

Product Warranty/Procedures Manual (U.S. Version)

**CONFIDENTIAL
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Effective April, 2019

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Section 1

Services to be provided by PowerBoss

Service Assistance

Services Provided:

- A. PowerBoss will support the Distributor, as required, in resolving customer service problems.
- B. PowerBoss will evaluate the performance in the marketplace of new and existing products.
- C. PowerBoss will manage the product warranty and policy adjustments.
- D. PowerBoss will maintain and update parts catalogs on-line as necessary.
- E. PowerBoss will send out via email all Tech Service Bulletin's as soon as they are released and post them to the on-line dealer site.

Section 2

Services provided by the PowerBoss distributor

Distributor Responsibilities

1. For each request for warranty coverage, it is the Distributor's responsibility to determine what is eligible under PowerBoss' warranty provisions, and what is the owner's responsibility to repair and maintain. The Distributor is responsible to inform the owner, that product failures due to neglect, misuse, lack of proper maintenance, misapplication or product alteration are not eligible for warranty consideration. Only defects, which are a direct result of either a manufacturing defect or product failure, are eligible to be considered for warranty reimbursement.
2. It is the Distributor's responsibility to ensure that all service technicians attend at least one PowerBoss conducted technical service school, and maintains their competency on PowerBoss Equipment.
3. It is the Distributor's responsibility to complete the New Unit Inspection and Preparation Check Sheet shown in Appendix A **when the distributor takes possession of the machine** and return a copy to PowerBoss prior to the unit being eligible for any warrantable reimbursement.

Qualified Personnel

It is to the Distributor's advantage to employ qualified technicians to perform service work on PowerBoss equipment. Each service technician must attend at a minimum one service school, which is conducted by PowerBoss and must maintain their proficiency by either continuing to work on PowerBoss equipment, or through on-going training at the Distributor's location.

Tools

It is to the Distributor's advantage to maintain a Standard Dealer Tool List. Check List of standard tools is located in Appendix. Form should be filled out and returned to warranty@powerboss.com

Technical Library

Each facility must make available to the service technicians updated manuals, including all service bulletins for each product line. Familiarize the staff with resources such as the on-line dealer site.

Section 2

Services provided by the PowerBoss distributor

New Unit Inspection and Preparation

1. It is the Distributor's responsibility to inspect and prepare each unit before the customer takes possession. This encompasses a detailed inspection, setup, adjustments as necessary, and cleaning prior to its delivery (refer to the New Unit Inspection and Preparation Check Sheet). There is no factory reimbursement for this work. Distributors however, may receive reasonable reimbursement for work that was in addition to the standard preparation, adjustment, and setup and which is a direct result of a manufacturing defect or product failure. Reimbursement for this work is received by means of the standard warranty form and process.

NOTE: The New Unit Inspection and Preparation Check Sheet shown in appendix A, must be completed, and a copy returned to PowerBoss, prior to the unit being eligible for any warrantable reimbursement. (A copy of the form from Appendix A may be completed and submitted)

2. It is the Distributor's responsibility to ensure that the end user is properly oriented as to the use and care of their PowerBoss equipment with machine user guide.
3. The Distributor must ensure that all PowerBoss customers are familiar with the warranty policy provisions and exclusions as it relates to their machine(s).

Section 2 Services provided by the PowerBoss distributor

Registration of Product Sold

It is the responsibility of the Distributor to complete and submit a Warranty Registration / Installation Report (Shown on the following page) for each unit which is sold or placed in the Distributor's rental or leasing fleet.

This form is to be submitted to PowerBoss within 10 days after the unit has been placed into service. The registration form is located at the on-line dealer site. Download, fill out, and submit the form electronically. A copy should be kept with the Distributor's files, and a copy is to be submitted to PowerBoss. PowerBoss utilizes this document to register the installation of the machine, identify the purchaser, and the unit's installation date. (If the electronic form is not accessible, a copy of the form from Appendix A may be completed and submitted to PowerBoss)

No warranty claims as a result of either a manufacturing or material defect, which was found during pre-delivery preparation, will be honored until the New Unit Inspection and Preparation Check Sheet has been returned, and machines are not eligible for warranty coverage after installation, unless the Registration / Installation Report has been completed and filed by PowerBoss.

"Both of these documents must be received in order for a machine to be validated for warranty coverage."

It is the Distributor's responsibility to make sure that all forms are complete and legible.

Forms that do not meet these requirements will be returned.



175 ANDERSON STREET
 ABERDEEN, NORTH CAROLINA 28315 USA
 910-944-2167 • FAX: 910-944-3199

WARRANTY REGISTRATION / INSTALLATION REPORT

Note: This report must be completed, signed and returned. All information below must be complete for proper warranty registration.

(PLEASE PRINT IN BLOCK LETTERS.)

CUSTOMER		DISTRIBUTOR	
Company Name	<u>All Types Industrial Equip.</u>	Company Name	<u>All Class Sweeper Co.</u>
Address	<u>1313 Highway #5 N.</u> <u>New Castle, WA.</u>	Address	<u>1758 Northern Blvd.</u> <u>Portland, OR.</u>
Country	<u>Lincoln</u>	Country	<u>USA</u>
Country	<u>USA</u>	Telephone	<u>(503) 555-8989</u>
Telephone	<u>(808) 555-6767</u>		
Telex	<u>(808) 555-6768</u>		
Key Contact*	<u>Mr. John Smith (Plant Sup.)</u> <small>* FOR FUTURE BULLETIN MAILINGS</small>		
Model No.	<u>SW/10XV</u>	Serial No.	<u>99677091</u>
Engine Mfr.	<u>Kubota V2203 DSL.</u>	Serial No.	<u>V2203-12345</u>
Original Invoice No.	<u>567888</u>	Hour Meter	<u>.9</u>
		Date Installed	<u>04 April 2003</u>

- OPERATION OF CONTROLS**
- Directional pedal
 - Steering
 - Brakes
 - Parking Brake
 - Throttle
 - Engine Controls & Instruments
 - Operator Safety Procedures
 - Hydraulic Control Levers
 - Hi-Dump Controls
 - Sweeping Controls
 - Scrubbing Controls
 - Brush Adjustment Knob
 - Filter Shaker Button
 - RTR

- MACHINE OPERATION**
- Describe All Safety Precautions
 - Starting Engine
 - Instruction Manual, Explain Use Of
 - Typical Sweeping Procedures
 - Typical Scrubbing Procedures
 - Dumping Hopper, Using Safety Lock
 - Using Hopper Safety Arm
 - Solution Tanks
 - Accessories

- LUBRICATION AND MAINTENANCE**
- Lubrication Chart
 - Changing Hydraulic Oil, Capacity Of Tank
 - Location of Hydraulic Oil Filter
 - Hydraulic Oil Recommended Specification
 - Battery Access & Maintenance
- Engine:
- Dipstick
 - Changing Engine Oil
 - Fuel Tank (Or LPG Tank)
 - Changing Oil Filter
 - Servicing Air Cleaner
 - Use Of Engine Manual
 - Engine Head Torquing Procedure
 - Plug Gap, Point Gap
 - Diesel Engine
 - Radiator
- Replacing Dust Filters
 - Replacing Brushes / Brooms
 - Dust Skirt Floor Clearance
 - Hopper Adjustment
 - Location Of Fuses
 - Brake Adjustments
 - Squeegee Adjustment
 - Squeegee Replacement

CHECK ONE OF THE FOLLOWING

The Equipment Being Installed:

- Replaces a Minuteman Powerboss unit (if so, indicate the model number of the machine being replaced SW/75)
- Replaces a competitive unit. (if so, indicate brand _____ and model _____ of replaced unit)
- Is a new or additional application for an existing customer

TYPE OF BUSINESS

Equipment Leasing

SIZE OF FACILITY

- Less than 25,000 sq. ft.
- 25,000 to 250,000 sq. ft.
- More than 250,000 sq. ft.

I have checked the equipment and acknowledge that I have been instructed by a Minuteman® PowerBoss® Distributor Representative and understand all of the procedures and safety measures checked above. I further acknowledge I have received a copy of the Minuteman® PowerBoss® (Limited) Product Warranty.

<u>Bill Smith</u> Customer Signature	<u>OWNER</u> Title	<u>04 APRIL 03</u> Date
<u>Roger Alise</u> Dealer Signature	<u>Sales</u> Title	<u>05 APRIL 03</u> Date

Section 3

PowerBoss Warranty Responsibilities

Original Purchasers

The warranty to the original equipment purchaser shall commence on the date of delivery providing that the Warranty Registration/Installation Report has been completed and sent to PowerBoss within the first thirty (30) days after installation.

After receiving a proof of purchase for any PowerBoss product covered by warranty, PowerBoss agrees to the following obligation for the duration of the product's warranty:

1. To warrant against defects in material and workmanship of products sold under the PowerBoss brand name in accordance with the terms and conditions outlined in the warranty agreement.
2. To reimburse PowerBoss authorized Distributors the cost of repairs and / or replacement of parts on its products, which may become defective under normal use. Labor and parts reimbursement is as defined in Section 3 of this manual.
3. PowerBoss will supply technical assistance to the Distributor in an effort to resolve any service problem that may arise.
4. PowerBoss will provide technical updates on a regular basis. It is the Distributor's responsibility to see that all Service Technicians are kept informed.

Items Not Covered Under Warranty

1. Products, which have been subject to unauthorized modification, neglect, or abuse.
2. Products no longer owned by the original purchaser.
3. Products suffering shipping or freight damage, normal wear, accident or damage caused by improper use of the equipment.
4. Repairs necessary to correct any failure due to improper New Unit Inspection and Preparation by the selling Distributor.
5. Time or expense to clean a unit.
6. Diagnostic labor and return trips to diagnose problem.
7. Replacement of filters, belts, anti-freeze lubricants or hydraulic oils.
8. Spray Nozzles and Check Valves
9. Electrical items such as light bulbs, fuses, switches, circuit breakers and connectors. This includes head, tail and safety light bulbs.
10. Any repeat or shop comeback repair as a result of poor service work or improper diagnosis.
11. No flaps, seals, skirts or gaskets will be considered for warranty reimbursement.
12. Squeegee rubbers, back-up strips and side squeegees will not be covered under warranty.

