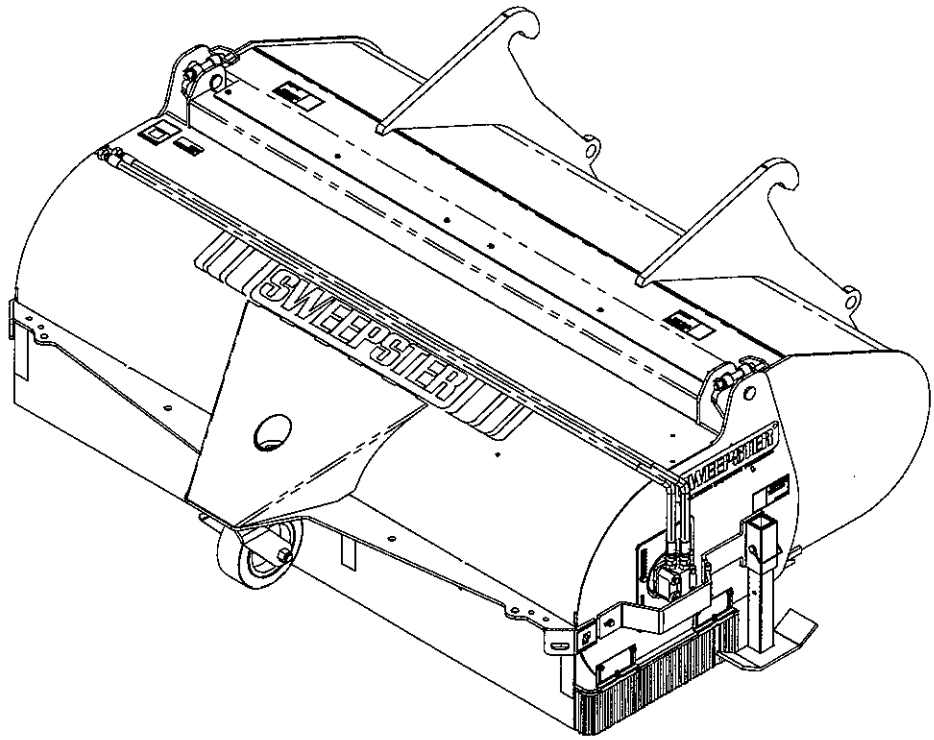
SWEEPSTER

BS Series

Bucket Sweeper

BRADCO
FFC
HARLEY
THE MAJOR
McMILLEN
SWEEPSTER

PALADIN LIGHT CONSTRUCTION



Sweepster Serial Number _____

Manual Number: 51-3735
Release Date: January 15, 2007

800-456-7100 www.paladinbrands.com Sweepster: 2800 N. Zeeb Road, Dexter, MI, 48130, United States of America

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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
2800 North Zeeb Road
Dexter, Michigan 48130
Phone: (734) 996-9116 - (800) 456-7100
FAX: (734) 996-9014
e-mail: sweepster@paladinbrands.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.

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.

NOTICE- 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. See Maintenance Section.
- 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 operator's area for any reason - lower the sweeper to the ground, stop the prime mover engine, set the parking brake and remove the key from the ignition.
- 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
- 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.
- 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.

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.

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 parking brake 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. See Appendix.

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 is embedded in the outer cover.

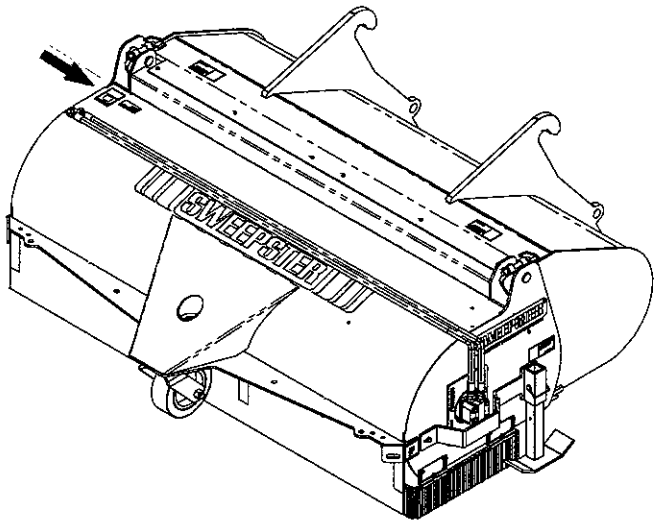
·The hoses have been pulled or stretched.

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

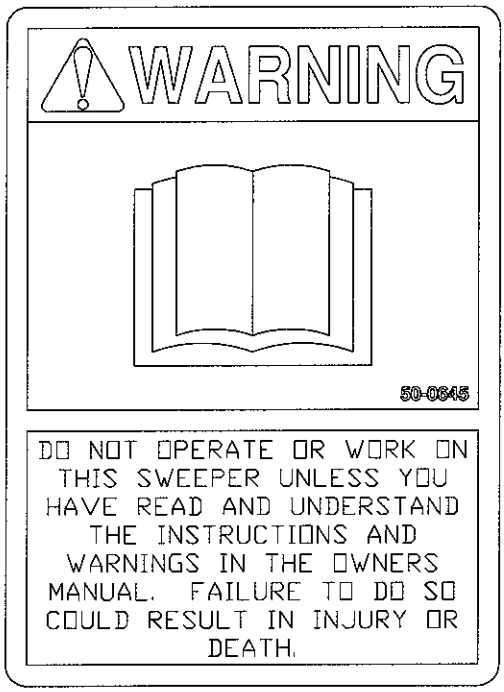
Safety Signs and Labels

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 and 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.



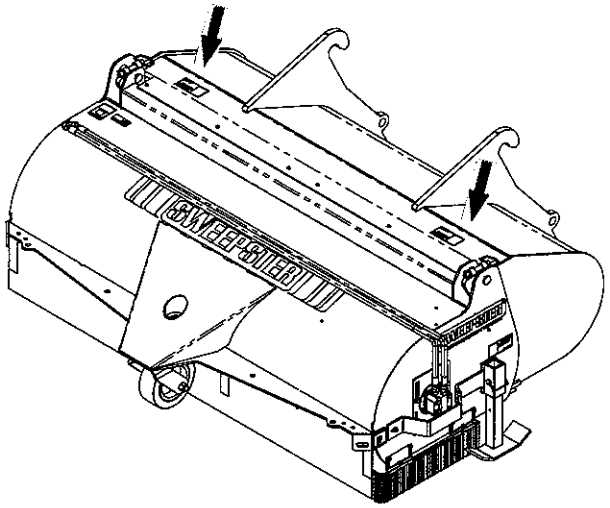
This warning label is located on the top right side of the brush hood.



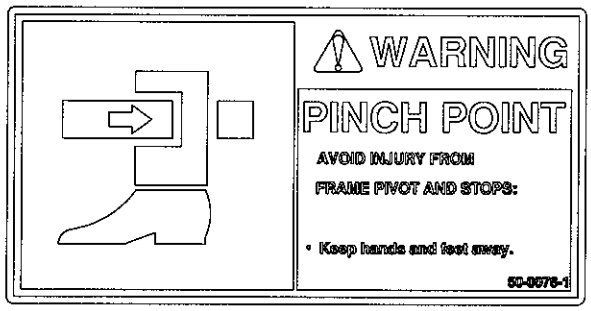
WARNING - Do not operate or work on this machine or sweeper unless you have read and understand the instructions and warnings in the Operation and Maintenance sections of the Owners Manuals. Failure to follow the instructions or heed the warnings could result in injury or death. Contact your SWEEPSTER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

Safety Signs and Labels

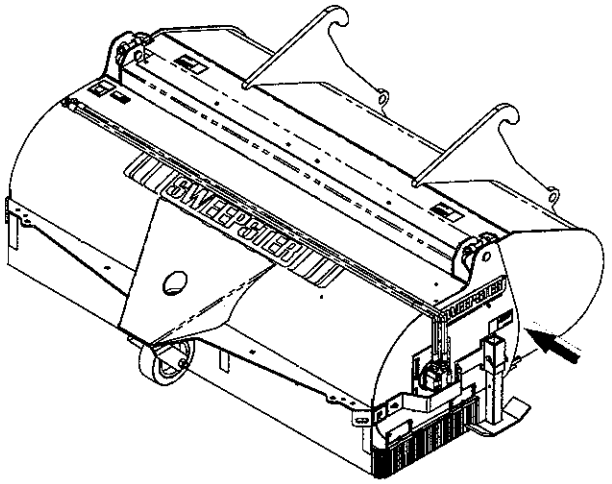
WARNING - Keep clear pivoting bucket can cause severe bodily harm.



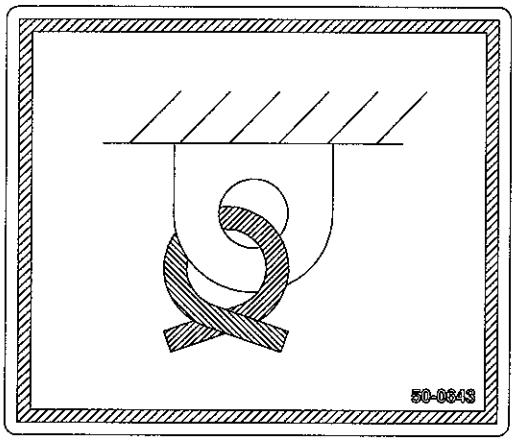
This warning label is located on the top right and top left of the bucket.



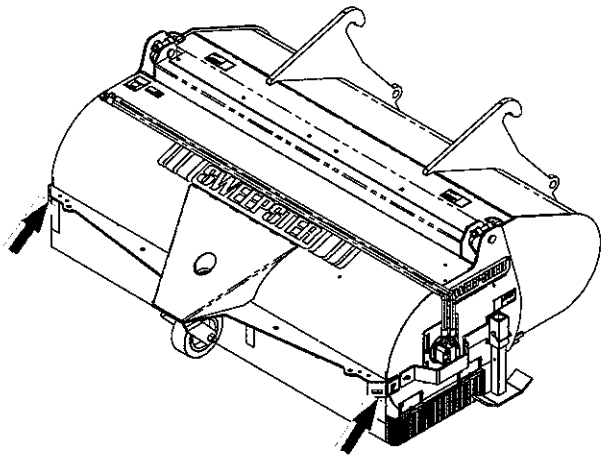
WARNING - Keep clear pivoting bucket can cause severe bodily harm.



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



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



This warning label is located on the front left and front right corners of the sweeper.

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 handholds.

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 operators compartment or when you exit the operators 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 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 a dust suppression kit to suppress the dust. Contact SWEEPSTER or your local dealer.

Operating Tips

NOTICE - 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 (Broom to Prime Mover)

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.

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 brake.
7. Tilt the quick coupler assembly forward.
8. Align the quick coupler assembly with the mounting on the bucket. Rack back the coupler and engage locking pins.
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. 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 one quarter of a turn in order to secure the hydraulic connections.
14. While the loader arms are lowered, visually inspect the quick coupler 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.

Removing the Sweeper

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.

NOTICE - 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. Disconnect the auxiliary hydraulic lines from the prime mover.
7. Enter the machine.
8. Fasten the seatbelt.
9. Start the engine.
10. Disengage the parking brake.
11. Disengage locking pins.
12. As you slowly back away from the mounting bracket, tilt quick coupler assembly forward until the top of quick coupler assembly clears the mounting.
13. Back away from the pick-up broom.

Storage

NOTICE - 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.

