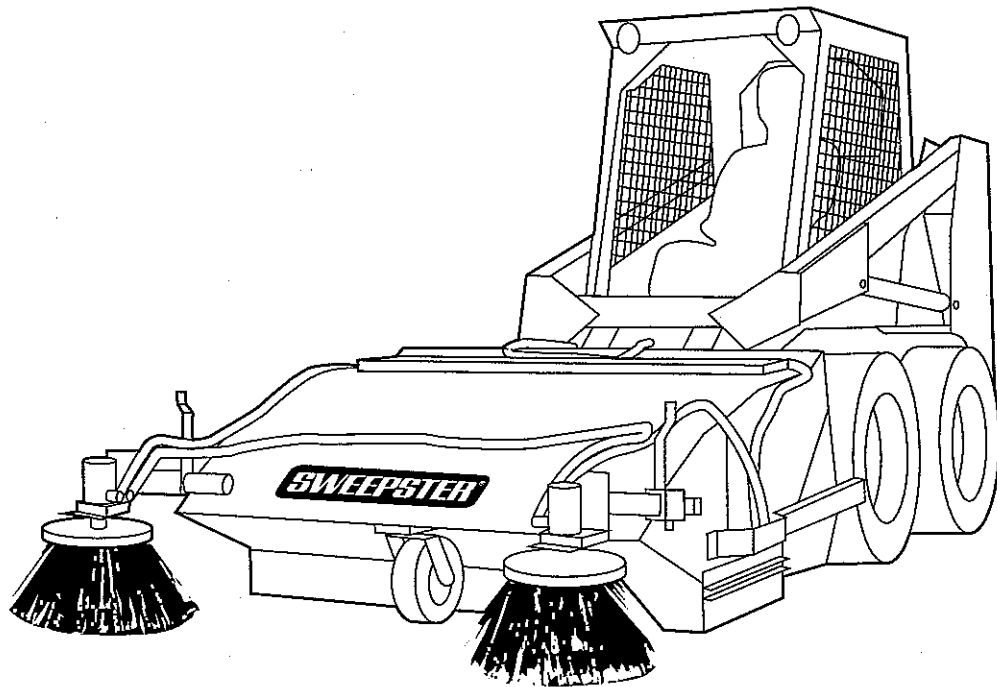




HB Series

Pickup Sweepers for
Tractor & Skid Steer Loaders



SWEEPSTER, Inc.
2800 N. Zeeb Road • Dexter, MI 48130
(734) 996-9116 • FAX (734) 996-9014
1-800-456-7100

51-0075, 3/00

Contents

Introduction	4-5	Storage	17
Serial & Part Numbers	4	Removing Bucket & Sweeper	17
Importance of this Manual	5	Installing Bucket & Sweeper	17
Purpose of Sweeper	5	Removing Sweeper Only	17
Safety Alert Symbol	5	Installing Sweeper	17
Contacting SWEEPSTER	5	Brushes	17
Terms Used in Manual	5	Maintenance	18-19
Optional Equipment	5	Replacing Brush Sections	18
Specifications & Features	5	Lubricating the Sweeper	19
Warranty	5	Maintaining Hydraulics	19
Safety Information	6-7	Main Sweeper	20-21
Read this Manual	6	Hydraulic Motor	22
Hazard Definitions	6	Buckets	23
Operation	6	Universal Mounting	24
Service & Repair	7	Hook Points	25
Safety Signs & Labels	8-9	Option – Gutter brush	26-31
Important	8	Installing Gutter Brushes	26
Locations	8	Adjusting Gutter Brush Contact Area	27
Representations of labels	9	Adjusting Gutter Brush Swing	27
Installation	10-14	Using Gutter Brushes	28
Notice	10	Replacing Gutter Brush	28
Installing Main Sweeper – Customer Bucket	10	Parts Lists	29-31
Installing Main Sweeper – Universal Mounting	11	Option – Sprinkler	32-36
Installing Main Sweeper – John Deere & New Holland	12	Installation	32-34
Quick Attach Mountings	12	Parts Lists	35-36
Installing Main Sweeper – Quick Attach Mountings	12	Templates	37-42
Installing Main Sweeper – Thomas	13	Torque Values	43
Installing Main Sweeper – GEHL	14	Warranty Information	44-45
Adjustments	15		
Adjusting Chains	15		
Adjusting Main Sweeper	15		
Operation	16		
Notice	16		
Operation	16		
Tips	16		

Introduction

Serial & Part Numbers

On your unit you will find a serial number plate and/or part number plate(s). The numbers on these plates are very important if you wish to order parts or accessories. For your convenience, record numbers in the appropriate spaces below.

SWEEPSTER	
Model #	Serial #
<input type="text"/>	<input type="text"/>
Empty	GVW
<input type="text"/>	<input type="text"/>
Dexter, MI 48130	1-800-456-7100

SWEEPSTER	
Dexter, MI 48130 1-800-456-7100	
Part Number	Date
<input type="text"/>	<input type="text"/>

SWEEPSTER	
Dexter, MI 48130 1-800-456-7100	
Part Number	Date
<input type="text"/>	<input type="text"/>

SWEEPSTER	
Dexter, MI 48130 1-800-456-7100	
Part Number	Date
<input type="text"/>	<input type="text"/>

Introduction

Importance of this Manual

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 model 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, snow removal 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, Inc.
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 a sweeper is mounted on or towed by.

Optional Equipment

Installation instructions for optional equipment, if applicable, appear with parts lists in the back of the manual.

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 prime mover, making sure it is tight.
- Make sure all hydraulic fittings and hardware are tight.
- Replace any damaged or fatigued hardware with properly rated fasteners.

- 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-sleeve shirt buttoned at the cuffs; safety glasses, goggles or a face shield; ear protection; and a dust mask.

When sweeping, adhere to all government rules, local laws and other professional guidelines for your sweeping application.

 **WARNING** – Never raise the sweeper more than a few feet off the ground. The sweeper can tip back or the prime mover can tip over causing death or serious injury.

Before leaving the operator's 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.

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.

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.

Safety Information

Service & Repair



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 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.

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.

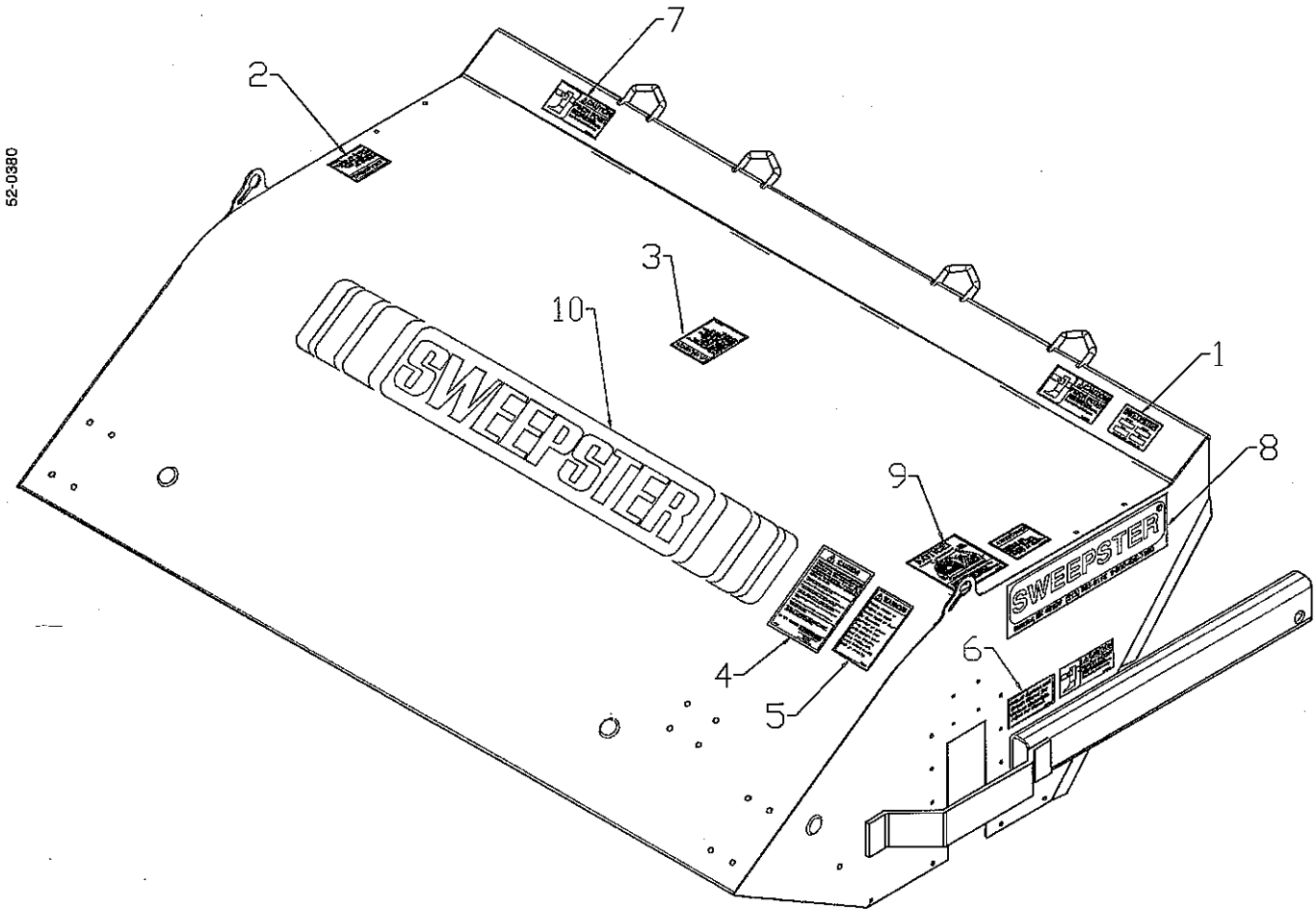
Safety Signs & Labels

Important

Always keep safety signs clean and readable, and always replace any damaged or missing safety signs with new ones from SWEEPSTER.

Safety sign and label locations are shown below. For representations of these safety signs and labels, refer to page 9.

Locations



Item Part Qty Description

1.	50-0004	1	Label, Serial Number
2.	50-0008-1	2	Label, Danger, No Riders
3.	50-0013-1	1	Label, Danger, Falling Sweeper & Loader Arms
4.	50-0014-1	1	Label, Caution, Read Manual
5.	50-0014-2	1	Label, Caution, Running Sweeper & Engine
6.	50-0023-1	2	Label, Adjust Aprons for Various Materials
7.	50-0076-1	4	Label, Caution, Pinch Point
8.	50-0203	1	Label, Sweep Direction, HB
9.	50-0185	2	Label, Medium, White, Logo
10.	50-0252	1	Label, Logo, Large, White, Die-Cut

Safety Signs & Labels

Representations of Labels

Locations shown on page 8.



1. 50-0004



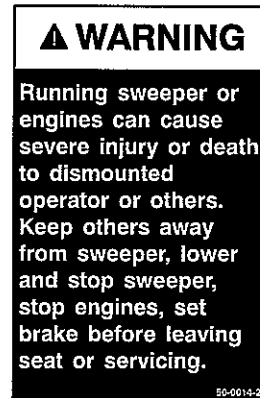
2. 50-0008-1



3. 50-0013-1



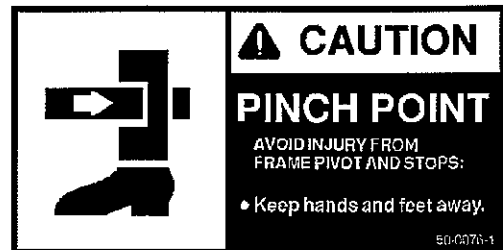
4. 50-0014-1



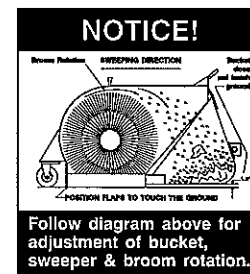
5. 50-0014-2



6. 50-0023-1



7. 50-0076-1



8. 50-0203



9. 50-0185



10. 50-0252

Installation

Notice

IMPORTANT – For single motor units, hydraulic flow must range from 8 to 15 gpm (30.28 to 56.85 liters/min) at 1,800 psi (124.14 bars). For dual motor units, hydraulic flow must range from 15 to 25 gpm (56.58 to 113.60 liters/min) at 1,800 psi (124.14 bars).

NOTE – Use 2 clevis pins, 2 rubber hoses and 2 quick links to attach the chain to the loader (figure 2).

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

Installing Main Sweeper – Customer Bucket

NOTE – For Thomas units, follow instructions on page 13. For GEHL units, see page 14.

NOTE – You must purchase a bolt-on bracket kit to use your own bucket. See page 20 or 22.

1. Locate brackets on the bucket as shown in figure 1. Transfer punch and then drill holes. Use a 13/32 in. bit on the side brackets and a 17/32 in. bit on the rear brackets.
2. Attach rear mounting brackets to the rear of the bucket and angle brackets to the sides with hardware provided.
3. Connect the sweeper to the bucket by attaching the sweeper side arms to the rear mounting brackets with pins provided.
4. Attach chains to a convenient location on the prime mover arms, such as a cross bar or step. Leave the chains loose with equal slack on both (figure 2). Do not entangle hydraulic hoses when installing.

5. Connect hydraulic hoses to the prime mover's hydraulic remotes.
6. Make adjustments to the chains and main sweeper; see the Adjustments section.

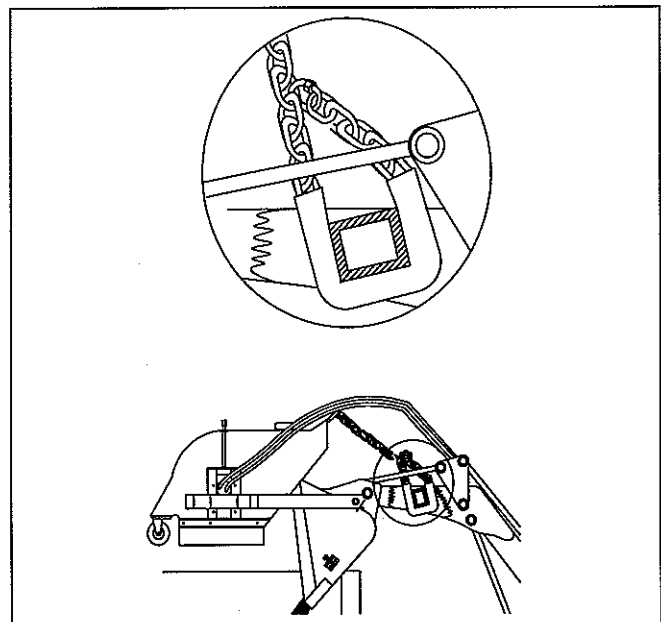


figure 2

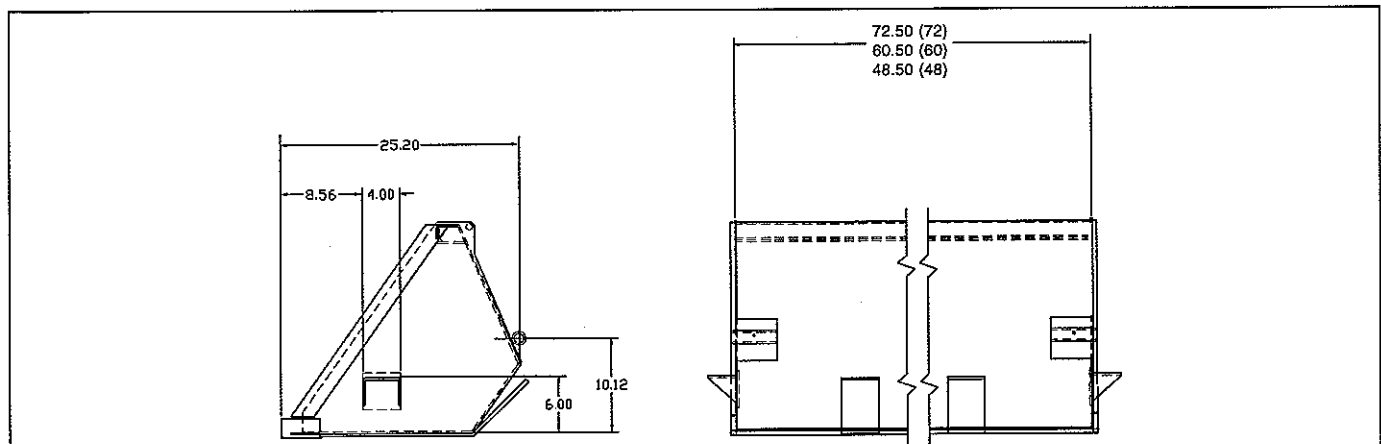


figure 1

Installation

Installing Main Sweeper – Universal Mounting

NOTE – Only prime movers without quick attaches use a universal mounting.

