



PV-II SERIES

OWNER'S MANUAL

POLYVAC

INFORMATION SHEET

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SWEEPER SERIAL NUMBER _____

SWEEPER MODEL _____

ENGINE TYPE _____

ENGINE SERIAL NO. _____

MANUAL COPY NO. _____

SOLDANDSERVICEDBY:

MANUFACTURED BY:
Schwarze Industries, Inc.
1055 Jordan Lane
Huntsville, AL 35811-9310
1-800-879-7933

To Schwarze PV II SERIES Sweeper Owners...

Dear Purchaser,

Thank you for choosing the Schwarze PV II SERIES sweeper, completely designed and manufactured in the United States by Schwarze Industries, Inc. Your new sweeper has been quality engineered to provide years of dependable service.

To meet the tough demands of commercial sweeping, all components have been fabricated from heavy-duty materials, with additional strength added to critical wear items. You will enjoy the smooth performance, convenient placement of controls, and the efficient, cost-effective operation that is Schwarze Industries' hallmark.

This manual has been prepared to acquaint you with the safe operation and maintenance of your new Schwarze PV II SERIES sweeper. It should be used in conjunction with the truck manufacturer's Chassis and Engine Manuals. Schwarze Industries has provided an additional engine manual which contains detailed information about the sweeper engine's operation, maintenance and warranty.

By following the procedures and guidelines outlined in these publications, you will maximize the life of your sweeper while minimizing the maintenance necessary to keep it running at peak efficiency. We urge you to familiarize yourself with all of these manuals before operating your new sweeper.

This manual should be considered a permanent part of your sweeper, and should remain with the sweeper in the event it is sold, to provide the next owner with the important safety, operational and maintenance information.

All information, illustrations and specifications contained in this manual are based upon the latest product information available at printing time. Due to our policy of continually striving to improve the performance and efficiency of our sweepers, Schwarze Industries reserves the right to make changes or improvements at any time without notice or obligation to update previously manufactured sweepers.

If you have any questions concerning the proper operation or maintenance of your sweeper, don't hesitate to call your authorized Schwarze Dealer. If for any reason your Dealer is unable to answer a question to your complete satisfaction, feel free to call us at our Huntsville, Alabama factory. Our toll free number is 1-800-879-7933.

Thanks again for choosing our Schwarze PV II SERIES sweeper. It's a choice that I'm sure you won't regret.

Jim Morris, President
Schwarze Industries, Inc.

INTRODUCTION

Your new Schwarze PV II SERIES sweeper incorporates the very latest in sweeper manufacturing technology. This sweeper will clean surfaces with a high rate of efficiency while at the same time minimizing operational costs. A single fan is used to create both the air pressure and the suction which power the sweeping function. This volume of air, which is pumped at a high velocity into the sweeper pickup head, provides its superior sweeping operation. This sweeper uses a 'closed loop' or 'regenerative air' system to accomplish debris pick-up. Part of the fan's forced air may be vented out of the fan housing, which provides increased performance over competitive models. You will find this design is much more dependable and requires less maintenance than that of broom sweepers.

To obtain the best use of the sweeper's equipment, we strongly recommend that the operator be required to thoroughly read, understand and follow all of the applicable information in this Manual prior to and during the operation of this sweeper. Daily cleaning and strict adherence to the unit's routine maintenance schedules are major factors in keeping your unit in like-new condition. Having both service personnel and operators become familiar with the information unique to this make and model of sweeper will greatly contribute to the sweeper providing cost-effective operation and years of quality service.

Our goal at Schwarze Industries is always 100% customer satisfaction. We're confident you'll find this new sweeper to be the best built on the market and it's backed by a company with a service commitment that's second to none. If you need help, don't hesitate to call. Many ideas for improvements in previous models have come from users in the field. If you have an idea or suggestion on how we might make our product even better, please let us know by calling toll free, 1-800-879-7933.

CUSTOMER ASSISTANCE

Schwarze Industries is noted for its commitment to customer satisfaction. In addition to many Authorized Dealers located throughout the country, Schwarze Industries also maintains a fully stocked factory service center in Huntsville, Alabama. In the event you need parts or service, call your nearest Authorized Dealer. Their name and number should be shown on the Sweeper Information Sheet, located in the front of this manual.

In the unlikely event that they are unable to provide the assistance you require, call us at our home office in Huntsville, Alabama. We have a state-of-the-art fabrication and production facility and a complete service and refurbishing center with an inventory of over \$500,000 in spare parts. In most cases, same day shipping and overnight delivery is available.

To reach our parts service representatives, call 1-800-879-7933.

To assure prompt delivery and processing of your parts order, please have the following information ready before calling:

- Type and serial numbers for the chassis, power module engine and the sweeping unit. (This information is also located on the Sweeper Information Sheet in the front of this manual.)
- The part number(s), description(s) and the quantity desired. (Please indicate any relevant particulars such as whether the part is for the right or left, front or rear.)
- Shipping instructions: Tell us how you want your order shipped (i.e: next day air, second day air, truck freight, etc). When left unspecified, orders are shipped UPS. Truck freight is used when required due to weight restrictions.

Every effort is made to ship all in-stock parts on the same day the order is placed when received before 12:00 noon Central Time. Orders received after noon are shipped on the following business day.

For your convenience, you may fax your orders 24 hours per day by calling 1-205-851-1210.

WARRANTY INFORMATION

Warranty claims are handled by our parts department. Before any warranted parts may be returned for warranty credit, however, *authorization by a Schwarze representative must first be obtained*. Also, once the authorization has been granted the defective part **MUST** be returned to us. This policy allows for efficient parts shipping and account crediting.

For your convenience, we accept MasterCard and Visa. If credit card payment is not used, orders will be shipped C.O.D. unless prior arrangements have been made with our accounting department.

Once received, shipments should be examined immediately. Any shortage or damage should be noted on the freight bill or express receipt **BEFORE** the parts are accepted from the carrier. Immediate notification of such shortage or damage should also be given to us.

If you still have questions with the service or operation of your sweeper, after consulting the maintenance and troubleshooting sections of this manual, call us toll-free and we will provide you with additional instruction.

We at Schwarze Industries are truly committed to your complete satisfaction with our products and services. If you have any suggestions, please call our toll-free number 1-800-879-7933. We are only a toll-free phone call away.

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SAFETY SECTION

General Safety Instructions and Practices

A safe and careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, the area and conditions in which you are operating the equipment, and by observing reasonable precautions. The first section of this manual includes a list of **Safety Messages** that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these **Safety Messages** before assembling, operating or servicing the Sweeper. This equipment should only be operated by those persons who have read the Manual, who are responsible, who have been properly trained, and who know how to operate the Sweeper safely and responsibly.

The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: **“ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED!”** The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all---remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.

CAUTION!

The lowest level of Safety Message; warns of possible injury. Decals located on the Equipment with this Signal Word are Black and Yellow.



WARNING!

Serious injury or possible death! Decals are Black and Orange.



DANGER!

Imminent death/critical injury. Decals are Red and White. (SWG-1)

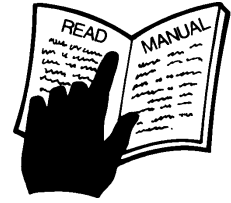


READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SWG-2)



PELIGRO!

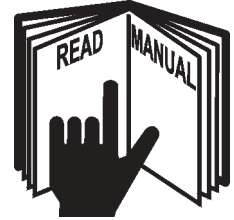
Si no lee Ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad. (SWG-3)



**¡ LEA EL
INSTRUCTIVO!**

DANGER!

Never operate the Sweeper until you have read and completely understand this Manual, the Truck Operator's Manual, the Auxiliary Engine Operator's manual, and each of the Safety Messages found in these Manuals and those affixed to the Sweeper and its components. Learn how to stop the Sweeper's engines suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Truck and Sweeper without supervision. Make sure the operator has fully read and understood the manuals prior to operation. (SWG-4)



In addition to the design and configuration of this Sweeper, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Truck and Auxiliary Engine Manuals. Pay close attention to the Safety Signs affixed to the Sweeper. (SWG-5)

PARTS INFORMATION

Schwarze Sweepers use balanced and matched system components for broom carriers, brooms, suction heads, and other components. These parts are made and tested to Schwarze specifications. Non-genuine or "will fit" parts do not consistently meet these specifications. The use of non-genuine or "will fit" parts may reduce Sweeper performance, void Sweeper warranties, and present a safety hazard. Use genuine Schwarze Sweeper parts for economy and safety.

SEE YOUR SCHWARZE DEALER (SWG-6)**WARNING!**

Always maintain the safety decals in good readable condition. If the decals are missing, damaged, or unreadable, obtain and install replacement decals immediately. Consult your authorized sales representative for decal replacements. (SWS-1)

DANGER!

All Safety Shields, Guards and other Protective Safety devices should be used and maintained in good working condition. All safety devices should be inspected carefully at least daily for missing or broken components. **NEVER REMOVE PROTECTIVE SHIELDS AND GUARDS! NEVER MODIFY OR CUT PROTECTIVE SHIELDS OR GUARDS!** When shields or guards are removed to access areas for maintenance, they must be replaced and be in good condition before operating. Missing, broken, or worn shields, guards, and other protective devices must be replaced at once and prior to operation to reduce the possibility of injury or death from thrown objects, entanglement, or contact. (SWS-2)

WARNING!