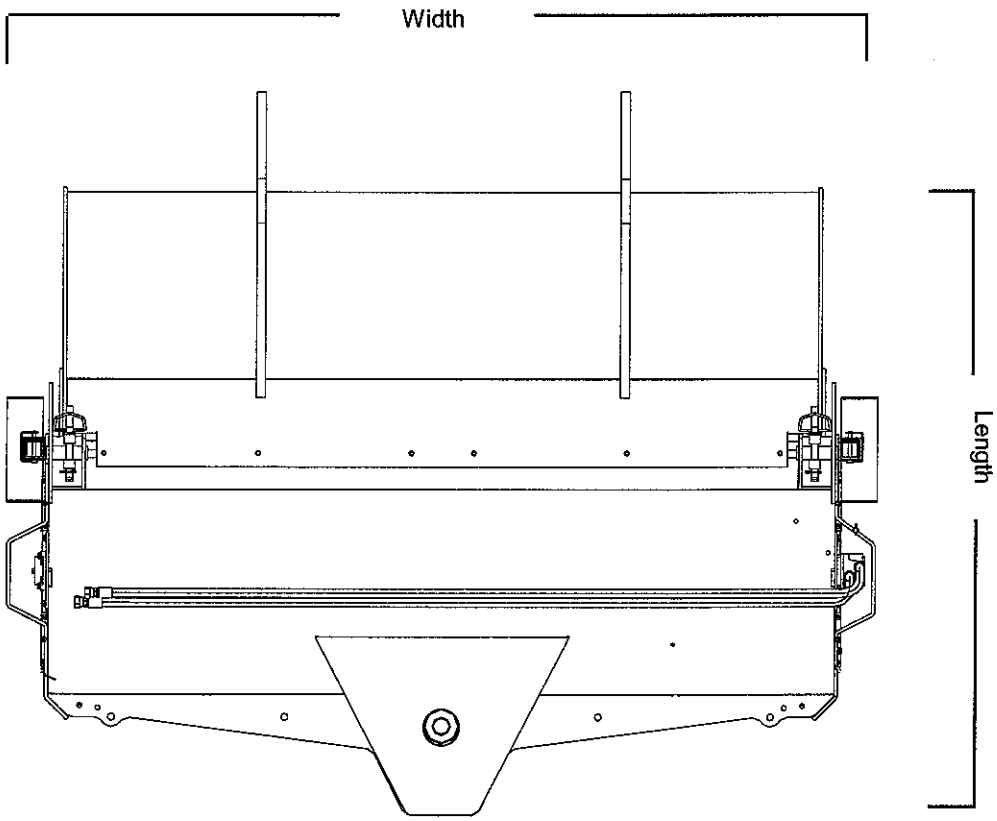
Do not store polypropylene brushes in direct sunlight. The material can deteriorate and crumble before the bristles are worn out.

Keep polypropylene brush material away from intense heat or flame.

Product Information

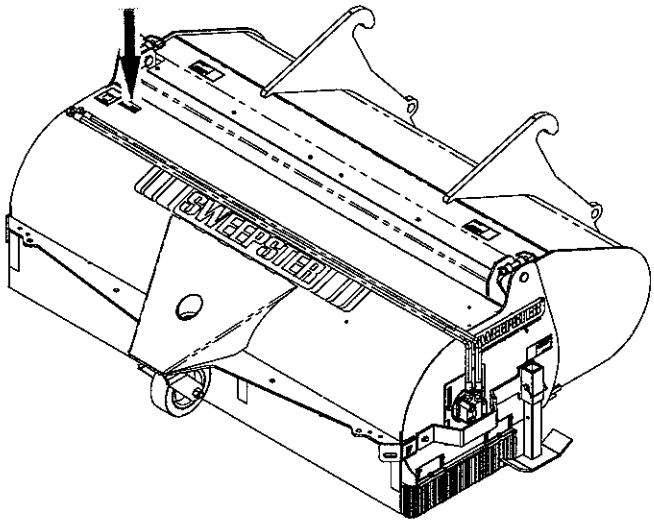
Specifications and Model Views

BS Pick-Up Broom	
Actual Sweeping Width	84 inches (BS26M7) 96 inches (BS26M8/32M8) 108 inches (BS32M9)
Maximum length with out coupler	78.5 inches (BS26) 94 inches (BS32)
Maximum Width	96 inches (BS26M7) 108 inches (BS26M8/32M8) 120 inches (BS32M9)
Flow Requirements	15-25 gpm (BS26) 15-40 gpm (BS32) Note: Flow divider kits available to obtain correct flow requirements. See options in service section.
Maximum Hydraulic Oil Pressure	3000 psi - BS26 3500 psi - BS32



Serial Number Plate Location

For quick reference, record the serial number in the space that is provided below the illustration. This serial number plate is located on the top right of the sweeper.

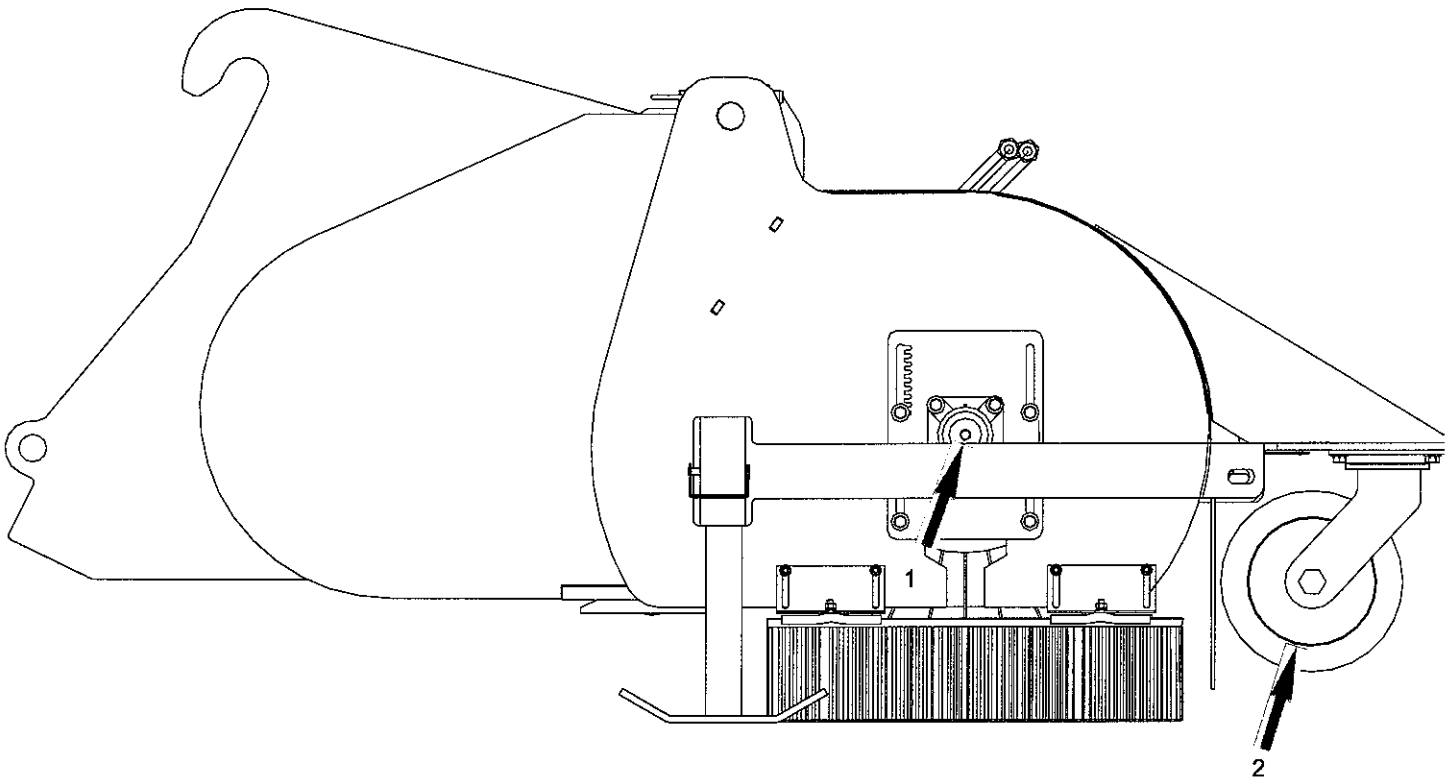


Pick-Up Serial Number_____

Lubrication Points

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

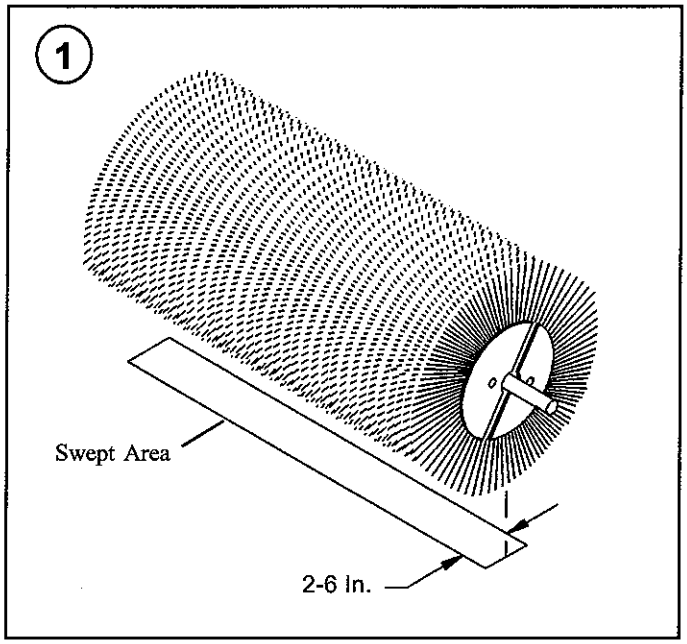
1.Core bearing (1 fitting)
2.Caster (2 fittings)



Brush Pattern

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

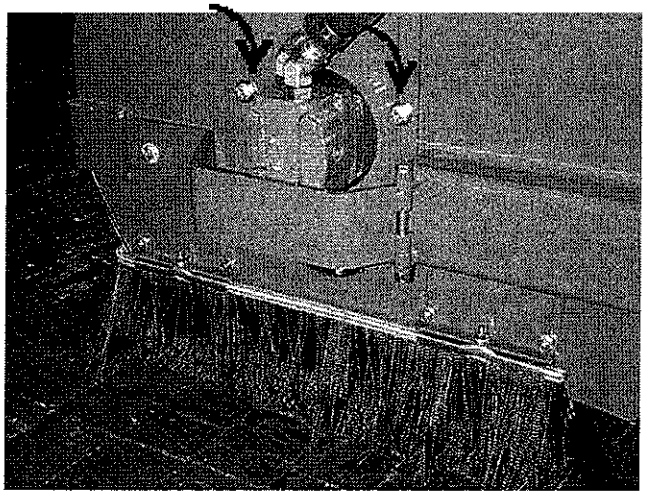
1. Move the sweeper to a dusty, flat surface.
2. Set the prime movers parking brake and leave the engine running.
3. Start the sweeper at a slow speed; then, lower it so the broom arms bottom out. Run the sweeper in a stationary position for 10 seconds.
4. Raise the sweeper and back away; switch off 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.

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



Replacing Brush Sections

1. Remove motor mount screws. Retain hardware for reinstallation. Remove motor mount.

2. Remove bearing mount screws from side plate. Retain hardware for reinstallation.

3. Remove core from brush head assembly.

4. Remove one half of bearing mount plate from bearing.

5. Remove retaining plate from core assembly.

6. Remove old sections.

7. Install new sections by doing the following:
   3 Bar Cores
   a. Number the tubes on the core as 1, 2 and 3 (figure 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 (figure 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 (figure 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.

   4 Bar Cores
   a. Slide the first section onto the core with the drive pins on either side of a tube. Make sure that the drive pins angle up. (figure 3)

   b. Install a second section with drive pins rotated 180° from those on the first section. (figure 4)

   c. Continue installing sections, rotating each section 180° until the core is full.

8. Reattach the core hat plate with previously removed hardware.

9. Lay core on ground. Lower body over core.

10. Reattach bearing plate with previously removed hardware.

11. Reattach motor mount with hardware removed in first step.

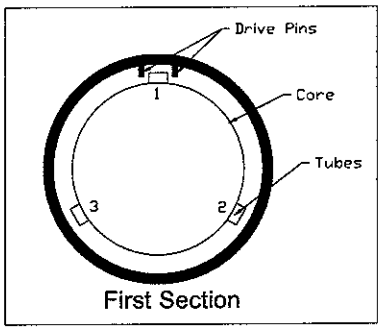


figure 1

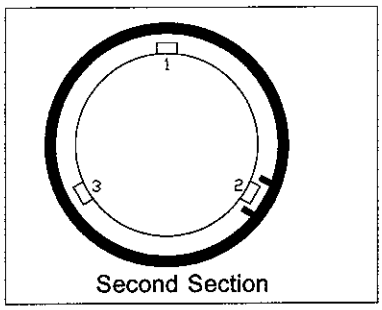
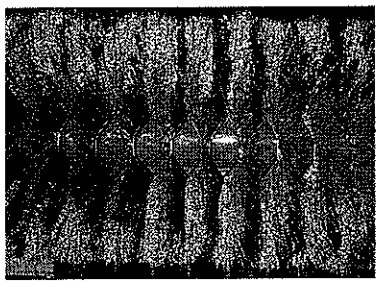


figure 2



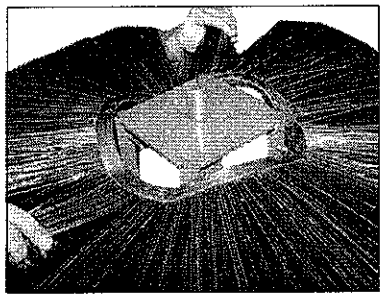


figure 3

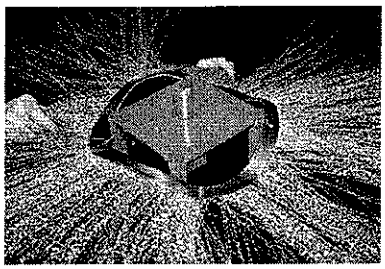


figure 4

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 20/18/15. 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 skin, 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 and 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 correctly.