NOTE – Due to the number of different sized pins used in the industry, it may be necessary to modify the mounting plates by either drilling out the pin holes or fabricating bushings.

1. Attach the mounting frame to the bucket with hardware provided.
2. Install 4 bottom mounting plates to the bucket.
3. Attach the prime mover arms to the bottom mounting plates.
4. Attach the top mounting plates to the bucket. Use the set of holes that align the plates with the prime mover tilt cylinders (partially extended).
5. Pin tilt cylinders to the top mounting plates.
6. Attach chains to a convenient location on the prime mover arms, such as a cross bar or step. Leave the chains loose with equal slack on both (figure 3).



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

7. Connect hydraulic hoses to prime mover remote hydraulics.
8. Make adjustments to the chains and main sweeper; see the Adjustments section.

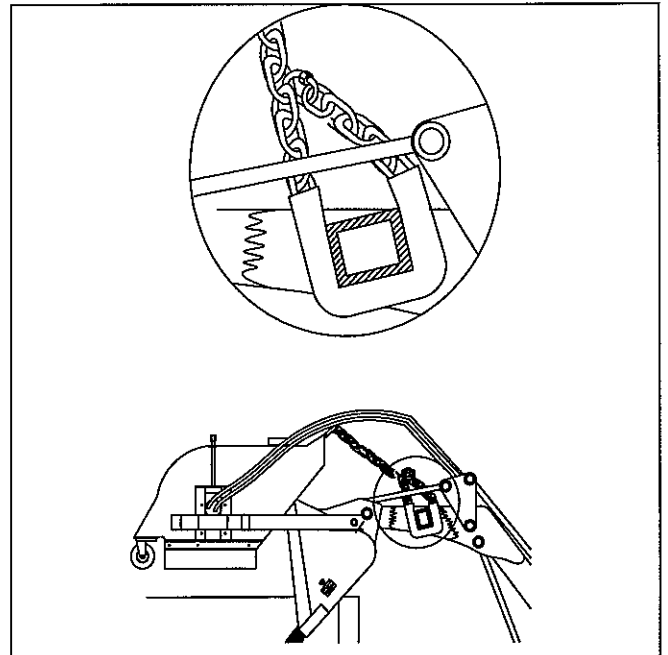


figure 3

Installation

Installing Main Sweeper – John Deere & New Holland Quick Attach Mountings

1. Install the sweeper on the prime mover's quick attach mounting.
2. Make a photocopy and then cut out the templates specific to your prime mover. (See Template pages 49-53.)
3. Place the appropriate template on the prime mover arm, aligning the outline of the template and the angled edge of the loader arm. Make sure the template extends 1/8 in. (3 mm) past the imaginary line formed by the vertical edge of the prime mover arm (figure 4).
4. Transfer punch hole locations onto the loader arm.
5. Repeat steps 1, 2 and 3 on the other loader arm.
6. Drill holes with a 13/32 in. bit.
7. Attach a plate under each loader arm.
8. Secure chains to the sweeper body with quick links; then, attach the opposite ends through the keyholes in the plates using the second to last link on each.
9. Using 2 clevis pins, 2 rubber hoses and 2 quick links, attach chains to the loader lift arms. Be sure the chains do not crush hydraulic lines, and use equal lengths of chain on both arms (figure 3).

CAUTION – Avoid equipment damage and personal injury. Chains must be of equal length and long enough to keep the sweeper level during dumping. Chains that are too short can cause the sweeper to tip back and damage the sweeper body.

10. Connect hydraulic hoses to the prime mover remote hydraulics.
11. Make adjustments to the chains and main sweeper; see the Adjustments section.

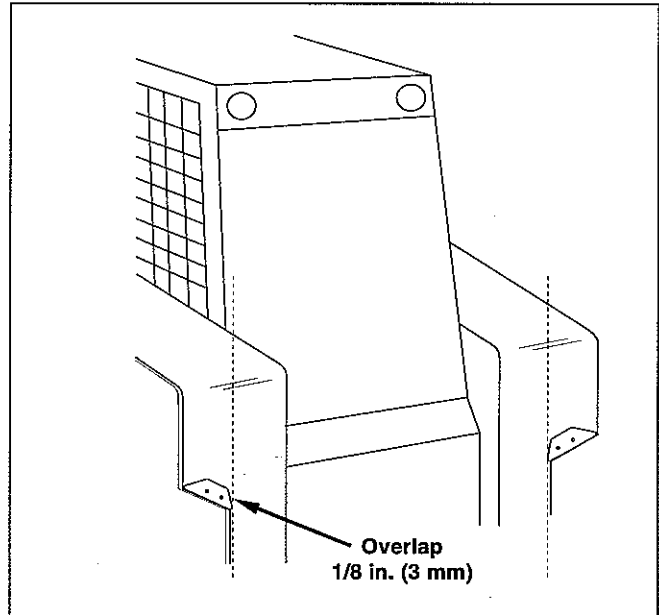


figure 4

Installing Main Sweeper – Quick Attach Mountings

1. Install the sweeper on the prime mover's quick attach mounting.
2. Attach chains to a convenient location on the prime mover arms, such as a cross bar or step. Leave the chains loose with equal slack on both (figure 7). Do not entangle hydraulic hoses.

NOTE – Use 2 clevis pins, 2 rubber hoses and 2 quick links to attach the chain to the loader (figure 7).

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

3. Connect hydraulic hoses to prime mover remote hydraulics.
4. Make adjustments to the chains and main sweeper; see the Adjustments section.

Installation

Installing Main Sweeper – Thomas

NOTE – You must purchase a bolt-on bracket kit to use your own bucket. See page 20 or 22.

1. Mount hook points to the prime mover arms as shown in figure 5.
2. Transfer punch holes from brackets to the bucket. Drill holes in the bucket using dimensions shown in figure 6.
3. Attach the rear mounting brackets to the rear of the bucket and angle brackets to the sides with hardware provided.
4. Connect the sweeper to the bucket by attaching the sweeper side arms to the rear mounting brackets with pins provided.
5. Connect the sweeper/bucket assembly to the prime mover.
6. Attach chains to hook points with equal slack on both chains.

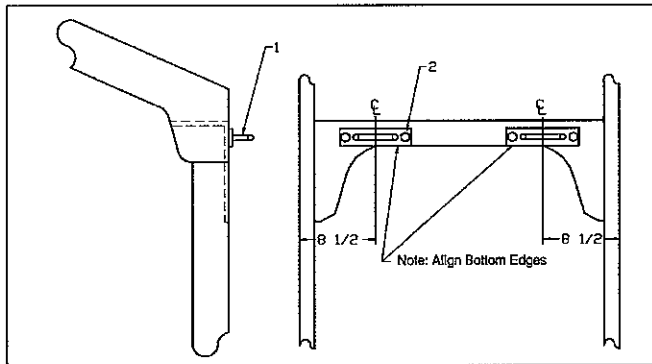


figure 5

NOTE – Use 2 clevis pins, 2 rubber hoses and 2 quick links to attach the chain to the loader (figure 7).



CAUTION – Avoid equipment damage and personal injury. Chains must be of equal length and long enough to keep the sweeper level during dumping. Chains that are too short may cause the sweeper to tip back during dumping.

7. Connect hydraulic hoses to the prime mover remote hydraulics.
8. Make adjustments to the chains and main sweeper; see the Adjustments section.

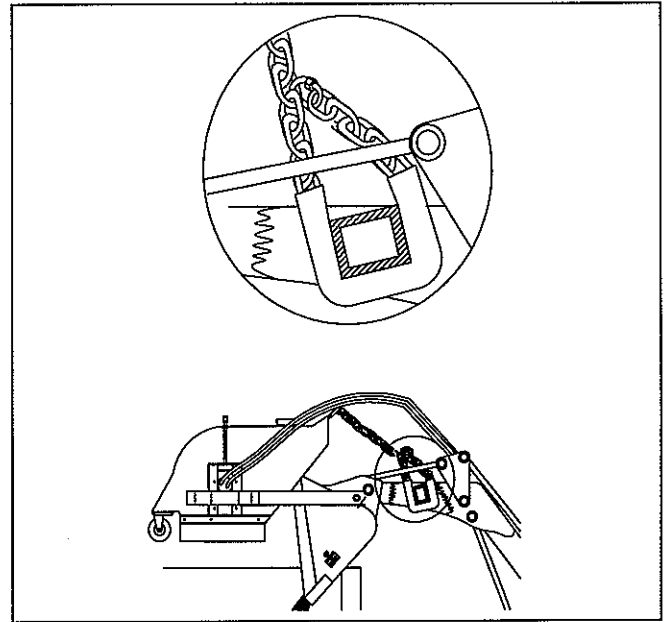


figure 7

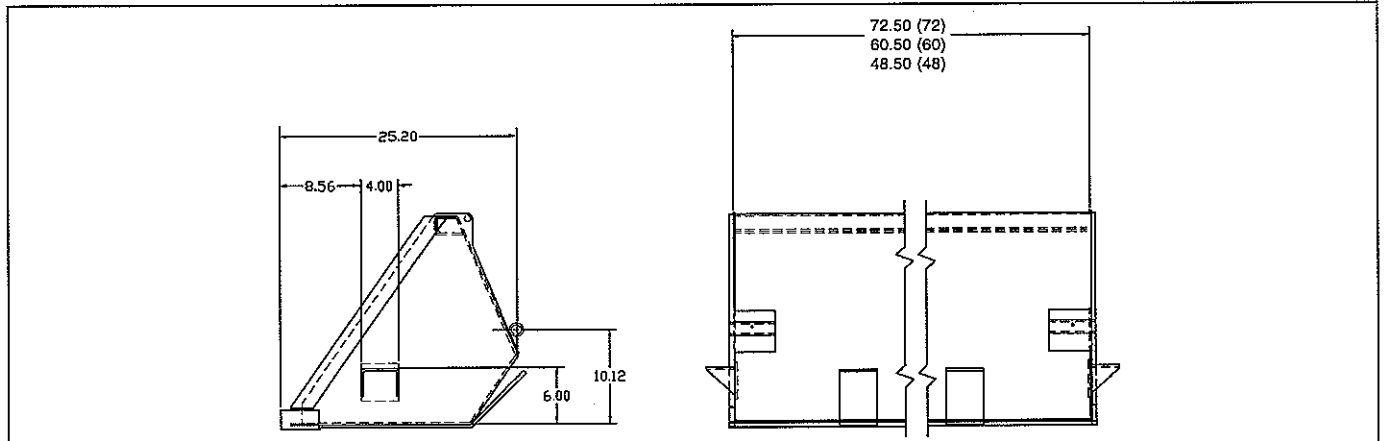


figure 6

Installation

Installing Main Sweeper – GEHL

1. Install the sweeper on the prime mover's quick attach mounting.
2. Attach chains to handles on the prime mover arms, as shown in figures A, B, and C. . Use 2 rubber hoses and 4 quick links. Leave the chains loose with equal slack on both. Do not entangle hydraulic hoses.

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

3. Connect hydraulic hoses to prime mover remote hydraulics.
4. Make adjustments to the chains and main sweeper; see the Adjustments section.



figure A

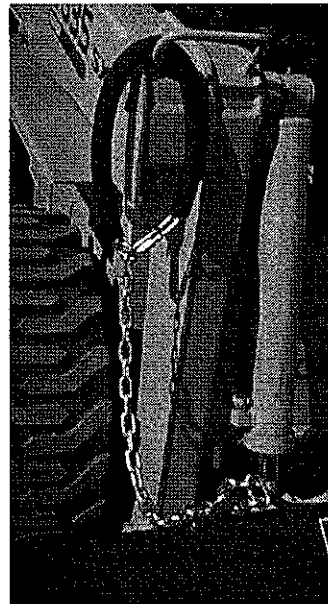


figure B



figure D



figure C

Adjustments

Adjusting Chains

1. Make sure chains are quite loose.
2. Raise the unit and then dump the bucket slowly. The unit will dump correctly if chains have the proper tension (figure 9). If the unit tips down when test dumping, go to step 3.
3. Tighten both chains by the same amount but no more than 2 links each.
4. Repeat steps 2 and 3 until the unit dumps correctly.

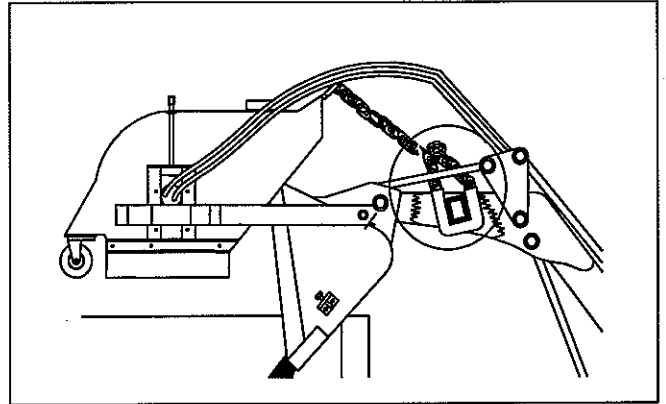


figure 9

Adjusting Main Sweeper

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

1. Move the sweeper to a dusty, flat surface.
2. Set the prime mover brake; leave the engine running.
3. Start the sweeper at a slow speed; then, lower the sweeper bucket to 1 in. (25 mm) above the ground.
4. Run the sweeper in a stationary position for 30 seconds.
5. Raise the sweeper and back away.
6. Switch off the prime mover engine and remove the key.
7. Check the brush pattern left in the dust. The swept area should be 2-3 in. (51-76 mm) wide, running the length of the brush (figure 10).
8. If the brush pattern is not 2-3 in. (5.08-7.62 cm) wide, adjust the brush height with the adjustment rods (Figure 11). On each side of the sweeper:
 - a. Loosen the adjustment rod.
 - b. Turn the jam nut up to create a wider pattern or down to make a narrower pattern.
 - c. Tighten the rod until it contacts the jam nut. This prevents the rod from loosening.
9. Adjust the front and side flaps to contact the sweeping surface lightly and evenly (Figure 11).

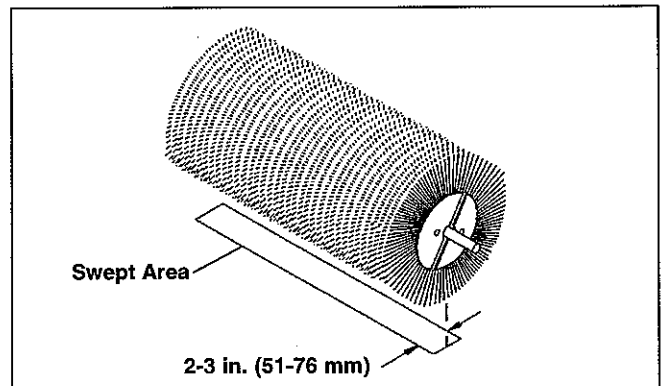


figure 10

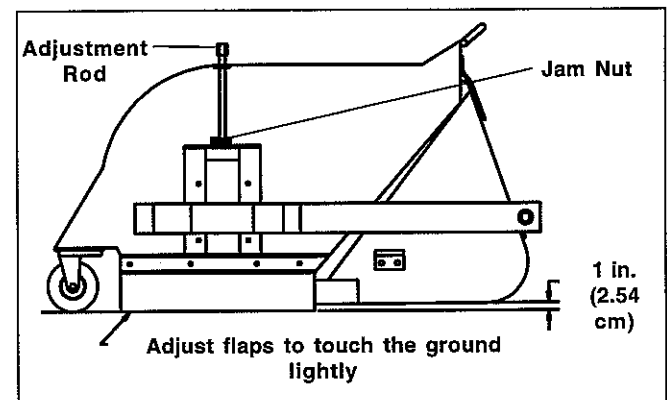


figure 11

Operation

Notice

IMPORTANT – For single motor units, hydraulic flow must range from 8 to 15 gpm (30.28 to 56.85 liters/min) at 1,800 psi (124.14 bars). For dual motor units, it must range from 15 to 25 gpm (56.58 to 113.60 liters/min) at 1,800 psi (124.14 bars).

Operation

Sweeping

This sweeper uses prime mover hydraulic flow to sweep. To start the brush, turn on the prime mover's hydraulic flow; to stop it, turn off the flow.

With this sweeper you sweep over the brush while moving forward (figure 12).

To increase or decrease brush speed, change the prime mover's engine rpm. Use the lowest speed that will complete the job. In general, half throttle provides plenty of engine speed.

