



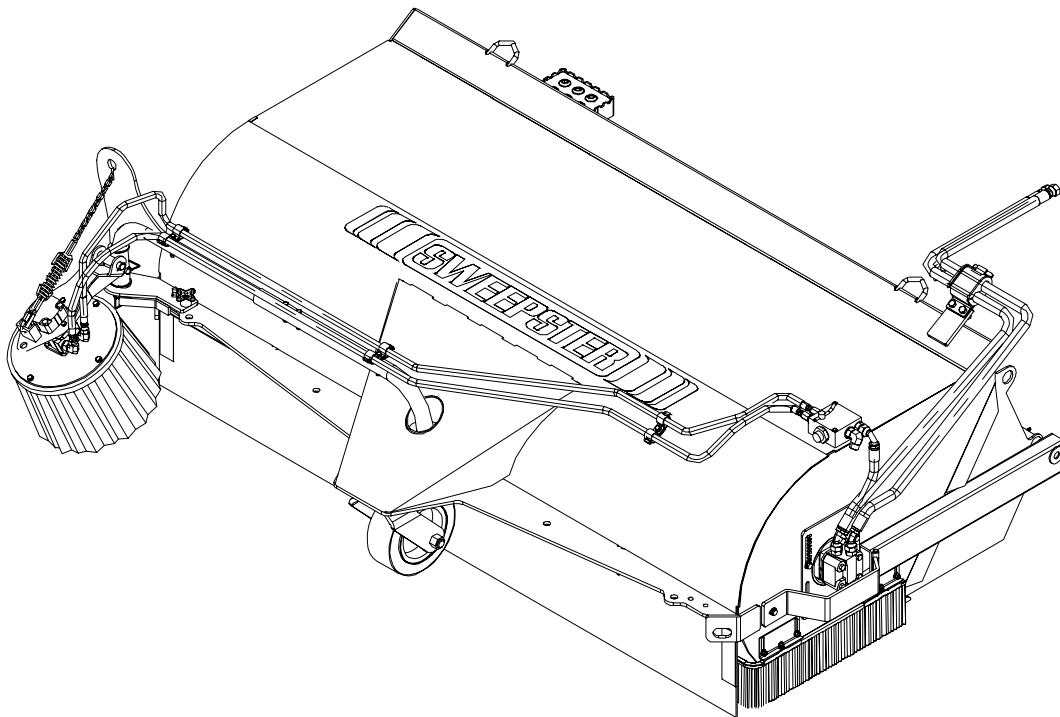
BIG DAWG

Series

Pickup Sweeper
for Skid Steer Loaders



PALADIN LIGHT CONSTRUCTION



Sweepster Serial Number _____

Manual Number: 51-3606
Release Date: February 2005

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Operation and Maintenance Manual

Pick-Up Sweeper

Big Dawg Series

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Introduction

Importance of this Manual



Read this manual before attempting to operate the equipment.

This operator's manual should be regarded as part of the sweeper. Suppliers of both new and secondhand sweepers are advised to keep documentation indicating that this manual was provided with the sweeper.

The manual contains information regarding installation, operation and maintenance required for this sweeper and optional equipment. It also includes detailed parts lists.

Purpose of Sweeper

This sweeper is designed solely for use in construction cleanup, road maintenance, grounds maintenance and similar operations. Use in any other way is considered contrary to the intended use. Compliance with and strict adherence to operation, service and repair conditions, as specified by the manufacturer, are also essential elements of the intended use.

This sweeper should be operated, serviced and repaired only by persons who are familiar with its characteristics and acquainted with relevant safety procedures.

Accident prevention regulations, all other generally recognized safety regulations and all road traffic regulations must be observed at all times.

Any modifications made to this sweeper may relieve the manufacturer of liability for any resulting damage or injury.

Safety Alert Symbol



This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury. Carefully read the message that follows and inform other operators.

Contacting SWEEPSTER

If you have any questions about information in this manual or need to order parts, please call, write, fax or e-mail SWEEPSTER.

SWEEPSTER, LLC.

2800 North Zeeb Road
Dexter, Michigan 48130

Phone: (734) 996-9116 - (800) 456-7100

FAX: (734) 996-9014

e-mail: sweep@sweepster.com

For help with installation, operation or maintenance procedures, contact our Technical Service Department. Direct product questions and parts orders to our Sales Department.

When ordering parts or accessories, be prepared to give the following information:

- Sweeper model, serial number and date of purchase
- Prime mover, make and model
- Part number, description and quantity

Terms Used in Manual

Right-hand, left-hand, front and rear are determined from the operator's perspective (either the operator's seat or standing behind a walk-behind unit), facing forward in the normal operating position.

Prime mover refers to the tractor, truck, loader or tow vehicle that the sweeper is mounted on or towed by.

Optional Equipment

Installation instructions for optional equipment, if applicable, appear in the Service Manual Section.

Specifications & Features

Due to continuous product improvement, specifications and features may change without notice.

Warranty

To validate the warranty for this unit, fill out the warranty card or warranty pages located at the back of this manual. Then, send this information to SWEEPSTER.

Safety Information

Read this manual

Read all safety information in this manual. All operators must read and understand the entire contents of this manual before sweeping. General safety practices are listed on Safety Information pages and specific safety information is located throughout this manual.

Hazard Definitions

Four hazard classifications are used in this manual. They are



CAUTION - Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



WARNING - Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



DANGER - Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

IMPORTANT - Used for instructions when machine damage may be involved.

Operation



CAUTION - A sweeper is a demanding machine. Only fully trained operators or trainee operators under the close supervision of a fully trained person should use this machine.

Before sweeping:

- Learn sweeper and prime mover controls in an off-road location.
- Be sure that you are in a safe area, away from traffic or other hazards.
- Check all hardware holding the sweeper to the host machine, making sure it is tight.
- Replace any damaged or fatigued hardware with properly rated fasteners.
- Make sure all hydraulic hardware and hydraulic fittings are tight.
- Replace any damaged or fatigued fittings or hoses.

- Check prime mover tire pressure before sweeping.
- Check tire ratings to be sure they match the prime mover load. Weigh the sweeper end of the prime mover, if necessary, to insure proper tire rating.
- Remove from the sweeping area all property that could be damaged by debris flying from the sweeper.
- Be sure all persons not operating the sweeper are clear of the sweeper discharge area.
- Always wear proper apparel such as a long-sleeved shirt buttoned at the cuffs; safety glasses, goggles or a face shield; ear protection; and a dust mask.

While sweeping:

- When sweeping, adhere to all government rules, local laws and other professional guidelines for your sweeping application.
- Before leaving the operators area for any reason, lower the sweeper to the ground. Stop the prime mover engine, set the brakes and remove the key from the ignition.
- Minimize flying debris - use the slowest brush speed that will do the job. See Operation Section: Operating Tips.
- Keep hands, feet, hair and loose clothing away from all moving parts.
- Leave the brush hood (shield) and all other shields and safety equipment in place when operating the sweeper and prime mover.
- Be aware of the extra weight and width a sweeper adds. Reduce travel speed accordingly. See Product Information Section.
- When sweeping on rough terrain, reduce speed to avoid "bouncing" the sweeper. Loss of steering can result.
- Never sweep toward people, buildings, vehicles or other objects that can be damaged by flying debris.
- Only operate the sweeper while you are in the seat of the prime mover. The seat belt must be fastened while you operate the prime mover. Only operate the controls while the engine is running. Protective glasses must be worn while you operate the prime mover and while you operate the sweeper.
- While you operate the sweeper slowly in an open area, check for proper operation of all controls and all protective devices. Note any needed repairs during operation of the sweeper. Report any needed repairs.

SAFETY SECTION
GENERAL SAFETY INFORMATION

Service & Repair - General



CAUTION - Do not modify the sweeper in any way. Personal injury could result. If you have questions, contact your dealer or SWEEPSTER.

Make sure that all clamps, guards, and shields are installed correctly.

Repair or adjust the sweeper in a safe area, away from road traffic and other hazards.

Before adjusting or servicing the sweeper - lower the sweeper to the ground, stop the prime mover engine, set the brakes and remove the key from the ignition.

When working on or around the sweeper, lower it to the ground or secure it with transport chains or cylinder-stop locks.

Service & Repair - Hydraulic Safety

Stop the prime mover engine and cycle control levers to release hydraulic pressure before servicing or adjusting sweeper hydraulic systems.



WARNING - Escaping hydraulic fluid can have enough pressure to penetrate the skin, causing serious personal injury.

Check lines, tubes and hoses carefully. Do not use your bare hand to check for leaks. Use a board or cardboard to check for leaks. Tighten all connections to the recommended torque.

Do not bend high pressure lines. Do not strike high pressure lines, Do not install bent lines, bent tubes, or kinked hoses. Do not install damaged lines, damaged tubes, or damaged hoses.

Repair loose lines, loose tubes, and loose hoses. Repair damaged lines, damaged tubes, and damaged hoses. Leaks can cause fires. See your SWEEPSTER dealer for repair or replacement parts.

Replace the parts if any of the following conditions are present:

- The end fittings are damaged or leaking.
- The outer covering is chafed or cut.
- The reinforcing wire layer is exposed.
- The outer covering is ballooning locally.
- The hose is kinked or crushed.
- The armoring embedded in the outer cover.
- The hoses have been pulled or stretched.

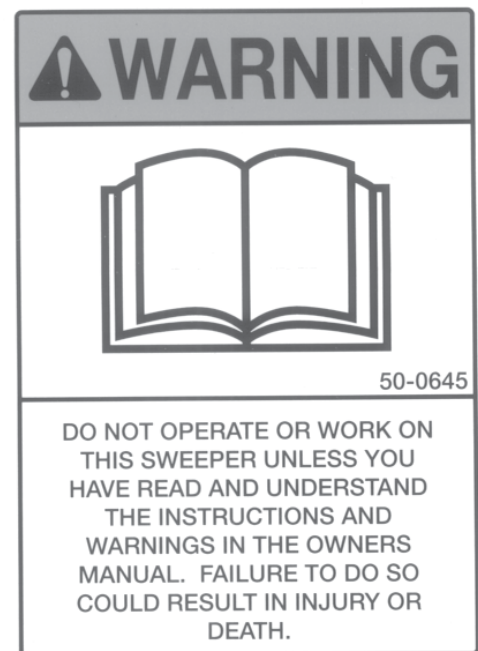
Safety Signs and Labels

There are several specific safety signs on this sweeper. The exact location of the hazards and the description of the hazards are reviewed in this section.

Make sure that all the safety signs are legible. Clean the safety signs or replace the safety signs if you cannot read the words. Replace the illustrations if the illustrations are not legible. When you clean the safety signs, use a cloth, water and soap. Do not use solvent, gasoline, or other harsh chemicals to clean the safety signs. Solvents, gasoline, or other harsh chemicals will loosen the adhesive that secures the safety sign. Loose adhesive will cause the safety sign to fall. Replace any safety sign that is damaged or missing. If a safety sign is attached to a part that is replaced, install a safety sign on the replacement part. Contact your SWEEPSTER dealer for replacement safety signs.



This warning label is located on the back of the brush hood near the center.



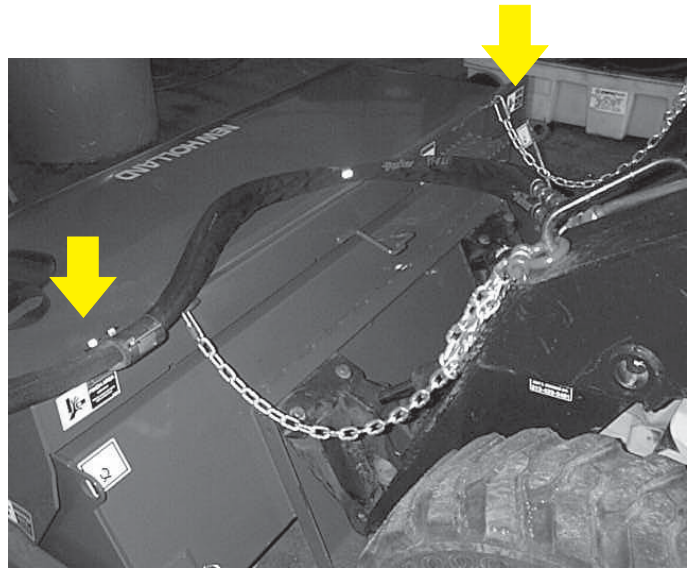
WARNING - Do not operate or work on this machine or sweeper unless you have read and understand the instructions and warnings in the Operation and Maintenance Manuals and Owner's Manuals. Failure to follow the instructions or heed the warnings could result in injury or death. Contact your SWEEPSTER dealer for replacement manuals. Proper care is your responsibility.

SAFETY SECTION
SAFETY SIGNS AND LABELS

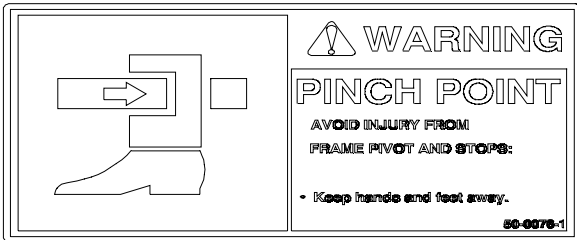
Safety Signs and Labels



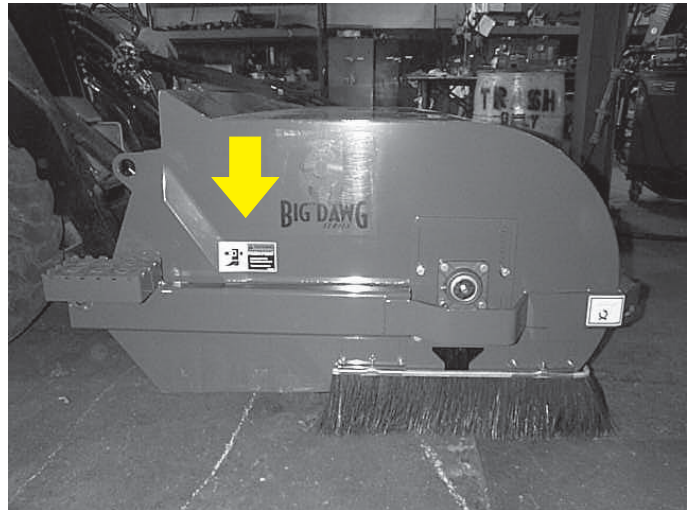
WARNING - Keep clear. Pivoting bucket can cause severe bodily harm.



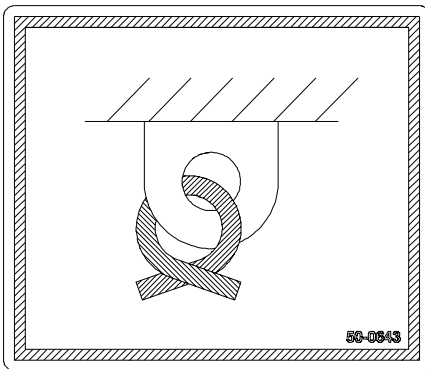
This warning label is located on the right and left hand side at the rear of the brush hood.



WARNING - Keep clear. Pivoting bucket can cause severe bodily harm.



This warning label is located on both sides of the brush head near the bucket.



IMPORTANT - Only use indicated tie down points. Failure to do so may result in damage to machine

Mounting and Dismounting

- Get on the prime mover only at locations that are equipped with steps and/or handholds. Get off the prime mover only at the locations that are equipped with steps and/or handholds. Utilize the steps that are provided on the sweeper when you get on the prime mover and when you get off the prime mover.
 - Before you get on the prime mover, clean the steps and handholds. Inspect the steps and the handholds. Make all necessary repairs.
 - Face the prime mover whenever you get on the prime mover and whenever you get off the prime mover.
 - Maintain a three-point contact with the steps and the hand holds.
- NOTE** - Three-point contact can be two feet and one hand. Three-point contact can also be one foot and two hands.
- Do not get on a moving prime mover or on an operating sweeper. Do not get off a moving prime mover.
 - Never jump off the prime mover or off the sweeper.
 - Do not use any controls as handholds when you enter the operator's compartment or when you exit the operator's compartment.