Section 3 PowerBoss Warranty Responsibilities

13. Squeegee caster wheels.
14. Vacuum, heater, and drain hoses where applicable, are warranted for (90) days.
15. Hydraulic hoses where applicable, are warranted for twelve (12) months. (3 years under Parker GPP Program, contact your local Parker Hydraulic distributor)
16. Tune-up parts (plugs, points, rotor buttons, plug wires, distributor caps, condensers, injectors, etc.) will not be covered under warranty.
17. Brooms and Brushes that fail due to workmanship or materials will be replaced for ninety (90) days from the date of purchase. Any failure occurring after ninety (90) days will be paid on a pro-rated basis for twelve (12) months.
18. Tires that fail due to workmanship or materials will be replaced for ninety (90) days from the date of purchase. Any failure occurring after ninety (90) days will be paid on a pro-rated basis for twelve (12) months.
19. Batteries that fail due to workmanship or materials will be replaced for ninety (90) days from the date of purchase. Any failure occurring after ninety (90) days will be paid on a pro-rated basis for twelve (12) months.
20. Battery Chargers that fail due to workmanship or materials will be replaced for 1 year from the date of purchase.

21. Note: Any part, except hydraulic hoses, which failed for any reason and which was replaced or repaired with a part or component that was purchased from a source other than PowerBoss, is not eligible for warranty consideration (neither labor nor travel).

The distributor assumes full liability for any subsequent failure or injury resulting from the usage of parts, including hydraulic hoses, which they purchased from sources other than PowerBoss.

22. Damage of or that which was caused by utilization of any part or component not authorized by or purchased from PowerBoss is not eligible for warranty reimbursement; parts or labor.
23. When repairing leaking hydraulic cylinders, valves, motors, or pumps, unless there is internal damage to the component, the distributor must first attempt to repair the component by replacing the seals prior to its replacement. **Note:** If the component could be rebuilt, the distributor will be reimbursed only for the cost of the seals and associated labor if within the warrantable period.
24. Freight costs and duty on warranted parts is not eligible for reimbursement.
25. All parts returned to PowerBoss must be complete and as represented on the warranty claim. If otherwise, they will be held for thirty (30) days, and then scrapped. The distributor will be informed by means of their warranty claim, which will be denied.
26. The replacement of a complete assembly, unless preauthorized by the PowerBoss warranty manager.

Section 3

PowerBoss Warranty Responsibilities

Falsification of Warranty

PowerBoss reserves the right to conduct warranty audits at the Distributor level on a periodic basis. If an audit reveals any misrepresentation regarding warranty information, a charge-back will be made covering any false or improper claims.

Dealer Certification and Labor Rate Reimbursement

PowerBoss realizes the importance of quality Aftermarket service and its impact on future machine sales. The parts certification program is designed to strengthen our relationship with our Distributors, and to better serve our mutual customers by encouraging them to stock high volume replacement parts and to supply only “Genuine PowerBoss Replacement Parts” for our customer’s machines.

Distributors will be reimbursed either 65% or 75% of their standard published shop labor rate, depending upon their certification status. The measurement of a certified Distributor is dependent upon three (3) factors:

1. Engine Diagnostic Tool Kit listed in Section 2 (minimum)
2. Must have at least 1 person per year attend our training school (minimum)

Labor reimbursement for our Distributors is dependent upon the above.

Section 3 PowerBoss Warranty Responsibilities

Labor Compensation - Flat Shop Rate

PowerBoss will reimburse the Distributors the labor hours listed, at the determined rate, for the specific warrantable operations for the repair(s) that are contained in the Shop Flat Rate Schedule (Section 5). Diagnostic labor is not covered. It is the Distributor's responsibility to obtain prior approval to claim excessive hours, if requested, prior to submitting the Warranty Claim Form. If prior approval was not obtained, the hours claimed on the form will be adjusted consistent with the Flat Rate Schedule (Section 5).

Distributor Compensation for Warranty

Compensation for warranty repairs made by the Distributor is triggered by the processing of the "Warranty Request Form". The Distributor must submit this form no later than thirty (30) days after the date of the repair. Late submissions are subject to rejection.

Upon completion of the warranty evaluation by the administrator, the respective Distributor will receive either a credit memo in the amount of the authorized labor, travel and/or parts reimbursement, or in the case where no labor, travel and parts is allowed a faxed and/or emailed explanation of the rejected/denied claim.

Note: No labor will be authorized to repair a machine with parts, except hydraulic hoses, which are not purchased from PowerBoss, and the distributor assumes full liability for any subsequent failure or injury resulting from the usage of parts, including hydraulic hoses, which were purchased from another source.

PowerBoss recommends that all product service be performed only by personnel trained in servicing the PowerBoss product line. If requested, it is the responsibility of the authorized PowerBoss distributor to determine if an end user is competent, both in knowledge and safety, to perform service work on their personal PowerBoss product. If so determined, the distributor may sell the parts to the end user, and PowerBoss will extend its standard parts warranty (labor excepted) to those parts which they installed. The standard warranty process is to be followed by the distributor for any defective components, which were installed by the end user.

Section 3 PowerBoss Warranty Responsibilities

Registration for Warranty Labor Rate

Adjustment of the Distributor's labor rate is achieved by copying, completing, and submitting the "Warranty Labor Rate Form." (WLRA-1, shown on the following page) along with paid shop invoices.

A warranty labor rate adjustment can be made one (1) time per year. The form must be received and approved by the PowerBoss Warranty Administrator prior to the new rate increase going into effect. For those Distributors who neglect to submit a change form, the dealer's current published rate on file will remain in effect.

A copy of the completed form on the following page should be sent to the "PowerBoss Warranty Administrator" along with three (3) copies of current, paid work orders listing your current posted labor rate.

Defective Part Reimbursement

PowerBoss will reimburse Distributors by means of a Credit memo either the "Dealer Net Price" or prorated price if appropriate, for all authorized warrantable parts and components, which were submitted by the dealer on a warranty claim and approved by PowerBoss during the review and evaluation. Only those items identified on the warranty claim with PowerBoss part numbers will be considered for warranty reimbursement. Replacement parts outside the original unit warranty are covered for a period of 90 days.

Note: Any part, except hydraulic hoses, which failed for any reason and which was replaced or repaired with a part or component that was purchased from a source other than PowerBoss, is not eligible for warranty consideration (neither labor nor travel).

The distributor assumes full liability for any subsequent failure or injury resulting from the usage of parts, including hydraulic hoses, which were purchased from sources other than PowerBoss.

Section 3

PowerBoss Warranty Responsibilities

Travel Time

PowerBoss will reimburse the Distributors a maximum of two (2) hours per call for those units, which are eligible for travel time. As with all labor reimbursement, travel will be reimbursed at either 75% or 65% of the published shop rate depending upon the certification status of the Distributor. For specifics, refer to the warranty coverage information contained in section 4 of this manual. Demonstration and stock units are not eligible for travel reimbursement.

Shipping & Freight Policy

PowerBoss products that arrive at your facility with visible damage must be handled by the carrier. All damages must be noted on the Bill of Lading or the Freight Bill. A claim must be immediately filed with the carrier that delivered the shipment. PowerBoss will not file claims with the common carriers; however, we will provide whatever assistance is needed in getting your claim resolved. Freight damage is not a warrantable item.

Section 3 PowerBoss Warranty Responsibilities

Completing “Warranty/Return Goods Claim”

1. Fill in all information requested on the “Warranty/Return Goods Form.”
2. All parts claims must be totaled and written in the correct spaces.
3. Labor is authorized per Section 5, the Shop Flat Rate Schedule. If the labor claimed deviates from the flat rate, it is the distributor’s responsibility to request an adjustment to that rate for this incident, from the PowerBoss Warranty Administrator prior to submitting the claim.
4. All forms should be typed and submitted via e-mail to warranty@powerboss.com.
5. Parts listed without PowerBoss part numbers will not be honored for warranty coverage. Miscellaneous items are not allowed.

Note: Only one repair per claim form

If more than one operation is performed, they must go on separate claim forms.

Example: You are called to repair headlights and fix an inoperable squeegee. They each must go on a separate claim form.

Example: Repair or replace an impeller belt and fan blade. Since the belt failure caused the fan blade to break, the claim for repair can be consolidated onto one (1) claim form.

