

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

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Effective April 1, 2025

Services to be provided by PowerBoss

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.

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.

Qualified Personnel

It is to the Distributor's advantage to employ qualified technicians to perform service work on PowerBoss equipment. Each service technician should 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.

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 and on-line manuals.

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. 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.
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).

Registration of Product Sold

It is the responsibility of the Distributor to complete and submit a Warranty Registration / Installation Report 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.

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.

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.
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, corrosion, 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 exceeding 2 hours
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.
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. 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.

20. 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.
21. 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.
22. Freight costs and duty on warranted parts is not eligible for reimbursement.
23. 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.
24. The replacement of a complete assembly, unless preauthorized by the PowerBoss warranty manager.

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.

Distributors will be reimbursed 75% of their standard published shop labor rate.

Labor Compensation

Diagnostic labor will be paid up to 2 hours. It is the Distributor's responsibility to obtain prior approval to claim labor hours exceeding 3 hours. If prior approval was not obtained, the hours claimed on the form will be adjusted consistent with what would be the norm to make such repairs.

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.

Registration for Warranty Labor Rate

Adjustment of the Distributor's labor rate is achieved by submitting 9 Warranty Labor Rate Letter, along with three (3) copies of current, paid work orders listing your current posted labor rate.

A warranty labor rate adjustment can be made one (1) time per year. The letter 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.

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.

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 75% of the published shop rate. 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. Notify PowerBoss if any damage has occurred.

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. All forms should be typed and submitted via warranty portal.
4. 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 via PowerBoss warranty portal.

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 PowerBoss
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 or claim number must be written on the outside of the RGA package. Returning of parts without the RGA or claim number written on the box 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.

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.

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.

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.

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.

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. 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.
2. Perform the New Unit Inspection and Preparation.

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 5

SHOP FLAT RATE SCHEDULES

- *Nautilus (Rider-Scrubber)*
- *Armadillo SW/6X, 9XV, 10XV and Atlas (Rider Sweepers)*
- *Scrubmaster and Nautilus Electric Scrubber*
- *Phoenix Scrubber Series*

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
R/R Cooling Coil	0.5 hours
Miscellaneous Adjustments	0.5 hours

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

3. INSTRUMENT PANEL GROUP

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

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

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	1.0 hour
R/R Gear Assembly, Steering	2.5 hours
R/R Wheel, Steering	0.5 hours
R/R Hub	1.0 hour
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

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 hour
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	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	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 hour 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 hour
R/R Fan Blade	1.5 hours
R/R Air Cleaner Assembly	0.5 hours
R/R Alternator	1.0 hour
R/R Belts	1.0 hour
R/R Battery	0.5 hours
R/R Starter	1.0 hour
R/R Sending Units	1.0 hour
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 hour
R/R Radiator Shroud	1.0 hour

10. TANK AND CONSOLE ASSEMBLY GROUP

R/R Seat	0.5 hours
R/R Gauges	0.5 hours
R/R Switches	0.5 hours
R/R Buttons	0.5 hours
R/R Lights	0.5 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	8.0 hours
R/R Tank Solution	8.0 hours
R/R Tank, Solution & Recovery	8.0 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 hour
Miscellaneous Parts and Adjustments	0.5 hours

POWERBOSS
Section 5 - Shop Flat Rate Schedule
Nautilus

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 Impeller (Belt Type)	0.5 hours
R/R Hydraulic Impeller	1.0 hour
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 hour
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 hour
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	0.5 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 hour
R/R Pivot Plate	1.0 hour
R/R Secondary Arm	1.0 hour
R/R Hydraulic Hoses	1.0 hour per side
R/R Wiring Harness	1.0 hour
R/R Safety Arm	0.5 hours
R/R Switch-Pressure Dump door	0.5 hours
Adjust 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

POWERBOSS
Section 5 - Shop Flat Rate Schedule
Nautilus

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
R/R Gasket - Main Broom Arm	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

18. HYDRAULIC RESERVOIR GROUP

R/R Hydraulic Reservoir	4 hours
R/R Hydraulic Sight Glass	1.0 hour
R/R Hydraulic Fill Tube	0.5 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 hour
R/R Tailpipe	0.75 hours
R/R Exhaust Pipe	1.5 hours

20. SCRUB AREA GROUP

Adjust Scrub Head	1.0 hour
Adjust Scrub Head Gauge	0.5 hours
R/R Scrub Head Actuator	1.0 hour
R/R Squeegee Lift Cylinder	1.0 hour
R/R Scrub Head Hydraulic Motor	1.0 hour
R/R Gimbal Plate Brush Retainer	0.5 hours
R/R Potentiometer Switch	0.5 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 hour each – 2.0 hour maximum for any combination
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Section 5 - Shop Flat Rate Schedule SW/6X; SW/9X; SW/10X; And Atlas

