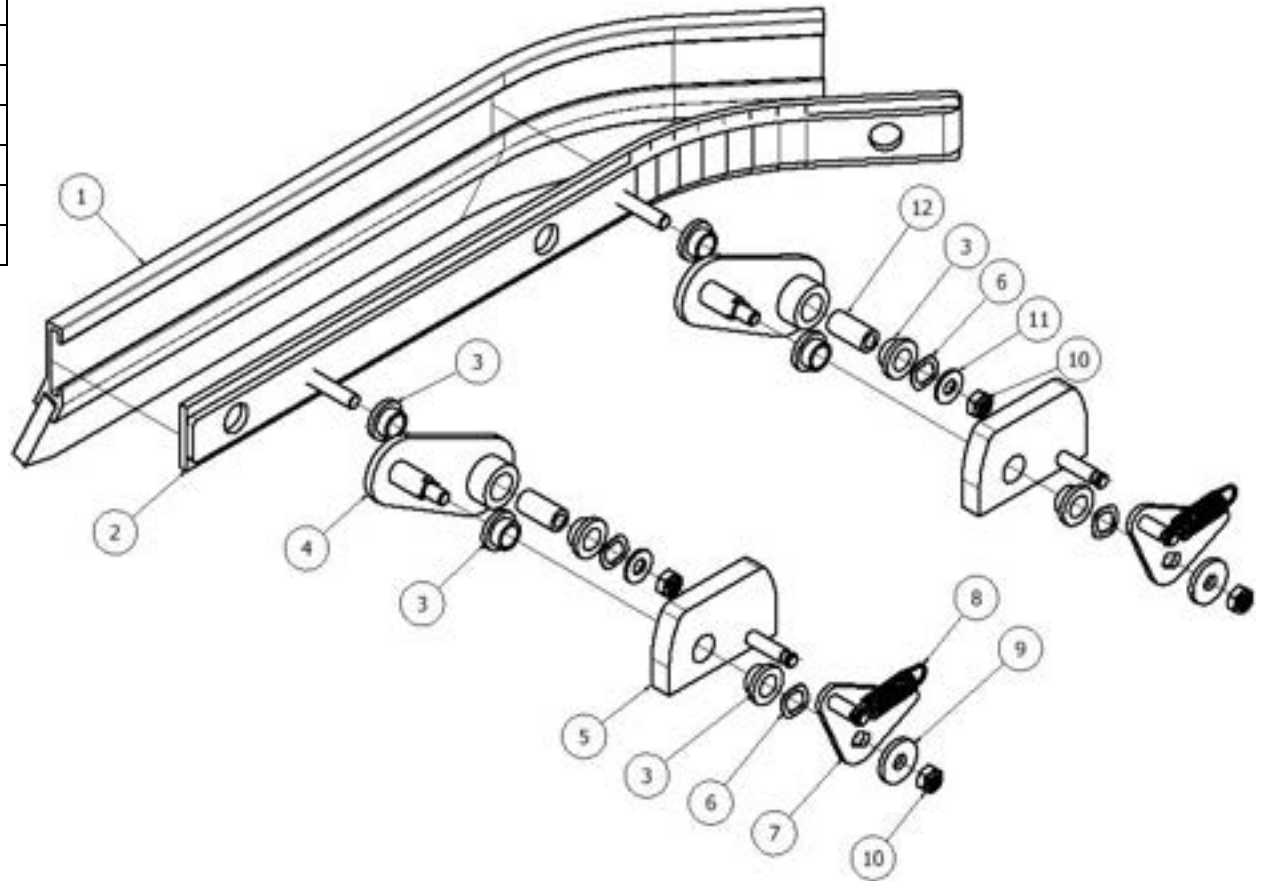
| PART NUMBER | DESCRIPTION |
|-------------|---------------------------------|
| 555909 | PAD 14"X28" BLACK STRIP CASE 5 |
| 555929 | PAD 14"X28" MAROON CFR CASE 5 |
| 555949 | PAD 14"X28" RED SCRUB CASE 5 |
| 555969 | PAD 14"X28" TURF CASE 4 |
| 555959 | PAD 14"X28" WHITE POLISH CASE 5 |

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RIGHT-HAND SIDE SQUEEGEE

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 890702 | BLADE ASSY SQUEEGEE SIDE |
| 1* | 1 | 890707 | BLADE ASSY SQUEEGEE SIDE URETHANE |
| 2 | 1 | 891304 | BRACE SQUEEGEE SIDE RIDER |
| 3 | 8 | 871101 | BUSHING, FLANGE, .50IN |
| 4 | 2 | 895105 | LINK LIFT SQUEEGEE SIDE |
| 5 | 2 | 891303 | BLOCK MOUNTING SQUEEGEE SIDE |
| 6 | 4 | 980093 | WASHER, WAVE, .50INCH |
| 7 | 2 | 895107 | LINK SPRING SQUEEGEE SIDE RH |
| 8 | 2 | 898308 | SPRING EXTENSION .50OD X 2.0L SS |
| 9 | 2 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 10 | 4 | 920040 | NUT, .31-18, NYLOCK, SS, LOW |
| 11 | 2 | W243D | WASHER, FLAT, 5/16, SS |
| 12 | 2 | 897704 | SHAFT LIFT SQUEEGEE SIDE |

