SWEEPSTER
BY PALADIN

OPERATOR'S MANUAL

ANGLE SWEEPER
AH/RLH Series

FOR
TRACKLESS VEHICLES

Serial Number: _____

Model Number: _____

Manual Number: 51-4702
Release Date: August 2018
Rev. 2

800-456-7100 I www.paladinattachments.com 2800 N. Zeeb Rd., Dexter, MI. 48130, United States of America

Notes

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PREFACE

GENERAL INFORMATION

This product was carefully designed and manufactured to give you many years of dependable service. Only minor maintenance (such as cleaning and lubricating) is required to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual and on any safety decals located on the product and on any equipment on which the attachment is mounted.

WARNING!  **Never let anyone operate this unit without reading the "Safety Precautions" and "Operating Instructions" sections of this manual. Always choose hard, level ground to park the vehicle on and set the brake so the unit cannot roll.**

Unless noted otherwise, right and left sides are determined from the operator's control position when facing the attachment.

NOTE: The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

BEFORE OPERATION

The primary responsibility for safety with equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or manufacturer to obtain further assistance. Keep this manual available for reference. Provide this manual to any new owners and/or operator's

SAFETY ALERT SYMBOL

This is the "Safety Alert Symbol" used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and the safety of others working with you.

SERVICE

Use only manufacturer replacement parts. Substitute parts may not meet the required standards. Record the model and serial number of your unit on the cover of this manual. The parts department needs this information to insure that you receive the correct parts.

SOUND AND VIBRATION

"Sound pressure levels and vibration data for this attachment are influenced by many different parameters; some items are listed below (not inclusive):

- prime mover type, age, condition, with or without cab enclosure and configuration
- operator training, behavior, stress level
- job site organization, working material condition, environment

Based on the uncertainty of the prime mover, operator, and job site, it is impossible to get precise machine and operator sound pressure levels, or vibration levels for this attachment."

NOTE: A list of all Paladin Patents can be found at http//www.paladinbrands.com/patents.asp.

SAFETY STATEMENTS

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! **NOTICE INDICATES A PROPERTY DAMAGE MESSAGE.**

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.

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.

GENERAL SAFETY PRECAUTIONS

WARNING! **LOWER OR SUPPORT RAISED EQUIPMENT**

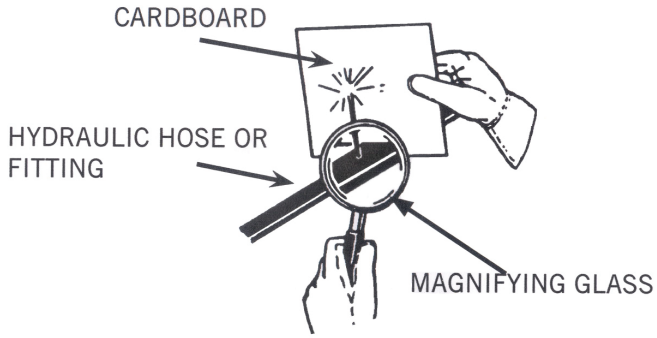
Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to ground 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.
- 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.

GENERAL SAFETY PRECAUTIONS

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.
- Wear the protective 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.

EQUIPMENT SAFETY PRECAUTIONS

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.

WARNING! **END OF LIFE DISPOSAL.**

At the completion of the useful life of the unit, drain all fluids and dismantle by separating the different materials (rubber, steel, plastic, etc.). Follow all federal, state and local regulations for recycling and disposal of the fluid and components.

EQUIPMENT SAFETY PRECAUTIONS

Operating the Sweeper:

- •Do not exceed the lifting capacity of your prime mover.
- •Operate only from the operator's station.
- •When operating on slopes, drive up and down, not across. Avoid steep hillside operation which could cause the prime mover to over turn.
- •Reduce speed when driving over rough terrain, on a slope, or turning to avoid overturning the vehicle.
- •An operator must not use drugs or alcohol, which can change his or her alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate equipment.
- •Before exiting the prime mover, lower the attachment to the ground, apply the brakes, turn off the prime mover's engine and remove the key.

Transporting the Sweeper:

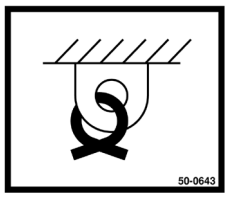
- •Travel only with the attachment in a safe transport position to prevent uncontrolled movement. Drive slowly over rough ground and on slopes.
- •When driving on public roads use safety lights, reflectors, Slow Moving Vehicle signs etc. to prevent accidents. Check local government regulations that may affect you.
- •Do not drive close to ditches, excavation, etc. cave in could result.

Maintaining the Sweeper:

- •Before performing maintenance (unless otherwise specified) lower the attachment to the ground, apply the brakes, turn off the engine and remove the key.
- •Never perform any work on the attachment unless you are authorized and qualified to do so. Always read the operator service manual's before any repair is made. After completing maintenance or repair, check for correct functioning of the attachment. If not functioning properly, always tag "DO NOT OPERATE" until all problems are corrected.
- •Worn, damaged or illegible safety decals must be replaced. New safety decals can be ordered from Sweeper.
- •Never make hydraulic repairs while system is under pressure. Serious personal injury or death could result.
- •Never work under a raised attachment.

DECALS

4. 41043



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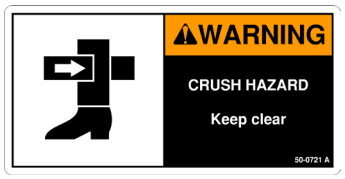

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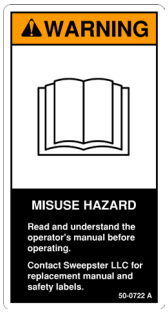
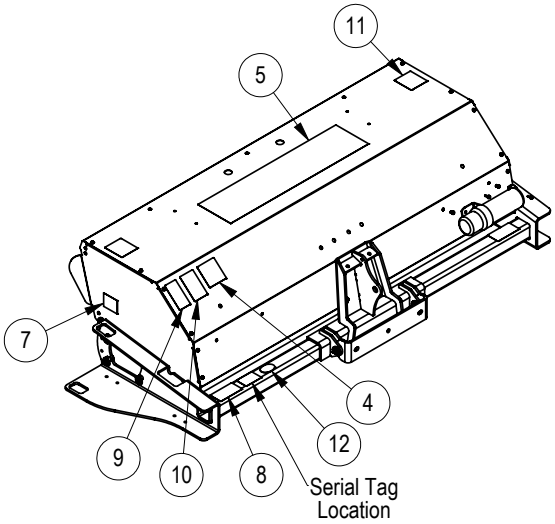


9. 50-0722

10. 50-0724

11. 50-0726



12. RDL3137

Item	Part	Qty	Description
4.	41043	1	Decal, Warning, Hazardous Dust
5.	50-0252	1	Decal, Logo, Sweepster, Large, White
7.	50-0643	2	Decal, Tie Down Point
8.	50-0721	2	Decal, Warning, Crush Hazard
9.	50-0722	1	Decal, Warning, Misuse Hazard
10.	50-0724	1	Decal, Warning, High Pressure Fluid Hazard
11.	50-0726	2	Decal, Warning, Flying Object & Entanglement
12.	RDL3137	1	Decal, Made in USA

Use part numbers to order replacements for lost or damaged decals. Be sure to read all decals before operating the attachment. They contain information you need to know for both safety and longevity.

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.

INSTALLATION

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.

CAUTION! **DO NOT MODIFY THE SWEEPER IN ANY WAY.** Personal injury could result. If you have questions, contact your dealer.

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. Lock jack stands in stowed position. (if available)
10. 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.
11. While the loader arms are lowered, visually inspect the attachment mechanism to ensure that it is securely mounted.

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.

INSTALLATION

NOTICE! 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.

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 bottom hose to the filter base and the top hose to the run port on the valve.

INSTALLATION

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).

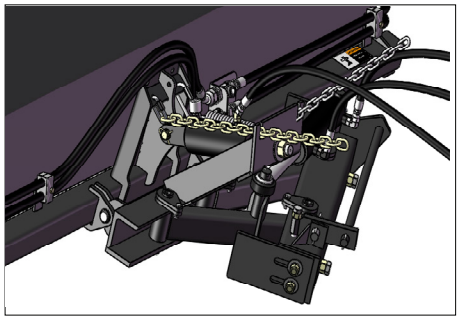


figure 1

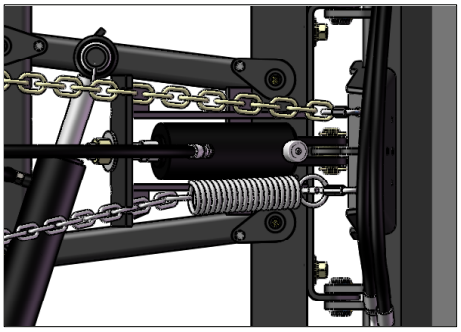


figure 2

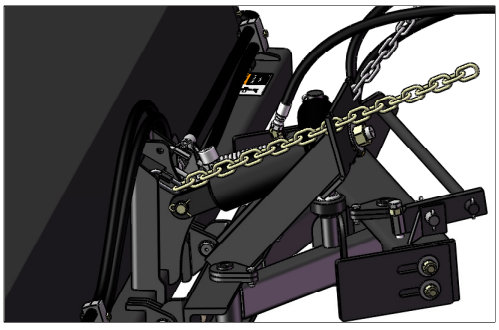


figure 3

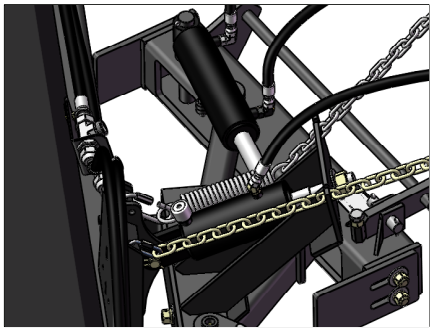


figure 4

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.

NOTICE! ***Avoid cylinder damage. Only place 1 nut on the rod. Adjustments to lift cylinder MUST be made before unit is operated. Adjust cylinder barrel so it does not touch swing plate gussets.***

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).

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

NOTICE! ***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.

INSTALLATION

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.

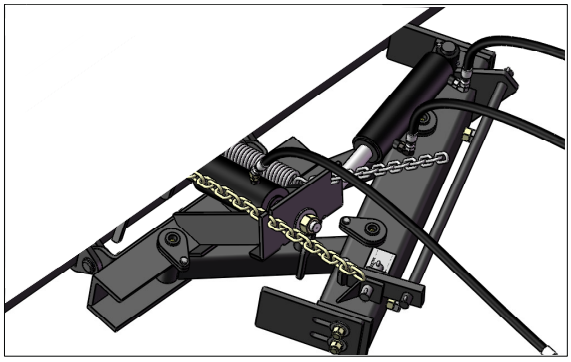


figure 1

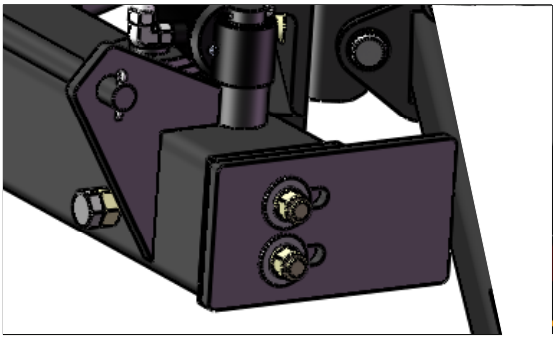


figure 2

INSTALLATION

3-Point Swing Assembly

1. Slide the pump onto the rear PTO. Secure with a chain. Attach the barb to the pump inlet and the elbow fittings on the pump outlet (figure 1.)

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 toplink using pins from the tractor (figure 2).

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 toplink 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 3

10. Level the swing assembly from front to back using the toplink 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.***

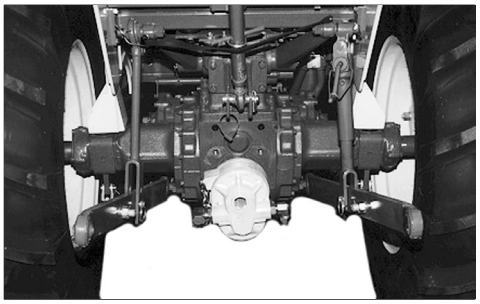


figure 1

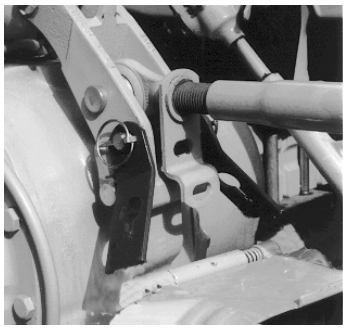


figure 2

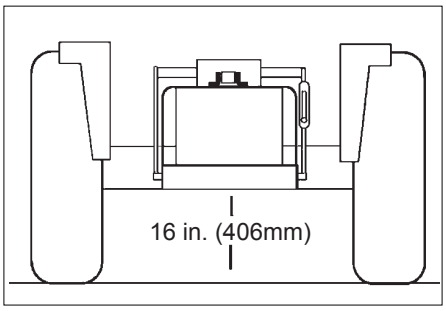


figure 3

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 your dealer.***

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

<u>Manual Angle Kit</u>

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

1. Slide the inner link into the outer link (figure 4).

2. Place link ends on swing assembly pins (figure 5). 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 6).

figure 4

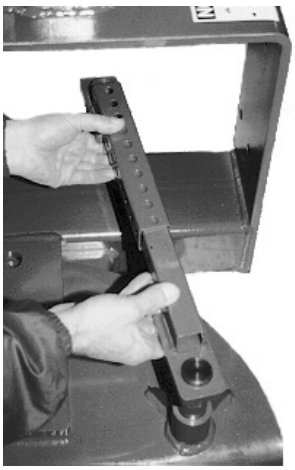


figure 5

figure 6

INSTALLATION

Hydraulic Angle Kit

1. Attach fittings to the cylinder. (figure 1).

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 2).

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.

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 1

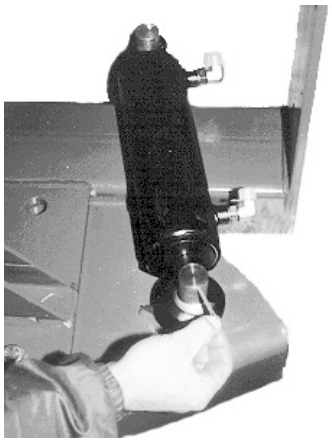


figure 2

OPERATION

INTENDED USE:

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.

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.

OPERATION

•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.

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.

Brush Run	*Swing*	*Lift*
Push to stop	Push to angle left	Push to lower
Pull to run	Pull to angle right	Pull to raise

OPERATION

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.

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.
w 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.

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 toplink. If the rear of the swing assembly is high, lengthen the toplink. If low, shorten the toplink.

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.

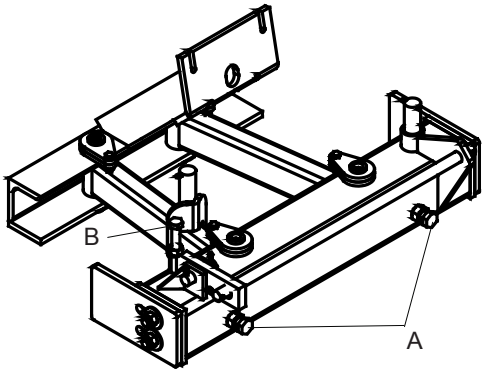


Figure 1

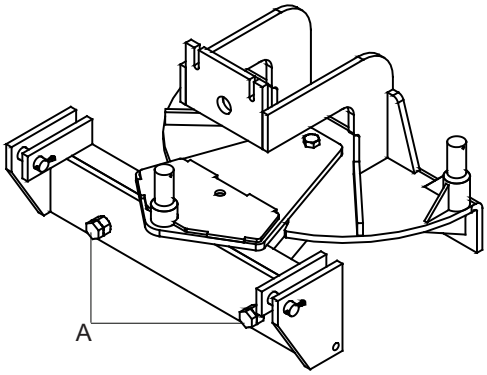
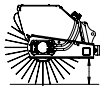


Figure 2



Measure
This
Distance

Figure 3

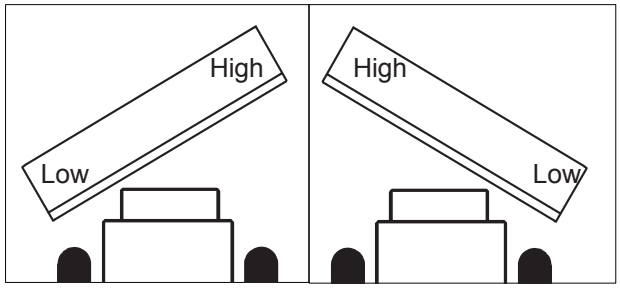


figure 3

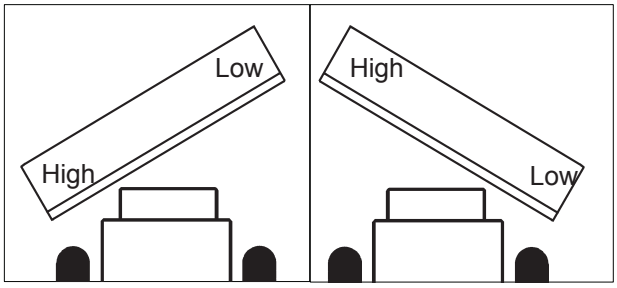


figure 5

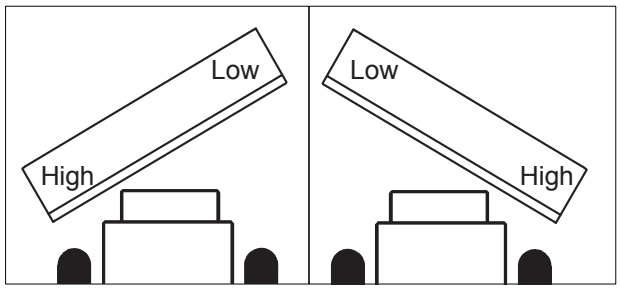


figure 4

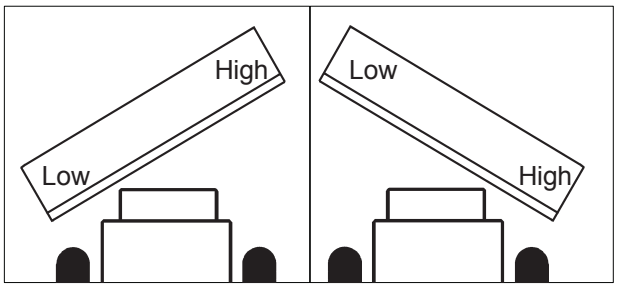


figure 6

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

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

- figure 3, turn leveling screws out. (figure 6, A)
- figure 4, turn leveling screws in. (figure 6, A)
- figure 5, 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 6, 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 3, extend tilt cylinders.
- figure 4, retract tilt cylinders.

