

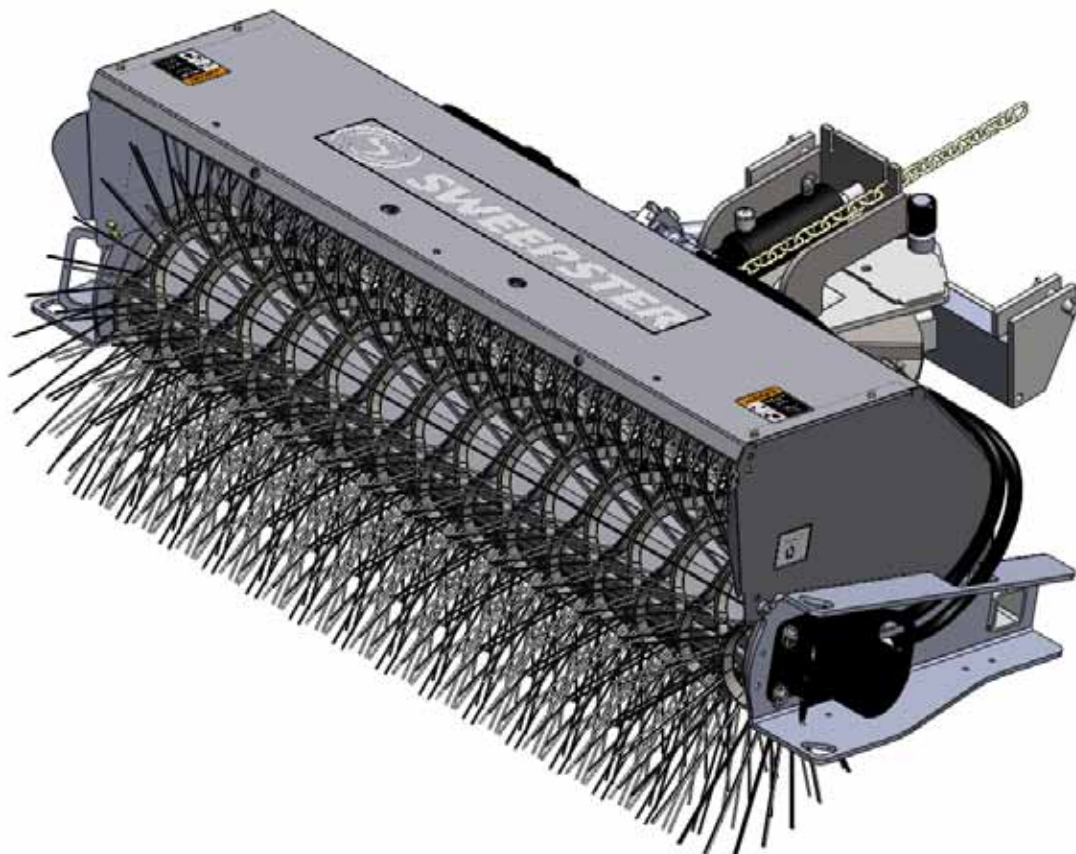


# QC Series

AH, CH, RLH, RLCH  
Hydraulic Windrow Sweepers



*The Power of Combined Excellence*



Sweepster Serial Number \_\_\_\_\_

Manual Number: 51-4163  
Release Date: April 2009  
Serial Number 0916001 and Up

## Notes

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# INTRODUCTION

# SAFETY STATEMENTS

## Purpose of Sweeper

This sweeper is designed solely for the use in construction cleanup, road 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.

## 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](mailto: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.

## Warranty

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

### DANGER!



**THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH WILL RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.**

### WARNING!



**THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.**

### CAUTION!



**THIS SIGNAL WORD IS USED WHERE MINOR INJURY COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.**

### NOTICE!

**THIS SIGNAL WORD IS USED WHERE EQUIPMENT OR PROPERTY DAMAGE COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.**



**THIS SYMBOL BY ITSELF OR USED WITH A WARNING WORD THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY OR THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**

## GENERAL SAFETY PRECAUTIONS

### WARNING!



#### **READ MANUAL PRIOR TO INSTALL**

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. **FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVERS MANUAL.**

### WARNING!



#### **READ AND UNDERSTAND ALL SAFETY STATEMENTS**

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing or operating this equipment.



#### **KNOW YOUR EQUIPMENT**

Know your equipment's capabilities, dimensions and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to assure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn and hard to read.

## GENERAL SAFETY PRECAUTIONS

### WARNING!



#### **PROTECT AGAINST FLYING DEBRIS**

Always wear proper safety glasses, goggles or a face shield when driving pins in or out or when operation causes dust, flying debris, or any other hazardous material.

### WARNING!



#### **LOWER OR SUPPORT RAISED EQUIPMENT**

Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground level or onto blocks. Lower booms and attachments to the ground before leaving the cab or operator's station.

### WARNING!



#### **USE CARE WITH HYDRAULIC FLUID PRESSURE**

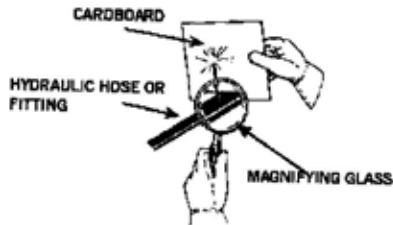
Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your prime movers operator's manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

- Keep unprotected body parts, such as face, eyes, and arms as far away as possible from a suspected leak. Flesh injected with hydraulic fluid may develop gangrene or other permanent disabilities.
- If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research immediately to determine proper treatment.

## GENERAL SAFETY PRECAUTIONS CONTINUED

- Wear safety glasses, protective clothing, and use a sound piece of cardboard or wood when searching for hydraulic leaks.

**DO NOT USE YOUR HANDS!  
SEE ILLUSTRATION.**



### WARNING!



#### **DO NOT MODIFY MACHINE OR ATTACHMENTS**

Modifications may weaken the integrity of the attachment and may impair the function, safety, life and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection System) equipment or device. Any modifications must be authorized in writing by the manufacturer.

### WARNING!



#### **SAFELY MAINTAIN AND REPAIR EQUIPMENT**

- Do not wear loose clothing, or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tool for the job at hand. Make sure they are in good condition for the task required.

## GENERAL SAFETY PRECAUTIONS CONTINUED

- Wear the protective clothing equipment specified by the tool manufacturer.

### WARNING!



#### **SAFELY OPERATE EQUIPMENT**

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your prime movers manual for these instructions.

- Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- Do not operate the equipment from anywhere other than the correct operators position.
- Never leave equipment unattended with the engine running or with this attachment in a raise position.
- Do not alter or remove any safety feature from the prime mover or this attachment.
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation.

# SAFETY SIGNS & LABELS



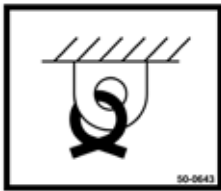
1. 41043



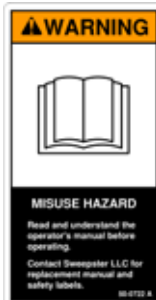
3. 50-0634



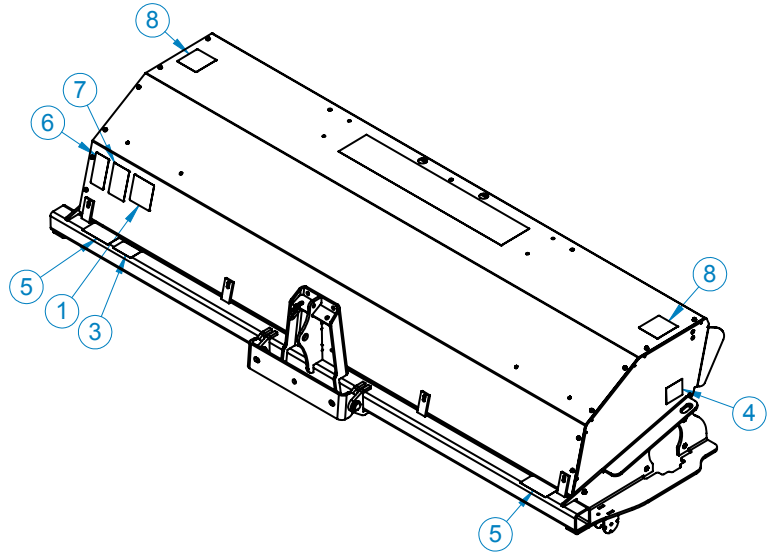
5. 50-0721



4. 50-0643



6. 50-0722



7. 50-0724



8. 50-0726

## SAFETY SIGNS & LABELS

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

Item	Part	Qty	Description
1.	41043	1	Decal, Warning, Hazardous Dust
3.	50-0634	1	Label, Serial Number
4.	50-0643	2	Label, Tie Down Point
5.	50-0721	2	Label, Warning, Crush Hazard
6.	50-0722	1	Label, Warning, Misuse Hazard
7.	50-0724	1	Label, Warning, High Pressure Fluid
8.	50-0726	2	Label, Warning, Flying Objects & Entanglement

### Placement or replacement of Safety Signs

1. Clean the area of application with nonflammable solvent, and then wash the same area with soap and water.
2. Allow the surface to fully dry.
3. Remove the backing from the safety sign, exposing the adhesive surface.
4. Apply the safety sign to the position shown in the diagram above and smooth out any bubbles.

### Instructions

1. Keep all safety signs clean and legible.
2. Replace all missing, illegible, or damaged safety signs.
3. Replacement parts, for parts with safety signs attached, must also have safety signs attached.
4. Safety signs are available, free of charge, from your dealer or from SWEEPSTER.



## SERVICE & REPAIR - SAFETY

### 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 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.

### CAUTION!



**A SWEEPER IS A DEMANDING MACHINE.** Only fully trained operators or trainee operators under supervision of a fully trained person should use this machine.

Before operating sweeper:


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

- When operating sweeper, adhere to all government rules, local laws and other professional guidelines for your sweeping application.
- Before leaving the operators area for any reason, lower the sweeper to the ground. Stop the prime mover engine, set the brakes and remove the key from the ignition.
- Minimize flying debris - use the slowest rotating speed that will do the job.
- Keep hands, feet, hair and other 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.
- Be aware of 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.
- Only operate the sweeper while you are in the seat of the prime mover. The seat belt must be fastened while you operate the prime mover. Only operate the controls while the engine is running. Protective glasses must be worn while you operate the prime mover and while you operate the sweeper.
- While you operate the sweeper slowly in an open area, check for proper operation of all controls and all protective devices. Note any repairs needed during operation of the sweeper. Report any needed repairs.



## SERVICE & REPAIR - SAFETY

**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 traffic and other hazards.

Before adjusting or servicing - lower the sweeper to the ground, set parking brake, shut down the prime mover and remove the key from the ignition.

When working on or around the sweeper, safely secure it from falling or shifting.

### Service & Repair - Hydraulic Safety

Stop the prime mover engine and 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 hand to check for leaks. Use a board or cardboard to check for leaks. Tighten all connections to the recommended torque.

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


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

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


- The end fittings are damaged or leaking.
- The outer covering is chafed or cut.
- The reinforcing wire layer is exposed.

- The outer covering is ballooning locally.
- The hose is kinked or crushed.
- The hoses have been pulled or stretched.

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

**WARNING!**  **EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA DUST ALONG WITH OTHER HAZARDOUS DUSTS MAY CAUSE SERIOUS OR FATAL RESPIRATORY DISEASE.**

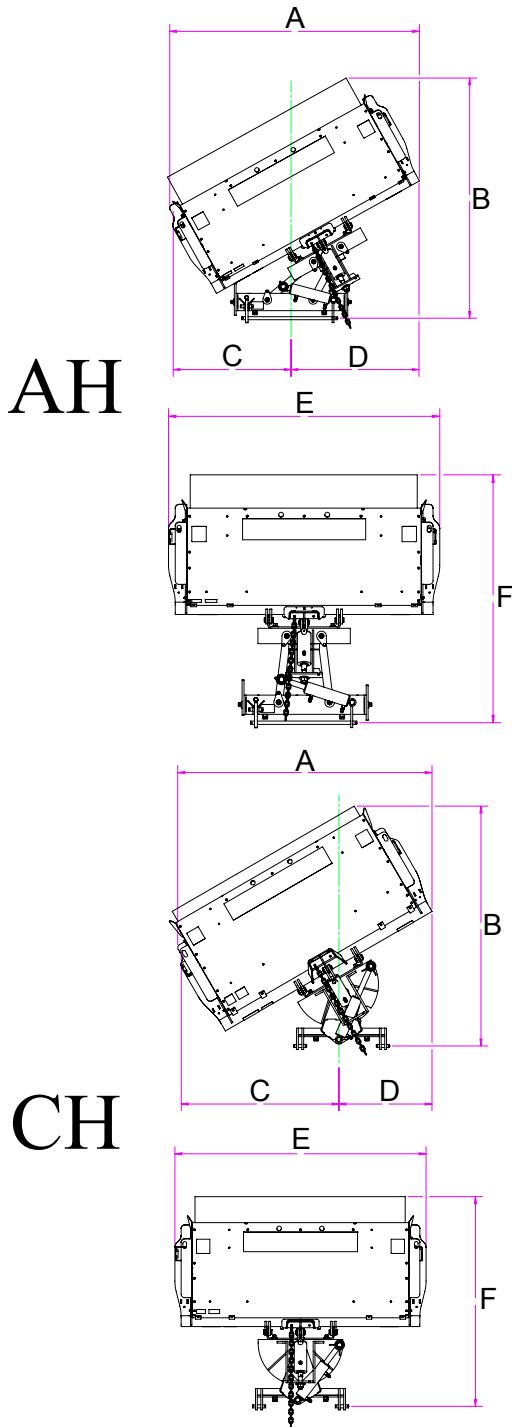
It is recommended to use dust suppression, dust collection and if necessary personal protective equipment during the operation of any attachment that may cause high levels of dust.

**WARNING!**  **REMOVE PAINT BEFORE WELDING OR HEATING.** Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do all work outside or in a well ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating.

When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

# PRODUCT INFORMATION

## Specifications and Model Views



	CH		AH		Width
	SGL	DUAL	SGL	DUAL	
Weight* (lbs)					4 Ft
	606	634	635	663	5 Ft
	656	685	685	714	6 Ft
	706	735	735	764	7 Ft
	757	785	786	814	8 Ft
					9 Ft
A Width @ 30°	65.77		65.77		4 Ft
	75.66		75.66		5 Ft
	85.55		85.55		6 Ft
	95.94		95.94		7 Ft
	105.83		105.83		8 Ft
	115.72		115.72		9 Ft
B Length @ 30°	73.50		73.50		4 Ft
	76.50		76.50		5 Ft
	79.50		79.50		6 Ft
	82.50		82.50		7 Ft
	85.50		85.50		8 Ft
	88.50		88.50		9 Ft
C Offset to Trail Edge @ 30°	43.00		31.25		4 Ft
	48.00		36.50		5 Ft
	53.00		41.75		6 Ft
	58.00		47.00		7 Ft
	62.00		52.25		8 Ft
	67.00		57.50		9 Ft
D Offset to Lead Edge @ 30°	20.50		32.25		4 Ft
	25.75		37.50		5 Ft
	31.00		42.75		6 Ft
	36.25		48.00		7 Ft
	41.50		53.75		8 Ft
	46.75		58.50		9 Ft
E Width @ 0°					4 Ft
	70.50		70.50		5 Ft
	82.50		82.50		6 Ft
	94.50		94.50		7 Ft
	106.50		106.50		8 Ft
					9 Ft
F Length @ 0°	59.00		64.25		All

Range of Hydraulic Oil Flow		
Single Motor	18 cubic inch	10-18
Single Motor	28 cubic inch	12-25
Dual Motor	18 cubic inch	18-36
Maximum Hydraulic Oil Pressure		
Single Motor	18 cubic inch	3500 psi
Single Motor	28 cubic inch	3000 psi
Dual Motor	18 cubic inch	3500 psi

# INSTALLATION & REMOVAL

## Sweeper Installation

### WARNING!



**Improper attachment of sweeper could result in injury or death.** Do not operate this machine until you have positive indication that the attachment is securely mounted.

1. Position the broom on a level surface.
2. Enter the prime mover.
3. Fasten the safety restraints.
4. Start the engine.
5. Disengage the parking brake.
6. Align the attachment mechanism with the mounting on the broom, attach to the prime mover. Follow the attaching procedure in the prime mover owners manual.
7. Engage the parking brake and shut down the prime mover. Be sure to relieve pressure to the auxiliary hydraulic lines.
8. Unfasten safety restraints and exit the prime mover.
9. Ensure that the hydraulic quick couplers are clean. Connect hydraulic lines for the broom to the prime mover. Twist the collar of the quick couplers one quarter of a turn in order to secure the hydraulic connections.
10. While the loader arms are lowered, visually inspect the attachment mechanism to ensure that it is securely mounted.

### WARNING!



**Improper attachment of sweeper could result in injury or death.** Do not operate this machine until you have positive indication that the attachment is securely mounted.

## Removing the Sweeper

### WARNING!



**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.

### NOTICE!

**Hoses for the sweepers must be removed before the quick attach is disengaged.** Pulling the sweeper with the hoses could result in damage to the prime mover or the sweeper.

1. Lower the broom to the ground.
2. Engage the parking brake and shut down the prime mover. Be sure to relieve pressure to the auxiliary hydraulic lines.
3. Unfasten safety restraints and exit prime mover.
4. Disconnect the broom hydraulic lines from the prime mover. Connect quick couplers together to keep clean.
5. Disengage attachment locking mechanism. (mechanical type)
6. Enter prime mover, fasten safety restraints and start the prime mover.
7. Disengage attachment mechanism. (hydraulic type)
8. Disengage the parking brake, and back away from the broom.

# INSTALLATION

## Mounting, Pump & Tank Assemblies

**NOTICE!** The following give general instructions. Refer to instructions included with the mounting assembly for information specific to a particular prime mover make and model.

### Front Pump Units


1. Remove any parts, such as a knockout, that block access to the tractor engine's crankshaft pulley.
2. Attach the mounting assembly to the tractor.
3. Secure the drive hub to the pulley. Some tractors require a crankshaft adapter.
4. Install the pump mounting bracket on the front of the tractor.
5. Assemble the coupling halves and fasten the chain around them.
6. Apply grease to the pump and drive shafts.
7. Slide the coupling assembly onto the pump shaft.
8. Place the keyed end of the drive shaft in the chain coupler.
9. Slide the drive shaft into the drive hub.
10. Fasten the pump to the bracket. Position the pump so the inlet faces the right hand side of the unit. Do not secure with hardware.
11. Center the chain coupler and tighten set screws.
12. Install the tank and valve assembly.
13. Install hydraulic fittings and hoses.
  - a. Attach the barb fitting to the pump inlet and the adapter fitting to the pump outlet.
  - b. Connect the suction hose to the tank outlet and to the barb fitting on the pump inlet. Secure with clamps.

- c. Attach the 36 inch hose to the valve and the pump's outlet port. Tighten the fittings.

14. Go to Swing Assembly.

### Rear Pump Units

1. Install the mounting assembly on the tractor.
2. Attach the pump to the rear PTO shaft and secure it with the chain provided. This prevents the pump from spinning or sliding off the shaft.

**CAUTION!**  **Avoid damage to the pump and other hydraulic components.** Do not use rear pump drive on PTOs faster than 540 RPM.

3. Install the tank and valve assembly.
4. Install hydraulic fittings and hoses.
  - a. Attach the barb fitting to the pump inlet and the adapter fitting to the pump outlet.
  - b. Connect the suction hose to the tank outlet and to the barb fitting on the pump inlet. Secure with clamps.
  - c. Attach the pressure hose to the valve and the pump's outlet port. Tighten fittings.
5. Go to Swing Assembly.

### **Swing Assembly**

Figure 1 shows the swing assembly attached to the mounting assembly.

1. Position the swing assembly in front of the mounting assembly. Remove the pin(s) from the swing assembly.
2. Align holes in the swing assembly with ears on the mounting assembly. Slide pin(s) through the holes and secure with cotter pin(s).
3. Go to Brush Head Assembly.

# INSTALLATION

## Brush Head Assembly

1. Position the brush head assembly in front of the swing assembly.
2. Align holes in the brush frame and swing assembly. Install hardware, using the cap screw in the center hole and carriage bolts in the remaining holes.
3. Align the brush head plate with the swing assembly plate and tighten the hardware.
4. Assemble the spring-chain assembly/ assemblies. Attach the spring end(s) to the brush head upright. Then place the chain in a slot on the swing plate upright. Figure 2 shows a spring-chain assembly installed on the unit.
5. Connect the transport chain, which is attached to brush head upright, to the remaining slot on the swing plate upright. Figure 3 shows a transport chain installed.

**NOTICE!** Use the transport chain to take weight off the spring-chain assembly/assemblies while transporting the unit between job sites.

6. Attach 2, 3/4 inch hoses to brush head fittings. Then, connect the top hose to the filter base and the bottom hose to the run port on the valve.

## Swing Cylinder

Figure 4 shows the swing cylinder fully installed.

1. Connect a hose to each fitting on the cylinder.
2. Attach adapter fittings to hose ends.
3. Connect adapter fittings to remote valves (manual valves) or the A/B ports (electric valves).

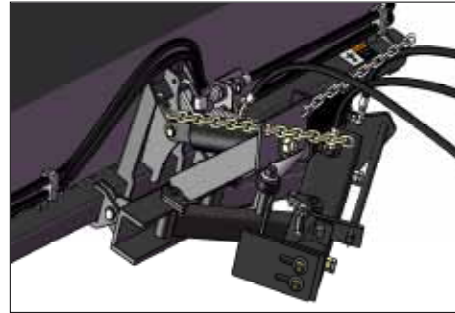


figure 1

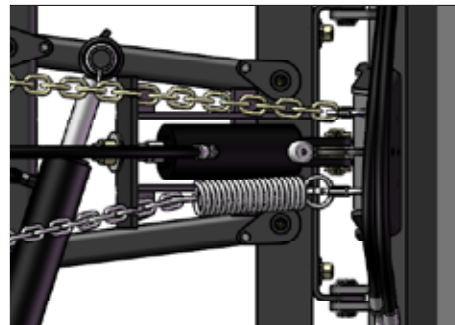


figure 2



figure 3

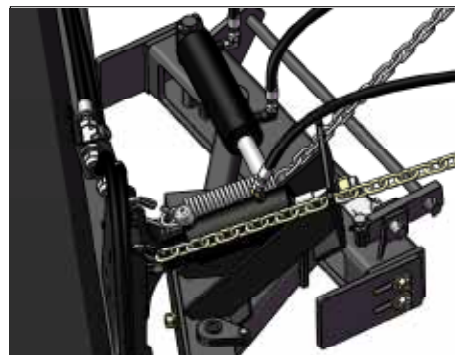


figure 4

# INSTALLATION

## Lift Cylinder

Figure 1 shows the lift cylinder fully installed.

1. Slide the rod end of the cylinder through the plate on the swing plate upright. Install flat washer and secure with a nut.

**CAUTION!** Avoid cylinder damage. Only place 1 nut on the rod.



2. Attach the barrel end to the center ear on the brush head upright. Use the clevis pin and hairpin clip provided.
3. Connect a hose to the elbow fitting on the cylinder.
4. Connect the hose to the first valve that has a single port (manual valves) or the L port (electric valves).



figure 1



figure 2

## Before First Use

1. Fill the tank to 2 inches (51mm) from the top. Use ISO VG-46 hydraulic oil.
2. Make sure that the tractor parking brake is on and the tractor is in neutral. Then, prime the pump.

Front pump units - Turn the engine on and off in short bursts without starting.

Rear and mid pump units - Rapidly engage and disengage the PTO while the engine is running.

3. Check the amount of oil in the tank. Add oil as required to bring it to the proper level.
4. Run the engine at a slow idle. Stop the engine and then check for hydraulic leaks. Make corrections before proceeding.
5. Start the tractor again. Engage the brush and let it run while watching for excess vibration or other problems. Test swing and lift functions. Make corrections before proceeding.

6. Perform procedures described in Adjusting Scissor Swing (scissor swing only) and Leveling, Setting, Brush Pattern, Adjusting Spring-Chain Assemblies and Adjusting Transport Chain.

## Adjusting Scissor Swing

**CAUTION!** Support yokes must fit tightly to the brush frame, or damage to the swing cylinder will occur.



1. Loosen hardware (figure 2) holding support yokes.
2. Swing the brush head completely to the right.
3. Slide the right-hand support yoke toward the brush head until it is snug on the brush frame tube, tighten nuts.
4. Swing the brush head completely to the left.
5. Slide the left-hand support yoke until it is snug on the brush frame tube, tighten nuts.
6. Swing the brush head assembly both directions and check to make sure that the support yokes fit tightly to the brush frame. If not, repeat this procedure from step 1.



# INSTALLATION

## Swing Assembly

1. Slide the pump onto the rear PTO. Secure with a chain. Attach the barb to the pump inlet and the elbow and relief fittings on the pump outlet (figure 3.)
2. Attach bottom plates to the swing assembly using hitch pins supplied. Plates go inside the frame with bends to the center.
3. Connect 39-link chains to bottom plates with shackles.
4. Fasten keyhole plates to the tractor toplinek using pins from the tractor (figure 4).
5. Position the swing assembly behind the 3-point hitch with the half-moon plate to the rear.
6. Lower hitch arms fully.
7. Slide hitch arms onto pins welded to the swing assembly. Secure with ring pins.
8. Secure the tractor toplinek to the top of the swing assembly using a pin.
9. Raise the hitch until the dimension from the slot in the center of the swing plate to the ground measures 16 inches (406mm). See figure 5
10. Level the swing assembly from front to back using the toplinek and side to side using the adjustable hitch arm.
11. Attach drop chains to keyhole plates. Adjust so chains keep the 16 inch (406mm) dimension.

**NOTICE!** For best sweeping results, keep the swing assembly at least 16 inches (406mm) above the ground and 21 inches (533mm) high to sweep snow. Otherwise, material tends to carry over the brush and onto the area swept.

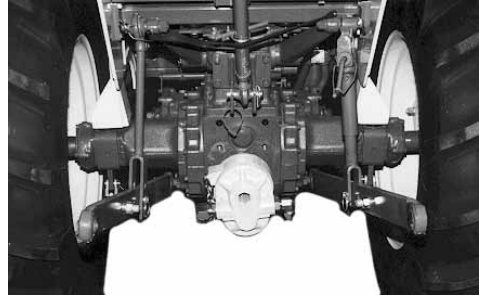


figure 3

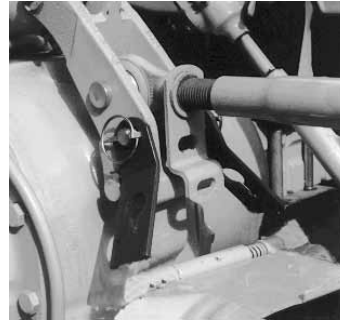


figure 4

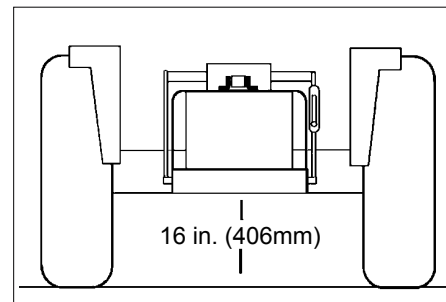
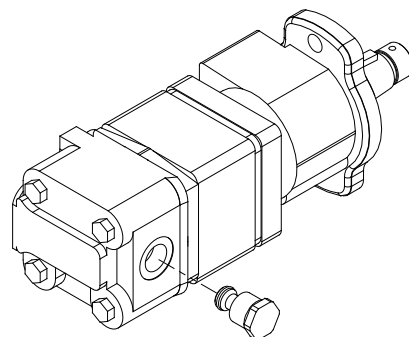


figure 5

## Check Disabler

For rear-mounted brooms the integral check valve cartridge, located in each motor, must be replaced with a blank cartridge, part number 03-4891.





# INSTALLATION

## Brush Head Assembly

1. Position the brush head assembly behind the swing assembly.
2. Align holes in the brush frame and swing assembly. Install 3 carriage bolts, flat washers, lock washers and nuts. Do not tighten the hardware; it must remain loose to level the brush head assembly.
3. Assemble the spring-chain assembly/assemblies. Attach the spring end(s) to the brush head upright. Then place the chains in the slots on the swing assembly upright.
4. Connect the transport chain, which is attached to brush head upright, to the remaining slot on the swing assembly upright.

**NOTICE!** Use the transport chain to take weight off the spring-chain assembly/assemblies while transporting unit between job sites.

5. Connect pressure and return hoses to prime mover remote.

**NOTICE!** If 12 gpm (45.4 lpm) is not available from the prime mover, purchase a power pack from SWEEPSTER.

6. Attach the pressure hose to the bottom hose on the brush head and the return hose to the top hose. **Angle Feature**

## Manual Angle Kit

**NOTICE!** Some sweepers use hydraulic swing instead of manual angle kit. See Hydraulic Angle.

1. Slide the inner link into the outer link (figure 1).
2. Place link ends on swing assembly pins (figure 2). Secure with cotter pins.