The front caster feature allows the sweeper to follow ground contours. Therefore, do not run the sweeper with the prime mover in Float. Using Float allows the sweeper to drop too low and lift too high, resulting in poor sweeping and damage to the unit.

Use the bucket for collection only. It will wear quickly if used for scraping. Never operate the sweeper with the bucket less than 1 in. (25 mm) above the ground.

Dumping

Empty the bucket by raising the sweeper above the container; then, dump using prime mover tilt controls.

! DANGER – Avoid electrical shock. Stay away from overhead wires when dumping.

! CAUTION – Avoid equipment damage and/or personal injury. Adjust the chains properly. Otherwise, the sweeper can tip back onto the lift arm during dumping.

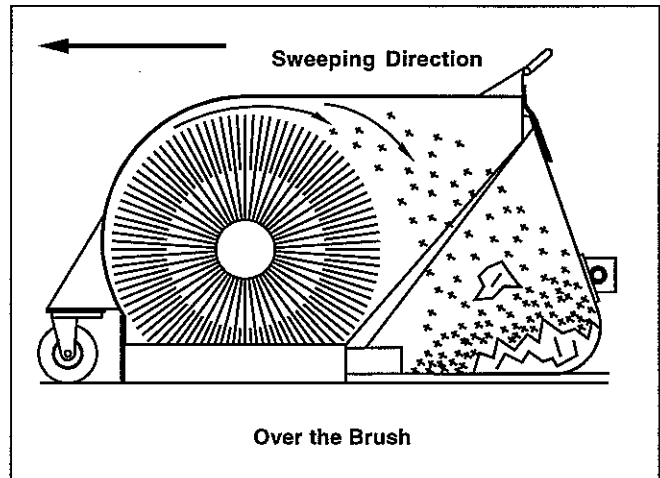


figure 12

Stopping Sweeper

Never stop the sweeper at high engine speed. Decrease prime mover engine speed before stopping the hydraulic flow to the sweeper.

IMPORTANT – Avoid sweeper and motor damage. Decrease prime mover engine speed (rpm) before stopping hydraulic flow to disengage the sweeper.

Tips

Do follow all safety precautions outlined in this manual.

Do operate the sweeper on flat, level surfaces only.

Do use low engine speed when sweeping to prevent excessive dust.

Do not run the sweeper in Float.

Do not engage or disengage the brush at a high engine speed. This damages the sweeper and motor.

Do not scrape with the bucket. It is for collection only and will wear prematurely if it is used for scraping. Never operate the sweeper with the bucket less than 1 in. (25 mm) from the ground.

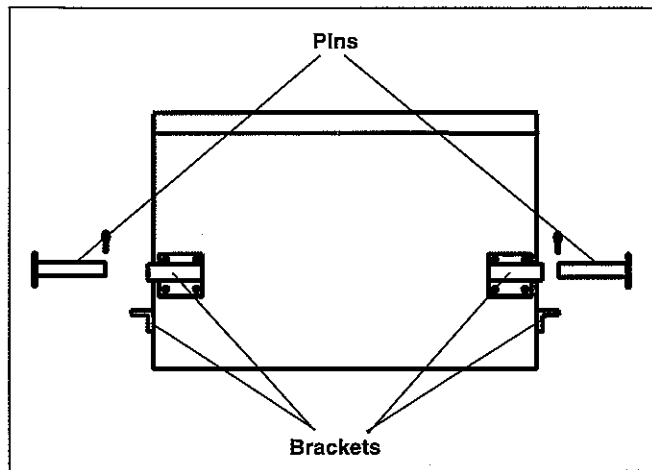


figure 13

Removing Bucket & Sweeper

WARNING – Avoid serious injury. Lower and stop the sweeper, set the brake, stop the prime mover engine and remove the key before leaving, adjusting or repairing the sweeper.

1. Move the sweeper to a storage area.
2. Set the bucket on blocks to keep the brush off the ground during storage.
3. Disconnect and cap hydraulic lines.
4. Remove support chains from the prime mover.
5. Remove the bucket from the prime mover.
6. Move the prime mover away from the sweeper.

Installing Bucket & Sweeper

1. Align the prime mover behind the sweeper.
2. Install the bucket on the prime mover.
3. Attach support chains.
4. Connect hydraulic lines.
5. Adjust according to Adjusting the Main Sweeper on page 15.

Removing Sweeper Only

WARNING – Avoid serious injury. Lower and stop the sweeper, set the brake, stop the prime mover engine and remove the key before leaving, adjusting or repairing the sweeper.

IMPORTANT – The bucket is for collection only. Scraping with the bucket edge wears the bucket prematurely.

1. Move the sweeper to a storage area.
2. Place the sweeper on blocks to keep the brush off the ground during storage.
3. Disconnect and cap hydraulic lines.
4. Remove support chains from the prime mover.
5. Remove pins from the rear brackets (figure 13).
6. Move the prime mover away from the sweeper.

Installing Sweeper

1. Align the prime mover behind the sweeper.
2. Pin sweeper side arms to the rear brackets.
3. Attach support chains to the prime mover.
4. Connect hydraulic lines.
5. Adjust according to Adjusting the Main Sweeper on page 15.

Brushes

IMPORTANT – Do not store the sweeper with weight on the brush. This will deform bristles, destroying their effectiveness. To avoid this problem, place the sweeper on blocks.

Do not store polypropylene brushes in direct sunlight. They will deteriorate and crumble.

Keep polypropylene brush material away from intense heat or flame. It will melt.

Replacing Brush Sections

! WARNING – Avoid serious injury. Lower and stop the sweeper, set the brake, stop the prime mover engine and remove the key before leaving the operator's seat.

1. Disconnect and then cap hydraulic lines to prevent contamination.
2. Remove flaps and adjustment lock pins from both sides of the sweeper.
3. Raise the sweeper, leaving the brush head on the ground.
4. Remove the retainer plate halves on the bearing end of the brush (single motor) or the end ring (dual motor).
5. Remove old sections.
6. Install new sections by doing the following:
 - a. Number the tubes on the core as 1, 2 and 3 (figure 14).
 - 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 15).
 - 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.
 - 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. Replace the retainer plate halves or end ring.
8. Lay the brush on the ground.
9. Lower the sweeper over the brush head.
10. Reinstall adjustment lock pins and flaps.
11. Connect hydraulic lines.
12. Adjust the brush pattern according instructions in the Adjustments section.

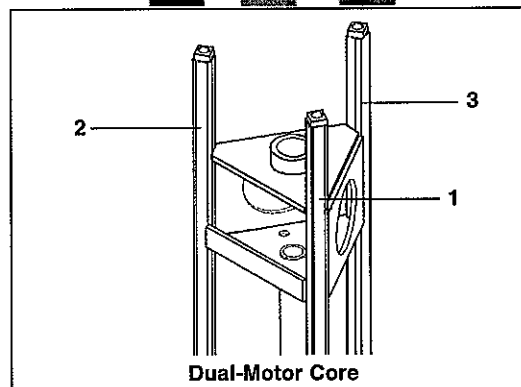
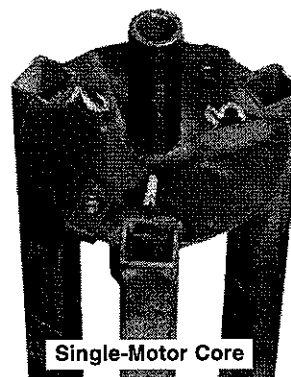


figure 14

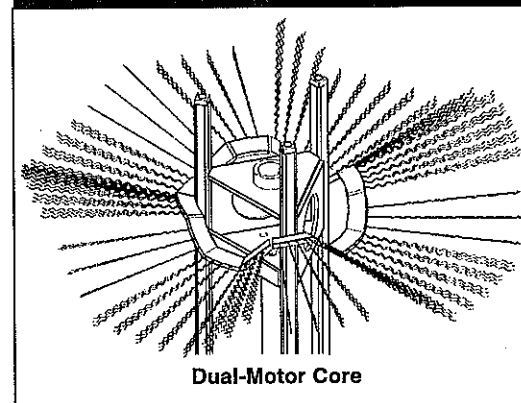
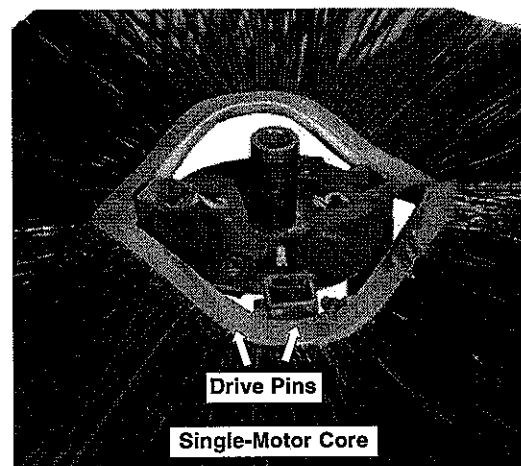


figure 15

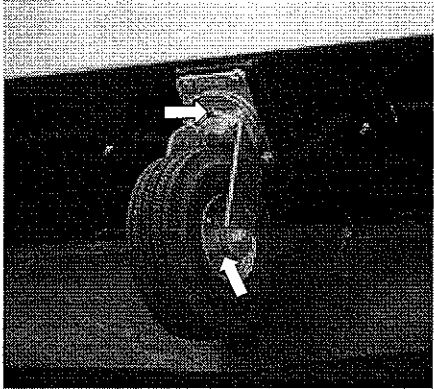


figure 16

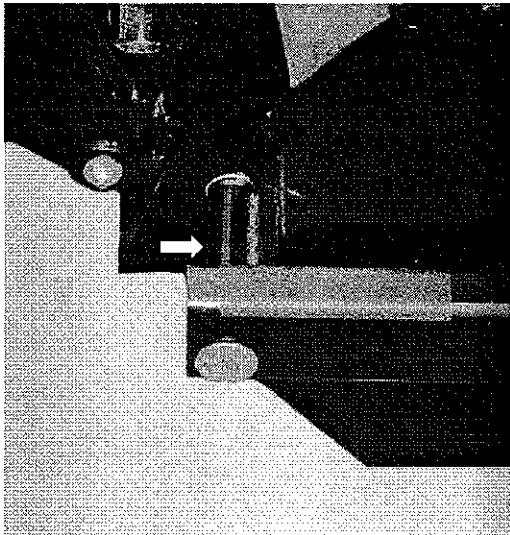


figure 17

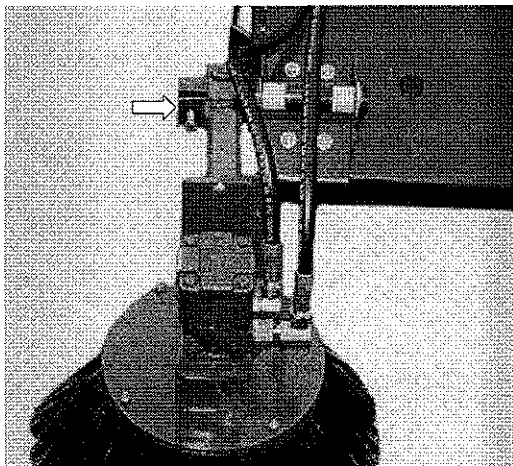


figure 18

Lubricating the Sweeper

Lubrication is an important part of daily maintenance. Each day, lubricate the following locations.

- Front caster axle and swivel zerks (figure 16)
- Rear bracket tube zerk (figure 17)
- Gutter brush pin zerk (inside the tube) (figure 18)

Maintaining Hydraulics

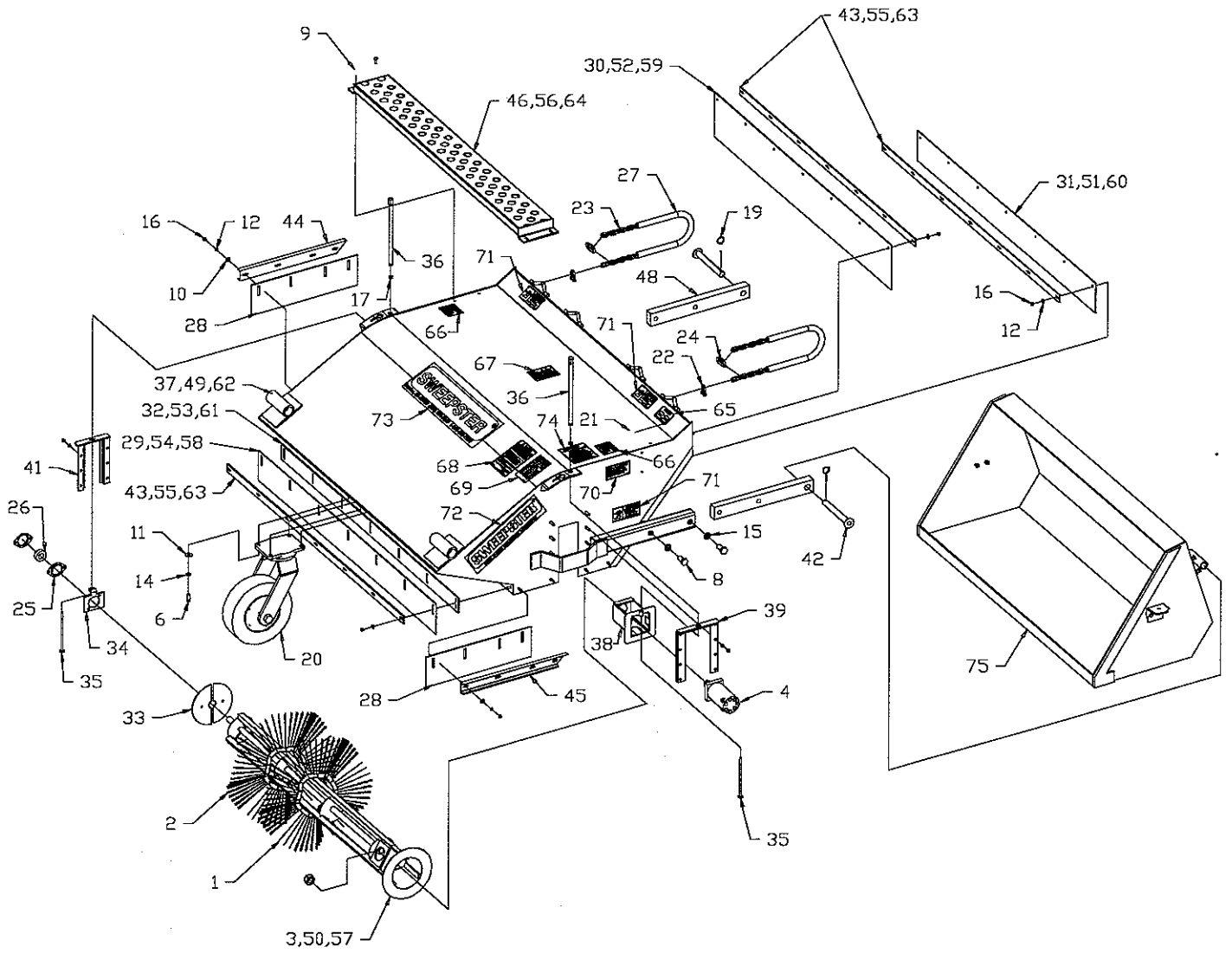
To prevent contamination of the sweeper hydraulic system, clean couplers before connecting hydraulics, and change oil and filters regularly according to manufacturer's instructions.