- figure 5, 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 hard ware.

- figure 6, 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 3, lengthen the hitch toplink.

- figure 4, shorten the hitch toplink.

- figure 5, lower the adjustable 3-Point hitch arm.

- figure 6, raise the adjustable 3- Point hitch arm.

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.

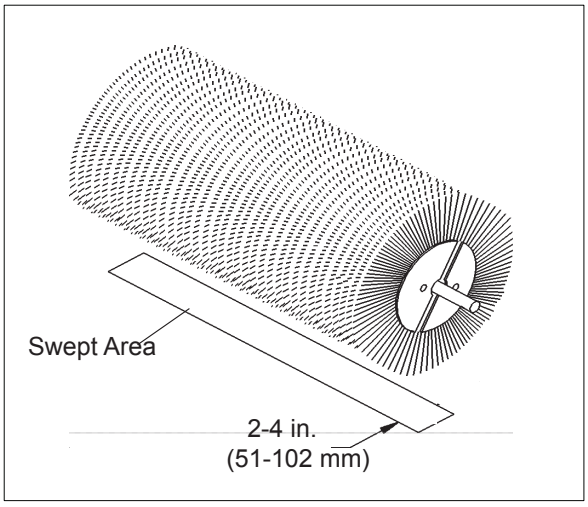


Figure 1

OPERATION

Adjusting Spring-Chain Assembly

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

To adjust the brush pattern:

. 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.

OPERATION

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. Lock jack stands in lowered position. (if available)
5. Disconnect the broom hydraulic lines from the prime mover. Connect quick couplers together to keep clean.
6. Disengage attachment locking mechanism. (mechanical type)
7. Enter prime mover, fasten safety restraints and start the prime mover.
8. Disengage attachment mechanism. (hydraulic type)
9. Disengage the parking brake, and back away from the broom.

OPERATION

General 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.

Storage:

- Clean the unit thoroughly, removing all mud, dirt and grease.
- Inspect for visible signs of wear, breakage or damage. Order any parts required and make the necessary repairs to avoid delays upon removal from storage.
- Tighten loose nuts, capscrews and hydraulic connections.
- Coat exposed portions of the cylinder rods with grease.
- Lubricate grease fittings.
- Seal hydraulic system from contaminants and secure all hydraulic hoses off the ground to help prevent damage.
- Store unit in a dry and protected place. Leaving the unit outside will materially shorten its life.

Additional Precautions for Long Term Storage:

- Touch up all unpainted surfaces with paint to avoid rust.
- Inflate tires to recommended tire pressure.
- Fill fuel tank and hydraulic oil tank to maximum.
- Check antifreeze properties and drain fluids as appropriate.

Removal from Storage:

- Remove cover.
- Wash unit and replace any damage and/or missing parts.
- Lubricate grease fittings.
- Check hydraulic hoses for damage and replace as necessary.

OPERATION

LIFT POINTS

Lifting points are identified by lifting decals where required. Lifting at other points is unsafe and can damage attachment. Do not attach lifting accessories around cylinders or in any way that may damage hoses or hydraulic components.

- Attach lifting accessories to unit at recommended lifting points.
- Bring lifting accessories together to a central lifting point.
- Lift gradually, maintaining the equilibrium of the unit.

WARNING! **USE LIFTING ACCESSORIES (CHAINS, SLINGS, ROPES, SHACKLES AND ETC.) THAT ARE CAPABLE OF SUPPORTING THE SIZE AND WEIGHT OF YOUR ATTACHMENT. Secure all lifting accessories in such a way to prevent unintended disengagement. Failure to do so could result in the attachment falling and causing serious personal injury or death.**

TIE DOWN POINTS

Tie down points are identified by tie down decals where required. Securing to trailer at other points is unsafe and can damage attachment. Do not attach tie down accessories around cylinders or in any way that may damage hoses or hydraulic components.

- Attach tie down accessories to unit as recommended.
- Check unit stability before transporting.

WARNING! **VERIFY THAT ALL TIE DOWN ACCESSORIES (CHAINS, SLINGS, ROPES, SHACKLES AND ETC.) ARE CAPABLE OF MAINTAINING ATTACHMENT STABILITY DURING TRANSPORTING and are attached in such a way to prevent unintended disengagement or shifting of the unit. Failure to do so could result in serious personal injury or death.**

MAINTENANCE

Service & Repair

CAUTION ! **DO NOT MODIFY THE SWEEPER IN ANY WAY.** Personal injury could result. If you have questions, contact your dealer.

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 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.

MAINTENANCE SCHEDULE

Maintenance Schedule

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

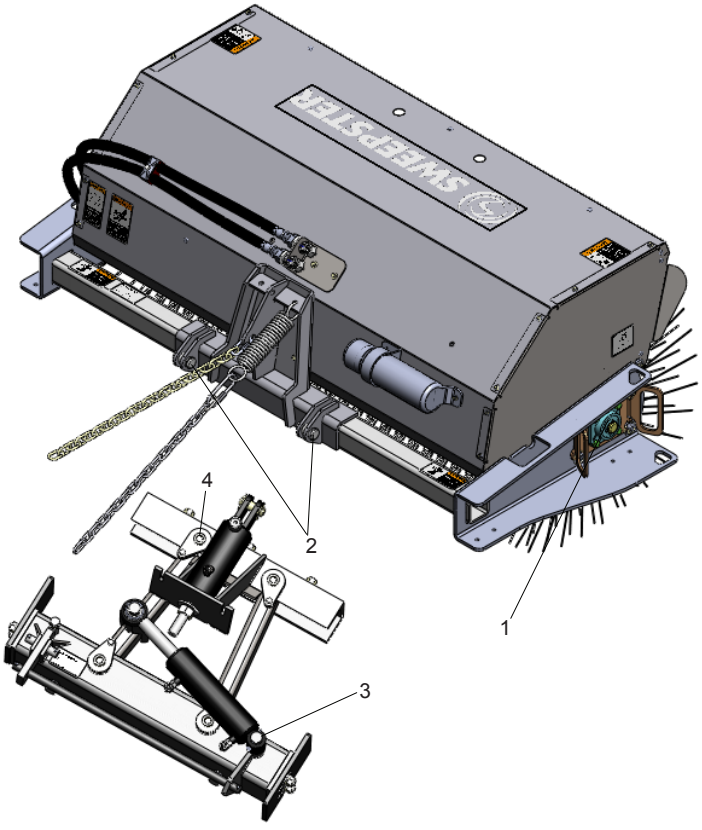
Oil Cleanliness Requirements

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.***

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

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 retaining plate from core assembly.
5. Remove old sections.
6. 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 1)
    b. Install a second section with drive pins rotated 180° from those on the first section. (figure 2)
    c. Continue installing sections, rotating each section 180° until the core is full.
7. Re-attach the section retainer with previously removed hardware.
8. Lay core on ground. Lower frame over core.
9. Re-attach bearing mounting plate with previously removed hardware (single motor only).
10. Re-attach motor mounts with hardware removed in first step.

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

Replacing Brush Sections

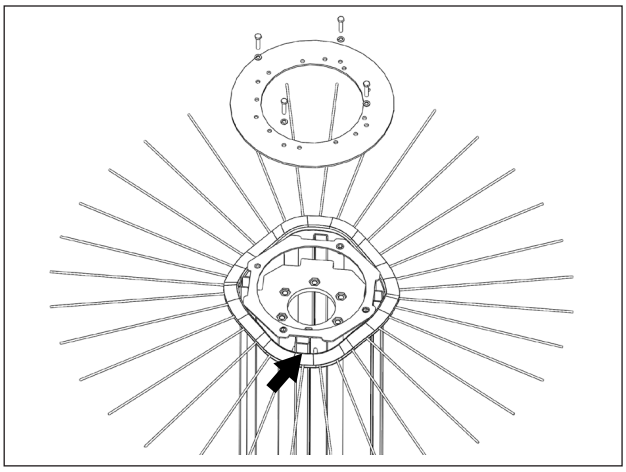


figure 1

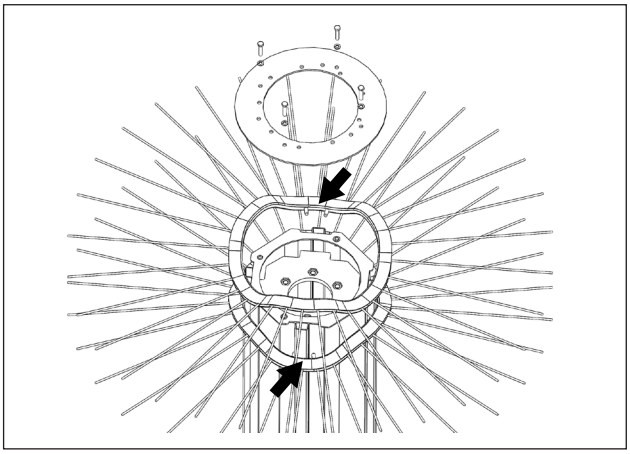
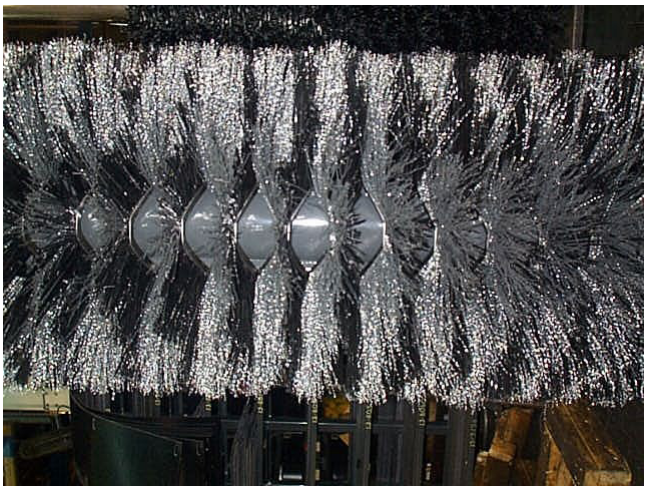
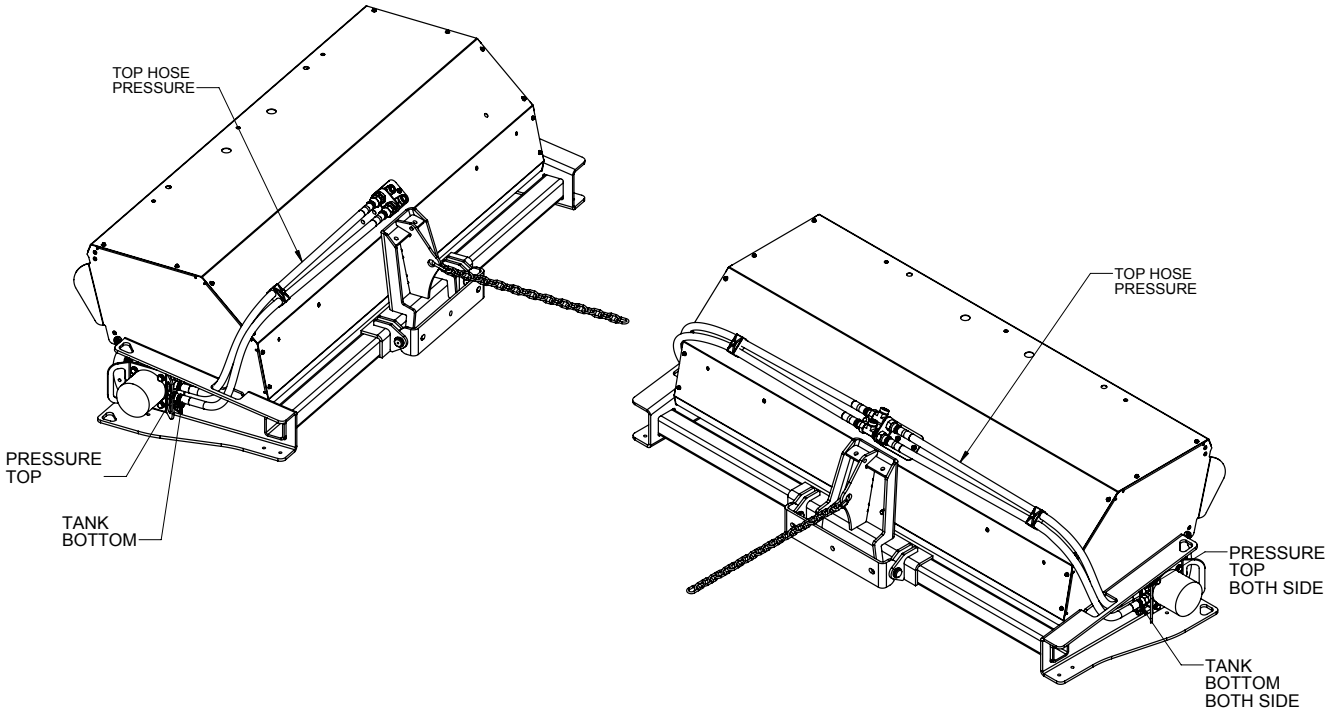


figure 2



MAINTENANCE

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

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 (51-102mm) 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)
	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)
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 (51-102mm) 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

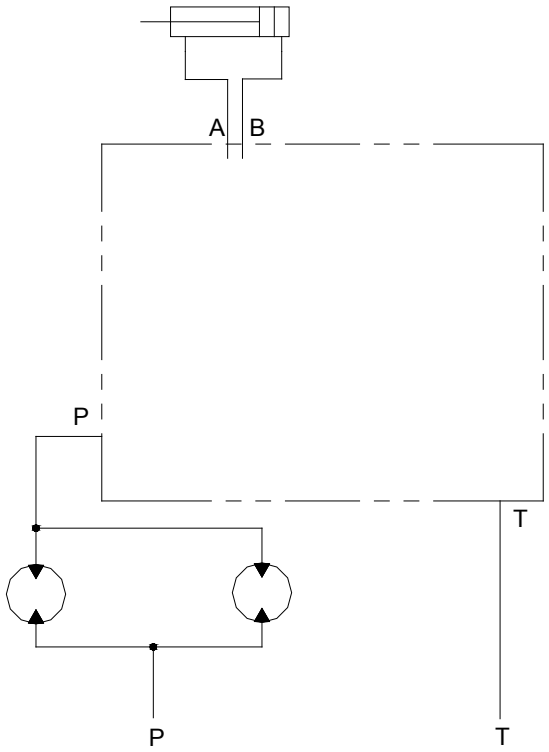
Problem	Possible Cause	Possible Solution
Hydraulic cylinder neither extends nor retracts	Manual valve - Control rods not connected or are binding	Check control rod linkage; make sure all parts are connected and are not binding; fix if necessary
	Electric valve - No power from controls because wires are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

TROUBLESHOOTING

Hydraulic System

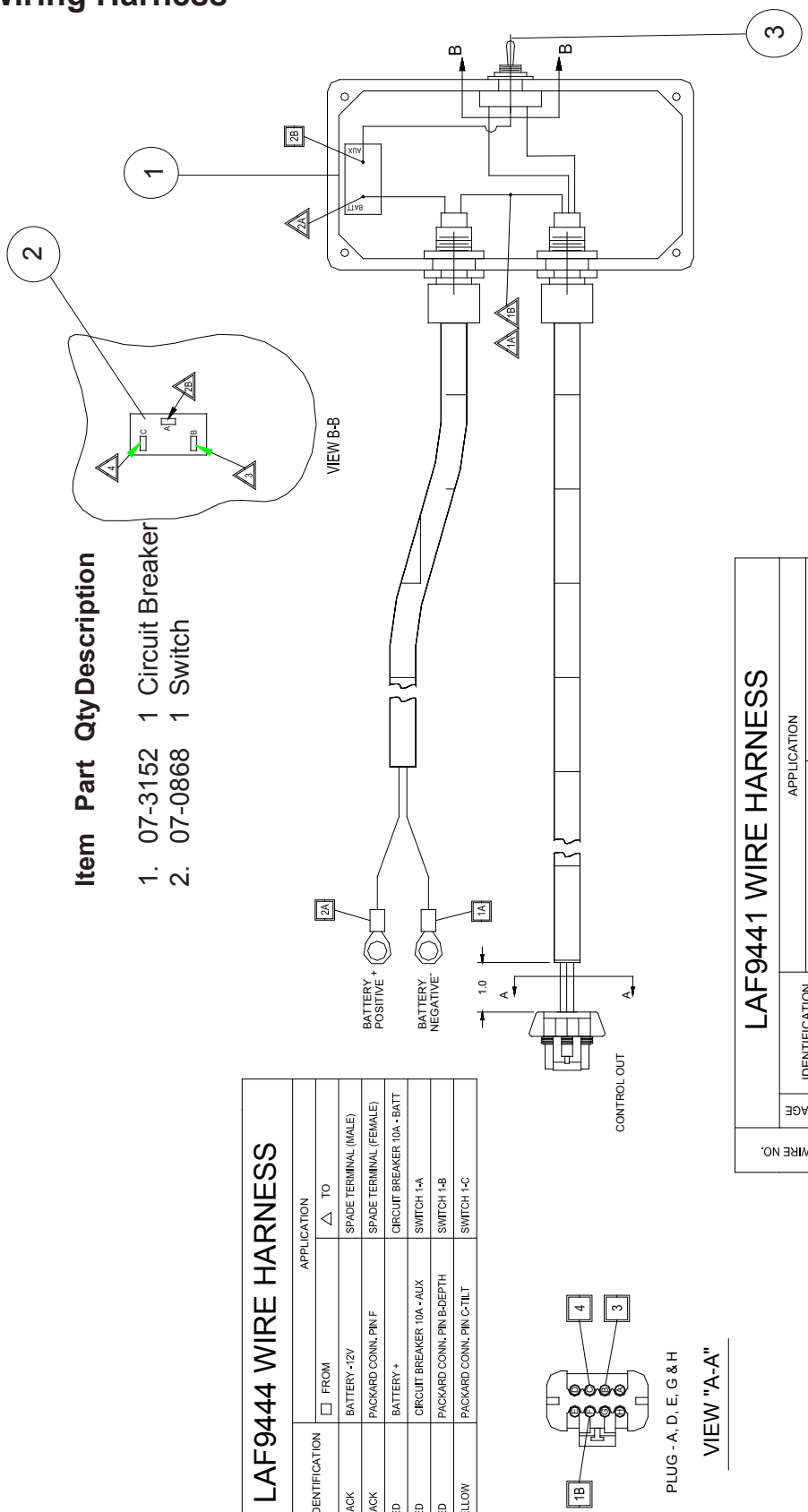
Problem	Possible Cause	Possible Solution
Hydraulic system overheats	Hydraulic oïl level too low	Add hydraulic oil to tank until it comes to 2 inches (51mm) from top
	Restriction in hoses	Remove bends in hoses; remove obstructions inside hoses / Replace Hose
	Host pump flow rate exceeds maximum rate of broom	Contact host manufacturer for proper flow control method
Hydraulic 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 Schematic