**Warranty claim forms are to be submitted by e-mail to warranty@powerboss.com.
Warranty/Return Goods Claim Number. Should be a unique identifier such as the work order number written in the top right of form (see below).**

INTERNATIONAL, INC./ POWERBOSS

111 SOUTH ROHLWING ROAD
 ADDISON, ILLINOIS 60101
 PHONE: 800-323-9420 FAX: 800-422-6933

CLAIM MUST BE FILED WITHIN 30 DAYS FROM DATE OF REPAIR

DEALER		USER				CLAIM DATE MM/DD/YY		
Tri-State Industrial Equipment		Triangle Motor Company				June 2 nd 2003		
3232 Industrial Park Drive		1234 Like Like Highway				WARRANTY (MARK ONE)	DEALER	NAT'L ACCT.
Any Town, OH 55555		Honolulu, HI 12345				RETURN GOOD CLAIM	ORDERED IN ERROR	SHIPPING ERROR
						PLEASE NOTE: NON-WARRANTY GOODS MUST BE NEW AND CURRENTLY USED IN PRODUCTION.		
MACHINE UNDER WARRANTY						FACTORY USE ONLY		
MODEL NO.	DESCRIPTION	SERIAL NUMBER	DATE DELIVERED	DATE OF FAILURE	HRS IN SERVICE	CLAIM REVIEW		
PB45HKLPG	Rider Sweeper/SCRUBBER	17PB1234	01/01/17	01/01/17	1			
DESCRIPTION OF FAILURE OR REASON FOR RETURN		Muffler hanger broke. We replaced the muffler hanger.						
PARTS TO BE RETURNED (WARRANTY)						PARTS PURCHASED		
DESCRIPTION						FACTORY USE ONLY		
PART NUMBER	DESCRIPTION	QTY	INVOICE NO.	INVOICE DATE	DEALER COST	QUANTITY RECEIVED	WARRANTY	EXTENSION
7300000	SAMPLE CLAIM	1	502XXXXXX	01/01/17	\$7.05		Y / N	
							Y / N	
							Y / N	
TRAVEL		1					Y / N	
LABOR RATE PER HOUR \$	\$50.00/hr	.5					Y / N	
INSPECTION REPORT (FACTORY USE ONLY)	GROSS LABOR CREDIT	HOURS PER CLAIM	1.5	TOTAL LABOR ONLY	\$75.00	GROSS PARTS CREDIT		
DATE RECEIVED						DATE PARTS	REPLACEMENT ORDER NO.	
CONDITION OF GOODS		PREPAID	COLLECT	RETURN TO STOCK	RETURN TO VENDOR	SCRAPPED	FREIGHT CHARGES	
SERVICE INSPECTOR APPROVAL		RECEIVED BY	DATE				RESTOCKING % CHARGE	
		CREDIT	DATE				OTHER	

Section 3

PowerBoss Warranty Responsibilities

Returning Parts

1. Parts are not to be returned to PowerBoss without a Return Authorization. Expenses associated with unauthorized parts returns are subject to being billed back to the distributor. Additionally, they would lack the ability to be tied to a warranty claim, if appropriate, thereby disallowing credit for the requested claim.
2. All failed parts must be held by the Distributor for thirty (30) days after receipt of the claim at PowerBoss. If you are not requested to return the parts by the end of the thirty (30) day period, you may dispose of them.
3. You will be informed of requested parts to be returned by the receipt of an “**RGA Request**” which will include an RGA authorization number”.
4. All freight costs for the parts being returned to the factory can be added to the warranty claim. PowerBoss will credit the freight cost providing the returned item is warrantable.
5. The assigned RGA number must be written on the outside of the RGA package. A copy of the RGA Request paperwork as well as a copy of the warranty claim should be enclosed in the RGA package as well. Returning of parts without the RGA number written on the box or without enclosing the related paperwork subjects the distributorship to not receiving any eligible credit for the returned part.

Policy Adjustments

From time to time a specific problem arises outside the boundaries of the policies outlined in this book. If you should encounter a situation in which you believe an exception is in order, please contact the Warranty Administrator for assistance.

1. No warranty adjustments will be allowed for travel time.
2. Failures that occur beyond normal warranty, but can be attributed to quality of workmanship or materials may be considered.
3. A request for a policy adjustment should be made in writing. Include the following:
 - Copies of all past repair orders for the specific problem
 - A detailed description of the request, and why you are of the opinion that a policy adjustment by the factory is in order
 - End user’s name, address, and phone number
 - Unit serial number, model number, hours, and installation date.

Section 3 PowerBoss Warranty Responsibilities

Engine Warranties:

All Powerboss dealers will have an option of becoming an unlisted Kubota dealer which is recommend. This will allow you the ability to perform your own work and purchase parts directly. To facilitate this click on the hyper-link below to get to Kubota's website and from there you can search for the local Kubota dealer who can set you up. Should you decide not to be an unlisted dealer, they can handle the repair of the engine or can refer you to a local Kubota Service Center who can.

If you have any difficulties, please contact the Powerboss Warranty Department and we will get our Kubota representative involved to assist you. Call 1-800-323-9420 or email at: warranty@powerboss.com

To find your closest local dealer go to: <http://www.kubotaengine.com/us-engine>
And see a listing for your area.

All major components are included in the 24 month, 2000 hour limited product warranty. In the case of the machines which are covered for up to sixty (60) months, the 25th through the 60th month or from 2,000 hours through 3,000 hours, whichever comes first, the following engine components shall be covered under the Parts Warranty on the standard engine:

Cylinder Block	Intake Manifold
Cylinder Head	Connecting Rods
Camshaft	Crankshaft
Flywheel	

The engine warranty coverage for PowerBoss products emulates, and with some products extends the warranty provided by the engine's manufacturer. Warranty eligibility is determined **after evaluation** by the engine manufacturer, or their authorized service representative.

Should a Distributor experience an engine failure, which they believe to be warrantable, they must adhere to the following procedure in order to ensure prompt evaluation and resolution of the claim:

1. The Distributor must contact (LOCAL ENGINE DEALER-KUBOTA-the PowerBoss Technical Support Manager with the following specifics: (Additional suggestions or recommendations may be made)
 - Machine Model / Type
 - Machine Serial Number
 - Engine Model
 - Engine Serial Number
 - Fuel Source
 - Hours on Engine
 - Hours on Machine
 - Date of Installation

Section 3

PowerBoss Warranty Responsibilities

Engine Warranties (cont.)

After the PowerBoss dealer contacts KUBOTA, the PowerBoss Technical Support Manager will assist the PowerBoss dealer in obtaining a prompt evaluation and/or repair. If the PowerBoss Technical Support Manager cannot facilitate a prompt resolution to the immediate issue then the PowerBoss Technical Support Manager will make arrangements for either the engine manufacturer or their authorized service representative to evaluate the engine and collect the following detailed information:

- Identification of the failed components, sequence of failure, etc.
 - The root-cause of the failure
 - Components necessary to repair the engine
 - Detailed results of the engine's oil and coolant analysis (Engines will not be considered for warranty eligibility without the above. The cost of the tests will be reimbursed if the failure is a result of a defect in materials or workmanship.)
 - Their assessment regarding the failures eligibility for warranty
2. After the PowerBoss Technical Support Manager receives the written evaluation he/she will forward this information, along with any extenuating circumstances, which should be considered prior to determining eligibility, to the Engine Manufacture for evaluation.

Note: It is incumbent upon the distributor, to ensure that a thorough analysis of the engine is performed by the manufacturer or their authorized representative.

If at any time during the engine evaluation, the Distributorship is of the opinion that they are not receiving a fair evaluation or support, they should immediately contact the Technical Support Manager at PowerBoss, Inc.

Please contact the following if you have any questions regarding and engine issue or details in regards to engine warranties.

Technical Support-PowerBoss 800-323-9420

Section 3 PowerBoss Warranty Responsibilities

Stock / Demonstration Machines

It is the Distributor's responsibility to maintain his machines in new and salable condition. For these machines, the warranty period does not start until either the machine is sold, placed in a rental or leasing fleet, or remains in the Distributor's stock longer than twelve (12) months. In the event that a machine remains as a stock unit in excess of twelve (12) months, the warranty period begins at the start of the thirteenth month with the remainder of the unit's warranty being prorated and transferred to the end user, when the unit is sold.

A Distributor's stock machine is eligible for warranty reimbursement for warrantable repairs, which would not have been identified and repaired in the process of performing the "New Unit Inspection and Preparation".

When filing a warranty claim on a stock unit, "STOCK UNIT" must be written in "Date Delivered" field (reference page 17), as the Install Date. Stock units are not eligible for travel reimbursement.

Loaner Units

PowerBoss will not cover any expenses that may be incurred on loaner machines. The use of a loaner is up to the discretion of the Distributor.

Rental Machines

Rental or lease units are treated the same as sold machines. The following forms must be completed.

1. Complete a Warranty Registration / Installation Report and mail to PowerBoss.
2. Perform the New Unit Inspection and Preparation. Complete the report and forward it to PowerBoss along with the registration.

Warranty considerations for rental and leased machines, when properly registered, are treated the same as those sold to an end user. In this case, the Distributor would be reimbursed for the appropriate travel, labor, and associated parts under the standard warranty provisions and exclusions.

Section 4 PowerBoss Warranty Responsibilities



Revision L
Effective May 2018
PowerBoss Made Simple Industrial Limited Warranty

Minuteman International owner of PowerBoss warrants to the original purchaser/user that the product is free from defects in workmanship and materials under normal use. PowerBoss will, at its option, repair or replace without charge, parts that fall under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals. All warranty claims must be submitted through and approved by factory authorized repair stations.

This warranty does not apply to normal wear, or to items whose life is dependent on their use and care. Parts not manufactured by PowerBoss are covered by their respective manufacturers. Please contact Minuteman International for procedures in warranty claims against these manufacturers.

Special warning to purchaser – Use of replacement parts not manufactured by PowerBoss or its designated licensees, will void all warranties expressed or implied. A potential health hazard exists without original equipment replacement.

All warranted items become the sole property of Minuteman International or PowerBoss or its original manufacturer, whichever the case may be.

PowerBoss disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. PowerBoss assumes no responsibility for any special, incidental or consequential damages.

This limited warranty is applicable only in the U.S.A. and Canada, and is extended only to the original user/purchaser of this product. Customers outside the U.S.A. and Canada should contact their local distributor for export warranty policies. PowerBoss is not responsible for costs or repairs performed by persons other than those specifically authorized by PowerBoss. This warranty does not apply to damage from transportation, alterations by unauthorized persons, misuse or abuse of the equipment, use of non-compatible chemicals, or damage to property, or loss of income due to malfunctions of the product. If a difficulty develops with this machine, you should contact the dealer from whom it was purchased.