3. Position the brush head assembly at the desired angle. Align holes in both links and install lock pin to keep the brush head assembly in position (figure 3).



figure 1



figure 2



figure 3

# INSTALLATION

## Hydraulic Angle Kit

1. Attach fittings to the cylinder. (figure 4).
2. Install the cylinder with the barrel end on the swing assembly and the rod end on the swing plate. Secure with cotter pins (figure 5).
3. Connect a hose to each fitting.
4. Attach adapter fittings to hose ends.
5. Connect adapter fittings to remote valves on the prime mover.



figure 4

## **Before First Use**

1. Run the prime mover engine at a slow idle. Stop the engine and then check for hydraulic leaks. Make corrections before proceeding.
2. Start the prime mover again. Engage the brush and let it run while watching for excess vibration or other problems. Test swing and lift functions. Lower the sweeper to the ground, set the parking brake, shut down the prime mover and remove the key from the ignition; make corrections before proceeding.
3. Perform procedures described in Leveling, Setting Brush Pattern, Adjusting Spring-Chain Assemblies and Adjusting Transport Chain in the Maintenance section.



figure 5

# STORAGE & OPERATION

## 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 storage 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.

### Before Each Use:

Perform daily maintenance as indicated in 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 in Safety Section.

**WARNING!** **Avoid serious injury. Check for large objects that could harm the operator or others if thrown by the sweeper.** Remove these items before operating.



### During Use:

Carry the sweeper low to the ground so the operator has good visibility and stability. Avoid any sudden movements.

Avoid excessive downward pressure on the brush sections to prevent excessive wear. A two to four inch wide pattern is sufficient for most applications. Ensure that the adjustment bolts are equally adjusted in order to prevent an uneven wear pattern. To adjust pattern see "Adjusting Brush Pattern".

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

The terms *swing* and *angle* are used interchangeably.

### Manual Angle

1. Remove the lock pin from links.
2. Position the brush head at the desired angle, aligning holes in the inner and outer link.
3. Insert and close the lock pin.

### Hydraulic Angle

1. Start the prime mover.
2. Rear or mid units only - Engage the PTO.
3. Position the brush head at the desired angle by using the valve control for the swing function.

### Engaging Functions - Tractor Mounts

Methods for engaging run, swing and lift functions differ according to how the unit is equipped.

#### Manual Valves with Control Rods

Control rod functions are marked with a label. Pull or push control rods according to instructions.

<u>Brush Run</u>	<u>Swing</u>	<u>Lift</u>
Push to stop	Push to angle left	Push to lower
Pull to run	Pull to angle right	Pull to raise

#### Manual Valves without Control Rods

Engage functions with valve control handles.

•With SWEEPSTER hydraulic run, swing and lift:

The first handle (closest to the operator) controls lift. Push forward to lower and pull back to raise.

The second handle activates the swing function. Push forward to angle left and pull back to angle right.

The third handle controls brush rotation. Pull back to run and push forward to stop.

# OPERATION

## Electric Valves

Activate valves with switches on the control box. Functions are marked with a label.

## Prime Mover Valves

Activate valves with prime mover controls.

## Sweeping

To sweep:

1. **Manual angle only** - Swing the brush head assembly the direction that you want to direct debris.
2. Start the prime mover at idle and raise the brush.
3. **Rear pump units only** - Engage the PTO.
4. **Hydraulic angle only** - Swing the brush head assembly the direction that you want to direct debris.
5. Engage the brush and then lower it to the ground.
6. Increase prime mover engine rpm to sweeping speed.

**NOTICE!**      **Avoid hydraulic pump damage on rear pump units. Do not run the engine at speeds above standard PTO RPM. This will destroy the pump.**

7. Travel forward at 5 mph (8 kph) or less.

## Operating Tips

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

### Large Areas

When sweeping a large area, as a parking lot, make a path down the middle and sweep to both

sides. This reduces the amount of debris that the sweeper must sweep to one side.

### Snow

Fast brush speeds and slow travel speeds are needed to sweep snow effectively. Start at 3/4 throttle and the lowest gear of the prime mover. For wet and/or deep snow, increase to almost full throttle. This helps keep snow from packing up inside the brush hood.

In deep snow you may need to make multiple passes to get down to a clean surface.

Always sweep with the wind at your back.

### Dirt & Gravel

To keep dust at a minimum, use the optional dust suppression kit or plan sweeping for days when it is overcast and humid or after it has rained.

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.

To sweep gravel, use just enough brush speed to "roll" the gravel, not throw it.

### Heavy Debris

Travel slowly - 2 to 3 mph (3-5 kph)

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

Increase engine speed if debris becomes very heavy.

# MAINTENANCE

## Leveling

Level the sweeper for even brush wear and effective use.

**CAUTION!** **Avoid injury. Before adjusting the sweeper, always turn off the sweeper and the prime mover engine and remove the key.**



1. Move the sweeper to a flat, paved surface.
2. Lower the brush head assembly so the brush is 2 inches (51 mm) above the ground.
3. Engage the parking brake and shut down the prime mover. Be sure to relieve pressure to the auxiliary hydraulic lines.
4. Unfasten safety restraints and exit prime mover.
5. Check if the swing assembly is level by using a bubble level. To make corrections:

Scissor swing/plate swing on tractor - Turn leveling bolts (A) (figure 1 and 2) in or out in equal amounts. If the front of the swing assembly is high, turn the leveling bolts in. If it is low, turn the leveling bolts out.

Loader with quick attach mounting - Adjust tilt cylinders. If the front of the swing assembly is high, extend tilt cylinders. If low, retract cylinders.

RLH/RLCH - Adjust the toplinek. If the rear of the swing assembly is high, lengthen the toplinek. If low, shorten the toplinek.

6. Position the brush head assembly straight ahead. On each side, measure from the brush frame to the ground (figure 3). If measurements are not equal:

Scissor swing - Turn adjustment screw (B) (figure 1) in to lower the right-hand side of the brush head assembly. Turn it out to lower the left-hand side.

Plate swing on Tractor/Loader - Loosen hardware that attaches the swing assembly to the brush head assembly; lower the high side of the brush head until both sides are an equal distance above the ground. Tighten the hardware.

RLH/RLCH - Raise or lower the adjustable hitch arm.

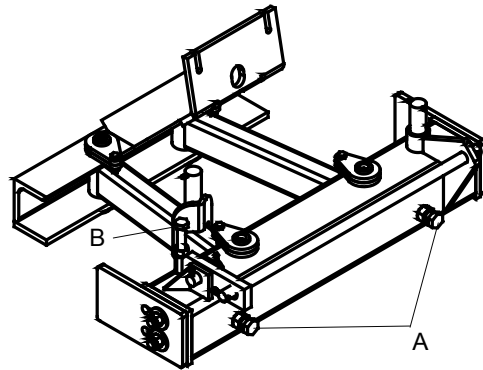


Figure 1

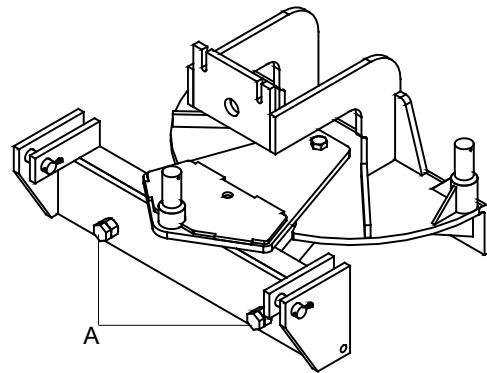


Figure 2

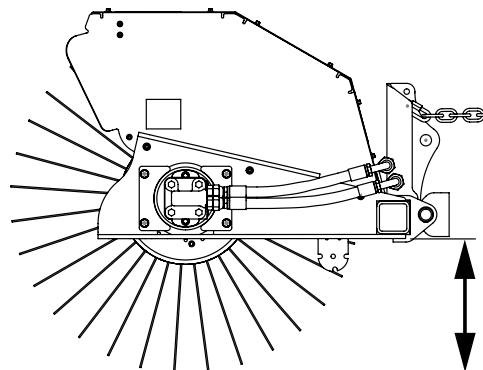


Figure 3

# MAINTENANCE

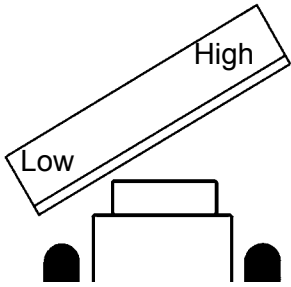


Figure 4

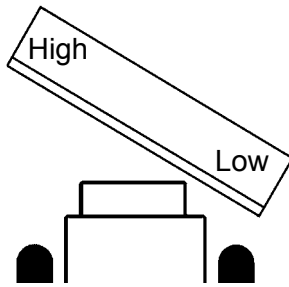


Figure 5

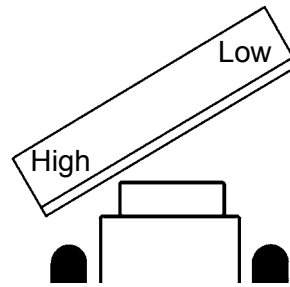


Figure 6

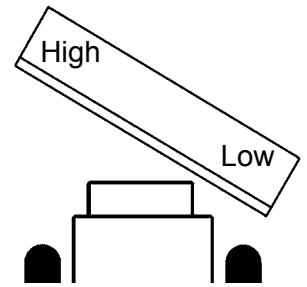


Figure 7

7. Measure to see if the brush head assembly is level when angled. First, angle the brush head to the right. Measure as in step 4. Then, angle the brush head to the left. Measure again. If measurements are equal, the sweeper is level. If not, proceed with this step.

Scissor swing - To correct leveling problems in:

- figure 4, turn leveling screws out. (figure 6, A)
- figure 5, turn leveling screws in. (figure 6, A)
- figure 6, turn the adjustment screw in. (figure 6, B)
- figure 7, turn the adjustment screw out. (figure 6, B)

Plate swing on tractor - To correct leveling problems shown in:

- figure 4, turn leveling screws out. (figure 7, A)
- figure 5, turn leveling screws in. (figure 7, A)
- figure 6, loosen hardware that attaches the swing assembly to the brush head assembly; lower the left-hand side of the brush head until both sides are an equal distance above the ground. Tighten the hardware.
- figure 7, loosen hardware that attaches the swing assembly to the brush head assembly;

lower the right-hand side of the brush head until both sides are an equal distance above the ground. Tighten the hardware.

Loader - To correct leveling problems shown in:

- figure 4, extend tilt cylinders.
- figure 5, retract tilt cylinders.
- figure 6, loosen hardware that attaches the swing assembly to the brush head assembly; lower the left-hand side of the brush head until both sides are an equal distance above the ground. Tighten the hardware.
- figure 7, loosen hardware that attaches the swing assembly to the brush head assembly; lower the right-hand side of the brush head until both sides are an equal distance above the ground. Tighten the hardware.

RLH/RLCH - To correct leveling problems in:

- figure 4, lengthen the hitch topline.
- figure 5, shorten the hitch topline.
- figure 6, lower the adjustable 3-Point hitch arm.
- figure 7, raise the adjustable 3-Point hitch arm.

# MAINTENANCE

## Setting Brush Pattern

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

1. Move the sweeper to a dusty, flat surface.
2. Set the prime mover's parking brake and leave the engine running.
3. Start the sweeper at a slow speed: lower it so the bristle tips touch the ground. 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 2-4 inches (51-102 mm) wide, running the length of the brush. (Compare the swept area with figure 1.)
5. Adjust the brush pattern as necessary according to instructions found in adjusting the Spring-Chain Assembly.

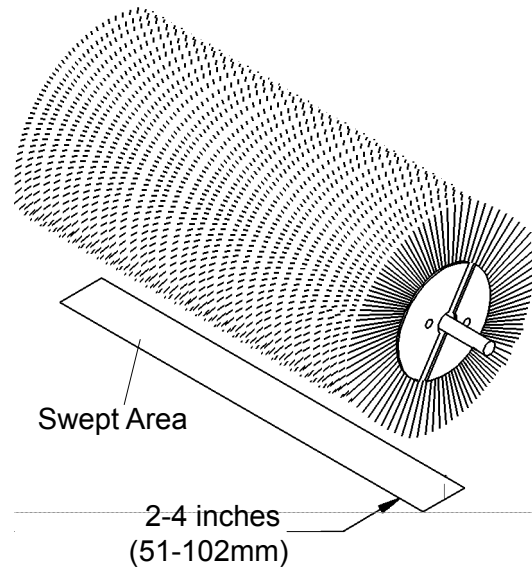


Figure 1

## Adjusting Spring-Chain Assembly

The spring-chain assembly allows the brush head to pivot up and down.

To adjust the brush pattern:

1. AH/CH - Raise the sweeper.  
RLH/RLCH/LOADER - Lower the sweeper.
2. Tighten the transport chain and lower the sweeper so the transport chain supports weight.
3. Move the spring chain forward in the swing assembly chain holder to lower the brush head or backward in the holder to raise it.

## Tightening Transport Chain

The transport chain supports the weight of the brush head assembly during transport between work sites and during adjustment of the spring-chain assemblies.

To adjust the transport chain:

### AH/CH/RLH/RLCH

1. Raise the sweeper.
2. Tighten the transport chain.
3. Lower the sweeper so the transport chain supports the weight of the sweeper.

### Loader

1. Extend tilt cylinders.
2. Tighten the transport chain.
3. Retract tilt cylinders.



# MAINTENANCE

## Replacing Brush Sections

1. Remove motor mount retainer pins. Retain hardware for reinstallation. Remove motor mount(s).
2. Remove idler bearing shaft mounting plate retainer pins from side. Retain hardware for reinstallation. (Single motor only)
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:
  - a. Slide the first section onto the core with the drive pins on each side of a tube. Make sure that the drive pins angle up. (figure 2)
  - b. Install a second section with drive pins rotated 180° from those on the first section. (figure 3)
  - c. Continue installing sections, rotating each section 180° until the core is full.
8. Re-attach the section retainer and bearing mounting plate with previously removed hardware.
9. Lay core on ground. Lower frame over core.
10. Re-attach bearing mounting plate with previously removed hardware.
11. Re-attach motor mount with hardware removed in first step.

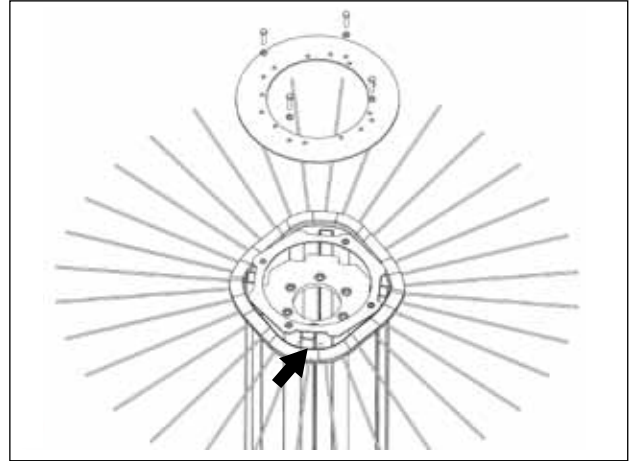


figure 2

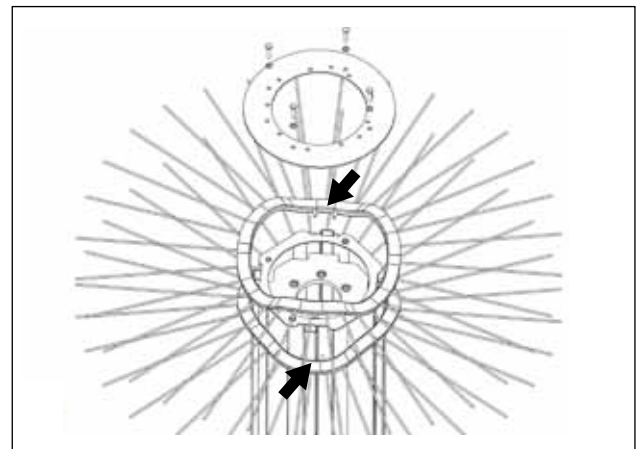


figure 3



Worn Section Standard				Reference Information	
Section OD, New	Ring ID	Section OD, Worn	Exposed Bristle, Worn	Bristle Length	Exposed Bristle, New
24	6.38	17	3.8	8.50	7.5
26	8.00	18	4.0	9.00	8.0
32	10.00	22	5.0	11.00	10.0
36	10.00	24	6.0	13.00	12.0
36	10.63	25	6.0	12.69	11.4
46	19.38	34	6.0	13.31	12.1

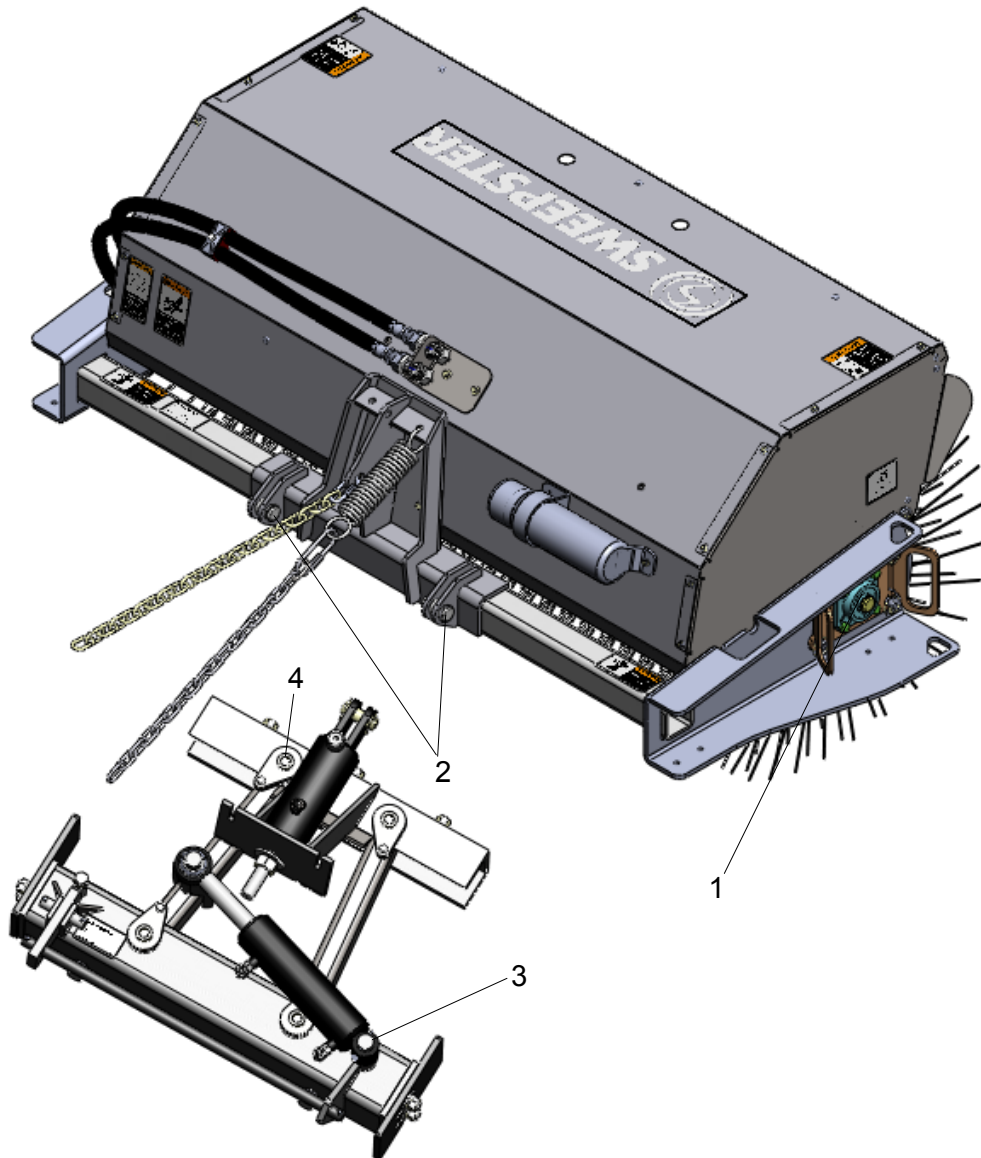
# MAINTENANCE

## Lubricating Zerk Fittings

The following grease fittings should be greased before each use.

See figure for locations.

1. Core bearing (1 fitting)
2. Brush Head Pivot (2 fitting)
3. Hydraulic Angle Cylinder (1 fitting)
4. Pivot Pins (4 fittings)



# MAINTENANCE SCHEDULE

## Maintenance Schedule

Procedure	Before Each Use	After Each Use	100 Hours	500 Hours	See Prime Mover Manual
<b>Brush Head Assembly</b> - Level	✓				
<b>Brush Pattern</b> - Check (See Pattern Adjustment)	✓				
<b>Cylinders</b> - Retract rods		✓			
- Grease threaded and ball ends to prevent rust.		✓			
<b>Filter, Air, Prime Mover</b> - Clean					✓
<b>Fittings/Hoses, Hydraulic</b> - Check for leaks/Tighten Check for damage	✓				
<b>Fittings, Zerk</b> - Grease (See lubrication points)	✓				
<b>Oil, Hydraulic</b> - Check level	✓				
<b>Hardware</b> - Check for tightness	✓				

### Oil Cleanliness Requirements

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

# MAINTENANCE RECORD

Date	Maintenance Procedure Performed	Performed by	Comments

# NOTES

# TROUBLESHOOTING

## Brush Head Assembly

Problem	Possible Cause	Possible Solution
Brush rotates in wrong direction	Hoses installed incorrectly	Switch hoses at bulk head fittings
Brush slows or stops when sweeping	Brush pattern too wide	Adjust brush pattern to 2-4 inches (5-10cm) wide: see: Adjusting Brush Pattern
	Travel speed too fast	Travel no more than 5 mph (8 kph) while sweeping (2-3 mph recommended)
	Trying to sweep too much material at once	Make several passes with sweeper
	Relief pressure set too low	Set relief pressure to 2000 psi (138.0 bars)
	Pump has failed	Contact dealer to repair or replace
	Hydraulic motor is failing	Test hydraulic system: see: Hydraulic Problems
	Filter plugging	Change or clean hydraulic oil filter
Brush head assembly "bounces" during sweeping	Travel speed too fast and/or brush speed too slow	Find correct combination of ground and brush speeds: do not travel at more than 5 mph (8 kph)
	Spring-chain assembly too loose	Adjust spring-chain assembly: see: Adjusting Spring-Chain Assembly
	Core is bent	Replace core
Brush wears into cone shape	Sweeper is not level	Level sweeper before each use: see: Leveling
	Tires on prime mover at different pressures or are different sizes	Check tire sizes and rating: make corrections as necessary
Brush wears very quickly	Brush pattern too wide	Adjust brush pattern to 2-4 inches (5-10cm) wide: see: Setting Brush Pattern

# TROUBLESHOOTING

## Spring-Chain Assemblies

Problem	Possible Cause	Possible Solution
Springs on spring-chain assemblies stretching	Transport chain too loose when traveling between job sites	Adjust according to Adjustment: Transport Chain
	Travel speeds too fast when sweeping	Do not travel at speeds over 5 mph (8 kph).

## Hydraulic Cylinders - Lift & Swing

Problem	Possible Cause	Possible Solution
Hydraulic cylinder neither extends nor retracts	<u>Manual valve</u> - Control rods not connected or are binding	Check control rod linkage; make sure all parts are connected and are not binding; fix if necessary
	<u>Electric valve</u> - Set screw in flow divider on manifold too tight	Loosen jam nut and then turn set screw in until it stops; turn set screw out 1 1/2 turns; tighten jam nut
	<u>Electric valve</u> - No power from controls because wires are broken or disconnected	Reconnect wires if disconnected; replace wires if broken
	<u>Electric valve</u> - No power from controls because switch is broken	Replace switch
	<u>Both types of valves</u> - Hydraulic oil level too low	Fill tank to 2-3 inches (51-76mm) from top of tank with ISO VG-46 oil
	<u>Both types of valves</u> - Hoses or fittings loose or disconnected	Tighten hoses and fittings
	<u>Both types of valves</u> - Restriction in hoses	Remove bends in hoses, remove obstructions inside hoses
Hydraulic cylinder only extends or only retracts	<u>Electric valve</u> - Set screw in flow divider on manifold out of adjustment	Loosen jam nut and then turn set screw in until it stops; turn set screw out 1 1/2 turns; tighten jam nut
	<u>Electric valve</u> - Dirt or debris in spools	Contact Sweepster Technical Service
Hydraulic cylinder extends or retracts too quickly	<u>Manual valve</u> - Flow too high because restrictor fitting missing from cylinder	Reinstall restrictor fitting on barrel end of cylinder
	<u>Manual valve</u> - Flow too high even though restrictor fitting is installed	Contact Sweepster for smaller orifice fitting
	<u>Electric valve</u> - Set screw in flow divider on manifold too loose	Loosen jam nut and then turn set screw in until it stops; turn set screw out 1 1/2 turns; tighten jam nut

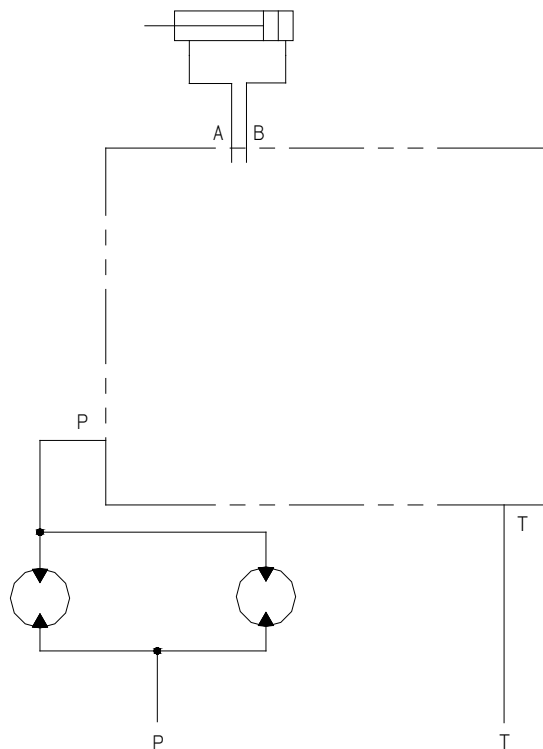


# TROUBLESHOOTING

## Hydraulic System

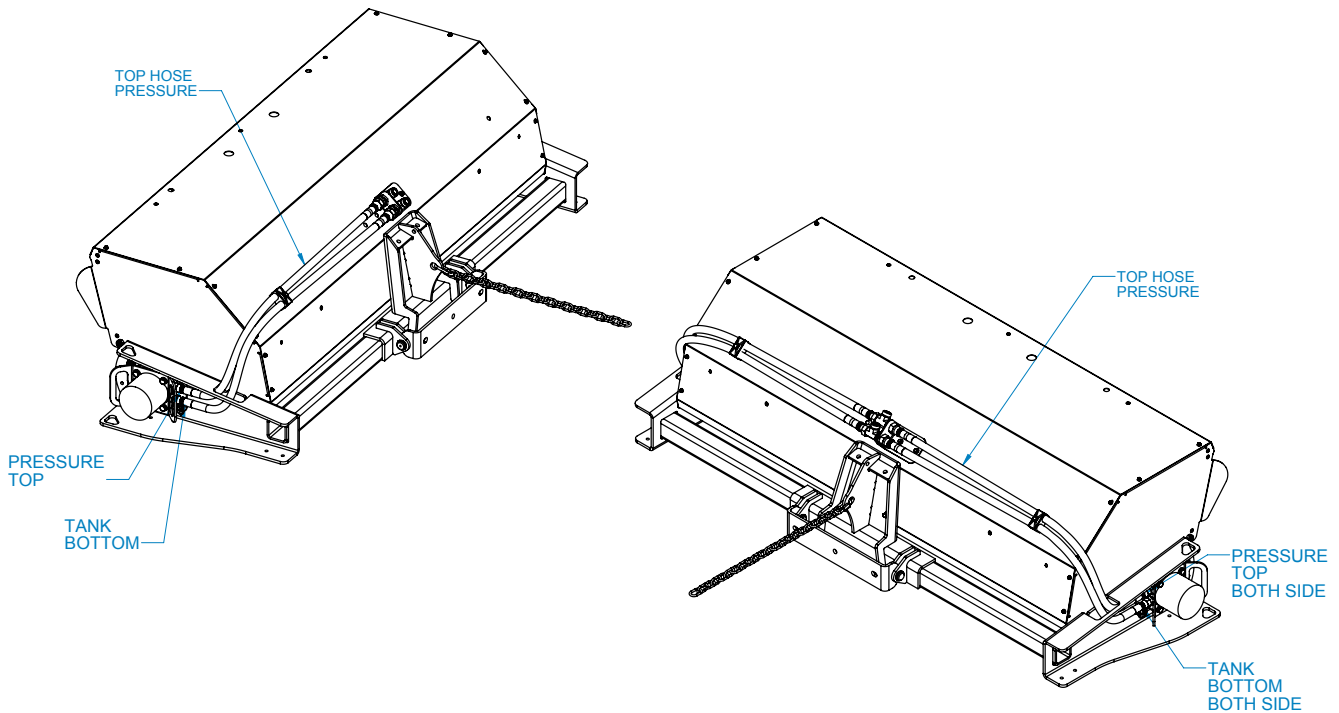
Problem	Possible Cause	Possible Solution
Hydraulic system overheats	Hydraulic oil level too low	Add hydraulic oil to tank until it comes to 2 inches (51mm) from top
	Restriction in hoses	Remove bends in hoses; remove obstructions inside hoses / Replace Hose
	Host pump flow rate exceeds maximum rate of broom	Contact host manufacturer for proper flow control method
Hydraulic quick couplers leak	Quick coupler poppet is unseated	Reseat poppet; replace quick coupler if poppet is beyond repair
Hydraulic motor seals leak	Back pressure exceeds 1000 psi	Contact Sweepster
	Motor is failing	High number of hours on motor; Contact dealer to rebuild or replace
Hydraulic oil flows from breather cap on hydraulic tank	Hydraulic tank too full	Grain hydraulic tank until level is 2" (51mm) from top

## Hydraulic Schematic



# TROUBLESHOOTING

## Hydraulic Hose Routings



**Manual Angle:** Connect pressure line to female quick disconnect. Connect return line to male quick disconnect.

**Hydraulic Angle:** Connect pressure line to female quick disconnect . Connect return line from brush motor(s) to "P" port on manifold. Connect "T" port on manifold to male quick disconnect.