Operating Tips

Before each Use

Perform daily maintenance as indicated in the Maintenance Schedule.

Run the prime mover and sweeper at a slow idle. Check for hydraulic leaks or other problems and make corrections, if necessary, before using the sweeper. See hydraulic inspection guideline.

During Use



WARNING - Avoid serious injury. Check for objects that could harm the operator or others if thrown by the sweeper. Remove these items before sweeping.

Carry the sweeper low to the ground so that the operator has good visibility. Avoid any sudden movements from one side to the other side when you carry a sweeper.

Avoid excessive downward pressure on the broom in order to prevent excessive wear. A two to six inch wide pattern is sufficient for most applications. Ensure that the motor and bearing plates are equally adjusted in order to prevent an uneven wear pattern. To adjust brush pattern see Maintenance Section.

Directing Debris

Observe wind direction. Sweeping with the wind makes sweeping more effective and helps keep debris off the operator.

If necessary, use the dust suppression kit to suppress the dust.

OPERATION SECTION
OPERATING TIPS

Operating Tips

Important - Avoid sweeper damage. Do not ram into piles.
Use a dozer blade for this type of job.

Brush, Engine & Travel Speeds

Vary brush, engine and travel speeds to match sweeping conditions.

Dirt & Gravel

To keep dust at a minimum, plan sweeping for days when it is overcast and humid or after it has rained. Also, sweep so the wind blows at your back.

Low brush speeds and moderate travel speeds work best for cleaning debris from hard surfaces. Brush speeds that are too fast tend to raise dust because of the aggressive sweeper action.

Heavy Debris

Travel slowly - less than 5 mph (8 kph)

Sweep a path less than the full width of the sweeper.

Increase engine speed if debris becomes very heavy.

Sweeper Installation



WARNING - Improper attachment of sweeper could result in injury or death. Do not operate this machine until you have positive indication that the coupler pins are fully engaged.

To check for engagement:

1. Keep the sweeper close to the ground.
2. While the lift arms are fully lowered, visually inspect the quick coupler to ensure that the coupler pins are fully extended through the corresponding holes of the sweeper mounting bracket.

Installation

1. Position the pick up broom on a level surface.
 2. Ensure that the coupler pins are in the disengaged position.
 3. Enter the machine.
 4. Fasten the seat belt.
 5. Start the engine.
 6. Disengage the parking break.
 7. Tilt the quick coupler assembly forward.
 8. Align the quick coupler assembly between the outer plates of the mounting bracket. Move the quick coupler assembly under the angled plate of the mounting bracket. Rack back on the broom.
 9. Engage the parking brake.
 10. Stop the engine.
 11. Cycle controls to relieve any pressure within the auxiliary hydraulic lines.
 12. Exit the machine.
-

13. Move the coupler pins to the engaged position.
14. Ensure that the quick disconnect couplings are clean. Connect auxiliary hydraulic lines for the broom to the prime mover. Twist the collar of the quick disconnect for one quarter of a turn in order to secure the hydraulic connections.
15. Attach shackle end of chains to SSL grab bars. See Chain Adjustment section for proper adjustment.
16. While the loader arms are lowered, visually inspect the quick coupler in order to ensure that the coupler pins are fully extended through the corresponding holes of the sweeper mounting bracket.



WARNING - Improper attachment of sweeper could result in injury or death. Do not operate this machine until you have positive indication that the coupler pins are fully engaged.

OPERATION SECTION
SWEEPER REMOVAL & STORAGE

Sweeper Removal



WARNING - Disengaging the coupler pins will release the sweeper from control of the operator. Serious injury or death may result from disengaging the sweeper when the sweeper is in an unstable position or carrying a load. Place the sweeper in a stable position before disengaging the coupler pins.

IMPORTANT - Auxiliary hoses for the sweepers must be removed before the quick coupler is disengaged. Pulling the sweeper with the auxiliary hoses could result in damage to the prime mover or the sweeper.

1. Lower the pick up broom to the ground.
 2. Place the direction control in NEUTRAL. Engage the parking brake.
 3. Stop the engine.
 4. Cycle controls to relieve any pressure within the auxiliary hydraulic lines.
 5. Exit the machine.
 6. Remove chains from the SSL grab bars.
 7. Disconnect the auxiliary hydraulic lines from the prime mover.
 8. Move the coupler pins to the DISENGAGED position.
 9. Enter the machine.
 10. Fasten the seatbelt.
 11. Start the engine.
 12. Disengage the parking brake.
 13. As you slowly back away from the mounting bracket, tilt quick coupler assembly forward until the top of quick coupler assembly clears the angled plate.
 14. Back away from the pick-up broom.
-

Storage

Never rest the broom on the bristles. Resting the broom on the bristles could cause the bristles to become deformed and unbalanced. Use stands in order to support the broom when the broom is not operating.

IMPORTANT - Do not store the sweeper with weight on the brush. Weight will deform the bristles, destroying the sweeping effectiveness. To avoid this problem, place the sweeper on blocks or use stands.

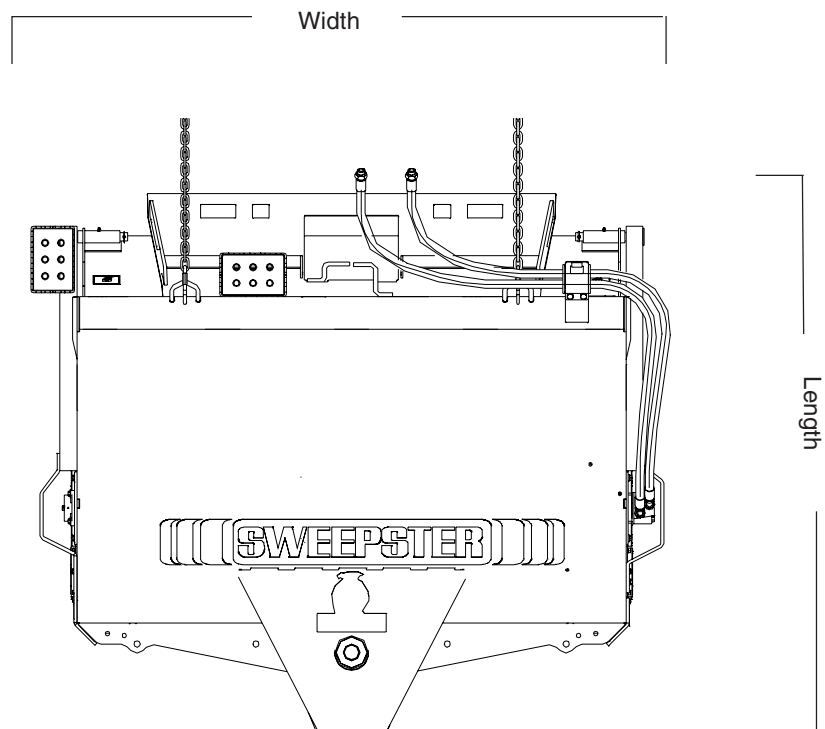
Do not store polypropylene brushes in direct sunlight. The material can deteriorate and crumble before the bristles are worn out.

Keep polypropylene brush material away from intense heat or flame.

Product Information Section

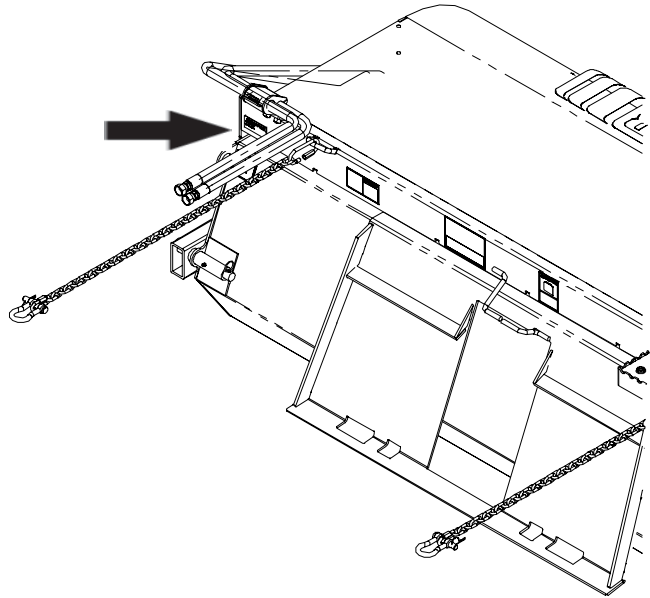
Specifications and Model Views

BDC Pick-Up Broom	
Maximum Weight with Bucket	1220 lbs (BDC62) 1370 lbs (BDC74) 1525 lbs (BDC84)
Actual Sweeping Width	62 inches (BDC62) 74 inches (BDC74) 84 inches (BDC84)
Maximum length	65 inches (all models)
Maximum Width	75 inches (BDC62) 87 inches (BDC74) 97 inches (BDC84)
Maximum Hydraulic Oil Flow	25 gpm
Maximum Hydraulic Oil Pressure	3000 psi



Serial Number Plate Location

For quick reference, record the serial number in the space that is provided below the illustration. The serial number plate is located on the back of the sweeper just above the bucket.

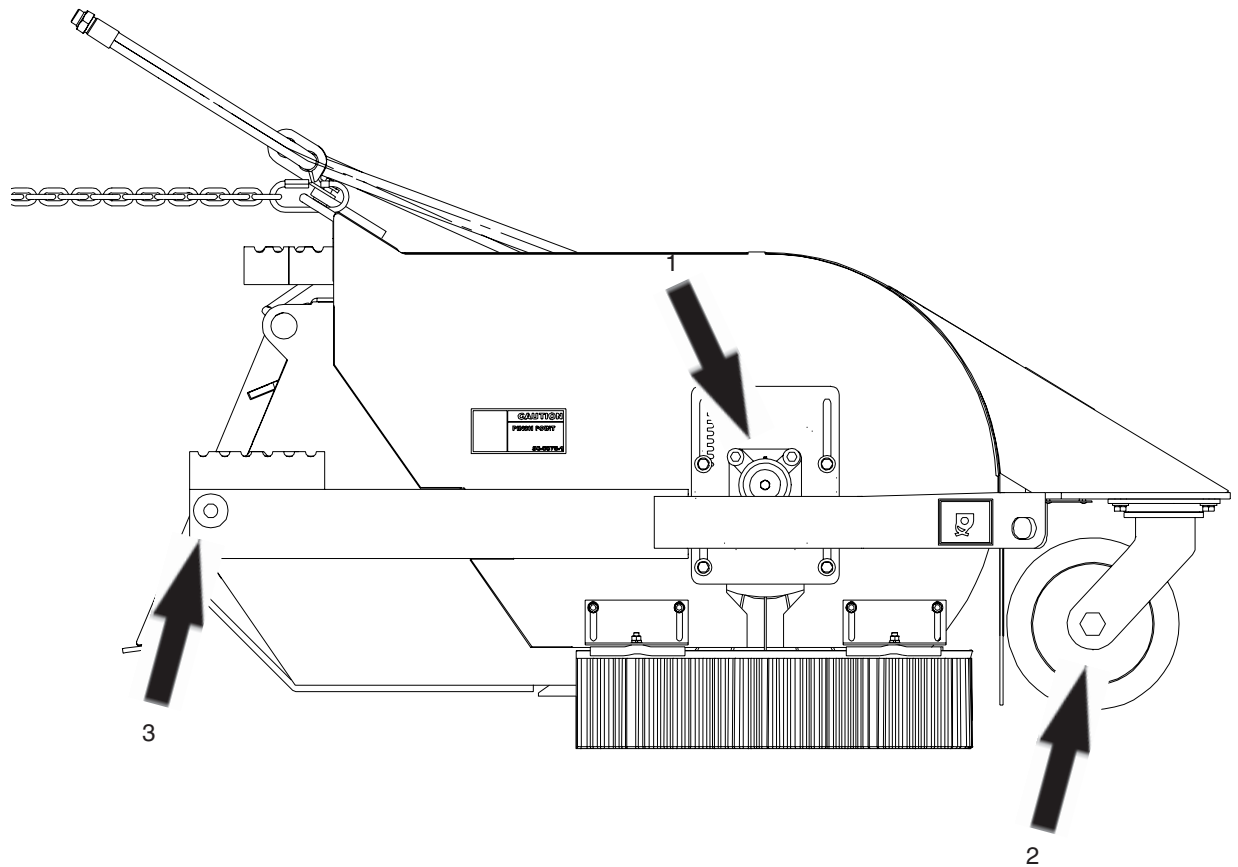


Pick-Up Serial Number _____

Lubrication Points

The following grease fittings should be greased before each use. See figure for locations.

1. Core bearing (1 fitting)
2. Caster (2 fittings)
3. Bucket Pivot (1 fitting each)

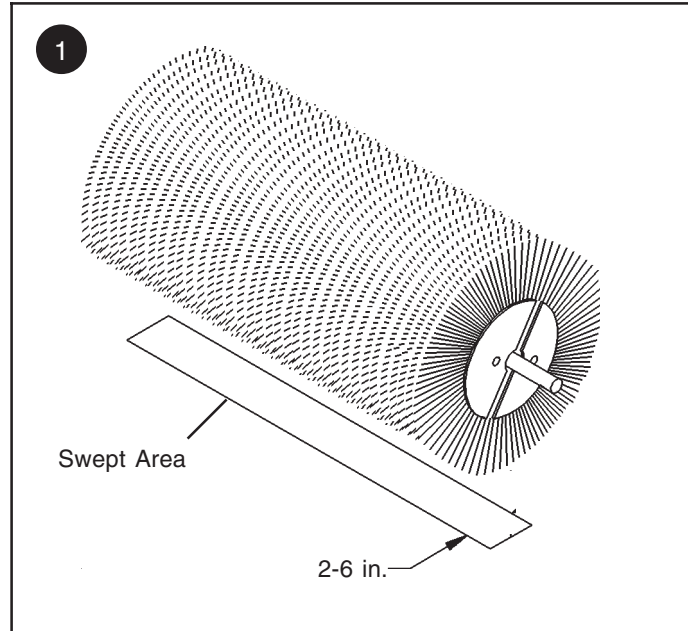


MAINTENANCE SECTION BRUSH PATTERN ADJUSTMENT

Brush Pattern

A properly adjusted brush offers the best sweeper performance. To check the brush pattern:

1. Move the sweeper to a dusty, flat surface.
2. Set the prime movers parking brake and leave the engine running.
3. Start the sweeper at a slow speed; then, lower it so the boom arms bottom out. Run the sweeper in a stationary position for 10 seconds.
4. Raise the sweeper and back away; switch off the engine and remove the key. The brush pattern left in the dust should be 2-6 inches wide, running the length of the brush (1).
5. Adjust the brush pattern as necessary according to the following instructions.