Maintenance Record

Use this log to record maintenance performed on the sweeper.

Date	Maintenance Procedure Performed	Performed by	Comments

Notes

Service Manual

Pick-Up Brooms

Notes

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Troubleshooting

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.

Troubleshooting

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 are 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 and secure with two M8 x 50mm screws and two M8 lock nuts. Do not tighten. 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 swing pivot with cross tube at top. Secure with bail pin through swing limit slot.

5. Slide quick release plate onto tube and secure with bail pin.

Note - For sweepers with serial numbers 02016001 and below: A 17/32 hole may 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, plate with square and round hole, carriage bolt and steel knob.

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 fender washers and four M8 lock nuts. Secure motor/brush assembly to swing pivot assembly using 3/4 clevis pin and cotter pin.

Chain Assembly

9. Attach chain assembly to motor mounting plate with quick link.

10. Attach other end through key hole slot at top of bent tube.

Hydraulic Hose/Valve Assembly

11. Install 90° elbows to gutterbroom motor.

12. 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. Use two M8 x 65mm screws, two M8 flat washers and two M8 lock nuts to fasten to tubes and one M8 x 30mm 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 and connect to "T" port on block. Use short hose to connect empty port on broom motor to "P" port on block. (See figure #1)

16. Be sure to tighten all connections to appropriate torque spec. found in the appendix. 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.

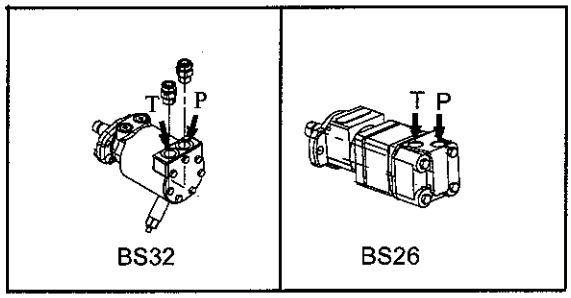
2. Swing to other side.

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, crg bolt, and pin.

6. Change direction on valve.



(fig. 1)

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 11/32 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.
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.
20. Install elbow nozzle and spray tip on the 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 prime 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.

NOTICE - Avoid 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.

Notes

Parts Manual

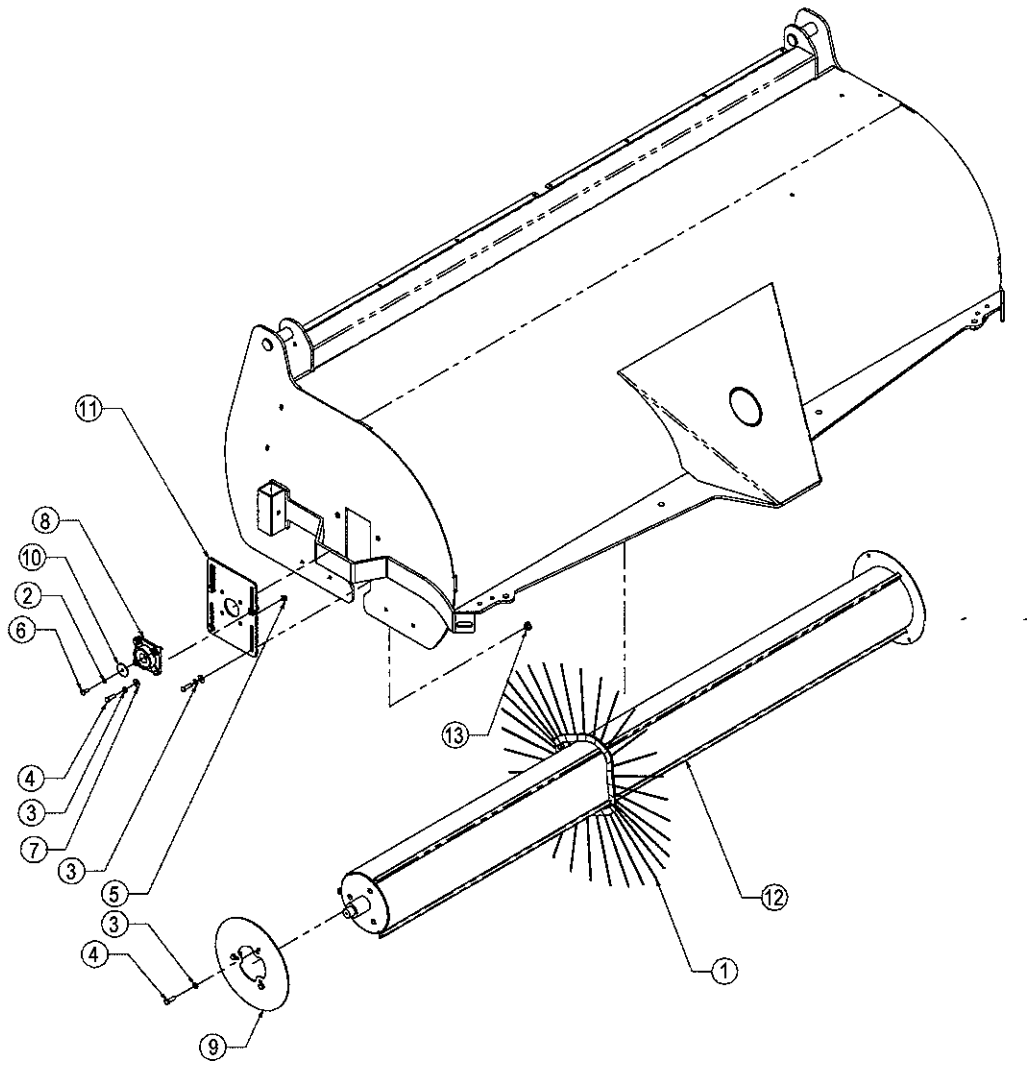
Pick-Up Brooms

Notes

Table of Contents

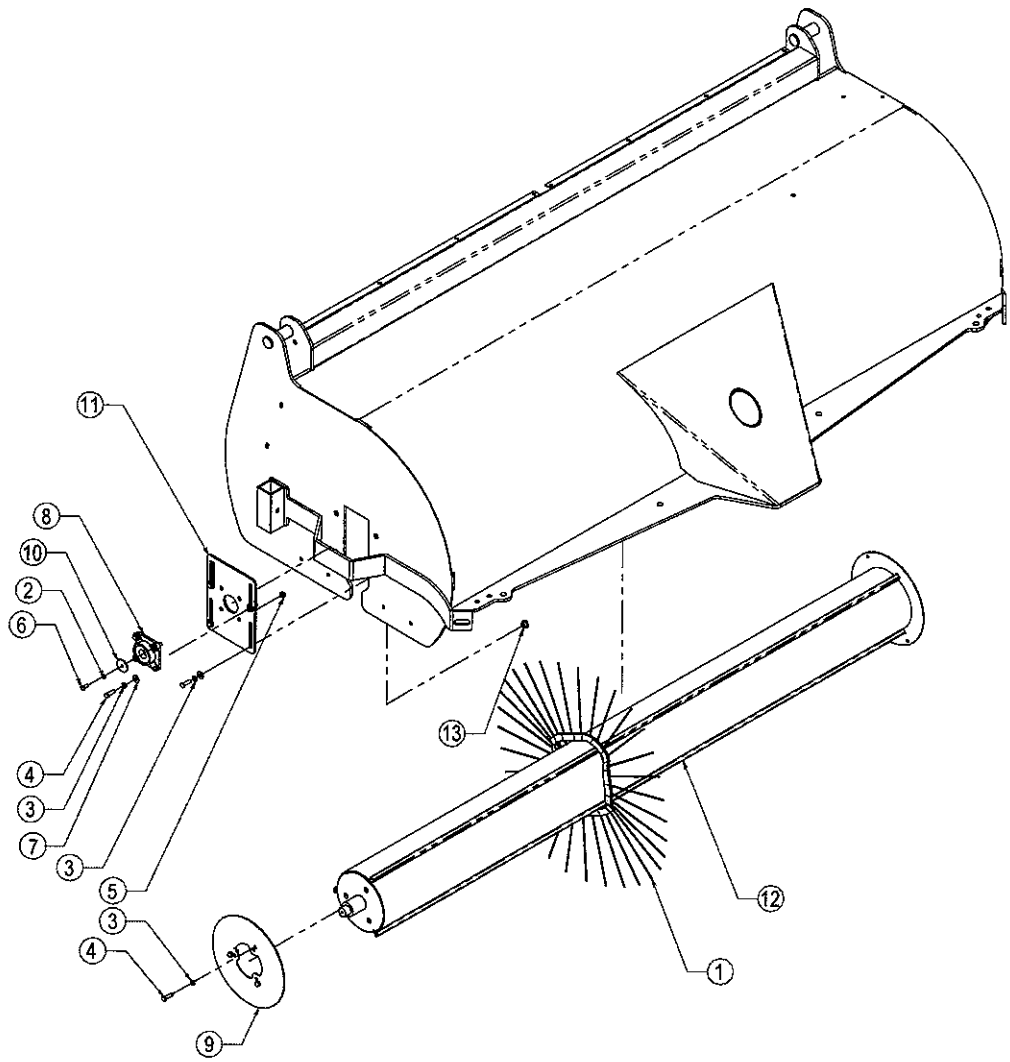
Core Assembly BS32 8 Ft. / 9 Ft.
28-9600/28-9601

Ref.	Part	Qty	Description
1.	01-5878	49	Section, 32, 10, Poly/Wire, Convoluted, 8 Ft.
		55	Section, 32, 10, Poly/Wire, Convoluted, 9 Ft.
2.	07-3738	1	Washer, Lock, Split, Med, M8
3.	07-3747	11	Washer, Lock, Split, Med, M10
4.	07-3749	11	Screw, HHC, Cl10.9, M10-1.5 x 30mm
5.	07-3775	4	Nut, Hex, Cl 8.8, M10-1.5
6.	07-3777	1	Screw, HHC, Cl 10.9, M8-1.25 x 20mm
7.	07-4619	8	Washer, Flat, Cl 8.8, M10
8.	08-0067	1	Bearing, 1 1/4, 4 Bolt
9.	13-12751	1	Plate, Core, Hat
10.	13-11903	1	Washer, .34 x 1.8 x 10GA
11.	13-12209	1	Plate, Bearing, Mounting
12.	13-12435	1	Weld, Core, 96, BS32, 8 Ft.
	13-12575	1	Weld, Core, 108, BS32, 9Ft.
13.	07-6056	4	Nut, Flange, M10-1.5