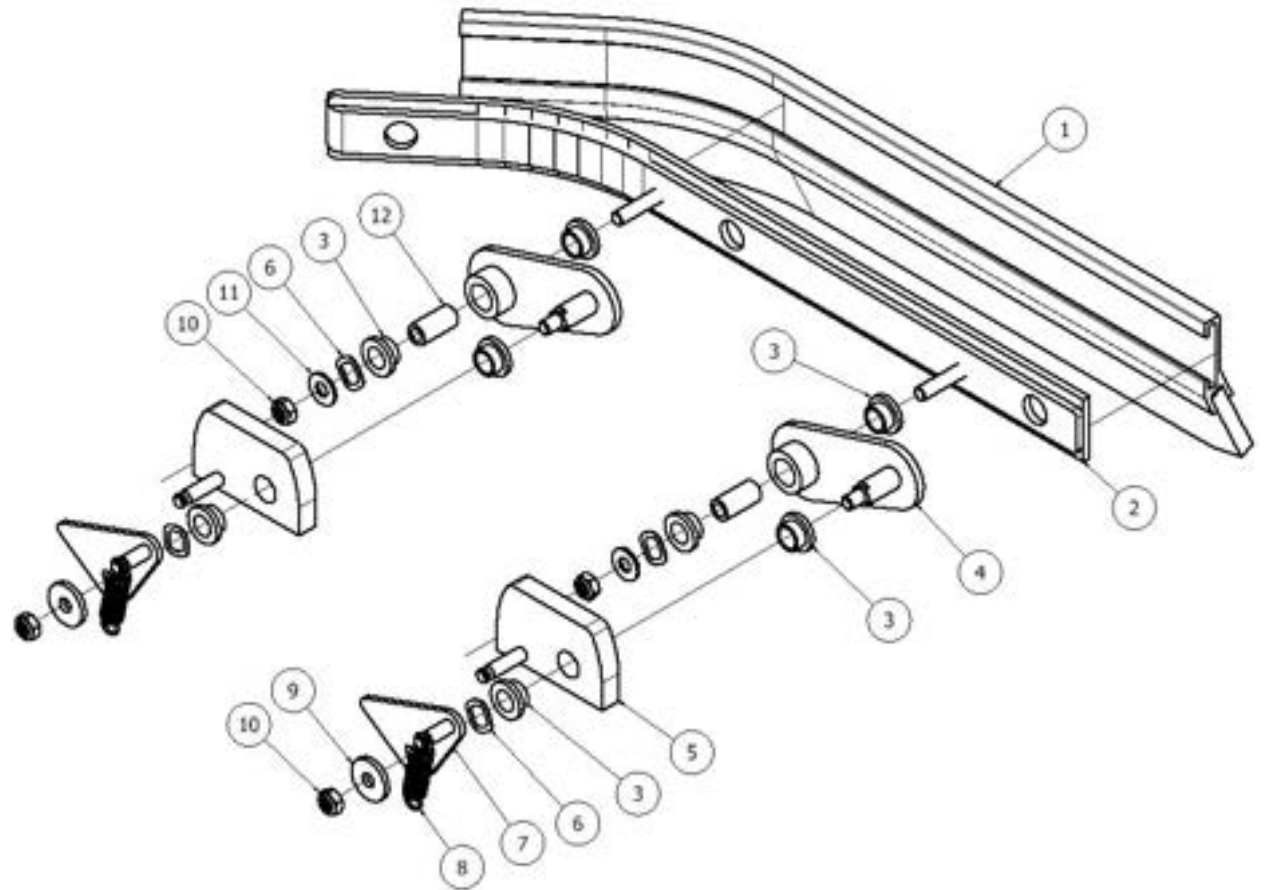
*Urethane Squeegee Blades are an optional accessory.