The Sweeper must be equipped with a fire extinguisher, rated for all fires, in an accessible and visible area. The fire extinguisher should be inspected routinely by a certified inspector for operational use and replaced as needed. Never obstruct access to the fire extinguisher. (SWS-6)

DANGER!



Do Not fill gasoline tank while engine is running. Refuel only after engine has cooled down. If gasoline is spilled, move machine away from the area of the spill and avoid creating any source of ignition until the gasoline has evaporated. (SG-28)

Driver Safety Instructions and Practices

WARNING!



The operator of the Sweeper must be trained in the operation and safe use of this machine. The operator must read and completely understand the operator's manuals of the Sweeper, Truck and Auxiliary engine manufacturers. New operators should be trained in an open area clear of obstructions before operating on public roadways. If operation of the entire Sweeper unit (Truck, Auxiliary engine, and Sweeping Components) is not completely understood, consult your authorized sales representative for a detailed explanation. Never allow an untrained or unqualified driver to operate the Sweeper.

(SWD-1)

CAUTION!



The Sweeper driver must meet the requirements and possess a Motor Vehicle License as determined by the state in which the Sweeper is operated if used on public roadways. Contact your local State Department of Public Safety office for special licensing requirements to operate the Sweeper in your area. (SWD-2)

DANGER!



NEVER use drugs or alcohol immediately before or while driving or operating the Sweeper. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the Sweeper safely. Before operating the Sweeper, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Sweeper safely. **NEVER** knowingly allow anyone to operate this Sweeper when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SWD-3)



WARNING!



Always wear OSHA approved Personal Protective Equipment (PPE) while operating, servicing, repairing, and/or cleaning the Sweeper. PPE is designed to provide bodily protection during such activities.

Personal Protective Equipment includes:

- Protective Eye Wear
- Steel Toed Safety Footwear
- Gloves
- Hearing Protection
- Close Fitted Clothing
- Hard Hat-When working around a raised hopper.
- Respirator-Depending on conditions and material being swept or cleaned.

Specialized protective equipment may be required if dangerous or hazardous material is being swept by or cleaned from the Sweeper. (SWD-4)

CAUTION!

Prolonged operation of the Sweeper may cause operator boredom and/or fatigue affecting the safe operation of the Sweeper. It is recommended that the operator take scheduled work breaks to help prevent these potentially impaired operating conditions. If possible, completely shut down the Sweeper, exit the cab and move around stretching your arms and legs. Never operate the Sweeper in a fatigued or bored mental state that impairs proper and safe Sweeper operation. (SWD-5)

CAUTION!

PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Sweeper operation can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss. *Note:* Hearing loss from loud noise [from sweepers, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery.

(SWD-6)

**Operation Safety Instructions and Practices****WARNING!**

Use available Sweeper handholds and steps to exit the Sweeper. Make sure you have solid footing before stepping down. Be careful of your step and use extra caution when mud, ice, snow, or other matter has accumulated on the steps or handrails. Never rush to exit or jump off the Sweeper.

(SWO-2)

DANGER!

Do not attempt to mount the Sweeper or Truck while the machine is moving. Never attempt to mount a runaway Sweeper. Serious injury or death may occur from being run over by a moving Sweeper. (SWO-3)

DANGER!

BEFORE leaving the Truck's seat, always engage the parking brake and/or set the Truck's transmission in parking gear, stop the engine, remove the key, and wait for all moving parts to stop. Never dismount a Truck that is moving or while the Truck and Auxiliary engines are running. Operate the Sweeper controls from the Truck seat only. (SWO-4)

WARNING!

Always wear a seat belt while driving the Sweeper during operation and transport. Serious injury or even death could result from falling out of the Truck or from being involved in a collision. (SWO-5)

DANGER!

Start the Truck and Auxiliary engines only when seated and belted in the Truck's operator seat. Operate the Sweeper controls only while properly seated with the seat belt secured around you. Inadvertent movement of the Truck and/or Sweeper components may cause serious injury or death to the operator and passersby. Read the Truck and Auxiliary Engine operator's manuals for proper starting instructions. (SWO-6)

WARNING!

Use the right side steering only for sweeping, and never while exceeding 15 MPH. For travel, the Sweeper must be driven from the LEFT side ONLY. If the Sweeper is to be operated from the right hand side, make sure the Sweeper's mirrors are aligned for visibility from the right hand side steering position. (SWO-7)

DANGER!



Sweep only in conditions where you have clear visibility of the area being swept in daylight or with adequate artificial lighting. Never sweep in darkness of foggy conditions where you cannot clearly see at least 50 feet in front and to the sides of the Sweeper. Make sure that you can clearly see and identify passersby, steep slopes, ditches, dropoffs, overhead obstructions, power lines, oversized debris and foreign objects. If you are unable to see these types of items, discontinue sweeping until visibility improves. (SWO-8)

WARNING!



Transport the Sweeper only at safe speeds. Serious accidents and injuries can result from driving this Sweeper at unsafe speeds. Become familiar with the driving characteristics of the Truck and how it handles before operating or transporting on streets and highways. Make sure the Truck's steering, brakes, and wheels are in good condition and operate properly. Before transporting the Sweeper determine the safe transport speeds for you and the machine. Make sure you abide by the following rules:

- 1. Test the Sweeper at a slow speed and increase the speed slowly. Apply the brakes smoothly to determine the stopping characteristics of the Truck equipped with the Sweeper. As you increase the speed of the Truck, the stopping distance increases. Determine the maximum safe transport speed for you and the Sweeper. When driving down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. Do not operate the Sweeper with weak or faulty brakes.**
- 2. Obey all traffic laws and regulations. Never exceed the posted speed limit.**
- 3. The Sweeper has a high center of gravity that may be further increased when carrying a loaded hopper and/or a full water tank. Use extreme caution when transporting at highway speeds. Slow down for sharp corners to avoid tipping or turning the Sweeper over.**
- 4. Only transport the Sweeper at the speeds determined as safe and which allow for proper control of the machine while driving and stopping during an emergency.**
- 5. When operating in traffic, use the Sweeper's directional indicator or signal lights to indicate your movement. Always use the Sweeper's flashing signal lights and other equipped warning features to alert motorists of your presence and slow moving speed when sweeping in traffic. Be Aware of Traffic Around You and Watch Out for the Other Guy.** (SWO-9)

WARNING!



When transporting the Sweeper between locations, follow all local traffic laws and regulations. Disengage all Sweeper controls, raise all sweeping components, gutter brooms, sweeper heads, make sure the hopper is completely lowered, and disengage all warning signals prior to entering vehicle traffic. (SWO-10)

WARNING!



Before starting to sweep, the sweeping components must be engaged and operating at the rated speed before moving forward. Sweeping debris before the Sweeper has reached its rated operation speed may result in debris binding between the sweeping components or obstruction in the suction tubes. (SWO-11)

WARNING!



Do not exceed the rated operating speed for the Truck and Auxiliary engines. Excessive operating speeds can cause engine and Sweeper component failures resulting in possible serious injury or death. (SWO-12)

WARNING!

Sweep at a speed that allows you to safely operate and control the Sweeper. Safe sweeping speed depends on street condition and the type and amount of debris being collected. Normal ground speed range is between 1 and 3 mph. Slow down for corners, curbs, parked cars, protruding signs and other obstacles. Use slow traveling speeds when operating on or near steep slopes, ditches, drop-offs, overhead obstructions, power lines, or when debris and foreign objects are to be avoided.

(SWO-13)

WARNING!

Never reach outside the Truck cab to pick up a foreign item or to clear an obstacle such as a tree limb or road sign impeding passage. Stop the Sweeper, shut down all sweeping components, wait for all moving parts to come to a complete stop, then exit the cab to handle objects that are hindering Sweeper operation and passage. (SWO-15)

WARNING!

Do not operate the Sweeper if excessive vibration or noise exists. Shut down the Sweeping components and the Truck and Auxiliary engines. Inspect the Sweeper to determine the source of the vibration or noise. If brooms are loose, damaged, or missing, replace them immediately. Do not operate the Sweeper until all necessary repairs have been performed and the Sweeper operates smoothly. Operating the Sweeper with excessive vibration can result in component failure and broken objects being thrown outward at high velocities. To reduce the possibility of property damage, serious injury, or even death, never operate the Sweeper with missing or damaged components. (SWO-16)

WARNING!

Never attempt to sweep debris that is too large for the Sweeper to pick up (oversized objects such as broken limbs and discarded tires). Such objects may plug the sweeping components and cause serious mechanical damage to the Sweeper. If possible, carefully place such objects out of the Sweeper and traffic path until properly removed by another means. (SWO-17)

WARNING!

Un swept debris, piled debris, and water puddles left behind the Sweeper might pose a driving hazard to vehicle traffic colliding with the debris or losing traction on the material. It is recommended to post warning signs alerting driver's of the Sweeper's presence and the need to reduce vehicle speed. If such hazards are left behind following the Sweeper's passage, the area should be swept a second time and any remaining hazards removed by an alternative method. (SWO-19)

DANGER!