Core Assembly BS26 7 Ft./8 Ft.
28-9602/28-9603

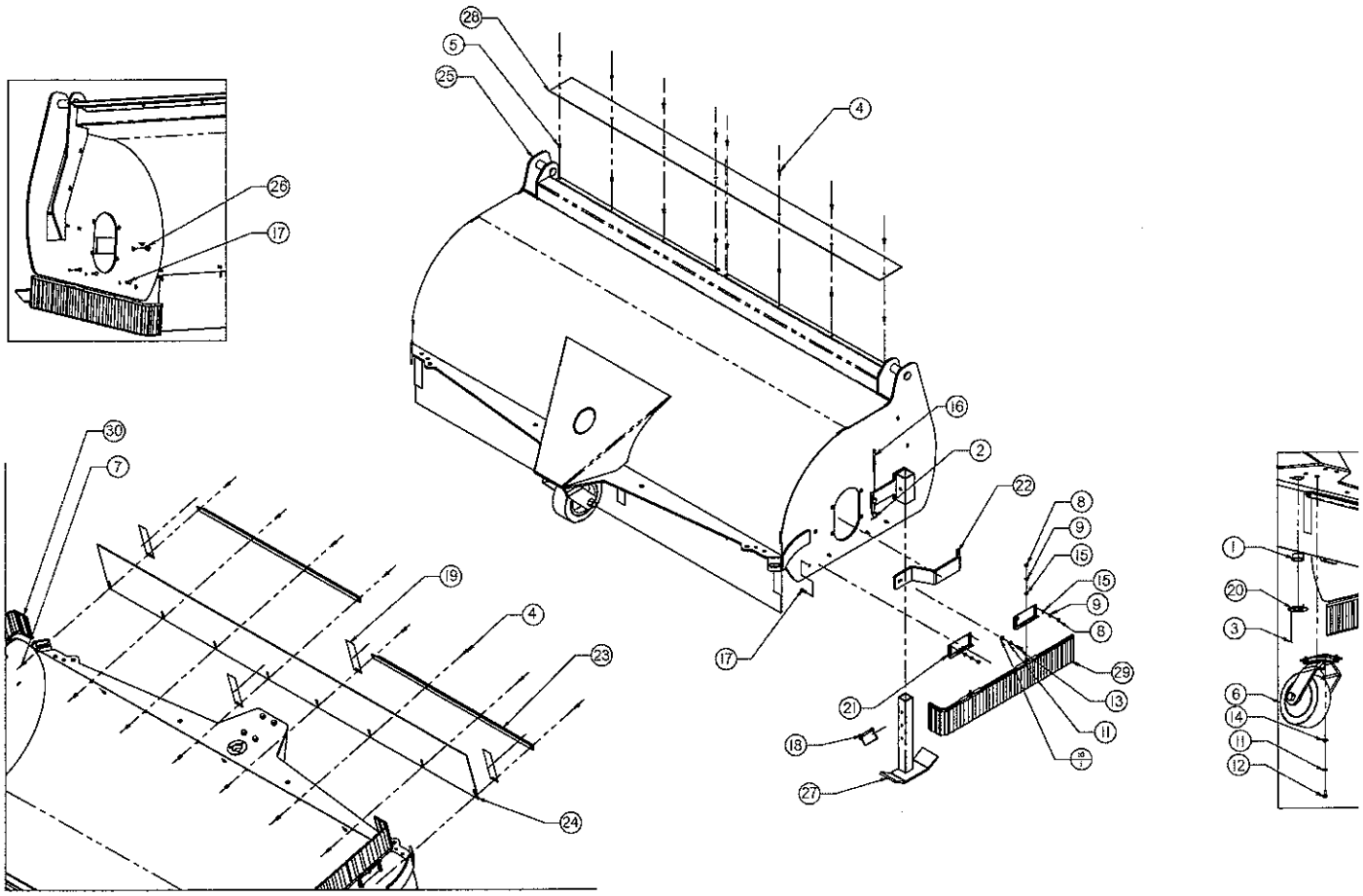
Ref	Part	Qty	Description
1.	01-5010	43	Section, 26, 8, Poly/Wire, Convoluted, 7 Ft.
		49	Section, 26, 8, Poly/Wire, Convoluted, 8 Ft.
2.	07-3738	1	Washer, Lock, Split, Med, M8
3.	07-3747	11	Washer, Lock, Split, Med, M10
4.	07-3749	11	Screw, HHC, Cl 10.9, M10-1.5 x 30mm
5.	07-3775	4	Nut, Hex, Cl 8.8, M10-1.5
6.	07-3777	1	Screw, HHC, Cl 10.9, M8-1.25 x 20mm
7.	07-4619	8	Washer, Flat, Cl 8.8, M10
8.	08-0067	1	Bearing, 1 1/4, 4Bolt
9.	13-12751	1	Plate, Core, Hat
10.	13-11903	1	Washer, .34 x 1.8 x 10Ga
11.	13-12209	1	Plate, Bearing, Mounting
12.	13-11880	1	Weld, Core, 84, 7 Ft
	13-12587	1	Weld, Core, 96, 8 Ft
13.	07-6056	4	Nut, Flange, M10-1.5



Body Assembly BS32 8 Ft. / 9 Ft.
28-9604/28-9605

Ref	Part	Qty	Description
1.	03-4072	1	Nylon, Bushing, 1.75 x 2
2.	07-0205	1	Pin, Cotter, Gr2, 1/8 x 1
3.	07-1075	3	Rivet, Pop, Gr2, 3/16 x .626-.75 Grip, Button Head
4.	07-2952	16	Screw, HFH, Cl 10.9, M6-11 x 20
5.	07-2956	8	Nut, Insert, M6 x 1, Grip length, .027-.165
6.	07-3516	1	Assembly, Caster, Ply, Kingpinless
7.	07-3617	8	Nut, Insert, M6 x 1, Hex
8.	07-3737	12	Nut, Hex, Cl 10, M8-1.25
9.	07-3738	12	Washer, Lock, Split, Med, M8
10.	07-3745	1	Washer, Flat, Cl 8.8, M10
11.	07-3747	5	Washer, Lock, Split, Med, M10
12.	07-3748	4	Screw, HHC, Cl 10.9, M10-1.5 x 25mm
13.	07-3749	1	Screw, HHC, Cl 10.9, M10-1.5 x 30mm
14.	07-3754	4	Washer, Flat, Cl 8.8, M12
15.	07-4607	12	Washer, Flat, Cl 8.8, M8
16.	07-5830	1	Pin, Clevis, 3/8 x 4 1/2
17.	07-5933	8	Bolt, Carriage, Cl 8.8, M8-1.25 x 25mm
18.	07-5965	2	Pin, Lock, 3/8 x 3, Grip Square
19.	13-10060	4	Finger, Apron
20.	13-11561	1	Plate, Cover, Nylon, Bushing
21.	13-11879	4	Plate, Bracket, Mount, Brush, Side
22.	13-11998	1	Weld, Motor, Guard, Hinged
23.	13-12431	2	Plate, Support, Flap, Front, 8 Ft.
	13-12579	2	Plate, Support, Flap, Front, 9 Ft.
24.	13-12432	1	Flap, Front, 8 Ft.
	13-12580	1	Flap, Front, 9 Ft.
25.	13-12433	1	Weld, Sweeper, 8 Ft, BS32
	13-12569	1	Weld, Sweeper, 9 Ft, BS32
26.	13-12491	1	Bushing, M10, Threaded, Press Fit
27.	13-12564	2	Weld, Stand, BS
28.	13-12582	1	Flap, Top, 8 Ft, BS32
	13-12581	1	Flap, Top, 9 Ft, BS32
29.	28-9591	1	Assembly, Side, Brush, Left
30.	28-9592	1	Assembly, Side, Brush, Right

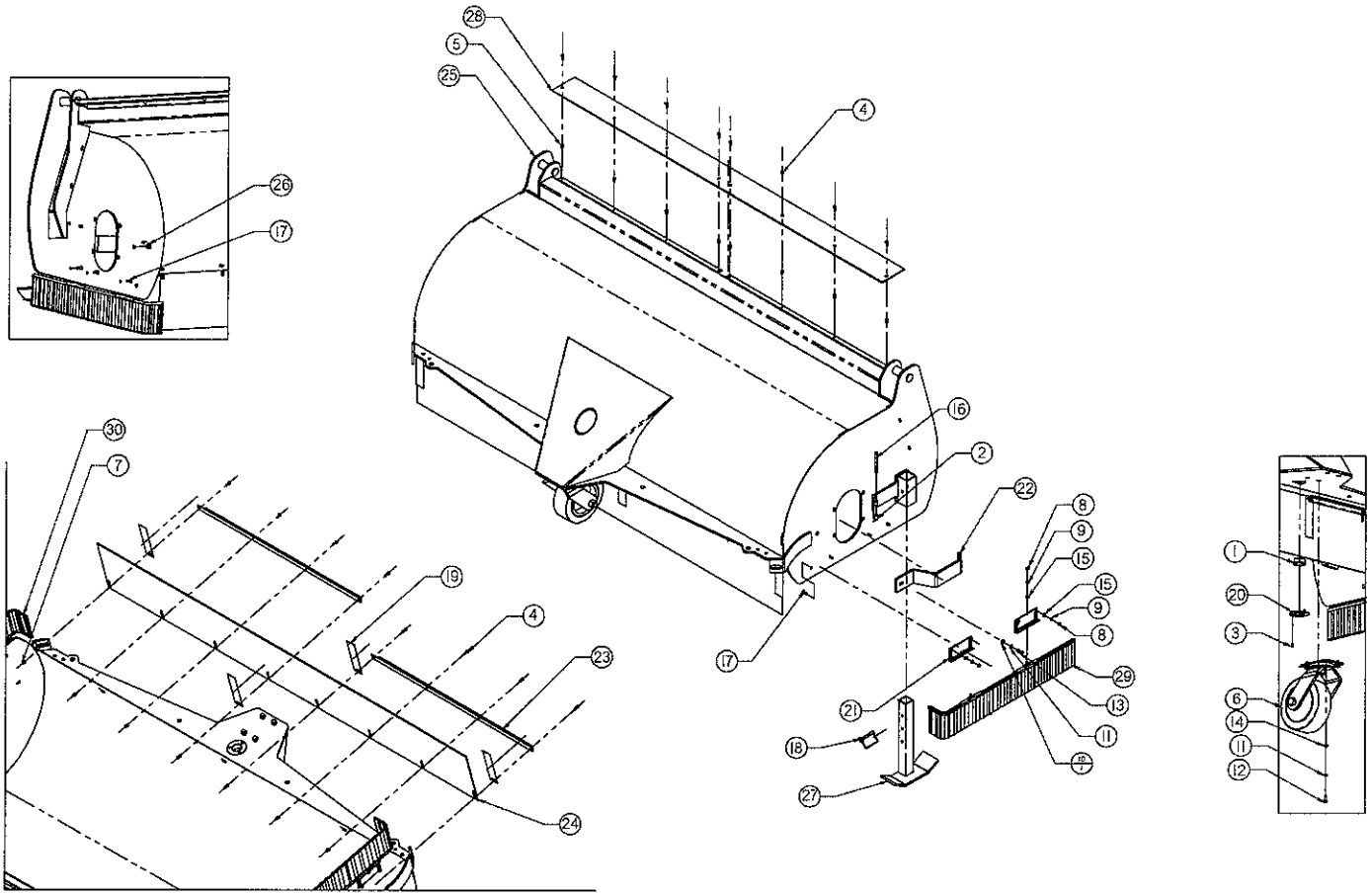
Body Assembly BS32



Body Assembly BS26 7 Ft. / 8 Ft.
28-9606/28-9607

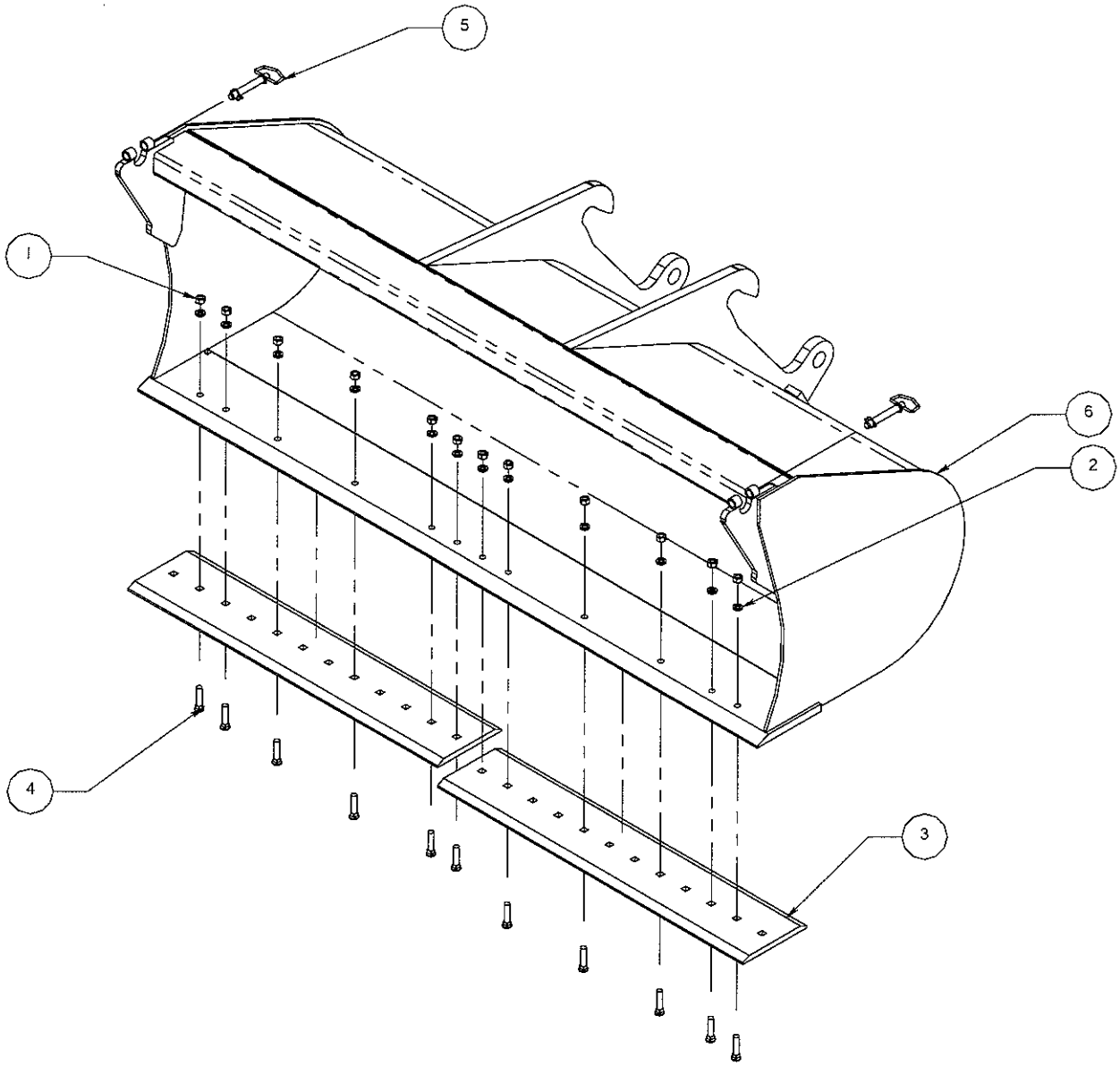
Ref	Part	Qty	Description
1.	03-4072	1	Nylon, Bushing, 1.75 x 2
2.	07-0205	1	Pin, Cotter, Gr2, 1/8 x 1
3.	07-1075	3	Rivet, Pop, Gr2, 3/16 x .626-.75 Grip, Button Head
4.	07-2952	16	Screw, HFH, Cl 10.9, M6-11 x 20
5.	07-2956	8	Nut, Insert, M6 x 1, Grip length, .027-.165
6.	07-3516	1	Assembly, Caster, Ply, Kingpinless
7.	07-3617	8	Nut, Insert, M6 x 1, Hex
8.	07-3737	12	Nut, Hex, Cl 10, M8-1.25
9.	07-3738	12	Washer, Lock, Split, Med, M8
10.	07-3745	1	Washer, Flat, Cl 8.8, M10
11.	07-3747	5	Washer, Lock, Split, Med, M10
12.	07-3748	4	Screw, HHC, Cl 10.9, M10-1.5 x 25mm
13.	07-3749	1	Screw, HHC, Cl 10.9, M10-1.5 x 30mm
14.	07-3754	4	Washer, Flat, Cl 8.8, M12
15.	07-4607	12	Washer, Flat, Cl 8.8, M8
16.	07-5830	1	Pin, Clevis, 3/8 x 4 1/2
17.	07-5933	8	Bolt, Carriage, Cl 8.8, M8-1.25 x 25mm
18.	07-5965	2	Pin, Lock, 3/8 x 3, Grip Square
19.	13-10060	4	Finger, Apron
20.	13-11561	1	Plate, Cover, Nylon, Bushing
21.	13-11879	4	Plate, Bracket, Mount, Brush, Side
22.	13-11998	1	Weld, Motor, Guard, Hinged
23.	13-11722	2	Plate, Support, Flap, Front, 7 Ft.
	13-12431	2	Plate, Support, Flap, Front, 8 Ft.
24.	13-11721	1	Flap, Front, 7 Ft.
	13-12432	1	Flap, Front, 8 Ft.
25.	13-12495	1	Weld, Sweeper, 7 Ft, BS26
	13-12593	1	Weld, Sweeper, 8 Ft, BS26
26.	13-12491	1	Bushing, M10, Threaded, Press Fit
27.	13-12564	2	Weld, Stand, BS
28.	13-12595	1	Flap, Top, 7Ft, BS26
	13-12582	1	Flap, Top, 8 Ft, BS26
29.	28-9548	1	Assembly, Side, Brush, Left
30.	28-9547	1	Assembly, Side, Brush, Right