Main Sweeper

Item	Part	Qty	Description	Item	Part	Qty	Description
1.	01-0009C	14	Section, 24, Poly, Conv, HB48	41.	13-1518	1	Weld, Flange, Take-Up
	01-0009C	18	Section, 24, Poly, Conv, HB60	42.	13-1537	2	Weld, Pin, 8 1/2, W/Hole
	01-0009C	22	Section, 24, Poly, Conv, HB72	43.	13-1539	3	Plate, Mounting, Flap, HB60
2.	01-0015C	12	Section, 24, Wire, Conv, HB48	44.	13-1540	1	Channel, Mounting, Flap, Right
	01-0015C	17	Section, 24, Wire, Conv, HB60	45.	13-1541	1	Channel, Mounting, Flap, Left
	01-0015C	20	Section, 24, Wire, Conv, HB72	46.	13-1542	1	Weld, Step, HB
3.	01-0610	1	Weld, Core, HB60	48.	13-3107	2	Plate, Lift, Arm, Ext
4.	03-2743	1	Motor, Hyd, 12.15, 1" Taper	49.	13-3112	1	Weld, Sweeper, HB72
6.	07-0038	4	Screw, Cap, 1/2-13 x 1	50.	13-3119	1	Weld, Core, HB72
8.	07-0077	4	Screw, Cap, 3/4-10 x 1 1/2	51.	13-3136	1	Flap, Inside, HB72
9.	07-0105	4	Carriage, Bolt, 5/16 x 1	52.	13-3137	1	Flap, Rear, HB72
10.	07-0153	35	Washer, Flat, 5/16	53.	13-3138	1	Flap, Reinf, 3 x 74, HB72
11.	07-0156	4	Washer, Flat, 1/2	54.	13-3139	1	Flap, Front, HB72
12.	07-0167	48	Washer, Lock, Split, 5/16	55.	13-3140	3	Plate, Mounting, Flap, HB72
14.	07-0170	4	Washer, Lock, Split, 1/2	56.	13-3142	1	Weld, Step, HB72
15.	07-0173	4	Washer, Lock, Split, 3/4	57.	13-3947	1	Weld, Core, HB48
16.	07-0182	50	Nut, Hex, 5/16-18	58.	13-3991	1	Flap, Front, HB48
17.	07-0183	2	Nut, Hex, 3/8-16	59.	13-3992	1	Flap, Rear, HB48
19.	07-0244	2	Pin, Link, #1600	60.	13-3993	1	Flap, Inside, HB48
20.	07-3581	1	Caster Assembly, Pneu.	61.	13-3994	1	Flap, Reinf, HB48
21.	07-3624	4	Metal Tack	62.	13-3995	1	Weld, Sweeper, HB48
22.	07-2046	2	Shackle, Chain, 5/16	63.	13-3996	3	Plate, Mounting, Flap, HB48
23.	07-2840	2	Chain, 1/4, 66 Links	64.	13-3997	1	Weld, Step, HB48
24.	07-3311	2	Link, Quick, 5/16	65.	50-0004	1	Label, Plate, Serial Number
25.	08-0005	2	Flange, Bearing, 2 Hole	66.	50-0008-1	2	Label, Danger, No Riders
26.	08-0006	1	Bearing, 1 Round, W/Collar	67.	50-0013-1	1	Label, Danger, Falling
27.	09-0066	4 ft	Hose, LP, 1 Fiber	68.	50-0014-1	1	Label, Caution, Read Manual
28.	09-0103	2	Flap, Side, HB	69.	50-0014-2	1	Label, Warning, Running
29.	09-0104	1	Flap, Front, HB60	70.	50-0023-1	2	Label, Adj, Aprons
30.	09-0105	1	Flap, Rear, HB60	71.	50-0076-1	4	Label, Caution, Pinch Point
31.	09-0106	1	Flap, Inside, HB60	72.	50-0185	2	Label, Med, White, Logo
32.	09-0114	1	Flap, Reinf, 3 x 62, HB60	73.	50-0193	1	Label, Logo, Large, White
33.	11-1804	1	Plate, Retainer, Sect, Set	74.	50-0203	1	Label, Sweep, Direction
34.	11-1953	1	Plate, Mounting, Bearing, HB	75.	07-3779	1	Bucket, Drawing, 60, HB
35.	11-1955-1	2	Weld, Rod, Height, Adj, 3/8 x 8		07-3780	1	Bucket, Drawing, 72, HB
36.	11-9312	2	Weld, Tube, Height, Adj				
37.	13-1504	1	Weld, Sweeper, HB60				
38.	13-1505	1	Weld, Mounting, Motor, HB				
39.	13-1506	1	Weld, Motor, Guide				

Main Sweeper

Single Motor
Models HB48, HB60 & HB72

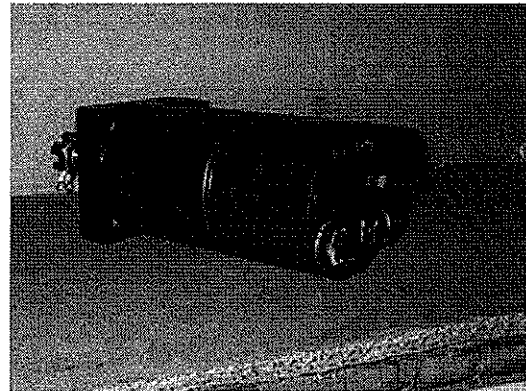


Hydraulic Motor

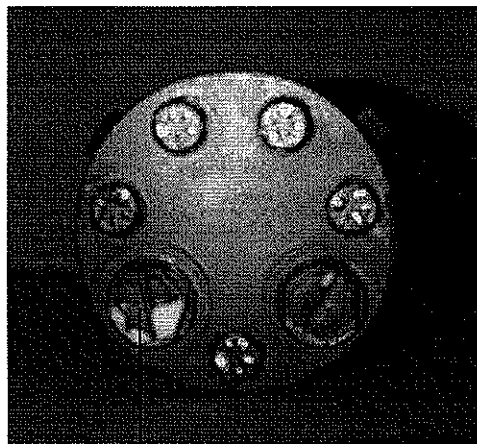
IMPORTANT – Do not disassemble hydraulic motor(s).

Disassembly may void warranty. If under warranty call SWEEPSTER Technical Service to arrange for replacement. If warranty has expired then contact SWEEPSTER for service parts and assembly drawing.

Hydraulic Motor 03-3204
Typical of
03-3052 and 03-2743



Seal kits available for hydraulic motors.
Seal kit for motor number 03-3204 is part number 03-1409. Seal kit for motors 03-2743 and 03-3052 is part number 03-2941.

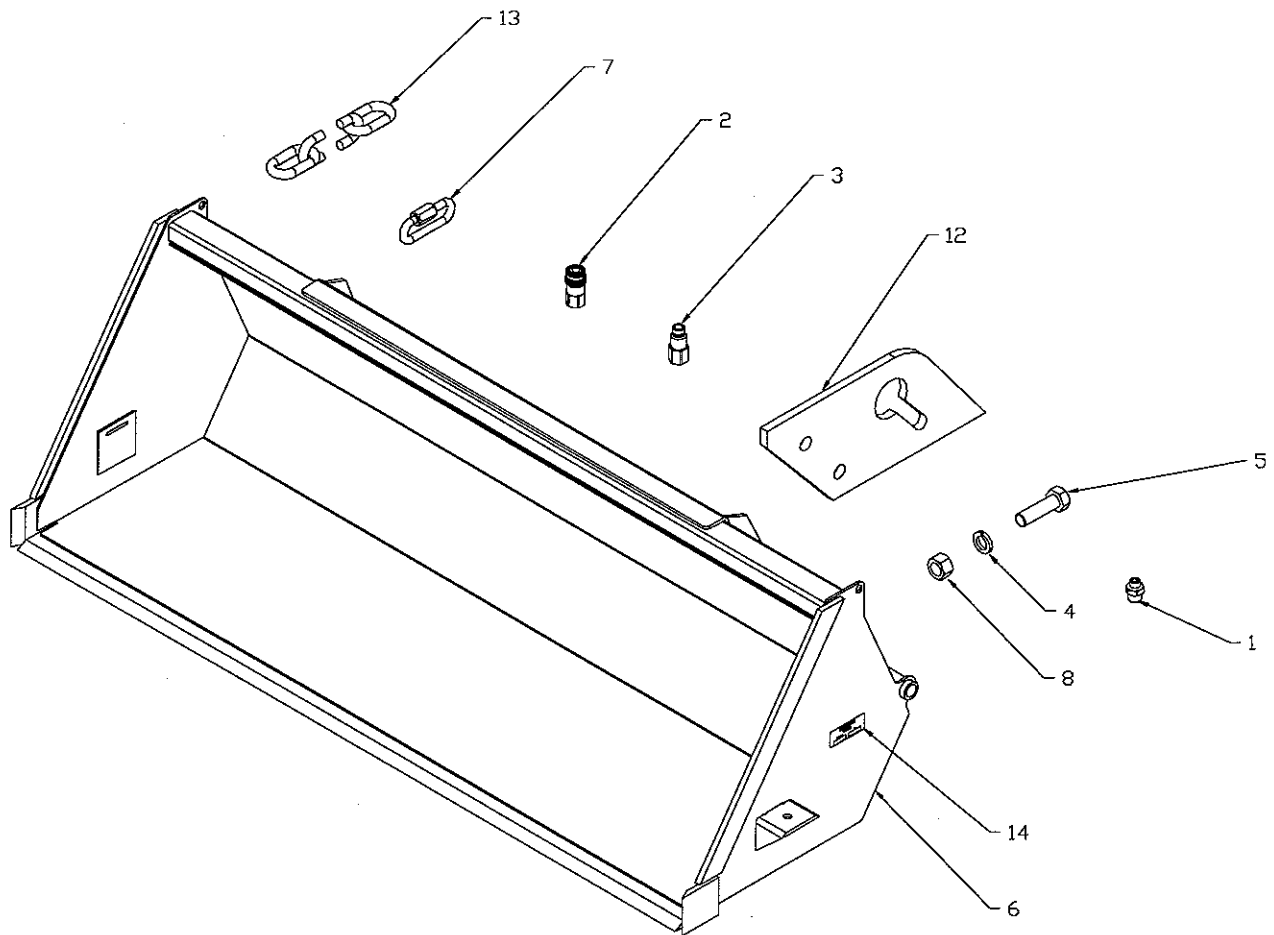


Input From
Prime Mover

Output To
Prime Mover

Bucket Kits

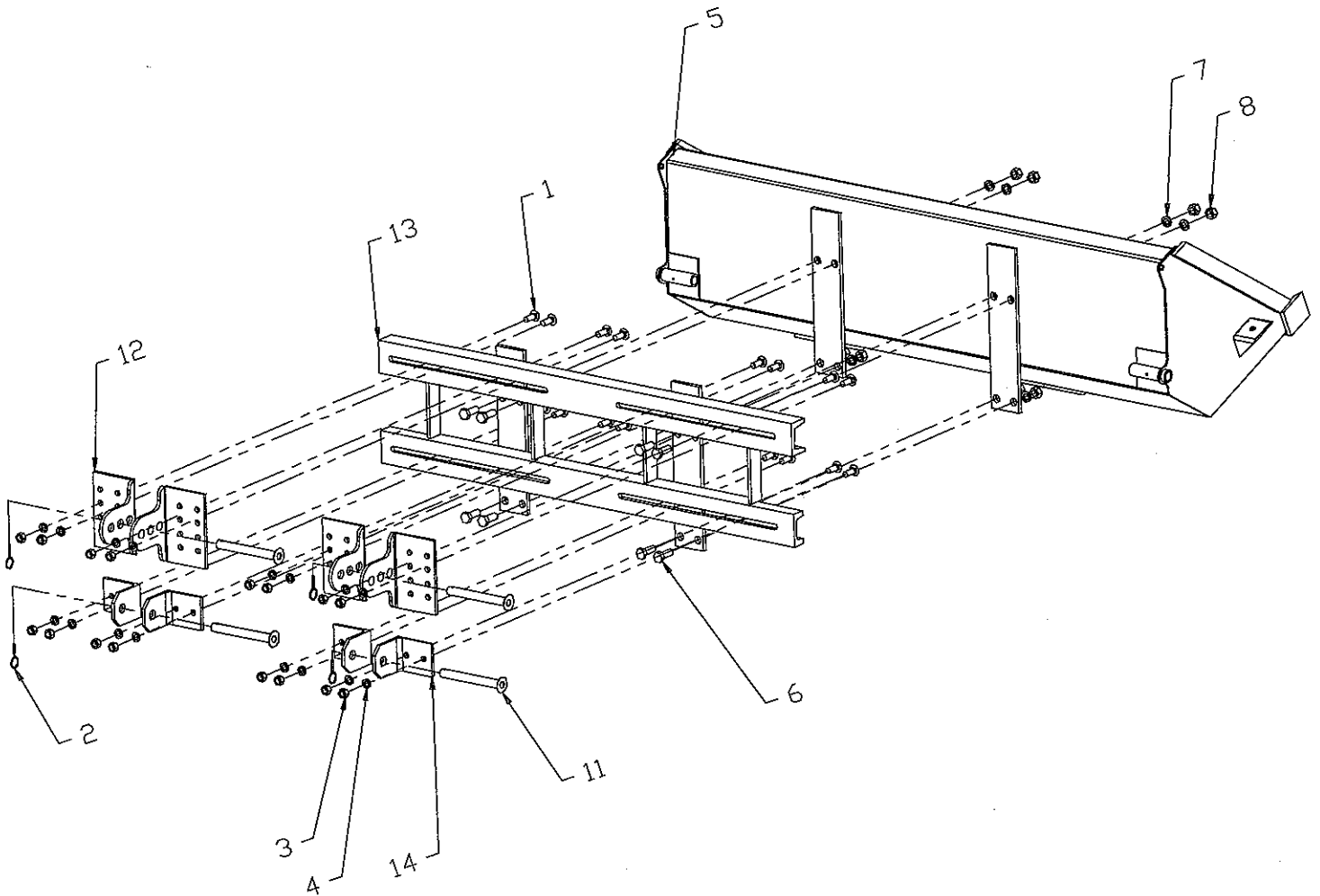
Assemblies 11-4419 & 11-4421



Item Part Qty Description

Item	Part	Qty	Description
1.	03-3515	2	Fitting, Cat 13/16-16 ORFS, Tend 1 1/16-12
2.	03-3859	1	Fitting, Quick Coupler, F1-1/16, FOR
3.	03-3860	1	Fitting, Quick Coupler, M1-1/16, FOR
4.	07-1718	4	Washer, Lock, Split, 3/8
5.	07-2116	4	Screw, Cap, 3/8-16 x 1 1/4
6.	07-2001	1	Bucket, HB60, Mustang, Melroe
	07-2635	1	Bucket, HB72, Melroe, 743/873A
7.	07-3311	2	Link, Quick, 5/16
8.	07-3654	4	Nut, Hex, 3/8-16
12.	13-7370	2	Plate, Chain, Mounting
13.	13-7371	2	Chain, 1/4, 24 Links
14.	50-0249	1	Label, Plate, Part Number, Date

Universal Mounting

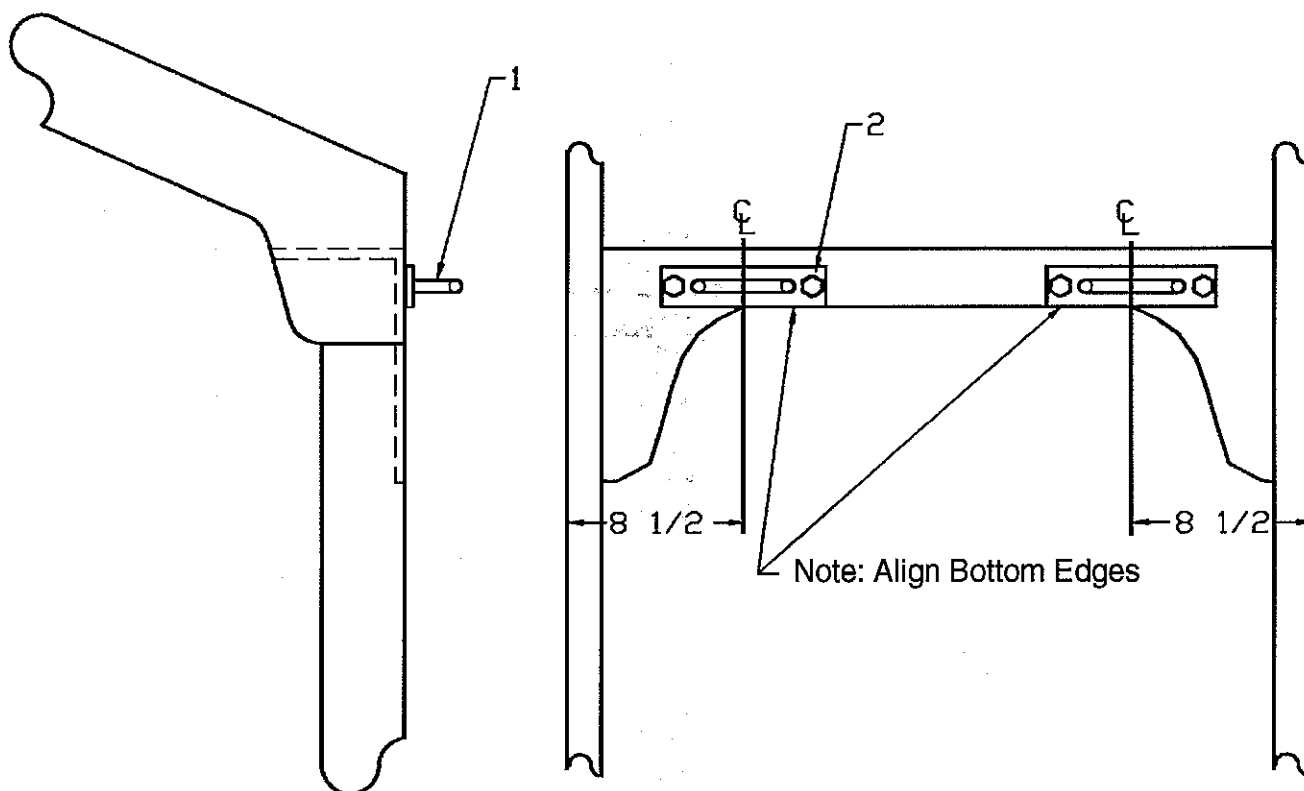


Item Part Qty Description

1.	07-0119	16	Bolt, Carriage, 5/8 x 1 3/4
2.	07-0244	4	Pin, Link
3.	07-1294	16	Nut, Hex, 5/8-11
4.	07-1872	16	Washer, Lock, Split, 5/8
5.	07-1930	1	Weld, Bucket, Adj. Fit, HB60
	07-2671	1	Weld, Bucket, Adj. Fit, HB72
6.	07-3064	8	Screw, Cap, 3/4 x 2
7.	07-3065	8	Washer, Lock, Split, 3/4
8.	07-3066	8	Nut, Hex, 3/4
11.	13-1537	4	Weld, Pin, 8 1/2 W/Hole
12.	13-1872	4	Plate, Mounting, Top, HB, Universal
13.	13-1873	1	Frame, Mounting, HB, Universal
14.	13-1874	4	Plate, Mounting, HB, Universal

Hook Points

For Sweeper Mounted on Thomas Skid Steer Loader



Item Part Qty Description

- 1. 13-4278 2 Hook
- 2. 07-0039 4 Screw, Cap, 1/2

Option – Gutter Brush

Installing Gutter Brushes

The following describes installing a single gutter brush. Repeat on the opposite side for a second gutter brush.