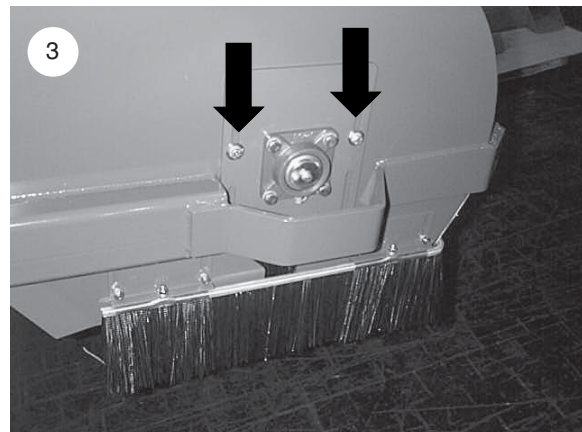
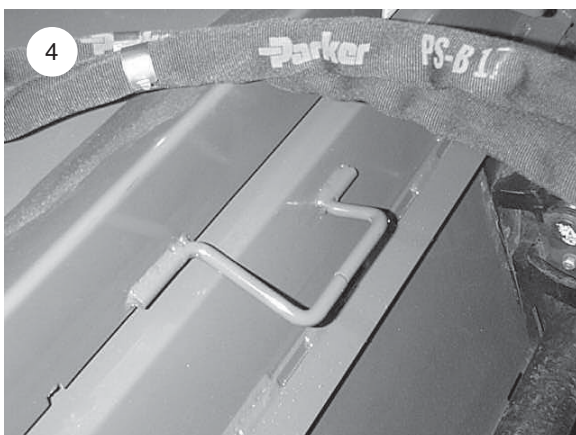
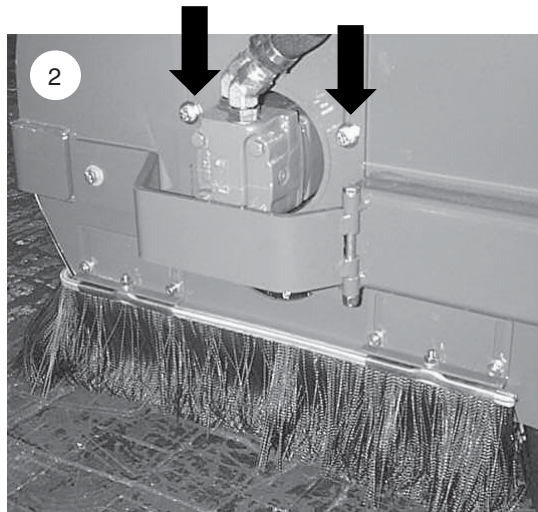
Adjusting Brush Pattern

Loosen four bolts on motor mounting plate and the four bolts on the bearing plate. Raise or lower sweeper body until the brush pattern is correct. (2 & 3)

NOTE - To extend brush life make sure bolts on both sides are adjusted evenly.

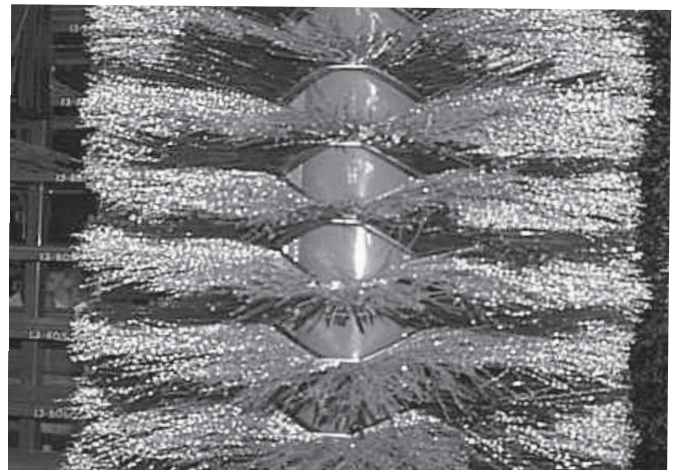
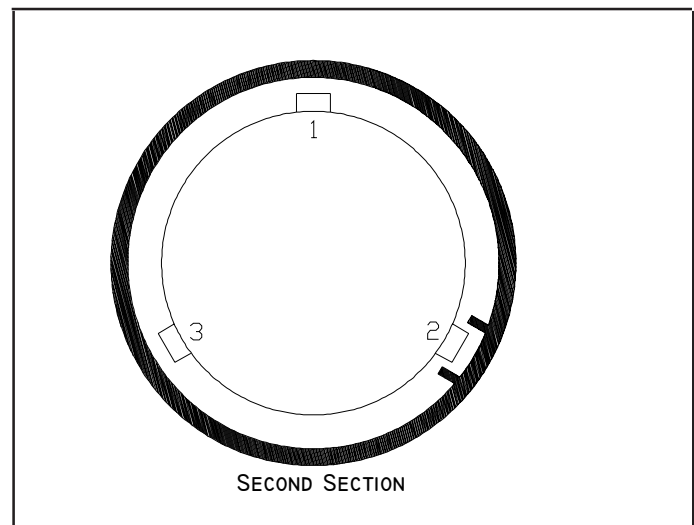
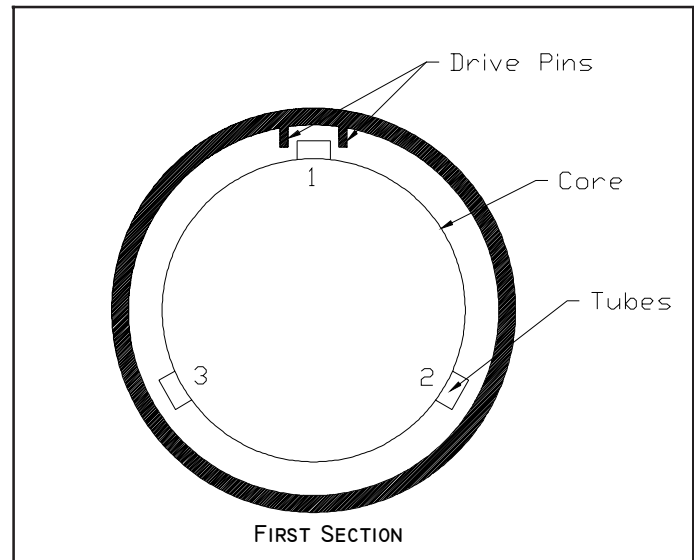
Bucket Adjustment

Use the sight gauge located on back of sweeper/bucket to properly position bucket for maximum sweeping performance. Ends of rods should be aligned for proper sweeping. (4)



Replacing Brush Sections

1. Remove four motor mount screws. Retain hardware for reinstallation. Remove motor mount.
2. Detach four bearing mount screws from side plate. Retain hardware for reinstallation.
3. Lift sweeper body leaving core on ground.
4. Remove the core hat plate. Retain hardware for reinstallation.
5. Remove old sections.
6. Install new sections by doing the following:
 - a. Number the tubes on the core as 1, 2 and 3 (1).
 - b. Slide the first section onto the core with the drive pins on either side of tube 1. Make sure that the drive pins angle up (1).
 - c. Place the second section on the core with the drive pins on either side of tube 2. Be sure the drive pins angle down (2).
 - d. Put the third section on with the drive pins around tube 3. Be sure the drive pins angle up.
 - e. Slide sections on until the core is full, making sure to alternate the tubes used and the direction of the drive pins.
7. Re-attach the core hat plate.
8. Lay core on ground. Lower body over core.
9. Attach bearing plate with previously removed hardware.
10. Attach motor mount with hardware removed in step one.



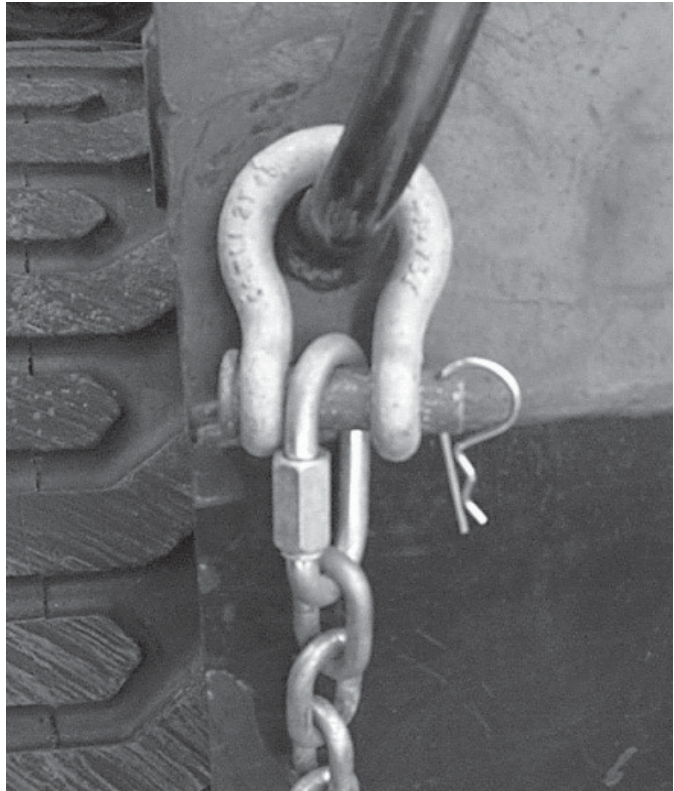
MAINTENANCE SECTION
CHAIN INSTALLATION & ADJUSTMENT

Attaching Chains

1. Install the sweeper to the prime movers quick attach mounting. See "Sweeper Installation".
2. Attach chains to SSL grab bars. Using one 5/16 quick link, one 1/2 shackle and one 1 3/4 hairpin clip per side(2).
3. Attach chains to sweeper using one 5/16 wide jaw quick clip per side(3). Leave the chains loose with equal slack in both sides. **Do not entangle hydraulic hoses.**
4. Connect hydraulic hoses to prime mover remote hydraulics.



CAUTION - Avoid equipment damage and personal injury. Chains must be of equal length and long enough to keep the sweeper level during dumping(4). Short chains may cause the sweeper body to tip back and damage the sweeper body.



Adjusting Chains

1. Make sure chains are quite loose(1).
2. Raise the sweeper and then dump the bucket slowly. The sweeper will dump correctly if chains have the proper tension(4). If the sweeper tips down when test dumping, go to step 3.
3. Tighten both chains by the same amount but no more than two links each.
4. Repeat steps 2 and 3 until the sweeper dumps correctly(4).



Maintenance Schedule

Procedure	Before Each Use	After Each Use	100 Hours	500 Hours	See Prime Mover Manual
Brush pattern - Check (See Pattern Adj. Section)	✓				
Fittings/hoses, hydraulic - Tighten - Check for damage	✓				
Fittings, zerk - Grease (See Lubrication Points)	✓				
Oil, hydraulic (Prime Mover) - Check Level - Check Cleanliness	✓	See Below for Requirements			
Hardware - Tighten	✓				

Oil Cleanliness Requirements

IMPORTANT - All hydraulic fluid shall be filtered before use in any SWEEPSTER product to obtain the ISO cleanliness standard of 17-14 or better. Unless explicitly specified otherwise.

Fittings/Hoses Inspection Guideline

Stop the prime mover engine and cycle control levers to release hydraulic pressure before servicing or adjusting sweeper hydraulic systems.



WARNING - Escaping hydraulic fluid can have enough pressure to penetrate the shin, causing serious personal injury.

Do not bend high pressure lines. Do not strike high pressure lines. Do not install bent lines, bent tubes, or kinked hoses. Do not install damaged lines, damaged tubes, or damaged hoses.

Repair loose lines, loose tubes, and loose hoses. Repair damaged lines, damaged tubes, and damaged hoses. Leaks can cause fires. See your SWEEPSTER dealer for repair or replacement parts.

Check lines, tubes, and hoses carefully. Do not use your bare hands to check for leaks. Use a board or cardboard to check for leaks. Tighten all connections to the recommended torque.

Replace the parts if any of the following conditions are present:

- The end fittings are damaged or leaking.
- The outer covering is chafed or cut.
- The reinforcing wire layer is exposed.
- The outer covering is ballooning locally.
- The hose is kinked or crushed.
- The armoring embedded in the outer cover.
- The hoses have been pulled or stretched.

Make sure that all clamps, guards, and shields are installed.

Service Manual

Pick-Up Broom

Big Dawg Series

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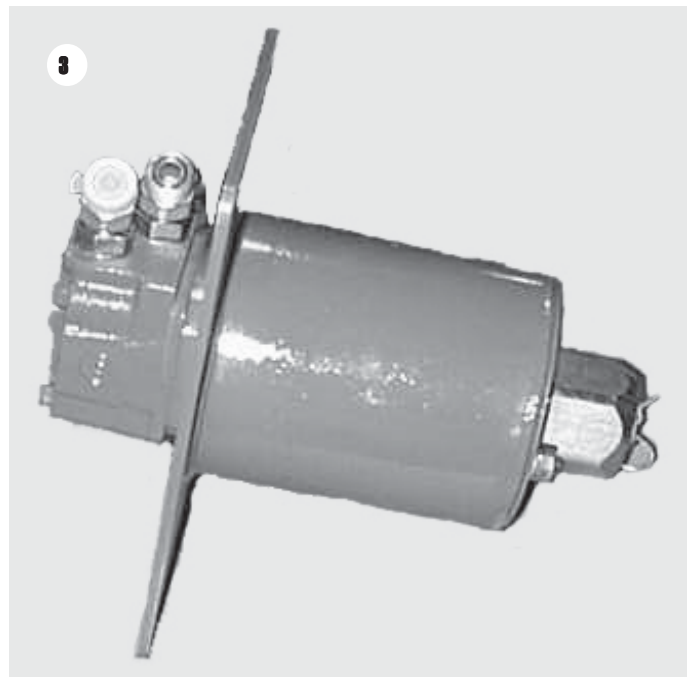
Assembling the Broom

Motor Bucket Assembly

NOTE - Keep all hydraulic components capped, until ready for assembly, to avoid hydraulic contaminants.

NOTE - Refer to Parts Manual for proper descriptions and part numbers.

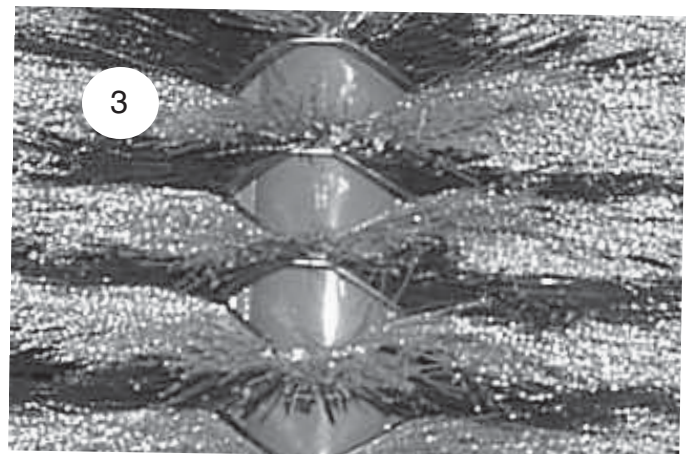
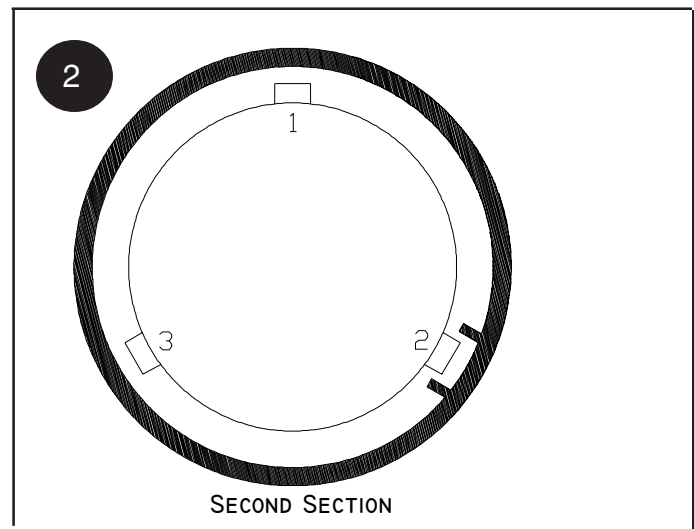
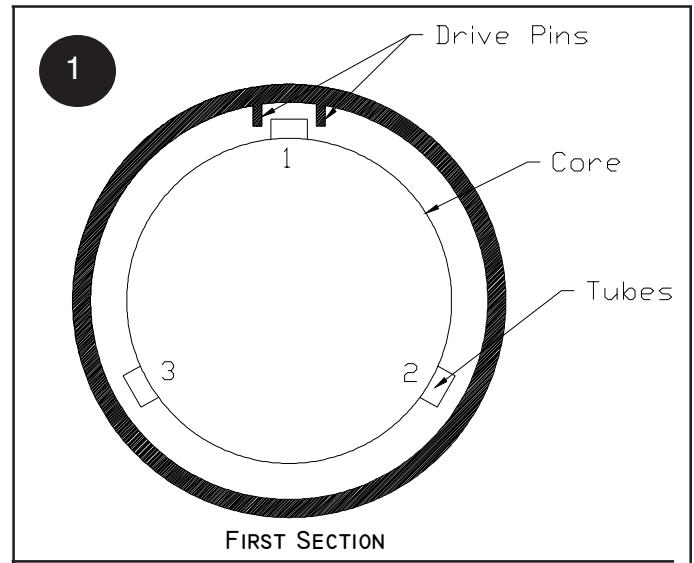
1. Attach hex hub to motor using castellated nut and cotter pin. Tighten to proper torque(1).
2. Attach hydraulic fittings to motor ports(2).
3. Insert motor into motor mount bucket and attach using hardware(3). Tighten to 100ft/lbs.



