

R.P.S. Corporation P.O. Box 368 Racine, Wisconsin 53401 Phone: 1-800-634-4060 Fax: 1-866-901-3335

Safety Message	4
Safety Precautions	5
Maintenance	6
Machine Controls and Features	7
Main Broom Removal	8
Side Broom Removal and Adjustment	9
Filter Service	10
Hopper Removal	11
On Board Charger Operations	12
Off Board Charger Operations	13
Machine Operation	14
Battery Maintenance	15
Trouble Shooting	16
Preventive Maintenance Worksheet	18
Warranty Policy	20
Machine Delivery Form	
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## **Machine Information**

Please fill this area out at the time of installation for future reference.

Model Number:
Serial Number:
nstallation Date:
Dealer:
Dealer Contact:
Address:
City, State, Zip
Phone Number

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

To register for warranty, fax or go online and register today!

FAX 866.632.6361

or

www.factorycat.com or www.tomcatequip.com

R.P.S. Corporation P.O. Box 241, Racine, WI 53401 1.800.450.9824

## **Safety Message**

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

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

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

This is intended for commercial use. It is designed to be used on hard floors in an indoor environment.

## 1. Do not operate unit:

Unless trained and authorized.

Unless operator manual is read and understood.

If unit is not in proper operating condition.

Outdoors or exposed to rain.

For picking up hazardous materials/dust.

On surfaces having a gradient exceeding 2%.

Parking brake is functioning on the machine.

#### 2. When operating unit:

Remove loose objects from the floor that may be projected from the revolving brushes.

Keep hands and feet away from revolving brushes.

Do not operate machine where flammable liquids are present.

Use extreme caution when maneuvering.

#### 3. Before leaving:

Make sure machine is turned off.

Stop on level surfaces.

Disconnect batteries.

#### 4. Before servicing:

Stop on level surface, and secure machine.

Disconnect batteries.

#### 5. Before discarding machine:

The batteries must be removed and properly disposed of.

## **Safety Precautions**

**Warning:** Hazardous voltage. Shock, burns or electrocution can result. Always disconnect the batteries before servicing machine.

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

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

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

**Warning:** Do not store outdoors or pressure wash. Prevent from getting electronic components wet.

**Warning:** The use of parts and solutions other than recommended by the manufacturer may cause damage or endanger people.

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

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

**Warning:** Only operate this machine from the operator's seat. It was not designed to carry passengers.

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

**Warning:** Do not attempt to push or pull the machine without first manually overriding the parking brake and disconnecting both leads to the traction motor.

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

**Warning:** Understand the dynamic braking system before you operate the machine on ramps. Machine does not coast. Releasing the foot pedal will automatically apply braking force, and stop the machine.

**Warning:** Do not park the machine on ramps or slopes. The machine has a parking brake, but it is recommended that it is always parked on level ground.

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

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

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

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

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

**Warning:** Do not operate over electrical floor outlets, may result in serious injury.

Perform task at hourly or calendar interval, whichever comes first.	Every 6 Hours or Daily	Every 30 Hours or Weekly	Every 120 Hours or Monthly
Inspect Brush			
Clean Filter			
Clean Hopper			
Inspect Batteries and Elect	trolyte Levels		
Inspect for Vacuum Leaks			
Inspect/Replace Dust Curt	ains		
Inspect Wheels/Tires			
Grease Front Tire			
Inspect Cables and Springs	5		
Inspect Nuts, Bolts, Fasten	ers		

Specs TR

Body Construction		
Frame Construction:	3/16" Coated Steel	
Front Wheel:	(1) 10" dia. x 3"	
Rear Wheel:	(2) 14" dia. x 5"	
Body Dimensions:	64" x 37" x 55"	
Weight (w/o batteries):	850 pounds	
Weight (w/ batteries):	1,140 pounds	
Brush System		
Sweeping Method:	Direct Throw	
Main Broom Diameter:	10 Inches	

Main Broom Diameter: 10 Inches 32" x 10" Main Broom Length: Main Broom Motor Horsepower: 1 HP Main Broom Speed: 435 RPM Main Broom Suspension: Trailing Arm Side Broom Size: (2) 17 Inch Side Broom Power: (2) 0.3 HP Side Broom Speed: 0-100 RPM Hopper Capacity: 4.2 Cubic Feet Hopper Material: Coated Steel