1. On 1 side, remove 4 plugs (figure 21) from holes in the sweeper hood.
2. Attach a sleeve plate (figure 21) to the sweeper hood where plugs were just removed. Use 4 screws, washers, lock washers and nuts.
3. Insert a nylon bushing into each side of the sleeve.
4. Slide the gutter brush pin (figure 22) into the sleeve. Place the round plate on the gutter brush pin and secure with a roll pin.
5. Place the gutter brush arm (figure 22) on the gutter brush pin and secure with the welded pin (figure 20) and cotter pin.
6. Attach the motor mounting plate (figure 22) to the gutter brush arm.
7. Place motor on motor mounting plate (figure 22) and secure with screws indicated in parts list.
8. Attach the brush to the motor (figure 22) using the set screw and screw provided.
9. Place the chain in the keyhole slot (figure 23) on top of the hood. The chain end goes to the outside. If desired, place the chain end inside the adjustment tube to reduce rattling.
10. Attach hydraulic hoses. (Refer to hydraulic diagrams on pages 37-40 for setup.)

IMPORTANT – Avoid hydraulic system damage. Make sure hose ends and gutter brush motor ports are clean before installation.

IMPORTANT – Avoid hose damage. Make sure that hoses do not get pinched or twisted. Do not allow hoses to drag on the ground.

11. Adjust according to Adjusting Gutter Brush Contact Area and Adjusting Gutter Brush Swing on page 34.

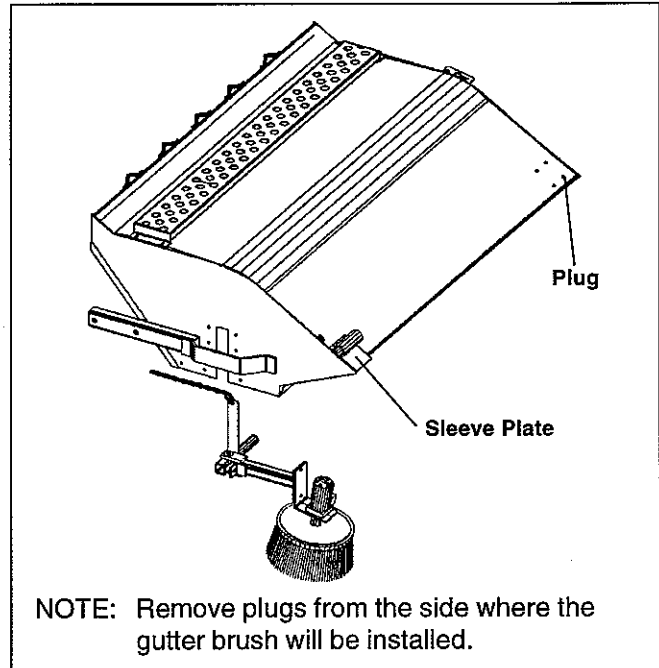


figure 21

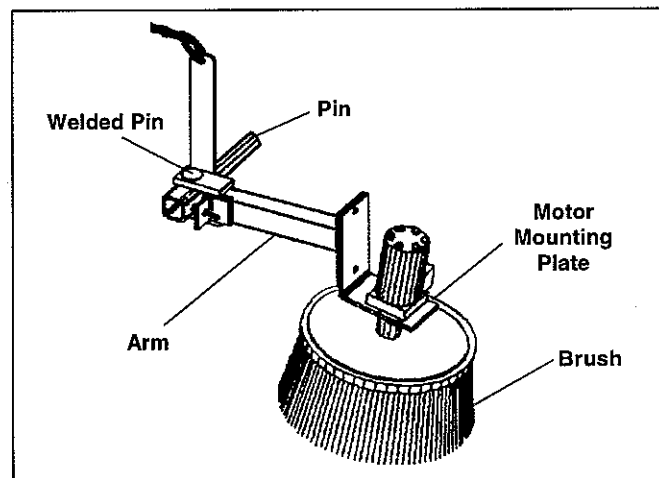


figure 22

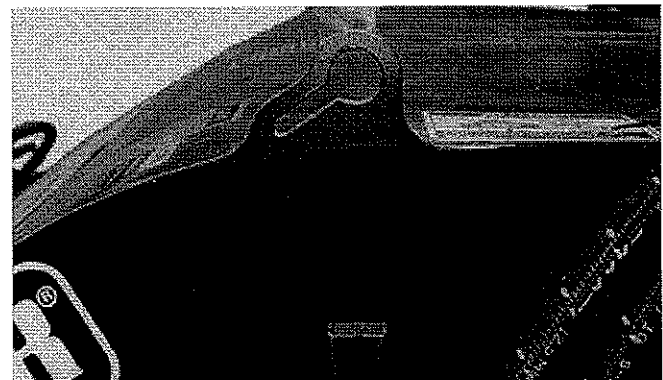


figure 23

Option – Gutter Brush

Adjusting Gutter Brush Contact Area

On a properly adjusted gutter brush, only a portion of the brush contacts the sweeping surface. figure 24 shows proper contact areas for both left and right gutter brushes.

To adjust the gutter brush contact area:

1. Lower the gutter brush onto the surface to be swept.
2. Loosen the bolts holding the gutter brush motor mounting plate to the gutter brush arm.
3. Turn the motor mounting plate right or left and adjust the tension chain to create the correct contact area.
4. Tighten the bolts.

Adjusting Gutter Brush Swing

The gutter brush should swing out only 1/2 in. (13 mm). To adjust the amount of swing:

1. Loosen the nut (figure 25).
 2. Adjust the bolt in for more swing or out for less (figure 25).
 3. Tighten the nut.
-

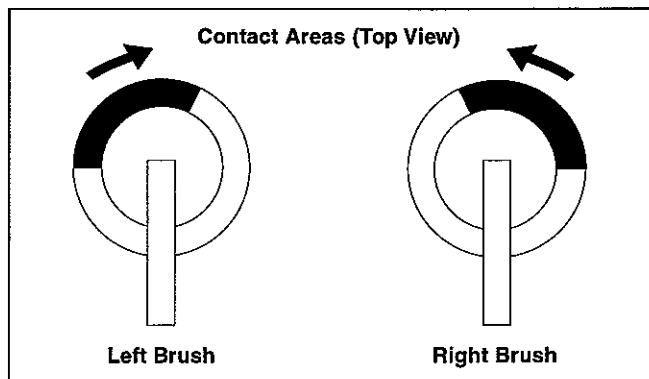


figure 24

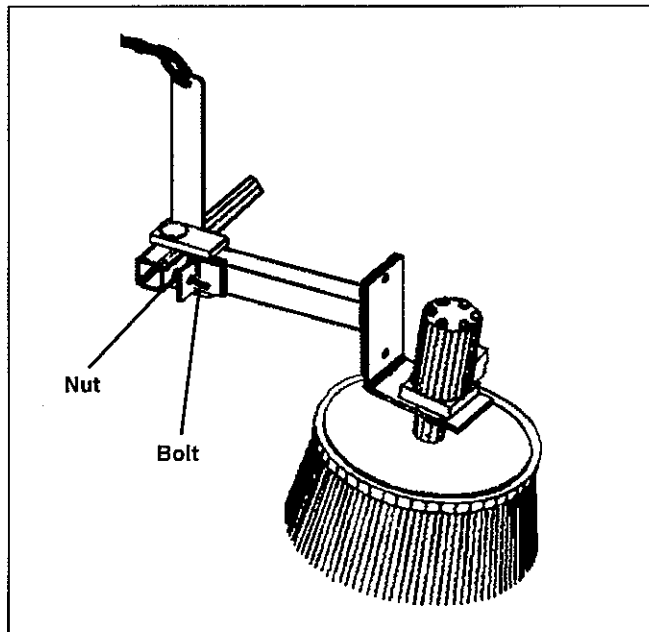


figure 25

Option – Gutter Brush

Using Gutter Brushes

Gutter brushes are only for sweeping forward.

When sweeping next to a curb or wall, sweep so only the bristle tips touch the vertical surface.

When not using a gutter brush for a short time, raise it with the tension chain. During extended periods of nonuse, unhook the hydraulic hoses from the gutter brush motor, remove the gutter brush assembly and connect the hydraulics to run only the main brush.

IMPORTANT – Contaminates can damage the hydraulic system. Cap gutter brush hoses and couplers during extended periods of nonuse.

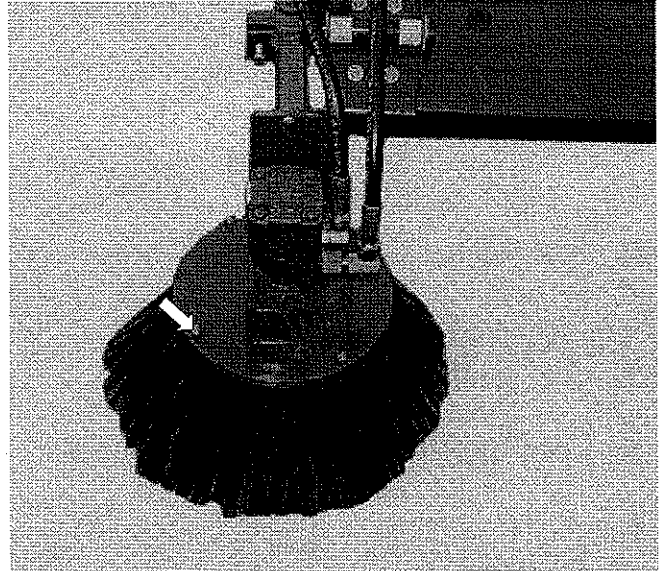


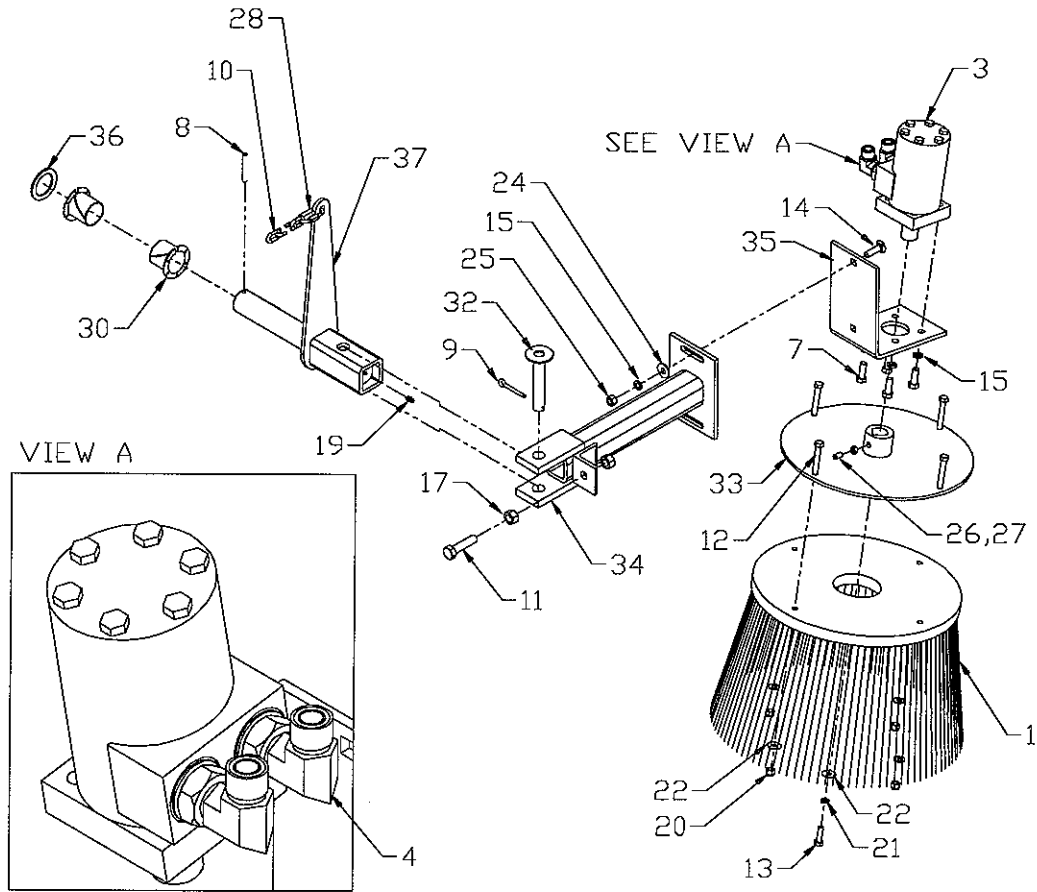
figure 26

Replacing Gutter Brush

1. Remove 4 screws from the gutter brush plate (figure 26) to detach the worn gutter brush.
2. Attach a new gutter brush to the plate with the 4 screws just removed.
3. Adjust according to Adjusting Gutter Brush Contact Area and Adjusting Gutter Brush Swing.

Option – Gutter Brush

To order, ask for HBGB (Wire) or HBGBP (Poly).