Do Not raise the Sweeper's broom components when passersby are within 25 feet. Make sure that the gutter brooms and sweeper brooms have come to a complete stop before raising the brooms from the street surface. Raising the sweeping components exposes the rotating brooms creating a potentially serious hazard from thrown objects by the brooms or from direct broom contact. (SWO-20)

DANGER!

Air enters the fan housing inlet with great force. Caution should be used when the power module is running and the hopper is raised. To avoid being pulled into the fan, do not wear loose clothes or position yourself or allow others near the fan housing inlet. Possible injury or death could occur from being pulled into the fan. (SWO-21)

DANGER!



Use extreme caution when dumping contents of the Sweeper. Be aware of bystanders and animals in the area. Select a dump site on level ground and clear of overhead obstructions that could be hit when raising the hopper. Serious injury or death to the operator, bystanders and animals could occur if precautions are not taken when dumping the contents of the hopper.

- When positioning the truck at the dump station, choose an accessible location only on level ground. Raising the hopper on unlevel ground increases the possibility of tipping.
- Make sure the area is clear of ground and overhead obstructions.
- Never raise the hopper bin unless you can clearly see all overhead structures. Make sure you stay clear of all utility lines.
- Do not dump the hopper over a pit area where the ground may cave in or is unstable.
- Stay in the cab of the sweeper with the windows rolled up when dumping the hopper.
- Use care when positioning the Sweeper to the dump station. Your vision, especially to the side and rear of the Sweeper may be reduced by the size of the Sweeper. Use side and rear view mirrors to aid vision. If you cannot see the dump site clearly, stop the Truck and examine the area. If necessary, request assistance to guide you while backing the Truck into position.
- If the hopper will be in the raised position for more time than is normally required to dump, or if someone is going to get under the hopper for repair, maintenance, cleaning or any other reason, secure the safety prop into position.
- Never drive the Sweeper with the hopper in the raised position. Traveling with the hopper in the raised position increases the chances of colliding with overhead obstructions. In addition, the center of gravity of the Sweeper is higher with a raised hopper, making the unit more prone to tipping over. (SWO-23)

WARNING!



Use extreme caution when lowering or unfolding the Sweeper's outriggers. Make sure no bystanders are close by or underneath the outriggers when activated. Allow ample clearance around the Sweeper when lowering or raising the outriggers. Use extreme caution around obstructions including bystanders, passersby, curbs, buildings, and other property. Use the Truck's horn to warn of danger when outriggers are being lowered. (SWO-24)

DANGER!



Do not allow the Sweeper to come in contact with potentially dangerous and/or hazardous material. Such hazards may include, but are not exclusively limited to, the following:

- Fire Hazards- Fuel spills, burning material,
- Chemical Hazards- Chemical spills, discarded chemical containers, batteries,
- Biological Hazards- Decaying Carcasses, BioMedical Waste,
- Radioactive Hazards-Radioactive Waste, Radiocative Material,
- Cutting Hazards-Broken Glass, Lumber with Potruding Nails,
- Carcinogenic Materials-Asbestos,
- Corrosive Materials-Batteries, Acids and Bases.

In most areas, these types of material require special handling requirements for safe collection and proper disposal and should not be collected by the Sweeper, nor can they be disposed of in a general landfill site like most swept waste. Contact the appropriate authority for the collection and disposal requirements of such dangerous and/or hazardous material. (SWO-25)

DANGER!



Always wear required OSHA approved Personal Protective Equipment (PPE) when coming in contact with and removing potentially dangerous and hazardous material that has been collected by the Sweeper or which is obstructing one or more Sweeper components. Pay close attention to dangerous and hazardous material including, but not exclusively limited to, chemicals, decaying carcasses and sharp objects. (SWO-26)

DANGER!

Never sweep into hot or burning debris. A burning object, even as small as a lit cigarette, has the potential of igniting the collected waste inside the hopper, possibly destroying the Sweeper and inflicting serious injury or death to the operator or passersby. (SWO-27)

WARNING!

Verbal communication near a Sweeper is difficult and dangerous. Operating instructions and sweeping directions should be made prior to starting the Sweeper. Unclear and misunderstood communication may lead to operator and bystander injury or death and equipment damage. If communication by the operator is necessary, completely shutdown and exit the Sweeper. Never allow anyone to approach the Sweeper while in operation. (SWO-28)

DANGER!

Never allow children to play on, under, or around the Sweeper nor allow children to operate Sweeper controls. Children can slip or fall off the Sweeper and be injured or killed. Children can cause the Sweeper components to shift or fall crushing themselves or others. (SWO-29)

WARNING!

Allow Sweeper passengers only in situations where their presence is involved in the sweeping operation (operator training, supervision, maintenance inspection). Never carry passengers who's presence distracts from the safe operation or transport of the Sweeper. Passengers must be seated securely and belted in the cab's passenger seat. Never allow any person to ride on any other location of the Sweeper during operation or transport. (SWO-30)

WARNING!

Extreme caution should be used by the Sweeper operator when operating near passersby. Stop sweeping if anyone comes within 25 feet of the Sweeper to prevent possible passerby injury or death from being struck from a thrown object, entanglement with the brooms, or run over. (SWO-31)

WARNING!

Make sure that no bystander, animal or obstruction such as a vehicle, building, or street sign are behind the Sweeper when backing up. The design of the Sweeper impairs operator rear vision when backing. Use extreme caution to ensure that the Sweeper is not backed into the path of pedestrian or vehicle traffic. Serious injury or death and property damage could result from running into, being crushed by, or run over by a Sweeper. (SWO-33)

DANGER!

Make sure no bystanders or animals are within 25 feet of the Sweeper when dumping contents from or cleaning the hopper. Hopper contents, which may exceed several thousand pounds, could fall and crush a bystander or an animal resulting in possible injury or death. (SWO-34)

WARNING!

Remove the auxiliary gas tank and set it on the ground before filling with Gasoline to prevent static electricity from sparking and igniting the gasoline. (SWO-41)

WARNING!

Avoid body contact with collected debris in the hopper. Use protective clothing including gloves and eye protection when servicing or working in or around hopper. Collected debris in the hopper can cut or puncture resulting in serious bodily injuries and the transmittal of diseases. (SWO-42)

DANGER!



Use extreme caution when operating the Sweeper in traffic. To alert motorists of the Sweeper's presence, the Sweeper is equipped with warning signals, flashing lights, and a built-in arrow board. Optional electrical lights, flashers and a warning barlight, strobe, or beacon may be positioned on top of the cab. Use all equipped warning signals to alert motorists and pedestrians of the Sweeper's presence and relatively slow speed. Serious injury or death and property damage may occur if a vehicle collides with the Sweeper. (SWS-3)

WARNING!



Before starting a sweeping operation, make sure all the warning signal lights are connected, visible and working. Routinely inspect the Sweeper's headlights, brake lights, backup lights, and turn signal lights for operational condition. Immediately repair non-functioning lighting. Always follow all local traffic regulations while operating the Sweeper. (SWS-4)

WARNING!



Always turn on all safety lights and flashers when you operate the Sweeper. It is recommended that you preset the beacon/strobe light switches to ON, so lights go on whenever the auxiliary engine is ON and lights go OFF whenever the auxiliary engine is turned OFF. This presetting action has the additional benefit of alerting the operator if the auxiliary engine is inadvertently left ON. (SWS-5)

Maintenance Safety Instructions and Practices

WARNING!



Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this Sweeper in good working order. (SWM-1)



WARNING!



Inspect the entire Sweeper before each use. Accidents may occur or damage to the Sweeper may result if the Sweeper is not maintained in good mechanical working order.

- Check for loose bolts, worn or broken parts, pinched hydraulic hoses, and leaky or loose fittings.
- Make sure all pins are secure and safety pins equipped.
- Make sure replacement parts (gutter broom heads) are the correct size and properly installed.
- Make sure all fluid levels are full and replenish as necessary.
- Make sure fuel, oil, and coolant caps are replaced and tightened.
- Make sure that the water tank cap is replaced.
- Check tire condition for tread wear and tire pressure at the rated PSI.
- Make sure that all safety shields and guards are attached and in good condition.
- Make sure all scheduled maintenance is up to date. (SWM-2)

WARNING!



Do not modify or alter this Sweeper. Do not permit anyone to modify or alter this Sweeper, any of its components or any Sweeper function. (SWM-3)

DANGER!



Use extreme care when climbing onto the Sweeper to perform repairs, maintenance, and cleaning. Use proper stands and ladders to access areas that cannot be reached from ground level. Slipping and falling off the Sweeper can cause serious injury or death. (SWM-4)

DANGER!

Never attempt to repair, lubricate, adjust, clean, remove obstructions or perform any other type of service to any Sweeper component while the Sweeper is in motion or while the Auxiliary and/or Truck engine is running. Completely shut down the sweeping components and the Truck and Auxiliary engines and wait for all motion to come to a complete stop before servicing the Sweeper. (SWM-5)

DANGER!