This warranty gives you specific legal rights, and you may have other rights, which vary from state to state. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

	Travel *	Labor	Parts	Engine	Extended Warranty	Costs
Walk Behind						****
Battery/IC Sweepers	90 Days	36 months	36 months	Through engine manufacturer	N/A	-
Battery Scrubbers	90 Days	36 months	60 months	N/A	N/A	-
Riders						
Battery Scrubbers	90 Days	36 months	60 months	N/A	Additional 12 months parts and labor (or 1000 Hours)	5%
IC Sweeper/Scrubbers (Nautilus, 82)	180 Days	24 months	36 months or 3000 hr.	60 months or 3000 hrs**	Additional 12 months parts and labor (or 1000 Hours)	5%
IC Sweepers 6X, 9X, 10X, Atlas	90 Days	12 months	48 months or 3000 hr.	60 months or 3000 hrs**	Additional 12 months parts and labor (or 1000 Hours)	5%
Exceptions						
Apex Series Sweeper	90 Days	36 months	36 months or 3000 hr.	Through engine manufacturer	Additional 12 months parts and labor (or 1000 Hours)	5%

Tank Bladders Eight years/ no additional labor
Polyethylene plastic tanks Ten years/ no additional labor
Batteries 0-3 months full replacement, 4-12 prorated credit
Chargers One-year replacement
Aftermarket Replacement parts Ninety days from date of purchase

*Two-Hour Cap Per Service Call

**Through Engine Manufacturer. See Section 3 of Warranty Manual for Engine Warranty Exceptions

**All above labor and travel reimbursed at 65% or 75% of the published shop rate.

14N845 US HWY 20 Pingree Grove, IL 60140
Phone: 847-264-5400 Fax 800-422-6933
www.powerboss.com

All above labor and travel reimbursed at 65% or 75% of the published shop rate.

Section 5

SHOP FLAT RATE SCHEDULES

- *Monitor Series (Rider Scrubbers)*
- *Commander Series (Rider Scrubbers)*
- *Nautilus (Rider-Scrubber)*
- *Armadillo SW/6X, 9XV, 10XV (Rider Sweepers)*
- *Atlas (Rider Sweepers)*
- *Admiral Series units (Battery Rider Scrubbers)*

POWERBOSS
Section 5 - Shop Flat Rate Schedule
Commander and Monitor

1. FRAME GROUP

R/R Doors (each)	0.5 hours
R/R Gaskets (glued type)	0.5 hours
R/R Seals	0.5 hours
R/R Mounts	0.5 hours
R/R Retainers	0.5 hours
R/R Stops	0.5 hours
R/R Latches	0.5 hours
R/R Straps	0.5 hours
R/R Skirts (Inner / Outer)	0.5 hours
R/R Fuel Tank	2.0 hours
R/R Fuel Lines & Fittings	0.5 hours
R/R Cooling Coil	1.5 hours
Miscellaneous Adjustments	0.5 hours max

2. ENGINE COVER GROUP

R/R Engine Cover (w/ Lights)	0.5 hours
R/R Engine Cover (w/o Lights)	0.5 hours
R/R Latch and Prop Assembly	0.5 hours
Miscellaneous Adjustments	0.5 hours max

3. INSTRUMENT PANEL GROUP

R/R Gauges	0.25 hours
R/R Switches (All)	0.25 hours
R/R Instrument Lights	0.25 hours
R/R RTR Lights	0.25 hours
R/R Fuses	0.25 hours
R/R Fuse Holder	0.25 hours
R/R Buttons	0.25 hours
Miscellaneous Adjustments	0.5 hours max

4. DIRECTIONAL CONTROL GROUP

R/R Disc Assembly, Forward/Reverse	0.5 hours
R/R Ring, Coupling	2.0 Max
R/R Arm, Forward/Reverse	0.5 hours
R/R Spring, Return Directional Control	0.5 hours
R/R Bracket, Adjustment Forward/Reverse	0.5 hours
R/R Rods, Directional Control	0.5 hours
R/R Pedal	0.5 hours
R/R Bushings	0.5 hours
Miscellaneous Adjustments	0.5 hours max

5. STEERING ASSEMBLY GROUP

R/R Fork Assembly, Steering	3.0 hours
R/R Bearing, Thrust	4.0 hours
R/R Pivot Assembly, Fork	2.0 hours
R/R Bearing (Cup / Cone)	2.0 hours
R/R Motor, Hydraulic	2.0 hours
R/R Link Assembly, Steering	1.5 hours
R/R Arm, Steering	1.5 hours
R/R Wheel, Steering	1.5 hours
R/R Hub	1.0 hours
R/R Tire & Rim Assembly	1.5 hours
R/R Fittings	0.5 hours
R/R Steering unit, Hydraulic	2.0 hours
R/R Power Steering Cylinder Assembly	2.0 hours

Commander and Monitor Continued

6. AXLE / BRAKE /WHEEL GROUP

R/R Axle	1.5 hours
R/R Shoe, w/ Lining	1.5 hours
R/R Hub	1.5 hours
R/R Tire / Rim Assembly	1.0 hours
R/R Bearings	1.5 hours
R/R Bushing, Springs, Etc.	0.5 hours
R/R Cable, Brake	4.0 hours
R/R Pedal Assembly	0.5 hours
R/R Brake Arm Assembly	1.0 hours
R/R Brake Catches	1.0 hours

7. TIRE ASSEMBLY GROUP

Breakdown & Reassemble Tire Rim Assembly	2.0 hours
R/R Tire and Rim Assembly	3.0 hours

8. LIGHT GROUP

R/R Headlights	0.5 hours
R/R Tail lights	0.5 hours Max allowed per light
R/R Option Lights	1.0 hours per assembly
R/R Bulbs	0.25 hours
R/R Lens	0.25 hours

9. ENGINE AND RADIATOR ASSEMBLY GROUP

R/R Engine Assembly	7.0 hours
R/R Main Pump	2.0 hours
R/R Auxiliary Pump	2.0 hours
R/R LP Regulator	1.0 hours
R/R Fan Blade	1.5 hours
R/R Air Cleaner Assembly	0.5 hours
R/R Alternator	1.0 hours
R/R Belts	1.0 hours
R/R Battery	1.0 hours
R/R Starter	2.0 hours
R/R Sending Units	1.0 hours
R/R Oil Drain Plug	0.5 hours
R/R Radiator (complete w/ shroud, hoses, etc.)	3.0 hours
R/R Radiator Hoses	1.0 hours
R/R Radiator Shroud	1.0 hours

10. TANK AND CONSOLE ASSEMBLY GROUP

R/R Seat	0.5 hours
R/R Gauges	0.5 hours
R/R Switches	0.25 hours
R/R Buttons	0.25 hours
R/R Lights	0.25 hours
R/R Levers	0.5 hours
R/R Decal (top)	0.5 hours
R/R Decal (others)	0.5 hours
R/R Tank Recovery (82)	4.0 hours
R/R Tank Solution (82)	3.0 hours
R/R Tank, Solution & Recovery (82)	3.0 hours
R/R Solution Hose	0.5 hours
R/R Recovery Drain Hose	0.5 hours
R/R Solution / Recovery Switch	0.5 hours
R/R Impeller Valve Body	1.0 hours
Miscellaneous Parts and Adjustments	0.5 hours

Commander and Monitor Continued

11. LINTEL ASSEMBLY GROUP

R/R Curb Broom Lever	0.5 hours
R/R Valve Body	2.0 hours
R/R Decals	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

12. IMPELLER ASSEMBLY GROUP

R/R Hydraulic Impeller	2.0 hours
R/R Impeller Motor – Hydraulic	2.5 hours
R/R Impeller Exhaust Hose	0.5 hours
R/R Impeller Exhaust Hose w/Vertical LP Mount	0.5 hours

13. HOPPER / BUMPER GROUP

R/R Hopper	3.0 hours
R/R Bumper	1.0 hours
R/R Shaker Motors	0.50 hours
R/R Filters	0.5 hours
R/R Wiring Harness	0.5 hours
R/R Hopper Hood Seals	0.5 hours
R/R Hopper Lid Seals	0.5 hours
R/R Gas Springs	0.5 hours
R/R Hopper Flaps	1.0 hours
R/R Side & Hopper Seals	0.5 hours
Miscellaneous Adjustments	0.5 hours

14. CURB BROOM GROUP

R/R Lever & Knob	0.5 hours
R/R Cable	1.0 hours
R/R Pulleys	0.5 hours (each)
R/R Hydraulic Motor	2.0 hours
R/R Hydraulic Motor Seals	1.5 hours
R/R Gimbal Plate Brush Retainer	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

15. LIFT ARM GROUP

R/R Lift Arms	3.0 hours
R/R Rotational Cylinder	1.5 hours
R/R Cylinder Blocks / Bushings	1.0 hours
R/R Pivot Plate	1.0 hours
R/R Secondary Arm	2.0 hours
R/R Hydraulic Hoses	1.0 hours per side
R/R Wiring Harness	1.0 hours
R/R Safety Arm	0.5 hours
Miscellaneous Adjustments	0.5 hours

16. GASKET MOUNT GROUP

R/R Gasket Mount	0.5 hours
R/R Fire in Hopper Indicator	0.5 hours
R/R Clogged Filter Indicator	0.5 hours
R/R Vacuum Hose	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

Commander and Monitor
Continued

17. MAIN BROOM GROUP

R/R Main Broom	0.5 hours
R/R Idler Bearings	1.5 hours
R/R Main Broom Assembly	2.0 hours
R/R Main Broom Hydraulic Motor	2.0 hours
R/R Main Broom Hydraulic Motor Seals	1.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

18. HYDRAULIC RESERVOIR GROUP

R/R Hydraulic Reservoir	2 hours
R/R Hydraulic Fittings	0.5 hours
R/R Hydraulic Filter	0.5 hours

19. EXHAUST GROUP

R/R Exhaust Flex Tube	2.0 hours
R/R Muffler	1.0 hours
R/R Tailpipe	0.75 hours
R/R Exhaust Pipe	1.5 hours

20. SCRUB AREA GROUP

Adjust Scrub Head	1.0 hours
Adjust Scrub Head Gauge	1.0 hours
R/R Scrub Head Actuator	1.0 hours
R/R Squeegee Lift Cylinder	1.0 hours
R/R Scrub Head Hydraulic Motor	1.0 hours
R/R Gimbal Plate Brush Retainer	0.5 hours
R/R Potentiometer Switch	1.0 hours
Adjust Squeegee	0.5 hours
Adjust Flaps	0.5 hours
R/R Squeegee	0.5 hours
R/R Rollers - Squeegee Asm	0.5 hours
R/R Scrub Head Assembly, Complete	3.0 hours