**Note:**  
Quick Disconnect Set-Up

Your broom comes equipped with standard ISO 16028 hydraulic quick disconnects (QD's). They are factory installed using the broom female QD as the pressure line. If your skid steer loader male QD is not the pressure line you will need to swap the positions of the broom QD's.

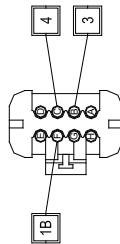
# TROUBLESHOOTING

## Wiring Harness

### Item Part Qty Description

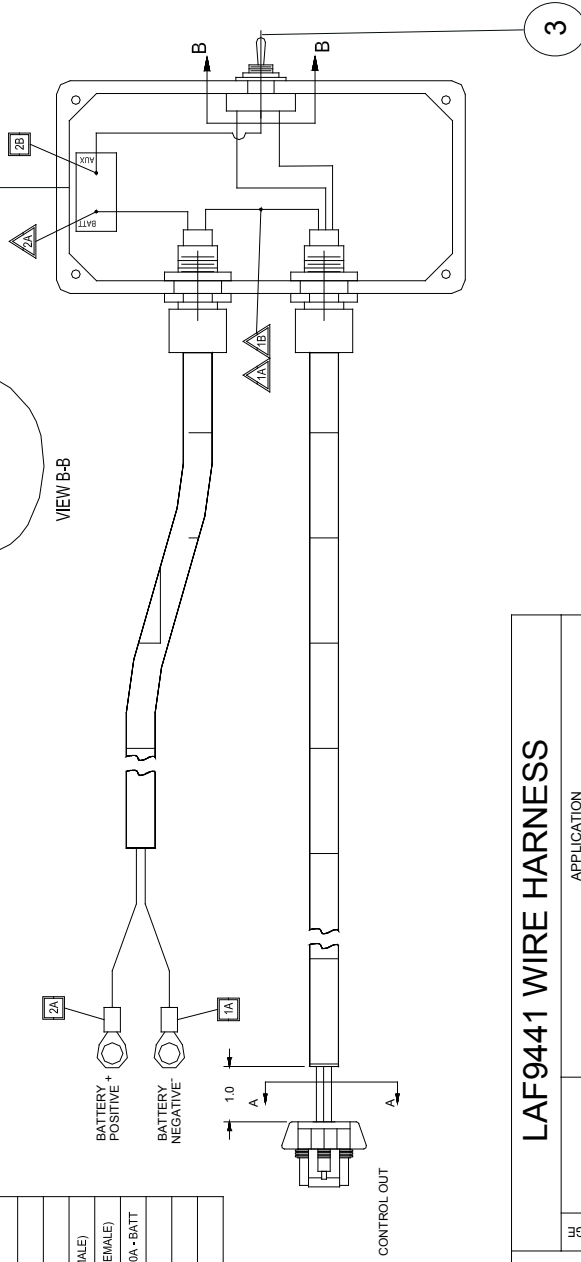
1. 07-3152 1 Circuit Breaker
2. 07-0868 1 Switch

LAF9444 WIRE HARNESS		APPLICATION	
WIRE NO.	GUAGE	IDENTIFICATION	FROM TO
1A	16	BLACK	BATTERY -12V SPADE TERMINAL (MALE)
1B	16	BLACK	PACKCARD CONN. PIN F SPADE TERMINAL (FEMALE)
2A	16	RED	BATTERY + CIRCUIT BREAKER 10A-AUX
2B	16	RED	CIRCUIT BREAKER 10A-AUX SWITCH 1-A
3	16	RED	PACKCARD CONN. PIN B-DEPTH SWITCH 1-B
4	16	YELLOW	PACKCARD CONN. PIN C-TILT SWITCH 1-C

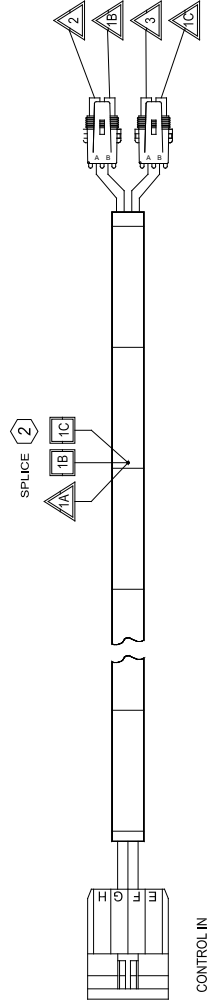


PLUG - A, D, E, G & H

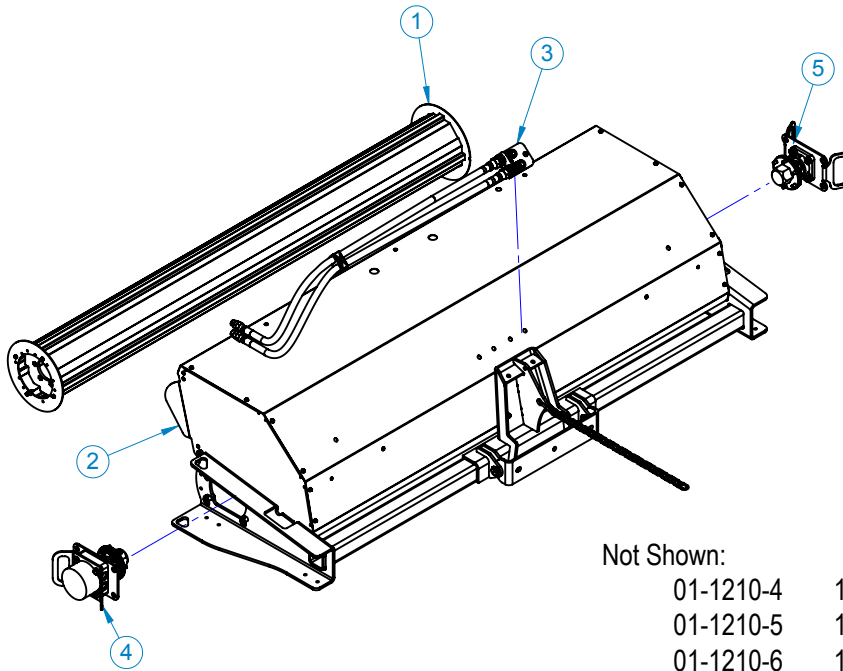
VIEW "A-A"



LAF9441 WIRE HARNESS		APPLICATION	
WIRE NO.	GUAGE	IDENTIFICATION	FROM TO
1A	16	BLACK	PACKCARD PIN F ULTRA SONIC SPLICE
1B	16	BLACK	ULTRA SONIC SPLICE PACKCARD 1 PIN B
1C	16	BLACK	ULTRA SONIC SPLICE PACKCARD 2 PIN B
2	16	RED	PACKCARD PIN B PACKCARD 1 PIN A
3	16	YELLOW	PACKCARD PIN C PACKCARD 2 PIN A



# SINGLE MOTOR BRUSH HEAD



NOTE:  
TOP PORT PRESSURE  
BOTTOM PORT RETURN

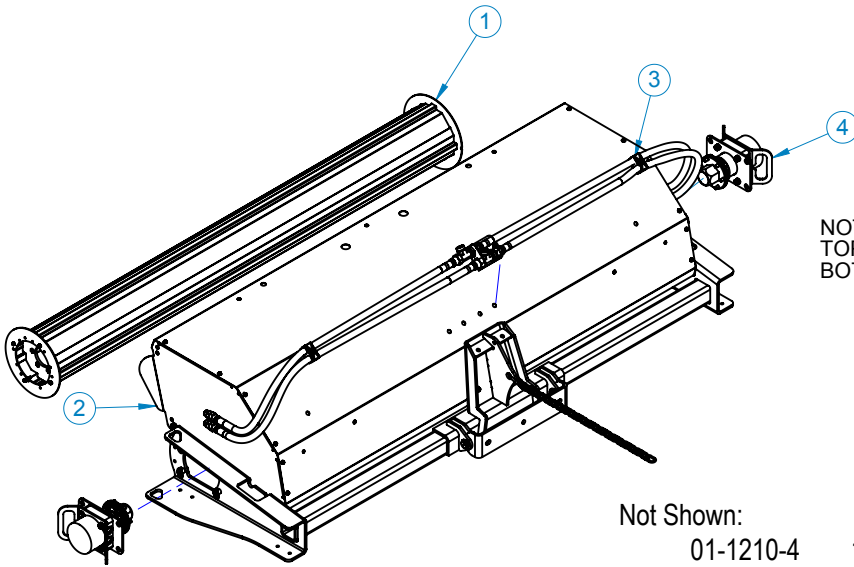
## Not Shown:

01-1210-4	1	Set Section, 32, 10, Poly, Convoluted, 4 Ft
01-1210-5	1	Set Section, 32, 10, Poly, Convoluted, 5 Ft
01-1210-6	1	Set Section, 32, 10, Poly, Convoluted, 6 Ft
01-1210-7	1	Set Section, 32, 10, Poly, Convoluted, 7 Ft
01-1210-8	1	Set Section, 32, 10, Poly, Convoluted, 8 Ft
01-1209-4	1	Set Section, 32, 10, Mixed, Convoluted, 4 Ft
01-1209-5	1	Set Section, 32, 10, Mixed, Convoluted, 5 Ft
01-1209-6	1	Set Section, 32, 10, Mixed, Convoluted, 6 Ft
01-1209-7	1	Set Section, 32, 10, Mixed, Convoluted, 7 Ft
01-1209-8	1	Set Section, 32, 10, Mixed, Convoluted, 8 Ft
01-1213-4	1	Set Section, 32, 10, Wire, Convoluted, 4 Ft
01-1213-5	1	Set Section, 32, 10, Wire, Convoluted, 5 Ft
01-1213-6	1	Set Section, 32, 10, Wire, Convoluted, 6 Ft
01-1213-7	1	Set Section, 32, 10, Wire, Convoluted, 7 Ft
01-1213-8	1	Set Section, 32, 10, Wire, Convoluted, 8 Ft
01-1214-4	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 4 Ft
01-1214-5	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 5 Ft
01-1214-6	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 6 Ft
01-1214-7	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 7 Ft
01-1214-8	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 8 Ft

## Item Part Qty Description

1.	28-10095-4	1	Assembly, Core 4 Ft
	28-10095-5	1	Assembly, Core 5 Ft
	28-10095-6	1	Assembly, Core 6 Ft
	28-10095-7	1	Assembly, Core 7 Ft
	28-10095-8	1	Assembly, Core 8 Ft
2.	28-10309-4	1	Assembly, Brush Frame 4 Ft
	28-10309-5	1	Assembly, Brush Frame 5 Ft
	28-10309-6	1	Assembly, Brush Frame 6 Ft
	28-10309-7	1	Assembly, Brush Frame 7 Ft
	28-10309-8	1	Assembly, Brush Frame 8 Ft
3.	28-10313-4	1	Assembly, Hydraulic Hose 4 Ft
	28-10313-5	1	Assembly, Hydraulic Hose 5 Ft
	28-10313-6	1	Assembly, Hydraulic Hose 6 Ft
	28-10313-7	1	Assembly, Hydraulic Hose 7 Ft
	28-10313-8	1	Assembly, Hydraulic Hose 8 Ft
4.	28-9849-1	1	Assembly, Motor, Hydraulic, 18.3 CI
	28-9849-2	1	Assembly, Motor, Hydraulic, 28.3 CI
5.	28-9862	1	Assembly, Idler

# DUAL MOTOR BRUSH HEAD



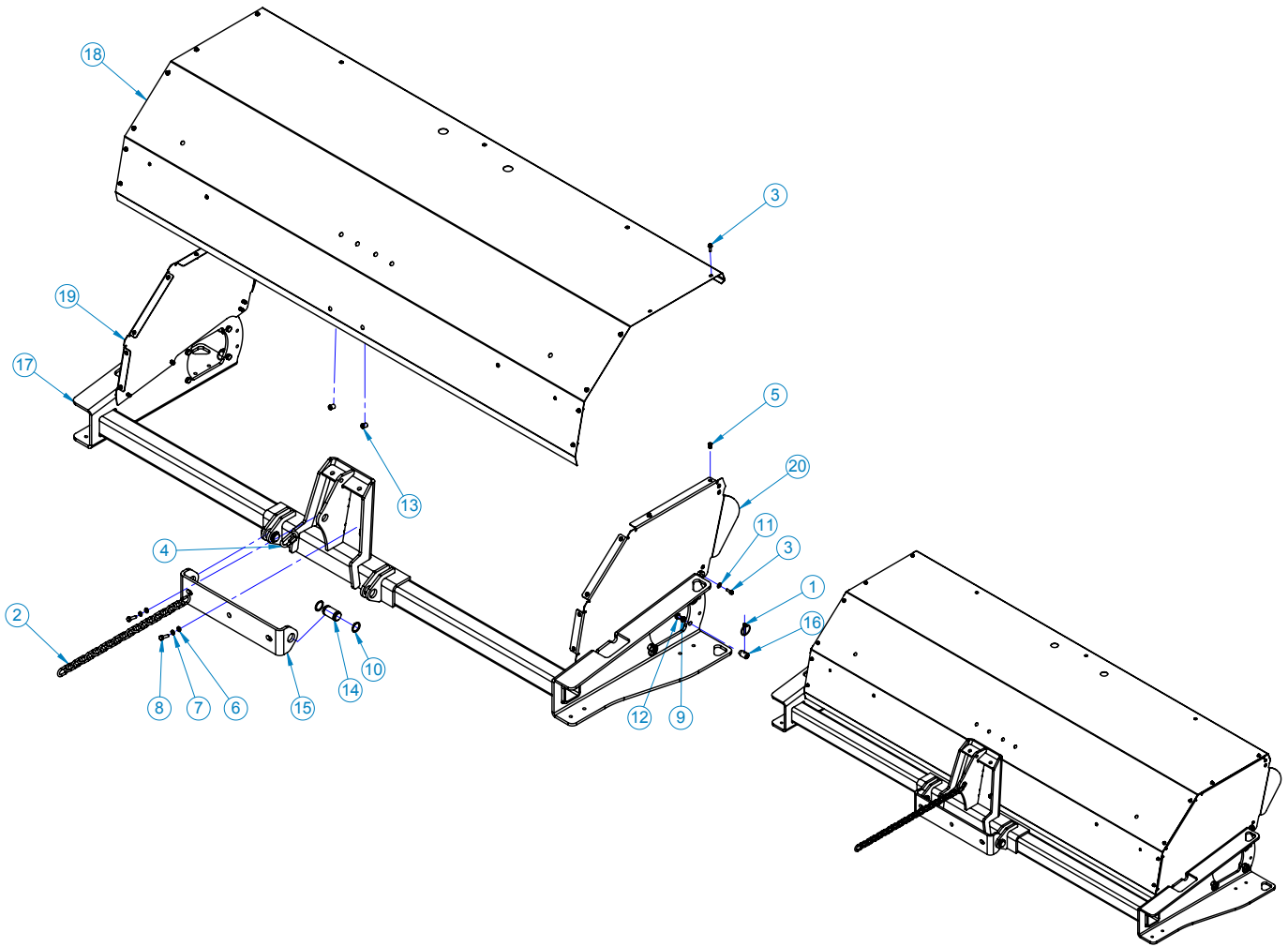
NOTE:  
TOP PORT PRESSURE  
BOTTOM PORT RETURN

Not Shown:

01-1210-4	1	Set Section, 32, 10, Poly, Convoluted, 4 Ft
01-1210-5	1	Set Section, 32, 10, Poly, Convoluted, 5 Ft
01-1210-6	1	Set Section, 32, 10, Poly, Convoluted, 6 Ft
01-1210-7	1	Set Section, 32, 10, Poly, Convoluted, 7 Ft
01-1210-8	1	Set Section, 32, 10, Poly, Convoluted, 8 Ft
01-1210-9	1	Set Section, 32, 10, Poly, Convoluted, 9 Ft
01-1209-4	1	Set Section, 32, 10, Mixed, Convoluted, 4 Ft
01-1209-5	1	Set Section, 32, 10, Mixed, Convoluted, 5 Ft
01-1209-6	1	Set Section, 32, 10, Mixed, Convoluted, 6 Ft
01-1209-7	1	Set Section, 32, 10, Mixed, Convoluted, 7 Ft
01-1209-8	1	Set Section, 32, 10, Mixed, Convoluted, 8 Ft
01-1209-9	1	Set Section, 32, 10, Mixed, Convoluted, 9 Ft
01-1213-4	1	Set Section, 32, 10, Wire, Convoluted, 4 Ft
01-1213-5	1	Set Section, 32, 10, Wire, Convoluted, 5 Ft
01-1213-6	1	Set Section, 32, 10, Wire, Convoluted, 6 Ft
01-1213-7	1	Set Section, 32, 10, Wire, Convoluted, 7 Ft
01-1213-8	1	Set Section, 32, 10, Mixed, Convoluted, 8 Ft
01-1213-9	1	Set Section, 32, 10, Mixed, Convoluted, 9 Ft
01-1214-4	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 4 Ft
01-1214-5	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 5 Ft
01-1214-6	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 6 Ft
01-1214-7	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 7 Ft
01-1214-8	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 8 Ft
01-1214-9	1	Set Section, 32, 10, 1/2 & 1/2, Convoluted, 9 Ft

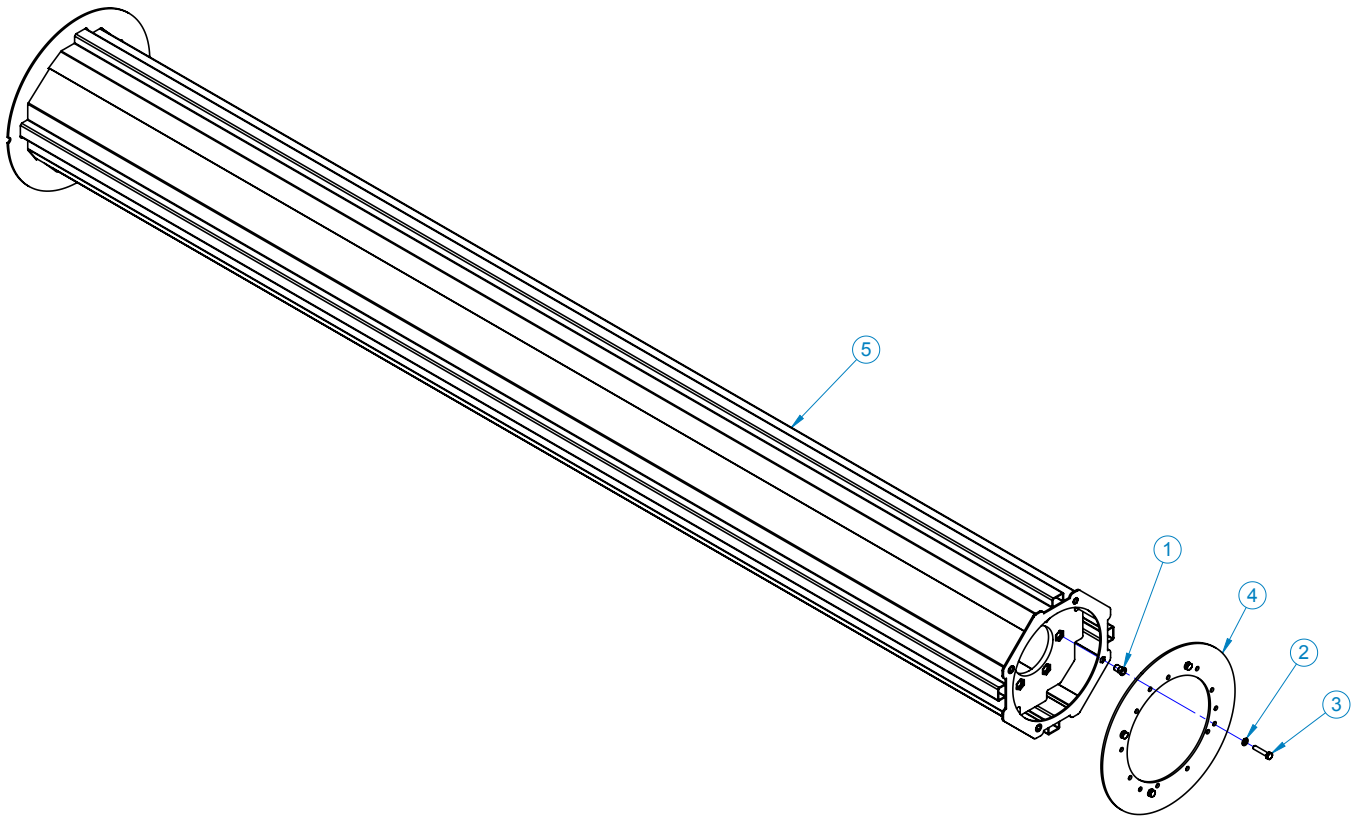
Item	Part	Qty	Description
1.	28-10095-4	1	Assembly, Core 4 Ft
	28-10095-5	1	Assembly, Core 5 Ft
	28-10095-6	1	Assembly, Core 6 Ft
	28-10095-7	1	Assembly, Core 7 Ft
	28-10095-8	1	Assembly, Core 8 Ft
	28-10095-9	1	Assembly, Core 9 Ft
2.	28-10309-4	1	Assembly, Brush Frame 4 Ft
	28-10309-5	1	Assembly, Brush Frame 5 Ft
	28-10309-6	1	Assembly, Brush Frame 6 Ft
	28-10309-7	1	Assembly, Brush Frame 7 Ft
	28-10309-8	1	Assembly, Brush Frame 8 Ft
	28-10309-9	1	Assembly, Brush Frame 9 Ft
3.	28-10314-4	1	Assembly, Hydraulic Hose 4 Ft
	28-10314-5	1	Assembly, Hydraulic Hose 5 Ft
	28-10314-6	1	Assembly, Hydraulic Hose 6 Ft
	28-10314-7	1	Assembly, Hydraulic Hose 7 Ft
	28-10314-8	1	Assembly, Hydraulic Hose 8 Ft
	28-10314-9	1	Assembly, Hydraulic Hose 9 Ft
4.	28-9849-1	2	Assembly, Motor, Hydraulic, 18.3 CI

# BRUSH FRAME ASSEMBLY



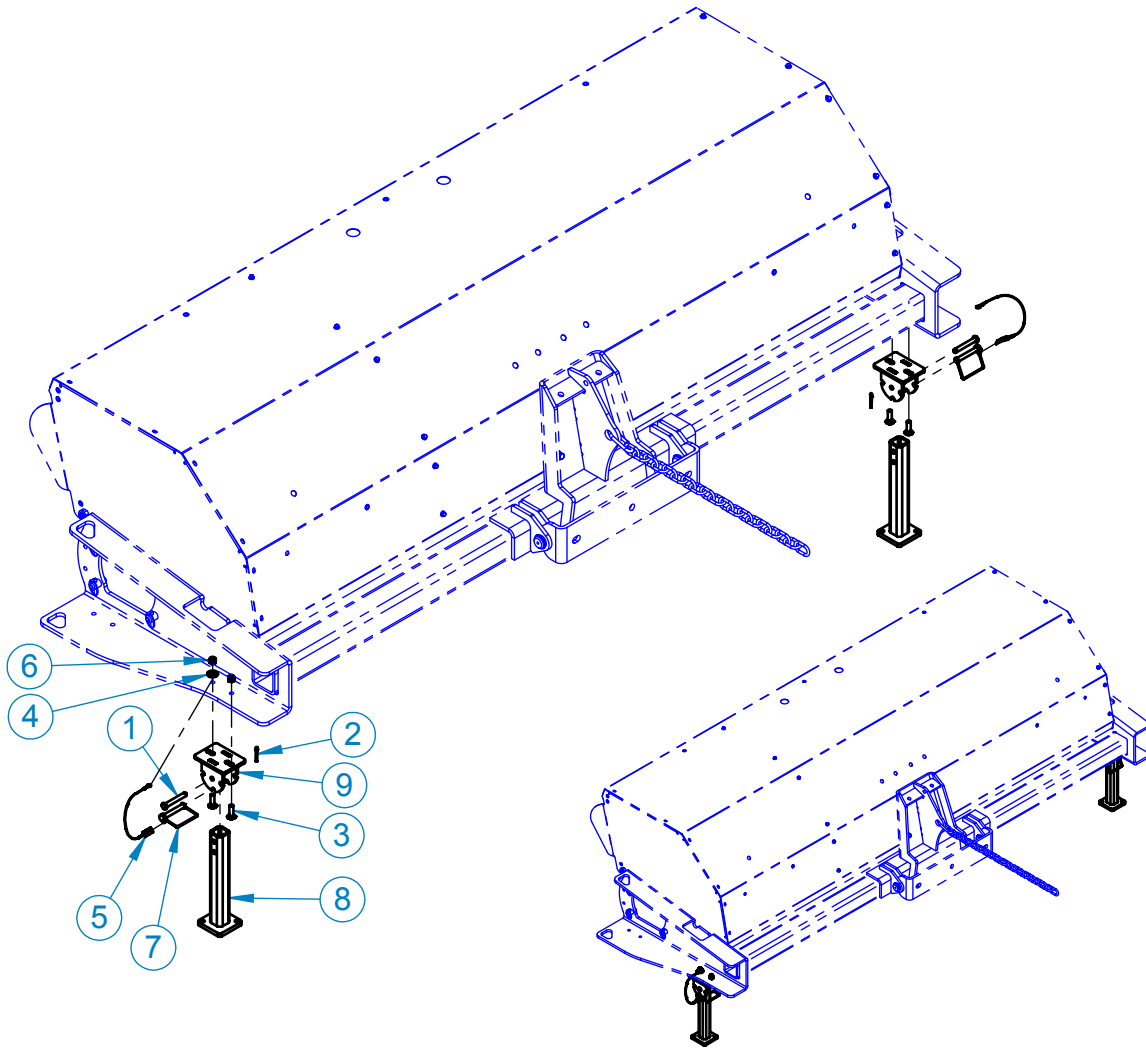
Item	Part	Qty	Description	Item	Part	Qty	Description
1.	07-0244	8	Pin, Linch, 1/4	17.	13-16994-4	1	Weld, Frame, Brush 4 Ft
2.	07-0249	1	Chain, 1/4 x 22 Links		13-16994-5	1	Weld, Frame, Brush 5 Ft
3.	07-2952	18	Screw, HFH, CL10.9, M6-1 x 20		13-16994-6	1	Weld, Frame, Brush 6 Ft
4.	07-3311	1	Link, Quick, 5/16		13-16994-7	1	Weld, Frame, Brush 7 Ft
5.	07-3617	29	Nut, Insert, Hex, M6 x 1		13-16994-8	1	Weld, Frame, Brush 8 Ft
6.	07-3736	2	Washer, Flat, CL8.8, M8		13-16994-9	1	Weld, Frame, Brush 9 Ft
7.	07-3738	2	Washer, Lock, Split, Medium, M8	18.	13-16995-4	1	Sheet, Hood 4 Ft
8.	07-3740	2	Screw, CL10.9, M8-1.25 x 30mm		13-16995-5	1	Sheet, Hood 5 Ft
9.	07-3747	8	Washer, Lock, Split, Medium, M10		13-16995-6	1	Sheet, Hood 6 Ft
10.	07-3842	4	Ring, Snap		13-16995-7	1	Sheet, Hood 7 Ft
11.	07-4927	6	Washer, Fender, CL8.8, M6		13-16995-8	1	Sheet, Hood 8 Ft
12.	07-6769	8	Screw, CL10.9, M10-1.5 x 16mm		13-16995-9	1	Sheet, Hood 9 Ft
13.	07-7115	2	Nut, Insert, M8-1.25	19.	13-16996	1	Sheet, Hood, Side, Left
14.	13-10004	2	Pin, Pivot, Lift, Arm	20.	13-16997	1	Sheet, Hood, Side, Right
15.	13-12617	1	Plate, Mounting, Pivot				
16.	13-14083	8	Stud, Mounting, Motor				

# CORE ASSEMBLY



Item	Part	Qty	Description
1.	07-3617	4	Nut, Insert, Hex, M6 x 1
2.	07-3730	4	Washer, Lock, Split, Medium, M6
3.	07-3731	4	Screw, HHC, CL10.9, M6-1 x 30mm
4.	13-13166	1	Plate, Ring, Core, End
5.	13-15866-4	1	Weld, Core, 4 Ft
	13-15866-5	1	Weld, Core, 5 Ft
	13-15866-6	1	Weld, Core, 6 Ft
	13-15866-7	1	Weld, Core, 7 Ft
	13-15866-8	1	Weld, Core, 8 Ft
	13-15866-9	1	Weld, Core, 9 Ft