Never leave the Sweeper unattended while the hopper bin is in the raised position. Accidental operation of the lifting lever or a hydraulic failure may cause a sudden drop of the unit which could result in injury or death by crushing. If the hopper must be raised for a purpose other than the time required to normally dump, or if someone is going to get under the hopper for any reason, always secure the hopper safety prop into position. (SWM-6)

DANGER!

Never crawl under the hopper bin while the hopper is in the raised position unless properly secured with the safety prop in position. Accidental operation of a lifting lever or hydraulic failure may cause a sudden drop of the unit with injury or death by crushing. (SWM-7)

WARNING!

Use proper protective equipment (gloves, safety eyewear, face shield, arm protection, possible respirator or particle mask) when handling gutter and sweeper brooms during replacement, adjustment, and maintenance. Broom bristles, which are sharp and coarse, could inflict puncture and stab wounds to the hands, arms, and/or eyes if proper protective equipment is not worn. (SWM-8)

DANGER!

Never crawl under any raised Sweeper component (gutter broom, sweeper head, suction head, hopper bin) unless the component is securely supported or blocked up and hydraulic pressure relieved. Accidental operation of the lifting lever or hydraulic failure may cause a sudden drop of the unit with possible injury or death by crushing. (SWM-9)

WARNING!

Hydraulic pressure must be relieved from the Sweeper's hydraulic circuit prior to doing any maintenance or repair work and when the Sweeper is parked at the end of the day. Place the Sweeper's gutter brooms, sweeper broom, suction head, and outriggers on the ground or securely blocked up with the safety pins installed. Make sure the hopper bin is lowered onto the chassis or secured in the raised position with the safety prop in position. Turn off the Truck and Auxiliary engines then engage the hydraulic remote cylinders several times to relieve hydraulic pressure prior to performing any maintenance or repair work. (SWM-12)

DANGER!

NEVER work on or near any engine component that has generated heat until it has cooled down. Use extra caution around the exhaust manifold near the water valve and the turbo charger manifold tubes. NEVER check or replenish the fluid levels of the Truck and Auxiliary engine coolant or hydraulic circuit oil levels until sufficient time has passed (up to 2 hours) to allow the system to cool down. Contact with a hot engine component or operating fluid may result in serious injury from burns, scalding and possible death. (SWM-14)

DANGER!

Never remove debris from or unclog jams in the suction hoses, gutter brooms, pickup brooms, and all other areas of the Sweeper until both the Truck and Auxiliary Engines have been completely shutdown, all sweeping components have come to a complete stop and are lowered to ground level and hydraulic pressure relieved. Always wear PPE when removing collected material from the Sweeper. Serious injury or death may occur if any of these precautions are not followed when removing plugged or jammed sweeping components. (SWM-15)

WARNING!



Use extreme caution when working in confined areas of the hopper bin or water tank for an extended period of time. Confined work areas may pose a danger because of the physical constraints imposed on the body. Routinely exit the confine to stretch and correct posture to prevent physical stress imposed on the body before bodily injury occurs. (SWM-16)

DANGER!



Use extreme caution when entering confined areas of the hopper bin to perform repairs, maintenance, and cleaning. Depending on any hazardous contents and/or fumes contained within the hopper bin, specialized Personal Protective Equipment such as a specialized respirator, artificial oxygen source, and protective body suit may be required. Always use the buddy system when hazardous or oxygen depleting material is contained within the hopper. Never enter an enclosed area without Personal Protective Equipment if contents are unknown, possible injury and death may result if required precautions are not taken. (SWM-17)

DANGER!



Use extreme caution when refueling the Sweeper, fuel is highly flammable and explosive if not handled safely. Always follow these precautions to reduce the dangers involved in refueling:

1. Completely shut down the Truck and Auxiliary Engines before refueling.
2. Do Not refuel while smoking or near an open flame.
3. Do Not store Sweeper with fuel in the tank in a building where fumes can reach an ignition source.
4. To prevent a fire and explosion caused by static electric discharge while filling the tank, use a plastic funnel. Avoid using a funnel that has a metal screen or filter.
5. Avoid spilling fuel. Fuel is expensive and can damage plastic and painted surfaces. Clean up spilled fuel immediately.
6. Store fuel and all oils at a site protected from moisture, dirt, and other contaminants. (SWM-18)

DANGER!



Never run the Truck or Auxiliary engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous and deadly to your health. If it is necessary to run the Truck or Auxiliary engine in an enclosed area, remove the exhaust fumes from the area to the outdoors with an exhaust pipe extension. If you do not have an exhaust pipe extension, or if it is not possible to use one (Sweeping within a building), open doors and circulate outside air into the area. (SWM-19)

WARNING!



Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer and birth defects or other reproductive harm. (SWM-20)

WARNING!



Always read carefully and comply fully with the manufacturers instructions when handling fuels, oils, solvents, cleansers, and any other chemical agent. (SWM-22)



WARNING!



Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and birth defects or other reproductive

WARNING!



Remove the negative battery cable from the battery before performing any maintenance on the electrical system to prevent an accidental circuit shorting and sparks. Sparks can result in wiring damaged, fire or personal injury. (SWM-25)

DANGER!



Use caution when working around the hopper doors. Do not let the doors fall uncontrolled onto bystanders or coworkers. Use the door locks to hold the doors open while cleaning or performing maintenance in or around the hopper. (SWM-26)

DANGER!



Inspect the trailer safety tow chains to make sure they are in good condition and properly attached to the towing vehicle. Do not tow the trailer unless the safety chains are attached to the towing vehicle. (SWM-29)

DANGER!



Inspect and test the trailer brakes periodically to ensure they are functioning properly. Do not transport the trailer and sweeper if the trailer brakes are miss-functioning. Miss-functioning brakes can result in loss of control of the trailer and towing vehicle. (SWM-30)

WARNING!



Use both hands for support when getting on and off the Sweeper. Use handholds and steps on the Sweeper for support when boarding the Sweeper. Never use the Sweeper control levers for support when boarding the sweeper. (SWO-1)

WARNING!



Inspect the condition of the trailer safety tow chains to ensure they are in good condition. Ensure the trailer is properly secured to the towing vehicle and the safety chains are properly attached. (SWD-9)

WARNING!



Before starting a sweeping operation, make sure all the warning signal lights are connected, visible and working. Routinely inspect the Sweeper's headlights, brake lights, backup lights, and turn signal lights for operational condition. Immediately repair non-functioning lighting. Always follow all local traffic regulations while operating the Sweeper. (SWS-4)

FEDERAL LAWS AND REGULATIONS

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources...”

DUTIES

Sec. 5 (a) Each employer-

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Regulations

OSHA regulations state in part: “At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved.”

Employer Responsibilities:

To ensure employee safety during Truck and Sweeper operation, it is the employer's responsibility to:

- 1. Train the employee in the proper and safe operation of the Truck and Sweeper.**
- 2. Require that the employee read and fully understand the Truck and Sweeper Operator's manual.**
- 3. Permit only qualified and properly trained employees to operate the Truck and Sweeper.**
- 4. Maintain the Truck and Sweeper in a safe operational condition and maintain all shields and guards on the equipment.**
- 5. Ensure the Truck is equipped with a functional seat belt and require that the employee operator securely fasten the safety belt at all times.**
- 6. Forbid the employee operator to carry additional riders on the Truck or Sweeper.**
- 7. Provide the required tools to maintain the Truck and Sweeper in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.**
- 8. Require that the employee operator stop sweeping if bystanders or passerbys come within 25 yards.**

Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

PV SERIES

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Chapter One – Installation

Please read through this entire chapter prior to beginning the actual installation process.

1. Prior to mounting your PV-II sweeper, the tailgate must be removed from the pickup truck onto which it is to be mounted. Also ensure that your truck has a 2" ball hitch, and that the hitch is firmly attached to the truck.

Then, back in under the PV-II unit and position it into the truck. You'll want to slide the sweeper into the truck bed until the hitching device is aligned with the ball on the truck's bumper. Next, connect the PV-II hitch onto the truck ball, making sure that the hitch locks firmly into place.

Until you have done this several times, it is a good idea to have another person on hand to help you maneuver your truck under the sweeper. Once sweeper is in place on your truck, do the following:

2. Install the drag arm brackets to your truck frame, as shown in Figure 1. Use existing holes, and be careful not to rub any wires or brake lines.

IMPORTANT ! Don't weld or drill holes in the frame, because this could weaken the structural strength of your vehicle's frame and void the chassis warranty.

3. Install the wiring adapter, supplied, to your truck wiring, using your choice of crimp or solderless connectors. Refer to the installation instructions supplied in the adapter kit.
4. Lower the jack stands by alternately cranking the handles on all four corners. Do this until the PV-II sets down evenly onto the truck bed and all four jack stands become loose inside their jack holders. Only then should you remove the jack stand safety pins (see arrows on Figures 2 and 3) and remove the jack stands from PV-II.