LEFT-HAND SIDE SQUEEGEE

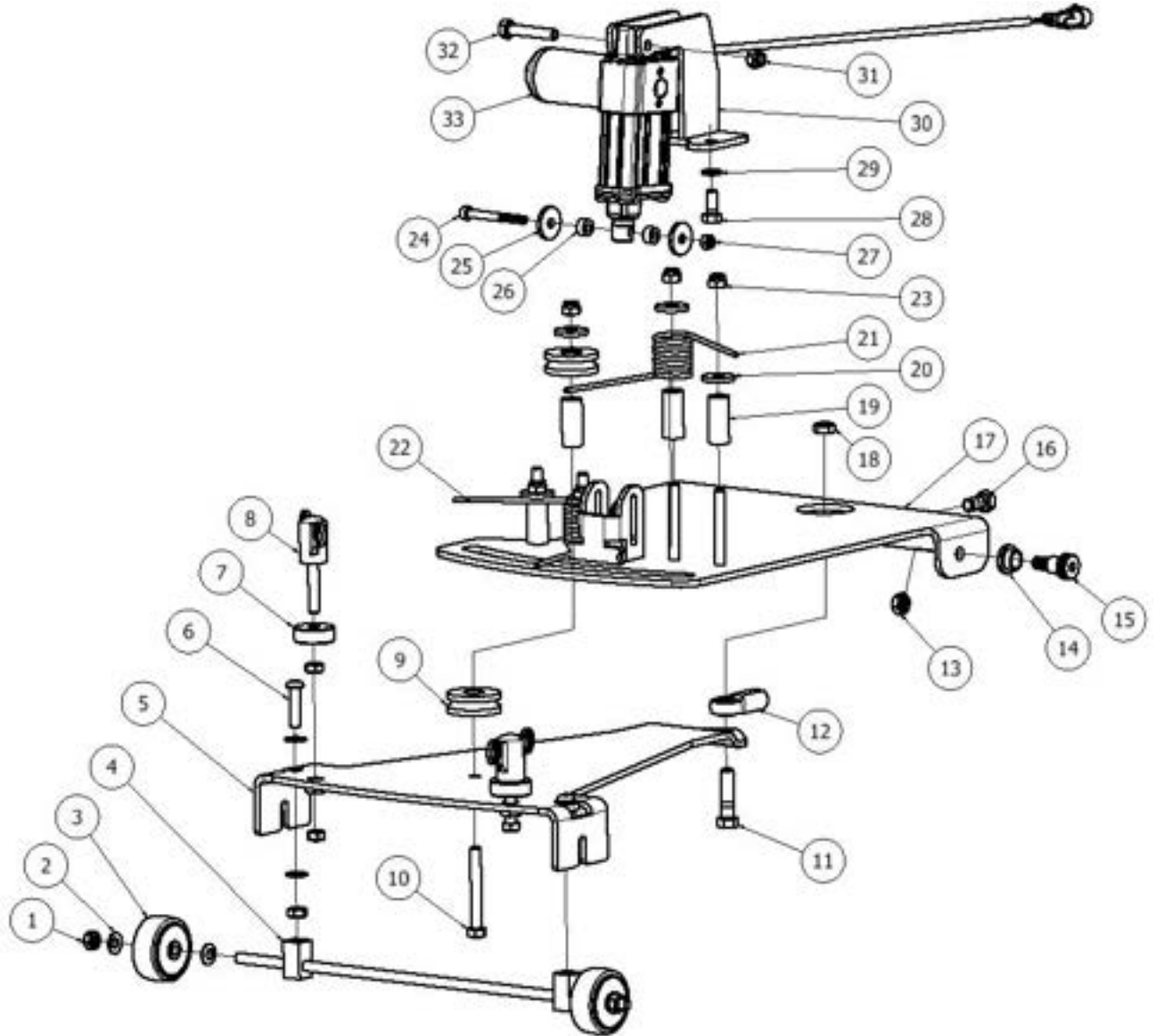
| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 1 | 890702 | BLADE ASSY SQUEEGEE SIDE |
| 1* | 1 | 890707 | BLADE ASSY SQUEEGEE SIDE URETHANE |
| 2 | 1 | 891304 | BRACE SQUEEGEE SIDE RIDER |
| 3 | 8 | 871101 | BUSHING, FLANGE, .50IN |
| 4 | 2 | 895105 | LINK LIFT SQUEEGEE SIDE |
| 5 | 2 | 891306 | BLOCK MOUNTING SQUEEGEE SIDE |
| 6 | 4 | 980093 | WASHER, WAVE, .50INCH |
| 7 | 2 | 895106 | LINK SPRING SQUEEGEE SIDE LH |
| 8 | 2 | 898308 | SPRING EXTENSION .50OD X 2.0L SS |
| 9 | 2 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 10 | 4 | 920040 | NUT, .31-18, NYLOCK, SS, LOW |
| 11 | 2 | W243D | WASHER, FLAT, 5/16, SS |
| 12 | 2 | 897704 | SHAFT LIFT SQUEEGEE SIDE |

*Urethane Squeegee Blades are an optional accessory.



SQUEEGEE LIFT

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|--|
| 1 | 8 | 920040 | NUT, .31-18, NYLOCK, SS, LOW |
| 2 | 8 | 980105 | WASHER, PLASTIC, THRUST |
| 3 | 2 | 849709 | WHEEL, 2 OD, .31 ID |
| 4 | 1 | 850501 | AXLE, WHEEL, SQUEEGEE |
| 5 | 1 | 890822 | BRACKET LINK SQUEEGEE |
| 6 | 2 | 962464 | SCREW, BUTTON, .31-18X1.25, ZINC |
| 7 | 2 | 877207 | RETAINER, FRAME, SQUEEGEE |
| 8 | 2 | 875003 | KNOB, THREADED, .31-18 X 1.5 |
| 9 | 2 | 897502 | GUIDE, ROLLER, SQUEEGEE |
| 10 | 5 | 962463 | SCREW, HEX, .31-18 X 2.5, SS, FULL THD |
| 11 | 1 | 962075 | SCREW, HEX, 3/8-16 X 1.5, SS |
| 12 | 1 | 902051 | BEARING, ROD END, .38 FEM |
| 13 | 2 | 920035 | NUT, NYLOCK, .38-16, SS |
| 14 | 2 | 871101 | BUSHING, FLANGE, .50IN |
| 15 | 2 | 962465 | SCREW, SHOULDER, .50 X .50 |
| 16 | 1 | 962028 | SCREW, HX, .38-24X.75,SS,PTCH |
| 17 | 1 | 890823 | BRACKET SWING SQUEEGEE |
| 18 | 1 | 920032 | NUT .38-16 NYLOCK THIN ZINC |
| 19 | 5 | 898204 | SPACER SQUEEGEE RIDER |
| 20 | 5 | 980107 | WASHER, FLAT, .31ID, 1.0OD, .12THK, SS |
| 21 | 1 | 898310 | SPRING TORSION LH 1.2 OD 40 IN-LBS |
| 22 | 1 | 898309 | SPRING TORSION RH 1.2 OD 40 IN-LBS |
| 23 | 5 | 920012 | NUT, NYLOCK, 5/16-18, ZINC |
| 24 | 1 | 964013 | SCREW M6X55 ZINC SHCS |
| 25 | 2 | 980106 | WASHER, FLAT, .25ID, 1.0OD, .12THK, SS |
| 26 | 2 | 898209 | SPACER ACTUATOR PLASTIC |
| 27 | 1 | 924082 | NUT, NYLOCK, M6X1.0, SS |
| 28 | 2 | 962269 | SCREW, HEX, .31-18 X .75, SS |
| 29 | 2 | 980094 | WASHER, SPLIT LOCK, .31, SS |
| 30 | 1 | 890810 | BRACKET SUPPORT ACTUATOR |
| 31 | 1 | 920036 | NUT, NYLOCK, 5/16-18, SS |
| 32 | 1 | 962270 | SCREW, HEX, 5/16-18X1.75,SS |
| 33 | 1 | 890504 | ACTUATOR SQUEEGEE LIFT |