1. FUEL TANK GROUP

R/R Sender - Fuel Tank w/Cork Gasket	0.5 hours
R/R Fuel Tank	1.0 hour

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
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	0.5 hours
R/R Plate - Directional Control	0.5 hours
Adjust Creeping	0.5 hours

4. MAIN BROOM SUB. GROUP

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

5. STEERING GROUP

R/R Steering Fork Sub-Assembly	2.0 hours
R/R Fork Pivot	2.0 hours
R/R Drive Motor	2.0 hours
R/R Stud - Wheel Hub	1.0 hour
R/R Ball Joint - Steering	0.5 hours
R/R Bearing - Tapered Rol-Cup	1.0 hour
R/R Bearing - Tapered Rolcone w/Seal	1.0 hour
R/R Bearing - Thrust	2.0 hours
R/R Hub - Rear Wheel	1.0 hour
R/R Motor - Hydraulic	2.0 hours
R/R Fitting - Special Wheel Motor	0.5 hours
R/R O-Ring - 0.755IDx0.098W	0.5 hours
R/R Assembly - Steering Link	0.5 hours
R/R Fitting - Grease 3/16	0.5 hours
R/R Fitting - Adapter 7/8-14 Ext to 3/4	0.5 hours
R/R Fitting - Others	0.5 hours
R/R Wheel - Steering	0.5 hours
R/R Battery - 12 Volt	0.5 hours
R/R Battery - 36 Volt (SW/62E)	0.5 hours
R/R Cable - Battery	0.5 hours

6. BROOM DOOR GROUP

R/R Broom Door	1.0 hour
R/R Flap	0.5 hours
R/R Seal (Glued Type)	0.5 hours

7. 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 SW/6X; SW/9X; SW/10X; And Atlas

8. LIFT ARM GROUP

R/R Grommet	0.5 hours
R/R Cylinder - Rotation	1.0 hour
R/R Bearing	0.5 hours
R/R Lift Arm Cylinder Mount	0.5 hours
Rebuild Hydraulic Cylinder	2.0 hours
R/R Lift Arms	2.0 hours
R/R Bearings - Spherical	0.5 hours
R/R Cylinder - Lift	1.0 hour
R/R Lift Arm Idler	0.5 hours

9. AXLE, BRAKES, & WHEEL GROUP

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

10. FRONT BUMPER ASSEMBLY GROUP

R/R Front Bumper Assembly	1.0 hour
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	1.0 hour
Install Seal Kit - Hydraulic Motor	2.0 hours
R/R Retainer - Brush	0.5 hours
R/R Key - Hex - Hydraulic Motor	0.5 hours
R/R Brush	0.5 hours
R/R Motor - Electric Curb Broom	0.5 hours
R/R Hydraulic Hoses	1.0 hour
R/R Wiring Harness	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

12. HYDRAULICS GROUP

R/R Cooling Coil	0.5 hours
R/R Control Valve Sub-Assembly	0.5 hours
R/R Fittings	0.5 hours
R/R Orifice	0.5 hours
R/R Lever	0.5 hours
R/R U-Link	0.5 hours
R/R Cotter Pin	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours
R/R Solenoid Valve Assembly	0.5 hours
R/R Fittings	0.5 hours
R/R Hydraulic Reservoir	1.5 hours
R/R Fittings	0.5 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 hour
R/R Hydraulic Hose - Main Feed	1.5 hours
R/R Fittings	0.5 hours
R/R Hydraulic Cylinders	1.0 hour
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	0.5 hours
R/R Pulley	0.5 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; And Atlas

15. HOPPER LID GROUP

R/R Gaskets - Glued Type	0.5 hours
R/R Hopper Hood	0.5 hours
R/R Actuator	0.5 hours
R/R Latch	0.5 hours
R/R Dump Door - Electric Scrubbers	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. CONTROL BOX GROUP

R/R Cables	0.5 hours
R/R Grommet	0.5 hours
R/R Solenoids	0.5 hours
R/R Harness – Scrub Head Lift	0.5 hours
R/R Fuses	0.5 hours
R/R Wire Jumpers	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	1.0 hour
R/R Fittings	0.5 hours
R/R Pump - Hydraulic w/Reservoir	1.0 hour
R/R Motor - Electric Auxiliary	0.5 hours
R/R Pulleys, Belts	0.5 hours
Miscellaneous Parts & Adjustments	0.5 hours

18. HOPPER GROUP

R/R Hopper Assembly	2.0 hours
R/R Flap - Hopper Lip	0.5 hours
R/R Clip nuts	0.5 hours
R/R Filter - Dust Control	0.5 hours
R/R Motor - Filter Shaker	0.5 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