IMPORTANT ! It is essential that the safety pins be utilized whenever jack stands are attached to the PV-II. **Failure to do so could result in serious injury.**

5. Connect the previously installed wiring plugs from the truck to the sweeper body.
6. Install the drag arms to the drag arm plates, as shown in Figure 4. Note that the drag arms should be adjusted using the adjustment holes shown in Figure 5, so that when the head is in the up position, it doesn't touch the pipe where the jack is inserted. (See Figure 6.) Typically, when you are hooked up correctly, the head will be located directly under the truck's bumper.
7. Adjust the head stops to the correct height. The sweeping head should be low enough not to contact either the truck bumper or the frame, and yet high enough for good ground clearance (Figure 7). When cranking the head to the up position, stabilize the head with your hand to keep it level. This will ensure that it comes up evenly.

IMPORTANT ! To avoid injury, always crank with the ratchet engaged. When lowering the head, release the ratchet and crank the handle counterclockwise until the head sets on ground. **Letting the handle spin freely may cause bodily injury.**

Chapter Two – Operation

This chapter is intended to assist in the operation of your AA-TACH PV-II sweeper. Although the chapter deals with operation, you must also become familiar with the contents of Chapter 4 to ensure proper operation of your PV-II sweeper.

1. Fueling the auxiliary engine.

For ease of removal prior to adding gasoline, the gasoline tank is outfitted with a quick disconnect coupling. It is important to remove the gasoline tank prior to filling, because the flow of gasoline through the pump nozzle can produce static electricity. This can cause a fire if the gasoline is pumped into an **ungrounded** gasoline container.

To avoid static buildup:

- Place approved container on the ground. *Do not* fill in a vehicle or truck bed.
- Keep nozzle in contact with the can while filling. *Do not* use an automatic pump handle device.

IMPORTANT! *To assure the gas tank is grounded properly, always remove it from the sweeper and place it onto the ground before filling.* As an added precaution against static electricity, the manufacturer has grounded the sweeper frame to the hopper's light harness grounding wire. Be sure to keep this grounding circuit intact.

2. Checking the auxiliary engine's oil.

Prior to starting your PV-II each time, we recommend checking the oil level of your auxiliary engine.

3. Adjusting the air bleeder valve.

Adjust the air bleeder valve according to your current sweeping conditions, as shown by arrows in Figure 8. It should be closed for heavy conditions, and open for light debris conditions. Remember that when the air bleeder is in the open position, the chance for dust emission is greater. This could require the use of the sweeper's water system.

Typically, it is better to start at a mid-point adjustment with low engine RPM. You can then easily adjust either the air bleeder opening or the RPM level. Noise is always a factor to consider in the contract sweeping business, so try to operate at the lowest RPM range that still provides acceptable performance in the conditions in which you are sweeping.

4. Starting the auxiliary engine.

Prior to starting the auxiliary engine, be sure to first lower the sweeping head. By doing so, you will eliminate any dust that might be caused by air discharge. To start, first pull out the low speed idle and choke knobs. Then, engage the starter button until the engine starts. After warm up, push in the choke and the low speed idle knob. The engine will assume the preset RPM that is determined by the position of the accelerator handle. (Refer to engine manual.) Remember to start at a lower RPM – you can always increase the RPM if required.

If you are operating in dusty conditions, turn the water valve at the head to a position that suppresses the dust. Water also helps compact the litter in the hopper, and helps to keep the screen from plugging.

IMPORTANT ! For prolonged life of your auxiliary engine, it is recommended that you idle the engine for several minutes before turning it off.

5. Get the curb blowing tube handy.

Attach the curb blowing tube to the top of the cab for easy access. This requires sticking Velcro (supplied) to the top of the truck cab.

Most contractors find the curb blower to be an invaluable tool. That's because use of it eliminates the need to use a backpack blower on all of the curb lines in a parking lot. The high speed air from the blower is sufficient to blow leaves, cigarette butts and most paper from curbs and planters. It will take time to master this technique, but once learned, you will appreciate the timesaving offered by the curb blowing tube.

6. Start your truck and begin sweeping.

In most parking areas, you will start by using a backpack blower to blow the trash from the sidewalk onto the pavement where the sweeper can get to it. Typically, you will then start sweeping along the curb in front of storefronts. It's important to get the trash along the curb picked up soon after blowing it off the sidewalks. That's because on windy days the trash can blow back onto the sidewalk, which will require additional use of the backpack blower. Be careful not to go too fast to pick up all the debris. It is better to get the feel for the amount of litter on a lot before increasing your speed. Normal sweeping speeds are 5 mph at curb lines and 15 mph in an open lot. Speeds will vary according to conditions. When you are first learning to use your PV-II, you may have to go slower than these normal speeds. Then, as you get more efficient with your sweeper, you will be able to operate at the recommended speeds.

Become familiar with the sound your sweeper makes during normal operation. In some situations, you will be able to recognize problems with your sweeper simply by hearing a change in the sound it makes. For instance, a plugged intake hose or plugged screen will cause the fan to increase slightly in sound output. This is an indication that the sweeper is no longer circulating air at the normal rate, and so is not sweeping up to its capabilities.

When sweeping in the rain, water will fill the hopper as well as debris. This means it will take less time for the hopper to fill up, unless you take steps to drain the water from the hopper. There are two primary changes that will take place that will alert you that the hopper is becoming overfull. One is a reduction in the RPMs of the sweeper engine. Secondly, you will notice trailings from the intake hose. These usually consist of the cigarette butts and small pieces of paper that tend to float on top of the water. This trailing occurs because, as water displaces the hopper volume, it forces this debris back out of the intake hose. That causes the sweeper to trail.

You can remove the excess water from the hopper by pulling out the slow speed idle knob. With the reduction in airflow, the vacuum inside the hopper will drop, allowing the water to flow out in the space provided under the hinges of the rear door.

If you develop a blockage of the intake tube, turn off the auxiliary engine prior to troubleshooting. Then, raise the sweeping head, and reach under the head with your hand and remove the debris from inside the hose. Sticks, pieces of wood and twigs will generally be the culprits. Remember, the intake is only 10" in diameter, and anything larger can cause a blockage.

Occasionally, the separator screen will become plugged, usually from paper or other light material. Sometimes, just idling the engine will allow the plugging material on the screen to fall down. However, if it doesn't, you'll need to turn off the auxiliary engine and clear the blockage by hand. With the engine off, this is as simple as opening the rear door and removing any paper or other material from the screen. You will find that as the debris in the hopper gets higher, blockages will occur more often and performance will diminish. The use of water will also help reduce the frequency of the separator screen becoming plugged.

7. Dumping debris from hopper.

Once you have determined that the hopper is full, or whenever you want to empty the hopper, the following procedure is recommended. If possible, dumpsters are the best place to dispose of debris. However, some cities prohibit this practice. Check with your clients, property managers or local officials to make sure.

If using a dumpster, back your PV-II up close to the dumpster. Turn off the auxiliary engine. Open the rear doors, using the rod to prop open the top door. Use a snow-type shovel to scoop the debris out and place it into the dumpster. Continue until hopper is empty.

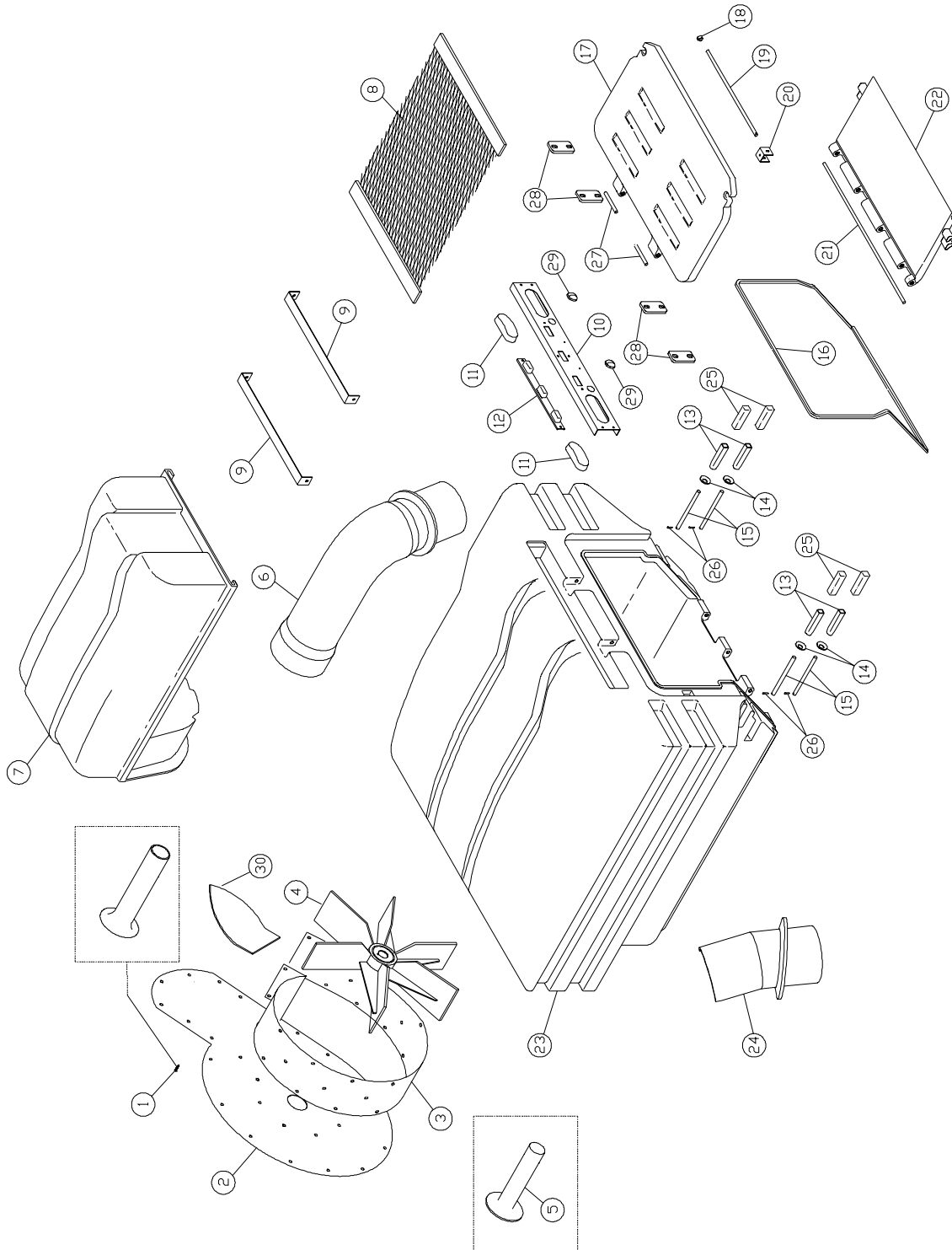
Note that on a daily basis (see Daily Maintenance, Chapter 4) you will need to remove and clean the screen. That's because, over time, fibers will begin to mat the surface of the separator screen, reducing performance of the sweeper.