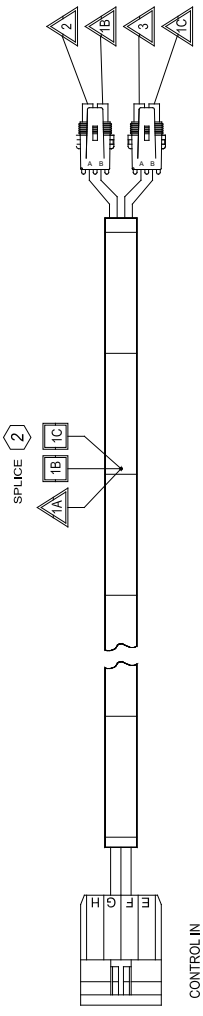
TROUBLESHOOTING

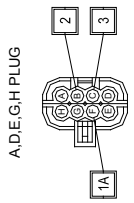
Wiring Harness



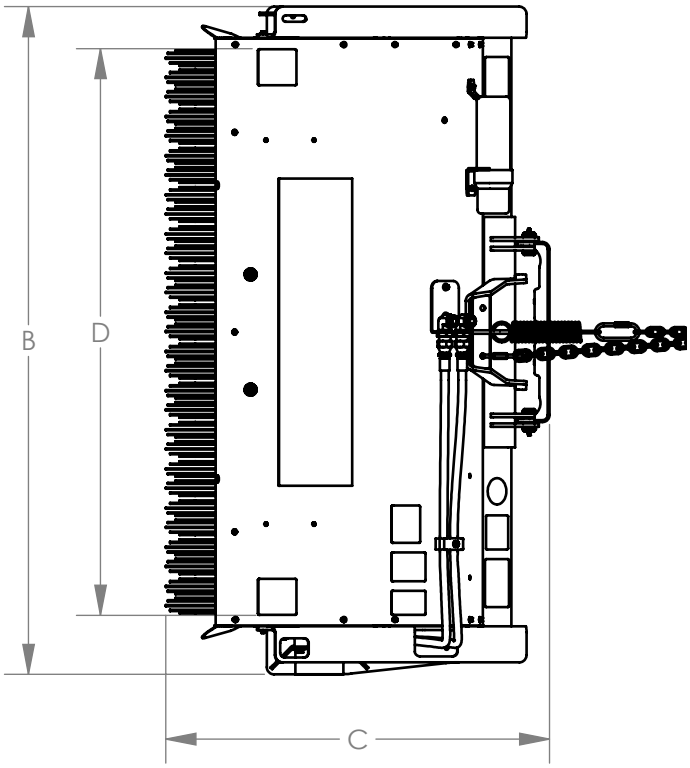
LAF9444 WIRE HARNESS				
WIRE NO.	GUAGE	IDENTIFICATION	APPLICATION	
			□ FROM	△ TO
1A	16	BLACK	BATTERY -12V	SPADE TERMINAL (MALE)
1B	16	BLACK	PACKARD CONN. PIN F	SPADE TERMINAL (FEMALE)
2A	16	RED	BATTERY +	CIRCUIT BREAKER 10A - BATT
2B	16	RED	CIRCUIT BREAKER 10A - AUX	SWITCH 1-A
3	16	RED	PACKARD CONN.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

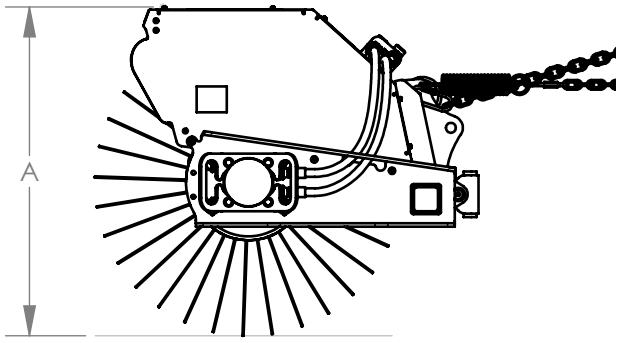
LAF9441 WIRE HARNESS				
WIRE NO.	GUAGE	IDENTIFICATION	APPLICATION	
			□ FROM	△ TO
1A	16	BLACK	PACKARD PIN F	ULTRA SONIC SPLICE
1B	16	BLACK	ULTRA SONIC SPLICE	PACKARD 1 PIN B
1C	16	BLACK	ULTRA SONIC SPLICE	PACKARD 2 PIN B
2	16	RED	PACKARD PIN B	PACKARD 1 PIN A
3	16	YELLOW	PACKARD PIN C	PACKARD 2 PIN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





PRODUCT SPECIFICATIONS





QC32M5SM18	
A. Overall Height	34.3 inches (87 cm)
B. Overall Width	69.6 inches (177 cm)
C. Overall Length	40 inches (102 cm)
D. Sweeping Width	60 inches (152 cm)
Weight	484 lbs (220 kg)
Flow Range	18 gpm (68 kpm)
Hydraulic Motor Displacement	18.3 ci (300 cc)
Number of Motors	1
Maximum Pressure	3000 psi (207 bar)
Brush Diameter	32 inches (81 cm)

BOLT TORQUE SPECIFICATIONS

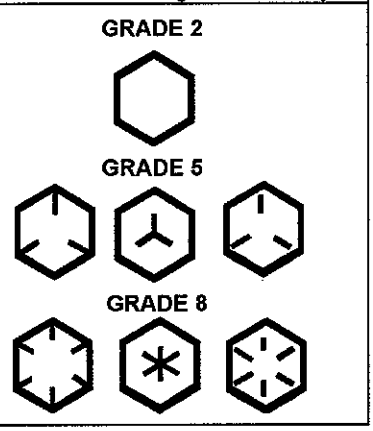
GENERAL TORQUE SPECIFICATION TABLES

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.

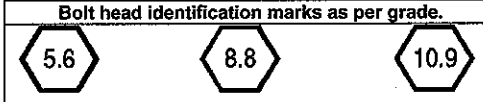
Bolt Size		SAE GRADE 5 TORQUE				SAE GRADE 8 TORQUE				Bolt head identification marks as per grade. NOTE: Manufacturing Marks Will Vary
		Pounds Feet		Newton-Meters		Pounds Feet		Newton-Meters		
Inches	Millimeters	UNC	UNF	UNC	UNF	UNC	UNF	UNC	UNF	
1/4	6.35	8	9	11	12	10	13	14	18	
5/16	7.94	14	17	19	23	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.



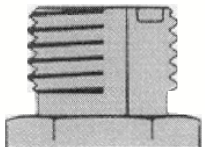
Size of Bolt	Grade No.	Pitch (mm)	Pounds Feet	Newton-Meters	Pitch (mm)	Pounds Feet	Newton-Meters
M6	5.6	1.0	3.6-5.8	4.9-7.9	-	-	-
	8.8		5.8-.4	7.9-12.7		-	-
	10.9		7.2-10	9.8-13.6		-	-
M8	5.6	1.25	7.2-14	9.8-19	1.0	12-17	16.3-23
	8.8		17-22	23-29.8		19-27	25.7-36.6
	10.9		20-26	27.1-35.2		22-31	29.8-42
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 0-ring to end of fitting if not already installed. Ensure 0-ring is fully seated and retained properly.
3. Lubricate 0-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.

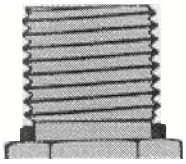
Torque Values

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

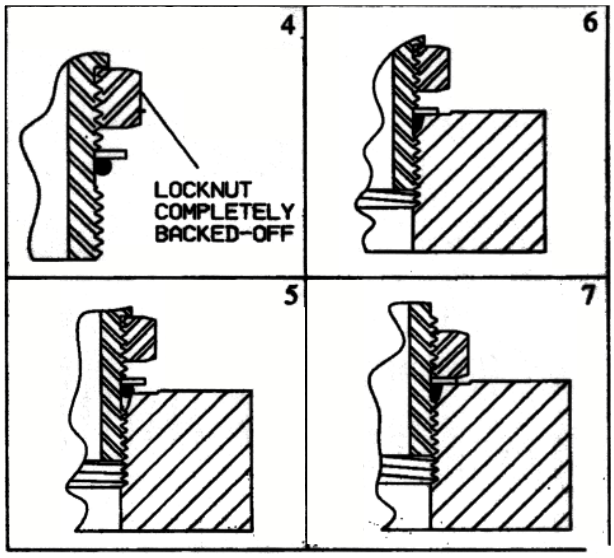


NOTE - Straight thread o-ring fittings are utilized to adapt hydraulic systems to motors, pumps, cylinders, and valves.

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.

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[1], 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.

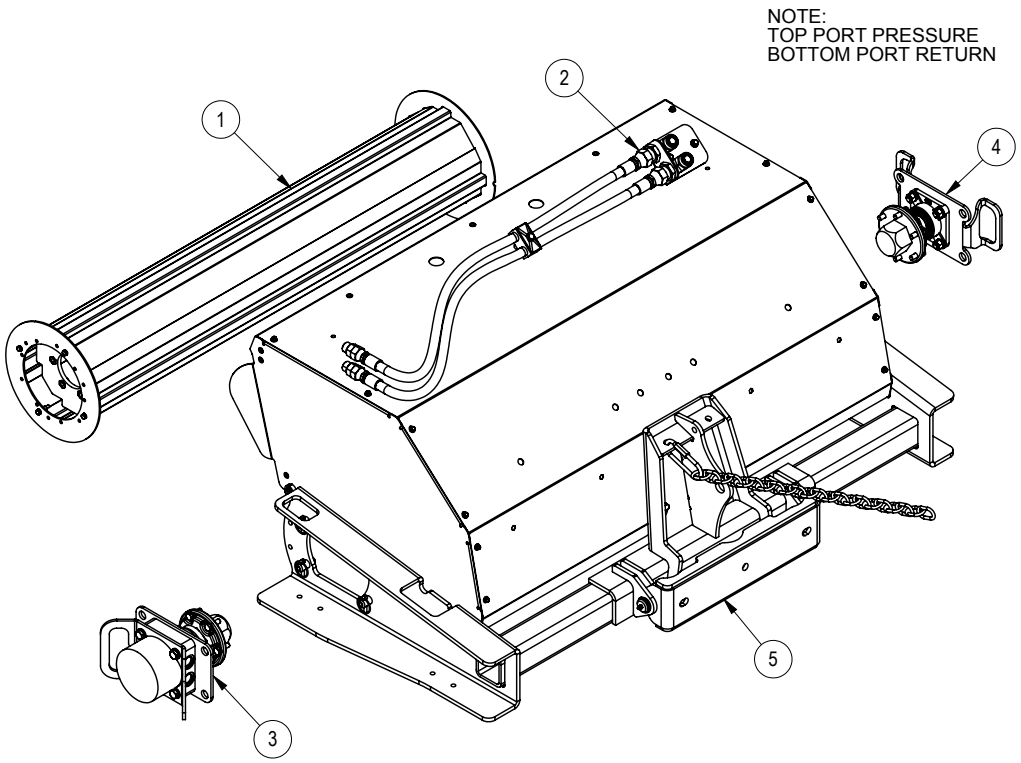
IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES.

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.

[1]Attachment Technologies Inc., a subsidiary of Paladin Brands Holding, Inc. (PBHI) is referred to herein as Paladin Light Construction.

February 10, 2010

SINGLE MOTOR BRUSH HEAD

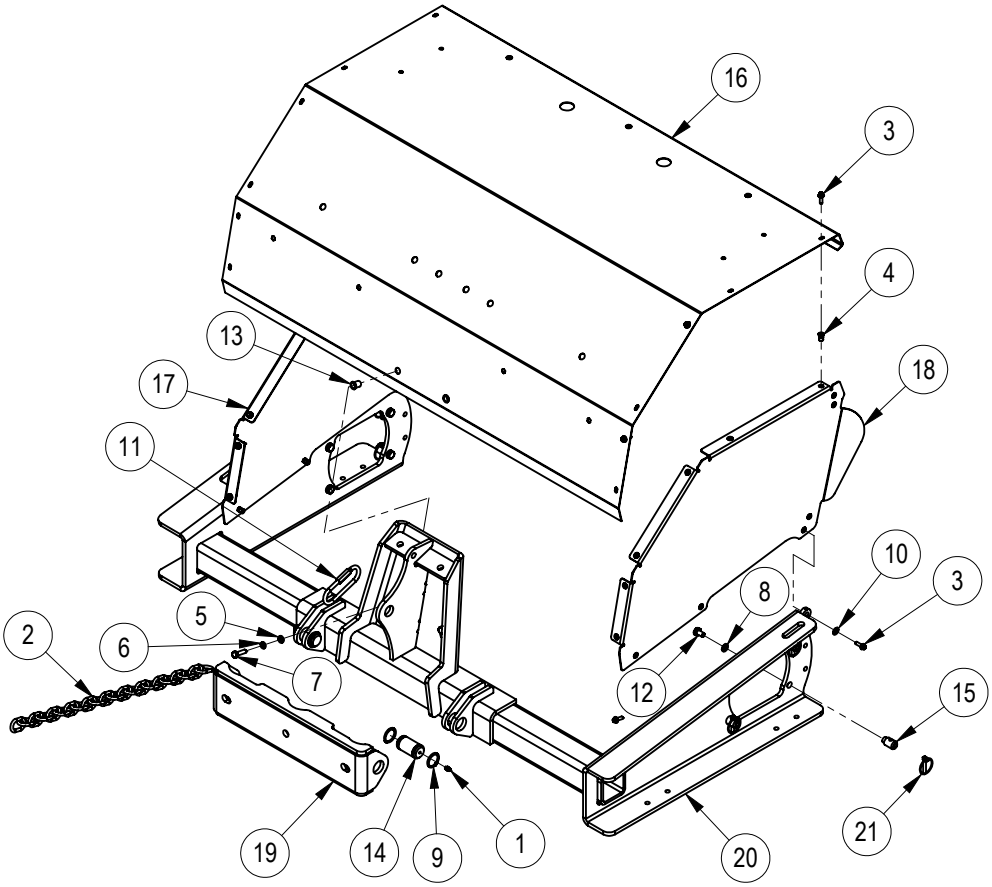


Item	Part	Qty	Description
1.	28-10095-4	1	Assembly, Core, 4 Ft
	28-10095-5	1	Assembly, Core, 5 Ft
	28-10095-6	1	Assembly, Core, 6 Ft
2.	28-10313-4	1	Assembly, Hydraulic Hose, 4 Ft
	28-10313-5	1	Assembly, Hydraulic Hose, 5 Ft
	28-10313-6	1	Assembly, Hydraulic Hose, 6 Ft
3.	28-10880	1	Assembly, Motor, Hydraulic, 18.3 CI
4.	28-10881	1	Assembly, Idler
5.	28-10882-4	1	Assembly, Brush Frame, 4 Ft
	28-10882-5	1	Assembly, Brush Frame, 5 Ft
	28-10882-6	1	Assembly, Brush Frame, 6 Ft

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
01-1209-4	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
01-1213-4	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
01-1214-4	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

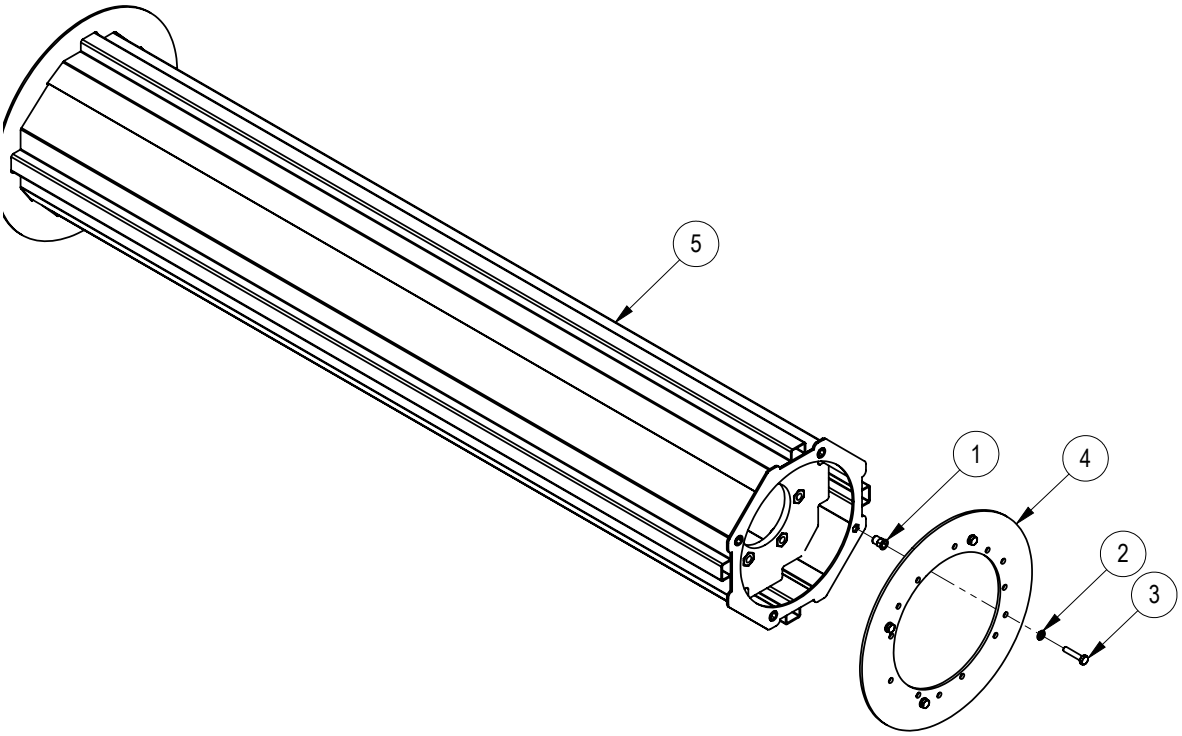
BRUSH FRAME ASSEMBLY



NOTE:
1. APPLY LOCTITE TO ITEM (12).