**Filtering System** 

Filter Material:	Polymer Felt	
Filter Rating (Standard):	2.5 to 1.0 Micron	
Filter Rating (Optional):	1.0 to 0.2 Micron	
Size:	5,182 Sq. Inches	
Vacuum:	250 CFM	

**Battery System** 

Battery AH Rating (Standard):	245 AH	
Battery AH Rating (Optional):	Up to 395 AH	
Battery Run Time:	Up to 6 hours	
Charger (Standard):	24V 25 Amp 110V	

**Drive System** 

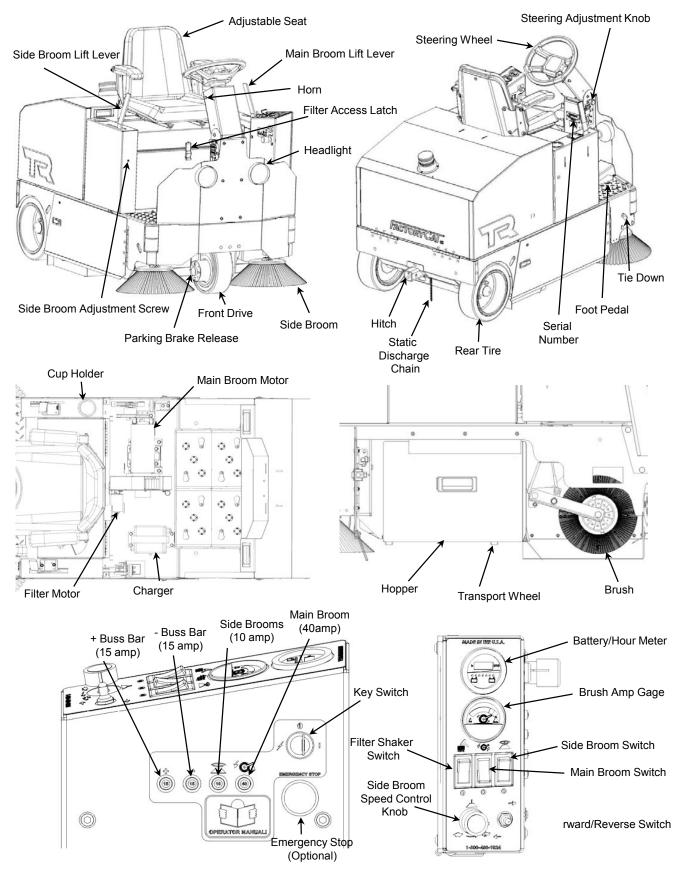
Front Drive Description:	Up to 1.5 HP All	
Forward Speed Control:	Gear/Sealed	
Reverse Speed Control:	0-320 ft./min (4 mph)	
General	0-200 ft./min (2 mph)	
Cleaning Width & Rate/Hour:	46"/60,568 sq. ft./hr.	

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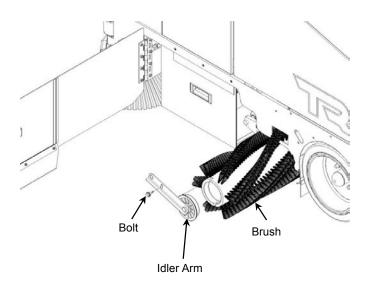
All Rights Reserved.

Since our policy is one of constant improvement,
All specifications are subject to change without notice.

# **Machine Controls and Features**

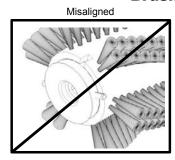


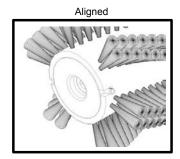
# **Main Broom Removal**



- 1. Turn the machine off and remove key.
- 2. Remove bolt on the idler arm.
- 3. Remove idler arm and pull out the old brush.
- 4. Slide the new brush in. Once you have the new brush on the driver, spin until you feel the brush engage the driver
- 5. Reinstall idler arm and tighten bolt.
- 6. If the brush is not level, then loosen bolt and run the brush for a couple seconds.
- 7. Tighten bolt and check to make sure the brush is level.