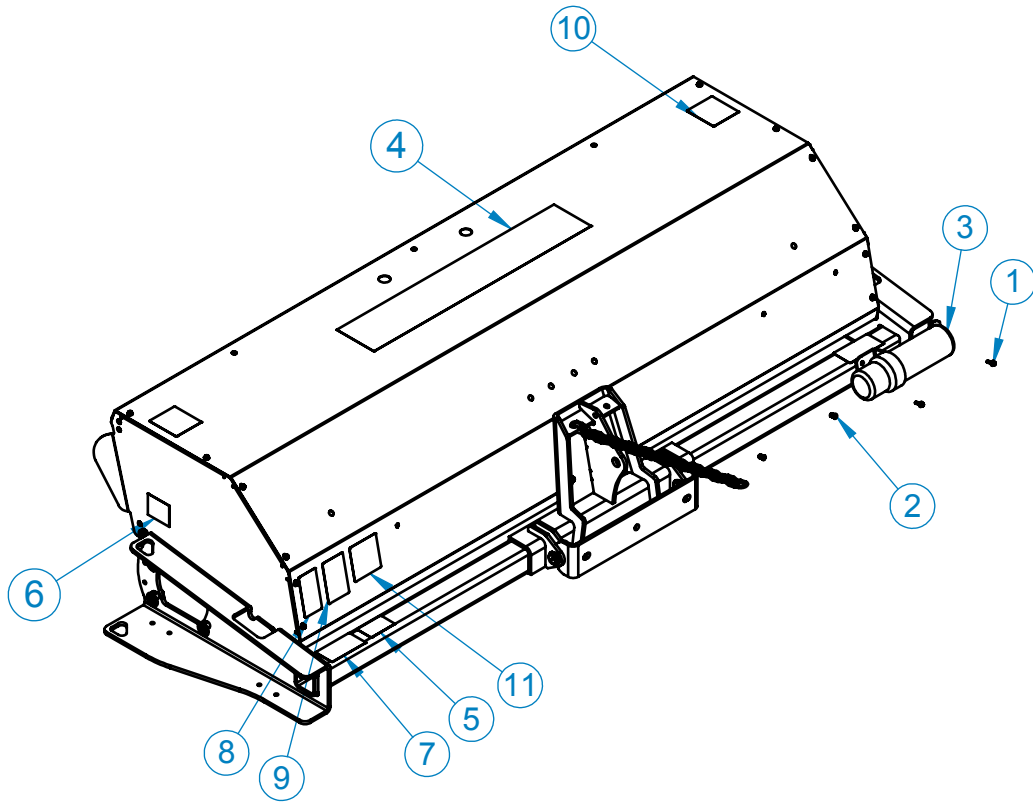
# BRUSH HEAD STANDS



Item	Part	Qty	Description
1.	07-0260	2	Pin, Clevis, Gr2, 3/8, 2 3/4
2.	07-0699	2	Pin, Cotter, Gr2, 1/8 x 1 1/4
3.	07-1717	4	Bolt, Carriage, Gr5, 3/8-16 x 1 1/4
4.	07-3279	2	Washer, Flat, Gr8, 3/8
5.	07-3375	2	Lanyard, 1/16 Cable, 1 1/4 Tab
6.	07-4036	4	Nut, Hex, Nylock, Gr8, 3/8-16
7.	07-4748	2	Pin, Lock, 3/8 x 2
8.	13-13226	2	Weld, Stand
9.	13-17002	2	Weld, Stand, Mounting

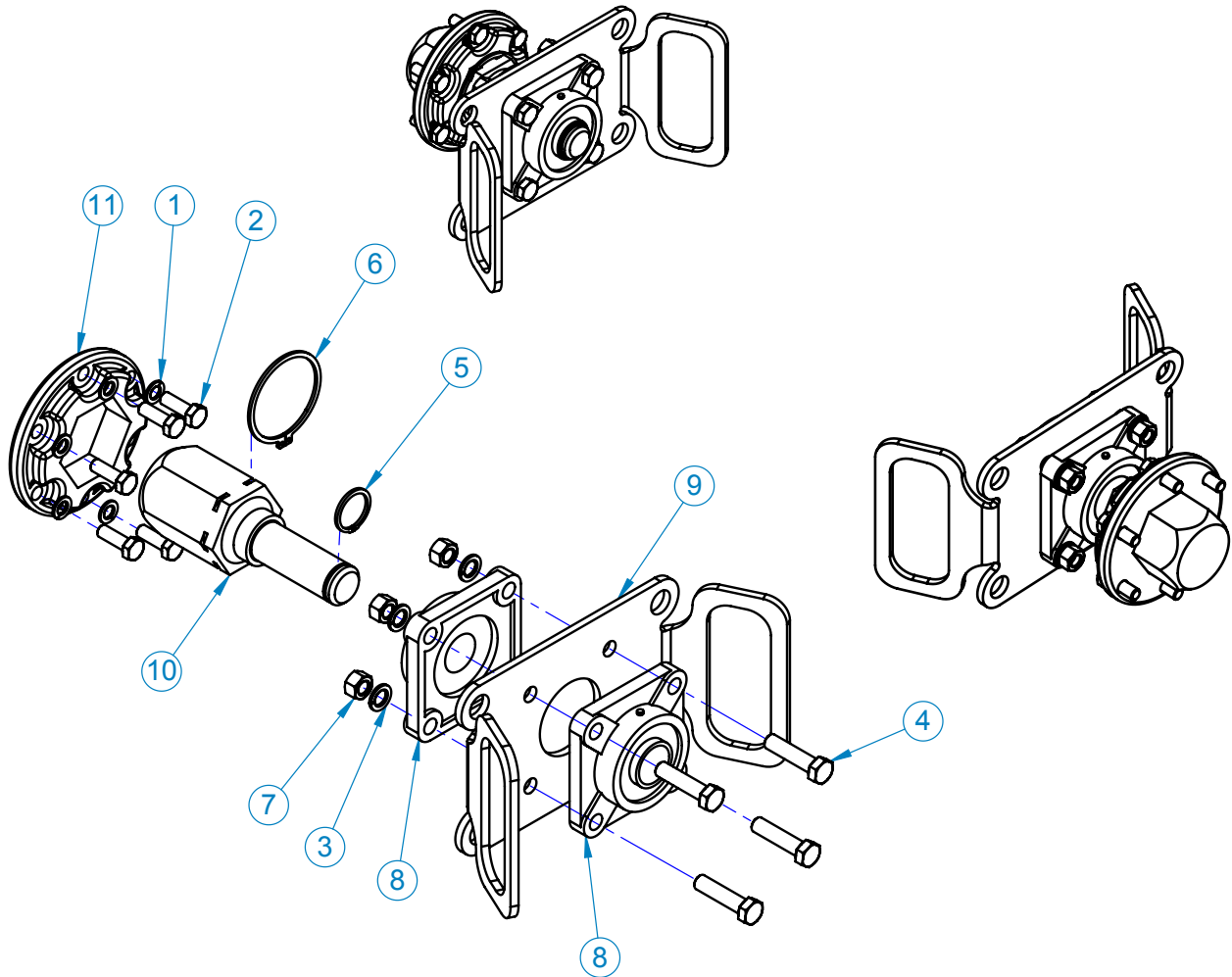


# BRUSH HEAD LABELS



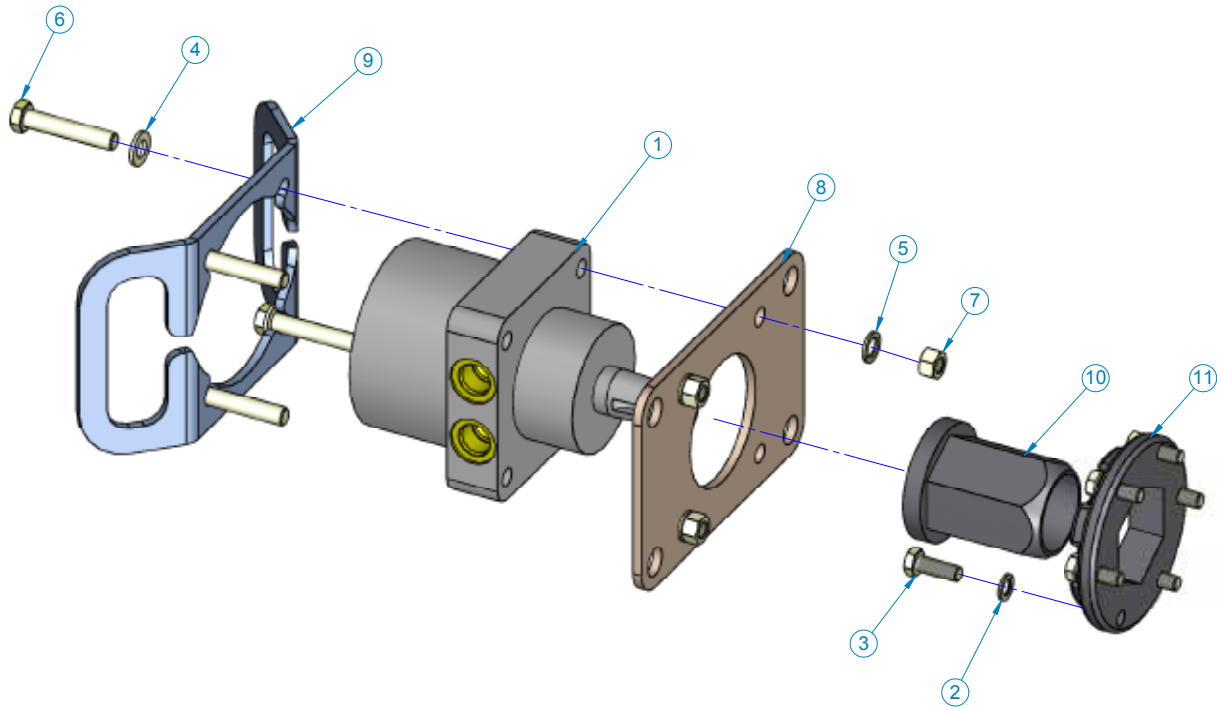
Item	Part	Qty	Description
1.	07-3522	2	Screw, HFH, CL10.9, M6 x 1
2.	07-3617	2	Nut, Insert, Hex, M6 x 1
3.	07-6869	1	Manual, Holder
4.	50-0252	1	Label, Logo, Sweepster, Large
5.	50-0634	1	Label, Serial Number
6.	50-0643	2	Label, Tie Down Point
7.	50-0721	2	Label, Warning, Crush Hazard
8.	50-0722	1	Label, Warning, Misuse Hazard
9.	50-0724	1	Label, Warning, High Pressure Fluid Hazard
10.	50-0726	2	Label, Warning, Flying Object & Entanglement
11.	41043	1	Decal, Warning, Hazardous Dust

## HEX DRIVE HUB ASSEMBLY



Item	Part	Qty	Description
1.	07-3747	6	Washer, Lock, Split, Medium, M10
2.	07-3749	6	Screw, HHC, CL10.9, M10-1.5 x 30mm
3.	07-3756	4	Washer, Lock, Split, Medium, M12
4.	07-3762	4	Screw, HHC, CL10.9, M12-1.75 x 50mm
5.	07-3842	1	Ring, Snap
6.	07-6196	1	Ring, Snap
7.	07-6766	4	Nut, Hex, CL10.9, M12-1.75
8.	08-0067	2	Bearing, 1 1/4, 4 Bolt
9.	13-14133	1	Plate, Mounting, Bearing
10.	13-14135	1	Hub, Hex, 2 1/2, Single Motor
11.	13-16225	1	Plate, Receiver, Hex, 2.5

# MOTOR ASSEMBLIES

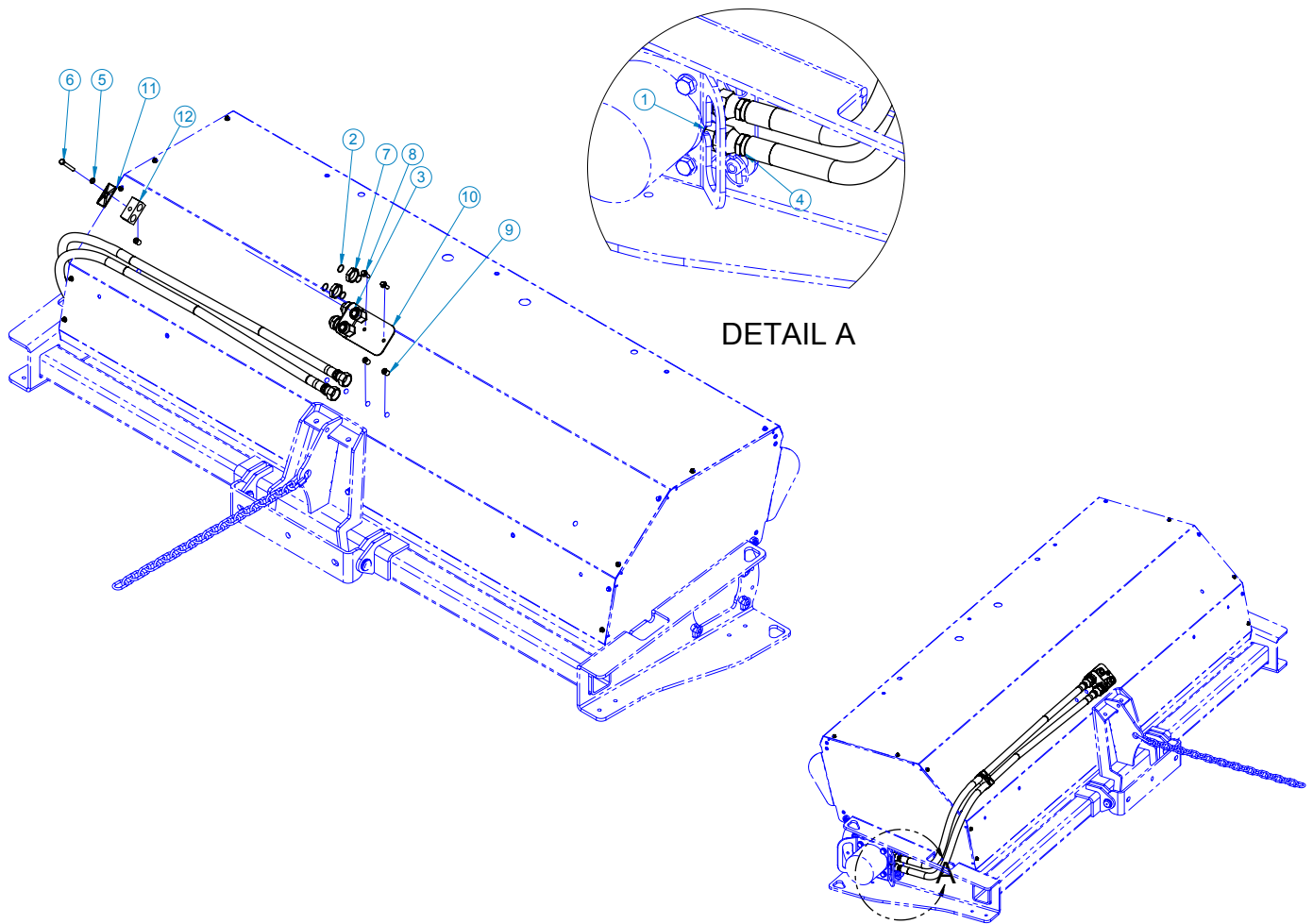


Item	Part	Qty	Description
1.	03-5612	1	Motor, 18.3 CI, 1.25, White-CE
	03-5613	1	Motor, 28.3 CI, 1.25, White-RE
2.	07-3747	6	Washer, Lock, Split, Medium, M10
3.	07-3749	6	Screw, HHC, CL10.9, M10-1.5 x 30mm
4.	07-3754	4	Washer, Flat, CL10.9, M12
5.	07-3756	4	Washer, Lock, Split, Medium, M12
6.	07-6683	4	Screw, HHC, CL10.9, M12-1.75 x 65mm
7.	07-6766	4	Nut, Hex, CL10.9, M12-1.75
8.	13-14085	1	Plate, Mounting, Motor
9.	13-14086	1	Plate, Handle, Motor
10.	13-5206	1	Hub, Hex, 2 1/2 x 1 1/4 Tapered Bore x 3.75
11.	13-16225	1	Plate, Receiver, Hex, 2.5

Not Shown:

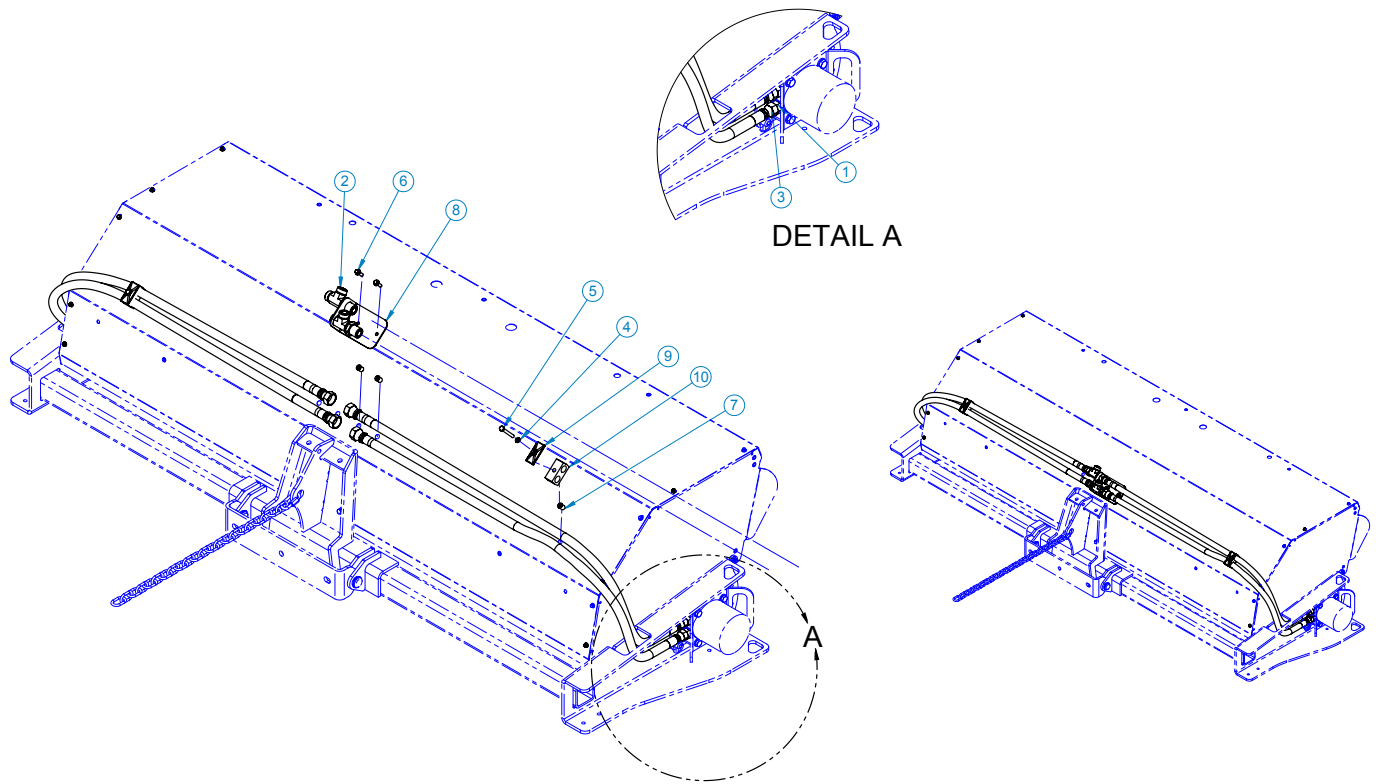
07-4568	1	Nut, Motor, Shaft
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# HYDRAULIC HOSE ASSEMBLY SINGLE MOTOR



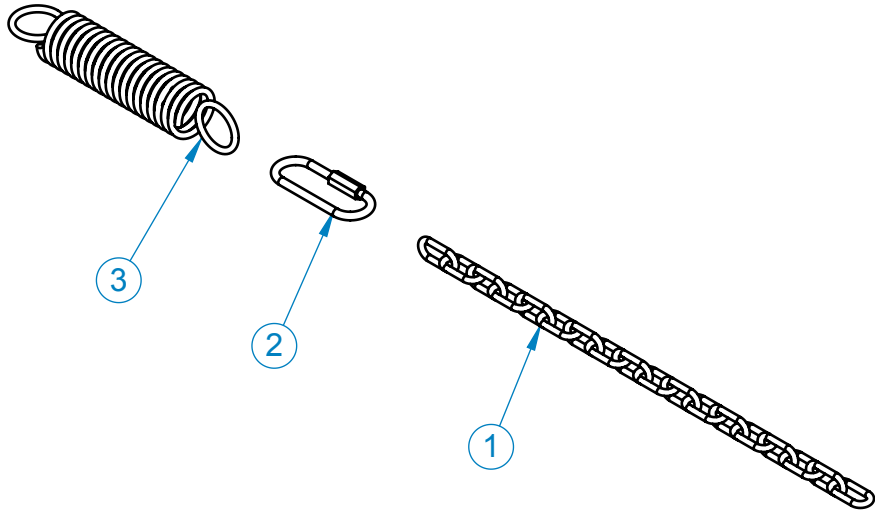
Item	Part	Qty	Description
1.	03-1939	2	Fitting, 10MB-10MF
2.	03-2003	4	O-Ring, FS, 3/4
3.	03-3531	2	Elbow, 90°, 12MF-12MF
4.	03-5167	2	Hose, .5 x 44, 10FF, 12FF, 3.5K 4 Ft
	03-5168	2	Hose, .5 x 50, 10FF, 12FF, 3.5K 5 Ft
	03-5179	2	Hose, .5 x 56, 10FF, 12FF, 3.5K 6 Ft
	03-5654	2	Hose, .5 x 62, 10FF, 12FF, 3.5K 7 Ft
	03-5655	2	Hose, .5 x 68, 10FF, 12FF, 3.5K 8 Ft
	03-5656	2	Hose, .5 x 74, 10FF, 12FF, 3.5K 9 Ft
5.	07-3738	1	Washer, Lock, Split, Medium, M8
6.	07-5287	1	Screw, HHC, CL10.9, M8-1.25 x 65mm
7.	07-6396	2	Nut, Bulkhead, #12
8.	07-6531	2	Screw, HFH, CL10.9, M8-1.25 x 25mm
9.	07-7115	3	Nut, Insert, M8-1.25, 22-10ga
10.	13-17014	1	Plate, Mounting, Bulkhead Fittings
11.	RHW8614	1	Cover, Plate
12.	RHW8616	1	Hose, Cradle

# HYDRAULIC HOSE ASSEMBLY DUAL MOTOR



Item	Part	Qty	Description
1.	03-1939	4	Fitting, 10MB-10MF
2.	03-5160	2	Tee, 12MF-12MF-12MF
3.	03-5167	4	Hose, .5 x 44, 10FF, 12FF, 3.5K 4 Ft
	03-5168	4	Hose, .5 x 50, 10FF, 12FF, 3.5K 5 Ft
	03-5179	4	Hose, .5 x 56, 10FF, 12FF, 3.5K 6 Ft
	03-5654	4	Hose, .5 x 62, 10FF, 12FF, 3.5K 7 Ft
	03-5655	4	Hose, .5 x 68, 10FF, 12FF, 3.5K 8 Ft
	03-5656	4	Hose, .5 x 74, 10FF, 12FF, 3.5K 9 Ft
4.	07-3738	2	Washer, Lock, Split, Medium, M8
5.	07-5287	2	Screw, HHC, CL10.9, M8-1.25 x 65mm
6.	07-6531	2	Screw, HFH, CL10.9, M8-1.25 x 25mm
7.	07-7115	4	Nut, Insert, M8-1.25, 22-10ga
8.	13-17014	1	Plate, Mounting, Bulkhead Fittings
9.	RHW8614	2	Cover, Plate
10.	RHW8616	2	Hose, Cradle

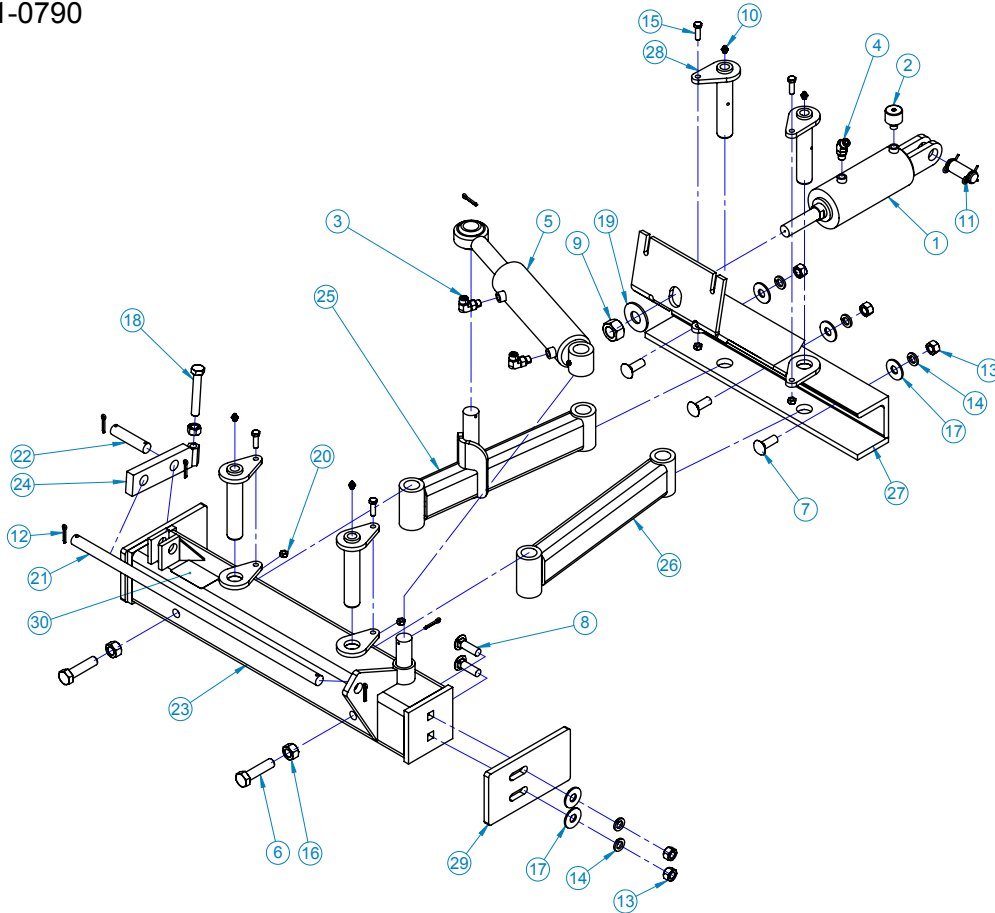
# SPRING-CHAIN ASSEMBLY



Item	Part	Qty	Description
1.	07-1558	1	Chain, 1/4, 18 Links
2.	07-5294	1	Link, Quick, 5/16, Wide Jaw
3.	07-6451	1	Spring, Tension, 325 #/in

# SCISSOR SWING ASSEMBLY

Assembly 11-0790



## Item Part Qty Description

1.	03-1928-1	1	Cylinder, 3.00 x 1.13 x 4.50
	03-2600	1	Cylinder, 2.00 x 1.13 x 4.50
2.	03-1932	1	Fitting, Vent, 9/16MOR
3.	03-2092	2	Elbow, 90, 6MF-6MB
4.	03-2115	1	Elbow, 45, 6MB-6MF
5.	03-4887	1	Cylinder, 2.50 x 1.38 x 7.5, 3.5K
6.	07-0080	2	Screw, Cap, Tap, 3/4-10 x 3
7.	07-0119	3	Bolt, Carriage, 5/8 x 1 3/4
8.	07-0120	4	Bolt, Carriage, 5/8-11 x 2
9.	07-0186	1	Nut, Hex, 1-14
10.	07-0223	4	Fitting, Zerk, Straight, 1/8NPT
11.	07-0539	1	Pin, Clevis, 1, with Hairpin Clip
12.	07-0786	6	Pin, Cotter, 3/16 x 1 1/2
13.	07-1294	8	Nut, Hex, Gr8, 5/8-11
14.	07-1872	7	Washer, Lock, Split, Medium, 5/8
15.	07-2116	4	Screw, HHC, Gr8, 3/8-16 x 1 1/4

## Item Part Qty Description

16.	07-3066	2	Nut, Hex, 3/4-10
17.	07-3120	7	Washer, Flat, Gr8, 5/8
18.	07-3934	1	Screw, Tap, Gr5, 5/8-11 x 4
19.	07-4040	1	Washer, Flat, Gr8, 1
20.	07-5370	4	Nut, Hex, Lock, Gr8, 3/8-16
21.	11-0023	1	Pin, 7/8 x 27 5/8
22.	11-0459	1	Pin, 7/8 x 3, 2 Holes
23.	11-0789	1	Weld, Frame, Swing, AH, Rear
24.	11-0799	1	Weld, Bracket, Leveling
25.	11-0800	1	Weld, Arm, Swing, AH, with Pin
26.	11-0803	1	Weld, Arm, Swing, AH, No Pin
27.	11-1677	1	Weld, Frame, Swing, AH
28.	13-15600	4	Weld, Pin, Frame, Swing
29.	13-15678	2	Plate, Adjustment, Brush Head
30.	50-0635	1	Label, Plate, Part Number/Date