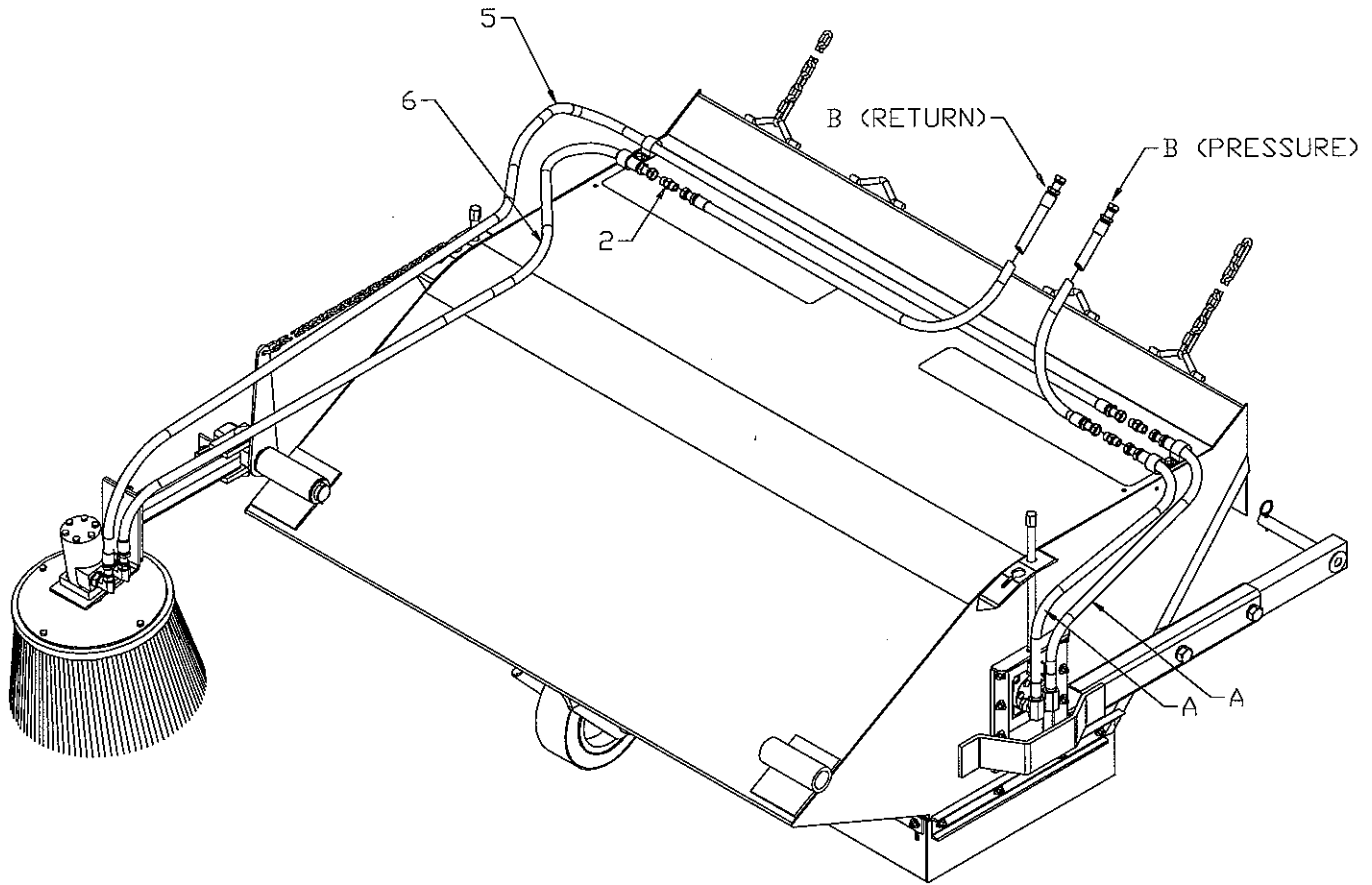


Item	Part	Qty	Description
1.	01-0523	1	Gutterbroom, 13, Woodback, Wire
	01-0704	1	Gutterbroom, 13, Woodback, Poly
2.	03-1919	2	Fitting, Union, 1/2 MFS, 1/2 MFS
3.	03-3153	1	Motor, White, RC12-12.5, Cu. In
4.	03-3498	2	Fitting, Adapter, 90°, M10SAE/M8ORFS
5.	03-3813	1	Hose, 1/2 x 120, 451 AR, 1/2FFS, 1/2 FFS
6.	03-3814	2	Hose, 1/2 x 56, 451 AR, 1/2 FFS, 1/2 FFS
7.	07-0018	4	Screw, Cap, 3/8-16 x 1
8.	07-0204	1	Pin, Roll, 1/4 x 2
9.	07-0206	1	Pin, Cotter, 3/16 x 2
10.	07-0387	1	Chain, 3/16, 26 Links
11.	07-1125	1	Screw, Cap, Tap, 1/2-13 x 2
12.	07-1698	4	Screw, Cap, 5/16-18 x 2
13.	07-1714	2	Screw, Cap, 5/16-18 x 1
14.	07-1717	2	Bolt, Carriage, 3/8-16 x 1 1/4
15.	07-1718	6	Washer, Lock, Split, 3/8
16.	07-1721	2	Clamp, Rubber Coat, 1 1/4 Hose
17.	07-1764	2	Nut, Hex, 1/2-13

Item	Part	Qty	Description
19.	07-3112	1	Fitting, Zerk, 1/4-28 Self Tap
20.	07-3270	4	Nut, Hex, 5/16-18, Nylock
21.	07-3273	2	Washer, Lock, Split, 5/16
22.	07-3275	7	Washer, Flat, 5/16
23.	07-3278	1	Nut, Hex, 5/16-18
24.	07-3279	2	Washer, Flat, 3/8
25.	07-3654	2	Nut, Hex, 3/8-16
26.	07-4724	1	Screw, Set, 5/16-18 x 5/8, Cup Point
27.	07-4725	1	Nut, Hex, Jam, 5/16-18
28.	07-5054	1	Link, Quick, 3/16
30.	09-0156	2	Flange, Bearing, Nylon
32.	11-3163	1	Weld, Pin, 3/4 W/Hole
33.	13-0374	1	Weld, Plate, Gutter Broom
34.	13-2264	1	Weld, Arm, Gutterbroom
35.	13-2265	1	Plate, Mounting, Gutterbroom
36.	13-7004	1	Plate, Round, 10 Gauge x 2.125 x 1.505
37.	13-10254	1	Weld, Pin, Mounting, Gutterbroom

Option – Gutter Brush

Hydraulic Hookup for Single Motor Unit with Single Gutter Brush

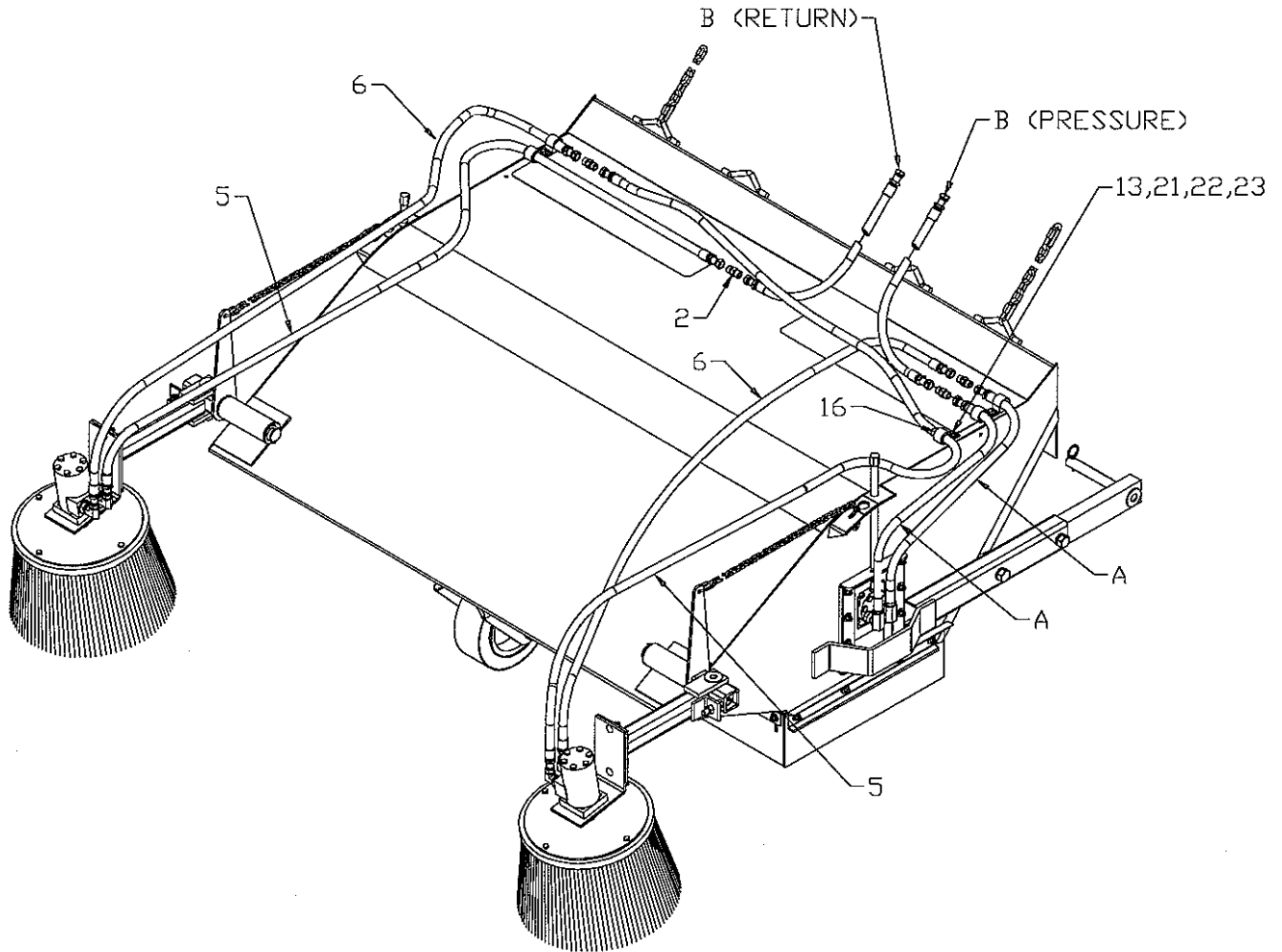


Item	Part	Qty	Description
2	03-1919	2	Fitting, Union, 1/2 MFS, 1/2 MFS
5	03-3813	1	Hose, 1/2 x 120, 451 AR, 1/2 FFS, 1/2 FFS
6	03-3814	2	Hose, 1/2 x 56, 451 AR, 1/2 FFS, 1/2 FFS
A	03-3811		Hose, 1/2 x 32, 451 AR, 1/2 FFS, 3/4 MORS, 90°
B	03-3812		Hose, 1/2 x 72, 451 AR, 1/2 FFS Both Ends

NOTE – Alpha call outs are included with the sweeper assembly.

Option – Gutter brush

Hydraulic Hookup for Single Motor Unit with Dual Gutter Brush



Item Part Qty Description

2	03-1919	2	Fitting, Union, 1/2 MFS, 1/2 MFS
5	03-3813	1	Hose, 1/2 x 120, 451 AR, 1/2 FFS, 1/2 FFS
6	03-3814	2	Hose, 1/2 x 56, 451 AR, 1/2 FFS, 1/2 FFS
13.	07-1714	2	Screw, Cap, 5/16-18 x 1
16.	07-1721	3	Clamp, Rubber Coat, 1 1/4 Hose
21.	07-3273	2	Washer, Lock, Split, 5/16
22.	07-3275	7	Washer, Flat, 5/16
23.	07-3278	1	Nut, Hex, 5/16-18
A	03-3811		Hose, 1/2 x 32, 451 AR, 1/2 FFS, 3/4 MORS, 90°
B	03-3812		Hose, 1/2 x 72, 451 AR, 1/2 FFS Both Ends

NOTE – Alpha call outs are included with the sweeper assembly.

Option – Sprinkler

Installation

1. Install the tank.
 - a. 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. See figure 27.
 - b. Transfer holes from the tank to the sweeper.
 - c. Drill holes.
 - d. Secure the tank to the sweeper with washers and screws.
 - e. Install a 5/8 in.–1/2 in. barb fitting on the tank outlet.
 - f. Connect the 10 ft (3 m) hose to the barb fitting. Secure it with a 7/8 in. (22 mm) hose clamp.
2. Remove 4 small plugs from the sweeper hood (figure 27).
3. Connect the filter to the pump. Place this assembly over the holes and secure it to the sweeper hood with 4 screws, nuts and washers (figure 28).
4. Attach a 5/8 in.–1/2 in. barb fitting to the strainer.
5. Connect the 10 ft (3 m) hose to the barb fitting. Secure it with a 7/8 in. (22 mm) hose clamp.
6. For sweepers with gutter brushes, on each gutter brush:
 - a. Remove 2 screws from the motor mounting plate.
 - b. Place the spraybar underneath the motor mounting plate.
 - c. Reinstall the hardware.
 - d. Clamp an elbow nozzle to the spraybar.

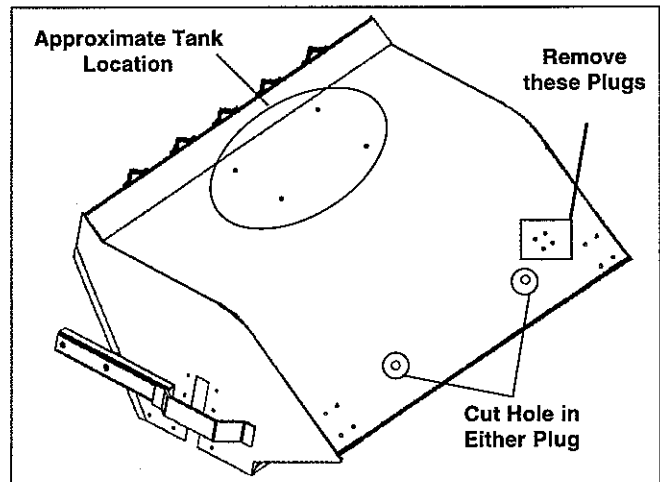


figure 27

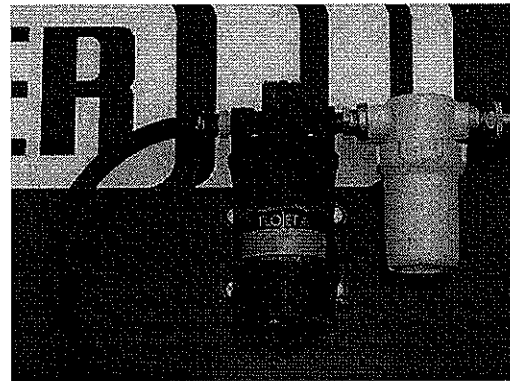


figure 28

Continued on next page

Option – Sprinkler

7. Measure and cut the 25 ft (7.6 m) hose into required lengths. Depending on the setup, you may have extra hose, nozzles and clamps.

No Gutter Brush

- 2 – 14 in. (356 mm) lengths
- 1 – 18 in. (458 mm) length
- 1 – 32 in. (813 mm) length

Single Gutter Brush on Right-Hand Side

- 2 – 14 in. (356 mm) lengths
- 1 – 18 in. (458 mm) length
- 1 – 32 in. (813 mm) length
- 1 – 42 in. (1067 mm) length

Single Gutter Brush on Left-Hand Side

- 2 – 14 in. (356 mm) lengths
- 1 – 18 in. (458 mm) length
- 1 – 32 in. (813 mm) length
- 1 – 42 in. (1067 mm) length
- 1 – 50 in. (1270 mm) length

Dual Gutter Brush

- 2 – 14 in. (356 mm) lengths
- 1 – 18 in. (458 mm) length
- 1 – 32 in. (813 mm) length
- 2 – 42 in. (1067 mm) lengths

8. Assemble hoses and nozzles.

NOTE – Refer to figure 29 for a hose schematic. The view is from the perspective of facing the front of the unit.

- a. Connect a hose to the pump.
- b. Cut a hole through the middle of either large plug (figure 26).
- c. For dual gutter brush setup, add a T-fitting to the end of the hose. Then, connect a 42 in. (1067 mm) hose to the T-fitting's branch. Next, add an elbow nozzle to the end of the 42 in. (1067 mm) hose. Now, install the elbow nozzle on the spraybar fitting. To the other side of the T-fitting, add a 32 in. (813 mm) hose.
- d. Insert the hose through the plug.
- e. Attach a T-nozzle to the hose; secure it with a clamp.
- f. Add a 14 in. (356 mm) hose to the other side of the T-nozzle. Secure with a clamp. g. Install the T-nozzle on the first eyelet (figure 30).