Section 5 - Shop Flat Rate Schedule SW/6X; SW/9X; SW/10X; And Atlas

19. ENGINE GROUP

R/R Gasket – Air Cleaner	0.5 hours
R/R Gasket – Carburetor	0.5 hours
R/R Gasket – Distributor	0.5 hours
R/R Gasket – Manifold	0.5 hours
R/R Gasket – In Manifold	0.5 hours
R/R Gasket – Muffler	0.5 hours
R/R Heat Shield	0.5 hours
R/R Housing – Flywheel	1 hour
R/R Key Switch	0.5 hours
R/R O-Ring – Oil Plug	0.5 hours
R/R Gauge – Oil	0.5 hours
R/R Thermostat	0.5 hours
R/R Plug – Oil Head Cover	0.5 hours
R/R Pulley	1.0 hour
R/R Rotor	0.5 hours
R/R Seal – Oil Gear Case	3.0 hours
R/R Spark Plugs	0.5 hours
R/R Starter	1.0 hour
R/R Wire Set – Plugs & Coil	0.5 hours
R/R Pump – Auxiliary	1.0 hours
R/R Spring – Return	0.5 hours
R/R Coupling – Load Directional Control	0.5 hours
R/R Assembly Disc – Forward/Reverse	0.5 hours
R/R Bracket – Forward / Reverse	0.5 hours
R/R Pump – Main	2.0 hours
R/R Valve – Tow Option	0.5 hours
R/R Mount – Forward / Reverse	0.5 hours
R/R Plate – Directional Control	0.5 hours
R/R Wiring Harness-Vacuum Switch	0.5 hours
R/R LP Regulator / Vaporizer	0.5 hours
R/R Carburetor Adapter	0.5 hours
R/R Bulkhead (Contains Safety Valve)	0.5 hours
R/R Solenoid – Shutoff	0.5 hours
R/R High Pressure Hose	0.5 hours
R/R Elbow	0.5 hours
R/R Safety Valve – LPG	0.5 hours
R/R Engine Mount	0.5 hours
R/R Coolant Tank	0.5 hours
R/R Engine	8 hours
R/R Fittings	0.5 hours
R/R Ball Joints	0.5 hours
Install Hydraulic Seal Kit	2.0 hours

R/R Wiring Harness – Lintel	0.5 hours
R/R Air Cleaner Assembly	0.5 hours
R/R Air Cleaner Element	0.5 hours
R/R Alternator	0.5 hours
R/R Belt – Fan	0.5 hours
R/R LP Regulator	1.0 hours
R/R Carburetor	0.5 hours
R/R Coil	0.5 hours
R/R Distributer	0.5 hours
R/R Fan – Engine	1.0 hour
R/R Filter – Fuel	0.5 hours
R/R Radiator	2.0 hours
R/R Hose – Radiator	0.5 hours
R/R Muffler	0.5 hours
R/R Filter – Oil	1.0 hour
R/R Flywheel	2.0 hours
R/R Pump – Electric Fuel	1.0 hour

Section 5 - Shop Flat Rate Schedule SW/6X; SW/9X; SW/10X; And Atlas

1. FRONT BUMPER GROUP

R/R Headlights	0.5 hours
R/R Wiring Harness	0.5 hours

2. CURB BROOM GROUP

R/R Curb Broom Motor	1.0 hour
R/R Curb Broom Motor Seals	1.5 hours
R/R Curb Broom Cable	0.5 hours
R/R Curb Broom Lever	0.5 hours
R/R Curb Broom Pulleys	0.5 hours

3. HOPPER GROUP

R/R Shaker Motor(s)	0.5 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	0.5 hours
R/R Side & Hopper Seals	0.5 hours
R/R Hopper	2.0 hours

4. HIGH DUMP ARM GROUP

R/R Assembly Hopper Lift Arm	2.0 hours
R/R Rotational Cylinders (each)	1.0 hour
R/R Cylinder Mounts	0.5 hours
R/R Hopper Pivot Plate (each)	1.0 hour
R/R Secondary Arms (each)	1.0 hour
R/R Hydraulic hoses (per side)	1.0 hour
R/R Wiring Harness	1.0 hour

5. SAFETY ARM GROUP

R/R Safety Arm	0.5 hours
R/R Safety Arm Retainer	0.5 hours

6. AXLE / BRAKE / FRONT WHEEL GROUP

R/R Tire Assembly - each side (Remove tire from machine)	1.0 hour
R/R Pneumatic Tire & Liner -each side (break down tire & reassemble)	1.0 hour
R/R Solid Tire -each side (break down tire & reassemble)	1.0 hour
R/R Wheel Bearings (each side)	1.0 hour
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 Wheel Cylinder - each side (R/R tire assembly, hub, & wheel cylinder)	1.0 hour
R/R/Rebuild Wheel Cylinder - each side (R/R tire assembly & hub, Rebuild wheel cylinder)	1.0 hour
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 hour
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; And Atlas