Body Assembly BS26



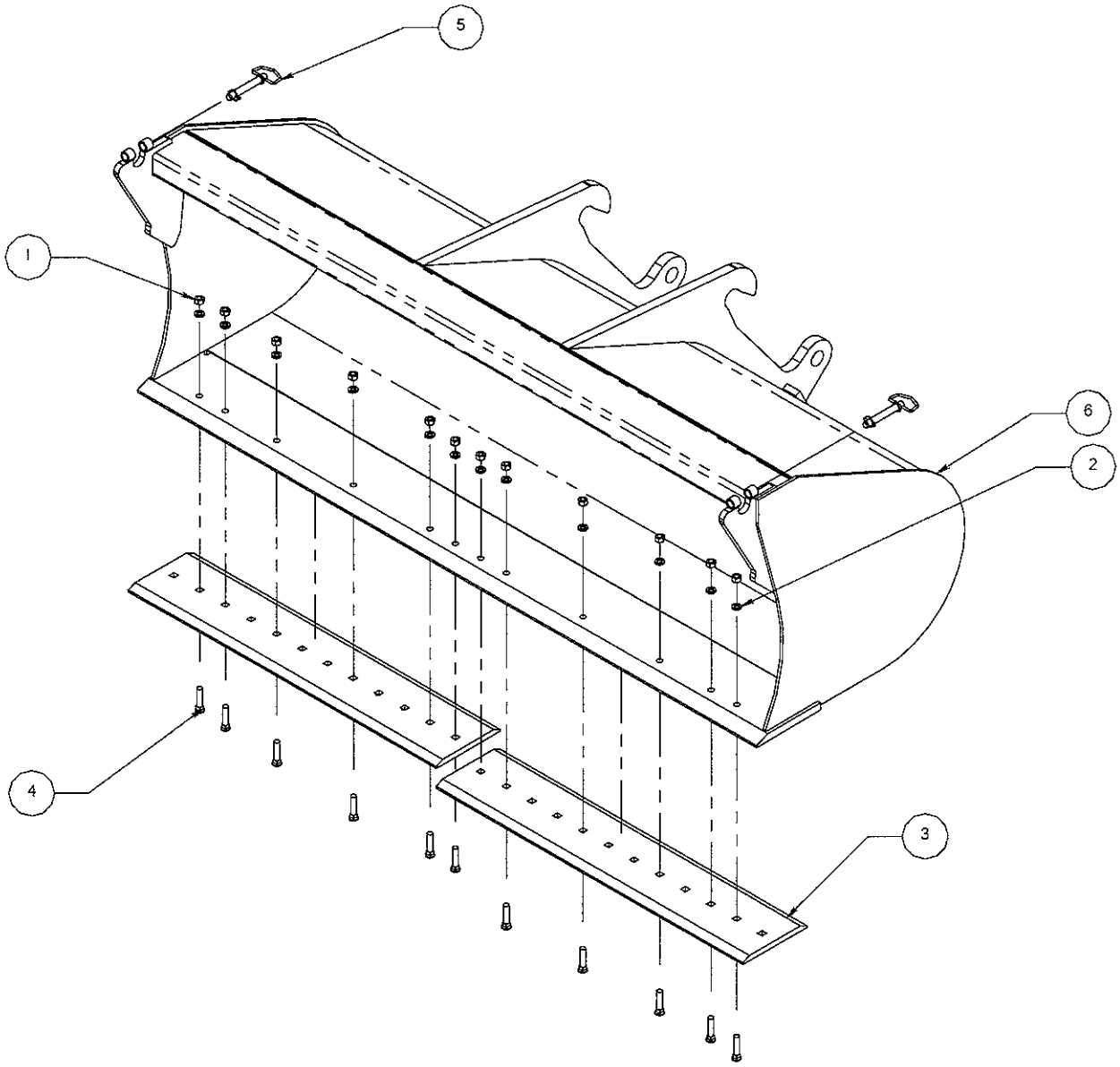
Bucket Assembly BS32 8 Ft./9 Ft.

Ref.	Part	Qty	Description
1.	07-1294	12	Nut, Hex, Gr8, 5/8-11, 8 Ft.
		16	Nut, Hex, Gr8, 5/8-11, 9 Ft.
2.	07-1872	12	Washer, Lock, Split, Med, 5/8, 8 Ft.
		16	Washer, Lock, Split, Med, 5/8, 9 Ft.
3.	07-5944	2	Edge, Cut, Bolt-on, 3/4 x 10 x 48, 12 Bolt, 8 Ft.
	07-5973	2	Edge, Cut, Bolt-on, 3/4 x 10 x 54, 13 Bolt, 9 Ft.
4.	07-5945	12	Bolt, Plow, Gr8, 5/8-11 x 3, 8 Ft.
		16	Bolt, Plow, Gr8, 5/8-11 x 3, 9 Ft.
5.	07-6042	2	Pin, Hitch, 3/4 x 4, with Linch Pin
6.	13-12434	1	Weld, Bucket, 8 Ft.
	13-12576	1	Weld, Bucket, 9 Ft.



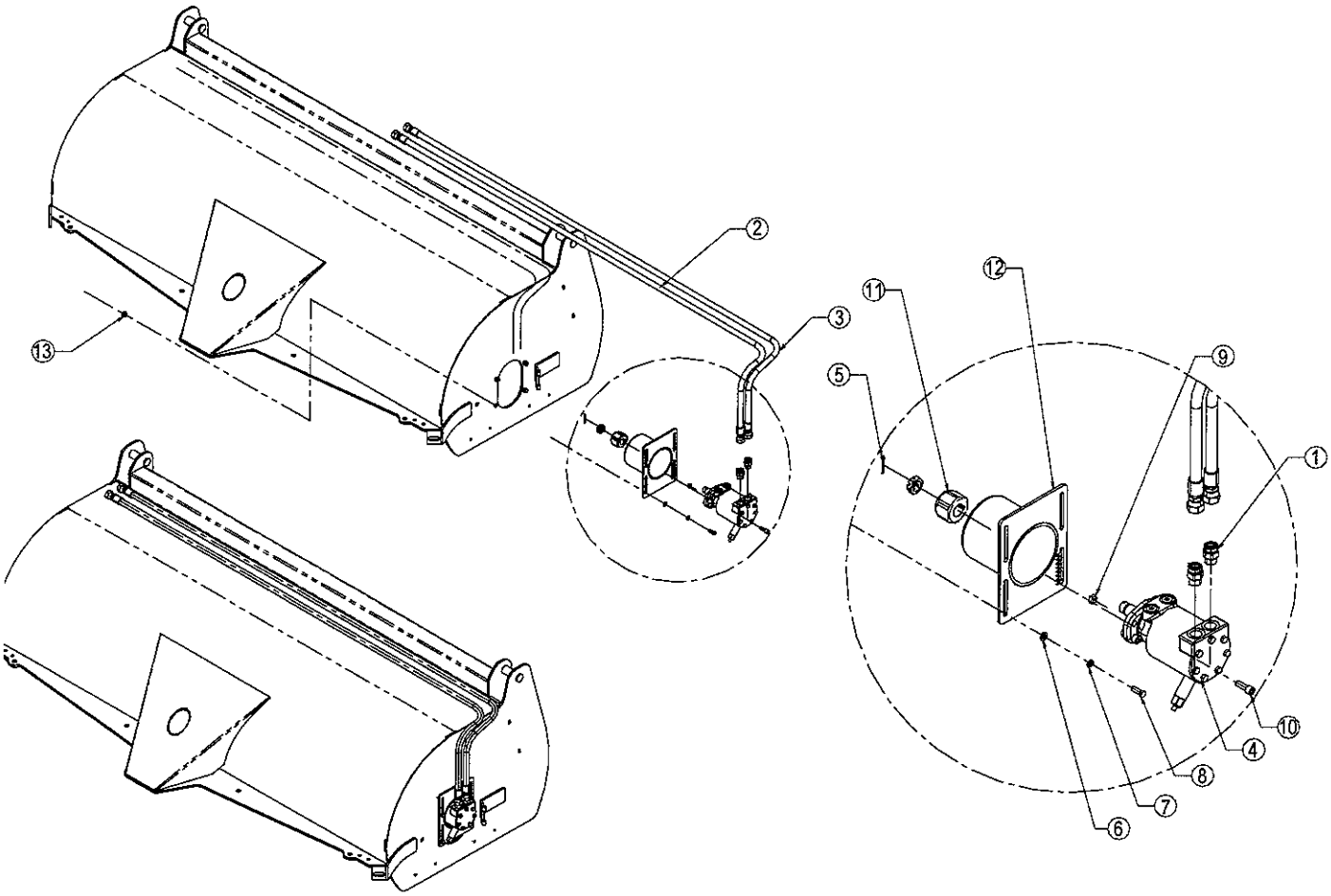
Bucket Assembly BS26 7 Ft./8 Ft.

Ref	Part	Qty	Description
1.	07-3066	7	Nut, Hex, Gr8, 3/4-10, 7 Ft.
		9	Nut, Hex, Gr8, 3/4-10, 8 Ft.
2.	07-3065	7	Washer, Lock, Split, Med, 3/4, 7 Ft.
		9	Washer, Lock, Split, Med, 3/4, 8 Ft.
3.	13-12521	1	Edge, Cut, Bolt-on, 3/4 x 8 x 84.75, 7 Bolt, 7 Ft.
	07-5936	1	Edge, Cut, Bolt-on, 3/4 x 8 x 96, 9 Bolt, 8 Ft.
4.	07-5948	7	Bolt, Plow, Gr8, 3/4-10 x 1 1/2, 7 Ft.
		9	Bolt, Plow, Gr8, 3/4-10 x 1 1/2, 8 Ft.
5.	07-6042	2	Pin, Hitch, 3/4 x 4, with Linch Pin
6.	13-12519	1	Weld, Bucket, 7 Ft.
	13-12594	1	Weld, Bucket, 8 Ft.