SQUEEGEE

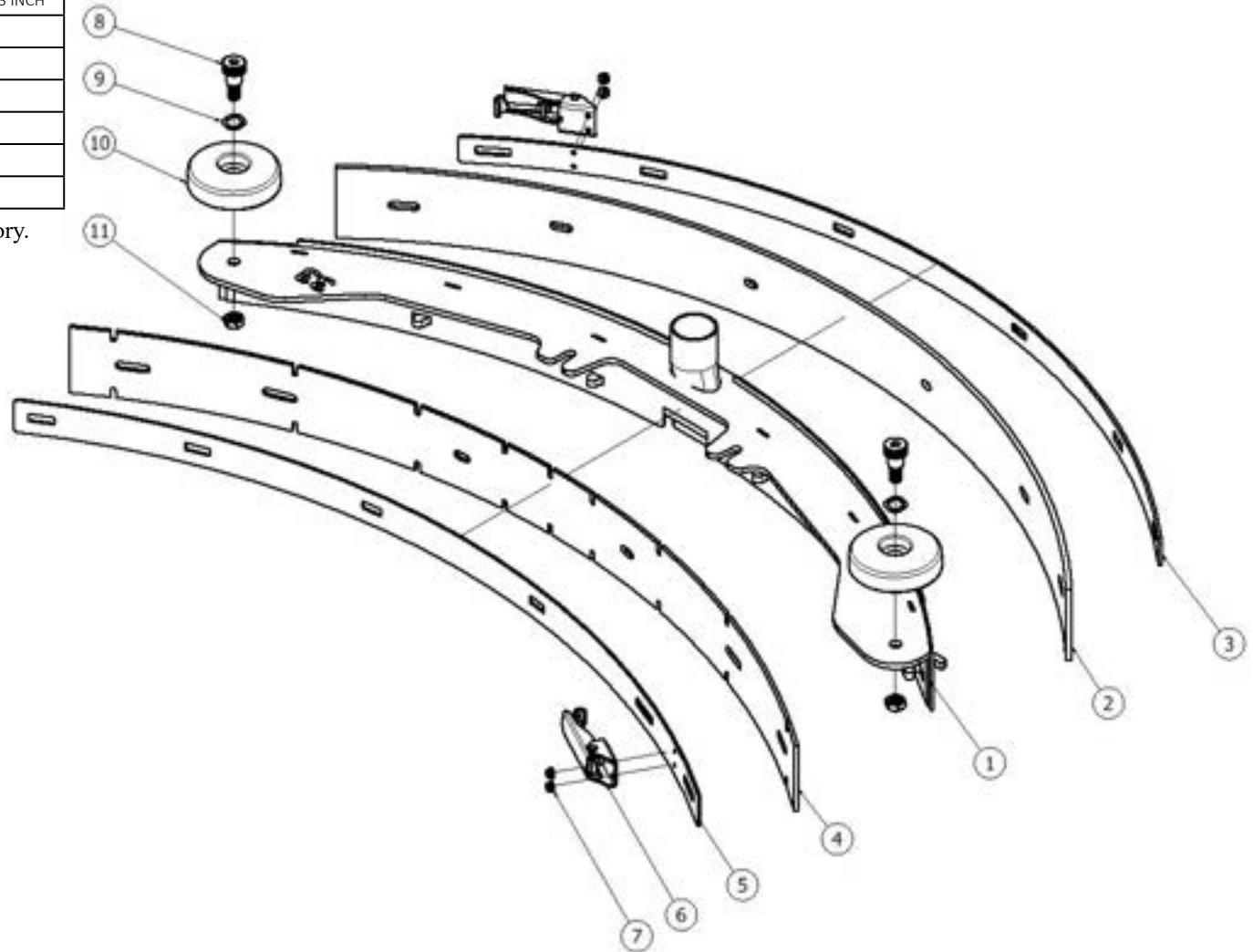
LINATEX ASSEMBLY: 898507
URETHANE ASSEMBLY: 898508