#### **Brush Driver**





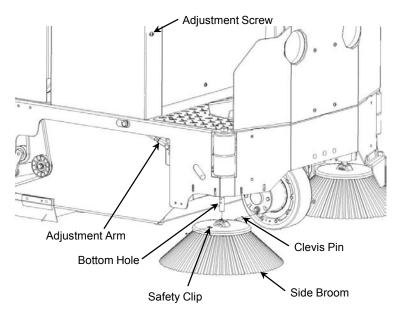
## **M** NOTICE

For Correct Brush Application Contact your Local Dealer.

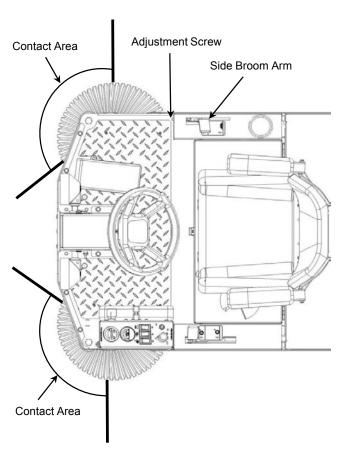
## **Main Broom**

Part Number	Brush Type
8-401U	Union
8-401N	Nylon
8-401	Poly
8-401NN	Carpet
8-401W	Wire
8-401US	Union Steel
8-401S	Poly and Steel

# **Side Broom Removal and Adjustment**



- 1. Lower the side broom by pulling forward on the lever and sliding to the rear.
- 2. Remove the side brooms from the box.
- 3. Install the side brooms onto the motor shaft. Use the bottom hole on the shaft. Line up the holes and install the clevis pin and safety clip.
- 4. Check side broom height is correct.
- 5. If needs adjustment see below.

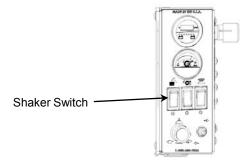


- To adjust side broom height turn adjustment screws clockwise to raise, counter clockwise to lower the brooms.
- The right side broom bristles should contact the floor in a 10 o'clock to a 3 o'clock pattern when the broom is in motion.
- 3. The left side broom bristles should contact the floor in a 9 o'clock to a 2 o'clock pattern when the broom is in motion
- 4. To raise the side brooms higher when in the up position adjust the adjustment arm.

## **Side Broom**

Part Number	Brush Type	Size
4-402	Poly	17"

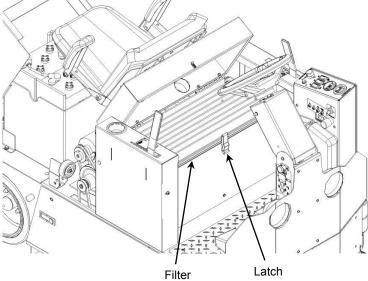
## **Filter Service**





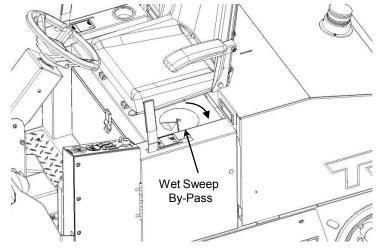
If dust begins to blow through the vacuum motor then the filter should be clean.

1. Clean the filter by pressing the shaker switch for 20 seconds.



- 1. To remove filter open hood.
- 2. Undo latch and open filter chamber lid.
- 3. Pull out filter.
- 4. Reinstall new filter.

# **Wet Sweep By-Pass**



## **A** CAUTION

When sweeping with water on the floor, make sure to open the wet sweep by-pass. This Reduces dust control.

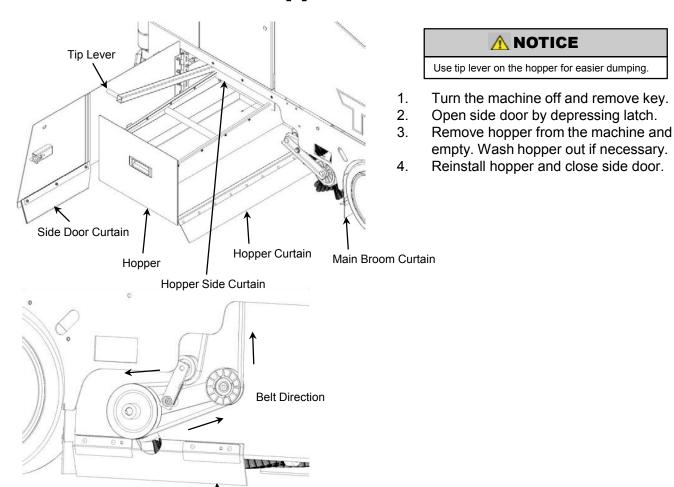
- Rotate the wet sweep by-pass door clockwise to open
- 2. Once back on dry floors close the wet sweep by-pass door.