◆ SECTION 3 ◆

POLYVAC
Parts and Schematics

HOPPER ASSEMBLY	3.1
FRAME	3.2
SWEEPER HEAD ASSEMBLY	3.3
DUST SUPPRESSION SYSTEM	3.4
CLEAN AIR BLOWER	3.5

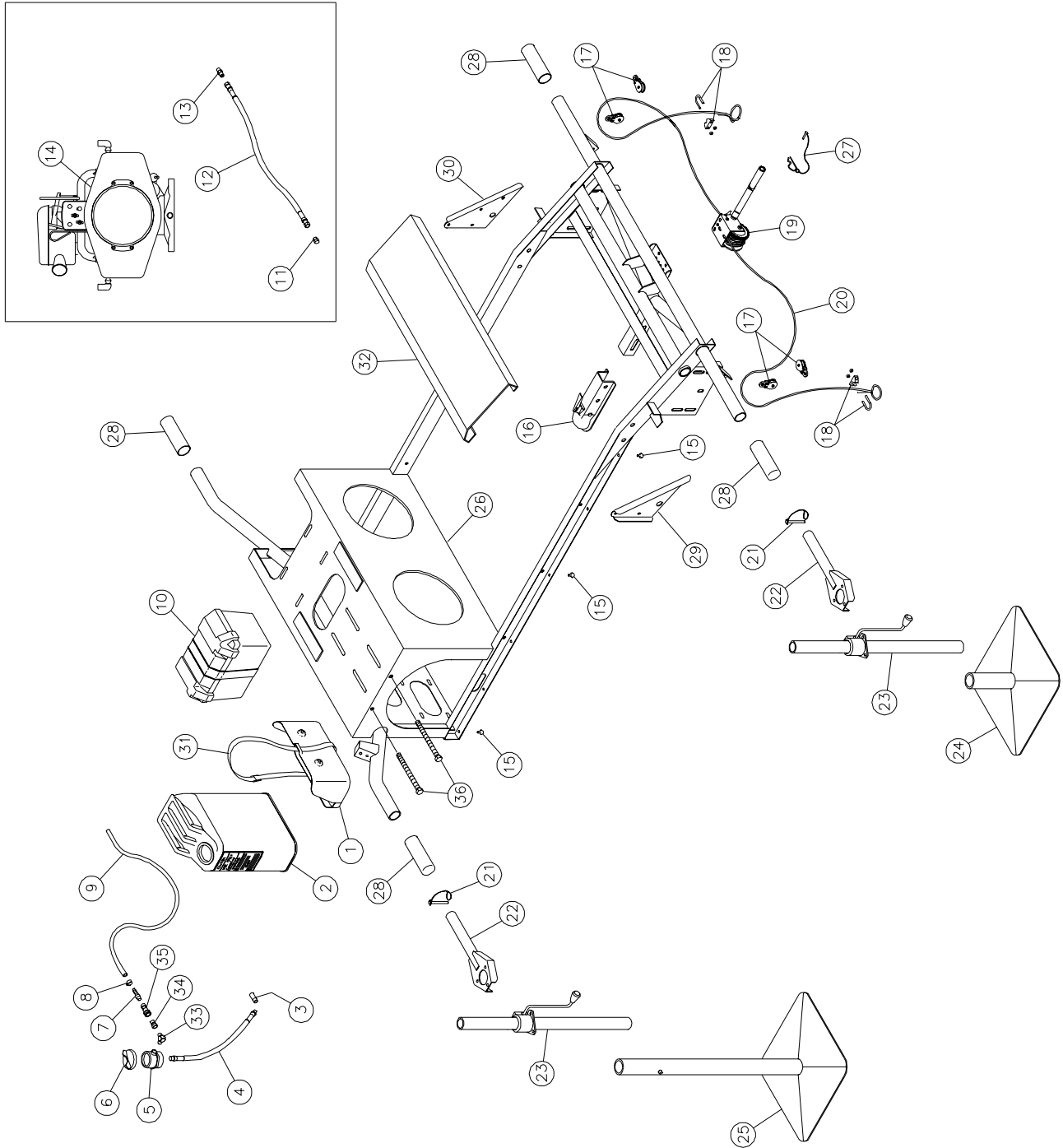
◆ 3.1 HOPPER ASSEMBLY



MANUAL #	DESCRIPTION	PART #
SK-1619-01	SHROUD ANCHOR	24084
SK-1619-02	SHROUD	522676
SK-1619-03	FAN LINER	23038
SK-1619-04	FAN	522647
SK-1619-05	ELEVATOR BOLT (AS NEEDED)	33063
SK-1619-06	PRESSURE TRANSITION	23036
SK-1619-07	DUST SEPARATOR	23039
SK-1619-08	SCREEN	522560
SK-1619-09	SEPARATOR BRACE	5210834
SK-1619-10	LIGHT MOUNT	5206517
SK-1619-11	SIDE MARKER LIGHT	21980
SK-1619-12	LIGHT BAR	21080
SK-1619-13	DOOR CLAMP HANDLE	521506

MANUAL #	DESCRIPTION	PART #
SK-1619-14	CLAMP WASHER	5210537
SK-1619-15	CLAMP ROD	5206559
SK-1619-16	DOOR SEAL	24092-132
SK-1619-17	UPPER DOOR	23035
SK-1619-18	PROP CLIP	24093
SK-1619-19	PROP	5210495
SK-1619-20	PROP SWIVEL	5210496
SK-1619-21	LOWER DOOR HINGE ROD	5206568
SK-1619-20	LOWER DOOR	23034
SK-1619-23	HOPPER	23033
SK-1619-24	SUCTION TRANSITION	23037
SK-1619-25	PLASTIC HANDLE GRIP	24104
SK-1619-26	BOLT, 1/4" X 2-3/4"	33084
SK-1619-27	UPPER DOOR HINGE ROD	5213032
SK-1619-28	RETAINER HINGE ROD (4PCS)	5213031
SK-1619-29	TAG LIGHTS (2PCS)	21093