21. HYDRAULIC HOSE GROUP

R/R Hydraulic Hoses - Not previously specified	1.0 hours each – 2.0 hour maximum for any combination
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POWERBOSS
Section 5 - Shop Flat Rate Schedule
Nautilus

1. FRAME GROUP

R/R Doors (each)	0.5 hours
R/R Gaskets (glued type)	0.5 hours
R/R Seals	0.5 hours
R/R Mounts	0.5 hours
R/R Retainers	0.5 hours
R/R Stops	0.5 hours
R/R Latches	0.5 hours
R/R Straps	0.5 hours
R/R Skirts (Inner / Outer)	0.5 hours
R/R Fuel Tank	2.0 hours
R/R Fuel Lines & Fittings	0.5 hours
Miscellaneous Adjustments	0.5 hours max

2. ENGINE COVER GROUP

R/R Engine Cover	0.5 hours
R/R Latch and Prop Assembly	0.5 hours
Miscellaneous Adjustments	0.5 hours max

3. INSTRUMENT PANEL GROUP

R/R Gauges	0.25 hours
R/R Switches (All)	0.25 hours
R/R Instrument Lights	0.25 hours
R/R Fuses	0.25 hours
R/R Fuse Holder	0.25 hours
R/R Buttons	0.25 hours
Miscellaneous Adjustments	0.5 hours max

4. DIRECTIONAL CONTROL GROUP

R/R Assembly, Forward/Reverse	1.0 hours
R/R Arm, Forward/Reverse	0.5 hours
R/R Return Directional Control Cable	1.5 hours
R/R Bracket, Adjustment Forward/Reverse	0.5 hours
R/R Pedal	0.5 hours
R/R Bushings	0.5 hours
R/R Neutral Safety Switch	0.5 hours
Miscellaneous Adjustments	0.5 hours max

5. STEERING ASSEMBLY GROUP

R/R Fork Assembly, Steering	3.0 hours
R/R Bearing, Thrust	4.0 hours
R/R Pivot Assembly, Fork	2.0 hours
R/R Bearing (Cup / Cone)	2.0 hours
R/R Motor, Hydraulic	2.0 hours
R/R Wheel, Steering	0.5 hours
R/R Hub	1.0 hours
R/R Tire & Rim Assembly	1.5 hours
R/R Steering unit, Hydraulic	2.0 hours
R/R Power Steering Cylinder Assembly	2.0 hours

POWERBOSS
Section 5 - Shop Flat Rate Schedule
Nautilus

6. AXLE / BRAKE / WHEEL GROUP

R/R Axle	1.5 hours
R/R Shoe, w/ Lining	1.5 hours
R/R Hub	1.5 hours
R/R Tire / Rim Assembly	1.0 hours
R/R Bearings	1.5 hours
R/R Bushing, Springs, Etc.	0.5 hours
R/R Cable, Brake	2.0 hours
R/R Pedal Assembly	1.0 hours
R/R Brake Arm Assembly	0.5 hours
R/R Brake Catches	0.5 hours

7. TIRE ASSEMBLY GROUP

Breakdown & Reassemble Tire Rim Assembly	1.5 hours
R/R Tire and Rim Assembly	1.5 hours

8. LIGHT GROUP

R/R Headlights	0.5 hours
R/R Tail lights	0.5 hours Max allowed per light
R/R Option Lights	1.0 hours per assembly
R/R Bulbs	0.5 hours
R/R Lens	0.5 hours

9. ENGINE AND RADIATOR ASSEMBLY GROUP

R/R Engine Assembly	7.0 hours
R/R Main Pump	2.0 hours
R/R Auxiliary Pump	2.0 hours
R/R LP Regulator	1.0 hours
R/R Fan Blade	1.5 hours
R/R Air Cleaner Assembly	0.5 hours
R/R Alternator	1.0 hours
R/R Belts	1.0 hours
R/R Battery	.5 hours
R/R Starter	1.0 hours
R/R Sending Units	1.0 hours
R/R Oil Drain Plug	0.5 hours
R/R Radiator (complete w/ shroud, hoses, etc.)	2.0 hours
R/R Radiator Hoses	1.0 hours
R/R Radiator Shroud	1.0 hours

10. TANK AND CONSOLE ASSEMBLY GROUP

R/R Seat	0.5 hours
R/R Gauges	0.25 hours
R/R Switches	0.25 hours
R/R Buttons	0.25 hours
R/R Lights	0.25 hours
R/R Levers	0.25 hours
R/R Decal (top)	0.5 hours
R/R Decal (others)	0.5 hours
R/R Tank Recovery	2.0 hours
R/R Tank Solution	3.0 hours
R/R Solution Hose	0.5 hours
R/R Recovery Drain Hose	0.5 hours
R/R Solution / Recovery Switch	0.5 hours
R/R Impeller Solenoid	1.0 hours
Miscellaneous Parts and Adjustments	0.5 hours

POWERBOSS

Section 5 - Shop Flat Rate Schedule

Nautilus

11. SIDE SCRUB/BROOM GROUP

R/R Side Scrub Actuator	1.0 hours
R/R Valve Body	2.0 hours
R/R Decals	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

12. IMPELLER ASSEMBLY GROUP

R/R Impeller Motor – Hydraulic	2.5 hours
R/R Vacuum Hose	2.0 hours

13. HOPPER / BUMPER GROUP (HIGH DUMP)

R/R Hopper	3.0 hours
R/R Bumper	1.0 hours
R/R Wiring Harness	0.5 hours
R/R Hopper Hood Seals	0.5 hours
R/R Hopper Lid Seals	0.5 hours
R/R Gas Springs	0.5 hours
R/R Hopper Flaps	1.0 hours
R/R Side & Hopper Seals	0.5 hours
Miscellaneous Adjustments	0.5 hours

14. SIDE SCRUB GROUP

R/R Hydraulic Cylinder	1.5 hours
R/R Manifold Solenoids	1.0 hours each
R/R Hydraulic Motor	2.0 hours
Miscellaneous Parts & Adjustments	0.5 hours

15. LIFT ARM GROUP

R/R Lift Arms	3.0 hours
R/R Lift Cylinder	1.5 hours
R/R Secondary Arm	1.0 hours
R/R Hydraulic Hoses	1.0 hours per side
R/R Wiring Harness	1.0 hours
R/R Switch, Dump door	0.5 hours
Miscellaneous Adjustments	0.5 hours

POWERBOSS
Section 5 - Shop Flat Rate Schedule
Nautilus

16. HYDRAULIC RESERVOIR GROUP

R/R Hydraulic Reservoir	2 hours
R/R Hydraulic Sight Glass	.5 hours
R/R Hydraulic Fill Tube	0.25 hours
R/R Hydraulic Fittings	0.5 hours
R/R Hydraulic Filter	0.5 hours

20. HYDRAULIC HOSE GROUP

R/R Hydraulic Hoses - Not previously specified	1.0 hours each – 2.0 hour maximum for any combination
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17. EXHAUST GROUP

R/R Exhaust Flex Tube	2.0 hours
R/R Muffler	1.0 hours
R/R Tailpipe	0.75 hours
R/R Exhaust Pipe	1.5 hours

18. SCRUB AREA GROUP

Adjust Scrub Head	1.0 hours
R/R Scrub Head Actuator	1.0 hours
R/R Squeegee Lift Cylinder	1.0 hours
R/R Scrub Head Hydraulic Motor	2.0 hours
R/R Idler Bearing	2.0 hours
Adjust Squeegee	0.5 hours
Adjust Side Squeegees	0.5 hours
R/R Squeegee	0.5 hours
R/R Rollers - Squeegee Asm	0.5 hours
R/R Scrub Head Assembly, Complete	3.0 hours

**Section 5- Shop Flat Rate Schedule
SW/6X, SW/9X, SW/10X**

1. FUEL TANK

R/R Sender - Fuel Tank w/Cork Gasket	0.5 hours
R/R Fuel Tank	2.0 hours

2. CLIP GROUP

R/R Gauges / Switches / Lights	0.5 hours
R/R Seat	0.5 hours
R/R Insulation	0.5 hours

3. DIRECTIONAL CONTROL GROUP

R/R Rods - All	0.5 hours Max.
R/R Ball Joints	0.5 hours each
R/R Bushings	0.5 hours
R/R Potentiometer / Micro switch	0.5 hours
R/R Switches	0.5 hours
R/R Directional Torque Tube	0.5 hours
R/R Bearings	0.5 hours
R/R Spring - Return	0.5 hours
R/R Coupling - Load Directional Control	0.5 hours
R/R Disc - Forward / Reverse	1.0 hours
R/R Plate - Directional Control	0.5 hours
Adjust Creeping	0.5 hours

4. MAIN BROOM SUB. GROUP

R/R Hub	1.0 hours
R/R Motor - Hydraulic	2.0 hours
R/R Bearing Mount - Main Broom	1.0 hours
R/R Bearing Mount Retainer Main Brm	1.0 hours
R/R Main Broom Pivot Tube	2.0 hours
R/R Bearing - Idler Plate	1.0 hours
R/R Bushing - Main Broom	1.0 hours
R/R Pulleys & Belts	1.0 hours
R/R Miscellaneous Parts & Adjustments	0.5 hours

5. STEERING GROUP

R/R Steering Fork Sub-Assembly	4.0 hours
R/R Drive Motor	2.0 hours
R/R Stud - Wheel Hub	1.0 hours
R/R Ball Joint - Steering	0.5 hours
R/R Bearing - Tapered Rol-Cup	1.0 hours
R/R Bearing - Tapered Rolcone w/Seal	1.0 hours
R/R Bearing - Thrust	2.0 hours
R/R Hub - Rear Wheel	1.0 hours
R/R Cylinder - Hydraulic	2.0 hours
R/R Assembly - Steering Link	0.5 hours
R/R Wheel - Steering	0.5 hours
R/R Battery - 12 Volt	0.5 hours
R/R Cable - Battery	0.5 hours