### Replacement Parts for 03-1928-1 :

03-0928	Seal Kit
03-0001B-1	Rod
03-5106	Rod/Gland Kit

### Replacement Parts for 03-4887 :

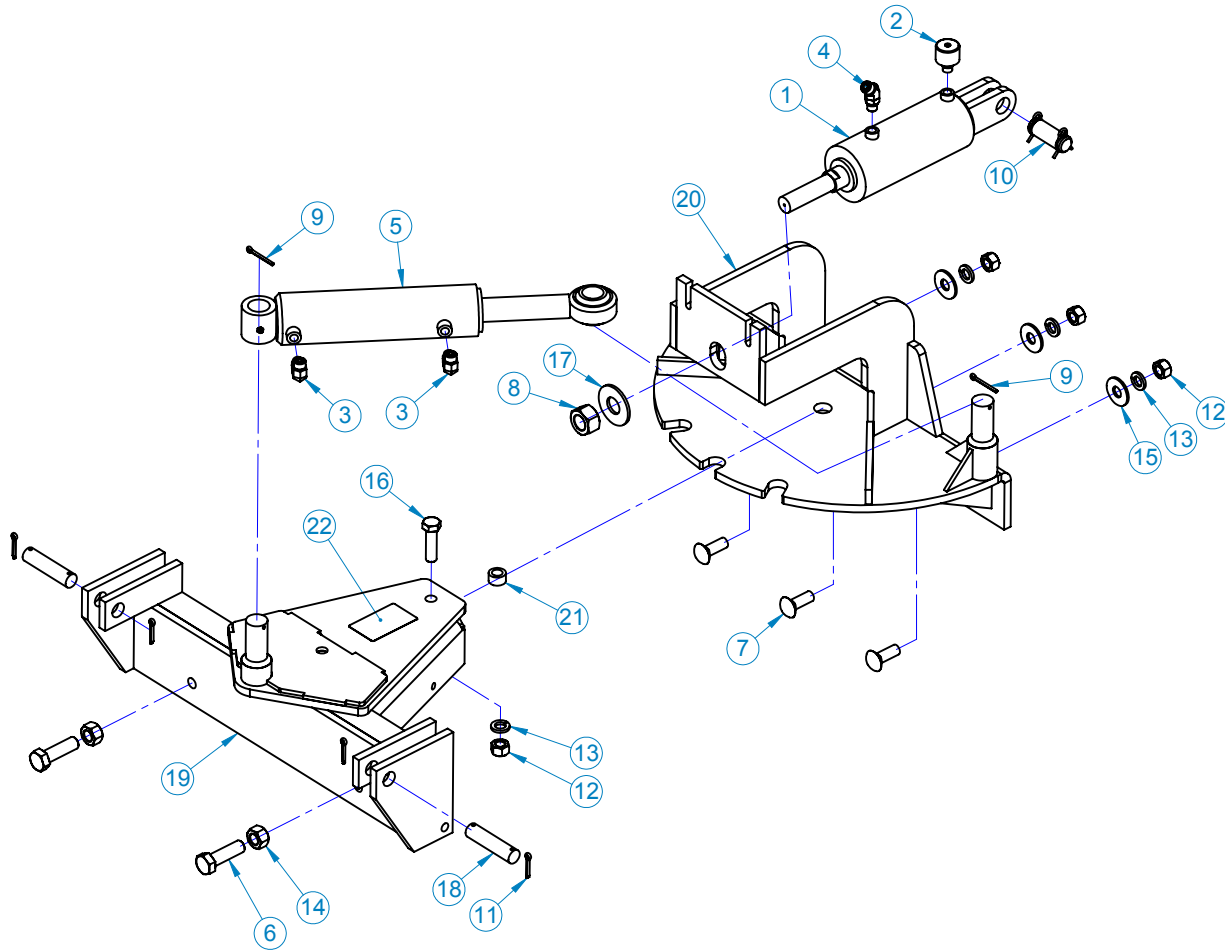
03-4888	Seal Kit
03-5035	Rod

### Replacement Part for 03-2600 :

03-1472	Seal Kit
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# SWING PLATE FOR TRACTORS

Assembly 28-4612



## Item Part Qty Description

1.	03-1928-1	1	Cylinder, 3.00 x 1.13 x 4.50
	03-2600	1	Cylinder, 2.00 x 1.13 x 4.50
2.	03-1932	1	Fitting, Vent, 9/16MOR, W/Bell Cap
3.	03-2092	2	Elbow, 90, 6MF-6MB
4.	03-2115	1	Elbow, 45, 6MB-6MF
5.	03-4887	1	Cylinder, 2.50 x 1.38 x 7.50, 3.5K
6.	07-0079	2	Screw, Cap, Tap, 3/4-10 x 2 1/2
7.	07-0119	3	Bolt, Carriage, Gr5, 5/8-11 x 1 3/4
8.	07-0186	1	Nut, Hex, 1-14
9.	07-0206	2	Pin, Cotter, Gr2, 3/16 x 2
10.	07-0539	1	Pin, Clevis, 1, with HairClip, Both-Ends

## Item Part Qty Description

11.	07-0786	4	Pin, Cotter, 3/16 x 1 1/2
12.	07-1294	4	Nut, Hex, 5/8-11
13.	07-1872	4	Washer, Lock, Split, 5/8
14.	07-3066	2	Nut, Hex, 3/4-10
15.	07-3120	3	Washer, Flat, 5/8
16.	07-3680	1	Screw, HHC, Gr8, 5/8-11 x 2 1/4
17.	07-4040	1	Washer, Flat, Gr8, 1
18.	11-0459	2	Pin, 7/8 x 3, 2 Holes
19.	13-10476	1	Weld, Swing, Frame, CH
20.	13-10477	1	Weld, Plate, Swing, CH
21.	13-4657	1	Bushing, 1 x 5/8 x .562
22.	50-0635	1	Label, Plate, Part Number/Date

### Replacement Parts for 03-1928-1 :

03-0928	Seal Kit
03-0001B-1	Rod
03-5106	Rod/Gland Kit

### Replacement Part for 03-2600 :

03-1472	Seal Kit
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### Replacement Parts for 03-4887 :

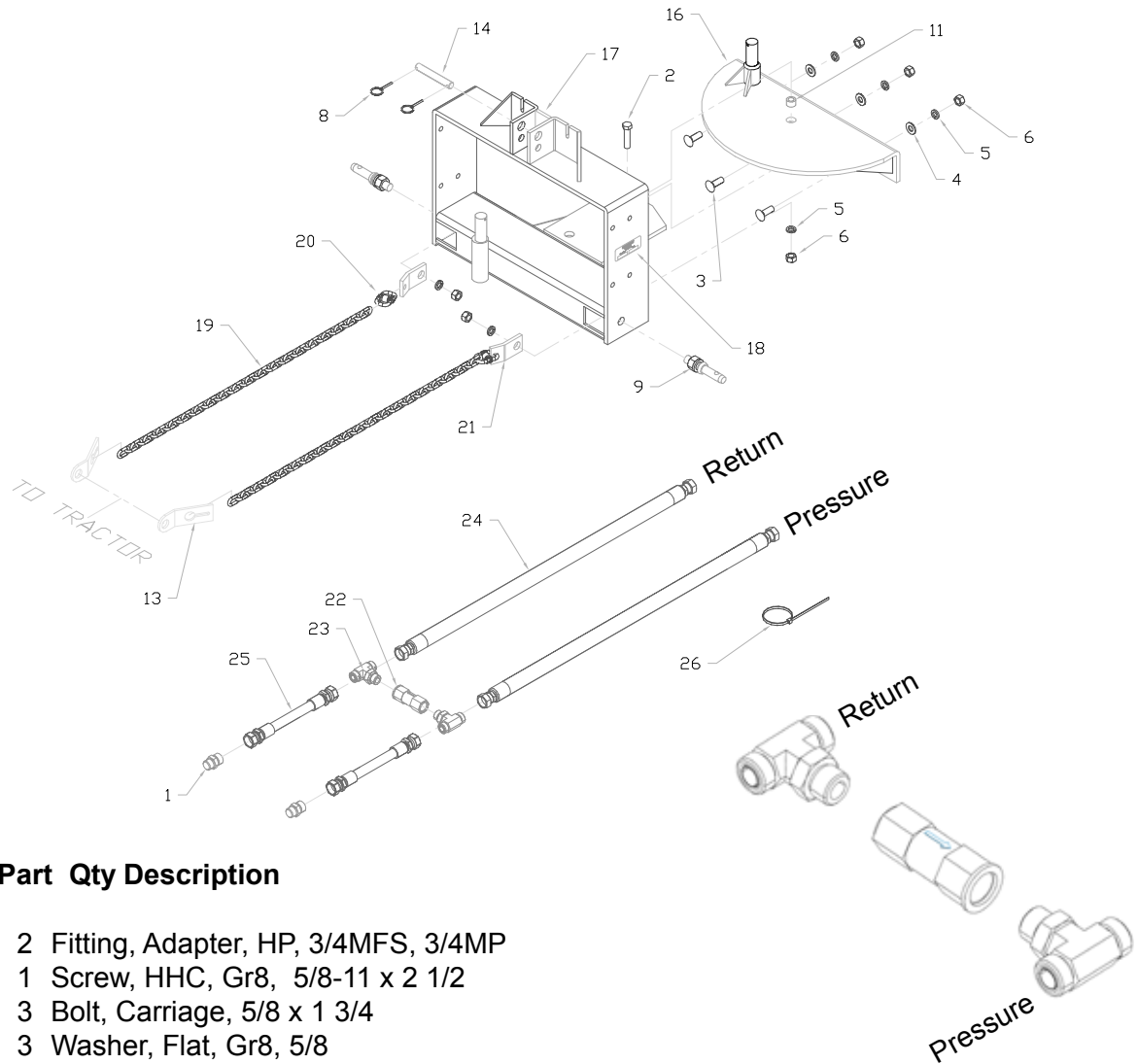
03-4888	Seal Kit
03-5035	Rod



# NOTES

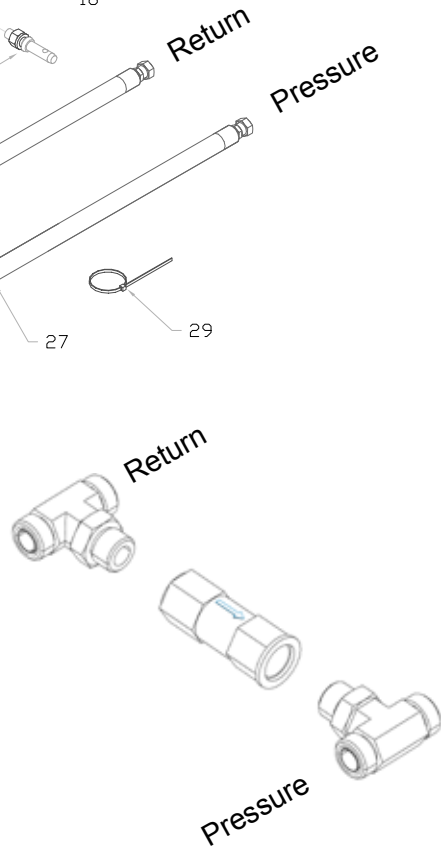
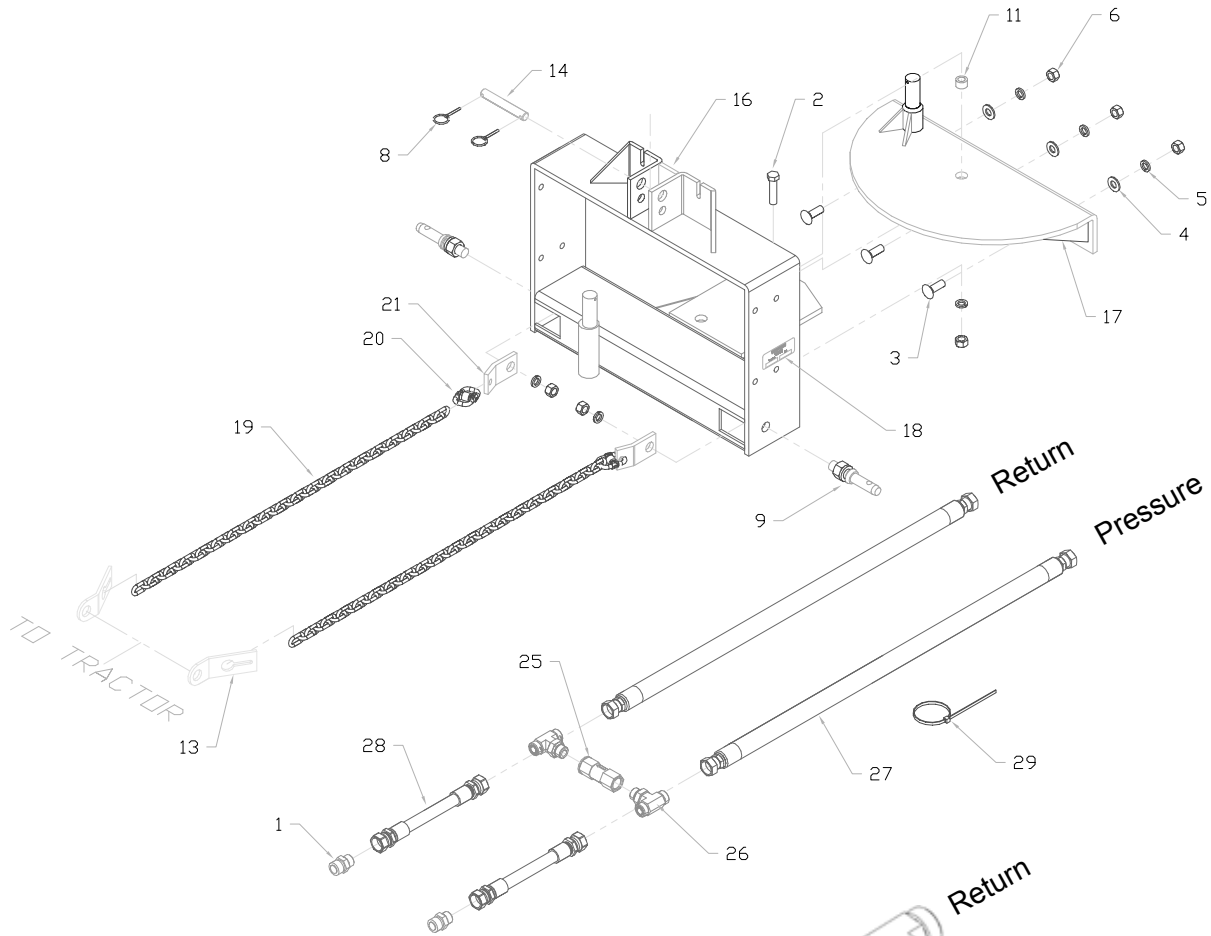
# 11-5031 RLCH, CATEGORY I HITCH

## 11-4183 RLH, CATEGORY I HITCH



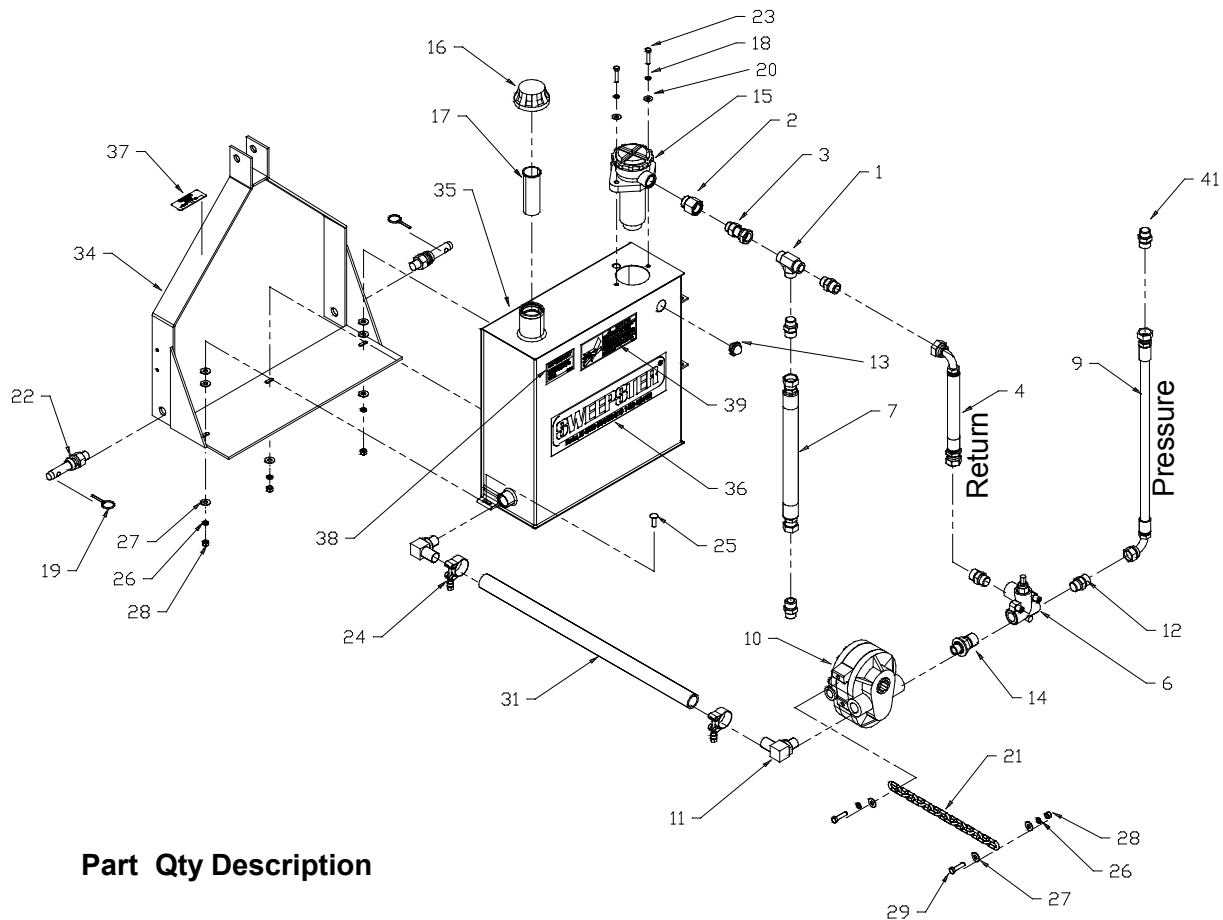
Item	Part	Qty	Description
1.	03-1943	2	Fitting, Adapter, HP, 3/4MFS, 3/4MP
2.	07-2855	1	Screw, HHC, Gr8, 5/8-11 x 2 1/2
3.	07-0119	3	Bolt, Carriage, 5/8 x 1 3/4
4.	07-3120	3	Washer, Flat, Gr8, 5/8
5.	07-1872	4	Washer, Lock, Split, Medium, 5/8
6.	07-1294	4	Nut, Hex, Gr8, 5/8-11
8.	07-0244	2	Pin, Linch, 1/4
9.	07-0285	2	Pin, Link, Category I
11.	13-4657	1	Bushing, 1 x 5/8 x .562
13.	13-0440	2	Bracket, Chain, Toplink, 3-Point
14.	13-2002	1	Pin, Toplink, 3-Point
16.	13-4823	1	Weld, Swing, Plate, CV, RLCH
17.	13-7911	1	Weld, Frame, Swing, RLCH
	13-4676	1	Weld, Frame, Swing, RLH
18.	50-0635	1	Label, Plate, Part Number/Date
19.	07-0290	2	Chain, 1/4, 39 Links
20.	07-2032	2	Clevis, Double Link, 9/32, Gr8
21.	11-1888	2	Plate, Support, Chain
22.	03-1816	1	Valve, Check, In-line, 1 1/16, O-Ring
23.	03-1950	2	Fitting, Tee, HP, MB, 3/4MFS
24.	03-2268	2	Hose, 3/4 x 42, 2W, 3/4FFS, 3/4FFS
25.	03-3333	2	Hose, 3/4 x 37, TC, 3/4FFS, 3/4FFS
26.	07-1817	4	Tie, Plastic, 15, White, Reuse

# 11-4184 RLH, CATEGORY II HITCH



Item	Part	Qty	Description
1.	03-1945	2	Fitting, 12MB-12MF
2.	07-0066	1	Screw, HHC, Gr8, 5/8-11 x 2
3.	07-0119	3	Bolt, Carriage, Gr5, 5/8 x 1 3/4
4.	07-3120	3	Washer, Flat, Gr8, 5/8
5.	07-1872	4	Washer, Lock, Split, Medium, 5/8
6.	07-1294	4	Nut, Hex, Gr8, 5/8-11
8.	07-0244	2	Pin, Lynch, 1/4
9.	07-0688	2	Pin, Cat 2, Hitch, 7/8 Thread
11.	13-4657	1	Bushing, 1 x 5/8 x .562
13.	13-0440	2	Bracket, Chain, Top Link, 3-Point
14.	13-11997	1	Pin, .875 x 6.5, with 5.72 Grip Length
16.	13-4676	1	Weld, Frame, Swing
17.	13-4823	1	Weld, Swing, Plate
18.	50-0635	1	Label, Plate, Part Number/Date
19.	07-0290	2	Chain, 1/4, 39 Links
20.	07-2032	2	Clevis, Double Link, 9/32, Gr80
21.	11-1888	2	Plate, Support, Chain
25.	03-1816	1	Valve, CV, 12FB-12FB, 30gpm, 5K
26.	03-1950	2	Tee, 12MF-12MF-12MB
27.	03-2268	2	Hose, .75 x 42, 12FF-12FF, 3.1K
28.	03-3333	2	Hose, .75 X 37, 12FF-12FF, 3K, TC
29.	07-1817	4	Tie, Plastic, 15, White, Reuse

# POWER PACK FOR 3-POINT HITCH FOR AH/CH LOADER 11-7690 (12GPM [.76LPS]) OR 11-7691 (20GPM [1.01LPS])



## Item Part Qty Description

1.	03-1940	1	Tee, 12MF-12MF-12MF
2.	03-3142	1	Fitting, 12FB-16MB
3.	03-3779	1	Fitting, 12FF-12MB
4.	03-1971	1	Hose, .75 x 56, 12FF-12FF90, .525K
6.	03-0129	1	Valve, RV, 12, 30gpm, 3K
7.	03-2473	1	Hose, .75 x 204, 12FF-12FF, 3.1K
9.	03-2443	1	Hose, .75 x 156, 12FF-12FF90, 3.1K
10.	03-0691	1	Pump, 5.7 CID, FPTO, CW, 11.4gpm
	03-0597	1	Pump, 9.9 CID, FPTO, CW, 21gpm
11.	03-0710	2	Barb, 20, 16MB90
12.	03-1943	4	Fitting, 12MF-12MP, 12FLO-S
13.	03-4709	1	Gauge, Sight, Window, 1 In
14.	03-0938	1	Fitting, 12MB-12MP
15.	03-5056	1	Filter, Hydraulic, In Tank, 39gpm
16.	03-5055	1	Cap, Breather, 5psi
17.	03-4642	1	Strainer, Filler Spout
18.	07-3273	2	Washer, Lock, Split, Medium, 5/16
19.	07-0244	2	Pin, Lynch, 1/4
20.	07-3275	2	Washer, Flat, Gr8, 5/16
21.	07-0246	1	Chain, 1/4, 13 Links
22.	07-0285	2	Pin, Cat I, Hitch, Gr2
23.	07-3647	2	Screw, HHC, Gr8, 5/16-18 x 1 1/2
24.	07-1192	2	Clamp, T-Bolt, 1 1/4
25.	07-1717	3	Bolt, Carriage, 3/8-16 x 1 1/4

## Item Part Qty Description

26.	07-1718	5	Washer, Lock, Split, Medium, 3/8
27.	07-3279	10	Washer, Flat, Gr8, 3/8
28.	07-3654	4	Nut, Hex, Gr8, 3/8-16
29.	07-3655	2	Screw, Cap, 3/8 x 1 1/2
31.	09-0020	5ft	Hose, Suction, 1 1/4
34.	11-7688	1	Weld, Mounting, Tank, 3-Point
35.	13-13256	1	Weld, Tank, AH/CH, 3 PT
36.	50-0185	1	Label, Logo, Sweepster, White
37.	50-0635	1	Label, Plate, Part Number, Date
38.	50-0272	1	Label, Oil, ISO VG 46
39.	50-0725	1	Label, Warning, Inspect Hydraulics
41.	03-1945	2	Fitting, 12MB-12MF

### Replacement Parts for 03-5056 :

03-3965	Element
03-4741	Filter Cap
03-6705	Gasket
07-6727	Vacuum Gauge

### Replacement Part for 03-0597 and 03-0691 :

03-0597A	Seal Kit
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## 11-4200 (RLH) & 11-4202 (RLCH) CATEGORY I HITCH, WITH POWER PACK

Item	Part	Qty	Description
1.	03-1940	1	Tee, 12MF-12MF-12MF
2.	03-1958	2	Hose, .75 x 78, 12FF-12FF, 3.125K
3.	03-0129	1	Valve, RV, 12, 30gpm, 3K
4.	03-3779	1	Fitting, 12FF-12MB
5.	03-0577	1	Elbow, 90, 12FP-12MB
6.	03-0597	1	Pump, 9.9 CID, FPTO, CW, 21gpm
	03-0691	1	Pump, 5.7 CID, FPTO, CW, 11.4gpm
7.	03-0710	1	Barb, 20, 16MB90
8.	03-3968	1	Hose, .75 x 60, 12FF-12FF90, 3.125K
9.	03-4709	1	Gauge, Sight, Window, 1 inch
10.	03-5056	1	Filter, Hydraulic, In tank, 39 GPM
11.	03-1022-10	1	Fitting, 12MP-12MP, 3/4FF-S
12.	03-3142	1	Fitting, 12FB-16MB
13.	03-5055	1	Cap, Breather, Hydraulic Tank, Pressurized, 5psi
14.	03-1943	2	Fitting, 12MF-12MP, 12FLO-S
15.	07-2116	2	Screw, HHC, Gr8, 3/8-16 x 1 1/4
16.	07-2855	1	Screw, HHC, 5/8-11 x 2 1/2
17.	07-1717	3	Bolt, Carriage, Gr5, 3/8-16 x 1 1/4
18.	07-0119	3	Bolt, Carriage, 5/8 x 1 3/4
19.	07-3279	10	Washer, Flat, Gr8, 3/8
20.	07-3120	3	Washer, Flat, Gr8, 5/8
21.	07-1718	5	Washer, Lock, Split, Medium, 3/8
22.	07-1872	4	Washer, Lock, Split, Medium, 5/8
23.	07-3654	4	Nut, Hex, Gr8, 3/8-16
24.	07-1294	4	Nut, Hex, Gr8, 5/8-11
26.	07-0244	2	Pin, Link, #1600
27.	07-4642	1	Strainer, Filler Spout, for 03-4939
28.	07-0246	1	Chain, 1/4, 13 Links
29.	07-0285	2	Pin, Linch, 1/4
31.	07-1192	2	Clamp, T-Bolt, 1 1/4
33.	09-0020	5ft	Hose, Suction, 1 1/4, Bulk
35.	13-4657	1	Bushing, 1 x 5/8 x .562
37.	13-13256	1	Weld, Tank, 3-Point
38.	11-9080	1	Weld, Plate, Swing
39.	13-0440	2	Bracket, Chain, Toplink, 3-Point
40.	13-7910	1	Weld, Frame, Mounting/Swing, RLCH for Hydraulic Tank
	13-0844	1	Weld, Frame, Swing, RLH for Hydraulic Tank
41.	13-2002	1	Pin, Toplink, 3-Point
43.	50-0185	1	Label, Logo, White, Medium, Sweepster
44.	50-0635	1	Label, Plate, Part Number/Date
45.	50-0272	1	Label, Oil, ISO VG 46
46.	07-0290	2	Chain, 1/4, 39 Links
47.	07-2032	2	Clevis, Double Link, 9/32, Gr80
48.	11-1888	2	Plate, Support, Chain
49.	07-3273	2	Washer, Lock, Split, Medium, 5/16
50.	07-3275	2	Washer, Flat, Gr8, 5/16
51.	07-3647	2	Screw, HHC, Gr8, 5/16-18 x 1 1/2
53.	07-1817	6	Tie, Plastic, 15, White, Reuse
57.	50-0725	1	Label, Warning, Inspect Hydraulic Components

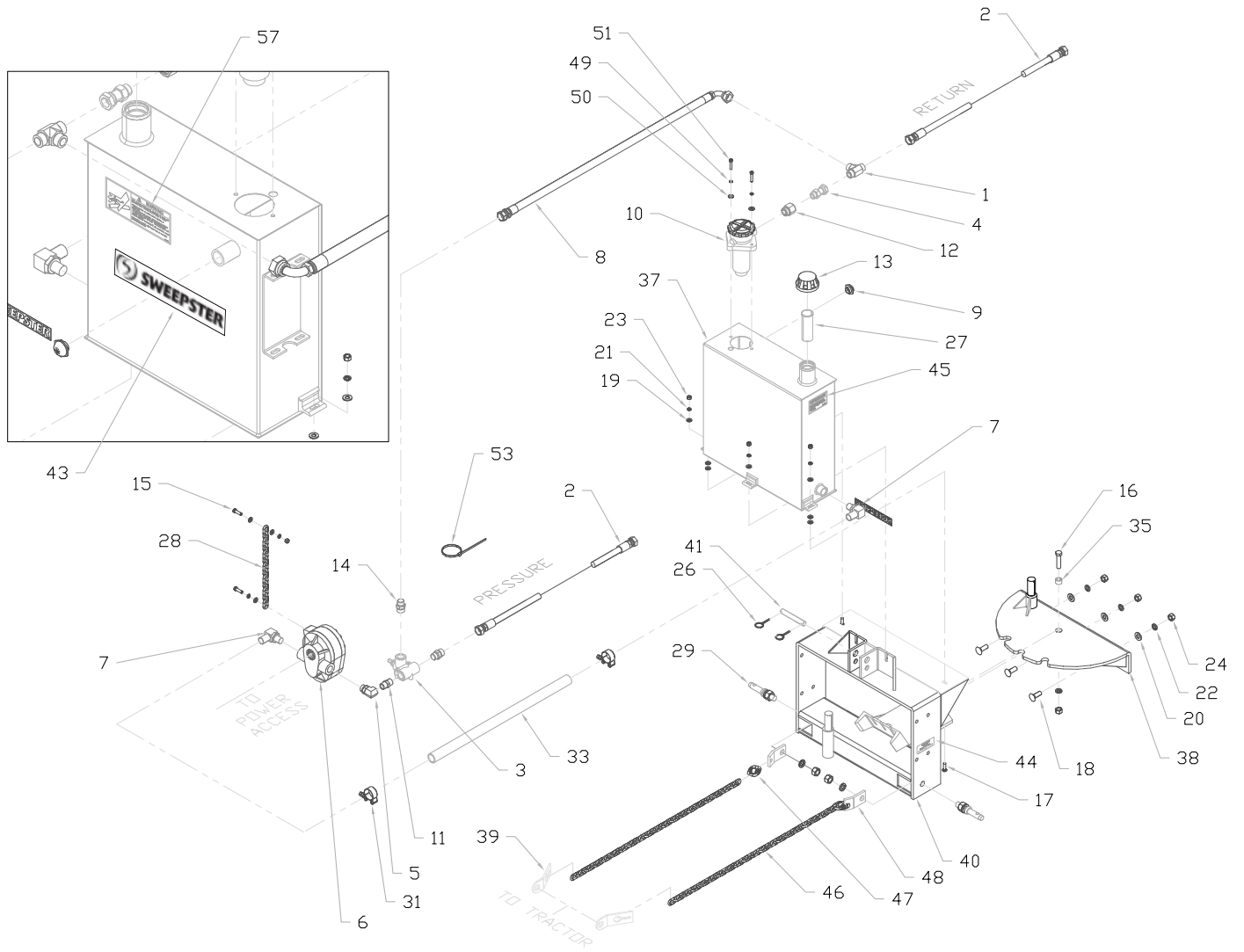
Replacement Parts for 03-5056 :