## **Filter**

Part Number	Material Type
4-402	Polypropylene 1 micron
4-502F	Polypropylene .02 micron
4-502N	Nomex (fire resistant) 1 micron

**M** NOTICE

# **Hopper Removal**



Inner Side Curtain

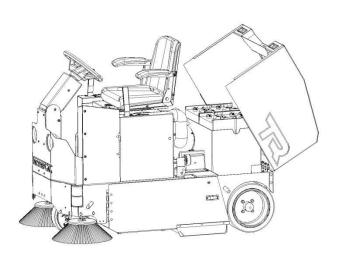


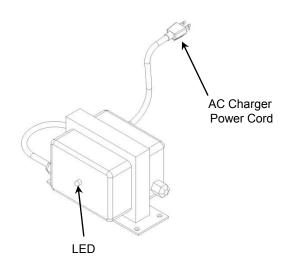
\*Curtain Kit includes 349-1165, 349-5710, 349-5750, 349-9509 and 349-9510.

## **Curtains**

Part Number	Description	Size
*349-5700	Curtain Kit	NA
349-1165	Main Broom Curtain	1/8"
349-5710	Hopper Curtain (Standard)	1/16"
349-5710A	Hopper Curtain (Option)	1/32"
349-5710B	Hopper Curtain (Option)	1/8"
349-5750	Inner Side Curtain	1/8"
349-9509	Side Door Curtain	1/16"
349-9510	Hopper Side Curtain	1/16"

## **On Board Charger Operations**





## **M** DANGER

Always charge batteries in a well ventilated area. Batteries emit hydrogen gas. Keep sparks and flames away, explosion or fire can result. Always wear protective clothing and a face shield, or have a skilled mechanic do the battery maintenance.

## **⚠** CAUTION

The following instructions are intended for the 24v charger supplied with the machine. Do **NOT** use any other charger with this machine.

## **A** CAUTION

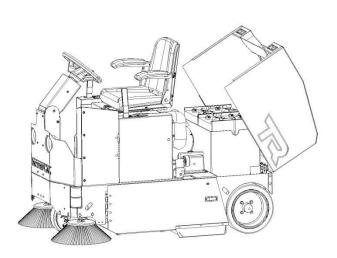
Do **NOT** charge the batteries unless the water is slightly higher than the plates. If needed, add distilled water to just slightly cover the plates. Be careful not to over fill. Batteries can overflow during charging.

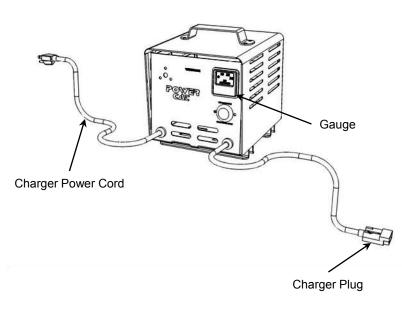
## **A CAUTION**

Make sure the hood is **ALWAYS** open when charging the machine.

- 1. Turn machine off.
- 2. Open the hood.
- Plug the AC charger power cord into a grounded 110 volt standard wall outlet.
- The charger will automatically begin charging and the LED on the charger will light, indicating charge current is flowing.
- 5. The OBET chargers are equipped with a electronic timer. At the battery gassing threshold, (2.3v per cell) the timer will activate and run for three hours.
- 6. After three hours the charger will shut off. Indicated by an extinguished LED.
- 7. Unplug the AC charger power cord.
- Check water level for each battery and add if needed.

# **Off Board Charger Operations**





## **M** DANGER

Always charge batteries in a well ventilated area. Batteries emit hydrogen gas. Keep sparks and flames away, explosion or fire can result. Always wear protective clothing and a face shield, or have a skilled mechanic do the battery maintenance.

#### **A** CAUTION

The following instructions are intended for the 24v charger supplied with the machine. Do **NOT** use any other charger with this machine.