6. BROOM DOOR GROUP

R/R Broom Door	1.0 hours
R/R Flap	0.5 hours

7. FRAME GROUP

R/R Front Frame Flap	0.5 hours
R/R Hopper Side Flap	0.5 hours
R/R Flap - Front	0.5 hours
R/R Flap - Rear	0.5 hours

**Section 5- Shop Flat Rate Schedule
SW/6X, SW/9X, SW/10X**

8. LIFT ARM GROUP

R/R Grommet	0.5 hours
R/R Cylinder - Rotation	1.0 hours
R/R Bearing	2.0 hours
R/R Lift Arm Cylinder Mount	3.0 hours
R/R Lift Arms	2.0 hours
R/R Bearings - Spherical	1.5 hours
R/R Cylinder - Lift	2.0 hours

9. AXLE, BRAKES, & WHEEL GROUP

R/R Cable - Brake	1.5 hours
R/R Spring - Brake Arm	0.5 hours
R/R Hand Brake	1.0 hours
R/R Front Axle Assembly	1.0 hours
R/R Tire & Rim Assembly	1.0 hours
R/R Bearing - Ball	1.0 hours
R/R Hub - Front Wheel	1.0 hours
R/R Shoe - Brake w/ Lining (manual)	1.0 hours
Miscellaneous Parts & Adjustments	0.5 hours

10. FRONT BUMPER ASSEMBLY GROUP

R/R Front Bumper Assembly	1.0 hours
R/R Headlights	0.5 hours
R/R Wiring Harness	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

11. CURB BROOM ASSEMBLY GROUP

R/R Plate - Gimbal	0.5 hours
R/R Motor - Hydraulic Curb Broom	1.5 hours
R/R Retainer - Brush	0.5 hours
R/R Brush	0.5 hours
R/R Hydraulic Hoses	1.0 hours
R/R Wiring Harness	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

12. HYDRAULICS GROUP

R/R Control Valve Sub-Assembly	2.0 hours
R/R Fittings	0.5 hours
R/R Orifice	1.0 hours
R/R Lever	1.0 hours
Miscellaneous Parts & Adjustments	0.5 hours
R/R Solenoid Valve Assembly	0.5 hours
R/R Hydraulic Reservoir	1.5 hours
R/R Dipstick	0.5 hours
R/R Hydraulic Filter	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours
R/R Hydraulic Hose (except Main Feed)	1.0 hours
R/R Hydraulic Hose - Main Feed	1.5 hours
R/R Hydraulic Cylinders	1.5 hours
Install Seal Kits	2.0 hours

13. GASKET MOUNT ASSEMBLY GROUP

R/R Gasket Mount	0.5 hours
R/R Vacuum Hose - Impeller to Hopper	0.5 hours
R/R Bushing	0.5 hours
R/R Ball Joint	0.5 hours
R/R Miscellaneous Parts & Adjustments	0.5 hours

14. CURB BROOM LIFT GROUP

R/R Cable - Side Broom Lift	1.0 hours
R/R Pulley	1.0 hours
R/R Side Broom Lever Assembly	0.5 hours
R/R Side Broom Lift Lever	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

**Section 5- Shop Flat Rate Schedule
SW/6X, SW/9X, SW/10X**

15. HOPPER LID GROUP

R/R Gaskets - Glued Type	0.5 hours
R/R Hopper Hood	0.5 hours
R/R Latch	0.5 hours
R/R Hopper Lid	0.5 hours
R/R Hinge	0.5 hours
R/R Ball Stud - Gas Spring	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

17. HOPPER GROUP

R/R Hopper Assembly	4.0 hours
R/R Flap - Hopper Lip	0.5 hours
R/R Filter - Dust Control	0.5 hours
R/R Motor - Filter Shaker	1.0 hours
R/R Ball Stud - Gas Spring	0.5 hours
R/R Harness - Filter Shaker	0.5 hours
R/R Gas Spring	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

16. IMPELLER ASSEMBLY / AUXILIARY DRIVE GROUP

R/R Impeller Assembly Sub	2.0 hours
R/R Impeller Casting	2.0 hours
R/R Impeller Motor - Hydraulic	2.0 hours
Miscellaneous Parts & Adjustments	0.5 hours

**Section 5- Shop Flat Rate Schedule
SW/6X, SW/9X, SW/10X**

1. HOPPER GROUP

R/R Shaker Motor(s)	1.0 hours
R/R Filters	0.25 hours
R/R Wiring Harness	0.25 hours
R/R Hopper Hood Seals	1.0 hours
R/R Hopper Lid Seals	1.0 hours
R/R Gas Springs	.5 hours
R/R Hopper Flaps	1.0 hours
R/R Side & Hopper Seals	0.5 hours
R/R Hopper	4.0 hours

2. HIGH DUMP ARM GROUP

R/R Assembly Hopper Lift Arm	3.0 hours
R/R Rotational Cylinders (each)	2.0 hours
R/R Cylinder Mounts	1.5 hours
R/R Hopper Pivot Plate (each)	1.0 hours
R/R Secondary Arms (each)	2.0 hours
R/R Hydraulic hoses (per side)	1.0 hours
R/R Wiring Harness	1.0 hours

3. SAFETY ARM GROUP

R/R Safety Arm	.5 hours
R/R Safety Arm Retainer	.5 hours

4. AXLE / BRAKE / FRONT WHEEL GROUP

R/R Tire Assembly - each side (Remove tire from machine)	1.0 hours
R/R Pneumatic Tire & Liner -each side (break down tire & reassemble)	1.0 hours
R/R Solid Tire -each side (break down tire & reassemble)	1.0 hours
R/R Wheel Bearings (each side)	1.0 hours
R/R Brake Assembly - each side (Remove tire, replace shoes, bleed brakes, replace tire)	2.0 hours
Adjust Brake Assembly (each side)	0.5 hours
R/R/Rebuild Wheel Cylinder - each side (R/R tire assembly & hub, Rebuild wheel cylinder)	1.0 hours
R/R Master Cylinder	1.5 hours
R/R Hand Brake Cables - each side (late model - cable terminates on exterior of backing plate)	1.0 hours
R/R Hand Brake Cables - each side (early model - cable replacement requires removal of backing plate)	1.5 hours
Adjust Brake Free play	0.5 hours

**Section 5- Shop Flat Rate Schedule
SW/6X, SW/9X, SW/10X**

5. CONTROL VALVE GROUP

R/R 3 Spool Hydraulic Valve	3.0 hours
R/R Pressure Relief Valve (3 spool valve does not need to be removed from the unit to replace pressure relief)	1.0 hours

6. GASKET MOUNT GROUP

R/R Hopper Seal Gasket	0.5 hours
R/R Fire in Hopper Sensor	0.5 hours

7. FRAME GROUP

R/R Rear Skirt Assembly – Broom Chamber	1.0 hours
R/R Main Broom Gaskets - each side (left & right side doors)	0.5 hours
R/R Main Broom Door Skirts (each side)	0.5 hours
R/R Main Broom Side Skirts (each side)	0.5 hours
R/R Broom Door Assembly (each side)	0.5 hours

8. CONSOLE GROUP

R/R Curb Broom Lever	0.5 hours
R/R Main Broom Lever	0.5 hours
R/R Hour Gage	0.5 hours
R/R Light Switches	0.5 hours
R/R RTR Lights	0.5 hours
R/R Secondary Wiring Harness	1.0 hours
R/R Hydraulic Filter Mount	0.5 hours

9. INSTRUMENT PANEL GROUP

R/R Gages (each)	0.5 hours
R/R Circuit Breakers	0.5 hours
R/R Horn or Shaker Button	0.5 hours

10. MAIN BROOM GROUP

R/R Main Broom	0.5 hours
R/R Main Broom Idler Bearings	1.0 hours
R/R Main Broom Assembly	2.0 hours
R/R Main Broom Motor - Hydraulic	2.0 hours

11. ENGINE COVER GROUP

R/R Gas Spring (each)	1.0 hours
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12. IMPELLER GROUP

R/R Complete Assembly	3.0 hours
R/R Impeller Exhaust Hose	0.5 hours

13. CLIP SEAT GROUP

R/R Seat	0.5 hours
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**Section 5- Shop Flat Rate Schedule
SW/6X, SW/9X, SW/10X**

**14. DIRECTIONAL CONTROL/HYDROSTAT
ADJUSTMENT**

Creeping Adjustment	0.5 hours
Pedal Height Adjustment	0.5 hours
R/R Engine Interlock Switch	0.5 hours

15. STEERING GROUP

R/R Steering Unit	1.0 hours
R/R Drive Motor	2.0 hours
R/R Power Steering Cylinder	1.5 hours
R/R Steering Fork	4.0 hours
R/R Hub - Rear	1.0 hours
R/R Drive Tire	1.0 hours
R/R Steering Stop	1.0 hours

16. HYDRAULIC RESERVOIR GROUP

R/R Dip Stick Assembly	0.5 hours
R/R Hydraulic Fill Tube	0.5 hours
R/R Hydraulic Reservoir	3.0 hours
R/R Fittings	0.5 hours
R/R Filter	0.5 hours

17. RADIATOR GUARD GROUP

R/R Cooler - Hydraulic	1.0 Hours
R/R Side Door	1.0 hours
R/R Side Door Latch	0.5 hours
R/R Rear Guard (XV Std)	0.5 hours

18. GAS TANK GROUP

R/R Fuel Sender w/ Cork Gasket	0.5 hours
R/R Fill Tube	0.5 hours
R/R Fuel Tank Straps	1.5 hours
R/R Fuel Tank	2.5 hours
R/R Fuel Line	0.5 hours