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|---------------------------------|
| 1 | 1 | 893206 | FRAME SQUEEGEE 33 INCH |
| 2 | 1 | 890703 | BLADE REAR 33 INCH LINATEX |
| 2* | 1 | 890706 | BLADE REAR 33 INCH URETHANE |
| 3 | 1 | 897204 | RETAINER SQUEEGEE REAR 33 INCH |
| 4 | 1 | 890704 | BLADE FRONT 33 INCH LINARD |
| 4* | 1 | 890705 | BLADE FRONT 33 INCH URETHANE |
| 5 | 1 | 897205 | RETAINER SQUEEGEE FRONT 33 INCH |
| 6 | 2 | 852002 | CLAMP, OVER-CENTER, BAND |
| 7 | 4 | 920034 | NUT, NYLOCK, #6-32, SS |
| 8 | 2 | 962465 | SCREW, SHOULDER, .50 X .50 |
| 9 | 2 | 980093 | WASHER, WAVE, .50INCH |
| 10 | 2 | 859703 | WHEEL, GUIDE |
| 11 | 2 | 920035 | NUT, NYLOCK, .38-16, SS |

*Urethane Squeegee Blades are an optional accessory.



FRONT BLADE LENGTH: 35"
REAR BLADE LENGTH: 36-1/2"



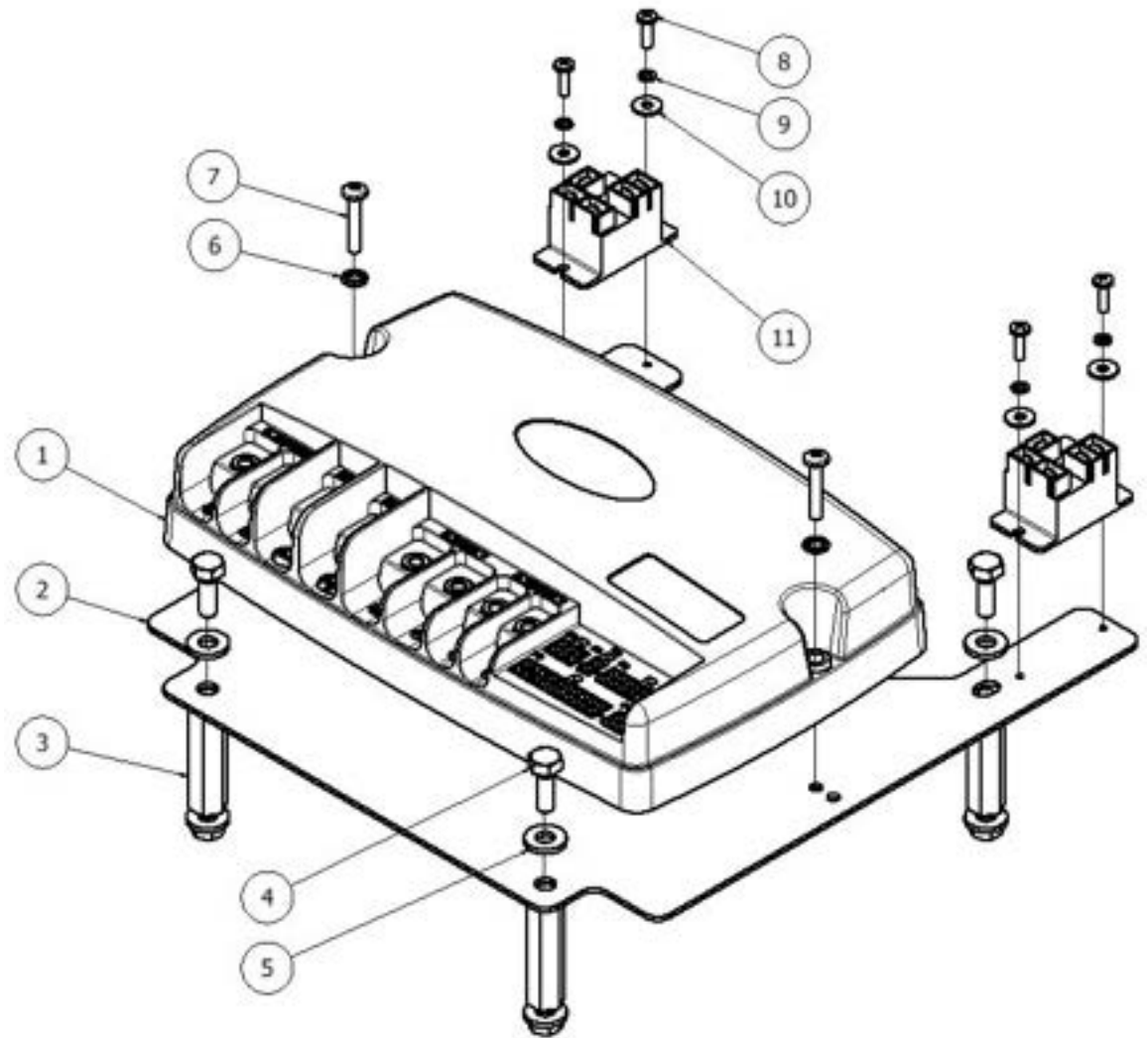
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CONTROLLER

| ITEM | QTY | PART NUMBER | DESCRIPTION |
|------|-----|-------------|-------------------------------------|
| 1* | 1 | 892406 | CONTROLLER DISK RIDER NIDEC |
| 1* | 1 | 892411 | CONTROLLER ORBITAL RIDER NIDEC |
| 2 | 1 | 897003 | PANEL ELECTRONICS RIDER |
| 3 | 4 | 898201 | SPACER PANEL ELECTRONICS |
| 4 | 8 | W189D | SCREW, HEX, 1/4-20 X .75, SS, PATCH |
| 5 | 8 | W104D | WASHER, FLAT, .25 |
| 6 | 2 | W124D | WASHER-LOCK #10 INT TOOTH |
| 7 | 2 | 962186 | SCREW, PAN, #10-32 X 1.0, SS |
| 8** | 4 | W315D | SCREW, PAN, #6-32 X .50, BLK |
| 9** | 4 | 980025 | WASHER SPLIT LOCK #6 ZINC |
| 10** | 4 | 980033 | WASHER, FLAT, #6, SS |
| 11** | 2 | 911685 | RELAY, 24VDC, BATTERYSHIELD |

*Item 1 is dependent upon machine model.