#### **A CAUTION**

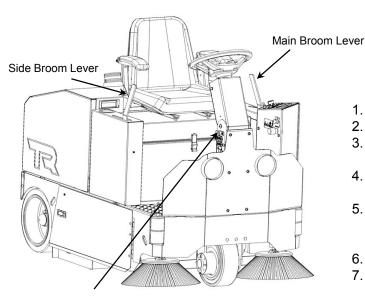
Do **NOT** charge the batteries unless the water is slightly higher than the plates. If needed, add distilled water to just slightly cover the plates. Be careful not to over fill. Batteries can overflow during charging.

#### **A CAUTION**

Make sure the hood is **ALWAYS** open when charging the machine.

- 1. Turn machine off.
- 2. Open the hood.
- 3. Plug in the red 50 charger plug from the charger into the machine.
- Plug the charger power cord into a grounded 110 volt standard wall outlet.
- The charger will automatically begin charging and automatically shut off when fully charged. (check gauge)
- 6. When fully charged and the charger has turned off, unplug the charger from the wall outlet.
- 7. Unplug the red 50 charger plug from the machine.
- 8. Check water level for each battery and add if needed.

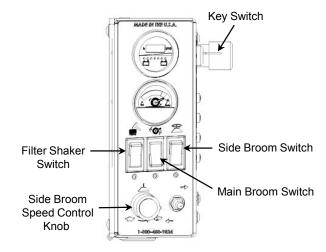
# **Machine Operation**



Steering Adjustment Knob

## **Pre-Sweep**

- 1. Disconnect charger and close hood.
- 2. Adjust the seat and steering pedestal.
- 3. Turn the key switch on and drive to the area to be cleaned.
- 4. Turn on the main broom and side broom switch.
- Adjust the speed of the side brooms to the desired speed and confirm the side brooms height is correct.
- 6. Lower the main broom and side broom.
- 7. Drive slowly.



# **After-Sweep**



- 1. Stop and shake filter.
- 2. Turn machine off and remove the key.
- 3. Remove hopper and clean.

## **Battery Maintenance**

R.P.S. CORPORATION P.O. BOX 368 RACINE, WI 53401 FAX 866.901.3335 www.factorycat.com

or

www.tomcatequip.com

#### 1. New Battery Installation

- \* Inspect new batteries for damage. Wet spots may indicate a broken battery case.
- \* Immediately notify transportation company if damaged batteries are found.
- \* If batteries are received "wet", they must be charged monthly.
- \* Do not stack batteries on top of one another and never store on concrete. Store on wooden board.
- \* Dry charge batteries should be activated in accordance with the battery manufacturers instructions.
- \* Batteries must be installed in accordance with the machine manufacturers instructions. Wear eye protection, all connections should be tight, and always charge batteries immediately after installation.

#### 2. Battery Inspection and Maintenance

- \* Use only distilled water to water batteries at least once a week.
- \* Fill all cells to the proper level. Do not overfill! The proper level is 1/2" above plates.
- \* Do not allow the electrolyte level to drop below the top of the separators.
- \* Use solution of bicarbonate of soda to wash any acid off of the batteries.
- \* Keep the top of the batteries clean and do not allow any foreign material to enter the cells.
- \* Remove any corrosion from battery post and apply a non-metallic grease of protective spray. Only apply the protective material after cleaning post and tightening the cables.
- \* Replace any cables that are damaged, frayed, or corroded.
- \* Weekly "spot" check at least (3) cells for specific gravity readings.
- \* If a low reading is found check:
  - 1. Charger functioning properly.
  - 2. Connections are tight.
  - 3. Check electrolyte levels.
  - 4. Check all other cells.
  - 5. Determine age of batteries.
  - 6. Estimate "cycle" total.
  - 7. Determine if replacement is required (3 years/600-750 cycles)

SPECIFIC GRAVITY @ 80°F (27°C)	BATTERY CONDITION
1.265	100% CHARGED
1.225	75% CHARGED
1.190	50% CHARGED
1.155	25% CHARGED
1.120	DISCHARGED

#### 3. Battery Charging Methods

- \* Read and Understand the Operator's Manual issued with the charger and the machine.
- \* Do not charge battery if the machine was unused that day.
- \* Always charge batteries monthly if machine is not used for extended periods of time.
- \* Only use charger provided by the manufacturer to charge this machine.
- \* Verify charger output is the correct for battery size. Voltage must be the same and amperage approximately 10% of battery size. (24 volt/140 or 210 ah battery requires a 24 volt/18 amp charger).