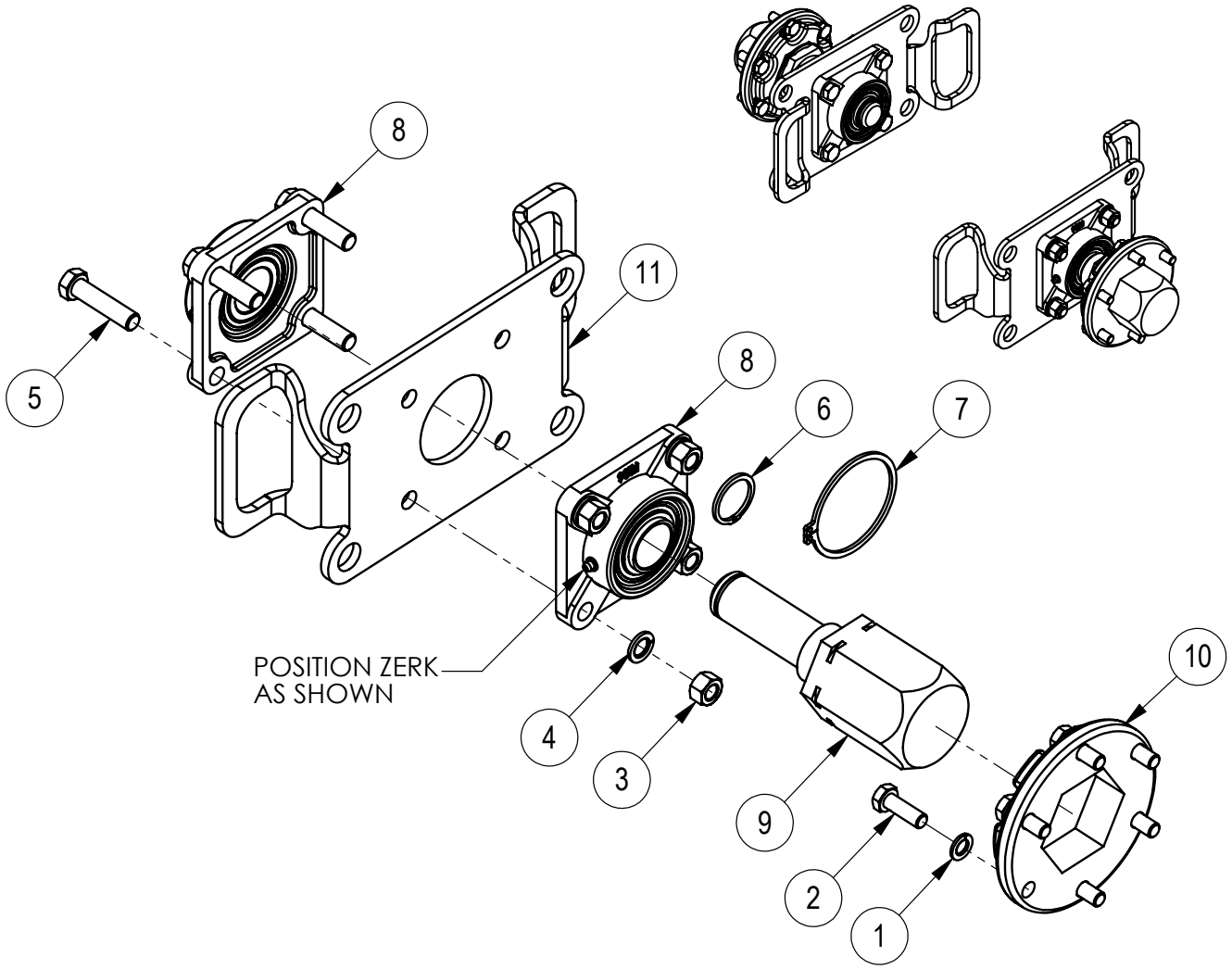
Item	Part	Qty	Description
1.	05-0763	2	Fitting, Zerk, 1/4-28, Straight
2.	07-0249	1	Chain, 1/4 x 22 Links
3.	07-2952	18	Screw, HFH, CL10.9, M6-1 x 20
4.	07-3617	27	Nut, Insert, Hex, M6 x 1
5.	07-3736	2	Washer, Flat, CL8.8, M8
6.	07-3738	2	Washer, Lock, Split, Medium, M8
7.	07-3740	2	Screw, CL10.9, M8-1.25 x 30mm
8.	07-3747	8	Washer, Lock, Split, Medium, M10
9.	07-3842	4	Ring, Snap
10.	07-4927	6	Washer, Fender, CL8.8, M6
11.	07-5294	1	Link, Quick, 5/16, Wide Jaw
12.	07-6769	8	Screw, CL10.9, M10-1.5 x 16mm
13.	07-7115	2	Nut, Insert, M8-1.25
14.	13-10004	2	Pin, Pivot, Lift, Arm
15.	13-14083	8	Stud, Mounting, Motor
16.	13-16995-4	1	Sheet, Hood 4 Ft
	13-16995-5	1	Sheet, Hood 5 Ft
	13-16995-6	1	Sheet, Hood 6 Ft
17.	13-16996	1	Sheet, Hood, Side, Left
18.	13-16997	1	Sheet, Hood, Side, Right
19.	13-17653	1	Weld, Plate, Mounting
20.	13-18528-4	1	Weld, BrushHead Frame, 4 Ft
	13-18528-5	1	Weld, BrushHead Frame, 5 Ft
	13-18528-6	1	Weld, BrushHead Frame, 6 Ft
21.	RHW8068	8	Pin, Linch, .25-1.56

CORE ASSEMBLY



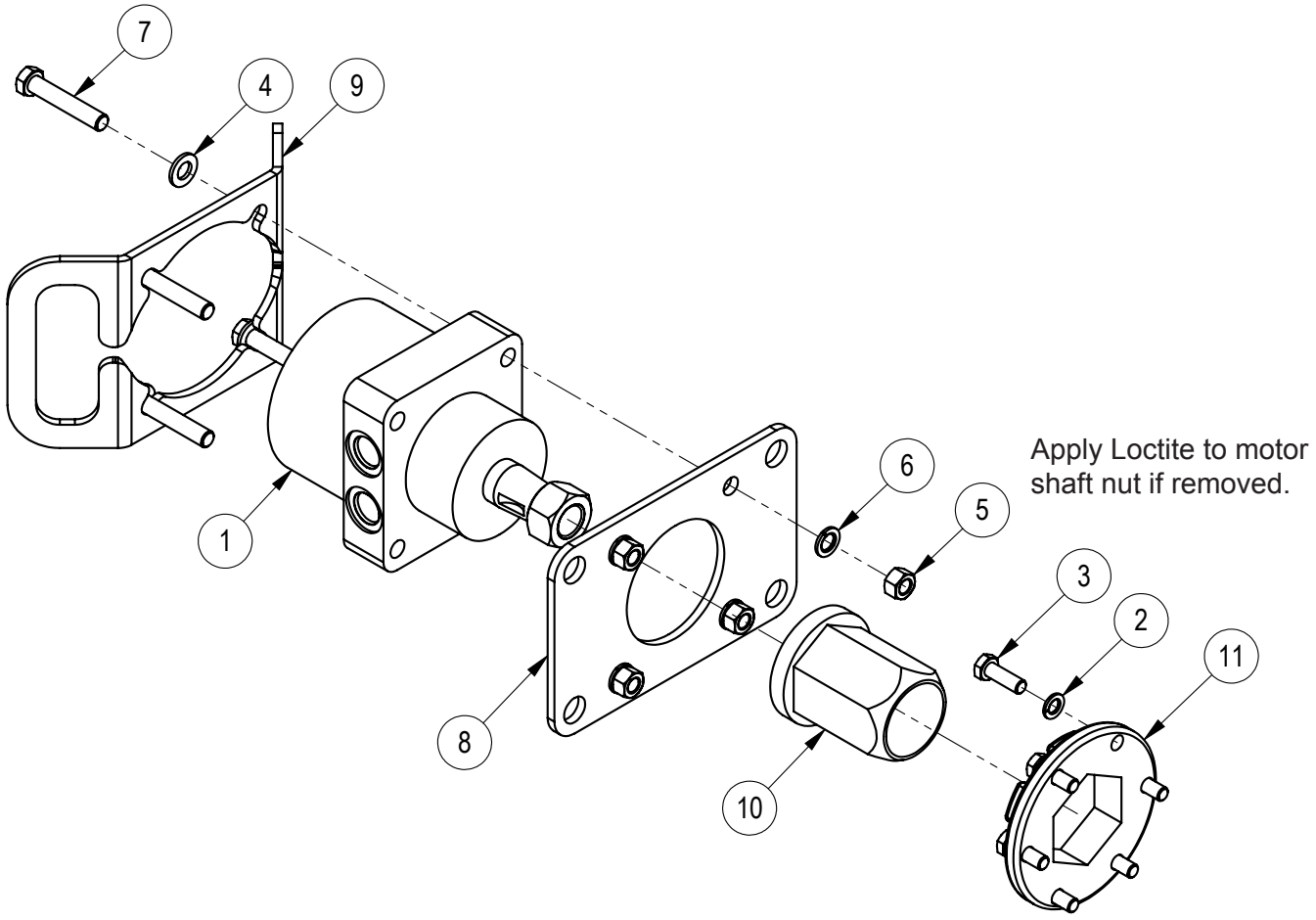
Item	Part	Qty	Description
1.	07-3617	4	Nut, Insert, Hex, M6 x 1
2.	07-3730	4	Washer, Lock, Split, Medium, M6
3.	07-3731	4	Screw, HHC, CL10.9, M6-1 x 30mm
4.	13-13166	1	Plate, Ring, Core, End
5.	13-15866-4	1	Weld, Core, 4 Ft
	13-15866-5	1	Weld, Core, 5 Ft
	13-15866-6	1	Weld, Core, 6 Ft

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.	07-3755	4	Nut, Hex, CL10, M12-1.75
4.	07-3756	4	Washer, Lock, Split, Medium, M12
5.	07-3762	4	Screw, HHC, CL10.9, M12-1.75 x 50mm
6.	07-3842	1	Ring, Snap
7.	07-6196	1	Ring, Snap
8.	08-0067	2	Bearing, 1 1/4, 4 Bolt
9.	13-14135	1	Hub, Hex, 2 1/2, Single Motor
10.	13-16225	1	Plate, Receiver, Hex, 2.5
11.	13-17968	1	Plate, Mounting, Handle Bearing

MOTOR ASSEMBLIES

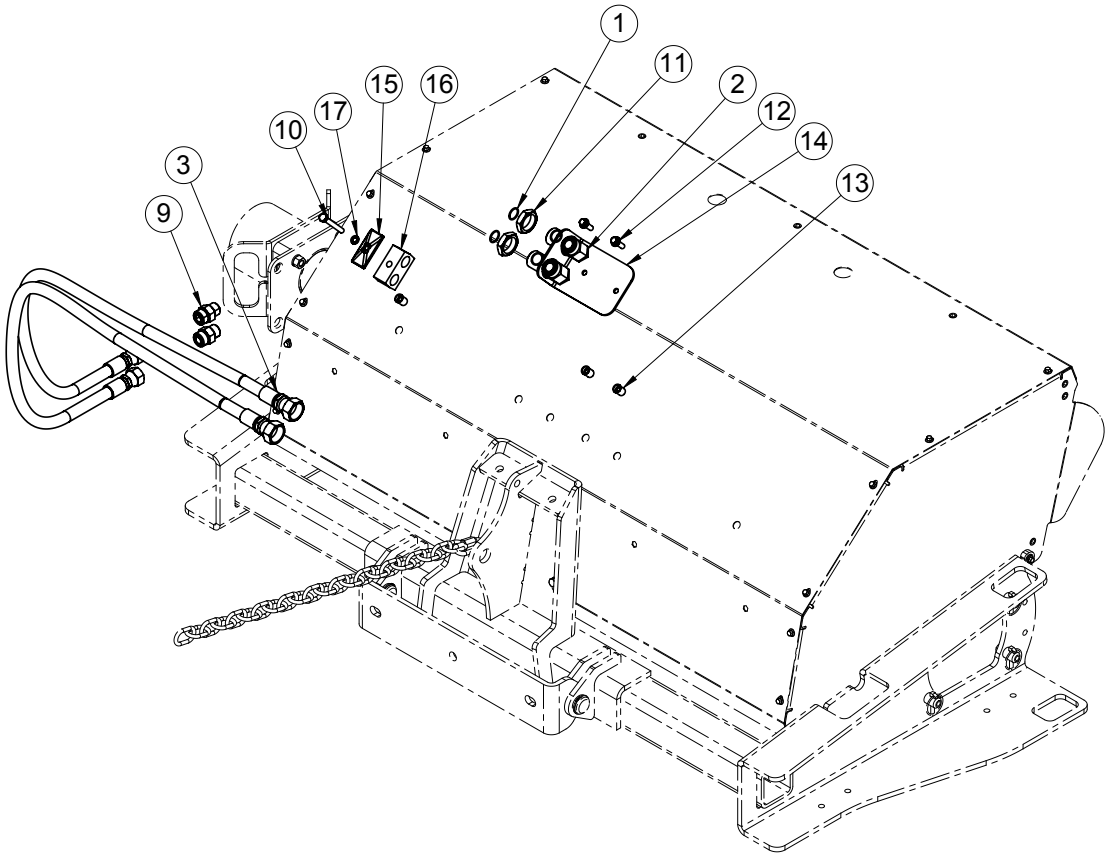


Item	Part	Qty	Description
1.	03-5612	1	Motor, 18.3 CID, 1.25 TPR
2.	07-3747	6	Washer, Lock, Split, Medium, M10
3.	07-3749	6	Screw, HHC, CL10.9, M10-1.5 x 30mm
4.	07-3754	4	Washer, Flat, CL8.8, M12
5.	07-3755	4	Nut, Hex, CL10, M12-1.75
6.	07-3756	4	Washer, Lock, Split, Medium, M12
7.	07-6683	4	Screw, HHC, CL10.9, M12-1.75 x 65mm
8.	13-14085	1	Plate, Mounting, Motor
9.	13-14086	1	Plate, Handle, Motor
10.	13-15206	1	Hub, Hex, 2 1/2 x 1 1/4 Tapered Bore x 3.75
11.	13-16225	1	Plate, Receiver, Hex, 2.5