03-3965	Element
03-4741	Filter, Cap
07-6705	Gasket
07-6727	Vacuum Group

Replacement Part for 03-0597 and 03-0691 :

03-0597A	Seal Kit
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# 11-4200 (RLH) & 11-4202 (RLCH) CATEGORY I HITCH, WITH POWER PACK



# 11-5309 AH/CH WITH MANUAL VALVE

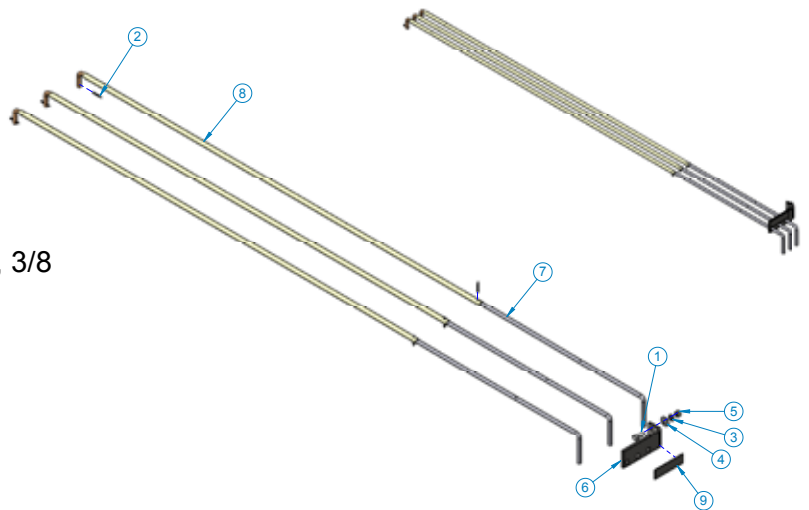
Item	Part	Qty	Description
1.	03-0573	1	Fitting, 12MB-12MB
2.	03-0601	1	Valve, 2 Spool, Run/Swing with Handles
3.	03-0602	1	Valve, 3 Way, 1 Spool, Lift with Handles
4.	03-0710	1	Barb, 20, 16MB90
5.	03-1945	2	Fitting, 12MB-12MF
6.	03-1946	1	Elbow, 90°, 10MB-12MF
7.	03-1953	3	Elbow, 90°, 6MF-10MB
8.	03-2181	1	Elbow, 45°, 10MB-12MF
9.	03-3142	1	Fitting, 12FB-16MB
10.	03-3779	1	Fitting, 12FF-12MB
11.	03-4183	1	Fitting, Cross, 3/4MFS, All Ends
12.	03-4642	1	Screen, Filler, Spout
13.	03-4649	1	Hose, .75 x 17, 12FF-12FF45, 3K, TC
14.	03-4650	1	Hose, .75 x 26, 12FF-12FF90, 1.525K
15.	03-4709	1	Gauge, Sight Window, 1 Inch
16.	03-5055	1	Cap, Breather, Hydraulic Tank
17.	03-5056	1	Filter, Hydraulic, Return Line, In-Tank
18.	07-1716	4	Bolt, Carriage, Gr5, 3/8-16 x 1
19.	07-1717	4	Bolt, Carriage, Gr5, 3/8-16 x 1 1/4
20.	07-1718	14	Washer, Lock, Split, Medium, 3/8
21.	07-3273	2	Washer, Lock, Split, Medium, 5/16
22.	07-3275	2	Washer, Flat, Gr8, 5/16
23.	07-3279	8	Washer, Flat, Gr8, 3/8
24.	07-3647	2	Screw, HHC, Gr8, 5/16-18 x 1 1/2
25.	07-3654	14	Nut, Hex, Gr8, 3/8-16
26.	07-3704	6	Bolt, Carriage, Gr5, 3/8-16 x 2 1/2
27.	13-12698	1	Weld, Tank
28.	13-12970	1	Weld, Mounting, Manual Valve
29.	50-0185	1	Label, Logo, Sweepster, White, Medium
30.	50-0272	1	Label, Oil, ISO, VG 46
31.	50-0725	1	Label, Warning, High Pressure Fluid Hazard

Replacement Part for 03-0601 :  
03-1332 Seal Kit

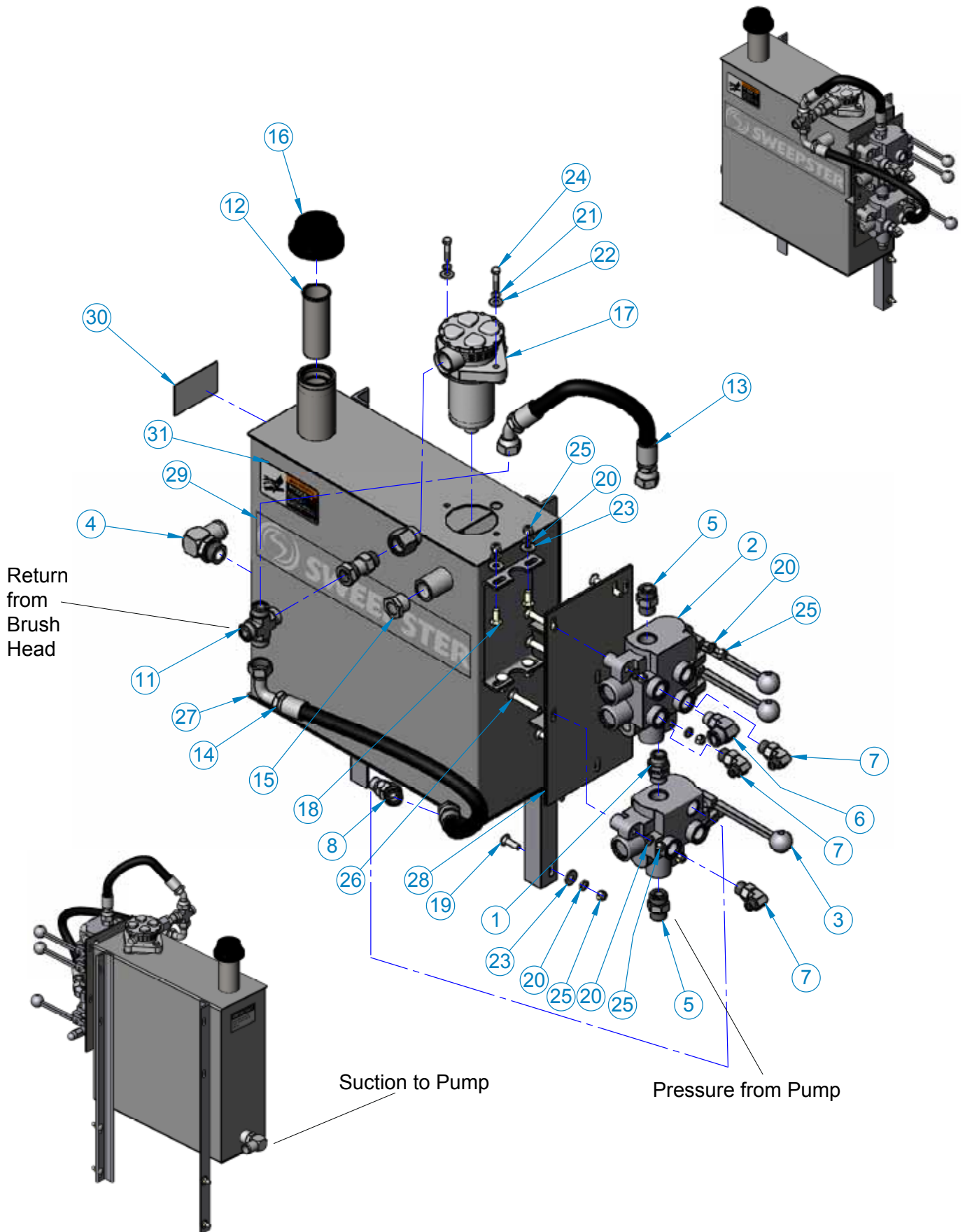
Replacement Parts for 03-5056 :  
03-3965 Element  
03-4741 Filter, Cap  
07-6705 Gasket  
07-6727 Vacuum Group

## Control Rods for Manual Valve

1.	07-0018	2	Screw, HHC, Gr8, 3/8-16 x 1
2.	07-0205	6	Pin, Cotter, 1/8 x 1
3.	07-1718	2	Washer, Lock, Split, Medium, 3/8
4.	07-3279	2	Washer, Flat, Gr8, 3/8
5.	07-3654	2	Nut, Hex, Gr8, 3/8-16
6.	11-0890	1	Bracket, Control Rod
7.	13-4245	3	Rod, Bent, Control
8.	13-4246	3	Weld, Control Rod
9.	50-0162	1	Label, Control Rod



# 11-5309 AH/CH WITH MANUAL VALVE





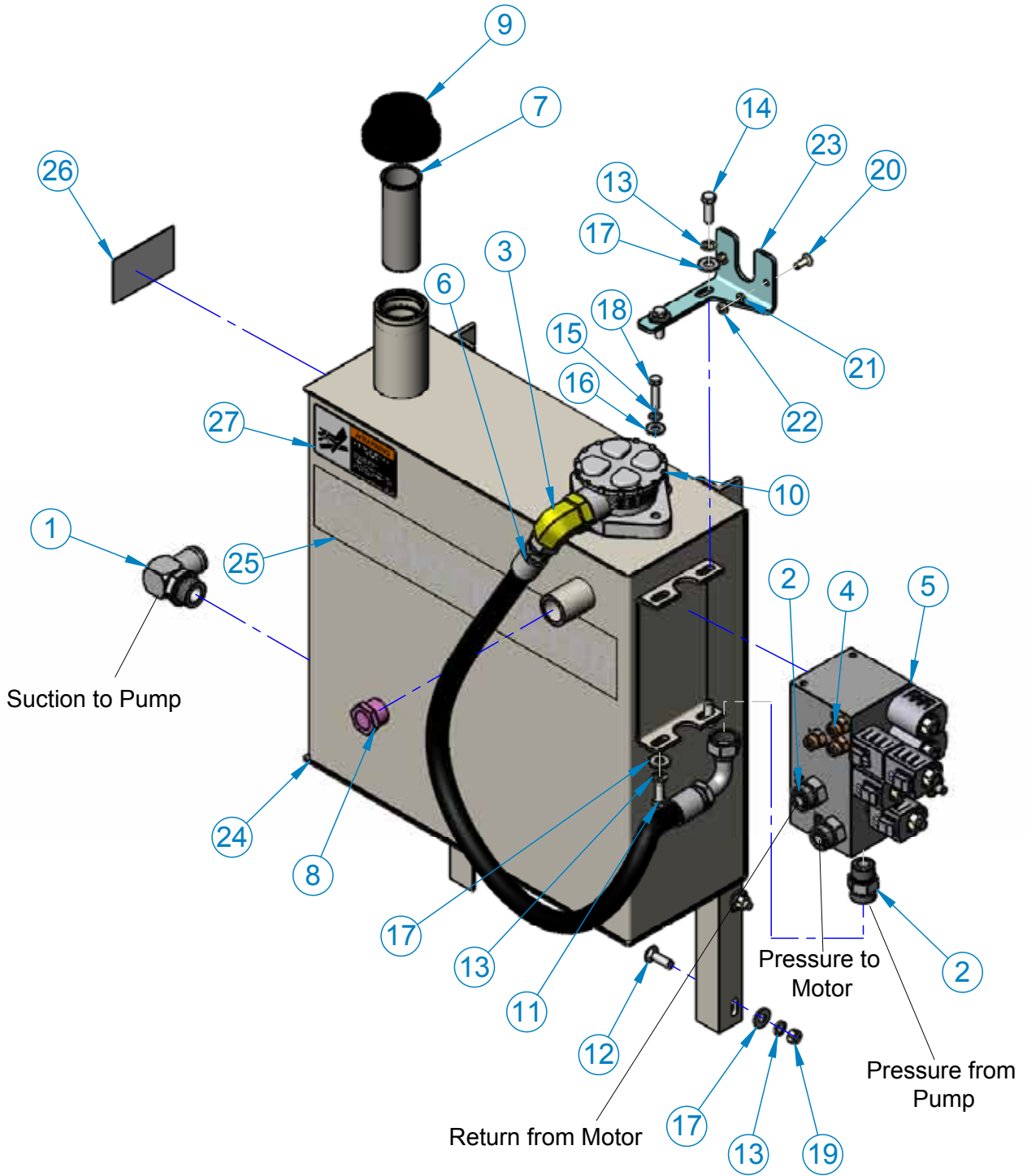
## 11-5363 AH/CH WITH ELECTRIC VALVES

Item	Part	Qty	Description
1.	03-0710	1	Barb, 20, 16MB90
2.	03-1945	4	Fitting, 12MB-12MF
3.	03-1956	1	Elbow, 90, 12MF-16MB
4.	03-2291	3	Fitting, 6MF-6MB, 6F5OLO-S
5.	03-2364-1	1	Manifold, 12 Volt, Swing/Lift/Run, with Screen
6.	03-2556	1	Hose, .75 x 24, 12FF-12FF90, 3.1K
7.	03-4642	1	Strainer, Filler, Spout
8.	03-4709	1	Gauge, Sight Window
9.	03-5055	1	Cap, Filler, Breather, Hydraulic Tank
10.	03-5056	1	Filter, Hydraulic, In-Tank
11.	07-0018	2	Screw, HHC, Gr8, 3/8-16 x 1
12.	07-1717	4	Bolt, Carriage, Gr5, 3/8-16 x 1 1/4
13.	07-1718	8	Washer, Lock, Split, Medium, 3/8
14.	07-2116	2	Screw, HHC, Gr8, 3/8-16 x 1 1/4
15.	07-3273	2	Washer, Lock, Split, Medium, 5/16
16.	07-3275	2	Washer, Flat, Gr8, 5/16
17.	07-3279	8	Washer, Flat, Gr8, 3/8
18.	07-3647	2	Screw, HHC, Gr8, 5/16-18 x 1 1/2
19.	07-3654	4	Nut, Hex, Gr8, 3/8-16
20.	07-3690	2	Bolt, Carriage, Gr5, 1/4-20 x 3/4
21.	07-4038	2	Washer, Lock, Split, Medium, 1/4
22.	07-4039	2	Nut, Hex, Gr8, 1/4-20
23.	13-11013	1	Plate, Mounting, QC, Socket, Bolt-On
24.	13-12698	1	Weld, Tank, Front
25.	50-0185	1	Label, Logo, Sweepster, White, Medium
26.	50-0272	1	Label, Oil, ISO VG 46
27.	50-0725	1	Label, Warning, High Pressure Fluid Hazard

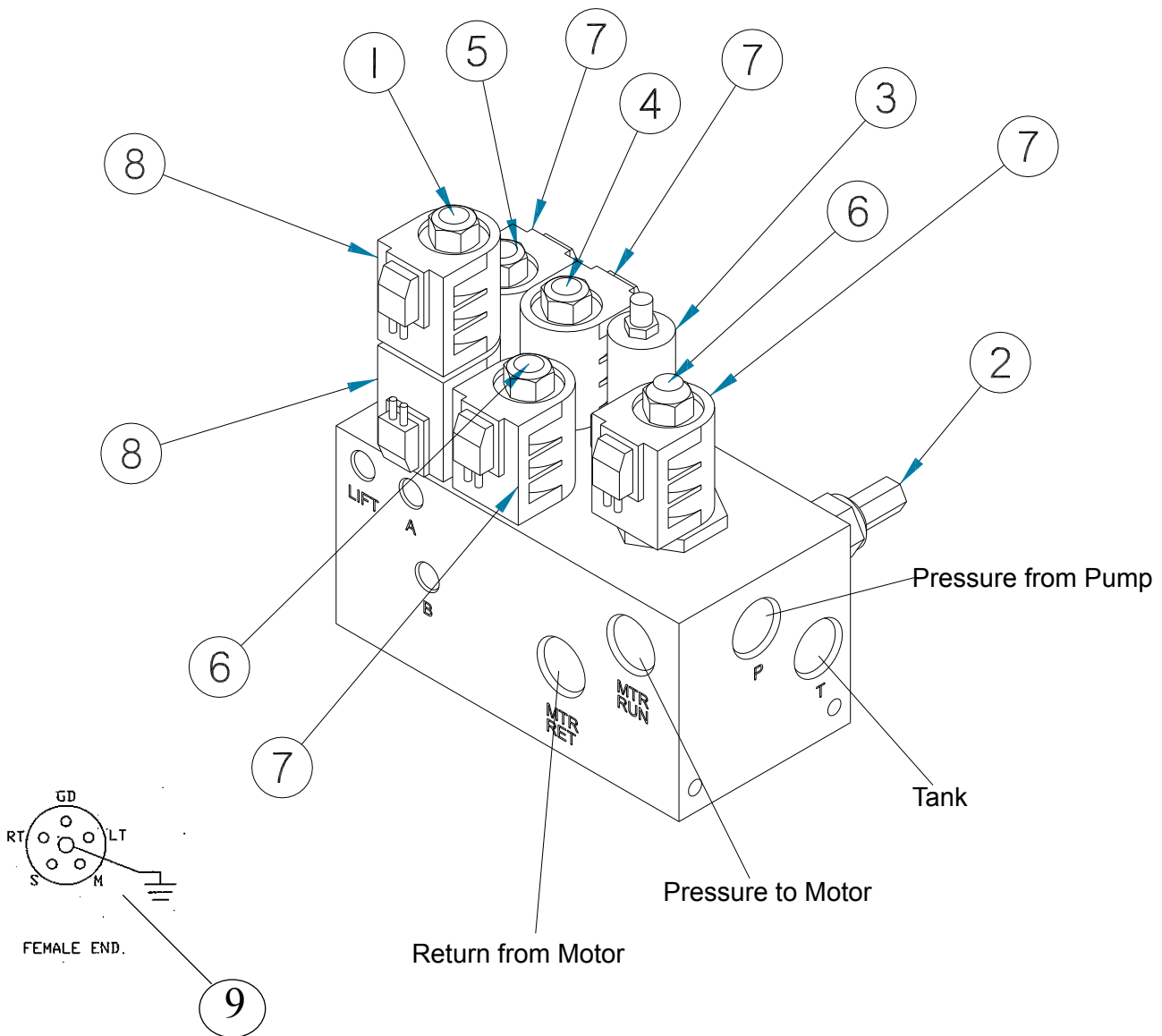
### Replacement Parts for 03-5056 :

03-3965	Element
03-4741	Filter Cap
07-6705	Gasket
07-6727	Vacuum Gauge

# 11-5363 AH/CH WITH ELECTRIC VALVES



# 03-2364-1 FOR 11-5363 ELECTRIC VALVES-MANIFOLD



## Item Part Qty Description

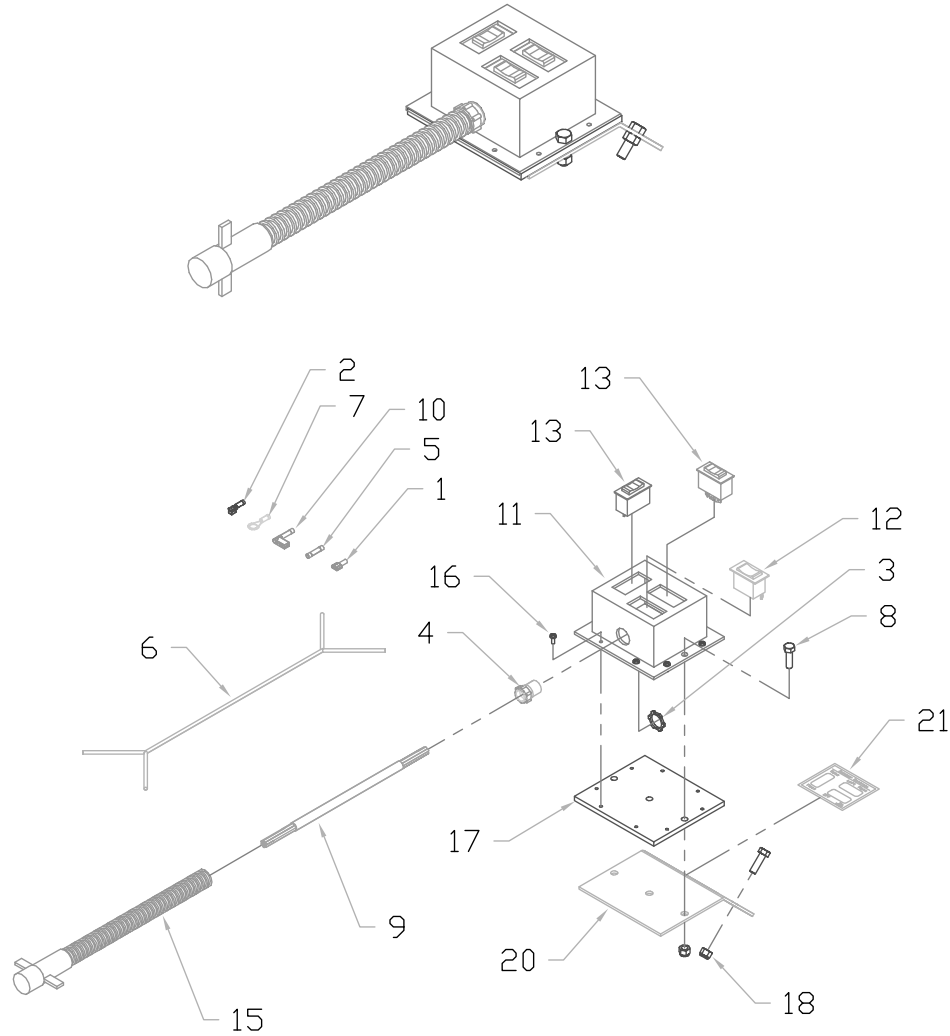
- 1. 03-4390 1 Valve, Delta, 3 position, 4 Way, 6gpm
- 2. 07-3148 1 Valve, Cartridge, Relief, Manifold Block
- 03-2927 Kit, Seal, for 07-3148
- 3. 03-5649 1 Valve, Cartridge, Relief, Pressure
- 4. 03-5571 1 Valve, Cartridge
- 5. 03-1396 1 Valve, Cartridge, Down, Manifold Block
- 03-1509 Kit, Seal, for 07-3078/07-3079/07-3080
- 6. 07-3081 1 Valve, Cartridge, Brush Motor, Manifold, Block
- 03-2926 Kit, Seal, for 07-3081/07-3082
- 7. 07-3077 4 Coil, 12 volt, Delta, Manifold Block
- 07-3354 4 Coil, 24 volt, Delta, Manifold Block
- 8. 07-4239 2 Coil, 12 volt
- 9. 07-2898 1 Connector, 6 Pole, Female

Replacement Part for 07-3148 :  
03-2927 Seal Kit

Replacement Part for 03-5649 :  
03-5600 Seal Kit

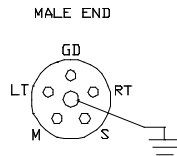
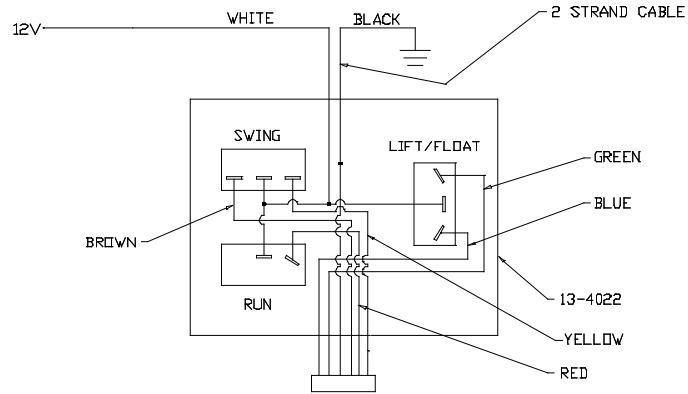
Replacement Part for 03-5571 :  
03-5601 Seal Kit

# 13-4022 CONTROL BOX



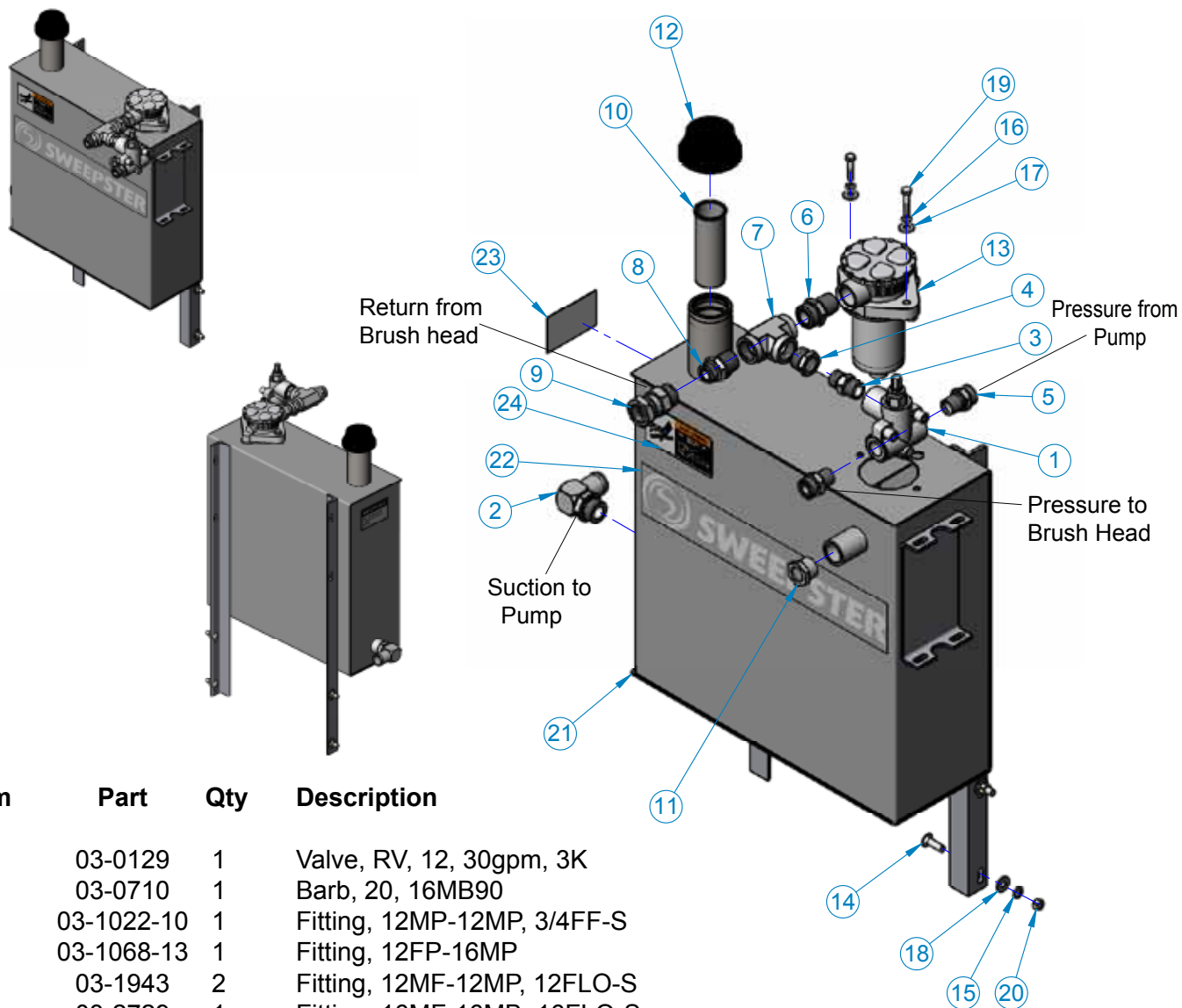
Item	Part	Qty	Description
1.	07-0812	3	Terminal, Connector, 1/4, Female, 16-14
2.	07-0815	2	Terminal, Connector, 1/4M-F, 16-14
3.	07-0856	1	Nut, Lock, 1/2, for Strain Relief
4.	07-0857	1	Strain, Relief, 1/2, 16-12
5.	07-0867	1	Terminal, Butt, Spline, 16-14
6.	07-0917	13ft	Wire, Cord, 16 Gauge, 2 Cond
7.	07-0929	1	Terminal, Ring, 3/8, 16-14
8.	07-1714	4	Screw, Cap, 5/16-18 x 1
9.	07-2133	16ft	Wire, Cord, 16 Gauge, 6 Cond, Trailer Cord
10.	07-2264	5	Terminal, 90°, Flag, 16-14
11.	07-2893	1	Box, 3 Switch, Monarch
12.	07-2894	1	Switch, Rocker, SPST, On-Off, Red, Broom
13.	07-2895	2	Switch, Rocker, SPDT, (On)-Off-(On), Swing Left/Right ( ) = Momentary Spring Centered
15.	07-2897	1	Connector, 6 Pole, Plug
16.	07-2908	8	Screw, Self-Tapping, 8-16 x 3/8
17.	07-2909	1	Plate, Plastic, Monarch
18.	07-3270	4	Nut, Hex, Nylock, 5/16-18
20.	13-4023	1	Plate, Mounting, Control Box
21.	50-0207	1	Label, Electric Control, Sweeper