7. 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 hour

8. GASKET MOUNT GROUP

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

9. FRAME GROUP

R/R Rear Skirt Assembly – Broom Chamber	1.0 hour
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

10. 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 hour
R/R Hydraulic Filter Mount	0.5 hours

11. 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

12. MAIN BROOM GROUP

R/R Main Broom	0.5 hours
R/R Main Broom Idler Bearings	1.0 hour
R/R Main Broom Assembly	2.0 hours
R/R Main Broom Motor - Hydraulic	1.0 hour
R/R Main Broom Motor Seals	1.5 hours
R/R Gasket - Main Broom Arm (each)	0.5 hours

13. ENGINE COVER GROUP

R/R Gas Spring (each)	1.0 hour
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14. IMPELLER GROUP

R/R Complete Assembly - XT / XV Deluxe	2.0 hours
R/R Complete Assembly - XV	2.0 hours
R/R Hydraulic Impeller Motor (housing does not need to be removed from unit)	2.0 hours
R/R Impeller Exhaust Hose	0.5 hours

15. CLIP SEAT GROUP

R/R Seat	0.5 hours
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16. DIRECTIONAL CONTROL GROUP / HYDROSTAT ADJUSTMENT

Section 5 - Shop Flat Rate Schedule SW/6X; SW/9X; SW/10X; And Atlas

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

17. STEERING GROUP

R/R Steering Unit	1.0 hour
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 hour
R/R Drive Tire	1.0 hour
R/R Mount Assembly - Steering Cylinder	1.0 hour
R/R Steering Stop	1.0 hour

18. 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	1.0 hour

19. RADIATOR GUARD GROUP

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

20. 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

21. EXHAUST GROUP

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

22. TAILLIGHT GROUP

R/R Assembly	1.0 hour
R/R Bulb	0.5 hours
R/R Lens	0.5 hours

23 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 hour
R/R Radiator Shroud (1 Piece)	1.0 hour
R/R Radiator Deflectors	1.0 hour
R/R Radiator	2.0 hours

Section 5 - Shop Flat Rate Schedule
SW/6X; SW/9X; SW/10X; And Atlas

25. HYDRAULIC HOSE GROUP

24. HYDRAULIC HOSE GROUP

R/R Lift Rotation Cylinder	1.0 hour per side
R/R Lift Cylinder	1.0 hour - each
R/R Curb Broom Motor	1.0 hour
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	0.5 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	0.5 hours

R/R Lift Rotation Cylinder	0.5 hours per side
R/R Lift Cylinder	0.75 hours - each
R/R Curb Broom Motor	0.5 hours - 1 or 2 hoses
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	0.5 hours
R/R Tail wheel to Reservoir	0.5 hours
R/R Tail wheel to Main Pump (forward or reverse)	1.5 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	1.5 hours
R/R Main Pump to Power Steering Unit	1.25 hours
R/R Main Pump to Inlet Side of Valve Body	1.25 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	0.5 hours

**Section 5 - Shop Flat Rate Schedule
Scrubmaster Series and Nautilus Electric**

Actuator, Brush	2 hours
Actuator, Side Broom	1 hour
Back Flow Preventer (Spray Bar)	1 hour
Back Flow Preventer, In line Not Spray Bar	0.5 hour
Backup Alarm	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	3 hours
Cables, Battery	0.5 hour
Control Board, Main	1 hour
Filter Assembly, Solution	1.5 hours
Harness, Chassis Drive Motor	2 hours
Motor, Brush	3 hours
Motor, Chassis Drive	2 hours
Motor, Pre sweep	1 hour
Pump, Water	1 hour
Solenoid, Water	1.5 hour
Speed (Drive) Controller	1 hour
Switch, Float	0.5 hour
Switch, Solution Float	0.5 hour

**Section 5 - Shop Flat Rate Schedule
Scrubmaster Series and Nautilus Electric**

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

Phoenix Series Scrubbers

Flat Labor Rates

Description Of Part Replaced	Hours Allowed
Battery (1 or more) includes testing	1
Battery Charger	2
Brush Dive Hub	0.5
Brush Motor	1
Caster(s)	0.25
IDrive Controller	1
Key Switch*	0.5
Recovery Tank	1
Relay/Contactor	1
Solution Tank	4
Squeegee Lift Cable	1
Switches*	0.5
Transaxle	2
Vacuum Motor	1
8 "Wheels*	.25 each
Squeegee Hose*	0.25
Relay, Contractor or Solenoid	1
Belt (Cylindrical Models Only)	0.5

* First 30 days only