Service Parts for 03-5612 Motor

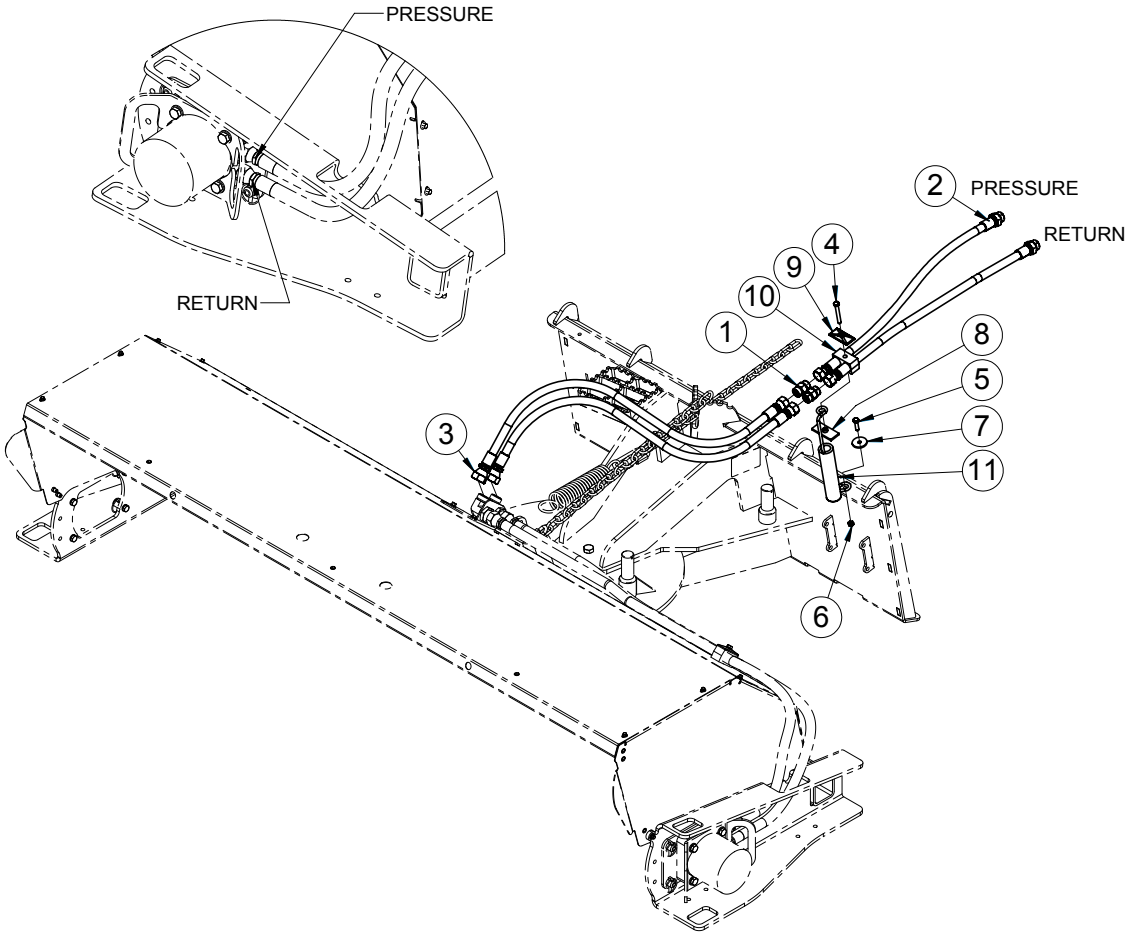
07-4568	Motor, Shaft, Lock, Nut
03-5503	Seal Kit
07-7286	Replacement Key

HYDRAULIC HOSE ASSEMBLY SINGLE MOTOR



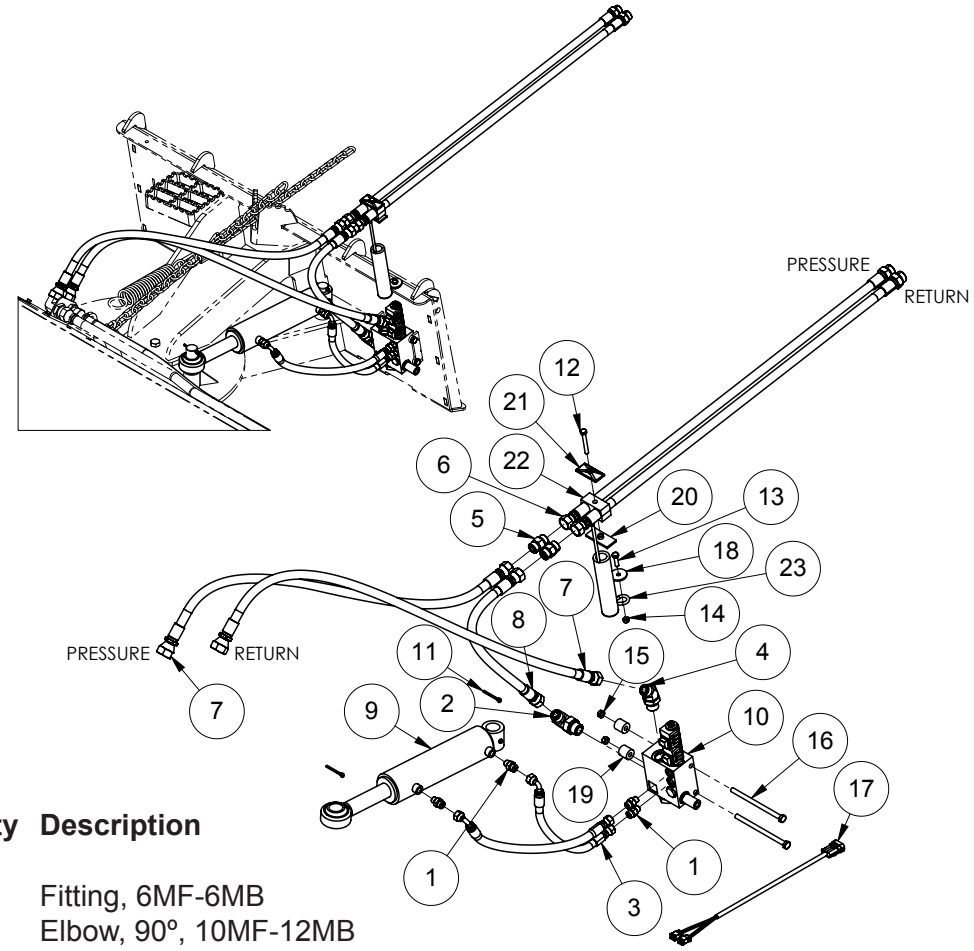
Item	Part	Qty	Description
1.	03-2003	4	O-Ring, FS, 3/4
2.	03-3531	2	Elbow, 90º, 12MF-12MF
3.	03-5167	2	Hose, .5 x 44, 10FF, 12FF, 3.5K 4 Ft
	03-5168	2	Hose, .5 x 50, 10FF, 12FF, 3.5K 5 Ft
	03-5179	2	Hose, .5 x 56, 10FF, 12FF, 3.5K 6 Ft
9.	03-5901	2	Fitting, 10MB-10MF
10.	07-3738	1	Washer, Lock, Split, Medium, M8
11.	07-5287	1	Screw, HHC, CL10.9, M8-1.25 x 65mm
12.	07-6396	2	Nut, Bulkhead, #12
13.	07-6531	2	Screw, HFH, CL10.9, M8-1.25 x 25mm
14.	07-7115	3	Nut, Insert, M8-1.25, 22-10ga
15.	13-17014	1	Plate, Mounting, Bulkhead Fittings
16.	RHW8614	1	Cover, Plate
17.	RHW8616	1	Hose, Cradle

STANDARD HYDRAULIC ASSEMBLY



Item	Part	Qty	Description
1.	03-4804	2	Fitting, 10MF-10MF
2.	03-5153	2	Hose, .5 x 80, 10FF-12MB, 3.5K,
3.	03-5179	2	Hose, .5 x 56, 10FF, 12FF, 3.5K
4.	07-1784	1	Screw, HHC, Gr8, 5/16-18 x 2 1/2
5.	07-3740	1	Screw, HHC, CL10.9, M8-1.25 x 30mm
6.	07-4604	1	Nut, Hex, Lock, M8-1.25, CL10.9
7.	105840	1	Washer, Fender
8.	RHW8613	1	Weld, Plate
9.	RHW8614	1	Cover, Plate
10.	RHW8616	1	Hose, Cradle
11.	RHW8618	1	Hose, Spring

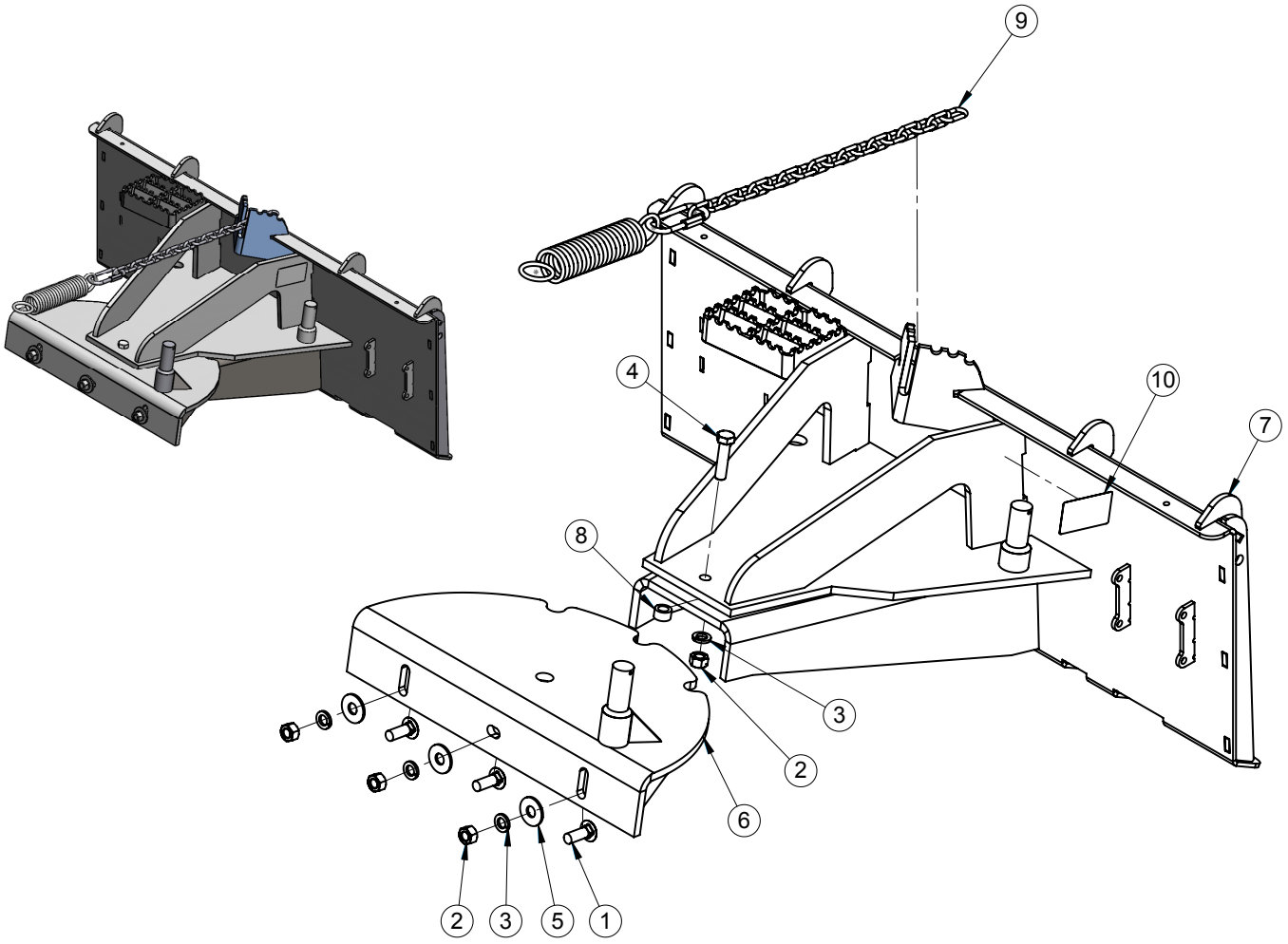
HYDRAULIC ANGLE ASSEMBLY WITH MANIFOLD



Item	Part	Qty	Description
1.	03-2291	4	Fitting, 6MF-6MB
2.	03-2396	1	Elbow, 90º, 10MF-12MB
3.	03-4030	2	Hose, .38 x 32, 6FF-6FF90, 5K
4.	03-4700	1	Elbow, 45º, 10MF-12MB
5.	03-4804	2	Fitting, 10MF-10MF
6.	03-5153	2	Hose, .5 x 80, 10FF-12MB, 3.5K,
7.	03-5179	2	Hose, .5 x 56, 10FF, 12FF, 3.5K
8.	03-5661	1	Hose, .5 x 36, 10FF-10FF, 3.5K
9.	03-5724	1	Cylinder, 2.5 x 1.25 x 7.5, 3.5K
10.	03-5835	1	Manifold, Swing, 12 Volt
	03-5836	1	Manifold, Swing, 24 Volt
11.	07-0206	2	Pin, Cotter, Gr2, 3/16 x 2
12.	07-1784	1	Screw, HHC, Gr8, 5/16-18 x 2 1/2
13.	07-3740	1	Screw, HHC, CL10.9, M8-1.25 x 30mm
14.	07-4604	1	Nut, Hex, Lock, M8-1.25, CL10.9
15.	07-4622	2	Nut, Hex, Lock, M10-1.5, CL10.9
16.	07-7131	2	Screw, HHC, CL10.9, M10-1.5 x 160mm
17.	07-7737	2	Wire, Harness, 108 Inches
18.	105840	1	Fender Washer
19.	13-11248	2	Bushing, 1 x .406 x 1
20.	RHW8613	1	Weld, Plate
21.	RHW8614	1	Cover, Plate
22.	RHW8616	1	Hose, Cradle
23.	RHW8618	1	Hose, Spring

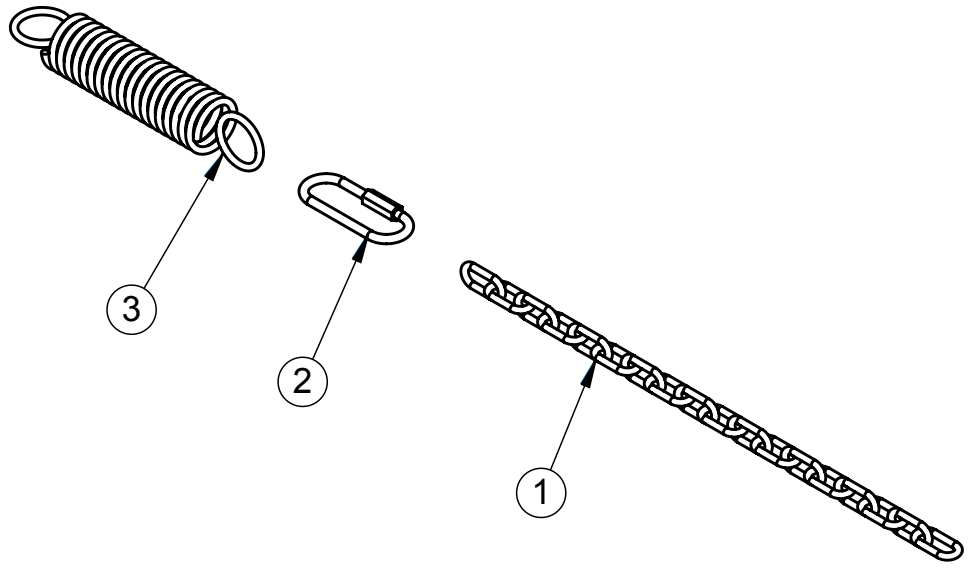
Replacement Parts for 03-5724
45617 Seal Kit
104605 Rod (Not Shown)

MOUNTING ASSEMBLY



Item	Part	Qty	Description
1.	07-0119	3	Bolt, Carriage, Gr5, 5/8-11 x 1 3/4
2.	07-1294	4	Nut, Hex, Gr8, 5/8-11
3.	07-1872	4	Washer, Lock, Split, Medium, 5/8
4.	07-2855	1	Screw, HHC, Gr8, 5/8-11 x 2 1/2
5.	07-3120	3	Washer, Flat, Gr8, 5/8
6.	11-9080	1	Weld, Swing, Plate
7.	XX-XXX	1	Weld, Frame, Mounting (Call Sweepster for correct Mounting)
8.	13-4657	1	Bushing, 1 x 5/8 x .562
9.	28-10342	1	Kit, Spring, Chain, Adjust
10.	50-0635	1	Label, Part Number, Date