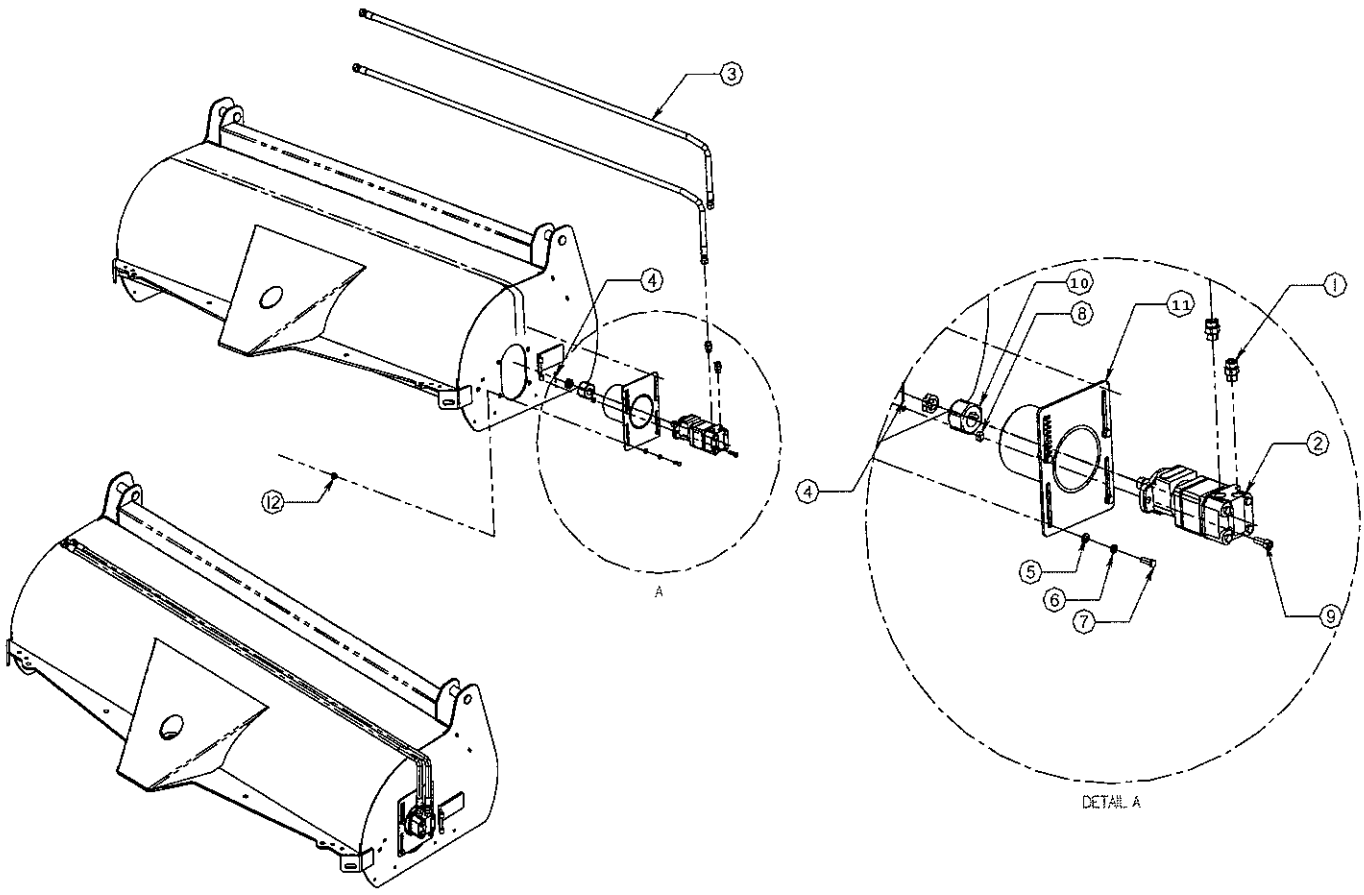
Motor Assembly BS32
28-9612

Ref.	Part	Qty	Description
1.	03-1945	2	Fitting, Adaptor, HP, 1 1/16MOR, 3/4MFS
2-3.	03-4171	2	Hose, 3/4 x 120, 3/4MP, 3/4FFS, 3000psi
4.	03-4419	1	Motor, Hydraulic, White, 22.8 Cu. In.
5.	07-1044	1	Pin, Caster, Gr2, 5/32 x 1 1/2
6.	07-3745	4	Washer, Flat, Cl 8.8, M10
7.	07-3747	4	Washer, Lock, Split, Med, M10
8.	07-3749	4	Screw, HHC, Cl 10.9, M10-1.5 x 30mm
9.	07-4610	4	Nut, Hex, Lock, Straight, M12-1.75, Cl 10.9
10.	07-5816	4	Screw, socket, Head, Cl 12.9, M12-1.75 x 35mm, Black Oxide
11.	13-11890	1	Hub, Hex, 2 1/2 x 1 1/4, Tapered Bore
12.	13-12489	1	Weld, Motor, Mounting
13.	13-12491	4	Bushing, M10, Threaded, Press Fit



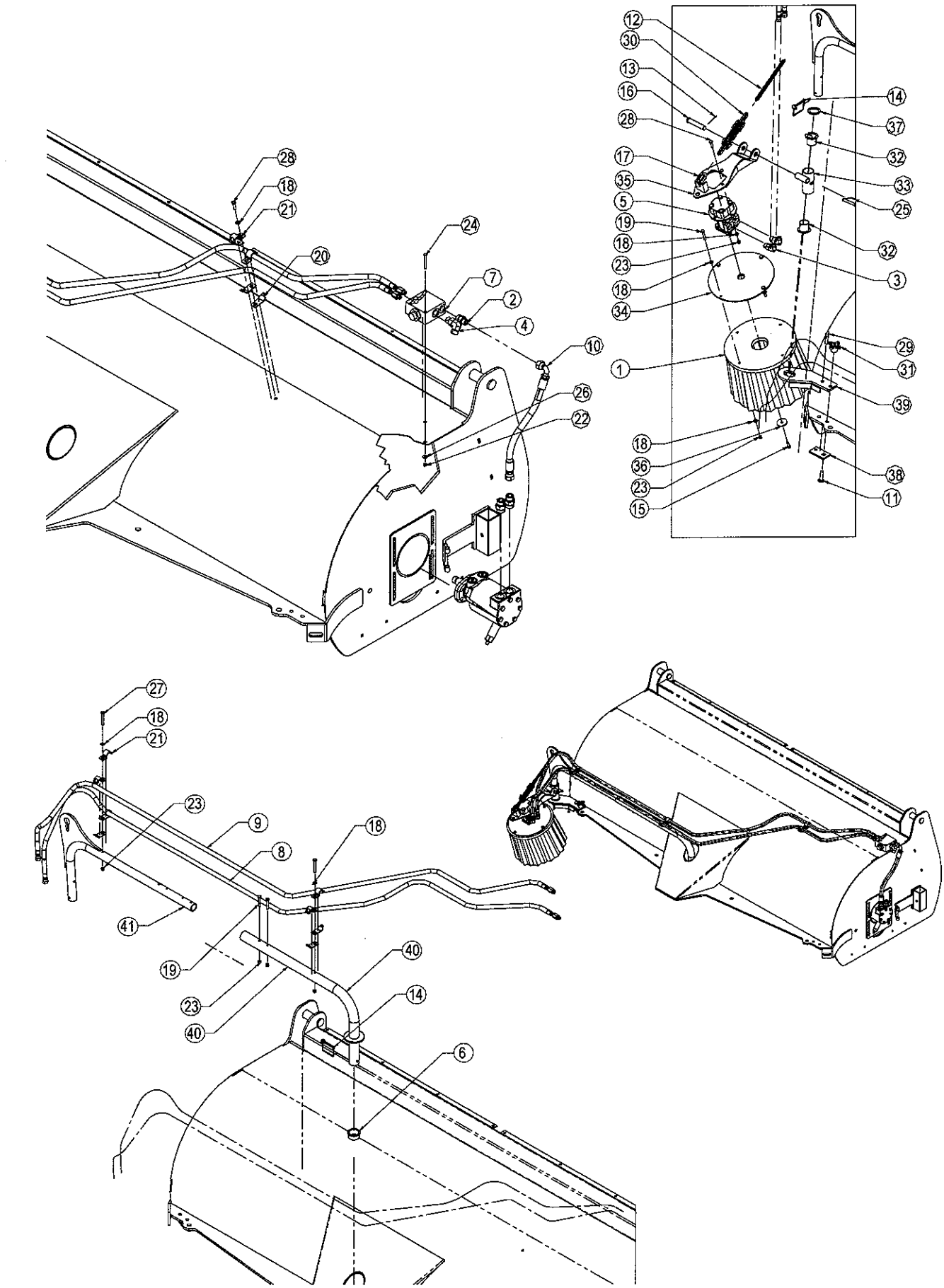
Motor Assembly BS26
28-9622

	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.	03-4070	2	Hose, 5/8 x 96, 2 Wire, 5/8FFS, 5/8FFS
4.	07-1044	1	Pin, Caster, Gr2, 5/32 x 1 1/2
5.	07-3745	4	Washer, Flat, Cl 8.8, M10
6.	07-3747	4	Washer, Lock, Split, Med, M10
7.	07-3749	4	Screw, HHC, Cl 10.9, M10-1.5 x 30 mm
8.	07-4610	2	Nut, Hex, Lock, Straight, M12-1.75, Cl 10.9
9 .	07-5816	2	Screw, Socket, Head, Cl 12.9, M12-1.75 x 35mm, Black Oxide
10.	13-11890	1	Hub, Hex, 2 1/2 x 1 1/4, Tapered Bore
11.	13-11887	1	Weld, Motor, Mounting
12.	13-12491	4	Bushing, M10, Threaded, Press Fit