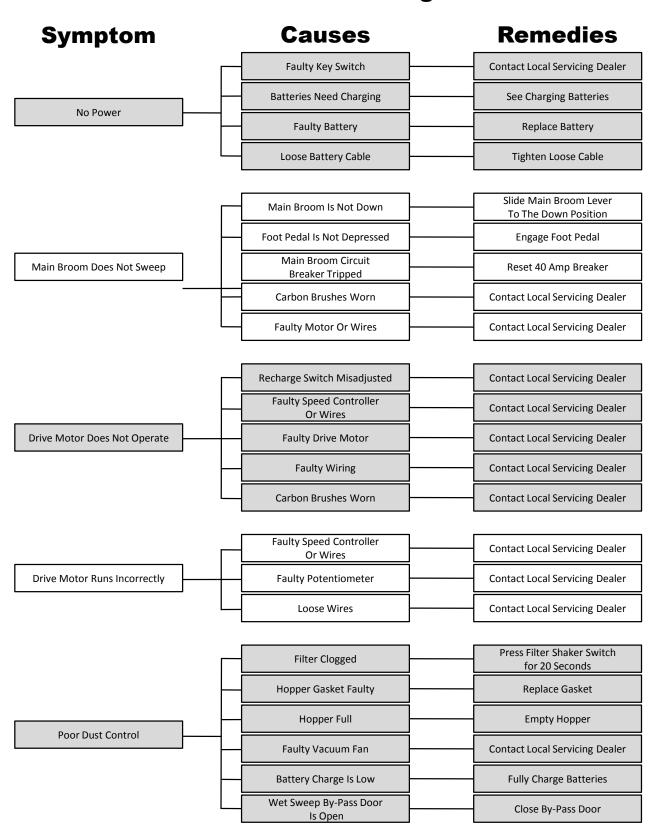
#### 4. Trouble Shooting Batteries

- \* Check terminal post connections for any that may be loose or have corrosion.
- \* Check cells with a hydrometer and note the specific gravity in each. A variation of .030 is poor.
- \* Check the voltage of each battery (must be disconnected). 12-volt batteries should read 12.7 volts and 6-volts batteries should read 6.3 volts to be considered "fully charged".
- \* Recharge batteries if everything up to this point checks out ok, and repeat process of checking all cells specific gravity and voltage.
- \* If poor run time is noted (less than 1/2 normal), one or more of the batteries need replacement.
- \* If modest run time is noted (approximated 3/4 of normal) the batteries are probably nearing the end of their useful life.

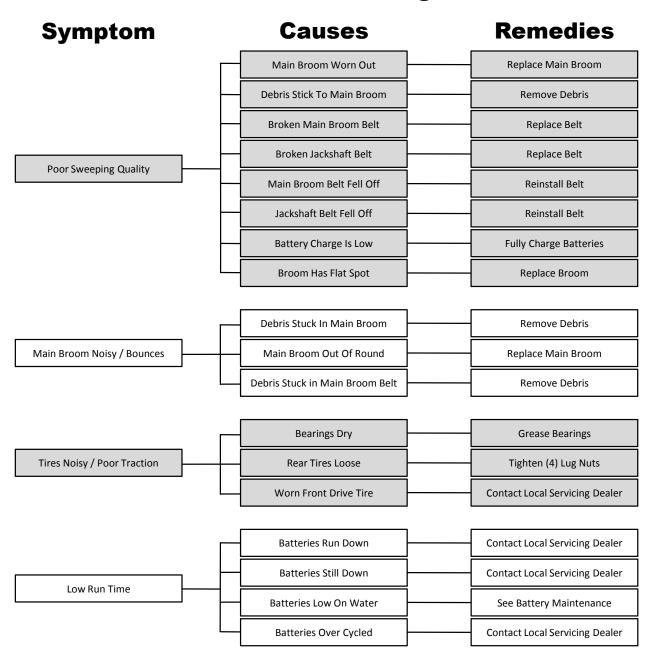
#### 5. Battery Replacement

- \* Wear eve protection and gloves!
- \* Carefully remove the battery cables and old set of batteries.
- \* Clean all cables, battery tray and compartment, and replace any with damage or corrosion.
- \* Inspect new batteries for damage according to Section 1
- \* Inspect batteries for proper electrolyte level before installation.
- \* Carefully install batteries in machine. Large batteries may weigh over 100 pounds and will require a hoist or additional people. Never stand under an elevated battery
- \* Install cables, being sure all terminals and connections are clean and tight.
- \* Apply a light coat of non-metallic grease/protective coating.