Assembling the Broom

Brush Core Assembly

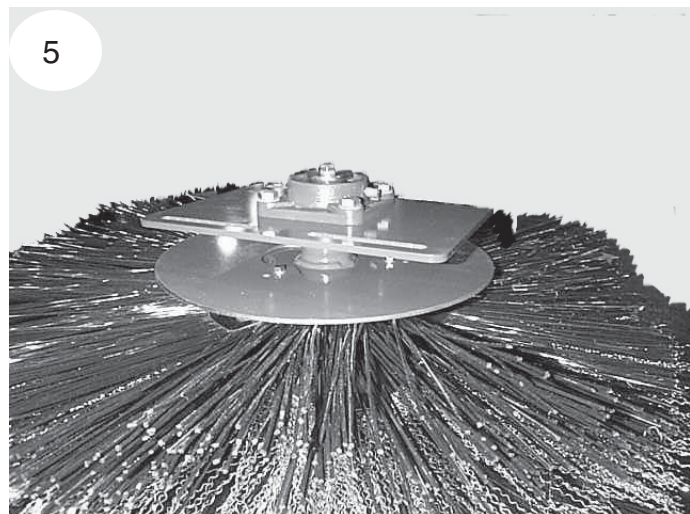
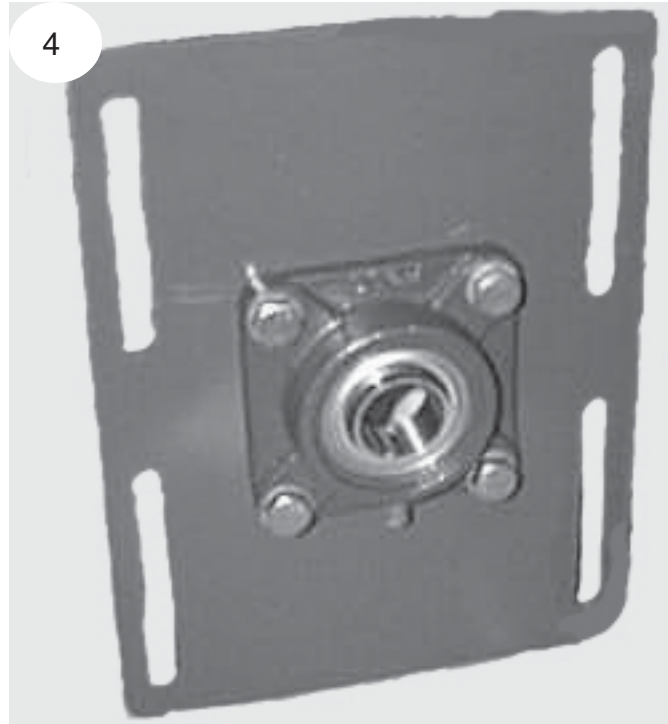
1. Install new sections by doing the following:
 - a. Number the tubes on the core as 1, 2 and 3 (1).
 - b. Slide the first section onto the core with the drive pins on either side of tube 1. Make sure that the drive pins angle up (1).
 - c. Place the second section on the core with the drive pins on either side of tube 2. Be sure the drive pins angle down (2).
 - d. Put the third section on with the drive pins around tube 3. Be sure the drive pins angle up.
 - e. Slide sections on until the core is full, making sure to alternate the tubes used and the direction of the drive pins.
2. Attach the core hat plate using three M10 x 25mm cap screws and three M10 lock washers.
3. Sections properly installed should form pockets as shown(3).



Assembling the Broom

Brush Core Assembly (continued)

4. Attach bearing to bearing mount plate using four M10 x 35mm screws, four M10 flat washers, four M10 lock washers and four M10 nuts(4).
5. Finally slide bearing assembly onto core shaft and secure with one M8 x 25mm screw and one M8 lock washer(5).



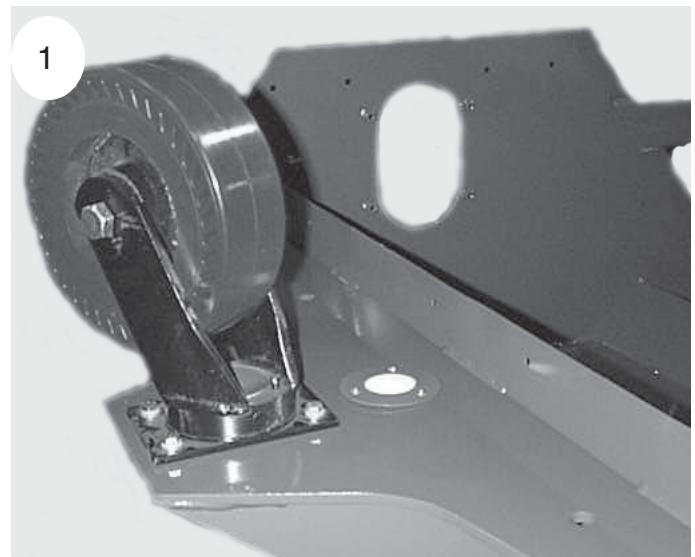
Assembling the Broom

Gutterbroom Bushing

1. Insert bushing into large hole behind caster(1).
2. Secure bushing using plate and three 3/16 x 3/4 pop rivets(2).

Caster

1. Attach caster using four 3/8 x 1 1/4 screws, four 3/8 flat washers, and four 3/8 lock washers(1)



Assembling the Broom

Flaps

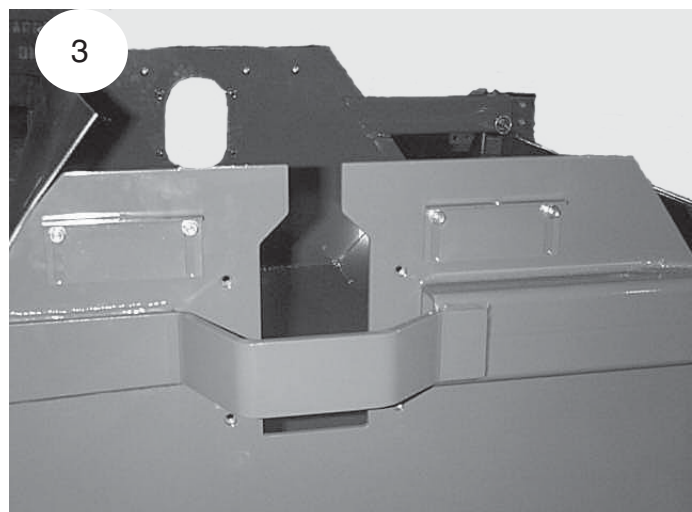
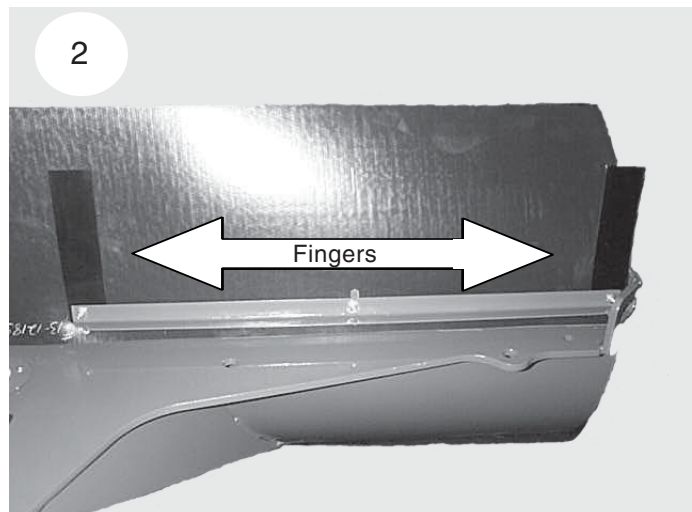
1. Install front flap using two support plates, six M6 x 25mm screws and six M6 inserts(1).

NOTE - Flap should be trapped between support plates and rolled portion of hood.

2. Install fingers as shown. End fingers should be on outside of flaps. The two middle fingers should alternate, inside and outside(2).

Side Brushes

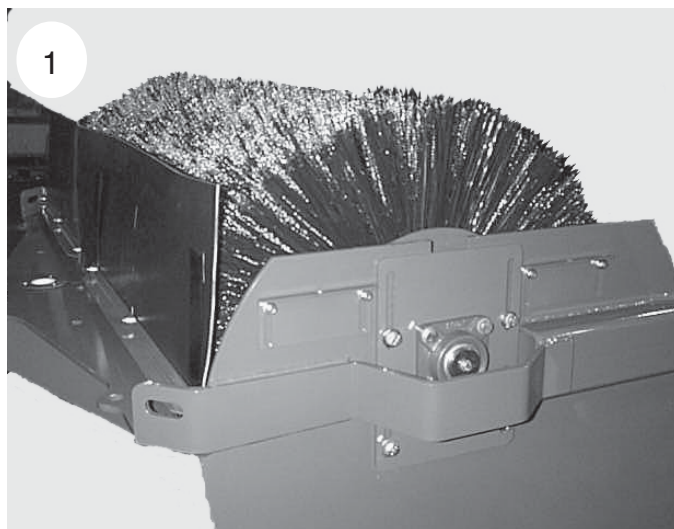
1. Attach side brush brackets using two M8 x 20mm carriage bolts, two M8 lock washers and two M8 nuts. Brush will be installed after core installation(3).



Assembling the Broom

Brush Head

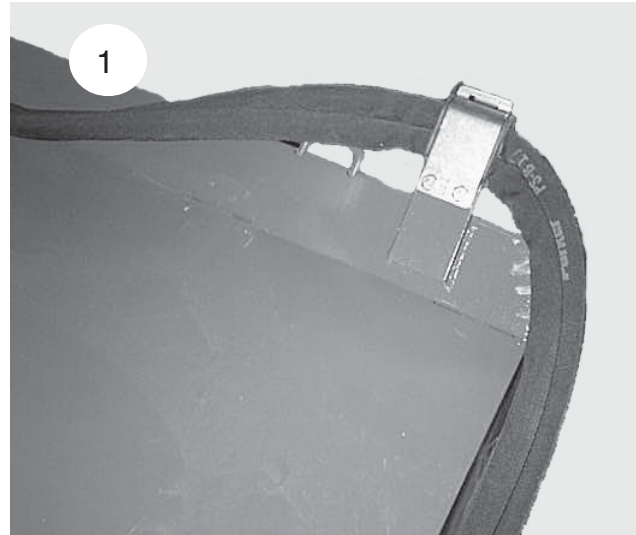
1. Lower brush core assembly into body(1).
2. Fasten bearing plate to side with four M10 x 30 screws, four M10 lock washers and four M10 flat washers. Nuts are welded to inside of brush hood side plate. **Do not Tighten** (1).
3. Lower core until screws bottom out in slot. Tighten hardware(2).
4. Insert pre-assembled motor bucket into core. Align hex hub on motor with hex shape inside core. Secure with four M10 x 30 screws, four M10 lock washers and four M10 flat washers. Nuts are welded to the inside of brush hood side plate. Fittings on motor should face top of machine as shown(3).
5. Attach side brushes using M8 nuts and M8 lock washers(3).
6. Install motor guard using 3/8 x 4 1/2 clevis pin and cotter pin. Secure using one M10 x 30 screw, one M10 lock washer and one M10 nut(3).



Assembling the Broom

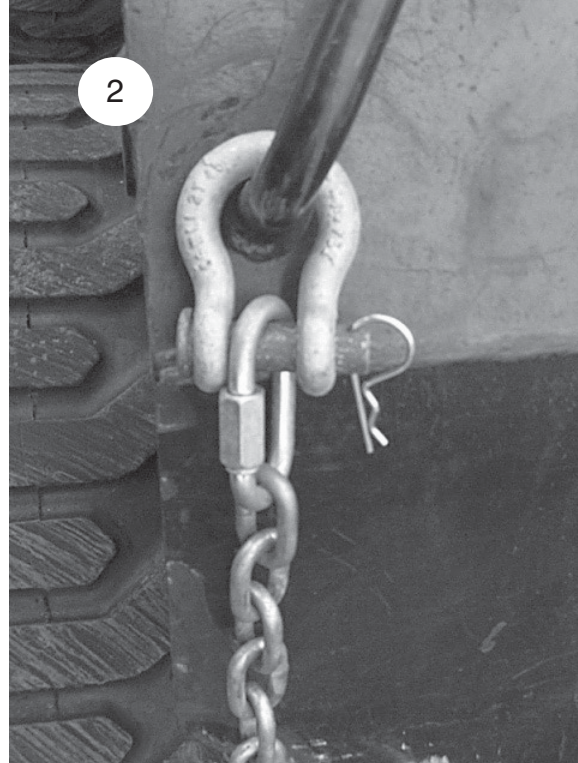
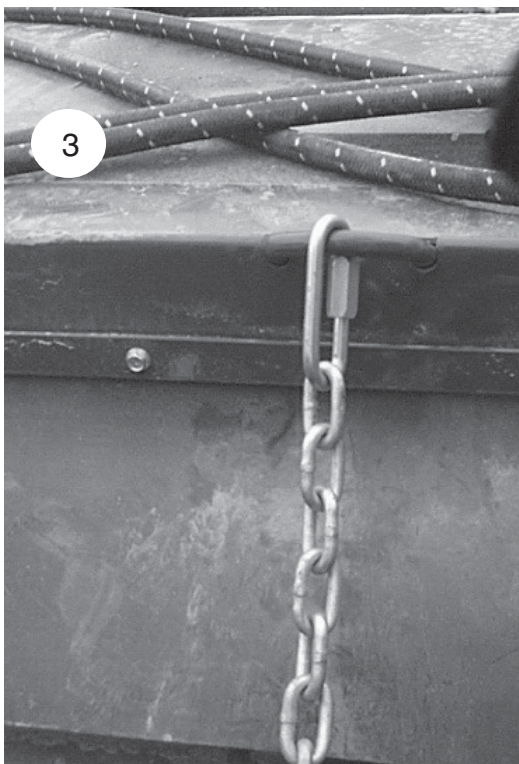
Hydraulic Hose

1. Attach 45° fitting end of each hose to fitting on motor(1).
2. Secure hose routing using hose clamp and M12 hardware(1).