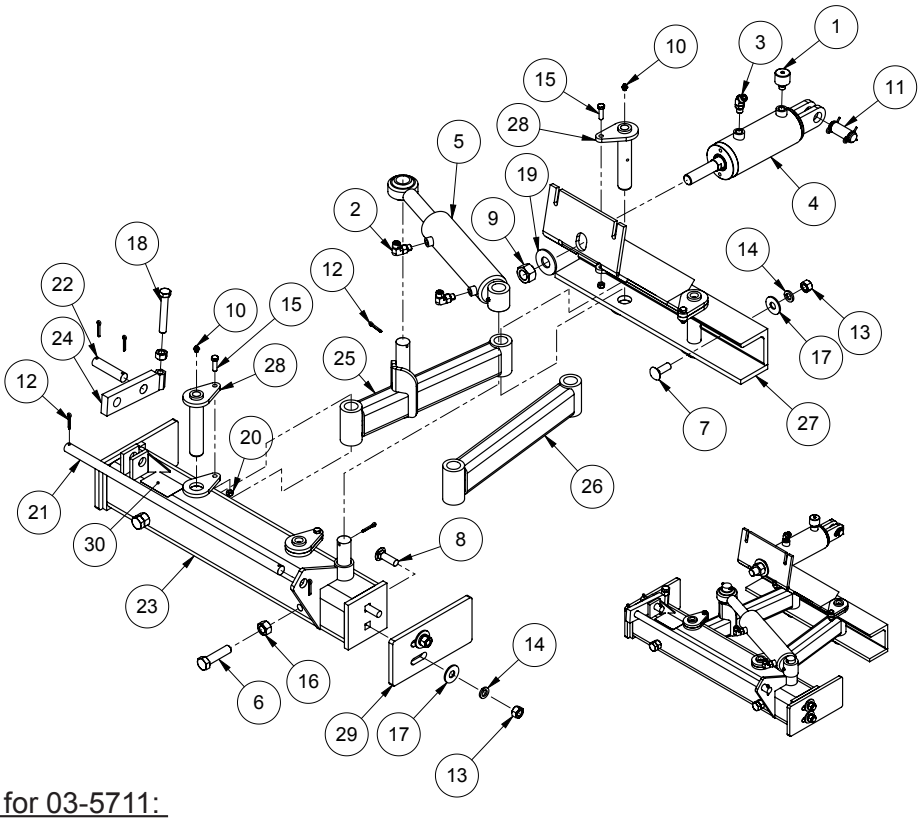
SPRING/CHAIN ADJUSTMENT



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



Replacement Part for 03-5711:
45838 Seal Kit

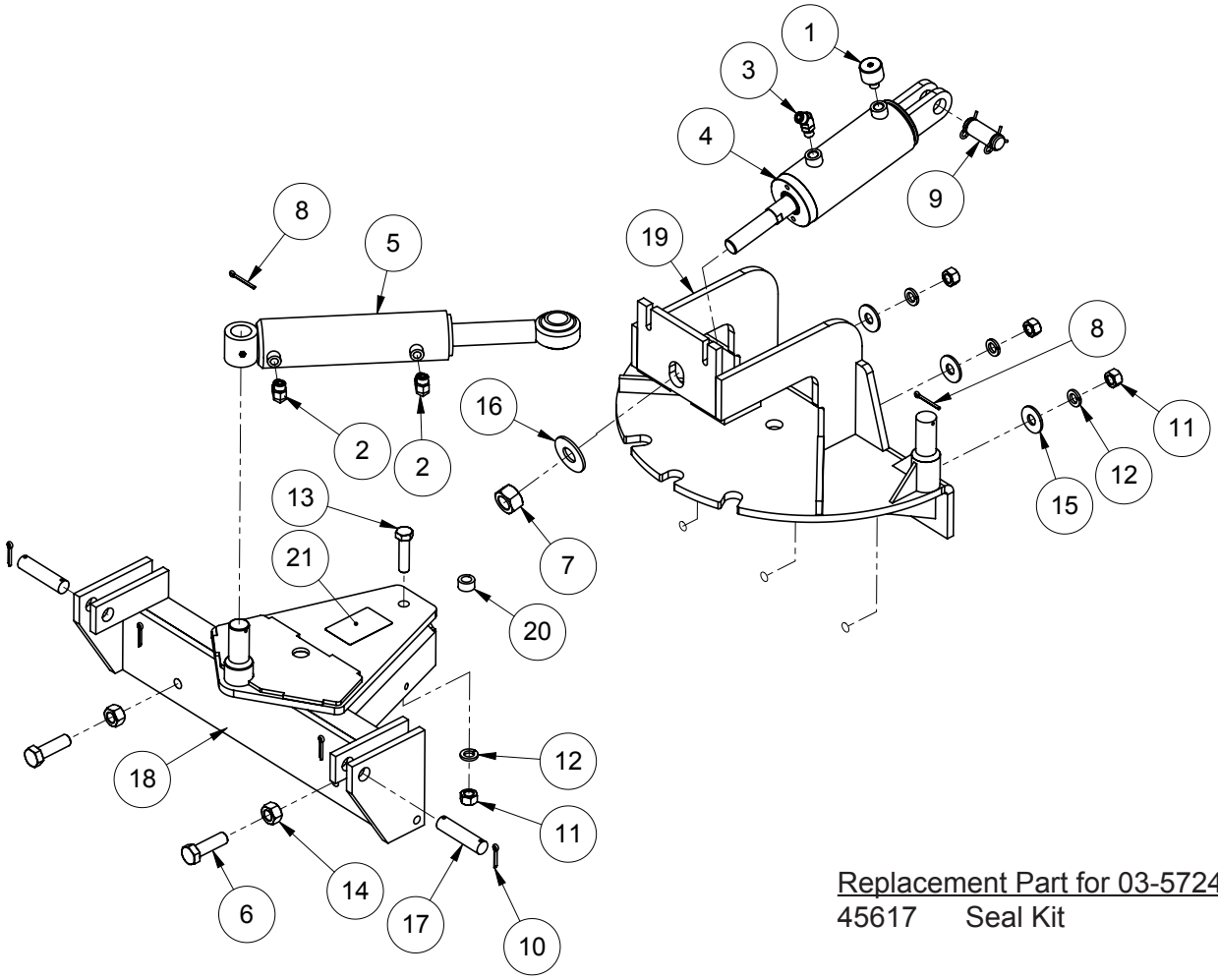
Replacement Part for 03-5724:
45617 Seal Kit

Item	Part	Qty	Description
1.	03-1932	1	Fitting, Vent, 9/16MOR
2.	03-2092	2	Elbow, 90, 6MF-6MB
3.	03-2115	1	Elbow, 45, 6MB-6MF
4.	03-5711	1	Cylinder, 3.00 x 1.13 x 4.50
5.	03-5724	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

PLATE SWING ASSEMBLY FOR TRACTORS

Assembly 28-4612



Replacement Part for 03-5724:
45617 Seal Kit

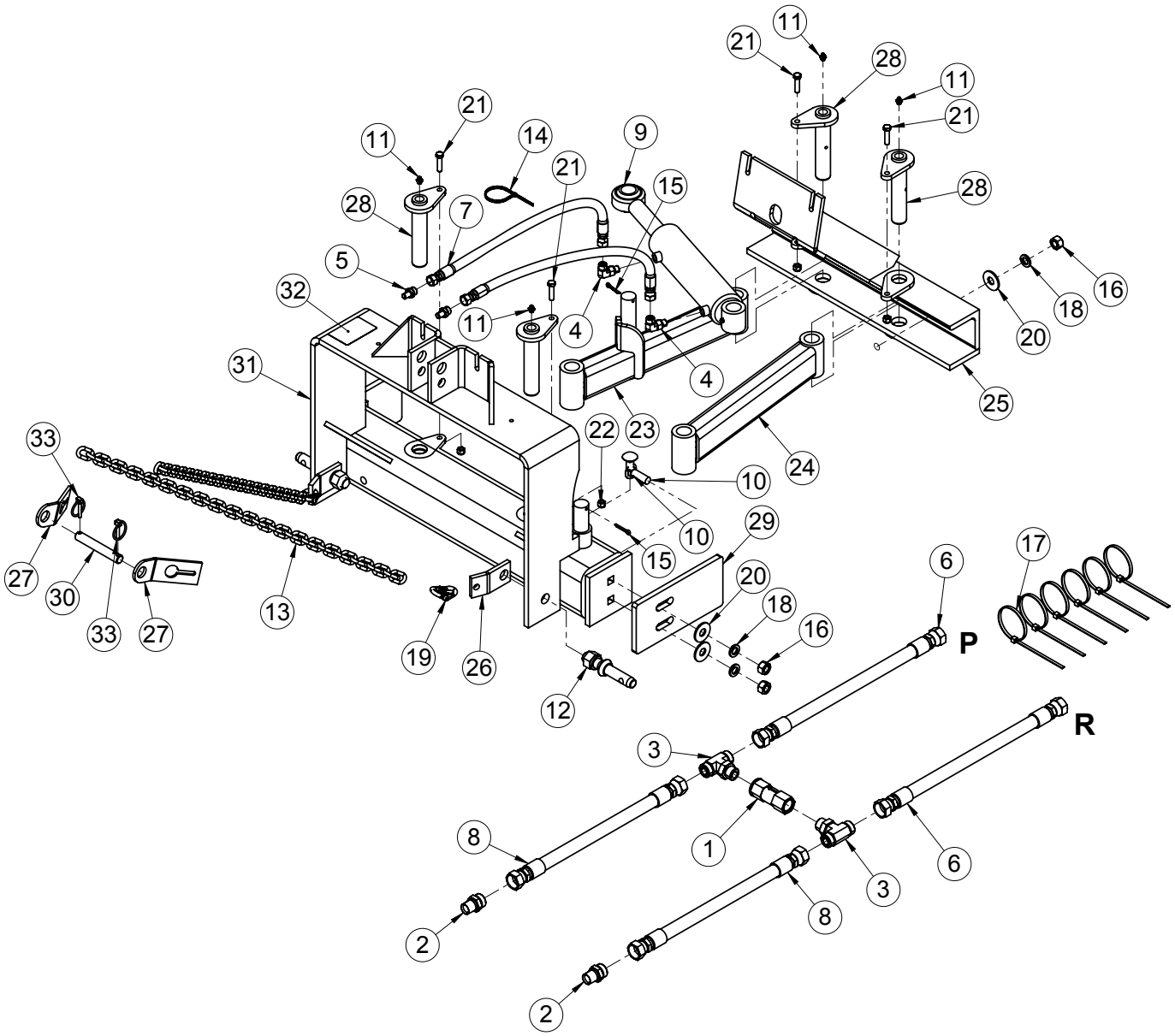
Item	Part	Qty	Description
1.	03-1932	1	Fitting, Vent, 9/16MOR, W/Bell Cap
2.	03-2092	2	Elbow, 90, 6MF-6MB
3.	03-2115	1	Elbow, 45, 6MB-6MF
4.	03-5711	1	Cylinder, 3.00 x 1.13 x .50
	03-2600	1	Cylinder, 2.00 x 1.13 x 4.50
5.	03-5724	1	Cylinder, 2.50 x 1.38 x 7.50, 3.5K
	03-4887	1	Cylinder, 2.50 x 1.38 x 7.50, 3.5K
6.	07-0079	2	Screw, Cap, Tap, 3/4-10 x 2 1/2
7.	07-0186	1	Nut, Hex, 1-14
8.	07-0206	2	Pin, Cotter, Gr2, 3/16 x 2
9.	07-0539	1	Pin, Clevis, 1, with HairClip, BothEnds

Item	Part	Qty	Description
10.	07-0786	4	Pin, Cotter, 3/16 x 1 1/2
11.	07-1294	4	Nut, Hex, 5/8-11
12.	07-1872	4	Washer, Lock, Split, 5/8
13.	07-2855	1	Screw, HHC, Gr8, 5/8-11 x 2 1/2
14.	07-3066	2	Nut, Hex, 3/4-10
15.	07-3120	3	Washer, Flat, 5/8
16.	07-4040	1	Washer, Flat, Gr8, 1
17.	11-0459	2	Pin, 7/8 x 3, 2 Holes
18.	13-10476	1	Weld, Swing, Frame, CH
19.	13-10477	1	Weld, Plate, Swing, CH
20.	13-4657	1	Bushing, 1 x 5/8 x .562
21.	50-0635	1	Label, Plate, Part Number/Date

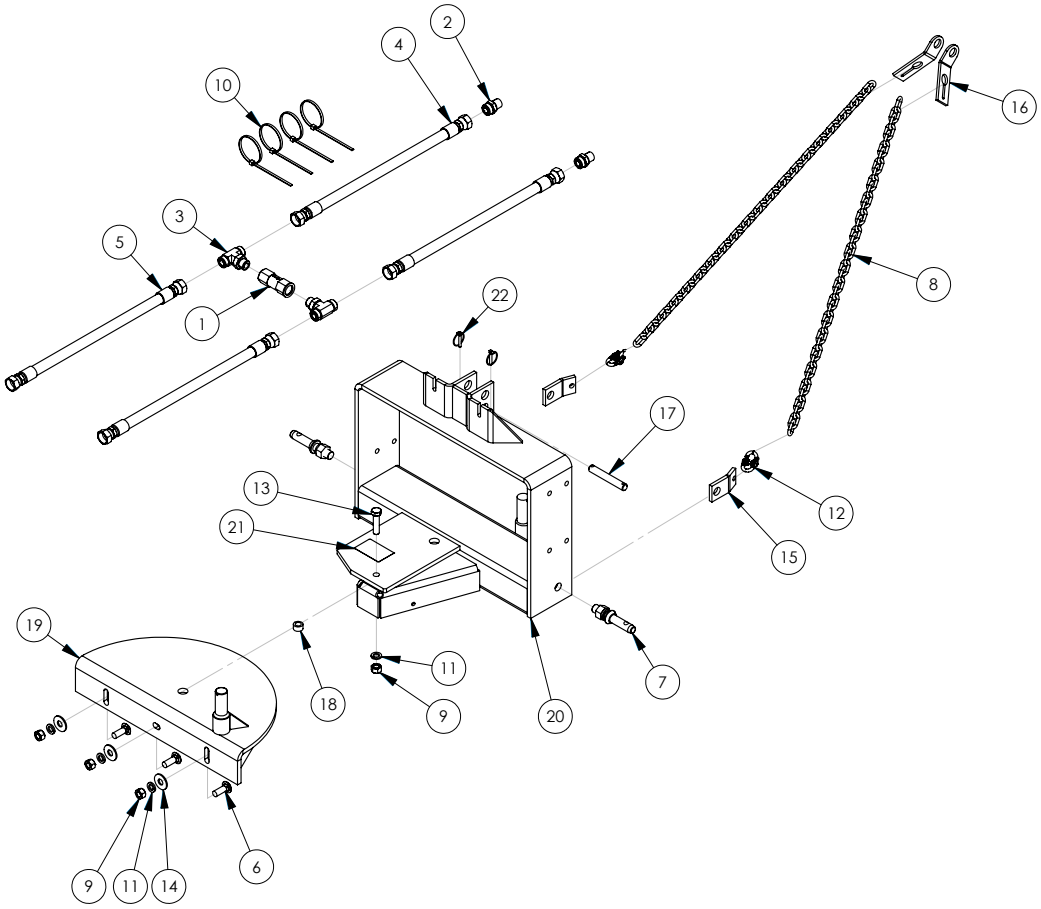
11-5033 RLH, 3 POINT, CATEGORY 1 SWING ANGLE

Item	Part	Qty	Description
1.	03-1816	1	Valve, Check, In-line, 1 1/16, O-Ring
2.	03-1943	2	Fitting, Adapter, HP, 3/4MFS, 3/4MP
3.	03-1950	2	Fitting, Tee, HP, MB, 3/4MFS
4.	03-2092	2	Elbow, 90º, 6MB-6MF
5.	03-2159	2	Fitting, 6MF-4MP
6.	03-2268	2	Hose, 3/4 x 42, 2W, 3/4FFS, 3/4FFS
7.	03-2275	2	Hose, .38 x 64, 6FF-6FF, 4K
8.	03-3333	2	Hose, 3/4 x 37, TC, 3/4FFS, 3/4FFS
9.	03-5724	1	Cylinder, 2.5 x 1.38 x 7.5, 3.5K
10.	07-0119	3	Bolt, Carriage, Gr5. 5/8-11 x 1 3/4
11.	07-0120	4	Bolt, Carriage, Gr5, 5/8-11 x 2
12.	07-0223	4	Fitting, Zerk, Straight, 1/8
13.	07-0285	2	Pin, Link, Category I
14.	07-0290	2	Chain, 1/4, 39 Links
15.	07-0678	1	Tie, Plastic, 7 1/2, Black
16.	07-0786	2	Pin, Cotter, Gr2, 3/16 x 1 1/2
17.	07-1294	7	Nut, Hex, Gr8, 5/8-11
18.	07-1817	6	Tie, Plastic, 15, White, Reuse
19.	07-1872	7	Washer, Lock, Split, Medium, 5/8
20.	07-2032	2	Clevis, Double Link, 9/32, Gr8
21.	07-3120	7	Washer, Flat, Gr8, 5/8
22.	07-3655	4	Screw, HHC, Gr8, 3/8-16 x 1 1/2
23.	07-4036	4	Nut, Hex, Nylock, Gr8, 3/8-16
24.	11-0800	1	Weld, Arm, Swing, with Pin
25.	11-0803	1	Weld, Arm, Swing, without Pin
26.	11-1677	1	Weld, Frame, Swing
27.	11-1888	2	Plate, Support, Chain
28.	13-0440	2	Bracket, Chain, Toplink, 3-Point
29.	13-15600	4	Weld, Pin, Frame, Swing
30.	13-15678	2	Plate, Adjustable
31.	13-2002	1	Pin, Toplink, 3-Point
32.	13-4948	1	Weld, Frame, Mounting
33.	50-0635	1	Label, Plate, Part Number/Date
34.	RHW8068	2	Pin, Linch, 1/4