# 13-4022 CONTROL BOX WIRING SCHEMATIC



Coil/Post	Color	Function
#1=GD	Red	Run
#2=M	Green	Raise
#3=S	Blue	Lower
#4=RT	Yellow	Swing/Right
#5=LT	Brown	Swing/Left

# 11-5364 AH/CH WITH NO VALVES

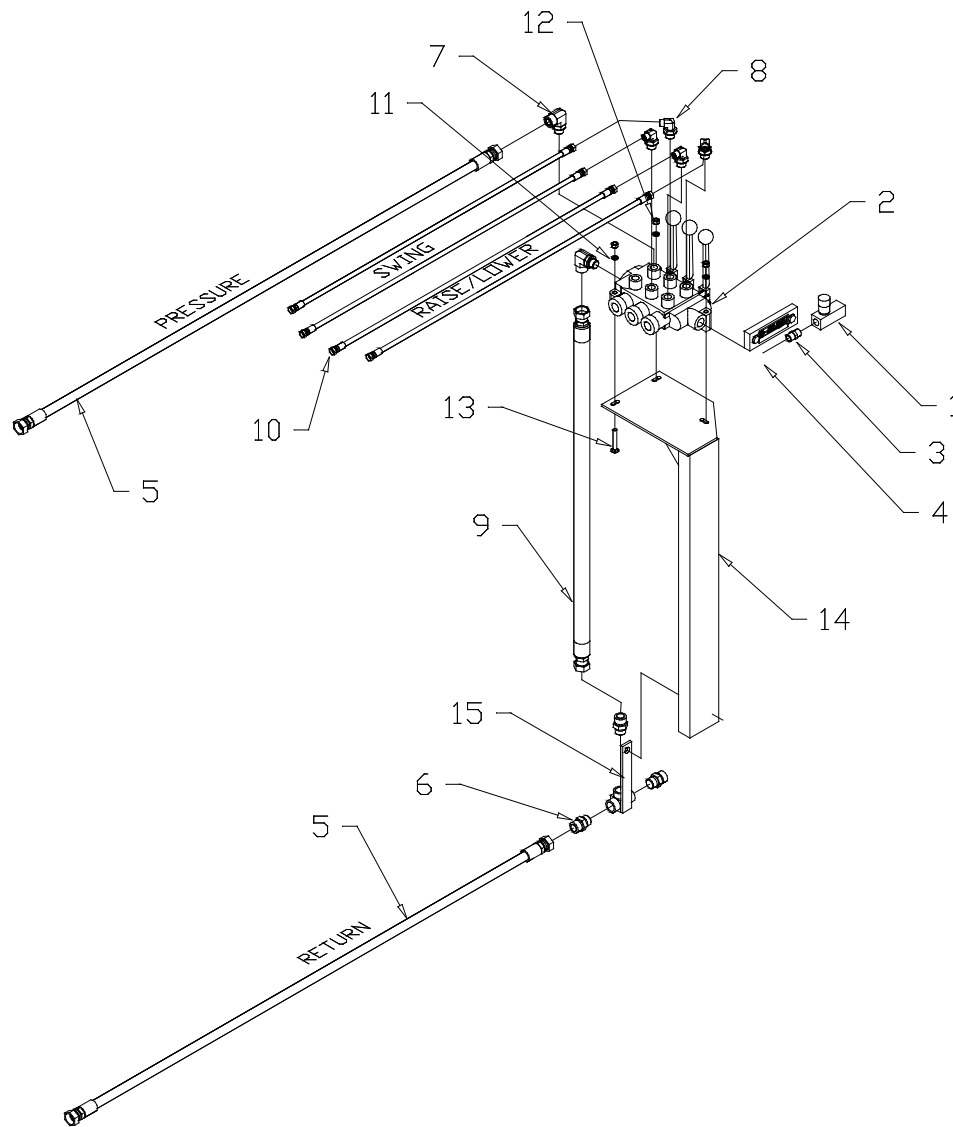


Item	Part	Qty	Description
1.	03-0129	1	Valve, RV, 12, 30gpm, 3K
2.	03-0710	1	Barb, 20, 16MB90
3.	03-1022-10	1	Fitting, 12MP-12MP, 3/4FF-S
4.	03-1068-13	1	Fitting, 12FP-16MP
5.	03-1943	2	Fitting, 12MF-12MP, 12FLO-S
6.	03-2729	1	Fitting, 16MF-16MB, 16FLO-S
7.	03-2910	1	Tee, 16FP-16FP-16FP
8.	03-2911	1	Fitting, 12MF-16MP
9.	03-3778	1	Fitting, 16FF-16MB
10.	03-4641	1	Cap, Breather, Hydraulic Tank
11.	03-4642	1	Strainer, Filler, Spout
12.	03-4709	1	Gauge, Sight Window
13.	03-5056	1	Filter, Hydraulic, In-Tank
14.	07-1717	4	Bolt, Carriage, 3/8-16 x 1 1/4
15.	07-1718	4	Washer, Lock, Split, Medium, 3/8
16.	07-3273	2	Washer, Lock, Split, Medium, 5/16
17.	07-3275	2	Washer, Flat, Gr8, 5/16
18.	07-3279	4	Washer, Flat, Gr8, 3/8
19.	07-3647	2	Screw, HHC, Gr8, 5/16-18 x 1 1/2
20.	07-3654	4	Nut, Hex, Gr8, 3/8-16
21.	13-12698	1	Weld, Tank, Front
22.	50-0185	1	Label, Logo, Sweepster, White, Medium
23.	50-0272	1	Label, Oil, ISO VG-46
24.	50-0725	1	Label, Warning, High Pressure Fluid Hazard

### Replacement Parts for 03-5056 :

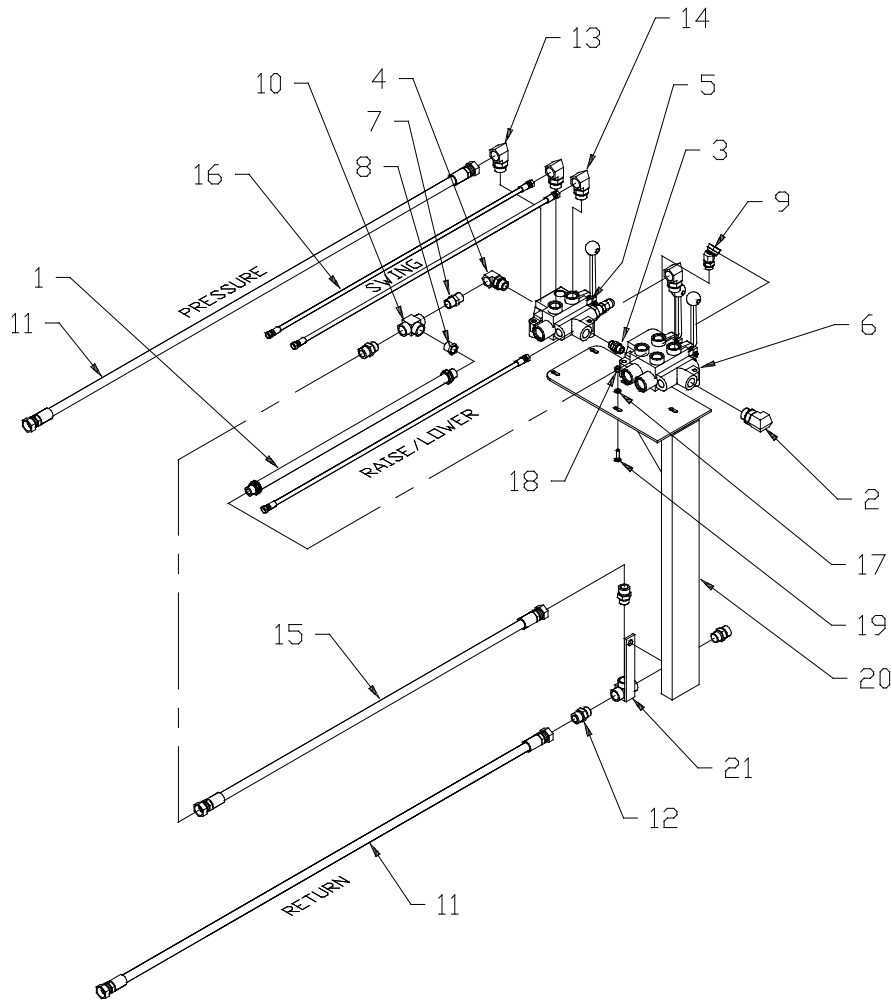
03-3965	Element
03-4741	Filter Cap
07-6705	Gasket
07-6727	Vacuum Gauge

# 11-4773 MANUAL VALVES, AHH/CHH WITH CLOSED CENTER HYDRAULIC SYSTEMS



Item	Part	Qty	Description	Item	Part	Qty	Description
1.	03-0072	1	Valve, Crtg, DCV, 8, 15gpm, 2P-1W	9.	03-2268	1	Hose, .75 x 42, 12FF-12FF, 3.1K
2.	03-0605	1	Valve, Closed Center, O-Ring Ports	10.	03-2340	4	Hose, .75 x 144, 6FF-6FF, 2.25K
	03-0665		Handle, Valve, No Hole	11.	07-1718	3	Washer, Lock, Split, 3/8
	03-0666		Kit, Pin/Clip, for Mounting Handle	12.	07-3654	3	Nut, Hex, 3/8-16
	03-1272		Kit, Relief	13.	07-3704	3	Bolt, Carriage, 3/8-16 x 1 1/2
3.	03-1022-7	1	Fitting, 8MP-8MP, 1/2FF-S	14.	13-4209	1	Weld, Mounting, V, Pedestal, Closed Center
4.	03-1076	1	Elbow, 90, 8FP-12MB	15.	13-4226	1	Weld, Mounting, Tee, Hydraulic
5.	03-1918	2	Hose, .75 x 156, 12FF-12FF, 2.25K				
6.	03-1943	3	Fitting, 12MF-12MP, 12FLO-S				
7.	03-1946	2	Elbow, 90, 10MB-12MF				
8.	03-1953	4	Elbow, 90, 6MF-10MB				

# 11-4772 MANUAL VALVES, AHH/CHH WITH OPEN CENTER HYDRAULIC SYSTEMS

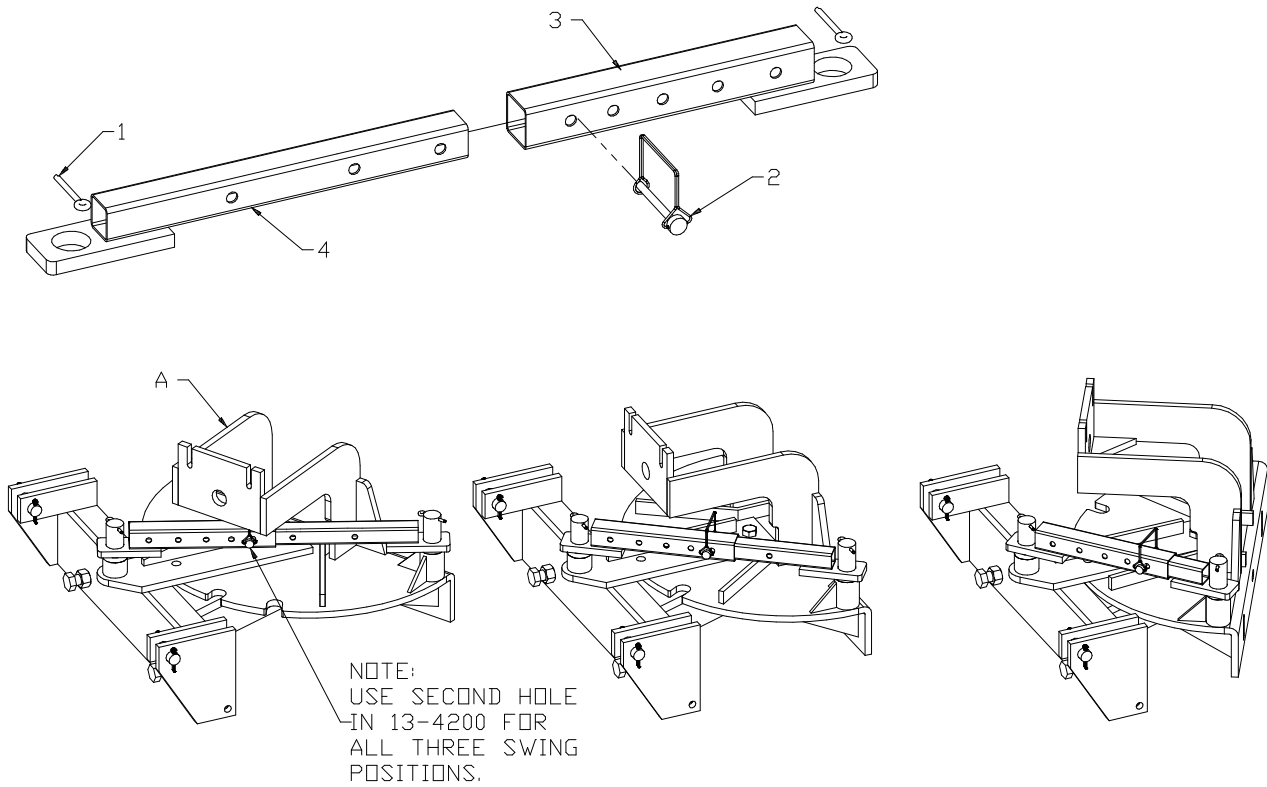


Item	Part	Qty	Description	Item	Part	Qty	Description
1.	03-0427	1	Hose, .50 x 18, 8MP-8MP, 2K	9.	03-1204	1	Elbow, 45, 8FP-10MB
2.	03-0563	1	Elbow, 90, 12FP-12MB	10.	03-1312	1	Tee, 12FP-12FP-12FP
3.	03-0573	1	Fitting, 12MB-12MB, Union	11.	03-1918	2	Hose, .75 x 156, 12FF-12FF, 2.25K
4.	03-0577	1	Elbow, 90, 12FP-12MB	12.	03-1943	4	Fitting, 12MF-12MF, 12FLO-S
5.	03-0601	1	Valve, 2 Spool, Run/Swing, with Handles	13.	03-1946	1	Elbow, 90, 10MB-12MF
	03-0665		Handle, Valve, No Hole	14.	03-1953	3	Elbow, 90, 6MF-10MB
	03-0666		Kit, Pin/Clip, for Mounting Handle	15.	03-1963	1	Hose, .75 x 56, 12FF-12FF, 2.5K
	03-1272		Kit, Relief	16.	03-2340	3	Hose, .38 x 144, 6FF-6FF, 2.25K
6.	03-0602	1	Valve, 3 Way, 1 Spline, Lift, with Handles	17.	07-1718	6	Washer, Lock, Split, 3/8
	03-0665		Handle, Valve, No Hole	18.	07-3654	6	Nut, Hex, 3/8-16
	03-0666		Kit, Pin/Clip, for Mounting Handle	19.	07-3704	6	Bolt, Carriage, 3/8-16 x 2 1/2
	03-1272		Kit, Relief	20.	13-3900	1	Weld, Mounting, Valve, Pedestal
7.	03-1022-10	1	Fitting, 12MP-12MP, 3/4FF-S	21.	13-4226	1	Weld, Mounting, Tee, Hydraulic

Replacement Part for 03-0601 :  
03-1332 Seal Kit

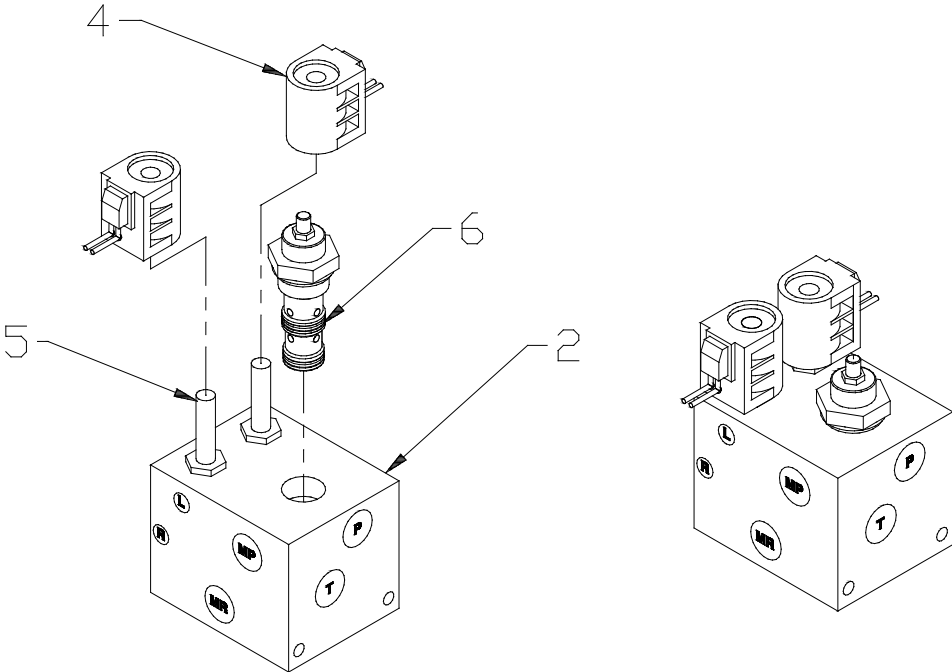


## 28-4626 MANUAL ANGLE KIT (CH SWING ONLY)



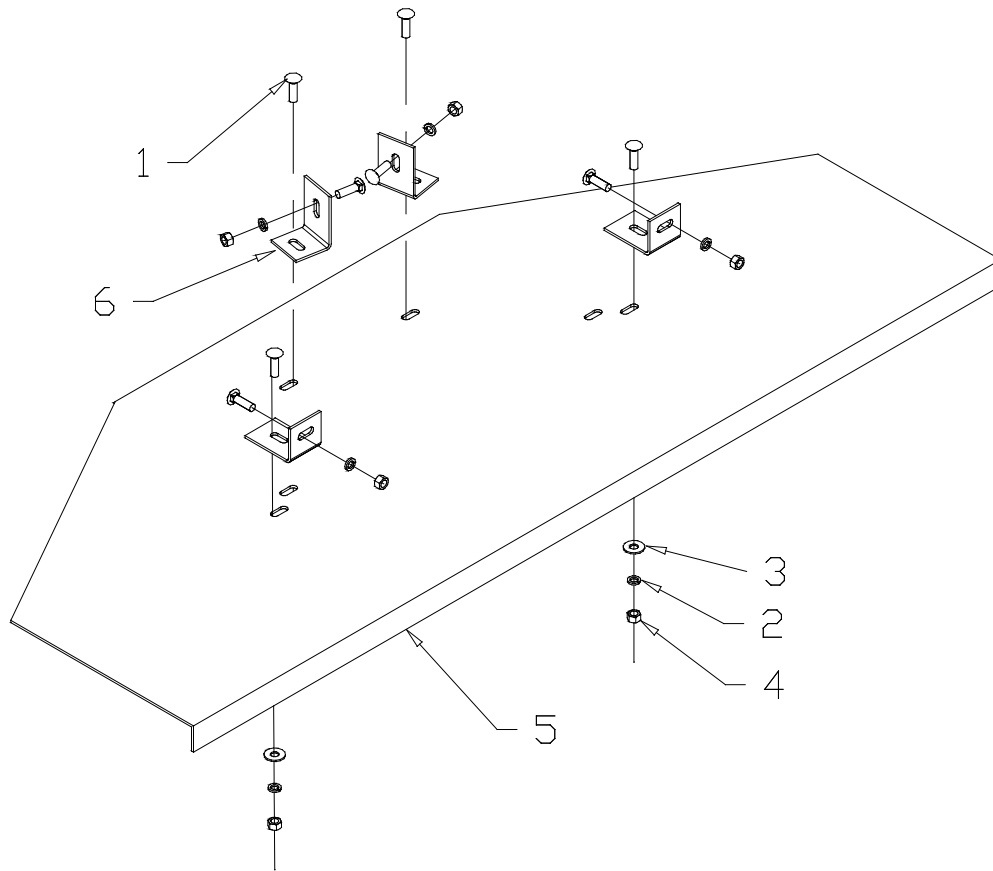
Item	Part	Qty	Description
1.	07-0206	2	Pin, Cotter, 3/16 x 2
2.	07-2105	1	Pin, Lock, 3/8 Square
3.	13-4200	1	Weld, Link, Outer, 15 1/4, 21 1/4
4.	13-10504	1	Weld, Link, Inner, Manual Angle, CH Swing
A.	28-4615	1	Assembly, Swing

# SWING MANIFOLD



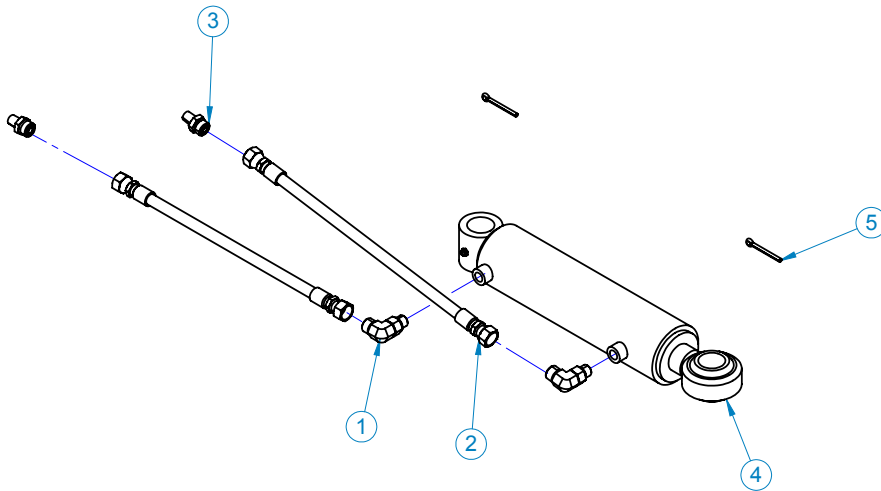
Item	Part	Qty	Description
2.	03-2543	1	Manifold, 12 volt, Swing, with Screen
	03-2742	1	Manifold, 24 volt, Swing, with Screen
4.	07-3077	2	Coil, 12 volt, Delta, Manifold Block
	07-3354	2	Coil, 24 volt, Delta, Manifold Block
5.	07-3080	2	Valve Cartridge, Swing, Left/Right
	03-1509		Kit, Seal, for 07-3080
6.	07-3082	1	Valve, Cartridge, Flow Divider
	03-2926		Kit Seal, for 07-3082

# RHFADD FOR RLH/RLCH



Item	Part	Qty	Description
1.	07-1717	8	Bolt, Carriage, 3/8-16 x 1 1/4
2.	07-1718	8	Washer, Lock, Split, 3/8
3.	07-3279	4	Washer, Flat, 3/8
4.	07-3654	8	Nut, Hex, 3/8-16
5.	11-9491	1	Deflector, Dirt
6.	13-0351	4	Angle, Mounting, Dirt Deflector

## HYDRAULIC ANGLE KIT 11-4297 & 11-4298

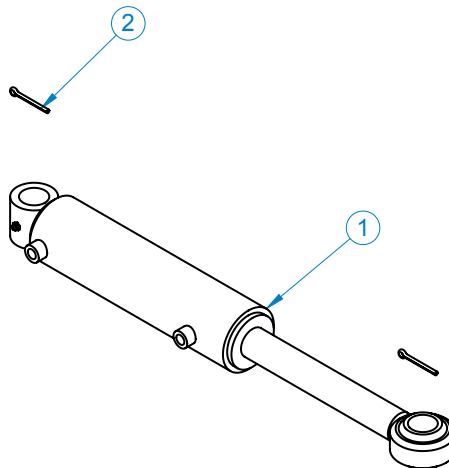


Item	Part	Qty	Description
1.	03-2092	2	Elbow, 90°, 6MB-6MF
2.	03-2155	2	Hose, .25 x 72, 6FF-6FF, 3.25K (11-4298)
	03-2158	2	Hose, .25 x 144, 6FF-6FF, 3.25K (11-4297)
3.	03-2159	2	Fitting, 6MF-4MP
4.	03-4887	1	Cylinder, 2.5 x 1.38 x 7.5, 3.5K
6.	07-0206	2	Pin, Cotter, Gr2, 3/16 x 2

Replacement Parts for 03-4887 :

03-4888 Seal Kit  
03-5035 Rod

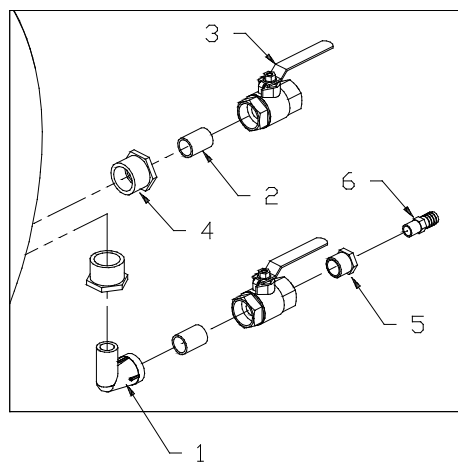
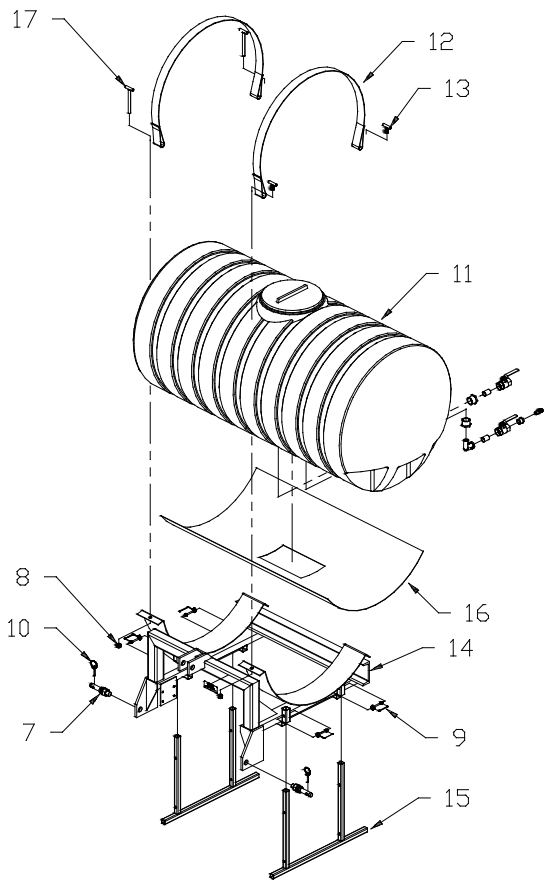
## HYDRAULIC ANGLE CYLINDER



Item	Part	Qty	Description
1.	03-4887	1	Cylinder, 2.5 x 1.38 x 7.5, 3.5K
2.	07-0206	2	Pin, Cotter, Gr2, 3/16 x 2