19. EXHAUST GROUP

R/R Flex Tube	1.5 hours
R/R Muffler	1.0 hours

20. TAILLIGHT GROUP

R/R Assembly	0.5 hours
R/R Bulb	0.5 hours
R/R Lens	0.5 hours

21 RADIATOR GROUP

R/R Upper Radiator Hose	0.5 hours
R/R Lower Radiator Hose	0.5 hours
R/R Radiator Shroud (4 piece)	1.0 hours
R/R Radiator Shroud (1 Piece)	1.0 hours
R/R Radiator Deflectors	1.0 hours
R/R Radiator	2.0 hours

**Section 5- Shop Flat Rate Schedule
SW/6X, SW/9X, SW/10X**

22. HYDRAULIC HOSE GROUP

R/R Lift Rotation Cylinder	1.0 hours per side
R/R Lift Cylinder	1.0 hours - each
R/R Curb Broom Motor	1.0 hours
R/R Main Broom to Reservoir	0.5 hours
R/R Main Broom to Filter	0.75 hours
R/R Main Broom to Impeller	0.75 hours
R/R Impeller to Valve Body	0.5 hours
R/R Impeller to Flow Valve	0.3 hours
R/R Tail wheel to Reservoir	0.5 hours
R/R Tail wheel to Main Pump (forward or reverse)	0.5 hours
R/R Oil Cooler to Reservoir	0.5 hours
R/R Oil Cooler to Filter	0.5 hours
R/R Main Pump to Reservoir - Feed	1.25 hours
R/R Main Pump to Power Steering Unit	0.75 hours
R/R Main Pump to Inlet Side of Valve Body	0.75 hours
R/R Power Steering Unit to Steering Cylinder	0.5 hours - each
R/R Power Steering to Aux Pump	0.75 hours
R/R Hoses - Miscellaneous Other	0.3 hours

**Section 5- Shop Flat Rate Schedule
ATLAS**

1. DIRECTIONAL CONTROL GROUP

R/R Ball Joints	0.5 hours each
R/R Bushings	0.5 hours
R/R Bearings	2.0 hours
R/R Spring - Return	0.5 hours
R/R Cable, Directional Control	1.5 hours
R/R Cam - Forward / Reverse	1.0 hours
R/R Plate - Directional Control	0.5 hours
Adjust Creeping	0.5 hours

2. MAIN BROOM SUB. GROUP

R/R Hub	1.0 hours
R/R Motor - Hydraulic	2.0 hours
R/R Bearing Mount - Main Broom	1.0 hours
R/R Bearing Mount Retainer Main Brm	1.0 hours
R/R Main Broom Pivot Tube	2.0 hours
R/R Bearing - Idler Plate	1.0 hours
R/R Bushing - Main Broom	1.0 hours
R/R Pulleys & Cable	1.0 hours
R/R Miscellaneous Parts & Adjustments	0.5 hours

3. STEERING GROUP

R/R Steering Fork Sub-Assembly	4.0 hours
R/R Drive Motor	2.0 hours
R/R Stud - Wheel Hub	1.0 hours
R/R Ball Joint - Steering	0.5 hours
R/R Bearing - Tapered	2.0 hours
R/R Bearing - Thrust	3.0 hours
R/R Hub - Rear Wheel	1.0 hours
R/R Motor - Hydraulic	2.0 hours
R/R Wheel - Steering	0.5 hours
R/R Battery - 12 Volt	0.5 hours

4. BROOM DOOR GROUP

R/R Broom Door	1.0 hours
R/R Flap	0.5 hours

5. FRAME GROUP

R/R Front Frame	0.5 hours
R/R Hopper Side	0.5 hours
R/R Flap - Front	0.5 hours
R/R Flap - Rear	0.5 hours

**Section 5- Shop Flat Rate Schedule
ATLAS**

6. LIFT ARM GROUP

R/R Bearing	3.0 hours
R/R Lift Arm Cylinder	3.0 hours
R/R Lift Arms	2.0 hours
R/R Cylinder - Lift	3.0 hours

7. AXLE, BRAKES, & WHEEL GROUP

R/R Cable - Brake	1.5 hours
R/R Spring - Brake Arm	0.5 hours
R/R Front Axle Assembly	1.0 hours
R/R Tire & Rim Assembly	1.5 hours
R/R Bearing - Ball	0.15 hours
R/R Hub - Front Wheel	0.15 hours
R/R Shoe - Brake w/ Lining	1.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

8. FRONT BUMPER ASSEMBLY GROUP

R/R Front Bumper Assembly	1.0 hours
R/R Headlights	0.5 hours
R/R Wiring Harness	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

9. CURB BROOM ASSEMBLY GROUP

R/R Plate - Gimbal	0.5 hours
R/R Motor - Hydraulic Curb Broom	1.5 hours
R/R Brush	0.25 hours
R/R Hydraulic Hoses	1.0 hours
R/R Wiring Harness	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

10. HYDRAULICS GROUP

R/R Control Valve Sub-Assembly	2.0 hours
R/R Fittings	0.5 hours
R/R Orifice	0.5 hours
R/R Lever	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours
R/R Solenoid Valve Assembly	0.5 hours
R/R Hydraulic Reservoir	1.5 hours
R/R Dipstick	0.25 hours
R/R Hydraulic Filter	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours
R/R Hydraulic Hose (except Main Feed)	1.0 hours
R/R Hydraulic Hose - Main Feed	1.5 hours
R/R Hydraulic Cylinders	1.5 hours

11. GASKET MOUNT ASSEMBLY GROUP

R/R Gasket Mount	0.5 hours
R/R Vacuum Hose - Impeller to Hopper	0.5 hours
R/R Miscellaneous Parts & Adjustments	0.5 hours

12. CURB BROOM LIFT GROUP

R/R Cable - Side Broom Lift	1.5 hours
R/R Pulley	0.5 hours
R/R Side Broom Lever Assembly	1.0 hours
R/R Side Broom Lift Lever	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

**Section 5- Shop Flat Rate Schedule
ATLAS**

13. HOPPER LID GROUP

R/R Gaskets - Glued Type	0.5 hours
R/R Hopper Hood	0.5 hours
R/R Actuator , Dump	1.0 hours
R/R Latch	0.5 hours
R/R Hopper Dump Door	1.0 hours
R/R Hinge	1.0 hours
R/R Ball Stud - Gas Spring	1.0 hours
Miscellaneous Parts & Adjustments	0.5 hours

15. HOPPER GROUP

R/R Hopper Assembly	3.0 hours
R/R Flap - Hopper Lip	0.5 hours
R/R Filter - Dust Control	0.5 hours
R/R Motor - Filter Shaker	1.0 hours
R/R Ball Stud - Gas Spring	0.5 hours
R/R Harness - Filter Shaker	0.5 hours
R/R Gas Spring	1.0 hours
Miscellaneous Parts & Adjustments	0.5 hours

14. IMPELLER ASSEMBLY / AUXILIARY DRIVE GROUP

R/R Impeller Assembly Sub	1.5 hours
R/R Impeller Motor - Hydraulic	1.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

**Section 5 - Shop Flat Rate Schedule
ADMER 28 & 32 and Admiral 35, 38, 40, 48**

Actuator, Brush (Admiral Series)	2.5 hours
Actuator, Brush (Admer Series)	2 hours
Actuator, Side Broom (ADM38,40,48)	1 hour
Back Flow Preventer (Spray Bar) (Admer)	1 hour
Back Flow Preventer, In line Not Spray Bar	0.5 hour
Backup Alarm (Admer Series)	0.5 hour
Backup Alarm (Admiral Series)	0.25 hour
Batteries	0.25 each
Battery Charger Repairs	1 hour
Bearing Assembly, Brush Idler	0.5 hour
Bearing Assembly, Brush Pulley	0.5 hour
Bearing, Belt Tension	.5 hour
Belts (Cylindrical)	.5 hour
Bladder (Admiral 38,40,48)	6.0 hours
Cables, Battery	0.5 hour
Control Board, Main	1 hours
Electric Brake (Admer Series)	0.5 hour
Filter Assembly, Solution (Admiral Series)	1.5 hours
Filter Assembly, Solution (Admer Series)	2 hour
Harness, Chassis Drive Motor (Admer)	2 hours
Motor, Brush (Admer Series)	2 hours
Motor, Brush (Admiral Series)	3 hours
Motor, Chassis Drive (Admer Series)	1 hour
Motor, Chassis Drive (Admiral)	2 hours
Pump, Water (Admer Series)	2 hours
Pump, Water (Admiral Series)	1 hour
Solenoid, Water	1.5 hours
Speed (Drive) Controller (Admiral Series)	1.5 hour
Squeegee Actuator	2 hours
Switch, Float (Waste)	0.5 hour
Switch, Solution Float (Admer)	0.5 hours

**Section 5 - Shop Flat Rate Schedule
AMER 28/32 and Admiral 38, 40, 48**

Switch, Seat	1.0 hour
Switch, Selector(Admer)	0.5 hour
Switch, Touch Pad (Admiral)	0.5 hour
Tank, Recovery (Admer Series)	2 hours
Tank, Recovery (Admiral Series)	4 hours
Tank, Solution (Admiral Series)	4 hours
Tank, Solution (Admer Series)	5 hour
Trio Controller	1 hour
Vacuum Motor	1.5 hour
Wheel, Front	2 hours
Wheels, Rear	1 hour

Section 5 - Shop Flat Rate Schedule
PHOENIX SERIES UNITS
20, 24, 26, 28, 30, 33

Walk Behind Auto Scrubbers

Hours Allowed	Description Of Part Replaced
2	Bail Assembly
1	Battery Charger
0.75	Charger Harness W8
1.5	Battery Charger and W8 Harness
1.5	Battery(s) (Includes Testing)
1	Brush Motor
1	Brush Pedal Weldment
0.5	Cable, Squeegee Lift
0.5 Set	Cables, Battery
1	Display Assembly
1	Contactactor/Relay/Solenoid
1	Controller
0.5	Float Assembly
1	Brush Lift Pedal
0.5	Hub, Brush Motor Drive
0.75	Lid, Recovery Tank
1	Mechanical Solution Valve
1	Motor, Brush
1.5	Motor, Vacuum
0.75	Pump, Water
3	Recovery Tank
1	Solenoid, Electric Solution
0.5	Spring, Squeegee Mechanism
2.5	Transaxle
1	Mechanism, Squeegee
1	Pump, Water