Lift Chains

1. Attach small quick link to one end of chain.
2. Attach larger quick link to opposite end of chain.
3. Attach small quick link to shackle and secure with hairpin(2).
4. Attach other end of chain to sweeper hooks(3).



Brush Head Assembly

Problem	Possible Cause
Motor for pick-up broom will not operate	Auxiliary hydraulics control on prime mover is activated in the wrong position
	Hoses improperly connected to prime mover
	Hoses on prime mover are obstructed
	Hoses on broom are obstructed
	The motor has failed
Sluggish broom operation	Insufficient oil flow from the prime mover
	One or more seals have failed in the motor
	Hydraulic filter on prime mover is dirty
The motor runs but the broom does not run	Motor shaft has a sheared key
Oil leaks from the motor	One or more seals have failed in the motor
	Seals on the fittings are damaged
	Fittings are loose or damaged
	Hydraulic hoses are loose or damaged
Brush rotates in wrong direction	Hoses installed incorrectly
Brush slows or stops when sweeping	Brush pattern too wide
	Travel speed too fast
	Trying to sweep too much material at once
	Hydraulic motor is failing
Brush wears very quickly	Brush pattern is too wide

Hydraulic Assembly

Problem	Possible Cause
Excessive hydraulic oil temperature	Low hydraulic oil level on the prime mover
	Hydraulic hoses are obstructed
	Hydraulic oil is dirty
	Quick couplers loose
Hydraulic quick coupler leaks	Quick coupler poppet is unseated

Installing the Gutterbroom

1. Unpack parts and then compare them to the parts list. If you discover any shortages, contact SWEEPSTER or your dealer.

Swing Assembly

2. Place nylon bushing (1.75 I.D.) into center hole on sweeper beak. Place larger O.D. tube through bushing and secure at bottom with bail pin.
3. Slide smaller O.D. bent tube into larger tube secure with two M8 x 50mm screws and two M8 lock nuts. Use holes appropriate for size of sweeper.
4. Install split nylon bushing (white) into both ends of swing pivot. Slide retainer plate onto bent tube and then pivot with cross tube at top. Secure with bail pin through swing limit slot. See figure 2.
5. Slide quick release plate onto tube and secure with bail pin. See figure 3.

Note: A 17/32 hole will need to be drilled into the front plate of the sweeper on both sides. Use the quick release pin provided and the quick release plate previously assembled to mark the appropriate location. Insert the pin through the hole closest to the tube and through the existing hole in the sweeper plate.

6. Attach quick release plate to sweeper using quick release pin, carriage bolt, and steel knob. See figure 4.

Motor/Brush Assembly

7. Attach drive plate to bristle backing using four M8 x 50mm screws, eight M8 flat washers and four M8 lock nuts. Be sure bushing is facing down. Attach motor to brush using 5/16 x 1 screw and large washer.
8. Fasten motor mount plate to flange on motor using four M8 x 25mm screws, four M8 washers and four M8 lock nuts. See figure 1. Secure motor/brush assembly to swing pivot assembly using 3/4 clevis pin and cotter pin. See figure 6.
9. Attach chain assembly to motor mounting plate with quick link. See figure 6.
10. Attach other end through key hole slot at top of bent tube. See figure 6.

Hydraulic Hose/Valve Assembly

11. Install 90° elbows to gutterbroom motor. See parts list for correct size.
12. Remove two plugs on left side of sweeper.
Note: Early production sweepers may not have pre-drilled holes. If this is the case use Figure 7 to locate and drill two 5/16 holes.
Fasten manifold block to sweeper using two M6 x 60mm screws, two M6 flat washers and two M6 lock nuts.
13. Install adapter fittings to manifold block as shown in parts diagram.
14. Install 1/4 hose to manifold and to gutterbroom motor. Secure with hose clips as shown in parts diagram. Use two M8 x 65mm screws, two M8 flat washers and two M8 lock nuts to fasten to tubes and one M8 x 25mm screw and M8 flat washer to fasten to weld nut in sweeper body.



WARNING - Escaping hydraulic fluid can have enough pressure to penetrate the skin, causing serious personal injury.

15. Finally remove return hose from motor (hose closest to sweeper body) and connect to "T" port on block. Use short hose to connect empty port on broom motor to "P" port on block.
16. Be sure to tighten all connections to appropriate torque spec. found in back of manual. Failure to do so may cause O-Ring damage, leaks and possible injury.

Swinging gutterbroom from side to side

1. Remove quick release pin and knob.
2. Swing brush to other side.
3. Remove chain from key hole slot. Remove swing limit pin and rotate brush 180 degrees. Replace pin and chain
4. Remove quick release plate and flip over. Gussets should face up if brush is on left side and face down if on right side.
5. Fasten quick release plate to sweeper using knob, carriage bolt, and pin.
6. Change direction on valve.

SERVICE MANUAL
INSTALLING GUTTERBROOM



Figure 1

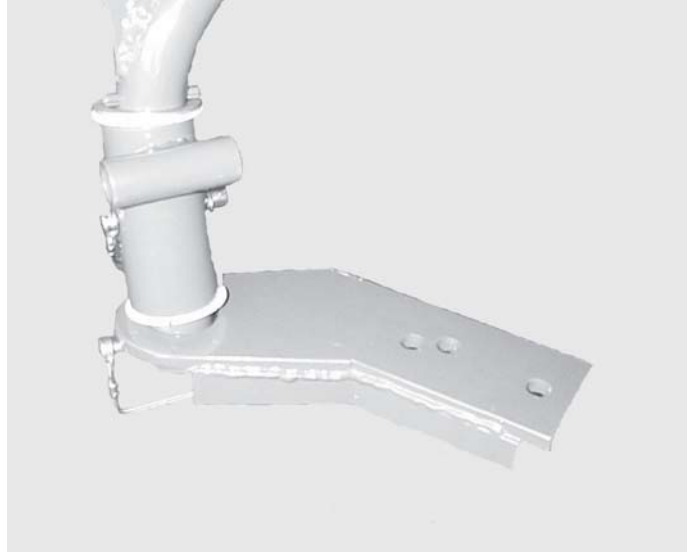


Figure 3

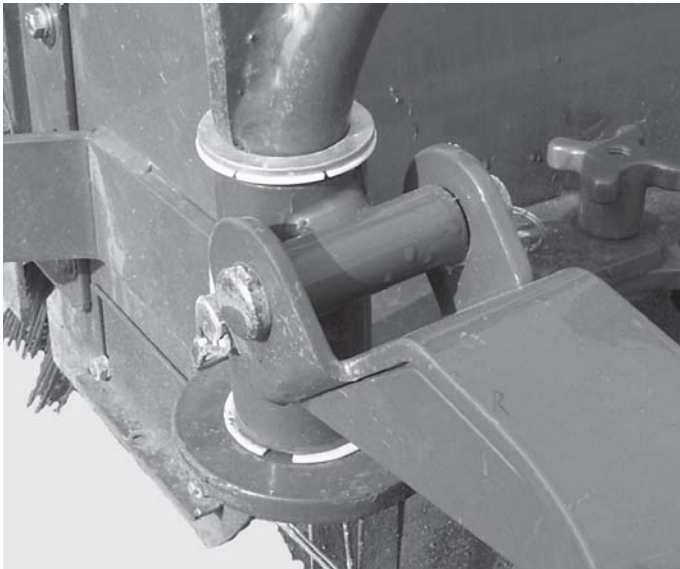


Figure 2

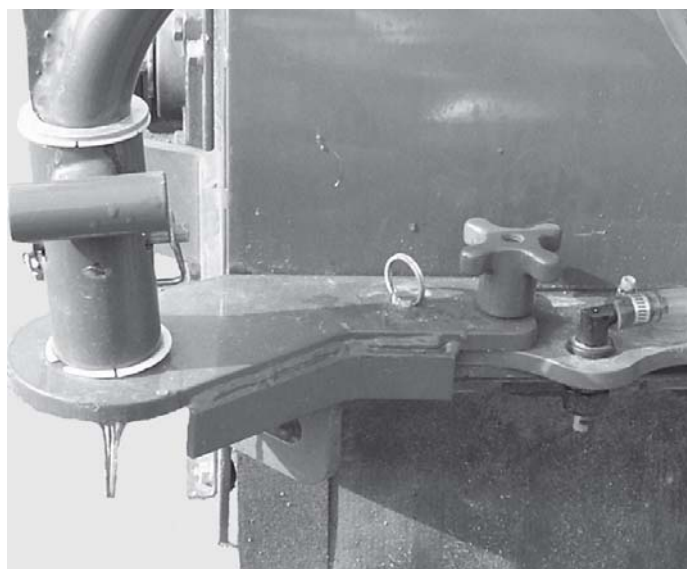


Figure 4



Figure 5

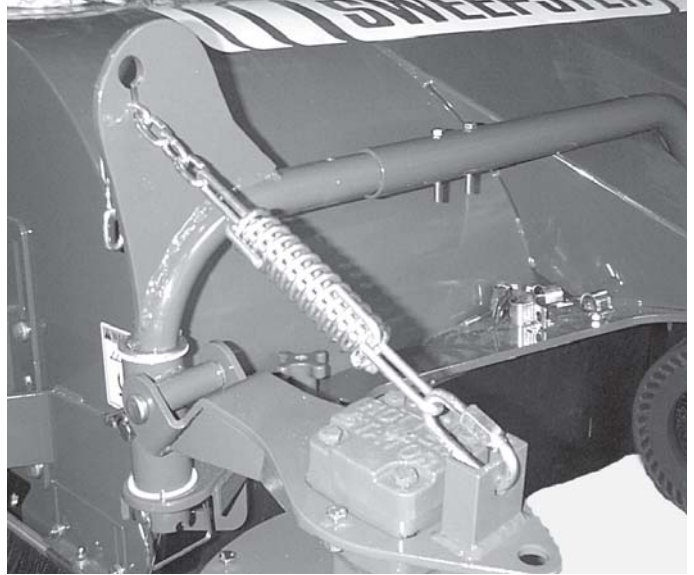


Figure 6

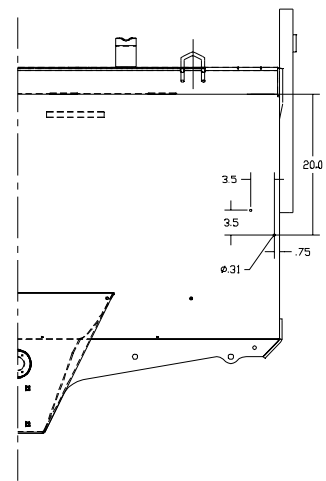


Figure 7

Installing the Dust Suppression Kit

1. Unpack parts and then compare them to the parts list. If you discover any shortages, contact SWEEPSTER or your dealer.

Tank/Pump (If no tank go to step 8)

2. Position the tank on top of the sweeper body as far back as possible. Align the left-to-right centerlines of the tank and the sweeper. The outlet must face the left-hand side of the sweeper.
3. Transfer holes from the tank to the sweeper.
4. Drill 1 1/32 in. holes.
5. Secure the tank to the sweeper with washers and screws.
6. Install a 5/8 in. - 1/2 in. barb fitting on the tank outlet.
7. Connect the 5/8 in. hose to the barb fitting. Secure it with a 7/8 in. hose clamp.
8. Connect the filter to the pump. Place this assembly over the holes and secure it to the water tank (if applicable) with 4 screws, nuts and washers.
9. Attach a 5/8 in. - 1/2 in. barb fitting to the strainer.
10. Connect the 5/8 in. hose to the barb fitting. Secure it with a 7/8 in. hose clamp.
11. Connect a 3/8 in. barb fitting to pump. Secure with hose clamp.
12. Connect the 3/8 in. hose to the barb fitting.

Nozzle/Hose Assembly

13. Attach nozzles to front plate of sweeper and secure with jam nut. Elbow nozzles at each end and tee nozzle in middle of sweeper.
14. Install nozzle tip and retainer to each nozzle.
15. Connect each nozzle with the 3/8 hose supplied. Secure with hose clamps.
16. Cut the hose that connects the two tee nozzles and insert a tee barb fitting. Secure with hose clamps. See parts list diagram on page 41.

17. From this tee use the remaining 3/8 in. hose to connect to the pump.
18. If a gutterbroom is installed, insert a tee barb fitting into the hose installed in step 17.
19. Route 3/8 in. hose from tee inserted in step 18 to gutterbroom following hydraulic hose routing. See parts list diagram on page 41.
20. Install elbow nozzle and spray tip on to gutterbroom and connect hose. Secure with hose clamp. Use zip tie to secure hose to hydraulic lines.

Switch Assembly

21. Find a convenient spot on the prime mover dash to place the toggle switch. Drill a hole with a 13/32 in. bit. Install the switch.

IMPORTANT - Avoid mover damage. Check behind the dash to make sure that you will not drill into wires or other parts.

22. Attach the wire cord to wires on the pump using quick connect connectors. Black goes to black and white connects to red.

23. Route the wire cord to the toggle switch.

IMPORTANT - Avoid fire damage. Route wire away from hot and/or moving parts.

24. Strip 3 in. of insulation off the wire cord near the switch, taking care not to damage any wires. Cut the white wire. Attach both ends to wires on the toggle switch using butt end connectors.
25. Route the wire cord to the fuse box keeping it away from hot and/or moving parts.
26. Connect the white wire to a 15-20 amp fuse or accessory on the ignition.
27. Attach the black wire to the tractor frame using the terminal ring to ground the system.