# 3PT WATER TANK AND MOUNTING

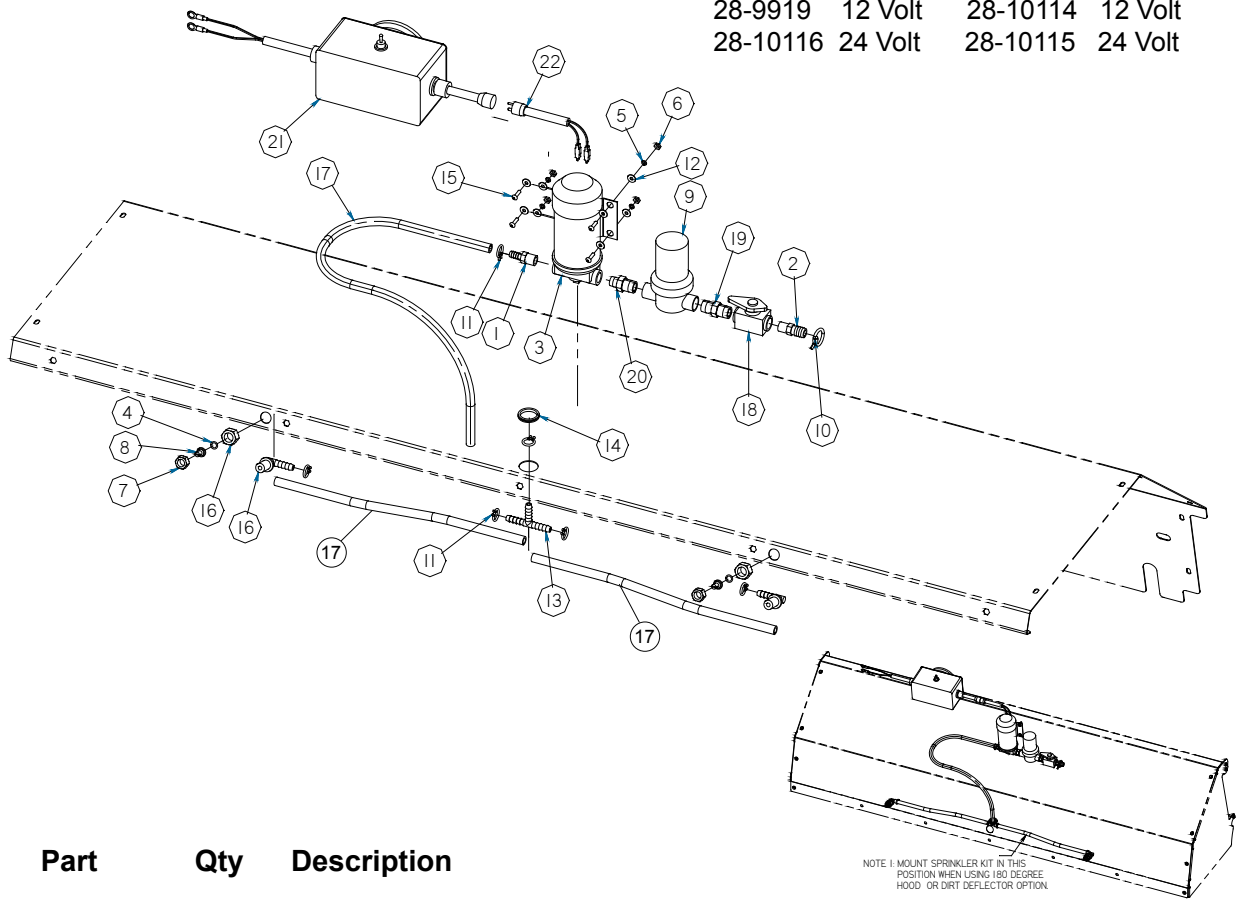
## 11-5734



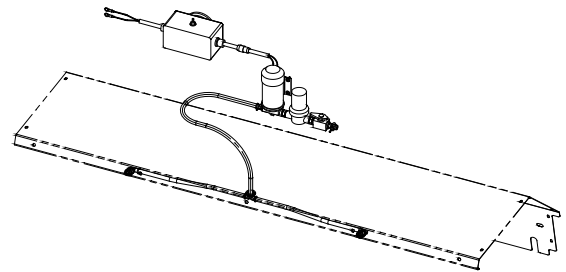
Item	Part	Qty	Description
1.	03-0029	1	Elbow, 90, 12FP-12MP, BP
2.	03-0054	2	Nipple, 12MP-12MP, BP
3.	03-0569	2	Valve, Ball, BR, 12FP-12FP
4.	03-0572	2	Fitting, 12FP-20MP, BP
5.	03-1068-9	1	Fitting, 8FP-12MP
6.	03-1226	1	Barb, 10, 8MP
7.	07-0285	2	Pin, Link, CAT1, Gr2
8.	07-4037	4	Nut, Hex, Gr2, 1/2-13, Nylock
9.	07-1607	4	Pin, Lock, 5/16Sq, Bail, Leg
10.	07-2843	2	Pin, Klik, 3/16 x 1 5/8
11.	07-3592	1	Assembly, Tank, Water, 200 Gallon
12.	09-0058	2	Strap, Nylon, Tank, Water
13.	11-7417	2	Weld, Bolt, Tee, 1 1/2
14.	13-2139	1	Weld, Mounting, Tank
15.	13-2152	2	Weld, Stand
16.	13-2155	1	Liner, Tank, 200 Gallon
17.	11-7051	2	Weld, Bolt, Tee, Sprinkler
18.	50-0635	1	Label, Plate, Part Number

# SPRINKLER KIT WITHOUT TANK

Field Installed		Factory Installed	
28-9919	12 Volt	28-10114	12 Volt
28-10116	24 Volt	28-10115	24 Volt



Item	Part	Qty	Description
1.	03-0457	1	Fitting, Barb, Nylon, 3/8, 3/8MP
2.	03-1226	1	Fitting, Barb, HP, 5/8, 1/2MP
3.	03-1326	1	Pump, Flojet, 2.1gpm, 12 volt, 7amp, 35psi
	03-2558	1	Pump, Flojet, 2.1gpm, 24 volt, 3.5amp, 60psi
4.	03-3537	2	O-Ring, #8 Face Seal
5.	07-0140	4	Washer, Lock, Gr2, #10
6.	07-0141	4	Nut, Hex, Gr2, 10-24
7.	07-0413	2	Nozzle, Cap, Nylon
8.	07-0414	2	Nozzle, Tip, Brass
9.	07-0532	1	Strainer, Water
10.	07-0547	1	Clamp, Spring, 7/8, Hose
11.	07-0549	6	Clamp, Spring, 5/8, Hose
12.	07-1430	8	Washer, Flat, #10
13.	07-3869	1	Fitting, Barb, Tee, Nylon, 3/8
14.	07-4804	1	Grommet, Rubber, 1 1/4 Hole x 7/8 Bore x 1/16 Panel
15.	07-4831	4	Screw, BHC, 10-24UNC, 2B x 3/4
16.	07-4862	2	Nozzle, Elbow, without Clamp
17.	07-5127	25ft	Hose, Clear, Vinyl, 3/8
18.	07-6862	1	Valve, Shut-Off, 1/2, Nylon
19.	07-6863	1	Fitting, Nipple, 1/2, Nylon
20.	07-6864	1	Fitting, Nipple, 1/2 x 3/8, Nylon
21.	LAF8316	1	Wire, Harness, with Box
22.	LAF8320	1	Wire, Assembly, x II Ft



Replacement Parts for 03-1326 and 03-2558 :	
07-6565	Fan Shroud
07-6566	Grommet Kit
07-6567	Mounting Plate

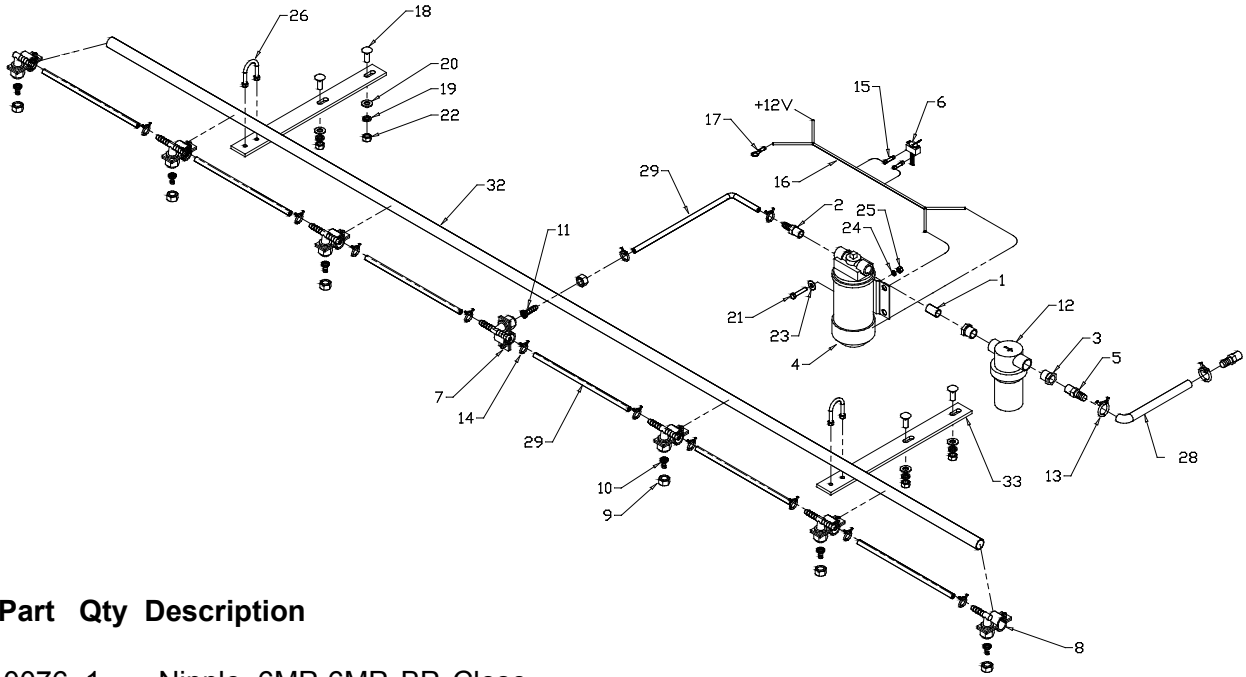
# DUST SUPPRESSION SYSTEM SPRAY BAR NOZZLE MOUNT

## 12 Volt

- 11-4190 (5 Ft [1.3m])
- 11-4045 (6 Ft [1.5m])
- 11-4171 (7 Ft [1.8m])
- 11-4062 (8 Ft [2.0m])

## 24 Volt

- 11-4379 (8 Ft [2.0m])



### Item Part Qty Description

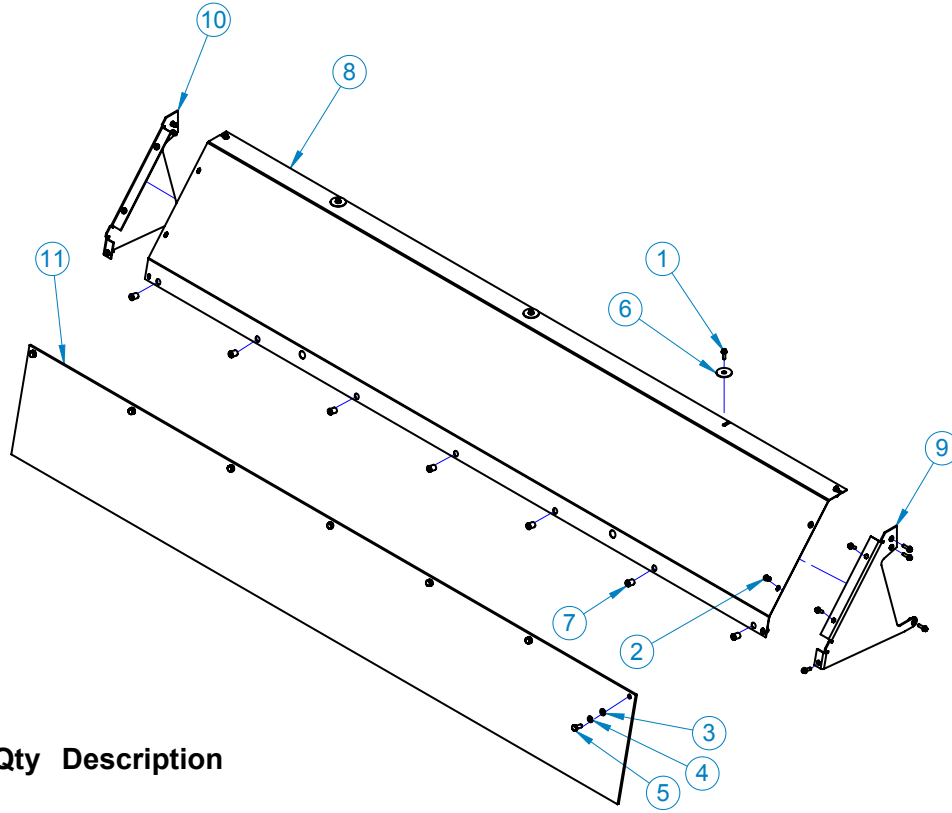
1.	03-0076	1	Nipple, 6MP-6MP, BP, Close
2.	03-0457	1	Barb, 6, 6MP, Nylon
3.	03-0819	2	Fitting, 6FP-8MP
4.	03-1326	1	Pump, Flojet, Water, 2.1 gpm, 12V
	03-2558	1	Pump, Flojet, Water, 2.9 gpm, 24V
5.	03-1709	2	Barb, 10, 6MP, Nylon
6.	07-0343	1	Switch, Toggle, 2 Position
7.	07-0411	3	Nozzle, Tee, with Clamp (5/6/7)
	07-0411	5	Nozzle, Tee, with Clamp (8/9/10)
8.	07-0412	2	Nozzle, Elbow, with Clamp
9.	07-0413	5	Nozzle, Cap, Nylon, (5/6/7)
	07-0413	7	Nozzle, Cap, Nylon, (8/9/10)
10.	07-0414	4	Nozzle, Tip, Brass (5/6/7)
	07-0414	6	Nozzle, Tip, Brass (8/9/10)
11.	07-0417	1	Fitting, Barb, Brass, 3/8 Tee Jet
12.	07-0532	1	Strainer, Hypro, Water
13.	07-0547	2	Clamp, Spring, 7/8 Hose
14.	07-0549	10	Clamp, Spring, 5/8 Hose (5/6/7)
	07-0549	14	Clamp, Spring, 5/8 Hose (8/9/10)
15.	07-0867	4	Terminal, Butt
16.	07-0917	20ft	Wire, Bulk, Cord, 16 Gauge
17.	07-0929	1	Terminal, Ring, 3/8, 16-14
18.	07-1716	4	Bolt, Carriage, 3/8-16 x 1
19.	07-1718	4	Washer, Lock, Split, 3/8
20.	07-3279	4	Washer, Flat, 3/8
21.	07-3638	4	Screw, Cap, 1/4-20 x 1 1/4

Item	Part	Qty	Description
22.	07-3654	4	Nut, Hex, 3/8-16
23.	07-4032	4	Washer, Flat, 1/4
24.	07-4038	4	Washer, Lock, Split, 1/4
25.	07-4039	4	Nut, Hex, 1/4-20
26.	07-4673	2	U-Bolt, Standard, 1/4-20 x 1
28.	09-0028	7ft	Hose, Heater, 5/8(5/6/7/9/10)
	09-0028	10ft	Hose, Heater, 5/8 (8)
29.	09-0056	23.75ft	Hose, Heater, 3/8 (5)
	09-0056	25ft	Hose, Heater, 3/8 (6)
	09-0056	26.25ft	Hose, Heater, 3/8 (7)
	09-0056	27.5ft	Hose, Heater, 3/8 (8)
	09-0056	28.75ft	Hose, Heater, 3/8 (9)
	09-0056	29ft	Hose, Heater, 3/8 (10)
32.	13-2164	1	Tube, RD, 7/8 x 16 Gauge x 60 (5)
	11-6684	1	Tube, RD, 7/8 x 16 Gauge x 72 (6/7)
	13-2812	1	Tube, RD, 7/8 x 16 Gauge x 92.37 (8)
	13-2802	1	Tube, RD, 7/8 x 16 Gauge x 104(9/10)
33.	13-10076	2	Plate, Mounting, Sprinkler Bar

### Replacement Parts for 03-1326 and 03-2558 :

07-6565	Fan Shroud
07-6566	Grommet Kit
07-6567	Mounting Plate

# HOOD EXTENSION AND DRAPE ASSEMBLY



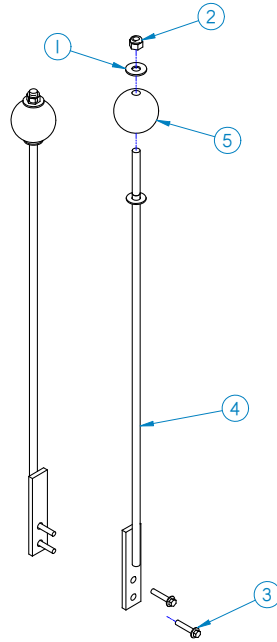
Item	Part	Qty	Description
1.	07-3522	17	Screw, HFH, CL10.9, M6 x 1
2.	07-3617	12	Nut, Insert, Hex, M6 x 1
3.*	07-3736	5	Washer, Flat, CL8.8, M8 4 Ft, 5 Ft
	07-3736	7	Washer, Flat, CL8.8, M8 6 Ft, 7 Ft
	07-3736	9	Washer, Flat, CL8.8, M8 8 Ft, 9 Ft
4.*	07-3738	5	Washer, Lock, Split, Medium, M8 4 Ft, 5 Ft
	07-3738	7	Washer, Lock, Split, Medium, M8 6 Ft, 7 Ft
	07-3738	9	Washer, Lock, Split, Medium, M8 8 Ft, 9 Ft
5.*	07-3777	5	Screw, HHC, CL10.9, M8-1.25 x 20 4 Ft, 5 Ft
	07-3777	7	Screw, HHC, CL10.9, M8-1.25 x 20 6 Ft, 7 Ft
	07-3777	9	Screw, HHC, CL10.9, M8-1.25 x 20 8 Ft, 9 Ft
6.	07-4942	3	Washer, Fender, 5/16 x 1 1/2
7.	07-7115	5	Nut, Insert, M8-1.25, 22-10ga 4 Ft, 5 Ft
	07-7115	7	Nut, Insert, M8-1.25, 22-10ga 6 Ft, 7 Ft
	07-7115	9	Nut, Insert, M8-1.25, 22-10ga 8 Ft, 9 Ft
8.	13-16998-4	1	Sheet, Hood, Extension 4 Ft
	13-16998-5	1	Sheet, Hood, Extension 5 Ft
	13-16998-6	1	Sheet, Hood, Extension 6 Ft
	13-16998-7	1	Sheet, Hood, Extension 7 Ft
	13-16998-8	1	Sheet, Hood, Extension 8 Ft
	13-16998-9	1	Sheet, Hood, Extension 9 Ft
9.	13-16999	1	Sheet, Hood, Extension, Side, Left
10.	13-17000	1	Sheet, Hood, Extension, side, Right
11.*	13-17030-4	1	Flap, Deflector 4 Ft
	13-17030-5	1	Flap, Deflector 5 Ft
	13-17030-6	1	Flap, Deflector 6 Ft
	13-17030-7	1	Flap, Deflector 7 Ft
	13-17030-8	1	Flap, Deflector 8 Ft
	13-17030-9	1	Flap, Deflector 9 Ft

\* Designates Drape Assembly



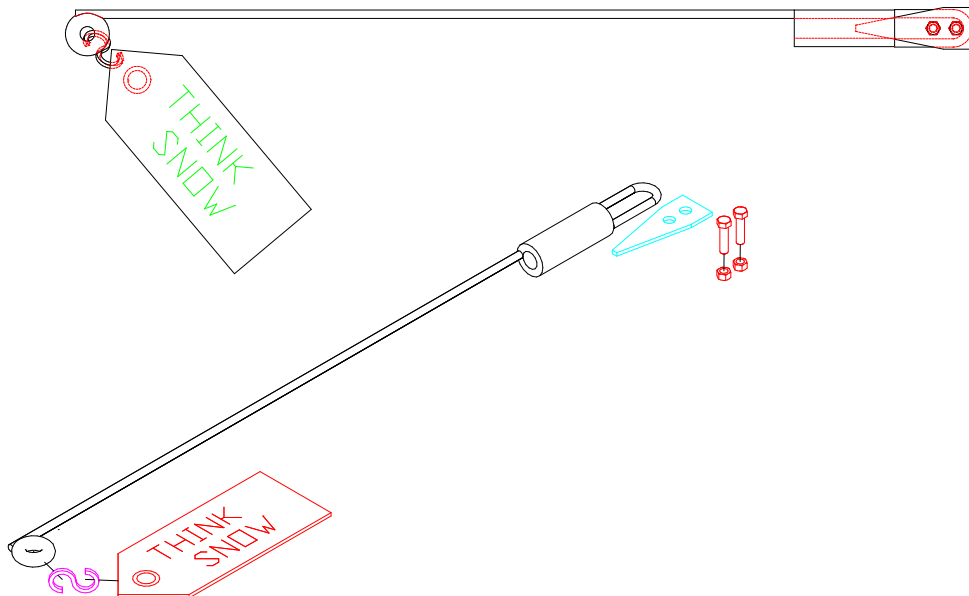
# SIGHT INDICATORS

Kit: 28-9965



Item	Part	Qty	Description
1.	07-3279	2	Washer, Flat, Gr8, 3/8
2.	07-4036	2	Nut, Hex, Nylock, 3/8-16
3.	07-6597	4	Screw, HFH, CL10.9, M6-1 x 30
4.	13-14857	2	Weld, Sight Indicator
5.	13-9567	2	Ball, 2 1/8 Round, Red, with Hole

Kit: 11-5897






# BOLT TORQUE SPECIFICATIONS

## GENERAL TORQUE SPECIFICATION TABLES

Use the following charts when determining bolt torque specifications when special torques are not given. Always use grade 5 or better when replacing bolts.




## SAE BOLT TORQUE SPECIFICATIONS

**NOTE:** The following torque values are for use with extreme pressure lubricants, plating or hard washer applications increase torque 15% when using hardware that is unplated and either dry or lubricated with engine oil.

Bolt Size		SAE GRADE 5 TORQUE				SAE GRADE 8 TORQUE				Bolt head identification marks as per grade. NOTE: Manufacturing Marks Will Vary
		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters		
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF	
1/4	6.35	8	9	11	12	10	13	14	18	<p>GRADE 2</p>  <p>GRADE 5</p>  <p>GRADE 8</p> 
5/16	7.94	14	17	19	23	20	25	27	34	
3/8	9.53	30	36	41	49	38	46	52	62	
7/16	11.11	46	54	62	73	60	71	81	96	
1/2	12.70	68	82	92	111	94	112	127	152	
9/16	14.29	94	112	127	152	136	163	184	221	
5/8	15.88	128	153	174	207	187	224	254	304	
3/4	19.05	230	275	312	373	323	395	438	536	
7/8	22.23	340	408	461	553	510	612	691	830	
1	25.40	493	592	668	803	765	918	1037	1245	
1-1/8	25.58	680	748	922	1014	1088	1224	1475	1660	
1-1/4	31.75	952	1054	1291	1429	1547	1700	2097	2305	
1-3/8	34.93	1241	1428	1683	1936	2023	2312	2743	3135	
1-1/2	38.10	1649	1870	2236	2535	2686	3026	3642	4103	

## METRIC BOLT TORQUE SPECIFICATIONS

**NOTE:** The following torque values are for use with metric hardware that is unplated and either dry or lubricated with engine oil. Reduce torque 15% when using hardware that has extreme pressure lubricants, plating or hard washer applications.

Bolt head identification marks as per grade.		
		

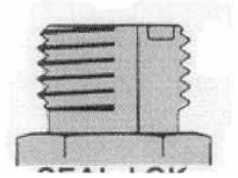
Size of Bolt	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
M6	5.6	1.0	3.6-5.8	4.9-7.9	-	-	-
	8.8		5.8-4	7.9-12.7		-	-
	10.9		7.2-10	9.8-13.6		-	-
M8	5.6	1.25	7.2-14	9.8-19	1.0	12-17	16.3-23
	8.8		17-22	23-29.8		19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
M10	5.6	1.5	20-25	27.1-33.9	1.25	20-29	27.1-39.3
	8.8		34-40	46.1-54.2		35-47	47.4-63.7
	10.9		38-46	51.5-62.3		40-52	54.2-70.5
M12	5.6	1.75	28-34	37.9-46.1	1.25	31-41	42-55.6
	8.8		51-59	69.1-79.9		56-68	75.9-92.1
	10.9		57-66	77.2-89.4		62-75	84-101.6
M14	5.6	2.0	49-56	66.4-75.9	1.5	52-64	70.5-86.7
	8.8		81-93	109.8-126		90-106	122-143.6
	10.9		96-109	130.1-147.7		107-124	145-168
M16	5.6	2.0	67-77	90.8-104.3	1.5	69-83	93.5-112.5
	8.8		116-130	157.2-176.2		120-138	162.6-187
	10.9		129-145	174.8-196.5		140-158	189.7-214.1
M18	5.6	2.0	88-100	119.2-136	1.5	100-117	136-158.5
	8.8		150-168	203.3-227.6		177-199	239.8-269.6
	10.9		175-194	237.1-262.9		202-231	273.7-313
M20	5.6	2.5	108-130	146.3-176.2	1.5	132-150	178.9-203.3
	8.8		186-205	252-277.8		206-242	279.1-327.9
	10.9		213-249	288.6-337.4		246-289	333.3-391.6

**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

**NOTICE -** 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 foreign materials.
2. Install proper SAE O-ring to end of fitting if not already installed. Ensure O-ring is fully seated and retained properly.
3. Lubricate O-ring with a light coating of clean hydraulic oil.
4. Position tube and nut squarely on face seal of fitting and tighten nut finger tight.
5. Using appropriate torquing device, tighten to given torque rating from the table below.

## Torque Values

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

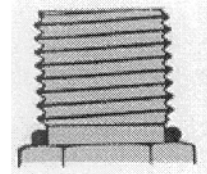
**NOTE** - ft-lb may be converted to Newton Meters by multiplying by 1.35582.

**NOTE** - in-lbs may be converted to Newton Meters by multiplying by 0.11298.

# HYDRAULIC TORQUE SPECIFICATIONS

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

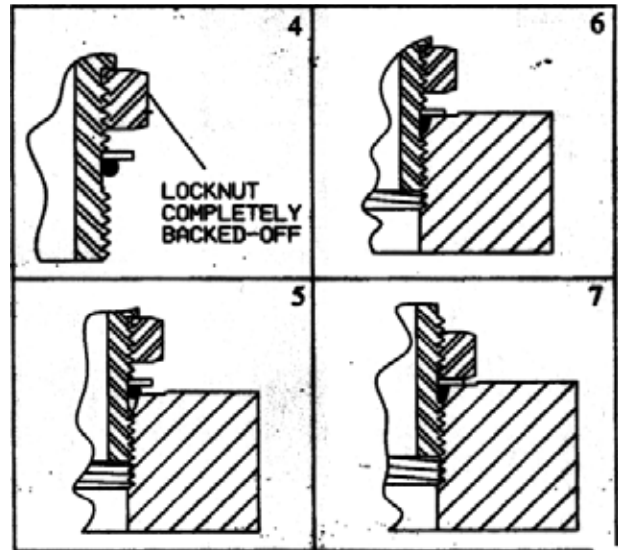
**NOTE -** Straight thread o-ring fittings are utilized to adapt hydraulic systems to motors, pumps, cylinders, and valves.



## 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 clean hydraulic oil.
4. Back off nut as far as possible and push washer up as far as possible. (figure 4 & 5)
5. Screw fitting into port. Hand tighten fitting until backup washer contacts face of port. (figure 6)
6. To position the fitting, unscrew to desired position, but not more than one full turn.
7. Hold fitting in position with wrench. Using appropriate torquing device, tighten nut to given torque rating from table. (figure 7)

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



**NOTE -** ft-lb may be converted to Newton Meters by multiplying by 1.35582.

**NOTE -** in-lbs may be converted to Newton Meters by multiplying by 0.11298.

# GLOSSARY

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

**BP** - black pipe.

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

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

**castellated** - having battlements like a castle.

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

**core** - weldment that holds brush sections.

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

**F** - female.

**FS** - face seal.

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

**gpm** - gallons per minute.

**HP** - high pressure.

**hood** - brush shield.

**hydraulic angle kit** - means of swinging an assembly hydraulically

**in.** - inch.

**kph** - kilometers per hour.

**lb** - pounds.

**left-hand** - side that is on 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.

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

**NPT** - national pipe thread.

**note** - indicates supplementary information.

**notice** - used for instructions when machine damage may be involved.

**psi** - pounds per square inch.

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

**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 the rear when facing the normal forward direction of travel of the machine.

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

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

# GLOSSARY

**section** - single brush wafer.

**section set** - replacement brush wafers.

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

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

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

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

**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

## Limited Warranty

Except for the Excluded Products as described below, all new products are warranted to be free from defects in material and/or workmanship during the Warranty Period, in accordance with and subject to the terms and conditions of this Limited Warranty.

1. Excluded Products. The following products are excluded from this Limited Warranty:

(a) Any cable, part that engages with the ground (i.e. sprockets), digging chain, bearing, teeth, tamping and/or demolition head, blade cutting edge, pilot bit, auger teeth and broom brush that either constitutes or is part of a product.

(b) Any product, merchandise or component that, in the opinion of Paladin Light Construction<sup>1</sup>, has been (i) misused; (ii) modified in any unauthorized manner; (iii) altered; (iv) damaged; (v) involved in an accident; or (vi) repaired using parts not obtained through Paladin Light Construction.

2. Warranty Period. The Limited Warranty is provided only to those defects that occur during the Warranty Period, which is the period that begins on the first to occur of: (i) the date of initial purchase by an end-user, (ii) the date the product is first leased or rented, or (iii) the date that is six (6) months after the date of shipment by Paladin Light Construction as evidenced by the invoiced shipment date (the "Commencement Date") and ends on the date that is twelve (12) months after the Commencement Date.

3. Terms and Conditions of Limited Warranty. The following terms and conditions apply to the Limited Warranty hereby provided:

(a) Option to Repair or Replace. Paladin Light Construction shall have the option to repair or replace the product.

(b) Timely Repair and Notice. In order to obtain the Limited Warranty, (i) the product must be repaired within thirty (30) days from the date of failure, and (ii) a claim under the warranty must be submitted to Paladin Light Construction in writing within thirty (30) days from the date of repair.

(c) Return of Defective Part or Product. If requested by Paladin Light Construction, the alleged defective part or product shall be shipped to Paladin Light Construction at its manufacturing facility or other location specified by Paladin Light Construction, with freight PRE-PAID by the claimant, to allow Paladin Light Construction to inspect the part or product.

Claims that fail to comply with any of the above terms and conditions shall be denied.

### LIMITATIONS AND EXCLUSIONS.

**THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY BASED ON A COURSE OF DEALING OR USAGE OF TRADE.**

**IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES.**

**IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR ANY LOSS OR CLAIM IN AN AMOUNT IN EXCESS OF THE PURCHASE PRICE, OR, AT THE OPTION OF PALADIN LIGHT CONSTRUCTION, THE REPAIR OR REPLACEMENT, OF THE PARTICULAR PRODUCT ON WHICH ANY CLAIM OF LOSS OR DAMAGE IS BASED. THIS LIMITATION OF LIABILITY APPLIES IRRESPECTIVE OF WHETHER THE CLAIM IS BASED ON BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHER CAUSE AND WHETHER THE ALLEGED DEFECT IS DISCOVERABLE OR LATENT.**

<sup>1</sup>Attachment Technologies Inc., a subsidiary of Paladin Brands Holding, Inc. (PBHI) is referred to herein as Paladin Light Construction.