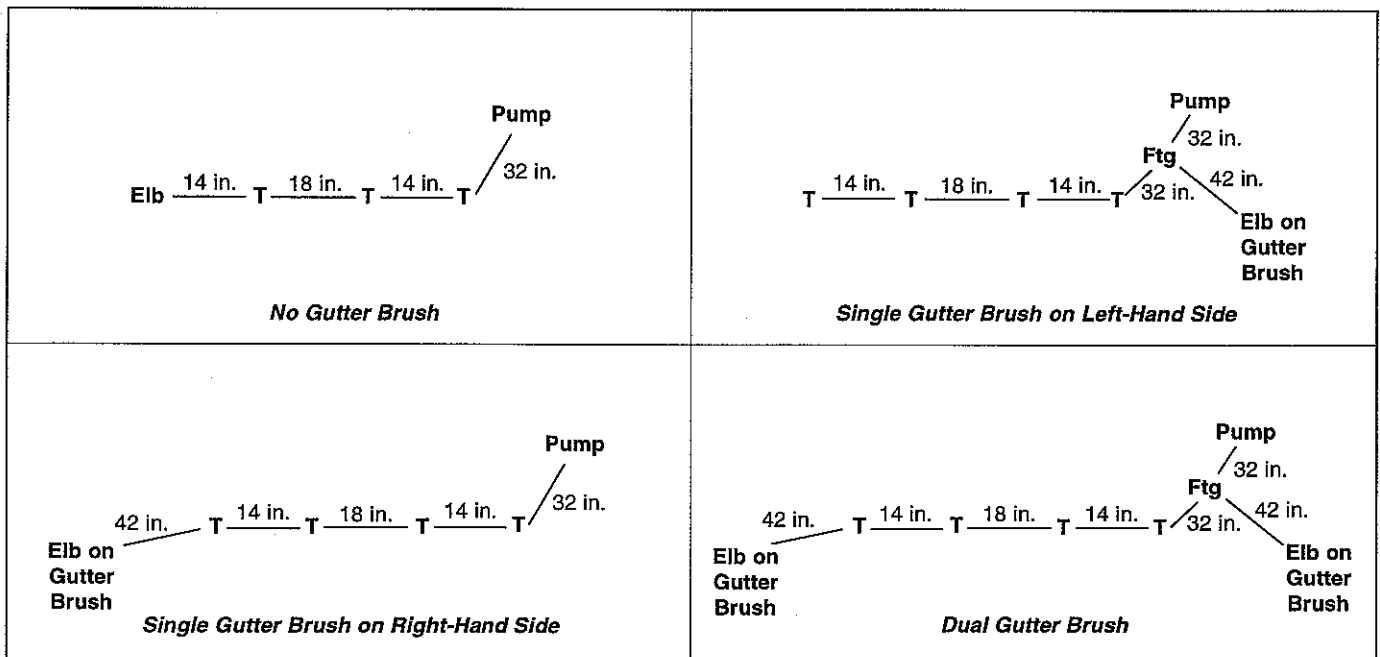


figure 29

Option – Sprinkler

- g. Add a T-nozzle to the end of the hose; secure it with a clamp.
- h. Connect an 18 in. (458 mm) hose to the other side of the T-nozzle. Secure it with a clamp.
- i. Install the T-nozzle on the second eyelet.
- j. Thread the hose through the hole in the gusset in the middle of the beak.
- k. Add a T-nozzle to the end of the hose. Secure with a clamp.
- l. Add a 14 in. (356 mm) hose to the other side of the T-nozzle. Secure with a clamp.
- m. Add a nozzle to the end of the 14 in. (356 mm) hose.
 - For setup without gutter brushes, install an elbow nozzle.
 - For setup with gutter brushes, install a T-nozzle.
- n. Install the T-nozzle on the third eyelet and the nozzle added in step n on the last eyelet.
 - For setup without gutter brushes, hose and nozzle installation is complete. Go on to step 5.
 - For setup with gutter brushes, go on to step p.
- o. Add a 42 in. (1067 mm) hose to the other side of the T-nozzle.
- p. Cut a hole in the middle of the other large plug and then route the 42 in. (1067 mm) hose up through it.
- q. Attach an elbow nozzle to the end of the 42 in. (1067 mm) hose. Secure with a hose clamp.
- r. Install the elbow nozzle on the gutter brush.

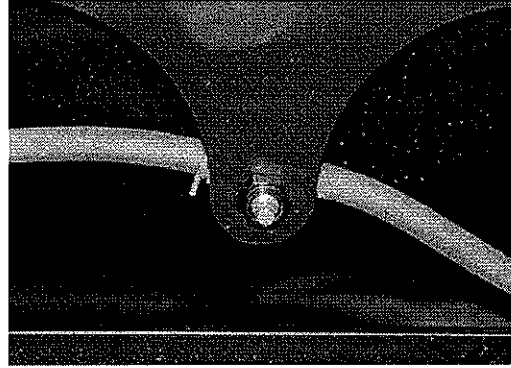
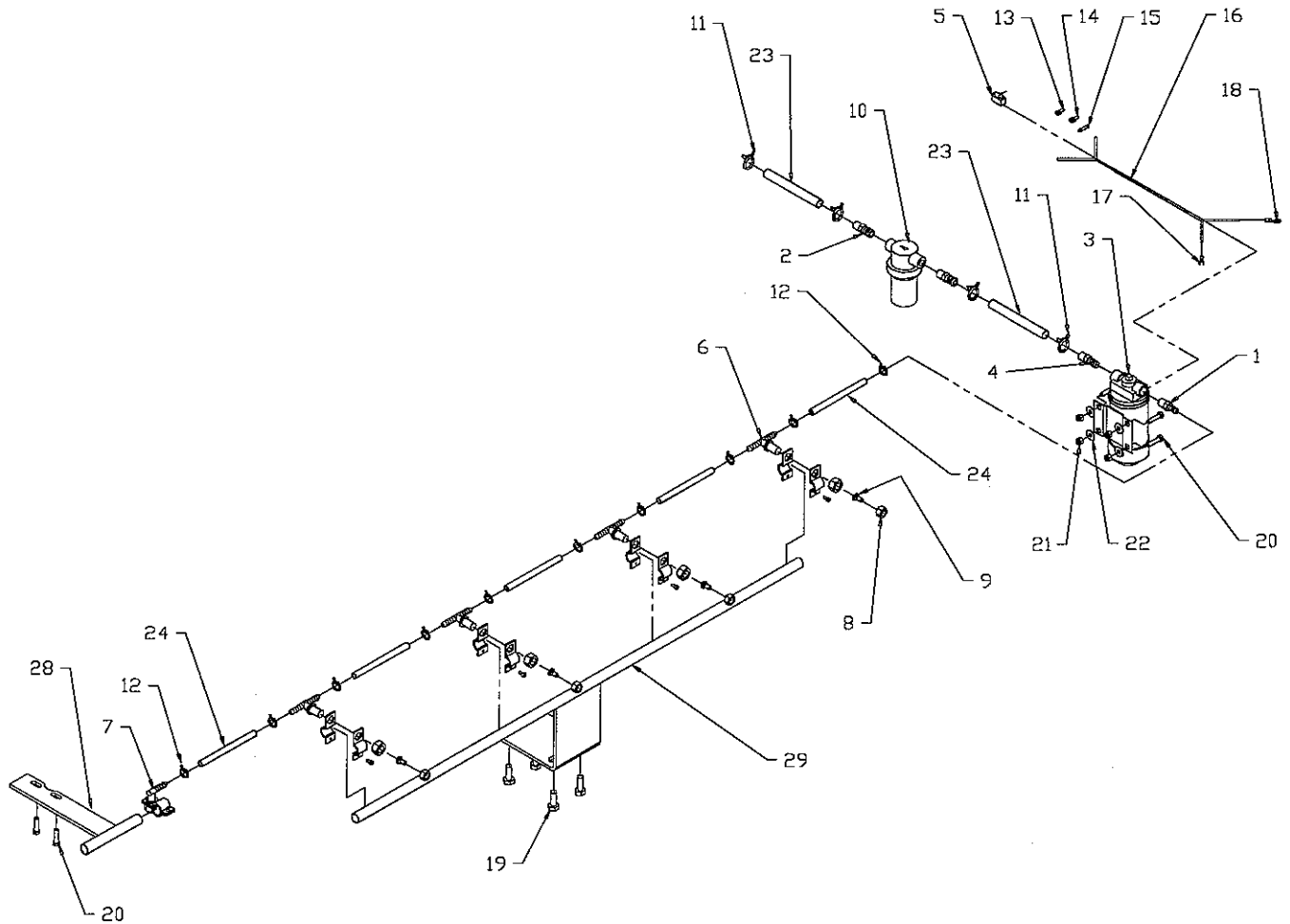


figure 30

Option – Sprinkler (No Tank)

**For Sweeper with Gutter Brushes
To order, ask for kit 11-4220 & 11-4366**



Item Part Qty Description

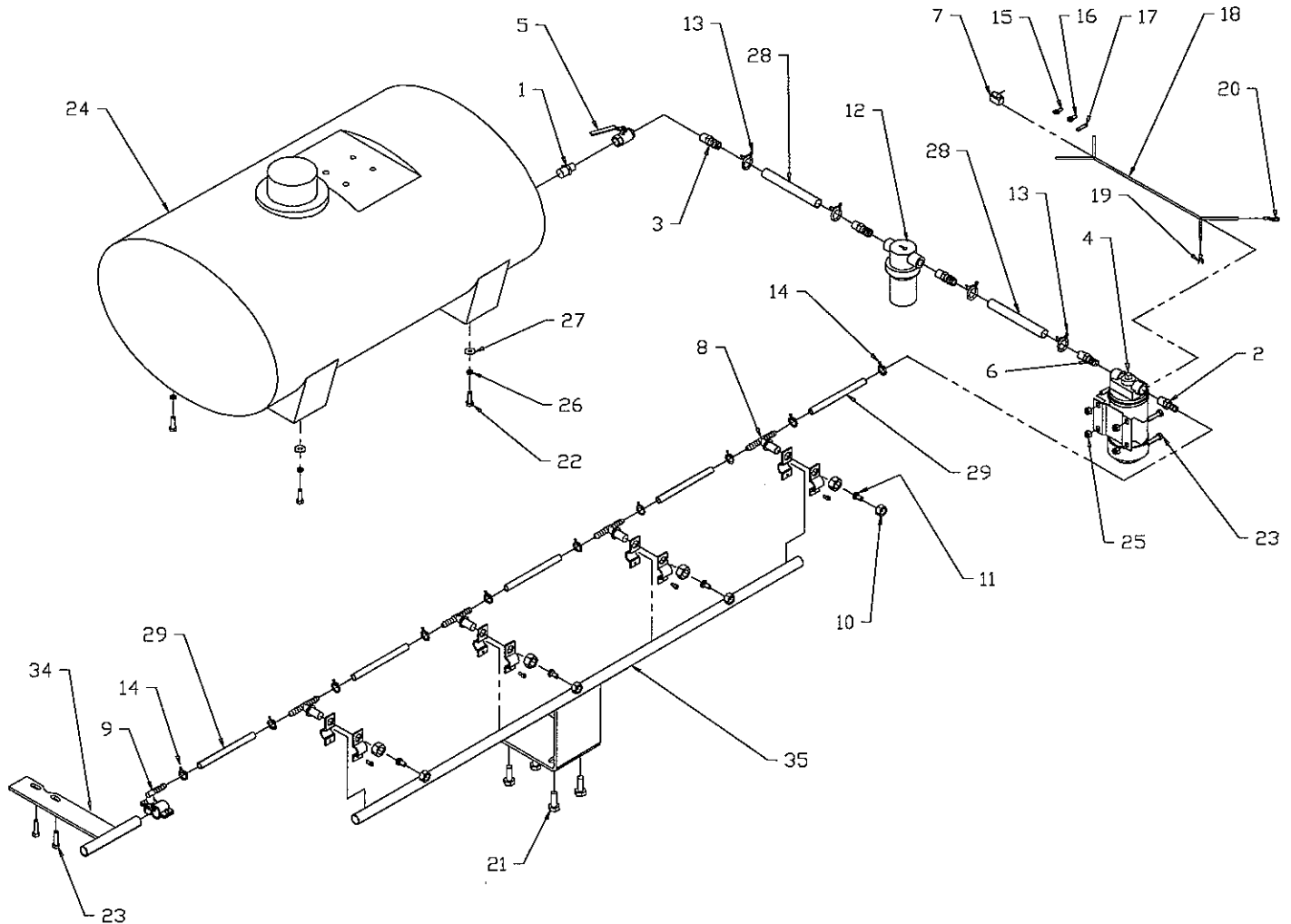
1.	03-0457	1	Fitting, Barb, Nylon, 3/8-3/8 MP
2.	03-1226	2	Fitting, Barb, HP, 5/8-1/2 MP
3.	03-1326	1	Pump, Flojet, Water, 2.9 gpm
4.	03-1709	1	Fitting, Barb, Nyl, 5/8, 3/8 MP
5.	07-0343	1	Switch Toggle, 2 Position
6.	07-0411	4	Nozzle, Tee, with Clamp
7.	07-0412	1	Nozzle, Elbow, with Clamp
8.	07-0413	5	Nozzle, Cap, Nylon
9.	07-0414	5	Nozzle, Tip, Brass
10.	07-0532	1	Strainer, Water
11.	07-0547	4	Clamp, Spring, 7/8, Hose
12.	07-0549	10	Clamp, Spring, 5/8, Hose
13.	07-0812	2	Terminal, Quick Disc, FN1/4F, 16-14
14.	07-0813	2	Terminal, Quick Disc, FN1/4M, 16-14
15.	07-0867	2	Terminal, Butt, Spl, Ins, 16-14
16.	07-0917	15 ft	Wire, Cord, 16 Gauge, 2 Con

Item Part Qty Description

17.	07-0926	1	Terminal, Spade, 6, 16-14
18.	07-0927	1	Terminal, Ring, 1/4, 16-14
19.	07-1309	4	Screw, Cap, 1/2-13 x 1 1/4
20.	07-1973	6	Screw, Cap, 5/16-18 x 1 1/4
21.	07-3270	4	Nut, Hex, Nylock, 5/16-18
22.	07-3275	4	Washer, Flat, 5/16
23.	09-0028	7 ft	Hose, Heater, 5/8
24.	09-0056	25 ft	Hose, Heater, 3/8
28.	13-2490	1	Weld, Spraybar, Gutterbroom, HB
29.	13-2493	1	Weld, Spraybar, HB60
	13-3984	1	Weld, Spraybar, HB72

Option – Sprinkler (With Tank)

**For Sweeper with Gutter Brushes
To order, ask for kit 13-4617 & 13-4618**



Item Part Qty Description

1.	03-0152	1	Fitting, Nipple, BP, Close, 1/2
2.	03-0457	1	Fitting, Barb, Nyl, 3/8, 3/8 MP
3.	03-1226	3	Fitting, Barb, HP, 5/8, 1/2 MP
4.	03-1326	1	Pump, Flojet, Water, 2.1 G.P.M., 12Volt
5.	03-1392	1	Valve, Shut-Off, Ball, 1/2
6.	03-1709	1	Fitting, Barb, Nyl, 5/8, 3/8 MP
7.	07-0343	1	Switch, Toggle, 2 Position
8.	07-0411	4	Nozzle, Tee, W/Clamp
9.	07-0412	1	Nozzle, Elbow, W/Clamp
10.	07-0413	5	Nozzle, Cap, Nylon
11.	07-0414	5	Nozzle, Tip, Brass, Tk 1.5
12.	07-0532	1	Strainer, Hypro, Water, 3350
13.	07-0547	4	Clamp, Spring, 7/8, Hose
14.	07-0549	10	Clamp, Spring, 5/8, Hose
15.	07-0812	2	Terminal, Quick Disc, FN1/4F, 16-14
16.	07-0813	2	Terminal, Quick Disc, FN1/4M, 16-14