◆ 3.2 FRAME



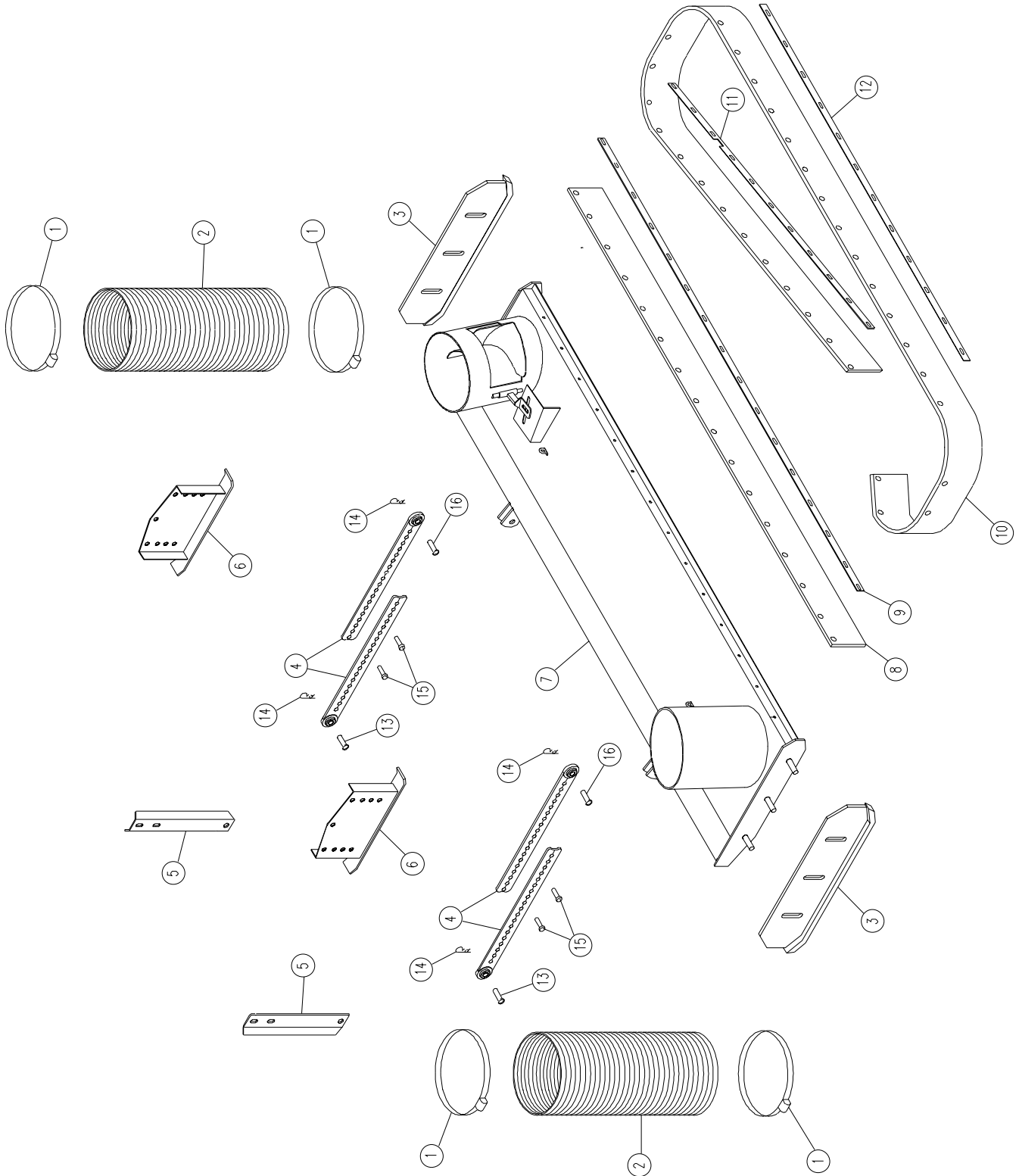
MANUAL #	DESCRIPTION	PART #
SK-1222-01	FUEL TANK BRACKET	23972
SK-1222-02	FUEL TANK	23971
SK-1222-03	POROUS FILTER	23973
SK-1222-04	SUCTION HOSE	26175
SK-1222-05	FUEL TANK NECK	522047
SK-1222-06	FUEL TANK CAP	23985
SK-1222-07	HOSE BARB, 1/4" X 5/16"	20136
SK-1222-08	HOSE CLAMP	20820
SK-1222-09	FUEL LINE	20541-022
SK-1222-10	BATTERY BOX	23382
SK-1222-11	PLUG, 3/8"	21264
SK-1222-12	OIL DRAIN HOSE	521143
SK-1222-13	CONNECTOR	27377
SK-1222-14	ROBIN EH-64 ENGINE	27335
SK-1222-15	FRAME RUBBER BUMPER	24211
SK-1222-16	HITCH	20524
SK-1222-17	BLOCK PULLEY	20218
SK-1222-18	CABLE CLAMP	20818
SK-1222-19	WINCH	23958
SK-1222-20	CABLE, GALVANIZED, 1/4"	20797-138
SK-1222-21	SAFETY PIN	24100

MANUAL #	DESCRIPTION	PART #
SK-1617-22	JACK STAND ARM	521507
SK-1617-23	SIDE-WIND JACK	25021
SK-1617-24	REAR JACK STAND BASE	522468
SK-1617-25	FRONT JACK STAND BASE	522467
SK-1617-26	FRAME	522646
SK-1617-27	LANYARD AND PULL-CLIP	24075
SK-1617-28	TUBE COVER	24148
SK-1617-29	HOPPER REINFORCEMENT, LHS	5211628
SK-1617-30	HOPPER REINFORCEMENT, RHS	5211629
SK-1617-31	FUEL TANK STRAP	26307
SK-1617-32	TAILGATE	5206516
SK-1617-33	ELBOW, 1/4" MALE	21740
SK-1617-34	QUICK DISCONNECT, MALE	27607
SK-1617-35	QUICK DISCONNECT, FEMALE	27608
SK-1617-36	JACK SCREWS	32043

NOT SHOWN:

THROTTLE CABLE	27527
CHOKE CABLE	27526

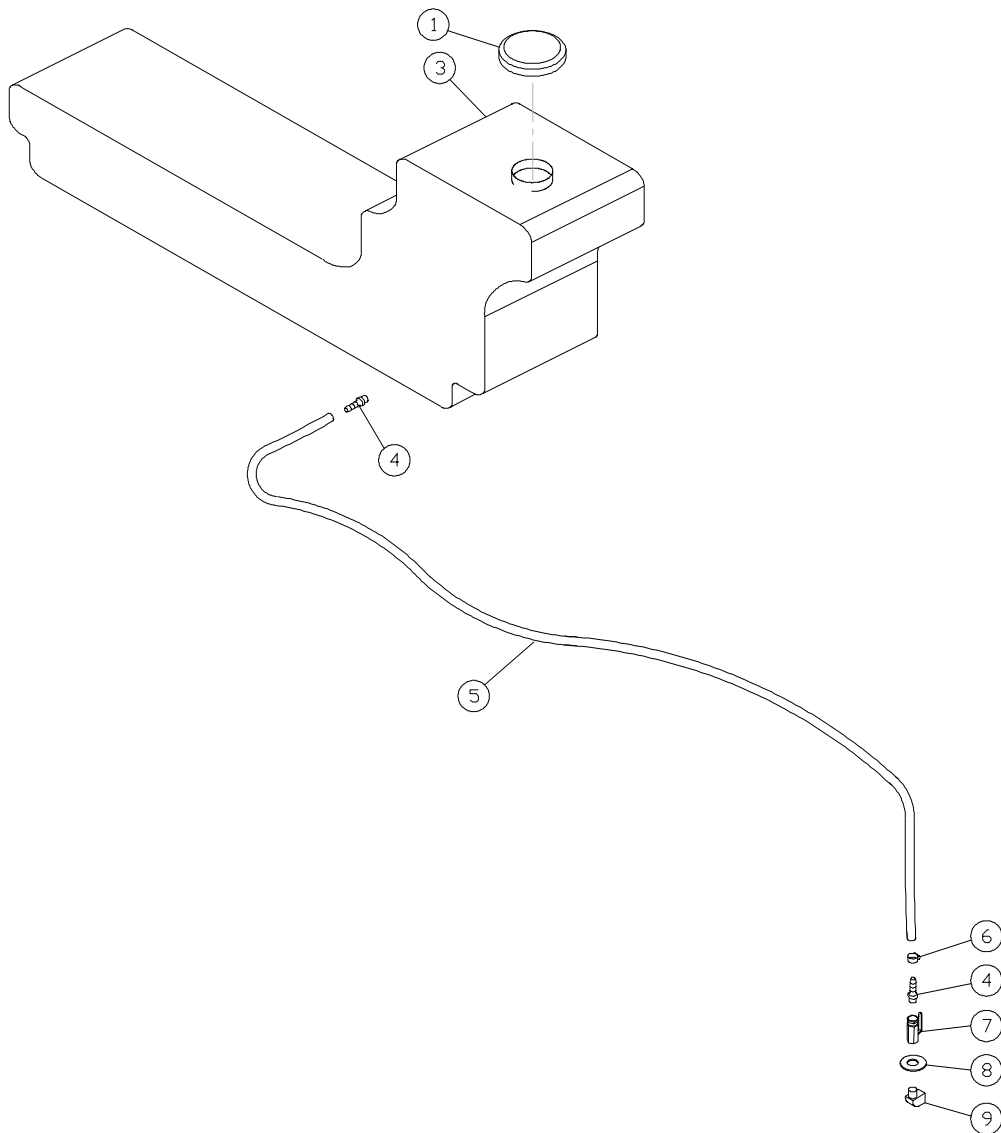
◆ 3.3 SWEEPER HEAD ASSEMBLY



MANUAL #	DESCRIPTION	PART #
SK-1223-01	HOSE CLAMP	24050
SK-1223-02	HOSE	21035-028
SK-1223-03	SKID PLATE	520573
SK-1223-04	DRAG ARM	522203
SK-1223-05	DRAG ARM MOUNT	5210486
SK-1223-06	UPSTOP	521505
SK-1223-07	SWEEPING HEAD	521502
SK-1223-08	FRONT FLAP, 1/8" X 6"	21703-078