Parts Manual

Pick-Up Broom

Big Dawg Series

NOTES

Table of Contents

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PARTS MANUAL
SWEEPER ASSEMBLY

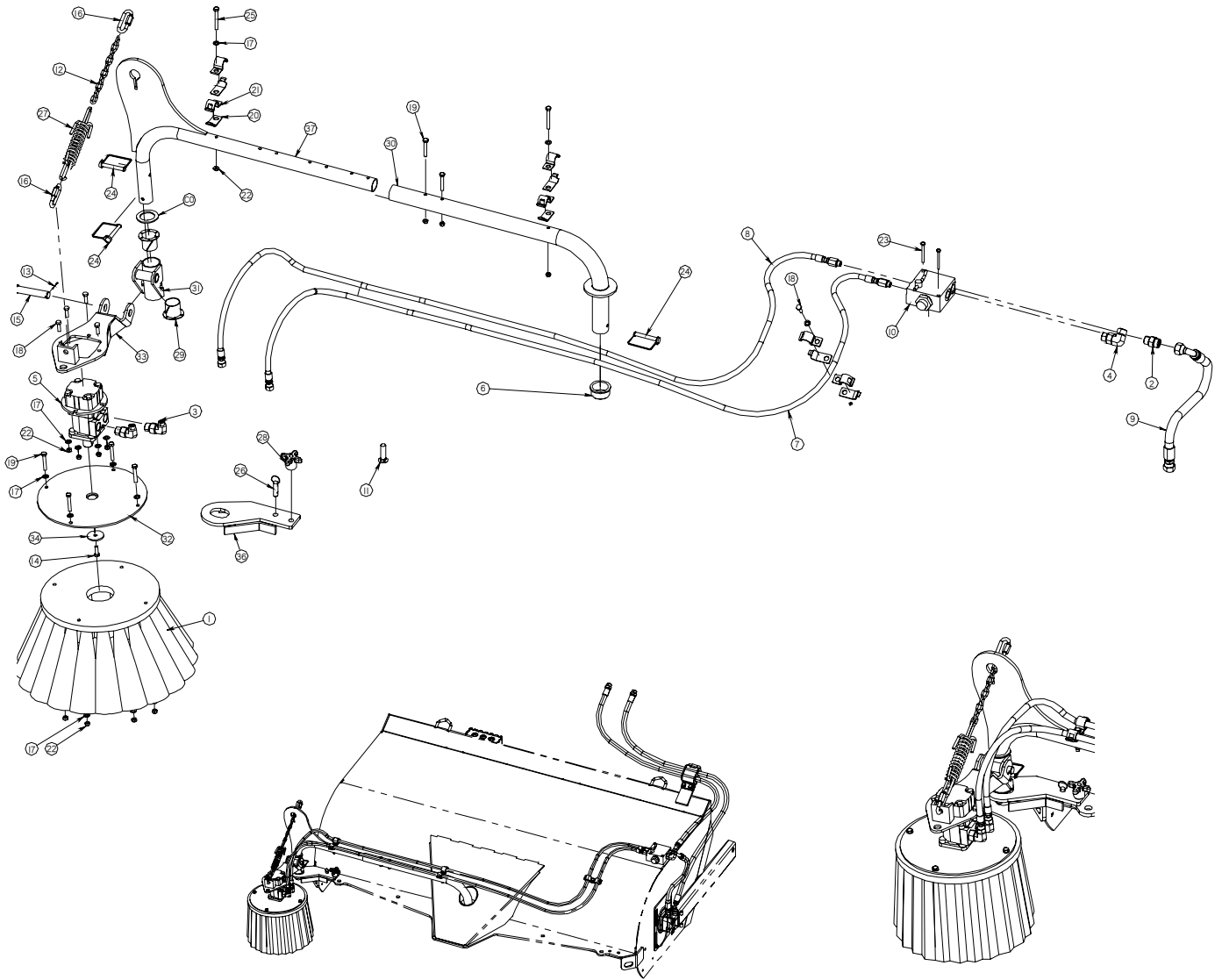
Item	Part	Qty	Description
1.	03-4072	1	Nylon, Bushing, 1.75 ID, 2.00 OD
2.	07-0205	1	Pin, Cotter, 1/8 x 1
3.	07-0210	2	Clip, Hairpin, 14 Gauge x 1 3/4
4.	07-0244	2	Pin, Lynch, 1/4
5.	07-0290	2	Chain, 1/4, 39 Links
6.	07-1075	3	Rivet, Pop, 3/16 x .626-.0750
7.	07-2950	8	Bolt, Carriage, M8-1.25 x 20mm
8.	07-2952	6	Screw, M6-1 x 20mm
9.	07-3311	2	Link, Quick, 5/16
10.	07-3617	6	Nut, Insert, M6 x 1, Hex
11.	07-3737	12	Nut, Hex, M8-1.25
12.	07-3738	12	Washer, Lock, Split, M8
13.	07-3745	1	Washer, Flat, CI 8.8, M10
14.	07-3747	5	Washer, Lock, Split, M10
15.	07-3749	1	Screw, HHC, CI 10.9, M10-1.5 x 30mm
16.	07-3751	4	Screw, HHC, CL10.9, M10-1.5 x 40mm
17.	07-3754	4	Washer, Flat, CI 8.8, M12
18.	07-4607	12	Washer, Flat, M8
19.	07-5294	2	Link, Quick, 5/16, Wide Jaw
20.	07-5295	2	Shackle, Anchor, 1/2, 3000 lb
21.	07-5830	1	Pin, Clevis, 3/8 x 4 1/2
22.	07-6798	1	Caster, Assembly, 10 x 2.75
23.	07-6521	2	Plate, Shim, 1/4 Inch
24.	13-10060	4	Finger, Apron, HB48/60/72
25.	13-11561	1	Plate, Cover, Nylon, Bushing
26.	13-11722	2	Plate, Support, Flap, Front, HBC74 & HBC84
27.	13-11734	2	Weld, Pin, 1 x 8, W/Hole
28.	13-11879	4	Plate, Bracket, Mount, Brush, Side
29.	13-11998	1	Weld, Motor, Guard, Hinged
30.	13-12179	1	Weld, Sweeper, HBC62
	13-12167	1	Weld, Sweeper, HBC74
	13-11564	1	Weld, Sweeper, HBC84
31.	13-12185	1	Flap, Front, HBC62
	13-12184	1	Flap, Front, HBC74
	13-11721	1	Flap, Front, HBC84
32.	28-9547	1	Assembly, Side, Brush, Right
33.	28-9548	1	Assembly, Side, Brush, Left

Not Shown: 08-2266 Grease, Pennzoil, Pennlit, Equivalent
for Caster Zerk Fittings.

PARTS MANUAL
GUTTERBROOM

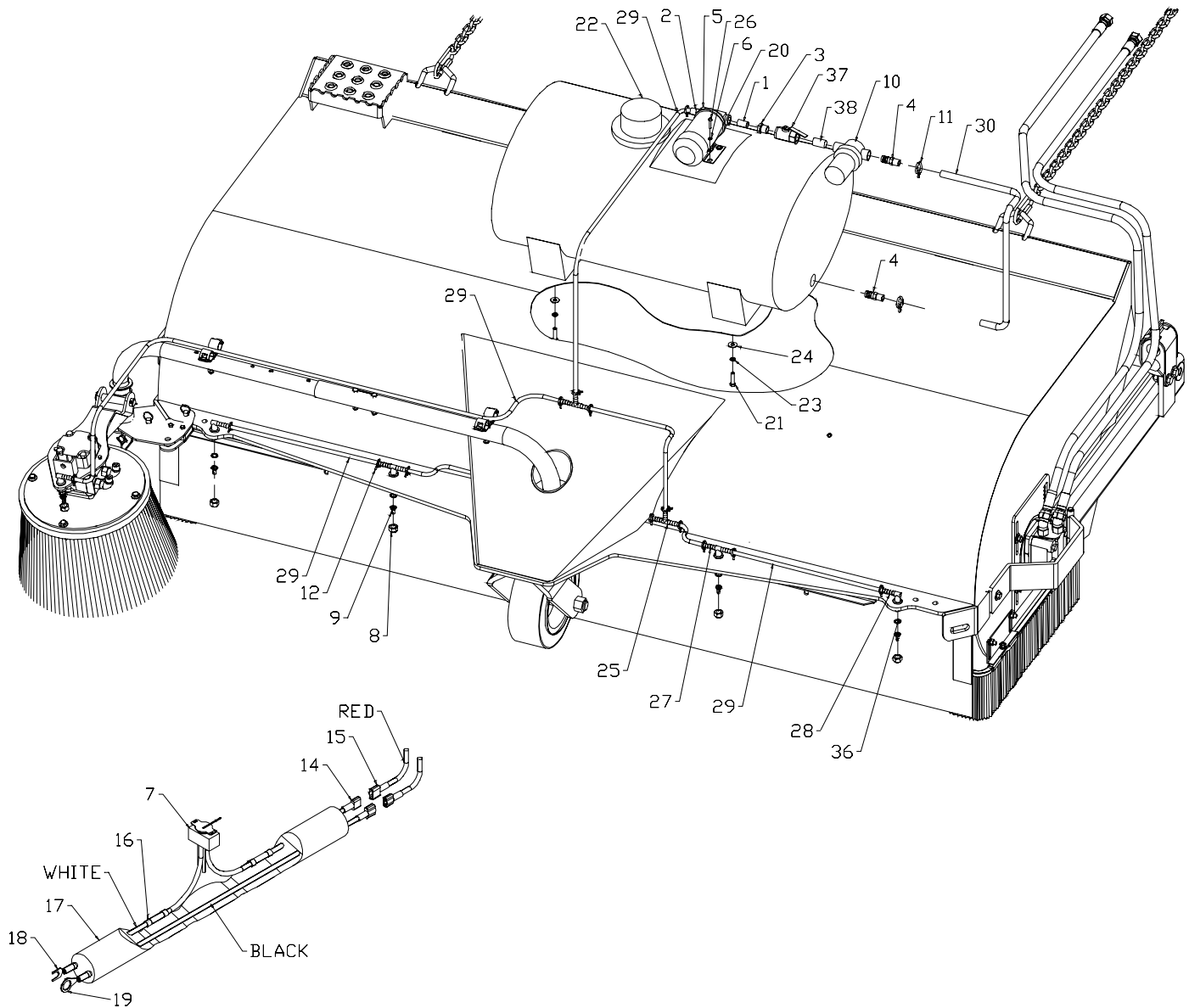
Item	Part	Qty	Description
1.	01-0523	1	Gutterbroom, Woodback
2.	03-1939	1	Fitting, Adaptor, 7/8MOR, 5/8MFS
3.	03-1953	2	Fitting, Elbow, HP, 90°, 7/8MOR, 3/8MFS
4.	03-2126	1	Fitting, Elbow, HP, 90°, 7/8MOR, 5/8MFS
5.	03-4071	1	Motor, Hydraulic, 6.8 Cu. In
6.	03-4072	1	Nylon, Bushing, 1 3/4 I.D., 2 O.D.
7.	03-4073	1	Hose, 1/4 x 102, 3/8FFS, 9/16MORS
8.	03-4073	1	Hose, 1/4 x 102, 3/8FFS, 9/16MORS
9.	03-4074	1	Hose, 5/8 x 18, 5/8FFS, 90°, 5/8FFS
10.	03-4075	1	Valve, 3-Way, Directional, Flow Divider, 3 GPM
11.	07-0117	1	Bolt, Carriage, Gr5, 1/2 x 2
12.	07-0238	1	Chain, 3/16, 10 Links
13.	07-0699	1	Pin, Cotter, 1/8 x 1 1/4
14.	07-1714	1	Screw, Cap, 5/16-18 x 1
15.	07-3159	1	Pin, Clevis, 3/4 x 3 3/4
16.	07-3311	2	Link, Quick, 5/16
17.	07-3736	15	Washer, Flat, M8
18.	07-3739	5	Screw, HHC, CL10.9, M8-1.25 x 25mm
19.	07-3744	6	Screw, Cap, M8-1.25 x 50mm
20.	07-4597	6	Clip
21.	07-4599	6	Clip
22.	07-4604	12	Nut, Hex, Lock, M8-1.25
23.	07-4669	2	Screw, Cap, M6-1 x 60mm
24.	07-4748	3	Pin, Lock, 3/8 x 2
25.	07-5287	2	Screw, Cap, M8-1.25 x 65mm
26.	07-5380	1	Pin, Hitch, Cotterless, 1/2 x 1
27.	07-5871	1	Extention, Spring, 8 3/4 x 1.375
28.	07-5872	1	Cast Iron, Knob, 2 9/16 Head, with 1/2-13 Hole
29.	09-0156	2	Flange, Bearing, Nylon
30.	13-11589	1	Weld, Arm, Gutterbroom
31.	13-11592	1	Weld, Pivot, Gutterbroom
32.	13-11599	1	Weld, Plate, Gutterbroom
33.	13-11601	1	Weld, Motor, Mounting, Gutterbroom
34.	13-11903	1	Washer, .34 x 1.8 x 10 Gauge
35.	13-12291	1	Washer, Flat, 2 1/4 O.D. x 1 5/8 I.D. x 12 Gauge
36.	13-12374	1	Weld, Pin Plate
37.	13-12378	1	Weld, Chain Holder

28-9134 Gutterbroom



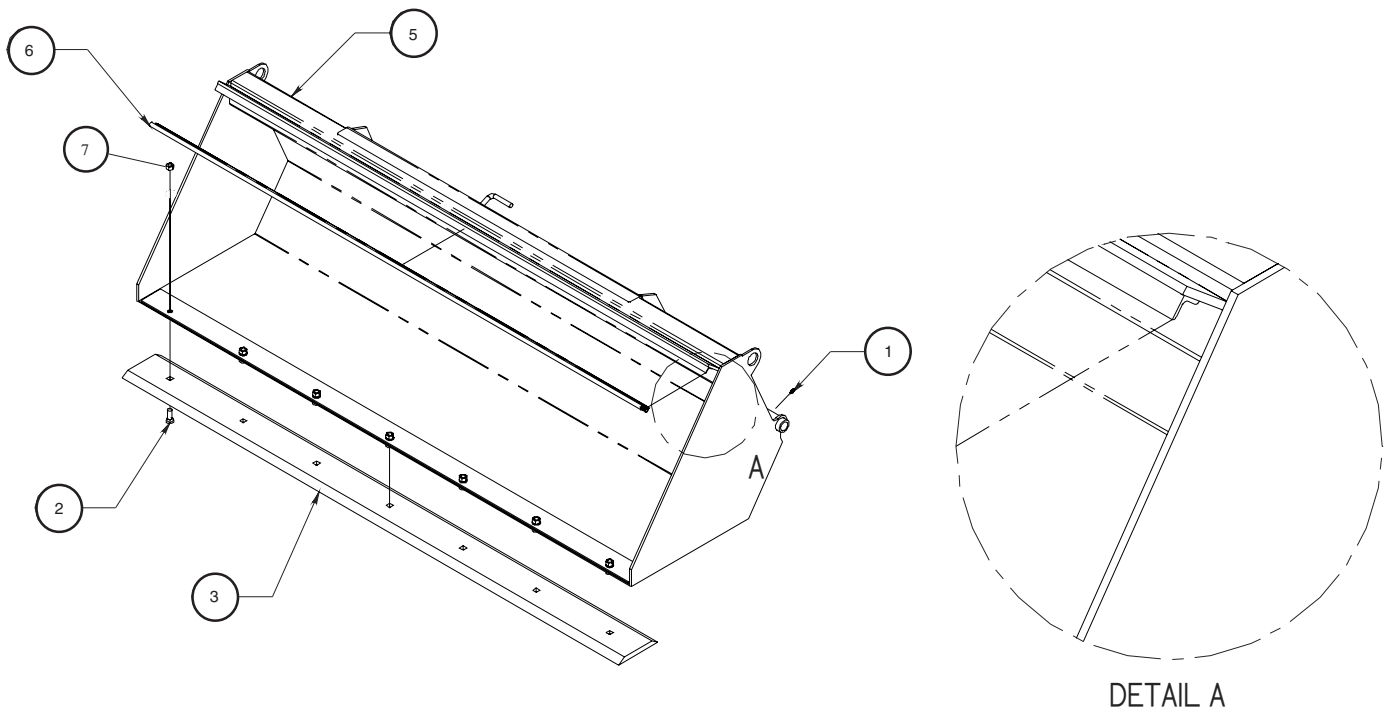
PARTS MANUAL
DUST SUPPRESSION KIT

Item	Part	Qty	Description
1.	03-0076	1	Fitting, Nipple, BP, Close, 3/8
2.	03-0457	1	Fitting, Barb, 3/8, 3/8MP
3.	03-0819	1	Fitting, Reducerbushing, HP, 1/2, 3/8
4.	03-1226	2	Fitting, Barb, HP, 5/8, 1/2MP
5.	03-1326	1	Pump, Water, 2.1 G.P.M., 12 Volt
6.	07-0140	4	Washer, Lock, #10
7.	07-0343	1	Switch, Toggle, 2 Position
8.	07-0413	5	Nozzle, Cap, Nylon
9.	07-0414	5	Nozzle, Tip, Brass, 1.5
10.	07-0532	1	Strainer, Water
11.	07-0547	2	Clamp, Spring, 7/8, Hose
12.	07-0549	14	Clamp, Spring, 5/8, Hose
14.	07-0812	2	Terminal, Connector, 1/4, F, 16-14
15.	07-0813	2	Terminal, Connector, 1/4, M, 16-14
16.	07-0867	2	Terminal, Butt, 16-14
17.	07-0917	15Ft	Wire, 16 Gauge, 2 Connector
18.	07-0926	1	Terminal, Spade, 6, 16-14
19.	07-0927	1	Terminal, Ring, 1/4, 16-14
20.	07-1430	4	Washer, Flat, #10
21.	07-1973	4	Screw, Cap, 5/16-18 x 1 1/4
22.	07-3150	1	Assembly, Tank, Water, 25 Gallon (28-9139 only)
23.	07-3273	4	Washer, Lock, Split, 5/16
24.	07-3275	4	Washer, Flat, 5/16
25.	07-3869	2	Fitting, Barb, Tee, 3/8
26.	07-4831	4	Screw, 2 x 3/4
27.	07-4861	2	Nozzle, Tee, without Clamp
28.	07-4862	3	Nozzle, Elbow, without Clamp
29.	07-5127	25Ft	Hose, Clear, Vinyl, 3/8
30.	09-0028	5Ft	Hose, Heater, 5/8
36.	03-3537	5	O-Ring, #8 SAE, Straight, Threaded Port
37.	03-1392	1	Valve, Shut-off, Ball, 1/2
38.	03-0152	1	Fitting, Nipple, BP, Close, 1/2