11-5033 RLH, 3 POINT, CATEGORY 1 SWING ANGLE

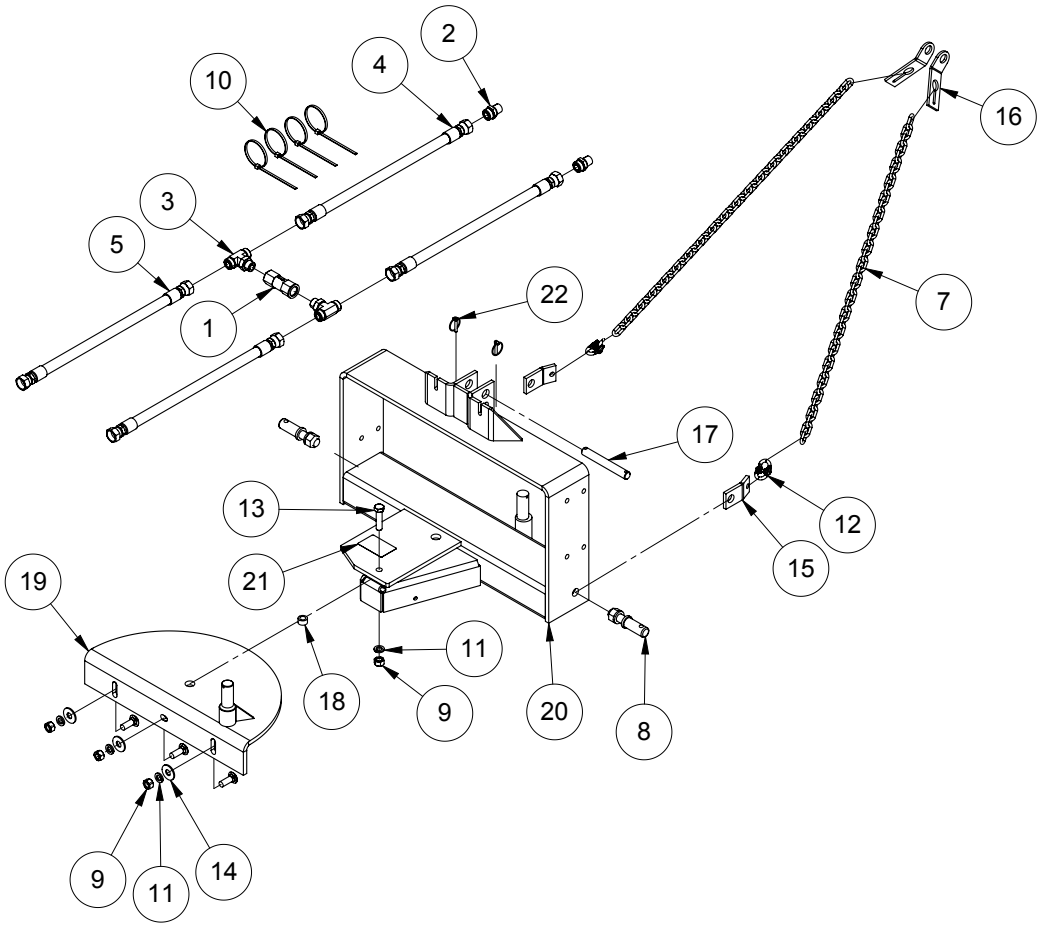


11-5031 RLCH, CATEGORY I HITCH



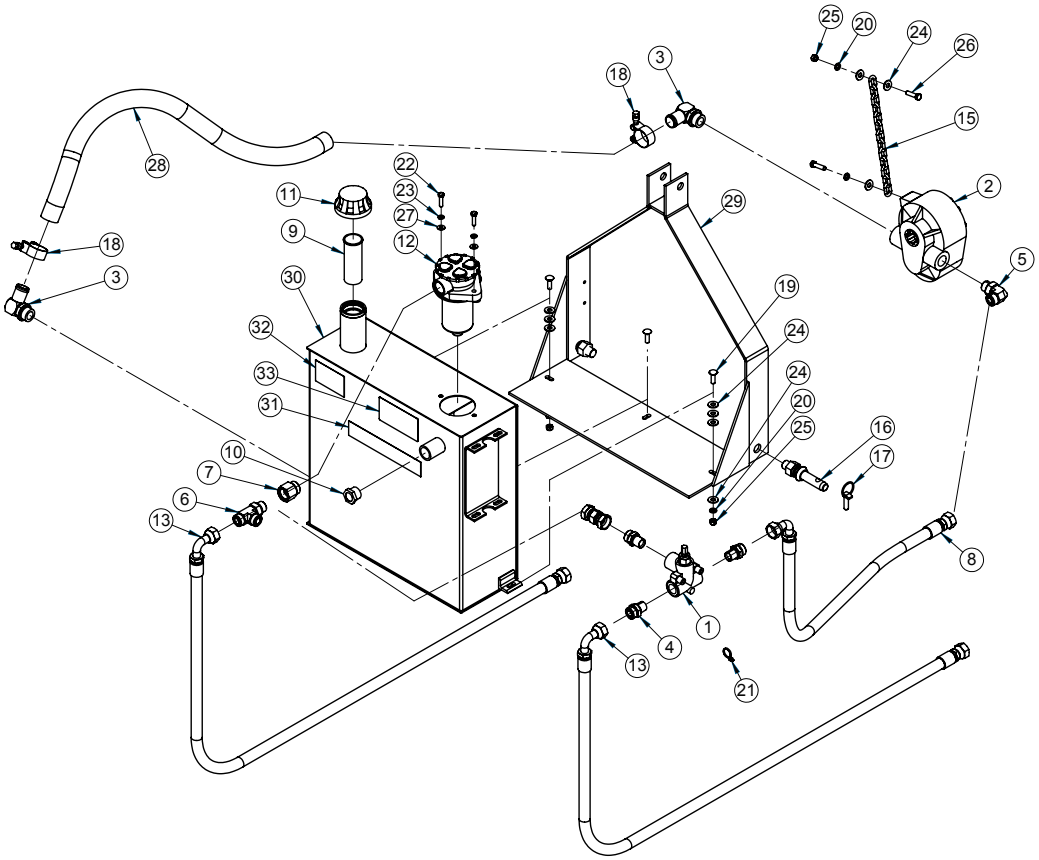
Item	Part	Qty	Description
1.	03-1816	1	Valve, Check, In-line, 1 1/16, O-Ring
2.	03-1943	2	Fitting, Adapter, HP, 3/4MFS, 3/4MP
3.	03-1950	2	Fitting, Tee, HP, MB, 3/4MFS
4.	03-2268	2	Hose, 3/4 x 42, 2W, 3/4FFS, 3/4FFS
5.	03-3333	2	Hose, 3/4 x 37, TC, 3/4FFS, 3/4FFS
6.	07-0119	3	Bolt, Carriage, 5/8 x 1 3/4
7.	07-0285	2	Pin, Link, Category I
8.	07-0290	2	Chain, 1/4, 39 Links
9.	07-1294	4	Nut, Hex, Gr8, 5/8-11
10.	07-1817	4	Tie, Plastic, 15, White, Reuse
11.	07-1872	4	Washer, Lock, Split, Medium, 5/8
12.	07-2032	2	Clevis, Double Link, 9/32, Gr8
13.	07-2855	1	Screw, HHC, Gr8, 5/8-11 x 2 1/2
14.	07-3120	3	Washer, Flat, Gr8, 5/8
15.	11-1888	2	Plate, Support, Chain
16.	13-0440	2	Bracket, Chain, Toplink, 3-Point
17.	13-2002	1	Pin, Toplink, 3-Point
18.	13-4657	1	Bushing, 1 x 5/8 x .562
19.	13-4823	1	Weld, Swing, Plate, CV, RLCH
20.	13-7911	1	Weld, Frame, Swing, RLCH
	13-4676	1	Weld, Frame, Swing, RLH
21.	50-0635	1	Label, Plate, Part Number/Date
22.	RHW8068	2	Pin, Linch, 1/4

11-5045 RLCH, CATEGORY II HITCH



Item	Part	Qty	Description
1.	03-1816	1	Valve, CV, 12FB-12FB, 30gpm, 5K
2.	03-1943	2	Fitting, 12MF-12MP
3.	03-1950	2	Tee, 12MF-12MF-12MB
4.	03-2268	2	Hose, .75 x 42, 12FF-12FF, 3.1K
5.	03-3333	2	Hose, .75 X 37, 12FF-12FF, 3K, TC
6.	07-0119	3	Bolt, Carriage, Gr5, 5/8 x 1 3/4
7.	07-0290	2	Chain, 1/4, 39 Links
8.	07-0688	2	Pin, Cat 2, Hitch, 7/8 Thread
9.	07-1294	4	Nut, Hex, Gr8, 5/8-11
10.	07-1817	4	Tie, Plastic, 15, White, Reuse
11.	07-1872	4	Washer, Lock, Split, Medium, 5/8
12.	07-2032	2	Clevis, Double Link, 9/32, Gr80
13.	07-2855	1	Screw, HHC, Gr8, 5/8-11 x 2 1/2
14.	07-3120	3	Washer, Flat, Gr8, 5/8
15.	11-1888	2	Plate, Support, Chain
16.	13-0440	2	Bracket, Chain, Top Link, 3-Point
17.	13-11997	1	Pin, .875 x 6.5, with 5.72 Grip Length
18.	13-4657	1	Bushing, 1 x 5/8 x .562
19.	13-4823	1	Weld, Swing, Plate
20.	13-8313	1	Weld, Frame, Mounting
21.	50-0635	1	Label, Plate, Part Number/Date
22.	RHW8068	2	Pin, Lynch, 1/4

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.	03-0129	1	Valve, RV, 12, 30gpm, 3K
2.	03-0691	1	Pump, 5.7 CID, FPTO, CW, 11.4gpm
	03-0597	1	Pump, 9.9 CID, FPTO, CW, 21gpm
3.	03-0710	2	Barb, 20, 16MB90
4.	03-1943	3	Fitting, 12MF-12MP, 12FLO-S
5.	03-2177	1	Elbow, 90º, 12MB-12MF
6.	03-3135	1	Tee, 12MB-12MF-12MF
7.	03-3142	1	Fitting, 12FB-16MB
8.	03-3877	1	Hose, .75 x 72, 12FF-12FF90, 3K
9.	03-4642	1	Strainer, Filler Spout
10.	03-4709	1	Gauge, Sight, Window, 1 In
11.	03-5055	1	Cap, Breather, 5psi
12.	03-5056	1	Filter, Hydraulic, In Tank, 39gpm
13.	03-5401	2	Hose, .75 x 234, 12FF-12FF90, 3K
14.	03-5494	1	Fitting, 12FF, 12FF
15.	07-0246	1	Chain, 1/4, 13 Links
16.	07-0285	2	Pin, Cat I, Hitch, Gr2
17.	07-0680	2	Pin, Klik, 7/16 x 1 3/8
18.	07-1192	2	Clamp, T-Bolt, 1 1/4
19.	07-1717	3	Bolt, Carriage, 3/8-16 x 1 1/4
20.	07-1718	5	Washer, Lock, Split, Medium, 3/8

Item	Part	Qty	Description
21.	07-1767	1	Tie, Plastic, 15 1/2, Black
22.	07-1973	2	Screw, HHC, Gr8, 5/16-18 x 1 1/4
23.	07-3273	2	Washer, Lock, Split, Medium, 5/16
24.	07-3279	12	Washer, Flat, Gr8, 3/8
25.	07-3654	4	Nut, Hex, Gr8, 3/8-16
26.	07-3655	2	Screw, Cap, 3/8 x 1 1/2
27.	07-4032	2	Washer, Flat, Gr8, 1/4
28.	09-0020	5ft	Hose, Suction, 1 1/4
29.	11-7688	1	Weld, Mounting, Tank, 3-Point
30.	13-13256	1	Weld, Tank, AH/CH, 3 PT
31.	50-0185	1	Label, Logo, Sweepster, White
32.	50-0272	1	Label, Oil, ISO VG 46
33.	50-0725	1	Label, Warning, Inspect Hydraulics

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

NOTES

CATEGORY I HITCH, WITH POWER PACK
11-4202 (RLCH)

Item	Part	Qty	Description
1.	03-0129	1	Valve, RV, 12, 30gpm, 3K
2.	03-0597	1	Pump, 9.9 CID, FPTO, CW, 21gpm
	03-0691	1	Pump, 5.7 CID, FPTO, CW, 11.4gpm
3.	03-0710	1	Barb, 20, 16MB90
4.	03-1943	3	Fitting, 12MF-12MP
5.	03-2177	1	Elbow, 90º, 12MB-12MF
6.	03-3135	1	Tee, 12MB-12MF-12MF
7.	03-3142	1	Fitting, 12FB-16MB
8.	03-3877	1	Hose, .75 x 72, 12FF-12FF90, 3K
9.	03-4642	1	Screen, Filler Spout
10.	03-4709	1	Gauge, Sight, Window, 1 inch
11.	03-4870	2	Hose, .75 x 78, 12FF-12FF90, 3.1K
12.	03-5055	1	Cap, Filler, Hydraulic, Breather
13.	03-5056	1	Filter, Hydraulic, In tank, 39gpm
14.	03-5494	1	Fitting, 12FF-12FF
15.	07-0119	3	Bolt, Carriage, 5/8 x 1 3/4
16.	07-0246	1	Chain, 1/4, 13 Links
17.	07-0285	2	Pin, Linch, 1/4
18.	07-0290	2	Chain, 1/4, 39 Links
19.	07-0680	2	Pin, Klik, 7/16 x 1 3/8
20.	07-1192	2	Clamp, T-Bolt, 1 1/4
21.	07-1294	4	Nut, Hex, Gr8, 5/8-11
22.	07-1717	3	Bolt, Carriage, Gr5, 3/8-16 x 1 1/4
23.	07-1718	5	Washer, Lock, Split, Medium, 3/8
24.	07-1817	6	Tie, Plastic, 15, White, Reuse
25.	07-1872	4	Washer, Lock, Split, Medium, 5/8
26.	07-1973	2	Screw, HHC, Gr8, 5/16-18 x 1 1/4
27.	07-2032	2	Clevis, Double Link, 9/32, Gr80
28.	07-2855	1	Screw, HHC, 5/8-11 x 2 1/2
29.	07-3120	3	Washer, Flat, Gr8, 5/8
30.	07-3273	2	Washer, Lock, Split, Medium, 5/16
31.	07-3279	10	Washer, Flat, Gr8, 3/8
32.	07-3654	4	Nut, Hex, Gr8, 3/8-16
33.	07-3655	2	Screw, HHC, Gr8, 3/8-16 x 1 1/2
34.	07-4032	2	Washer, Flat, Gr8, 1/4
35.	09-0020	5ft	Hose, Suction, 1 1/4, Bulk
36.	11-1888	2	Plate, Support, Chain
37.	11-9080	1	Weld, Plate, Swing
38.	13-0440	2	Bracket, Chain, Toplink, 3-Point
39.	13-13256	1	Weld, Tank, 3-Point
40.	13-2002	1	Pin, Toplink, 3-Point
41.	13-4657	1	Bushing, 1 x 5/8 x .562
42.	13-7910	1	Weld, Frame, Mounting/Swing, RLCH for Hydraulic Tank
43.	50-0184	1	Label, Logo, White, Medium, Sweepster
44.	50-0272	1	Label, Oil, ISO VG 46
45.	50-0635	1	Label, Plate, Part Number/Date
46.	50-0725	1	Label, Warning, Inspect Hydraulic Components
47.	RHW8068	2	Pin, Lynch, .25-1.56

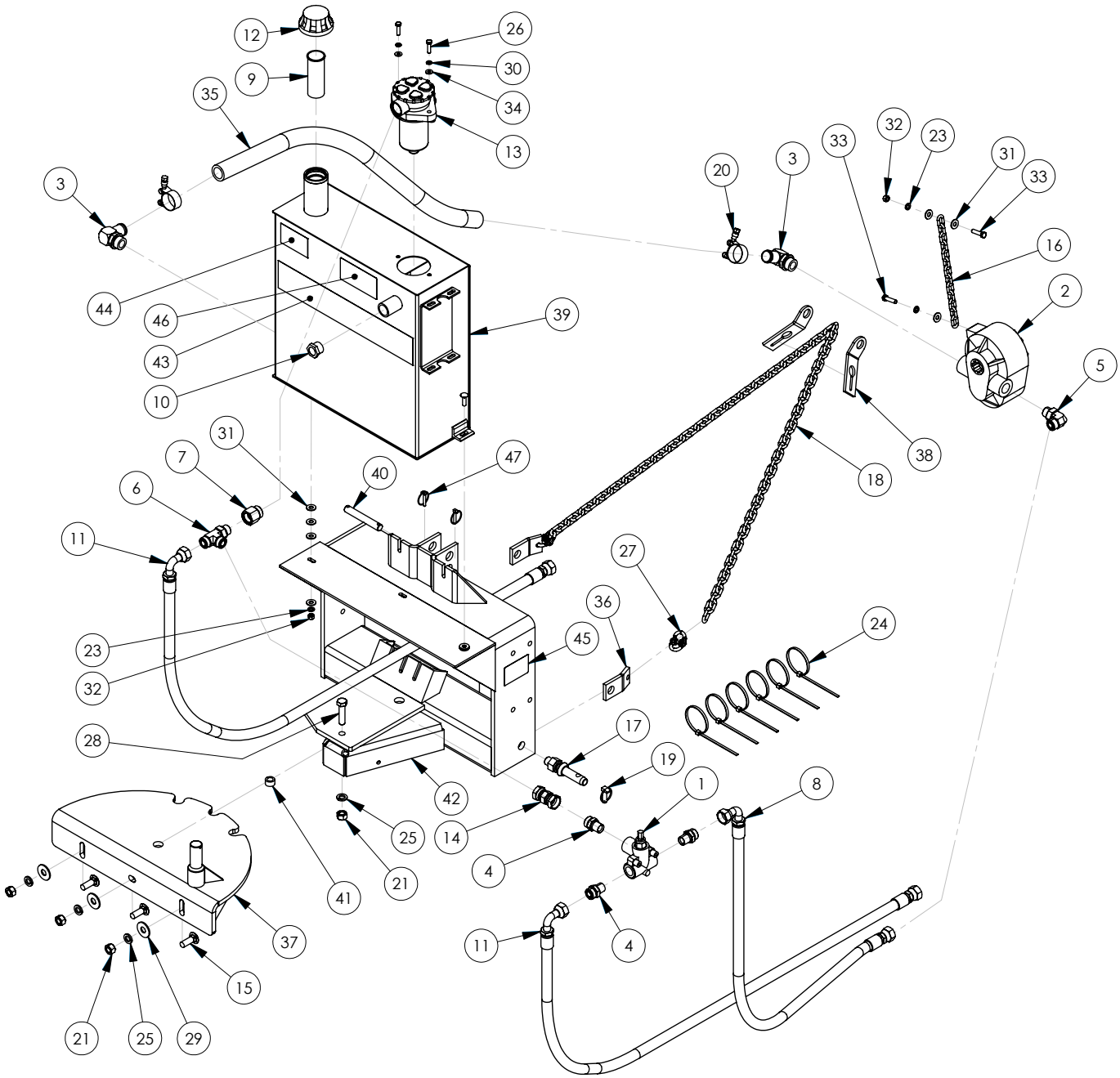
Replacement Parts for 03-5056:

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

CATEGORY I HITCH, WITH POWER PACK
11-4202 (RLCH)



TANK ASSEMBLY 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, 90º, 10MB-12MF
7.	03-1953	3	Elbow, 90º, 6MF-10MB
8.	03-2181	1	Elbow, 45º, 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
22.	07-3273	2	Washer, Lock, Split, Medium, 5/16
26.	07-4032	2	Washer, Flat, Gr8, 1/4
23.	07-3279	8	Washer, Flat, Gr8, 3/8
21.	07-1973	2	Screw, HHC, Gr8, 5/16-18 x 1 1/4
24.	07-3654	14	Nut, Hex, Gr8, 3/8-16
25.	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

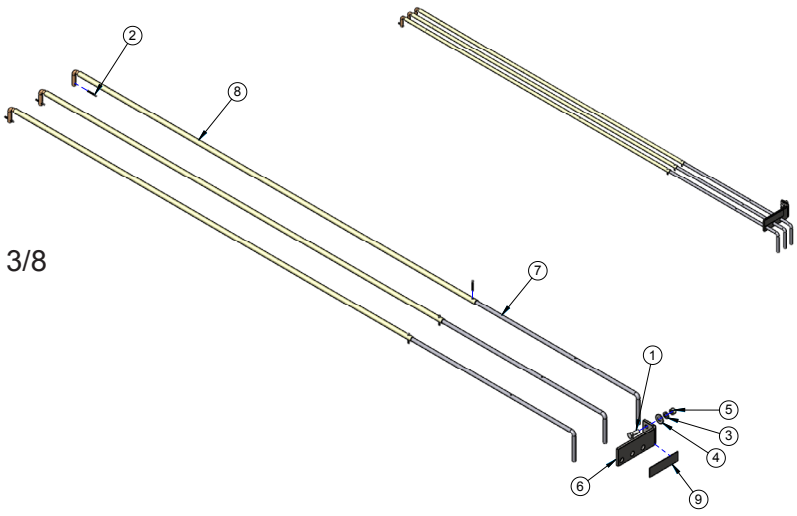
Replacement Part for 03-0601 :
03-1332 Seal Kit