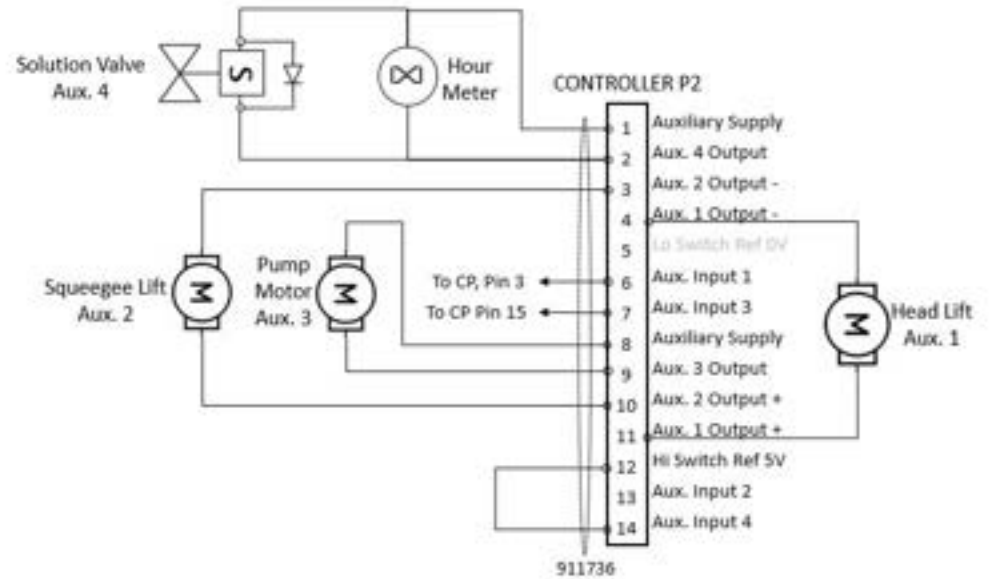
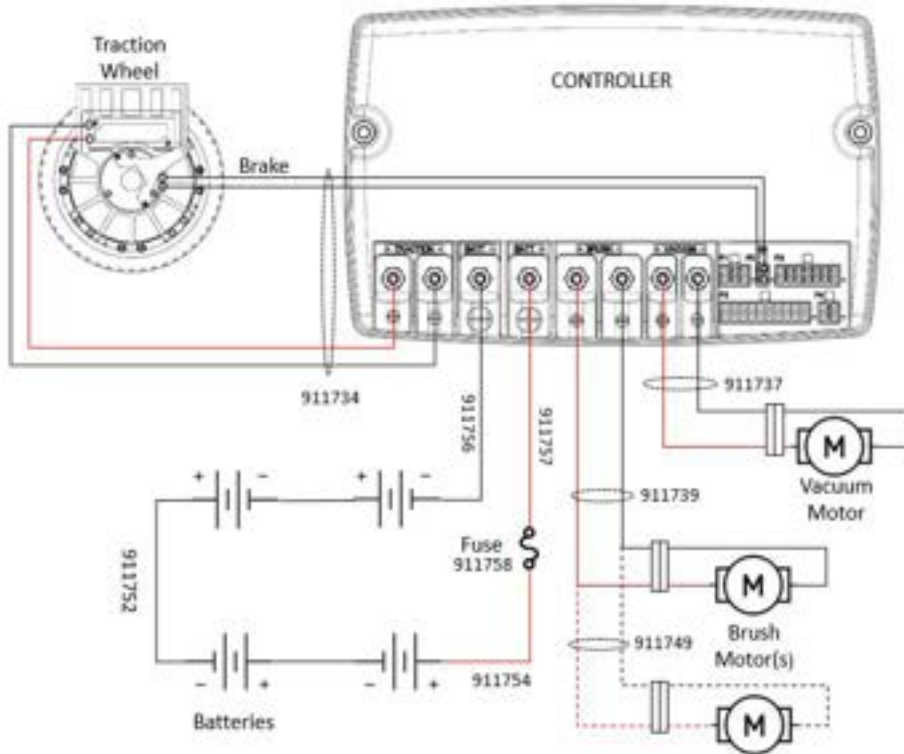
**Items 8-11 only used with optional ScrubSmart telemetry system.