Gutterbroom Assembly
28-9623 BS32
28-9134 BS26

Ref	Part	Qty	Description
1.	01-1063	1	Gutterbroom, Ecolo, 13, Woodback
2.	03-1939	1	Fitting, Adaptor, HP, 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, White, 6.8 Cu. In.
6.	03-4072	1	Bushing, Nylon, 1.75 x 2
7.	03-4075	1	Valve, 3-Way, Directional, Central Flow Divider
8-9.	03-4461	2	Hose, 1/4 x 126, 9/16MORS, 3/8FFS, With Partek
10.	03-4462	1	Hose, 5/8 x 24, 2 Wire, 5/8FFS, 5/8FFS, 90, with Partek
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, Gr2, 1/8 x 1 1/4
14.	07-1607	2	Pin, Lock, 5/16, Sq Bail, Leg, Lock
15.	07-1714	1	Screw, HHC, Gr8, 5/16-18 x 1
16.	07-3159	1	Pin, Clevis, Gr2, 3/4 x 3 3/4
17.	07-3311	1	Link, Quick, 5/16
18.	07-3736	15	Washer, Flat, Cl 8.8, M8
19.	07-3744	6	Screw, HHC, Cl 10.9, M8-1.25 x 50mm
20.	07-4597	6	Clip, Hose, Clamp
21.	07-4599	6	Clip, Hose, Clamp
22.	07-4603	2	Nut, Hex, Lock, Cl 8.8, M6-1
23.	07-4604	12	Nut, Hex, Lock, Straight, Cl 10.9, M8-1.25
24.	07-4669	2	Screw, HHC, Cl 10.9, M6-1 x 60mm
25.	07-4748	1	Pin, Lock, 3/8 x 2, Grip, Square
26.	07-4927	2	Washer, Fender, Cl 8.8, M6
27.	07-5287	2	Screw, HHC, Cl 10.9, M8-1.25 x 65mm
28.	07-5336	5	Screw, HHC, Cl 8.8, M8-1.25 x 28
29.	07-5380	1	Pin, Hitch, Cotterless, 1/2 x 1
30.	07-5871	1	Extension, Spring, 8 3/4 x 1.375 x .207
31.	07-5872	1	Knob, Cast, Iron, 2 9/16 Head, 1/2-13 Hole
32.	09-0156	2	Flange, Bearing, Nylon
33.	13-11592	1	Weld, Pivot, Gutterbroom
34.	13-11599	1	Weld, Plate, Gutterbroom
35.	13-11601	1	Weld, Motor, Mounting, Gutterbroom
36.	13-11903	1	Washer, .34 x 1.8 x 10 Ga.
37.	13-12291	1	Washer, Flat, 2.25 x 1.625 x 12 Ga.
38.	13-12370	1	Plate, 3.25 x 2, with Holes
39.	13-12374	1	Weld, Pin, Plate, for Gutterbroom
40.	13-12566	1	Weld, Arm, Gutterbroom, BS32
	13-11589	1	Weld, Arm, Gutterbroom, BS26
41.	13-12568	1	Weld, Chain, Gutterbroom, BS32
	13-12378	1	Weld, Chain, Gutterbroom, BS26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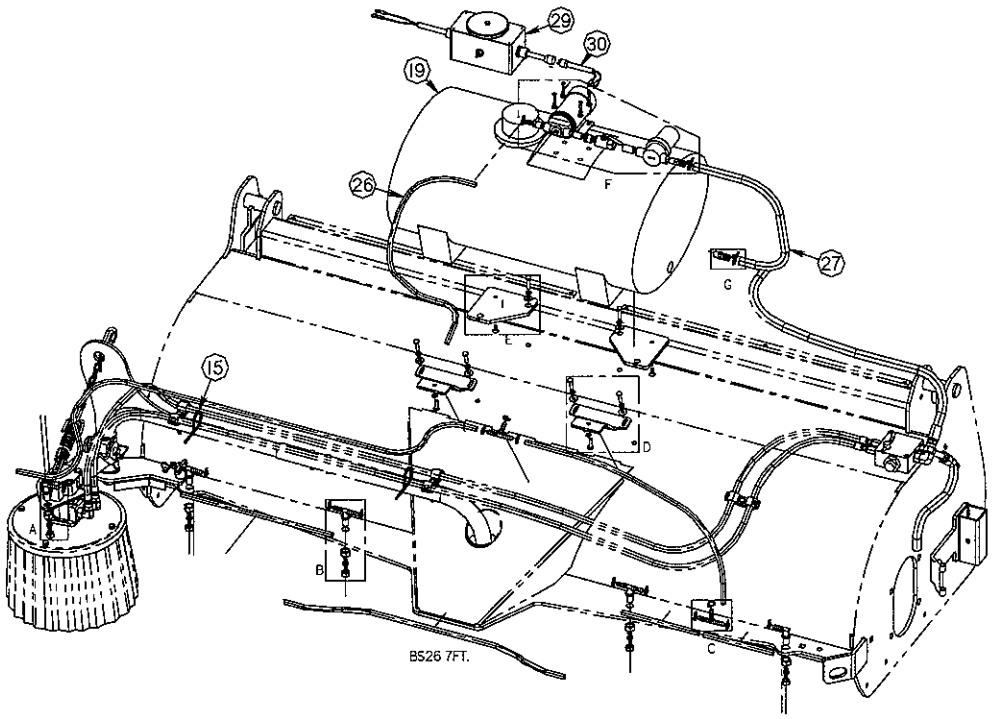
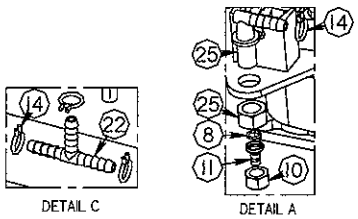
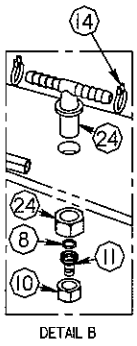
Sprinkler Assembly
25 Gallon
28-9812 12 Volt
28-9814 24 Volt

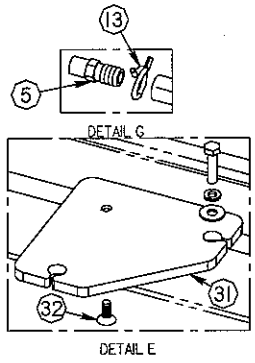
Item	Part	Qty	Description
1.	03-0076	1	Fitting, Nipple, BP, Close, 3/8
2.	03-0152	1	Fitting, Nipple, BP, Close, 1/2
3.	03-0457	1	Fitting, Barb, Nylon, 3/8, 3/8MP
4.	03-0819	1	Fitting, Reducerbushing, HP, 1/2, 3/8
5.	03-1226	2	Fitting, Barb, HP, 5/8, 1/2MP
6.	03-1326	1	Pump, Flojet, Water, 2.1gpm,12 volt
	03-2558	1	Pump, Flojet, Water, 2.9gpm, 24 volt
7.	03-1392	1	Valve, Shut Off, Ball, 1/2
8.	03-3537	5	O-Ring, #8 Face Seal
9.	07-0140	4	Washer, Lock, Gr2, #10
10.	07-0413	5	Nozzle, Cap, Nylon
11.	07-0414	5	Nozzle, Tip, Brass
12.	07-0532	1	Strainer, Hypro, Water
13.	07-0547	2	Clamp, Spring, 7/8
14.	07-0549	14	Clamp, Spring, 5/8
15.	07-0678	2	Tie, Plastic, 7 1/2, Black
16.	07-1430	4	Washer, Flat, #10
17.	07-1714	2	Screw, HHC, Gr8, 5/16-18 x 1
18.	07-1973	6	Screw, HHC, Gr8, 5/16-18 x 1 1/4
19.	07-3150	1	Assembly, Tank, Water, 25gal
20.	07-3273	8	Washer, Lock, Split, Medium, 5/16
21.	07-3275	6	Washer, Flat, Gr8, 5/16
22.	07-3869	2	Fitting, Barb, Tee, Nylon, 3/8
23.	07-4831	4	Screw, BHC, 10-24UNC, 2B x 3/4
24.	07-4861	2	Nozzle, Tee, without Clamp
25.	07-4862	3	Nozzle, Elbow, without Clamp
26.	07-5127	25ft	Hose, Clear, Vinyl, 3/8
27.	09-0028	5ft	Hose, Heater, 5/8
28.	13-13907	2	Plate, Mounting, Tank, Water
29.	LAF8316	1	Wire, Harness, with Box
30.	LAF8320	1	Wire, Assembly x 11ft
31.	LAF8376	2	Sprinkler, Tank, Mount
32.	RHW2135	2	Screw, Socket Head, Flat, Gr5, 5/16-18 x 3/4

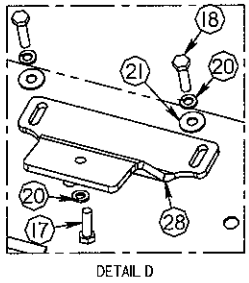
28-9812 12 Volt
28-9814 24 Volt

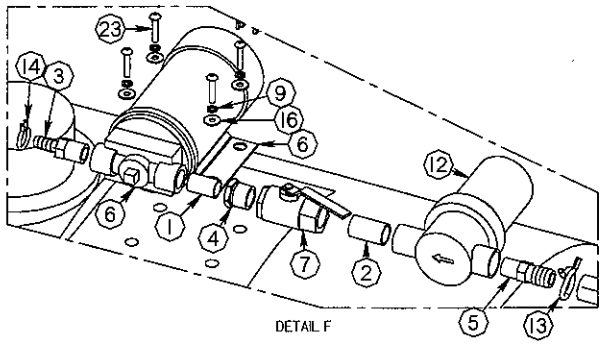






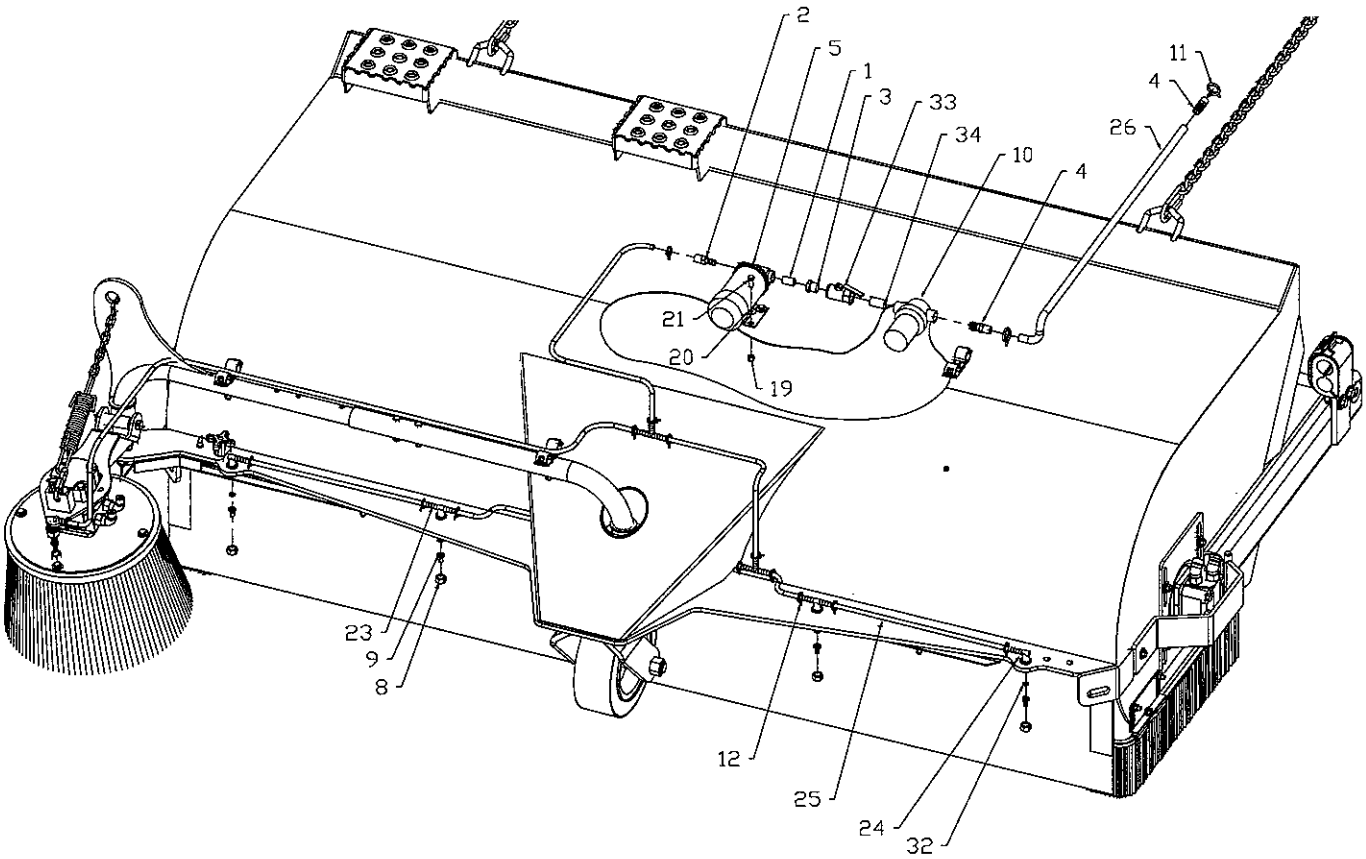






Sprinkler Assembly
25 Gallon
28-9140 12 Volt, No Tank
28-9646 24 Volt, No Tank

Item	Part	Qty	Description
1.	03-0076	1	Fitting, Nipple, BP, Close, 3/8
2.	03-0457	1	Fitting, Barb, Nylon, 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, Flojet, Water, 2.1gpm, 35psi, 12 Volt
	03-2558	1	Pump, Flojet, Water, 2.1gpm, 60psi, 24 Volt
7.	07-0343	1	Switch, Toggle, 2 Position
8.	07-0413	5	Nozzle, Cap, Nylon
9.	07-0414	5	Nozzle, Tip, Brass
10.	07-0532	1	Strainer, Hypro, Water
11.	07-0547	2	Clamp, Spring, 7/8
12.	07-0549	14	Clamp, Spring, 5/8
13.	07-0812	2	Terminal Connector, 1/4Female, 16-14
14.	07-0813	2	Terminal Connector, 1/4Male, 16-14
15.	07-0867	2	Terminal Butt, 16-14
16.	07-0917	15ft	Wire, Cord, 16ga
17.	07-0926	1	Terminal, Spade, 6, 16-14
18.	07-0927	1	Terminal, Ring, 1/4, 16-14
19.	07-3270	4	Nut, Hex, Nylock, Gr8, 5/16-18
20.	07-3275	4	Washer, Flat, Gr8, 5/16
21.	07-3436	4	Screw, HHC, Gr8, 5/16-18 x 3/4
22.	07-3869	2	Fitting, Barb, Tee, Nylon, 3/8
23.	07-4861	2	Nozzle, Tee, without Clamp
24.	07-4862	3	Nozzle, Elbow, without Clamp
25.	07-5127	25ft	Hose, Clear, Vinyl, 3/8
26.	09-0028	10ft	Hose, Heater, 5/8
32.	03-3537	5	O-Ring, #8, Face Seal
33.	03-1392	1	Valve, Shut-Off, Ball, 1/2
34.	03-0152	1	Fitting, Nipple, BP, Close, 1/2