MANUAL #	DESCRIPTION	PART #
SK-1223-09	FRONT BACKING STRIP	5206569
SK-1223-10	REAR FLAP, 1/2" X 6"	21699-160
SK-1223-11	MIDDLE BACKING STRIP	5206570
SK-1223-12	REAR BACKING STRIP	5206571
SK-1223-13	CLEVIS PIN, 5/8" X 1-3/4"	24127
SK-1223-14	CLIP PIN	24074
SK-1223-15	BOLT, 1/2" X 1-1/2", GRADE 8	32289
SK-1223-16	CLEVIS PIN, 5/8" X 2-1/4"	23977

◆ 3.4 DUST SUPPRESSION SYSTEM

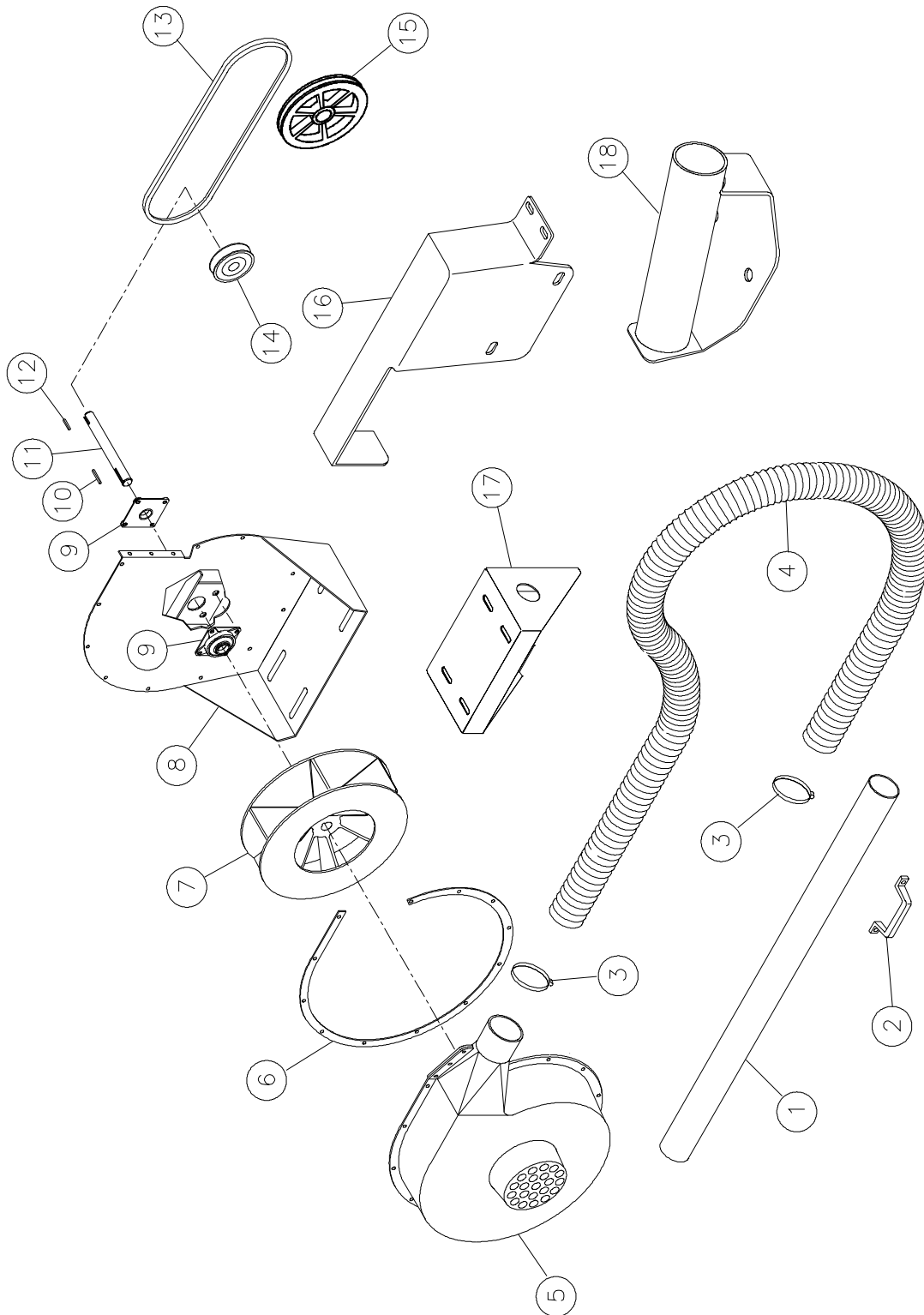


SK-1032B

MANUAL #	DESCRIPTION	PART #
SK-1032B-01	FILLER CAP	22662
SK-1032B-02	FILL NECK	521629
SK-1032B-03	RESERVOIR	23040
SK-1032B-04	HOSE BARB, 1/4"X 5/16"	20136
SK-1032B-05	WATER LINE	20541-120

MANUAL #	DESCRIPTION	PART #
SK-1032B-06	HOSE CLAMP	20820
SK-1032B-07	BALL VALVE, 1/4"	20278
SK-1032B-08	FLAT WASHER	31593
SK-1032B-09	ELBOW, STREET, 1/4"	20133

◆ 3.5 CLEAN AIR BLOWER



MANUAL #	DESCRIPTION	PART #
SK-1620-01	WAND	5203787
SK-1620-02	HANDLE	20452
SK-1620-03	HOSE CLAMP	20827
SK-1620-04	FLEX HOSE	22610-078
SK-1620-05	BLOWERHOUSING	27351
SK-1620-06	BLOWERHOUSINGRING	5212448
SK-1620-07	BLOWER FAN	522516
SK-1620-08	BLOWERHOUSINGMOUNT	522420

MANUAL #	DESCRIPTION	PART #
SK-1620-09	BEARING	28118
SK-1620-10	KEY 3/16 SQ KEY x 1.2	5213226
SK-1620-11	ARBOR	5213213
SK-1620-12	KEY 3/16 SQ KEY x 1.5	5213227
SK-1620-13	BELT	28074
SK-1620-14	BLOWER PULLEY	28056
SK-1620-15	ENGINE PULLEY	28057
SK-1620-16	BELT GUARD	5213065
SK-1620-17	SHELF	5206508
SK-1620-18	TUBE HOLSTER - WAND	522675

Chapter Four – Maintenance

This chapter is intended to assist you in maintaining your PV-II. Maintenance is an important factor in prolonging the life of your PV-II. We have included schedules to help you track your maintenance. Simply copy the schedules enclosed and place them in your three-ring binder as an easy reference. Since you will be operating in dusty conditions, it is important that you adhere to these schedules. As a rule of thumb, if you think it needs it, do it. Changing the auxiliary engine oil and cleaning the air filters will be your number one priority. This also applies to your truck.

Adjusting the rubber flaps on the sweeping head.

When you notice an air gap of approximately 3/8" or more, it is time to adjust the flaps.

1. Park the truck on a flat surface. Lower the head until it contacts the ground.
2. Loosen the three bolts on each drag shoe, shown in Figure 9, until the plates are loose. Let the head take a natural drop to the ground.
3. Pull the truck ahead about three feet.
4. Securely tighten the three bolts on each side.

The flaps are adjusted. (For proper positioning, see Figure 10.) Never force the head with your foot or hand. This will give you a false adjustment. Curb lines will wear a groove about 18" on the intake side. Don't worry about this air gap, as it is normal wear.

Replacing the flaps.

1. Remove the head from the sweeper.
2. Remove the drag shoes.
3. Remove the old rubber flaps.
4. Spread the new flaps on the ground. Place the old flaps on top of the new. Spray paint through the holes to mark the new flaps. Place a block of wood under one hole at a time and punch, using a leather punch in a drill or a leather punch and a hammer. (Drilling with a conventional drill bit does not work well.)
5. After punching all the holes, replace the flaps to the head.
6. Replace the drag shoes, but do not tighten.

Once the head is back on the sweeper, adjust as previously explained. Flaps will last from 3 – 6 months depending on surfaces swept. Flap replacement is required when bottles and similar debris will not go under sweeping head, usually with about 3" of rubber remaining.

PV-II HD SWEEPING SET-UP CHECKLIST

Sweeping Head

- Sweeping head free of debris and caked on materials
- Sweeping head spray nozzles operational and free of debris
- Sweeping head suspension cables should be slack to allow the head to float with head lowered to the sweeping surface
- Sweeping head flap set should extend to the sweeping surface or slightly below the skid plates
- Blast hose interior is clean and securely fastened to the sweeping head and is free from holes
- Suction hose interior is clean and securely fastened to the sweeping head and is free from holes
- Air diverter valve is positioned as sweeping preference dictates

Fan Drive

- Fan drive motor is secure and free from leaks
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Hopper

- Hopper seals completely with the fan inlet seal and suction tube inlet seal in the lowered position
- Hopper screens are clean and free of debris blocking the air flow
- Hopper suction inlet tube is clean and free of debris blocking the air flow
- Inspection door seals are in place and seal properly
- Rear hopper seals are in place and seal properly with the door closed
- Rear door closes and is making a good seal with the hopper

Skid Plate

- Verify skid plate is not bent or damaged
- Skid plate to be adjusted to place the head flap set (especially the rear flap) to touch the sweeping surface

Water System

- Verify water tank has sufficient water
- Verify all nozzles are free of debris and operational

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