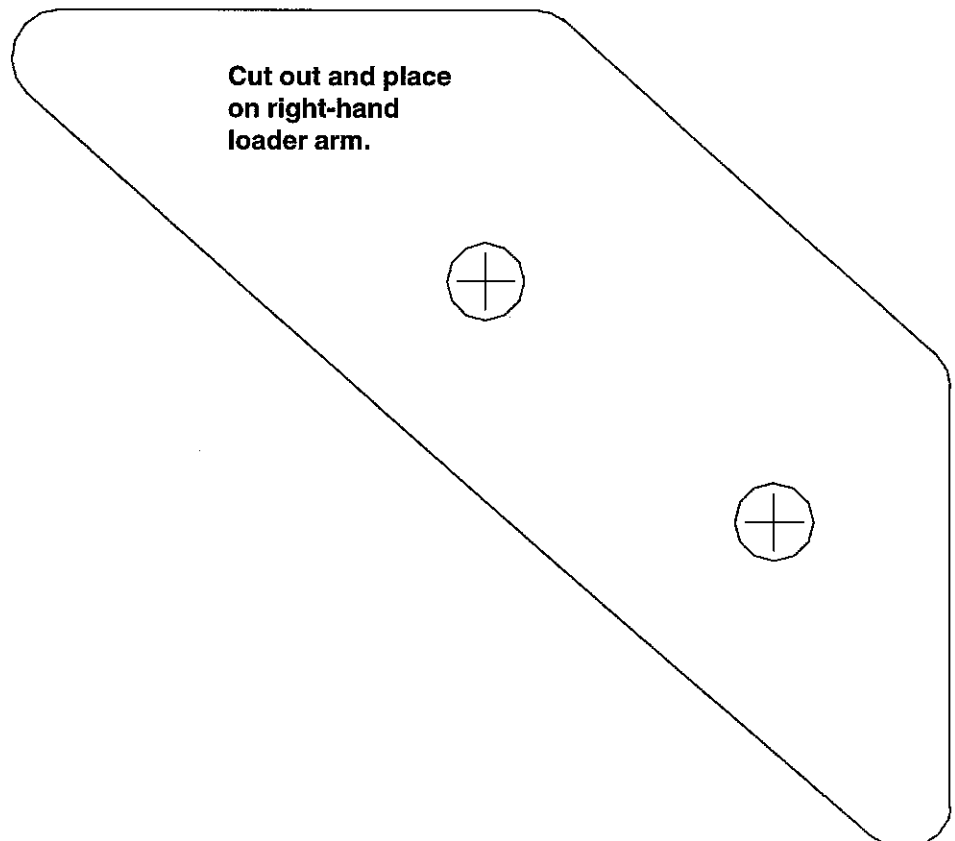
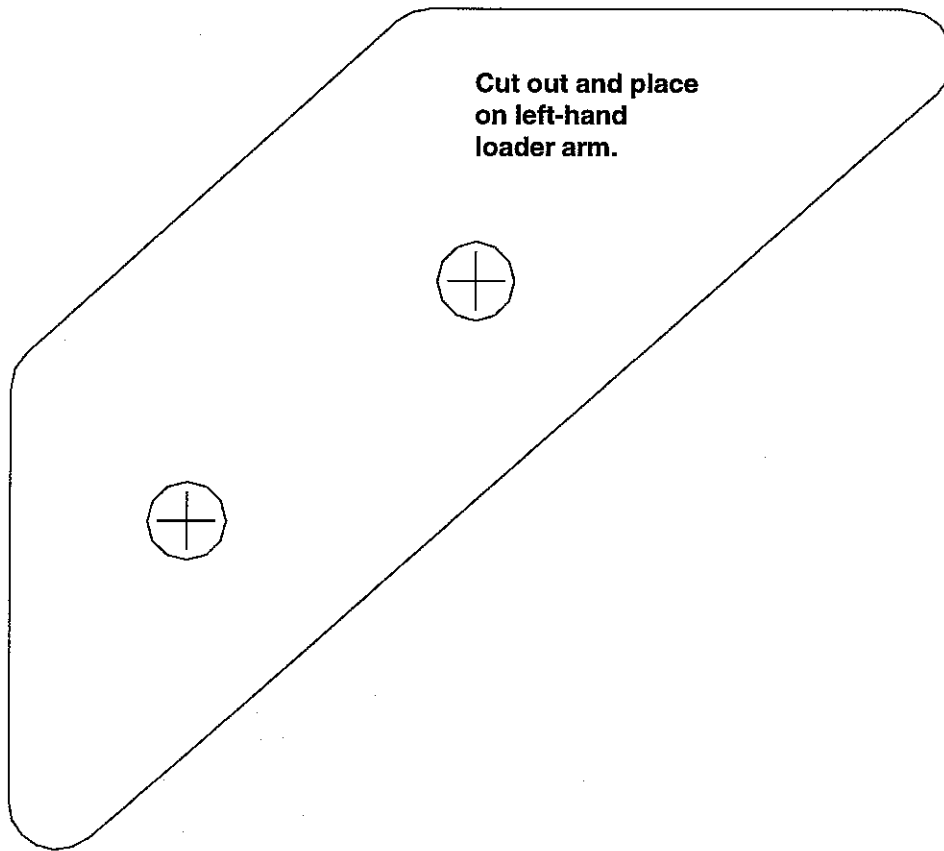
Item Part Qty Description

17.	07-0867	2	Terminal, Butt, Spl, Ins, 16-14
18.	07-0917	15 ft	Wire, Cord, 16 Gauge, 2 Con
19.	07-0926	1	Terminal, Spade, 6, 16-14
20.	07-0927	1	Terminal, Ring, 1/4, 16-14
21.	07-1309	4	Screw, Cap, 1/2-13 x 1 1/4
22.	07-1714	4	Screw, Cap, 5/16-18 x 1
23.	07-1973	6	Screw, Cap, 5/16-18 x 1 1/4
24.	07-3150	1	Tank, Water, 25 Gallon
25.	07-3270	4	Nut, Hex, Nylock, 5/16-18
26.	07-3273	4	Washer, Lock, Split, 5/16
27.	07-3275	4	Washer, Flat, 5/16
28.	09-0028	7 ft	Hose, Heater, 5/8
29.	09-0056	25 ft	Hose, Heater, 3/8
34.	13-2490	1	Weld, Spraybar, Gutterbroom, HB
35.	13-2493	1	Weld, Spraybar, HB60
	13-3984	1	Weld, Spraybar, HB72

Notes

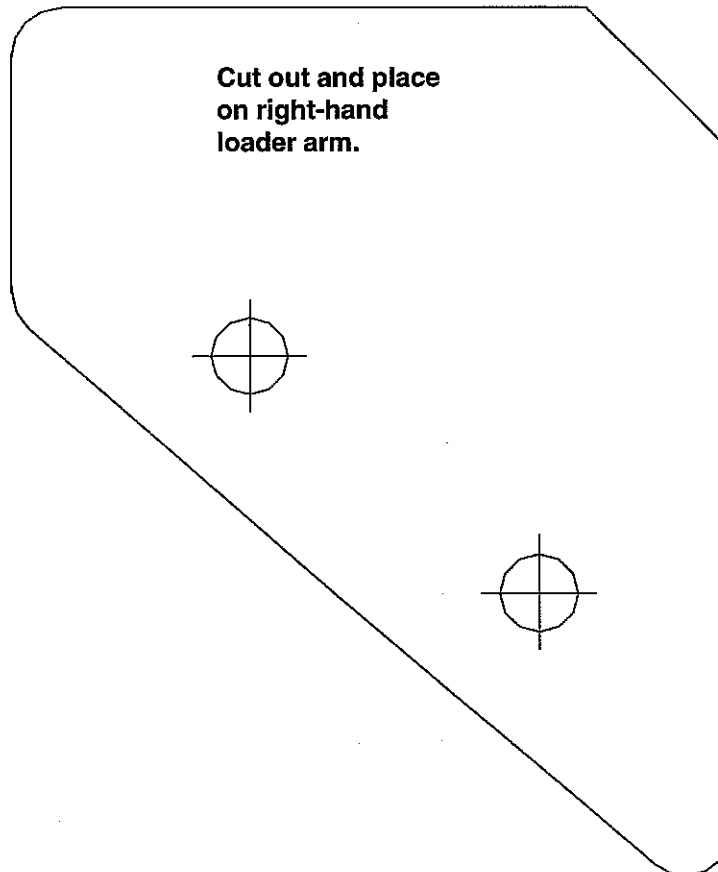
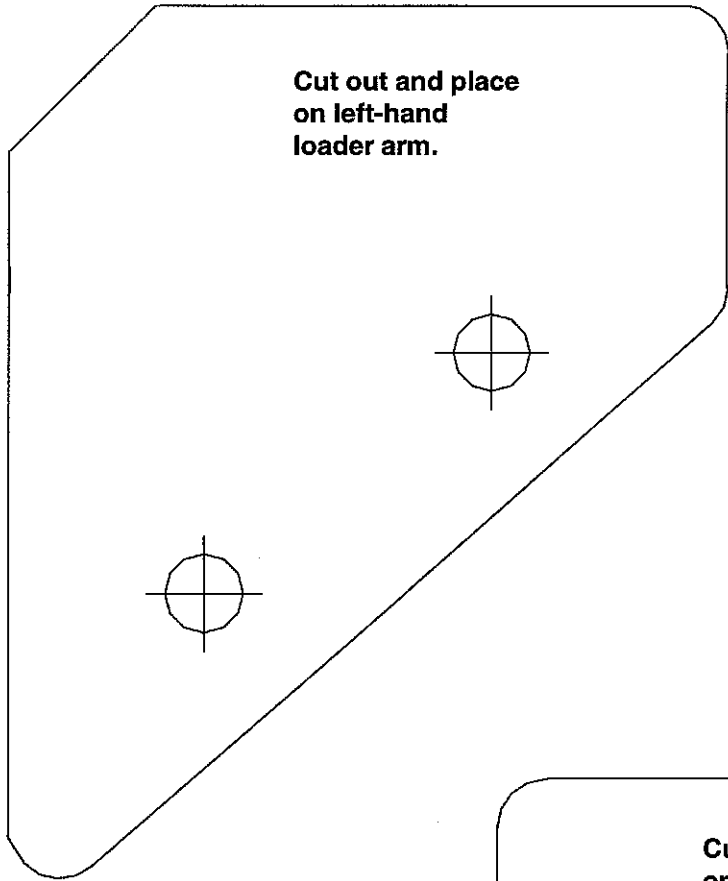
Templates

For New Holland L/LX465, LX485, LS140, & LS150
& John Deere 4475



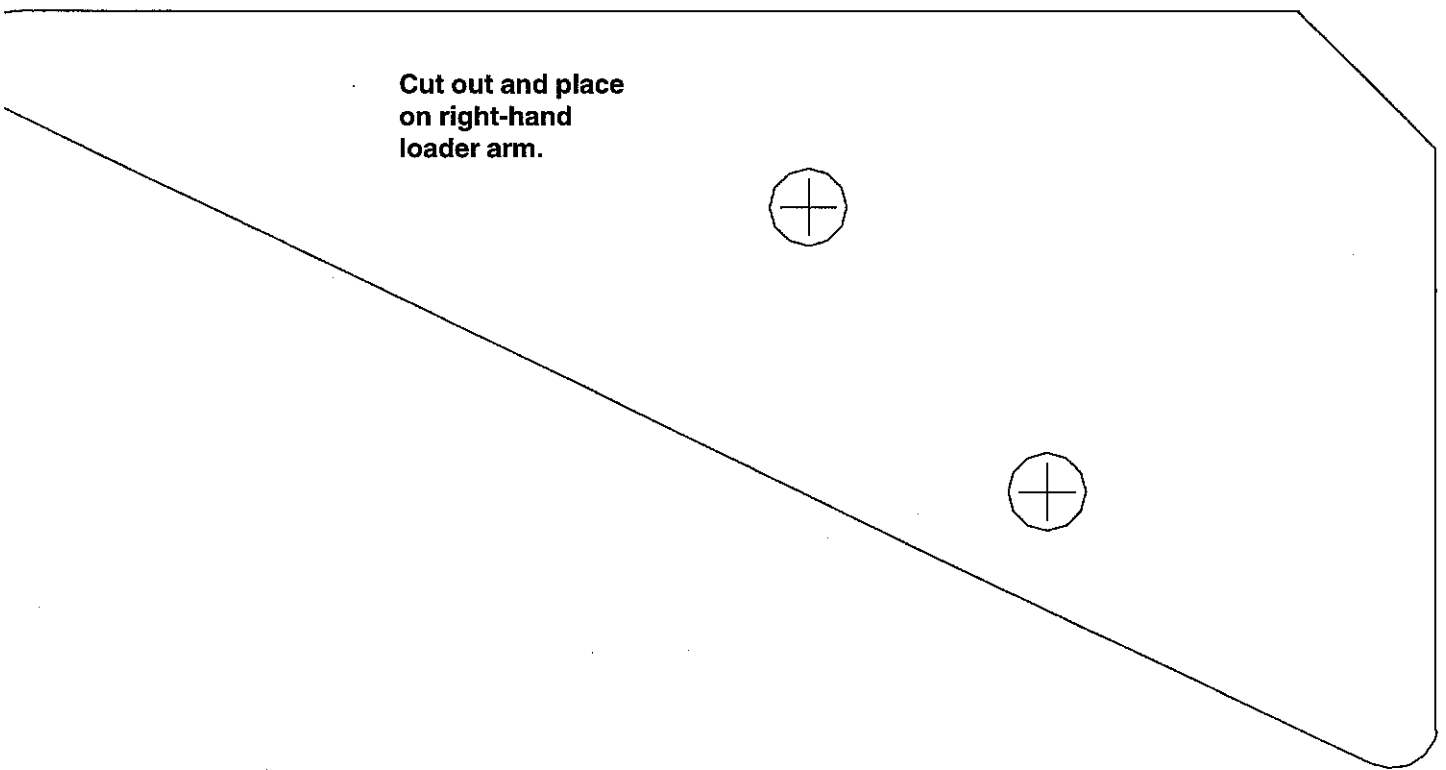
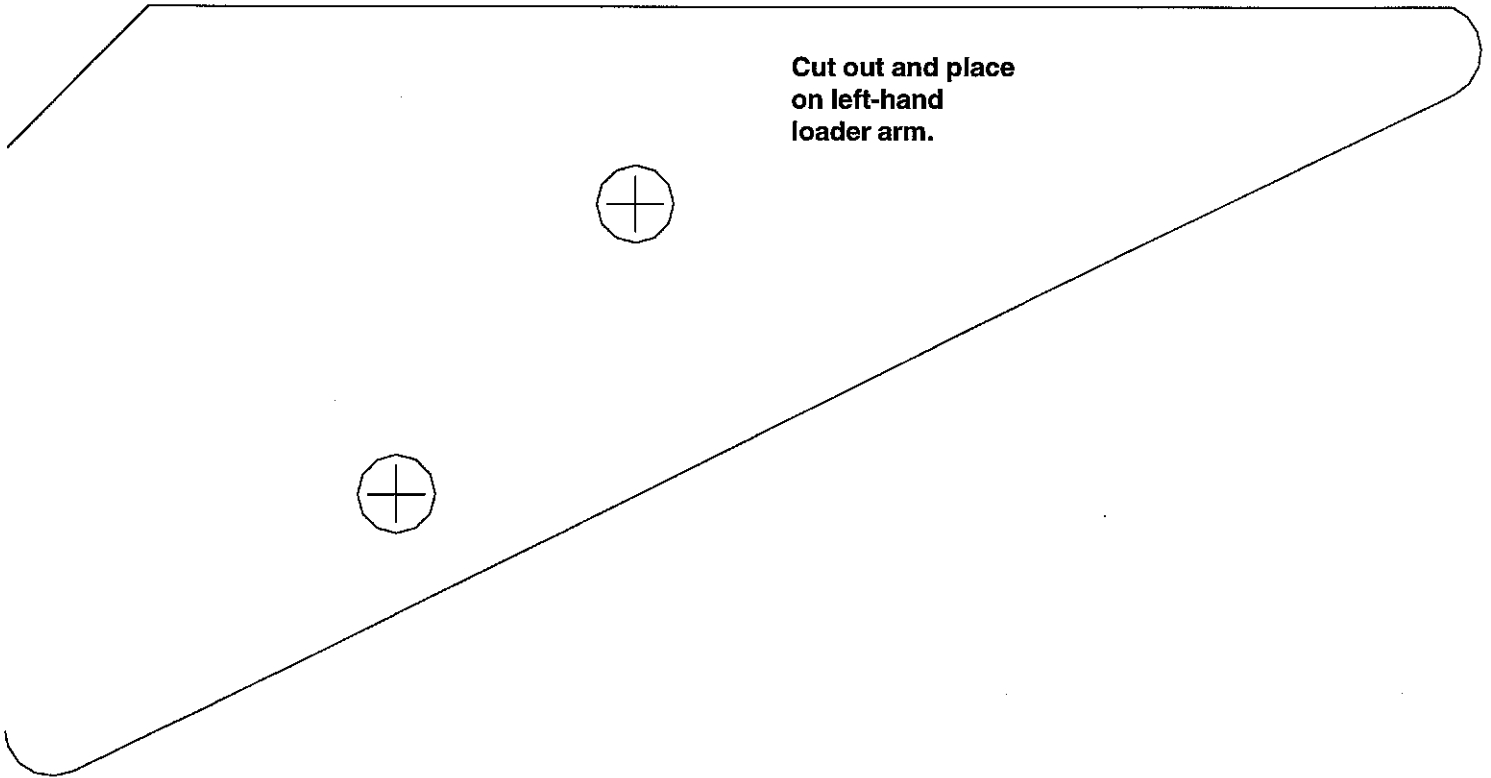
Templates

For New Holland L/LX565, LX665, LS160, & LS170
& John Deere 5575 & 6675



Templates

For New Holland L/LX865, LX885,
LX985, LS180, & LS190
& John Deere 7775 & 8875



Torque Values

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 dividing 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.

Warranty Information

Warranty Registration

Return form to 1-734-996-9014



PALADIN LIGHT CONSTRUCTION

Warranty Registration Form and Delivery Inspection Report

IMPORTANT! Warranty Void if card is not returned with 10 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)

- | | |
|---|---|
| <input type="checkbox"/> All Decals installed (see operator's manual) | <input type="checkbox"/> Review Operating and Safety Instructions |
| <input type="checkbox"/> Hydraulic fittings tight and free of leaks | <input type="checkbox"/> Guards and covers in place and secure |
| <input type="checkbox"/> Fasteners tight | <input type="checkbox"/> 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

	1 Excellent	2 Good	3 Average	4 Unsatisfactory	5 Poor
QUALITY ASSURANCE RATING					
Question:					
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. Mail original to Sweepster.

Comments: _____

Sweepster, Inc.
 2800 N. Zeeb Rd.
 Dexter, MI 48130-9499
 800-456-7100
 fax 734-996-9014



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 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 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.