# **Trouble Shooting**



# **Trouble Shooting**



# **TR SERIES**

## PREVENTIVE MAINTENANCE WORKSHEET

CUSTOMER INFORMATION						
CUSTOMER						
ADDRESS						
CITY			STATE		ZIP COI	DE
MACNINE INFORMATION						
MODEL#				CEDI	۸۱ <del>#</del>	
			T		SERIAL#	
WORK ORDER#		HOU	JR METER			ATE:
SERVICE COMPANY:					ECH:	
BATTERY CONDITION		Ce	#1	С	ell #2	Cell #3
Battery #1 Hydrometer Reading						
Battery #1 Water Condition						
Battery #2 Hydrometer Reading						
Battery #2 Water Condition						
Battery #3 Hydrometer Reading						
Battery #3 Water Condition						
Battery #4 Hydrometer Reading						
Battery #4 Water Condition						
Clean Battery Tops, Check Batte	ery Cables and To	erminal Con	dition			
NOTES:						
BRUSH CONDITION						
Main Broom Fiber Length		Ro	tated Brushes	3		
Broom Driver	Good	W	orn	Needs Re	placement	
Broom Driver & Idler Hubs	Good	Worn		Needs Replacement		
Side Broom Condition	Good	W	orn	Needs Re	placement	Rotated Side to Side
CHECK OPERATION AND CON	IDITION OF:	INSEC	REPAIR		PRO	BLEM
Steering Wheel Tilt Mechanism						
Key Switch						
Horn						
Head Lights						
Battery / Hour Meter Gauge						
Broom Amp Gauge						
Main Broom Switch						
Side Broom Switch						
Filter Shaker Switch						
Forward / Reverse Switch						
Foot Pedal						
Back Up Alarm (Reverse Only)						
Side Broom Speed Control Rhed	ostat					
Main Broom Belts						

Main Broom Lift Cable
Side Broom Lift Mechanism

# **TR SERIES**

## PREVENTIVE MAINTENANCE WORKSHEET

	1			
Side Broom Operation	ļ	<del>                                     </del>		
Strobe Light				
Battery Charger Connectors				
Battery Charger				
CLEAN AND/OR LUBRICATE:	INSEC	REPAIR	PROBLEM	
Filter (20 Seconds w/ Shaker Button	111000		TROBLEM	
Hopper				
Side Broom Linkage				
Remove Broom & Check Drivers For Debris				
Steering Chain				
VISUALLY INSPECT:	INSEC	REPAIR	PROBLEM	
Seal Under Filter				
Hopper Curtain				
Hopper Side Curtain				
Main Broom Curtain (Rear)				
Side Door Curtain				
nner Side Curtain				
Vacuum Hose				
Drive Wheel Condition				
Daan Milaada Canditian		l		
Rear Wheels Condition  COMMENTS:				
COMMENTS:				
comments:				
COMMENTS:			Date:	
chnician's Name:			Date:	

# **STANDARD WARRANTY POLICY (RPS Corporation)**

RPS Corporation warrants its machines, parts and accessories to be free of manufacturer's defects for the periods specified below. Warranty will be granted at the sole discretion of RPS Corporation and is subject to final claim and parts review by R.P.S. Corporation and its vendors. This policy is effective January 1, 2010 and is subject to change on production units at a future date.

#### **COVERAGE, EXCLUSIONS AND LIMITATIONS:**

Coverage: All Models sold (Sweepers, Scrubbers, Burnishers)
Parts: 36 months / 1,500 hours on "Power On" hour meter

Labor: 12 months

Travel: 3 months (150 mile maximum)

Poly Tanks: 7 Years
OEM Parts: 3 months

Validity: Fully completed Machine Delivery Form (online or fax) is on record at RPS.