28-9139**Dust Suppression Kit
With Tank****28-9140****Dust Suppression Kit
No Tank**

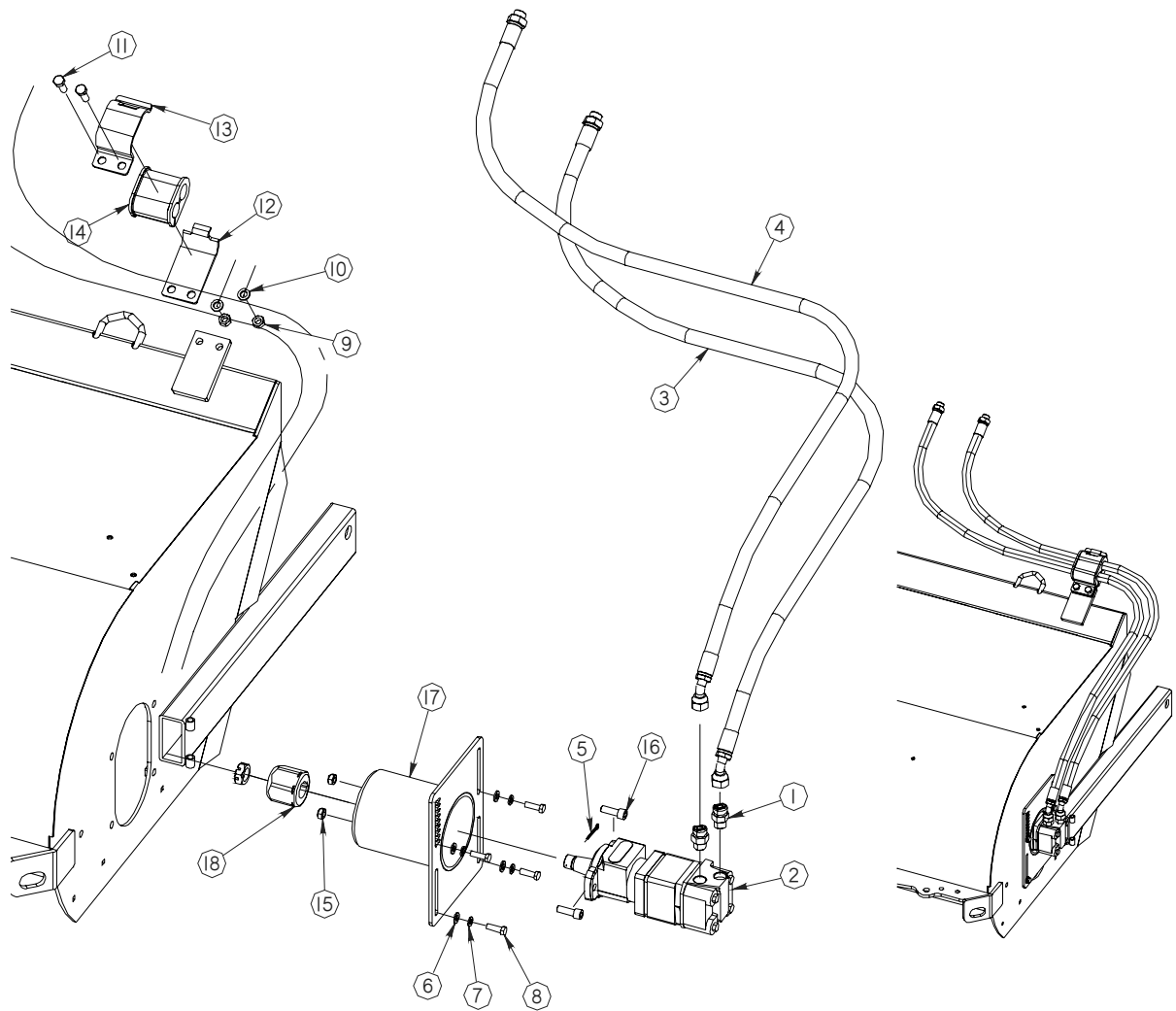
PARTS MANUAL
BUCKET

28-9135 62 Inch Bucket
28-9136 74 Inch Bucket
28-9137 84 Inch Bucket



Item	Part	Qty	Description
1.	07-3112	2	Fitting, Zerk, 1/4-28, Self Tap
2.	07-4454	6	Bolt, Plow, 1/2 x 1 1/2, 62 Inch
	07-4454	7	Bolt, Plow, 1/2 x 1 1/2, 74 Inch
	07-4454	8	Bolt, Plow, 1/2 x 1 1/2, 84 Inch
3.	07-3902	1	Edge, Cut, Bolt on, 5/8 x 6, Dual Bevel, 62 Inch
	07-5342	1	Edge, Cut, Bolt on, 5/8 x 6, Dual Bevel, 74 Inch
	07-5341	1	Edge, Cut, Bolt on, 5/8 x 6, Dual Bevel, 84 Inch
5.	13-11809	1	Weld, Mounting Bucket, 62 Inch
	13-11816	1	Weld, Mounting Bucket, 74 Inch
	13-11602	1	Weld, Mounting Bucket, 84 Inch
6.	13-12242	1	Clean Grip, 62 Inch
	13-12243	1	Clean Grip, 74 Inch
	13-12244	1	Clean Grip, 84 Inch
7.	07-1764	6	Nut, Hex, Gr8, 1/2-13, 62 Inch
	07-1764	7	Nut, Hex, Gr8, 1/2-13, 74 Inch
	07-1764	8	Nut, Hex, Gr8, 1/2-13, 84 Inch

Motor Bucket 28-9119



Item	Part	Qty	Description
1.	03-1939	2	Fitting, Adaptor, HP, 7/8MOR, 5/8MFS
2.	03-4024	1	Motor, Hydraulic, White, 24.9 Cu In
3.	03-4469	1	Hose, 5/8 x 96, 100R2, 10MOR, 10FFS, 45°
4.	03-4469	1	Hose, 5/8 x 96, 100R2, 10MOR, 10FFS, 45°
5.	07-1044	1	Pin, Center, Gr2, 5/32 x 1 1/2
6.	07-3745	4	Washer, Flat, CI 838, M10
7.	07-3747	4	Washer, Lock, Split, Med, M10
8.	07-3749	4	Screw, HHC, CI 10.9, M10-1.5 x 30mm
9.	07-3755	2	Nut, Hex, CI 10, M12-1.75
10.	07-3756	2	Washer, Lock, Split, Med, M12
11.	07-3759	2	Screw, HHC, CI 10.9, M12-1.75 x 35mm
12.	07-4598	1	Clip
13.	07-4600	1	Clip
14.	07-4601	1	Clip
15.	07-4610	2	Nut, Hex, Lock, CI 10.9, M12-1.75
16.	07-5816	2	Screw, Socket Head, CI 12.9, M12-1.75 x 35mm
17.	13-11887	1	Weld, Motor, Mounting
18.	13-11890	1	Hub, Hex, 2 1/2 x 1 1/4, Tapered Bore

Core Assembly

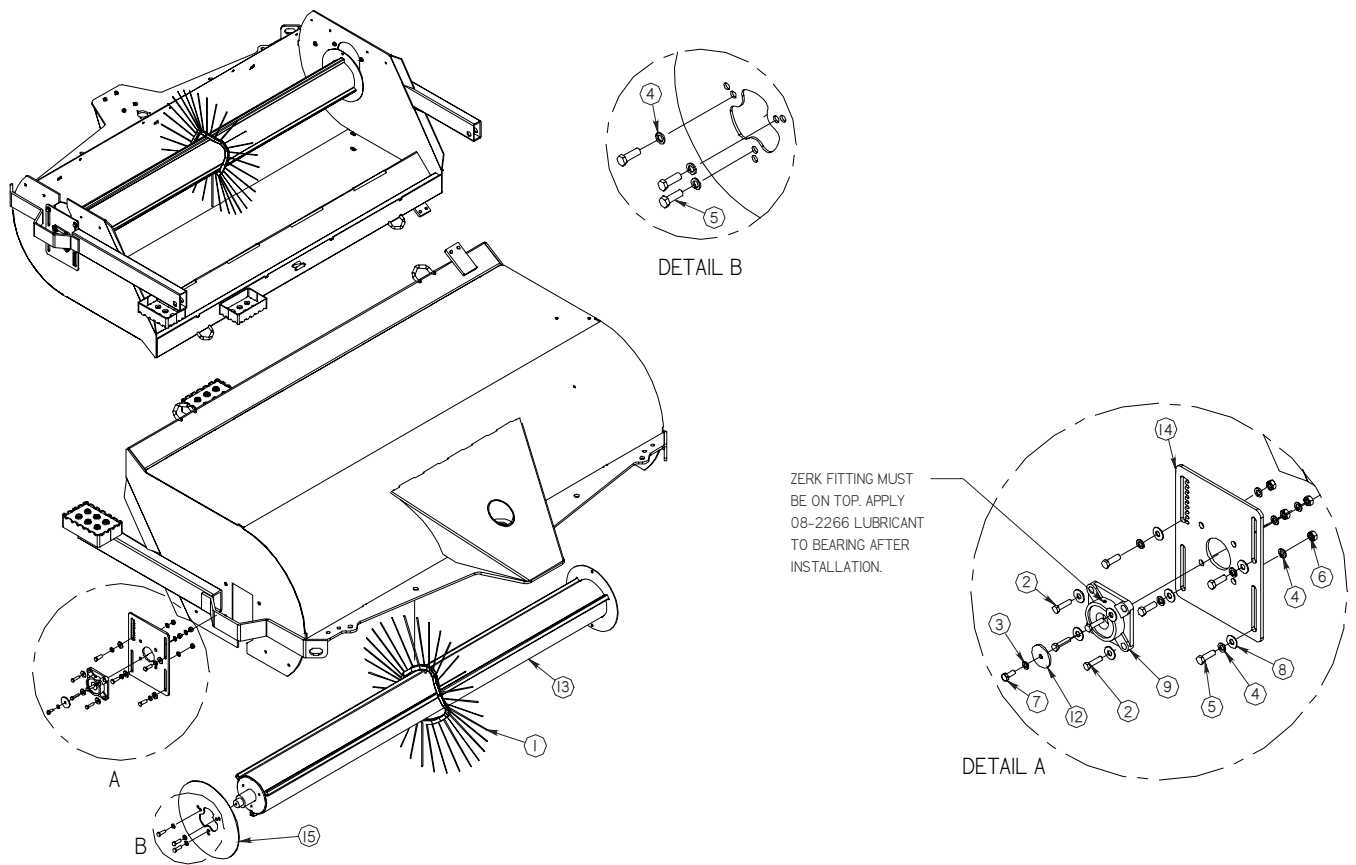
Item	Part	Qty	Description
1.	01-0848		Wire Sections (See below for quantity)
	01-5847		Poly Sections (See below for quantity)
2.	07-2495	4	Screw, HHC, CI 8.8, M10-1.5 x 35mm
3.	07-3738	1	Washer, Lock, Split, Med, M8
4.	07-3747	11	Washer, Lock, Split, Med, M10
5.	07-3749	13	Screw, HHC, CI 10.9, M10-1.5 x 30mm
6.	07-3775	1	Nut, Hex, CI 8.8, M10-1.5
7.	07-3777	1	Screw, HHC, CI 10.9, M8-1.25 x 20mm
8.	07-4619	8	Washer, Flat, CI 8.8, M10
9.	08-0067	1	Bearing, 1 1/4, 4 Bolt
12.	13-11903	1	Washer, .34 x 1.8 x 10 Ga.
13.	13-12205	1	Weld, Core, Hex Drive, 62
	13-12203	1	Weld, Core, Hex Drive, 74
	13-11880	1	Weld, Core, Hex Drive, 84
14.	13-12209	1	Plate, Bearing, Mounting
15.	13-12751	1	Plate, Core, Hat

Model Number

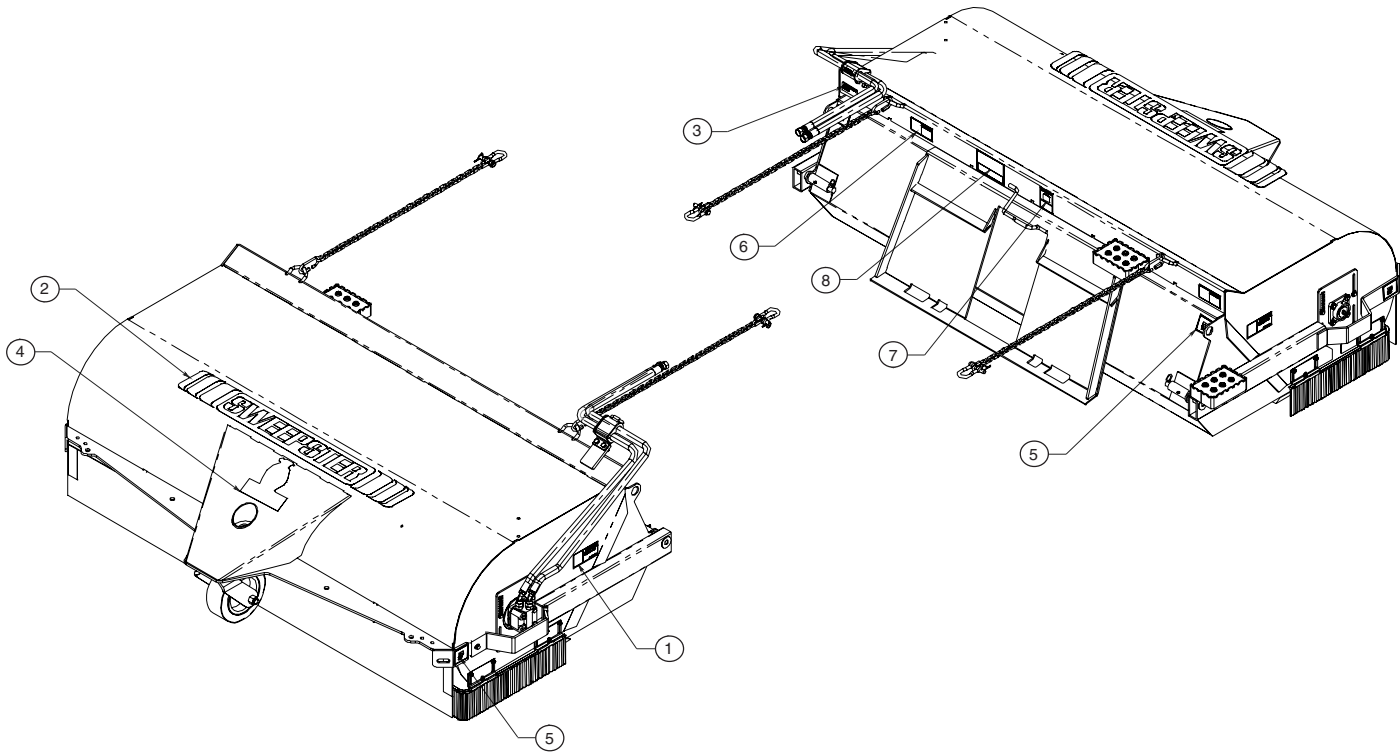
Sections Needed

HBC62M	16 Poly, 16 Wire
HBC62P	32 Poly
HBC74M	19 Poly, 19 Wire
HBC74P	38 Poly
HBC84M	22 Poly, 21 Wire
HBC84P	43 Poly

- 28-9125 62 Core Assembly Mixed**
- 28-9126 62 Core Assembly Poly**
- 28-9127 74 Core Assembly Mixed**
- 28-9128 74 Core Assembly Poly**
- 28-9129 84 Core Assembly Mixed**
- 28-9130 84 Core Assembly Poly**



Label Assembly



Item	Part	Qty	Description
1.	50-0076-1	2	Label, Warning, Pinch Point, Avoid Injury
2.	50-0252	1	Label, Logo, Large, White, Die Cut
3.	50-0634	1	Label, Serial #, Sweepster
4.	50-0642	1	Label, Big Dawg, Decal, 8.375 x 8.625
5.	50-0643	4	Label, Tie Down Point, without Warning
6.	50-0644	2	Label, Warning, Pinch Point
7.	50-0645	1	Label, Warning, Read Manual, with Text
8.	50-0652	1	Label, Bucket, Position Adjustment

Appendix

Pick-Up Brooms

Big Dawg Series

NOTES

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APPENDIX
TORQUE SPECS.