Appendix

Most up to date forms are always located on dealer web site. Please log on and fill out electronically and submit to warranty@powerboss.com

- New Unit Inspection and Preparation Check Sheet
- Warranty Registration / Installation Report
- Warranty Labor Rate Registration Form
- Standard Dealer Tool Check List

PowerBoss

New Unit Inspection And Preparation Check Sheet

	OK	Add / Adjust	Repair / Replace		OK	Add / Adjust	Repair / Replace
EXTERIOR				SOLUTION TANK			
Inspect Paint Finish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	All Door Latches & Knobs Tight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inspect Doors for Fit, Seal & Adjustment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clean-Out Doors (no leaks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hinge Mounts Tight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Solution Delivery Working Properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Ball Float Mechanism Functional	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HOPPER				UNDER CARRIAGE			
Check Caulked Areas of Filter Chamber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brooms & Brushes Installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filter Shaker Operates Properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brooms & Scrub Head Raises & Lowers Freely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filter Retainers Tight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drain Hose (no leaks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hopper Hood Sealing Properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Squeegee Hose Connected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hopper Flaps Intact & Adjusted to 1/8" from ground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Inspect & Test Filters for Leakage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OPERATION			
Safety Arm Fits Properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water Pick-Up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENGINE COMPARTMENT				Squeegee Raises in Reverse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine Oil Level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Back-Up Alarm Functional (Optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air Cleaner Connections Tight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety Light Operational (Optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engine Belts Tight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Head, Tail & Instrument Lights Function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Battery Electrolyte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Noise or Vibration (no abnormal)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Battery Cables Tight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Options Function Properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic Connections (leaks or seepage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Main Broom, Side Broom Adjusted Properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coolant Level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Scrub Brushes Adjusted Correctly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				Sweeping Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IMPELLER COMPARTMENT				Squeegee flair set correct	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydraulic Fluid Level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MISCELLANEOUS			
Hydraulic Connections (leaks or seepage)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unnecessary Tags & Stickers Removed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OPERATOR COMPARTMENT				Correct Manual with Unit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parking Brake Adjustment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Warning and Safety Decals in Place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Choke Cable Movement (as appropriate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Solution Tank Drained	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Horn Operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recovery Tank Drained & Flushed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Throttle Operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hopper Cleaned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RTR Lights Adjusted Correctly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Unit Washed & Cleaned	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All Instruments & Gauges Function Properly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fuel Level OK	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTES & COMMENTS (Include Pictures when possible)

POWERBOSS COMMITMENT TO EXCELLENCE		
WE HEREBY CERTIFY THAT ALL ITEMS ON THIS FORM HAVE BEEN CHECKED AND CORRECTED FOR PROPER OPERATION AS REQUIRED.		
/	/	
TECHNICIANS SIGNATURE / DATE	SERVICE MANAGERS SIGNATURE / DATE	
SUBMIT THIS FORM TO warranty@powerboss.com		
SERIAL NUMBER	DEALER	MODEL NUMBER

WARRANTY REGISTRATION / INSTALLATION REPORT

Note: This report must be completed, signed and returned. All information below must be complete for proper warranty registration.

(PLEASE PRINT IN BLOCK LETTERS)

<u>CUSTOMER</u>	<u>DISTRIBUTOR</u>
Company Name _____	Company Name _____
Address _____	Address _____
_____	_____
_____	_____
Country _____	Country _____
Country _____	Telephone _____
Telephone _____	
Telex _____	
Key Contact* _____	

* FOR FUTURE BULLETIN MAILINGS

Model No. _____ Serial No. _____ Hour Meter _____
 Engine No. _____ Serial No. _____ Date Installed _____
 Original Invoice No. _____

OPERATION OF CONTROLS

- Directional pedal
- Steering
- Brakes
- Parking Brake
- Throttle
- Engine Controls & Instruments
- Operator Safety Procedures
- Hydraulic Control Levers
- Hi-Dump Controls
- Sweeping Controls
- Scrubbing Controls
- Brush Adjustment Knob
- Filter Shaker Button
- RTR

MACHINE OPERATION

- Describe All Safety Precautions
- Starting Engine
- Instruction Manual, Explain Use Of
- Typical Sweeping Procedures
- Typical Scrubbing Procedures
- Dumping Hopper, Using Safety Lock
- Using Hopper Safety Arm
- Solution Tanks
- Accessories

LUBRICATION AND MAINTENANCE

- Lubrication Chart
- Changing Hydraulic Oil, Capacity Of Tank
- Location of Hydraulic Oil Filter
- Hydraulic Oil Recommended Specification
- Battery Access & Maintenance
 - Engine:
 - Dipstick
 - Changing Engine Oil
 - Fuel Tank (Or LPG Tank)
 - Changing Oil Filter
 - Servicing Air Cleaner
 - Use Of Engine Manual
 - Engine Head Torquing Procedure
 - Plug Gap, Point Gap
 - Diesel Engine
 - Radiator
 - Replacing Dust Filters
 - Replacing Brushes / Brooms
 - Dust Skirt Floor Clearance
 - Hopper Adjustment
 - Location Of Fuses
 - Brake Adjustments
 - Squeegee Adjustment
 - Squeegee Replacement

CHECK ONE OF THE FOLLOWING

The Equipment Being Installed:

- Replaces a PowerBoss™ unit (if so, indicate the model number of the machine being replaced _____)
- Replaces a competitive unit. (if so, indicate brand _____ and model _____ of replaced unit)
- Is a new or additional application for an existing customer

TYPE OF BUSINESS

SIZE OF FACILITY

- Less than 25,000 sq. ft.
- 25,000 to 250,000 sq. ft.
- More than 250,000 sq. ft.

I have checked the equipment and acknowledge that I have been instructed by a PowerBoss™ Distributor Representative and understand all of the procedure and safety measures checked above. I further acknowledge I have received a copy of the PowerBoss™ (Limited) Product Warranty.

Customer Signature _____	Title _____	Date _____
Customer Signature _____	Title _____	Date _____

White - PS • Yellow - Distributor • Pink - Customer

WARRANTY LABOR RATE REGISTRATION FORM

Dealer Name: _____

Accounts Receivable #: _____

Address: _____

City / State: _____

Zip Code: _____

Posted Shop Labor Rate: _____

Service Managers Name: _____

Dealer's Signature: _____

Date: _____

Note: Three(3) copies of current, paid work orders listing your posted labor rate, must be attached.

In order for PowerBoss to reimburse for warranty work or to change the amount of reimbursement received the above information must be completed and returned to warranty@powerboss.com

Form WLRA-1

Authorized Service Technician Tool Check List

The following lists of tools are considered Technician Tools and should be purchased/owned by the Service Technician.

Complete the form, and submit to: warranty@powerboss.com

Tool	Check
1. Standard Allen Wrench	<input type="checkbox"/>
2. Metric Allen Wrench	<input type="checkbox"/>
3. Complete Wrench Set	<input type="checkbox"/>
4. Complete Socket Set	<input type="checkbox"/>
5. Screw Driver Set	<input type="checkbox"/>
6. Flashlights	<input type="checkbox"/>
7. Electrical Terminal Pliers	<input type="checkbox"/>
8. Soldering Iron	<input type="checkbox"/>
9. Precision Screw Drivers	<input type="checkbox"/>
10. Pliers Set	<input type="checkbox"/>
11. Hammer Set	<input type="checkbox"/>
12. Hacksaw	<input type="checkbox"/>
13. File Set	<input type="checkbox"/>
14. Work Light	<input type="checkbox"/>
15. Snap Ring Pliers	<input type="checkbox"/>
16. Chisel Set	<input type="checkbox"/>
17. Drill Set	<input type="checkbox"/>
18. Electric Drill	<input type="checkbox"/>
19. Grease Gun	<input type="checkbox"/>
20. Volt/Ohm Meter	<input type="checkbox"/>
21. Creeper	<input type="checkbox"/>
22. Tool Box	<input type="checkbox"/>
23. Feeler Gauge Set	<input type="checkbox"/>
24. Continuity Tester	<input type="checkbox"/>
25. Battery Terminal Tool	<input type="checkbox"/>
26. Battery Terminal Spreader	<input type="checkbox"/>
27. Battery Terminal Lift Strap	<input type="checkbox"/>
28. Gasket Scraper	<input type="checkbox"/>
29. Jumper Test Leads	<input type="checkbox"/>
30. Battery Hydrometer	<input type="checkbox"/>
31. Caulking Gun	<input type="checkbox"/>
32. Camera (always available to document defects and repairs)	<input type="checkbox"/>

Authorized Dealer Service Tool List

The following list of tools are considered Shop Tools and should be provided by the authorized dealer.

*Complete the form, and Submit this Check List to:
warranty@powerboss.com*

Tool	Part Number	Check
1. Vacuum Gauge	701031	<input type="checkbox"/>
2. Hydraulic Pressure Gauge (0-5000psi)		<input type="checkbox"/>
3. Hydraulic Adapter		<input type="checkbox"/>
4. Hydraulic Flow Gauge (0-12gpm)		<input type="checkbox"/>
5. Adjustable Hydraulic Loader Valve		<input type="checkbox"/>
6. AC/DC Amp. Meter		<input type="checkbox"/>
7. Gear Puller Set		<input type="checkbox"/>
8. Hydraulic Jack		<input type="checkbox"/>
9. Jack Stands		<input type="checkbox"/>
10. Kubota Engine Software		<input type="checkbox"/>
11. Kubota Engine Diag Cable	600036	<input type="checkbox"/>

Notes & Comments:

WE HEREBY CERTIFY THAT ALL ITEMS ON THIS LIST HAVE BEEN CHECKED AND THESE ITEMS ARE AVAILABLE FOR USE AS REQUIRED.

/

Service Managers signature / Date