Limitation: Warranty will begin on date of machine installation to end-user or 6 months

after shipment from RPS Corp to the distributor if unsold at that time.

This warranty includes all parts on the machine except normal wear parts. Some of these exceptions are:

- 1. Any Brooms, Brushes, Pads or Pad Drivers including Center Clip Retainers
- 2. Floor Seals, Wipers, Splash Curtains, Squeegees or Gaskets.
- 3. Filters, Dust Collection Bags or Screens
- 4. The safety pins design to fail in shear, which are a fail-safe device
- 5. Belts, Hoses or Tubing.
- 6. Caster Wheels, Tires or internal tire tubes.
- 7. Vacuum motors with evidence of water/foam passage or more than 450 hours
- 8. Lights (Strobe, Headlights or bulbs).
- 9. The Batteries (see below).
  - ❖ NOT COVERED: Routine maintenance, adjustments or parts damaged from abuse, neglect, improper use of the machine, or lack of scheduled "daily, weekly, monthly" maintenance in accordance with our published PM Sheets.

**POLY TANKS:** 7 Years Coverage against leakage due to manufacturer's defect in materials or workmanship. **NOTE:** Freight coverage for 3-Years under the parts section of warranty.

**BATTERIES:** Warranted through battery manufacturer for **One (1) Year** (prorated) from the date of delivery. The battery manufacturer approves or denies the warranty coverage after analysis. We rely on solely on their review. **NOTE NOT COVERED:** Damage from lack of water, failure to use OEM charger, or non-distilled water.

Installing Dealer:  Location: (City, State):  End-User Company Name		Installed By:						
		Install Date:	Install Date:End-User Contact:					
		End-Us						
Address:	City/State: Zip		Zip					
Phone:		Fax:		Email:				
Model:		Serial #:		Hour Meter:				
BUYER'S REPR	ESEI	NTATIVE HAS RECEIVED INSTRUCTION IN P	ROPER OPERATION OF TH	IE FOLLOWING CONTROLS AND	FEATURES:			
SCRUBBERS								
		Filling solution tank, Solution tank sight t	ube, Solution drain hose	or valve for flushing and freezing	conditions			
		Adjusting controls & operation, Double scrubbing, Squeegee lift delay, vacuum switch (horn honking) and vacuum timer Recovery tank draining & cleaning, vacuum screen removal and cleaning, drain saver basket emptied.						
		Shroud and pad/brush removal and insta		· ·				
		Side Wiper and Curtain adjustment and maintenance for water control						
		Solution valve and filter operation (removal and cleaning)						
		LCD display operation, 4 hour meters (key switch, brush, traction drive, vacuum)						
		Tank tilt back feature, only when both tanks are fully drained						
		Squeegee hose removal and checking for clogs						
BURNISHERS								
		Train and have customer demonstrate or	roner removal and replace	ement of hurnishing had				
			stomer demonstrate proper removal and replacement of burnishing pad ge and proper operating range to avoid tripping the circuit breaker					
SWEEPERS		and the second Sensor and the period of the second	8 8					
OWEE, ENG		Demonstrate proper removal and replace	amant of main broom and	d sida braams				
		Demonstrate proper removal and replacement of main broom and side brooms  Method for cleaning the dust filter, empting out the debris hopper and correct installation						
		Trained on the "Wet-Sweep" bypass door and not to operate through standing water						
ALL MACHINES		Trained on the Wet Sweep Bypass doo	and not to operate time	agn standing water				
ALL WACHINE			6					
		Checking battery electrolyte level and confirm monthly check that battery terminals are tight						
		Parking brake override						
		Charging operation and customer understands batteries have limited "cycles" and recharging = 1 cycle						
		Seat and steering wheel adjustment	list of WADNINGS in the	Dagratar manual				
		Customer has read and understands the		·				
		Battery and Machine Maintenance Guide Manufacturer's website is a good source						
			_					
operating the		above items the buyers representative has hine.	received the operator's r	manual and been advised to read	d the manual before			
Installed By (p	rint)	)		Signature				
Ruvers Renres	enta	ative (print)		Signature				

Buyer agrees to pay for any repairs, adjustments, or secondary training that manufacturer determines is excluded from the warranty.