Bolt Torque Specifications

Body Size Grade 5	Ft-lbs		Body Size Class 8.8	Ft-lbs
1/4 - 20	6 ± 1		M6 - 1.0	5 ± 1
- 28	7 ± 1		n/a	-
5/16 - 18	13 ± 3		n/a	-
- 24	14 ± 3		n/a	-
3/8 - 16	23 ± 5		M8 - 1.25	14 ± 3
- 24	26 ± 5		- 1.0	-
7/16 - 14	37 ± 8		M10 - 1.5	29 ± 6
- 20	41 ± 9		- 0.75	-
1/2 - 13	56 ± 11		M12 - 1.75	50 ± 10
- 20	63 ± 12		- 1.0	-
9/16 - 12	82 ± 14		M14 - 2.0	80 ± 14
- 18	91 ± 16		- 1.5	-
5/8 - 11	113 ± 20		M16 - 2.0	125 ± 22
- 18	127 ± 23		- 1.5	-
3/4 - 10	201 ± 26		n/a	-
- 16	223 ± 29		n/a	-
7/8 - 9	321 ± 41		M20 - 2.5	244 ± 31
- 14	355 ± 46		- 1.5	-
1 - 8	483 ± 62		M24 - 3.0	422 ± 54
- 12	528 ± 68		- 2.0	-

Body Size Grade 8	Ft-lbs		Body Size Class 10.9	Ft-lbs
1/4 - 20	9 ± 2		M6 - 1.0	8 ± 1
- 28	10 ± 2		n/a	-
5/16 - 18	18 ± 4		n/a	-
- 24	20 ± 4		n/a	-
3/8 - 16	32 ± 7		M8 - 1.25	20 ± 4
- 24	37 ± 8		- 1.0	-
7/16 - 14	52 ± 11		M10 - 1.5	40 ± 8
- 20	58 ± 12		- 0.75	-
1/2 - 13	80 ± 16		M12 - 1.75	69 ± 14
- 20	90 ± 18		- 1.0	-
9/16 - 12	115 ± 20		M14 - 2.0	110 ± 20
- 18	128 ± 23		- 1.5	-
5/8 - 11	159 ± 28		M16 - 2.0	173 ± 31
- 18	180 ± 32		- 1.5	-
3/4 - 10	282 ± 36		n/a	-
- 16	315 ± 41		n/a	-
7/8 - 9	454 ± 59		M20 - 2.5	337 ± 44
- 14	500 ± 65		- 1.5	-
1 - 8	681 ± 88		M24 - 3.0	583 ± 75
- 12	746 ± 97		- 2.0	-

Foot-pounds may be converted to Newton Meters by multiplying by 1.35582

Foot-pounds may be converted to Inch-pounds by multiplying by 12.

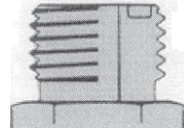
If the nut and screw are not the same grade, the lower grade will always be used.

NOTE - Nylock nuts are utilized when greater resistance to vibrating loose is required, and greater operating temperatures are not a factor. In addition, like lock nuts, nylock nuts have a safety feature that if the bolt does vibrate loose, the nut will remain on the screw. Install nylock nuts to the standard torque shown above.

Hydraulic Torque Specifications

Face Seal: Assembly, Tube to Fitting

Note - Face seal fittings have the most reliable sealing method and therefore, should be used whenever possible.



Installation

1. Make sure threads and sealing surfaces are free of burrs, nicks, scratches, or any foreign materials.
2. Install proper SAE o-ring to end of fitting if not already installed. Ensure o-ring is fully seated and retained properly.
3. Lubricate o-ring with a light coating of clean hydraulic oil.
4. Position tube and nut squarely on face seal of fitting and tighten nut finger tight.
5. Using appropriate torquing device, tighten to given torque rating from the table below.

Torque Values:

SAE Dash Size	Tube Side Thread Size	In-lbs	Ft-lbs
-4	9/16 - 18	220 ± 10	18 ± 1
-6	11/16 - 16	320 ± 25	27 ± 2
-8	13/16 - 16	480 ± 25	40 ± 2
-10	1 - 14	750 ± 35	63 ± 3
-12	1 3/16 - 12	1080 ± 45	90 ± 4
-16	1 7/16 - 12	1440 ± 90	120 ± 8
-20	1 11/16 - 12	1680 ± 90	140 ± 8
-24	2 - 12	1980 ± 100	165 ± 8

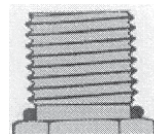
NOTE - ft-lb may be converted to NewMeters by multiplying by 1.35582.
NOTE - in-lbs may be converted to Newton Meters by multiplying by 0.11298.

APPENDIX
TORQUE SPECS.

Hydraulic Torque Specifications

Straight Thread O-ring Fitting: Assembly, Fitting to Port

NOTE - Straight thread o-ring fittings are utilized to adapt hydraulic systems to motors, pumps, cylinders, and valves.



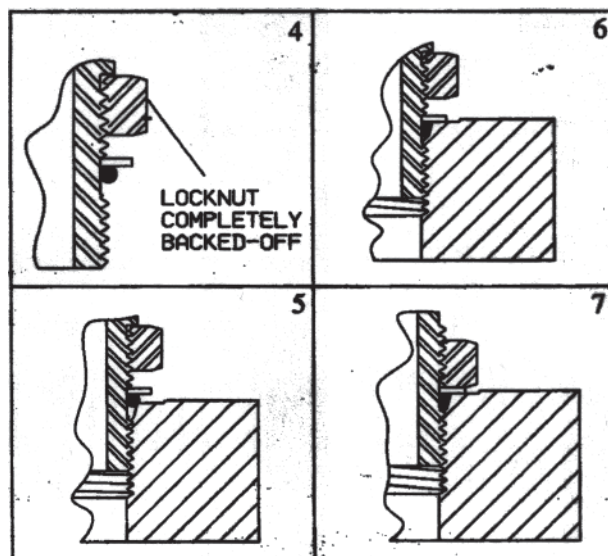
Installation (Adjustable Fitting)

1. Make sure threads and sealing surfaces are free of burrs, nicks, scratches, or any foreign materials.
2. Install proper SAE o-ring on port end of fitting if not already installed. Ensure o-ring is fully seated and retained properly.
3. Lubricate o-ring with a light coating of clean hydraulic oil.
4. Back off nut as far as possible and push washer up as far as possible. (Figure 4 & 5)
5. Screw fitting into port. Hand tighten fitting until backup washer contacts face of port. (Figure 6)
6. To position the fitting, unscrew to desired position, but not more than one full turn.
7. Hold fitting in position with wrench. Using appropriate torquing device, tighten nut to given torque rating from the table in section. (Figure 7)

Torque Values

Figures 4, 5, 6 and 7

Fitting Size	SAE Port Thread Size	In-Lbs	Ft-Lbs
-4	7/16 - 20	190 ± 10	16 ± 1
-6	9/16 - 18	420 ± 15	35 ± 1
-8	3/4 - 14	720 ± 25	60 ± 2
-10	7/8 - 14	1260 ± 50	105 ± 5
-12	1 1/16 - 12	1680 ± 75	140 ± 6
-16	1 5/16 - 12	2520 ± 100	210 ± 8
-20	1 5/8 - 12	3100 ± 150	260 ± 12
-24	1 7/8 - 12	3800 ± 150	315 ± 12



NOTE - ft-lb may be converted to NewMeters by multiplying by 1.35582.
NOTE - in-lbs may be converted to Newton Meters by multiplying by 0.11298.

angle or angle assembly - portion of the sweeper that allows the brush head assembly to angle.

BP - black pipe.

brush head assembly - assembly that includes the core, hood, and brush frame.

brush pattern - area of dirt removed from sweeping surface; with a properly adjusted sweeper; the pattern is the same width for the entire length.

castellated - having battlements like a castle.

caution - indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

core - weldment that holds brush sections.

danger - indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

F - female.

FS - face seal.

front - side that is in front when facing the normal forward direction of travel of the machine.

gpm - gallons per minute.

HP - high pressure.

hood - brush shield.

hydraulic angle kit - means of swinging an assembly hydraulically.

important - used for instructions when machine damage may be involved.

in. - inches.

kph - kilometers per hour.

lb - pounds.

left-hand - side that is on the left when facing the normal forward direction of travel of the machine.

lift cylinder - means of raising the brush head assembly hydraulically.

lps - liters per second.

M - male.

mm - millimeters.

mph - miles per hour.

manual angle kit - means of swinging the brush head assembly mechanically.

mid pump unit - sweeper in which the pump is mounted on the mid PTO.

mounting assembly - portion of the sweeper that attaches to the prime mover; designed specifically for each prime mover.

NPT - national pipe thread.

note - indicates supplementary information.

OR - o-ring.

psi - pounds per square inch.

PTO - power take off; shaft on the prime mover used to drive attachments.

plate swing - swing assembly that includes a half-moon plate.

power pack - auxiliary hydraulic package used when prime mover hydraulics do not have enough flow available.

prime mover - refers to the tractor, truck, loader or other vehicle to which a sweeper is attached.

qty - quantity.

quick change core - core designed in a way that allows brush sections to be changed without removing hoses from motors.

rpm - revolutions per minute.

rear - side that is in rear when facing the normal forward direction of travel of the machine.

rear pump unit - sweeper in which the pump is mounted on a rear PTO.

retainer - removable plate or set of plates that keeps sections on the core.

right-handed - side that is on the right when facing the normal forward direction of travel of the machine.

section - single brush wafer.

section set - replacement brush wafers.

sprinkler system - system that sprays water ahead of the sweeper used to reduce dust.

sprinkler tank - assembly that includes the water reservoir and mounting used in a sprinkler system.

stands - devices designed to keep the components off the ground when the sweeper is dismounted.

APPENDIX
GLOSSARY

swing or swing assembly - portion of the sweeper that allows the brush head assembly to angle.

swing cylinder - means of angling the brush head assembly hydraulically.

tank assembly, hydraulic - assembly that includes the hydraulic reservoir, filter and fittings; may also incorporate valves.

warning - indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

weld - weldment.

windrow - pile of debris.

zerk - grease fitting.

SWEEPSTER WARRANTY REGISTRATION

Thank you for purchasing a Sweepster product. Warranty protection on this equipment is valid only when completed and signed by customer and dealer and mailed to SWEEPSTER. If you have any questions, please give us a call at 1-800-456-7100 or (734) 996-9116.

PLEASE PRINT - PRESS HARD MULTIPLE COPIES

<i>Purchaser's Name</i>	
<i>Address</i>	<i>City</i>
<i>State</i>	<i>Zip</i>
<i>Phone</i>	
<i>Model Number</i>	<i>Serial Number</i>
<i>Engine Make</i>	<i>Engine Model</i>
<i>Date Delivered to Dealer</i>	<i>Date Delivered to Customer</i>
<i>Dealer's Name</i>	
<i>Address</i>	<i>City</i>
<i>State</i>	<i>Zip</i>
<i>Phone</i>	

1. MATERIAL YOU ARE SWEEPING?
 Snow Dirt General Debris Thatch
 Other _____

2. MAKE AND MODEL NUMBER OF PRIME MOVER.
 (For attachment sweepers only.) _____

3. DID YOU OR YOUR CUSTOMER RECEIVE AN OPERATION/PARTS MANUAL? Yes No

4. DID THE UNIT FIT CORRECTLY TO PRIME MOVER?
 Yes No Comments _____

5. WHY DID YOU PURCHASE A SWEEPSTER? (check one)
 Quality Price Reputation Simplicity Prior Use
 Dealer Referral Operation Features Availability
 Other _____

6. PLEASE RATE THE FOLLOWING (check one)
 Appearance: Excellent Good Poor
 Delivery Time: Excellent Good Poor
 Sales Service: Excellent Good Poor
 Performance: Excellent Good Poor
 Technical Support: Excellent Good Poor

7. SUGGESTIONS/COMMENTS? _____

White-Customer Yellow-Dealer Card-Return to Sweepster postage paid



SWEEPSTER LLC Limited 12 Month Warranty

Thank you for purchasing a Sweepster, LLC. product. Warranty protection is valid only when this Warranty Registration is completed and signed by the customer and dealer, and mailed to Sweepster LLC. I hereby acknowledge that I have received a copy of the owners Limited Warranty and I accept the terms therein.

For a period of 12 months from the date of delivery of product to the original user, Sweepster, LLC. warrants each product to be free from manufacturing defects, subject to the limitations contained in this policy.

This warranty does not apply to defect caused, in whole or in part, by unreasonable use while in the possession of the user, including, but not limited to: failure to properly set up product; failure to provide reasonable and necessary maintenance; normal wear; routine tune ups or adjustments; improper handling or accidents; operation at speed or load conditions contrary to published specification; improper or insufficient lubrication; improper storage. This warranty is also not a guarantee that performance of each product will meet the expectations of the purchaser.

Sweepster, LLC. shall not be liable for consequential damages of any kind, including, but not limited to: consequential labor costs or transportation charges in connection with the replacement or repair of defective parts; lost time or expense which may have accrued because of said defects. In no event shall Sweepster, LLC.'s total liability hereunder exceed the product purchase price.

Sweepster, LLC. makes no warranty with respect to trade accessories or any component or accessory of the product which was not manufactured by Sweepster, LLC. including any purchased components of any kind. These are subject to the warranties of their respective manufacturers. The warranty will be considered void if the product or any part of the product is modified or repaired in any way not expressly authorized by Sweepster, LLC. or if closed components are disassembled prior to return. Closed components include, but are not limited to: gearboxes, hydraulic pumps, motors, cylinders, and actuators.

Our obligation under the warranty is expressly limited, at our option, to the replacement or repair at Sweepster, LLC or at a service facility designated by us, or such part or parts as inspection shall disclose to have been defective. We are not responsible for unauthorized repairs or replacements. Any implied or statutory warranties, including any warranty of merchantability or fitness for a particular purpose, are expressly limited to the duration of this written warranty. We make no other express or implied warranty, nor is anyone authorized to make any on our behalf. This warranty cannot be extended, broadened, or changed except in writing by an authorized officer of Sweepster, LLC.