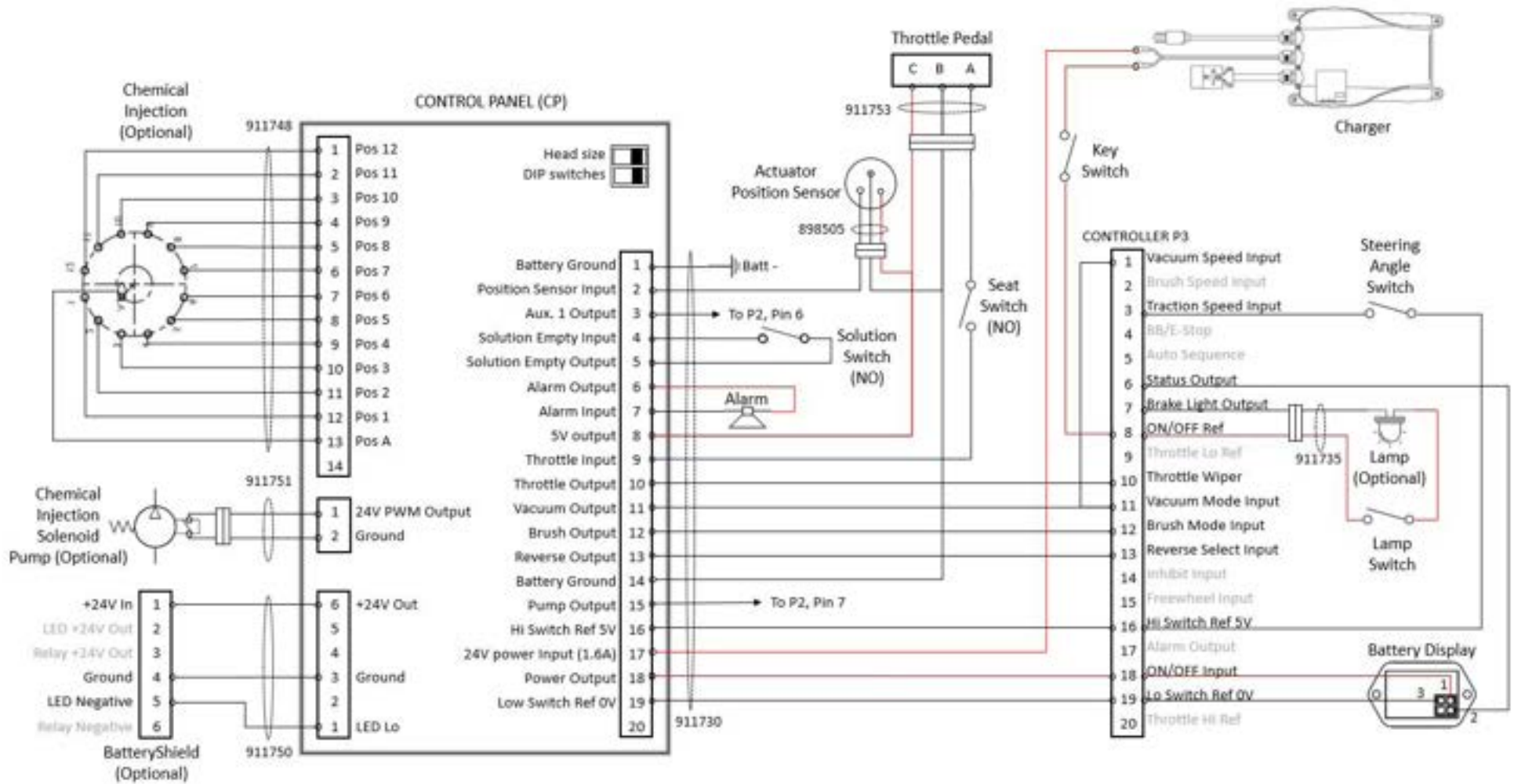
ELECTRICAL HARNESES

| PART NUMBER | DESCRIPTION | APPLICATION | CONNECTIONS |
|-------------|-----------------------------------|--|---|
| 911730 | HARNESS SIGNAL P3 | MAIN CONTROLLER TO OPERATOR PANEL HARNESS | CONTROLLER-OPERATOR PANEL-MULTIPLE SMALL COMPONENTS |
| 911736 | HARNESS SIGNAL AUX P2 | MAIN CONTROLLER TO AUXILIARY COMPONENTS HARNESS | CONTROLLER-ACTUATORS-PUMP-VALVE |
| 911734 | HARNESS DRIVE FLEXIBLE W/ FITTING | DRIVE WHEEL AND BRAKE POWER CABLE | CONTROLLER-DRIVE WHEEL-BRAKE |
| 911753 | HARNESS EXTENSION THROTTLE | THROTTLE SIGNAL HARNESS | THROTTLE PEDAL-CONTROLLER |
| 911737 | HARNESS MOTOR VACUUM | VACUUM MOTOR POWER CABLE | CONTROLLER-VACUUM MOTOR |
| 911739 | HARNESS MOTOR SCRUB LH | LEFT HAND BRUSH MOTOR CABLE | CONTROLLER-LEFT HAND BRUSH MOTOR |
| 911749 | HARNESS MOTOR SCRUB RH | RIGHT HAND BRUSH MOTOR CABLE | CONTROLLER-RIGHT HAND BRUSH MOTOR |
| 911752 | HARNESS CONN BATTERY 4AWG BLACK | BATTERY CONNECTION CABLE | BATTERY-BATTERY |
| 911756 | HARNESS CONN BATTERY 4AWG BLACK | PRIMARY BATTERY GROUND CABLE | BATTERY NEGATIVE-CONTROLLER |
| 911754 | HARNESS BATTERY RIDER 4AWG RED | POWER CABLE | BATTERY POSITIVE-FUSE HOLDER |
| 911757 | HARNESS CONN CONTROLLER 4AWG RED | POWER CABLE | FUSE HOLDER-CONTROLLER |
| 911758 | FUSE MIDI BOLT-DOWN 100A 32V | FUSE | IN-LINE |
| 894206 | HOUSING FUSE INLINE | FUSE HOLDER | NA |
| 911750 | HARNESS EXTENSION BATTERYSHIELD | BATTERYSHIELD SIGNAL HARNESS | BATTERYSHIELD SENSOR-CONTROLLER |
| 911751 | HARNESS PUMP CHEM DISPENSING | OPTIONAL CHEMICAL INJECTION POWER HARNESS | CONTROL PANEL-CONTROLLER-CHEMICAL INJECTION PUMP |
| 911735 | HARNESS LAMP AMBER | OPTIONAL LAMP HARNESS | LAMP SWITCH-CONTROLLER-LAMP |
| 911755 | HARNESS CLEAN-N-PAY RIDER | OPTIONAL TELEMETRY SYSTEM POWER & SIGNAL HARNESS | CONTROLLER-TRACK UNIT |
| 893303 | FUSE ATO 1 AMP | FUSE | TELEMETRY SYSTEM |