2
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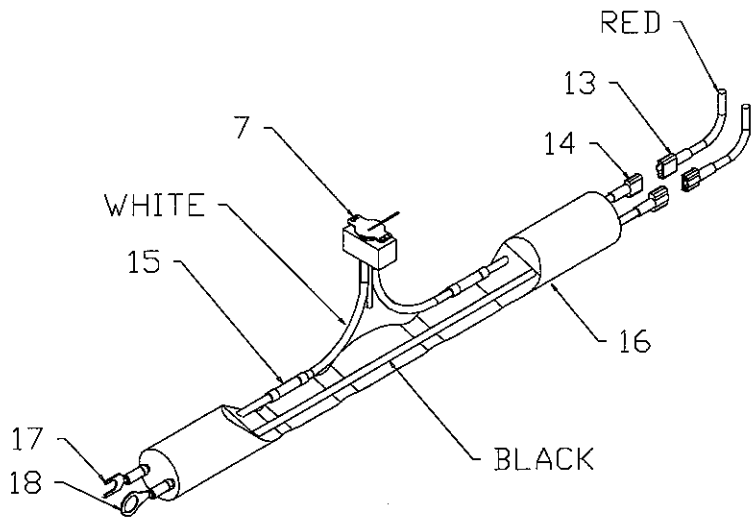
RED
13
14
7
WHITE
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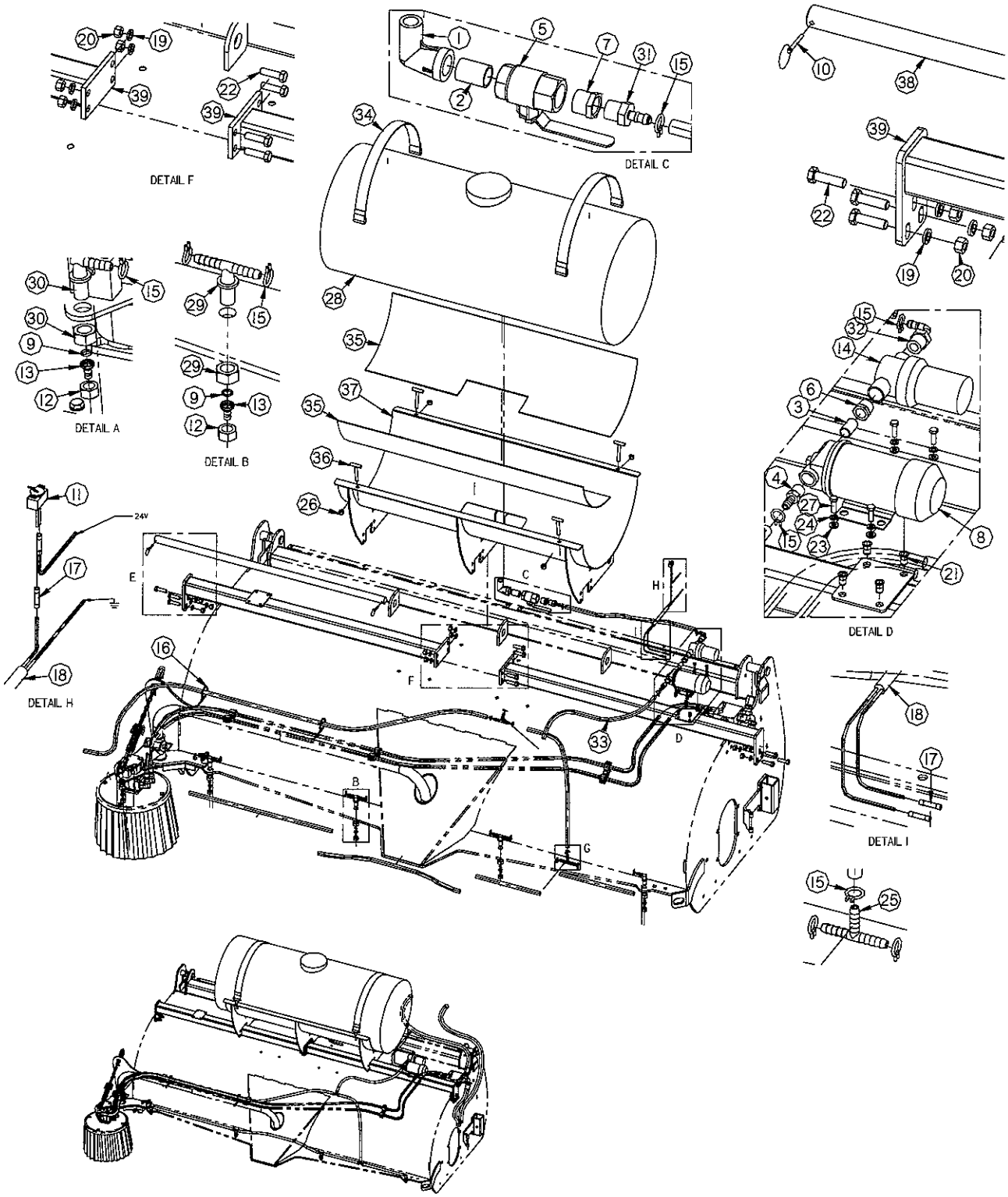
16
17
18
BLACK

Sprinkler Assembly
85 Gallon
28-9649 24 Volt, 8 Ft
28-9799 24 Volt, 9 Ft



Item	Part	Qty	Description
1.	03-0029	1	Fitting, Street Elbow, BP, 90°, 3/4
2.	03-0054	1	Fitting, Nipple, BP, Close, 3/4
3.	03-0076	1	Fitting, Nipple, BP, Close, 3/8
4.	03-0457	1	Fitting, Barb, Nylon, 3/8, 3/8MP
5.	03-0569	1	Valve, Shut-off, Ball, 3/4
6.	03-0819	1	Fitting, Reducerbushing, HP, 1/2, 3/8
7.	03-1068-9	1	Fitting, Reducerbushing, HP, 3/4, 1/2
8.	03-2558	1	Pump, Flojet, Water, 2.9gpm, 24 Volt
9.	03-3537	5	O-Ring, #8 Face Seal
10.	07-0244	2	Pin, Lynch, 1/4
11.	07-0343	1	Switch, Toggle, 2 Position
12.	07-0413	5	Nozzle, Cap, Nylon
13.	07-0414	5	Nozzle, Tip, Brass, 1.5
14.	07-0532	1	Strainer, Hypro, Water
15.	07-0549	16	Clamp, Spring, 5/8
16.	07-0678	2	Tie, Plastic, 7 1/2
17.	07-0867	4	Terminal, Butt, 16-14
18.	07-0917	30ft	Wire, 16ga
19.	07-1762	10	Washer, Lock, Split, Medium, 1/2
20.	07-1764	10	Nut, Hex, Gr8, 1/2-13
21.	07-3617	4	Nut, Insert, Hex, M6 x 1
22.	07-3671	10	Screw, HHC, Gr8, 1/2-13 x 1 3/4
23.	07-3728	4	Washer, Flat, CL8.8, M6
24.	07-3730	4	Washer, Lock, Split, Medium, M6
25.	07-3869	2	Fitting, Barb, Tee, Nylon, 3/8
26.	07-4037	4	Nut, Hex, Nylock, Gr8, 1/2-13
27.	07-4605	4	Screw, HHC, CL10.9, M6-1 x 20mm
28.	07-4682	1	Tank, Water, Poly, 85 Gal, 32 Inch
29.	07-4861	2	Nozzle, Tee, without Clamp
30.	07-4862	3	Nozzle, Elbow, without Clamp
31.	07-5118	1	Fitting, Barb, Poly, 3/8, 1/2MP
32.	07-5119	1	Fitting, Barb, Poly, 3/8, 1/2MP, 90°
33.	07-5127	25ft	Hose, Clear, Vinyl, 3/8
34.	09-0202	2	Strap, Nylon, Water Tank, 34 Inch
35.	13-10075	2	Rubber, Neoprene, Tank Pad
36.	13-10081	4	Weld, Bolt, Tee, 3 1/2
37.	13-13264	1	Weld, Water Tank, Saddle
38.	13-13269	1	Rod, CR, 1 1/4 x 44 1/2, with Holes
39.	13-13896	2	Weld, Mounting, Water Tank, 8 Ft
	13-13261	2	Weld, Mounting, Water Tank, 9 Ft

Notes

Appendix

Pick-Up Brooms

Notes

Table of Contents

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	-

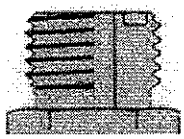
Foot-pounds may be converted to Newton Meters by multiplying by 1.35582
Foot-pounds may be converted to Inch-pounds by multiplying by 12.
If the nut and screw are not the same grade, the lower grade will always be used.

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 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.

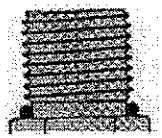
Torque Values:

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 11/6 - 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 0.11298.

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.

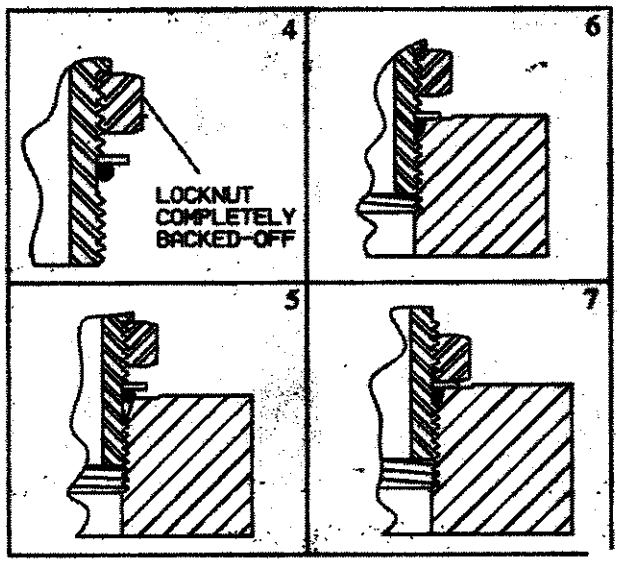
Installation (Adjustable Fitting)

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 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 back-up 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 appreciate torquing device, tighten nut to given torque rating from the table in section. (Figure 7)

Torque Values

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

Figures 4, 5, 6 and 7



NOTE - ft-lb may be converted to NewMeters by multiplying by 1.35582.
NOTE - in-lbs may be converted to Newton Meters 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 the brush head 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 brush off the ground when the sweeper is dismounted.

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.

three-point contact - method of mounting sweeper where contact is constant with three points, be it two feet and one hand or two hands and one foot.

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.

Warranty Registration

SWEEPSTER

PALADIN LIGHT CONSTRUCTION

Warranty Registration Form and Delivery Inspection Report

IMPORTANT! Warranty Void if card is not returned within 0 days.
All Applicable sections must be filled in.

This section to be filled out and signed by Dealer at time of delivery.

Warranty Registration

Customer's Name _____ Dealer's Name _____
Address _____ Address _____
City _____ State ____ Zip ____ City _____ State ____ Zip ____
Phone _____ CHECK ONE:
Loader / Tractor Model _____ Construction Use _____
Delivery Date _____ Agricultural Use _____
Model or Part # _____ Landscape Use _____
Serial # _____ Other: _____

Dealer Inspection (check items applicable)

____ All Decals Installed (see operators manual) ____ Review Operating and Safety Instructions
____ Hydraulic Fittings Tight and Free of Leaks ____ Guards and covers in place and secure
____ Fasteners Tight ____ Does Product Function Properly

I have thoroughly instructed the buyer on the above described equipment. This review included: The Operator's manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date: _____ Dealer's Rep. signature _____

This section to be completed and signed by the customer

	5 Excellent	4 Good	3 Average	2 Unsatisfactory	1 Poor
QUALITY ASSURANCE RATING					
Question:		Sweepster		Local Dealer	
Quality of Product: Appearance		_____			
Construction		_____			
Quality of Service		_____		_____	
Value (Priced Fairly)		_____		_____	
Does it perform as claimed		_____			

The above described equipment and Operator's Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date: _____ Owner's signature: _____

NOTE: Make one copy each for the dealer's and owner's records. Fax or Mail original to Sweepster.

Comments: _____

Sweepster, Inc.
2800 N. Zeeb Rd
Dexter, MI 48130-9489
800-456-7700
fax 734-996-9014

SWEEPSTER

SWEEPSTER ATTACHMENTS LLC

Limited 12 Month Warranty

Thank you for purchasing a Sweepster Attachments, LLC. product. Warranty protection is valid only when this Warranty Registration is completed and signed by the customer and dealer, and mailed to Sweepster Attachments,LLC. I hearby 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 Attachments, 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 Attachments, 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 Attachments, LLC.'s total liability hereunder exceed the product purchase price.

Sweepster Attachments, LLC. makes no warranty with respect to trade accessories or any component or accessory of the product which was not manufactured by Sweepster Attachments, 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 Attachments, 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 Attachments, 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 Attachments, LLC.