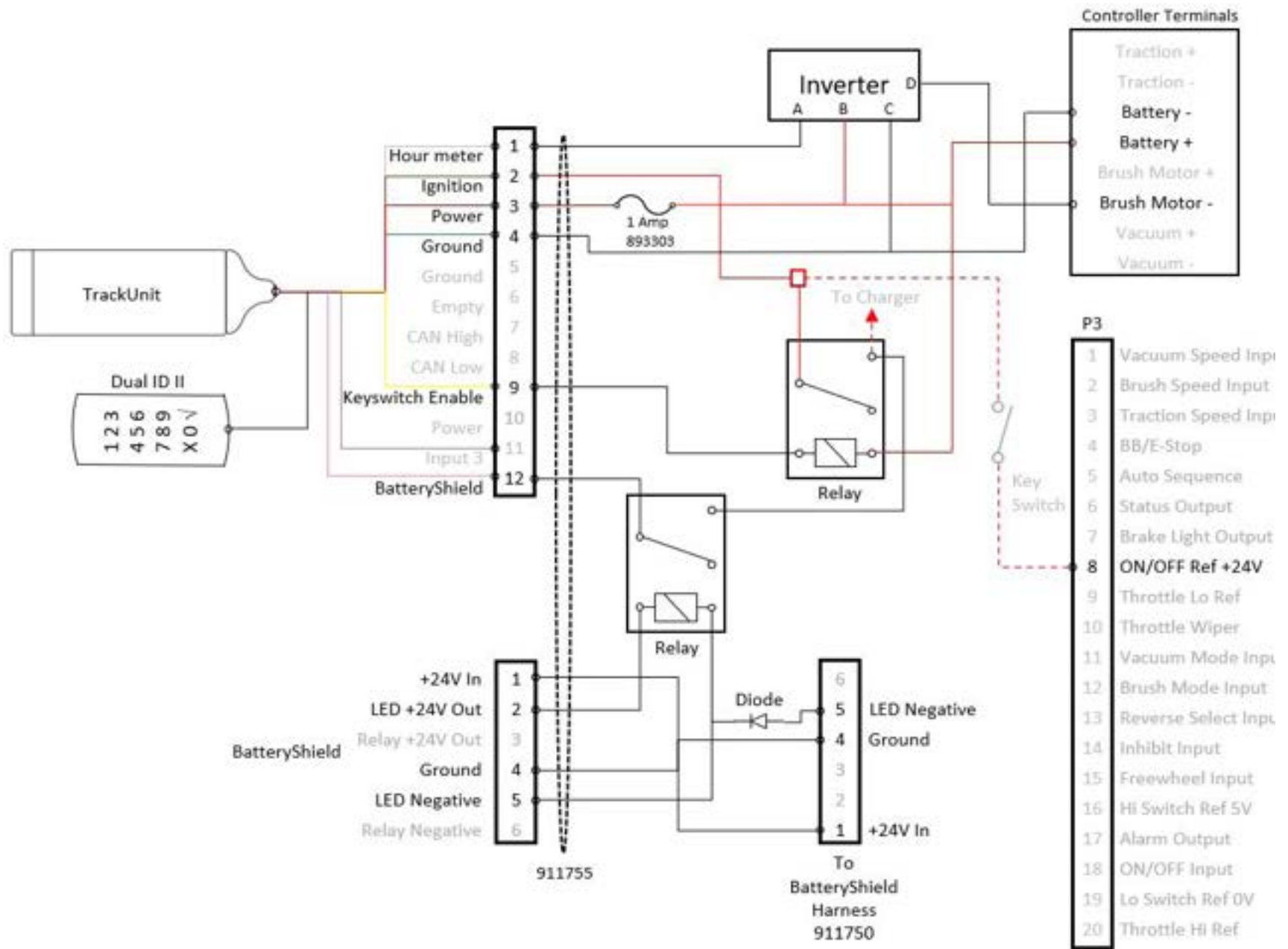
ELECTRICAL DIAGRAMS



ELECTRICAL DIAGRAMS



OPTIONAL SCRUBSMART TELEMETRY ELECTRICAL DIAGRAM



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