Replacement Relief Valve - 03-2937
Replacement Handle with Hole - 13-8603

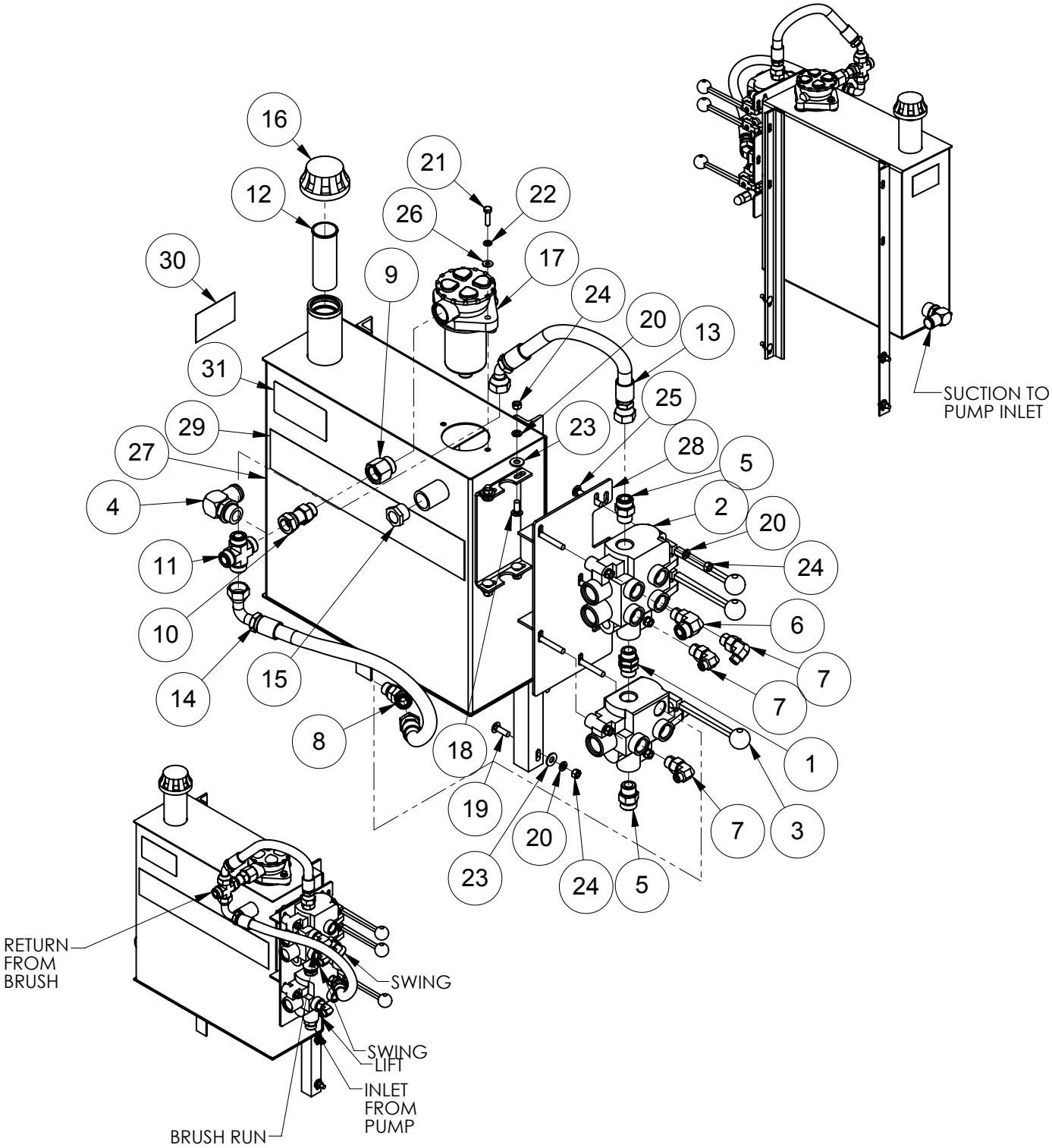
Replacement Parts for 03-5056 :
03-3965 Element
03-4741 Filter, Cap
07-6705 Gasket
07-6727 Vacuum Group

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



TANK ASSEMBLY WITH MANUAL VALVE



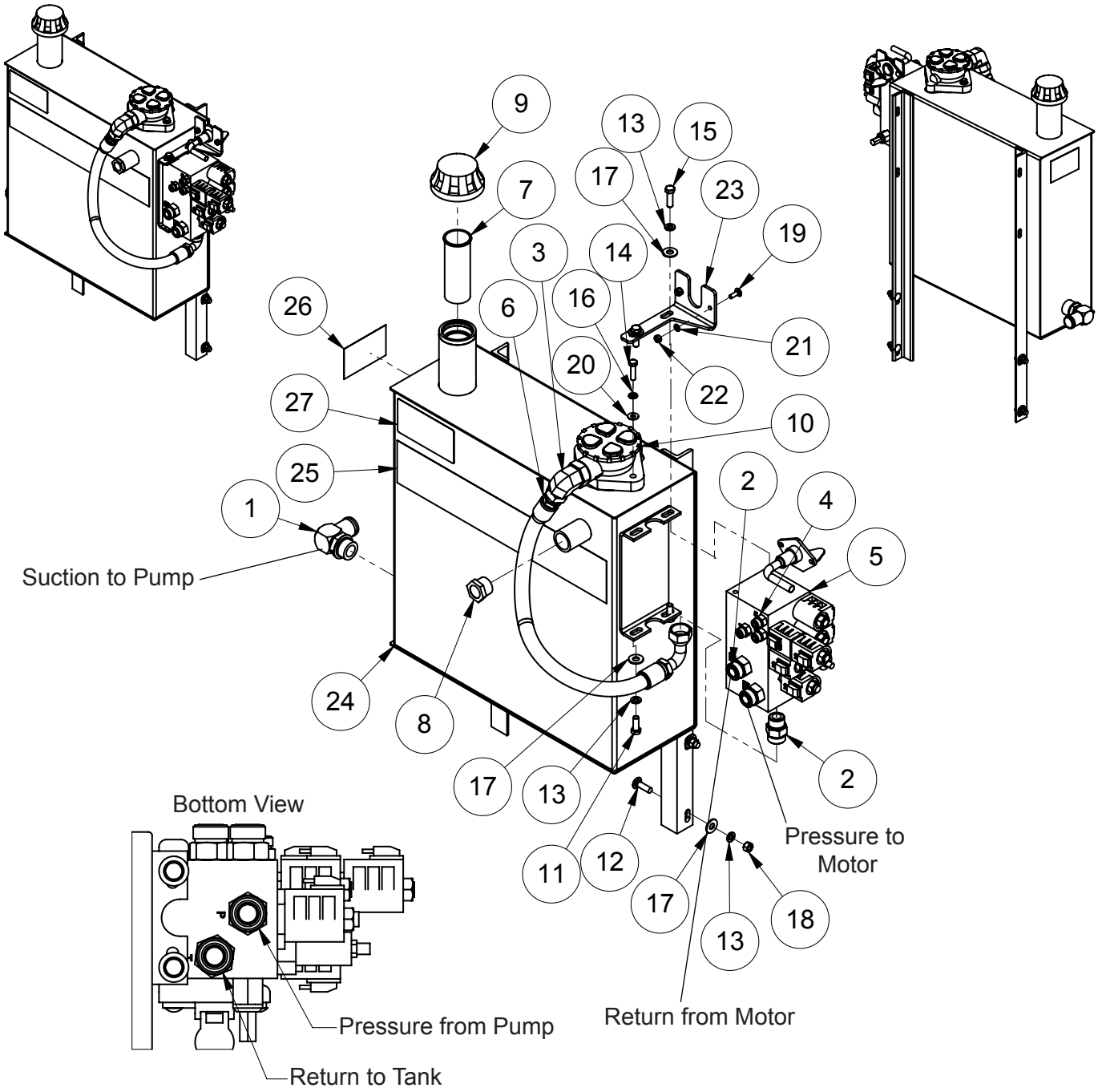
TANK ASSEMBLY WITH ELECTRIC VALVE

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
15.	07-2116	2	Screw, HHC, Gr8, 3/8-16 x 1 1/4
16.	07-3273	2	Washer, Lock, Split, Medium, 5/16
20.	07-4032	2	Washer, Flat, Gr8, 1/4
17.	07-3279	8	Washer, Flat, Gr8, 3/8
14.	07-1973	2	Screw, HHC, Gr8, 5/16-18 x 1 1/4
18.	07-3654	4	Nut, Hex, Gr8, 3/8-16
19.	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

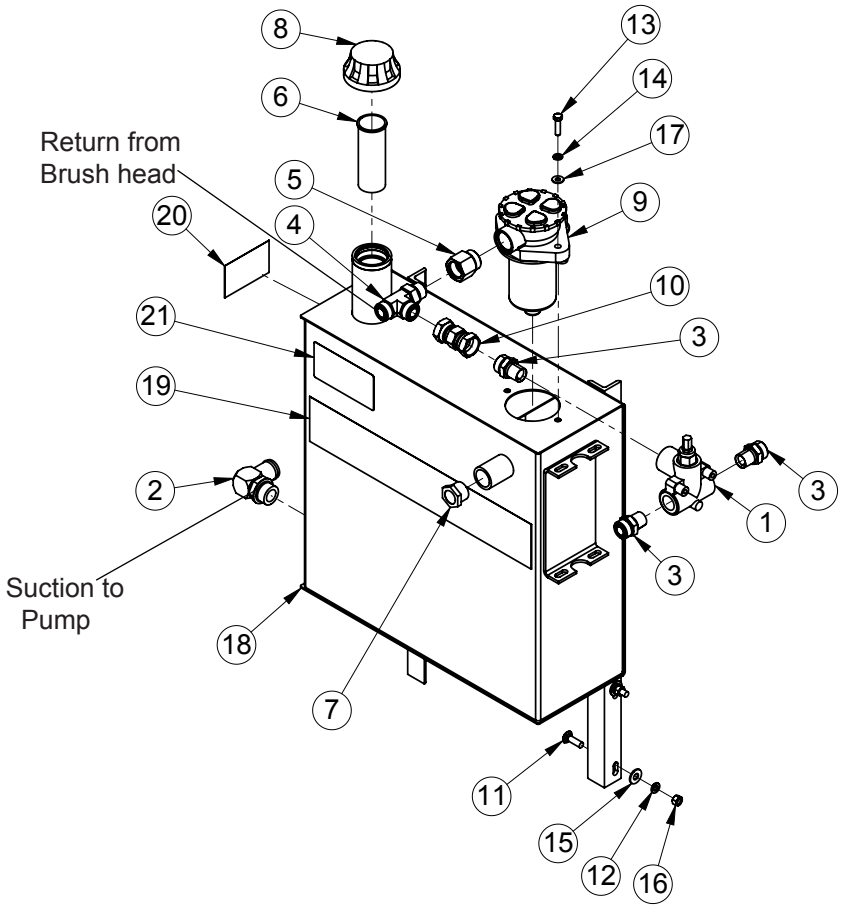
Replacement Parts for 03-5056 :

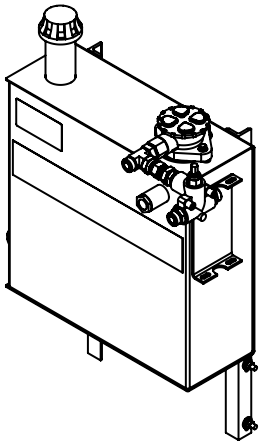
03-3965	Element
03-4741	Filter Cap
07-6705	Gasket
07-6727	Vacuum Gauge

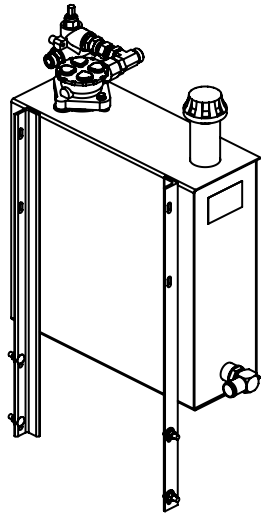
TANK ASSEMBLY WITH ELECTRIC VALVE



TANK ASSEMBLY WITH RELIEF





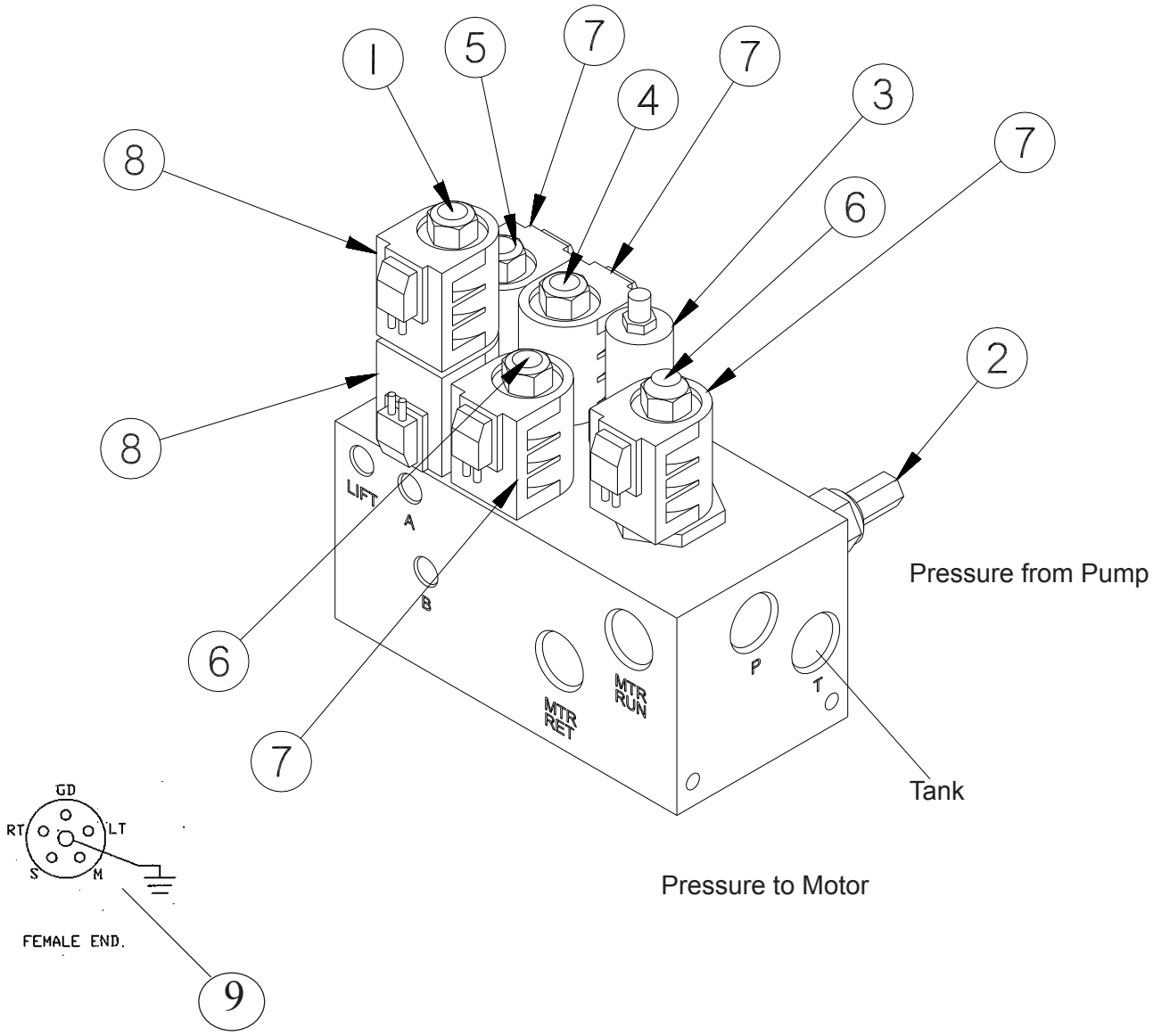


Item	Part	Qty	Description
1.	03-0129	1	Valve, RV, 12, 30gpm, 3K
2.	03-0710	1	Barb, 20, 16MB90
3.	03-1943	3	Fitting, 12MF-12MP, 12FLO-S
4.	03-3135	1	Tee, 12MB-12MF-12MF
5.	03-3142	1	Fitting, 12FB-16MB
6.	03-4642	1	Strainer, Filler, Spout
7.	03-4709	1	Gauge, Sight Window
8.	03-5055	1	Cap, Filler, Breather
9.	03-5056	1	Filter, Hydraulic, In-Tank
10.	03-5494	1	Fitting, 12FF-12FF
11.	07-1717	4	Bolt, Carriage, 3/8-16 x 1 1/4
12.	07-1718	4	Washer, Lock, Split, Medium, 3/8
13.	07-1973	2	Screw, HHC, Gr8, 5/16-18 x 1 1/4
14.	07-3273	2	Washer, Lock, Split, Medium, 5/16
15.	07-3279	4	Washer, Flat, Gr8, 3/8
16.	07-3654	4	Nut, Hex, Gr8, 3/8-16
17.	07-4032	2	Washer, Flat, Gr8, 1/4
18.	13-12698	1	Weld, Tank, Front
19.	50-0184	1	Label, Logo, Sweepster, White, Medium
20.	50-0272	1	Label, Oil, ISO VG-46
21.	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

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



Item Part Qty Description

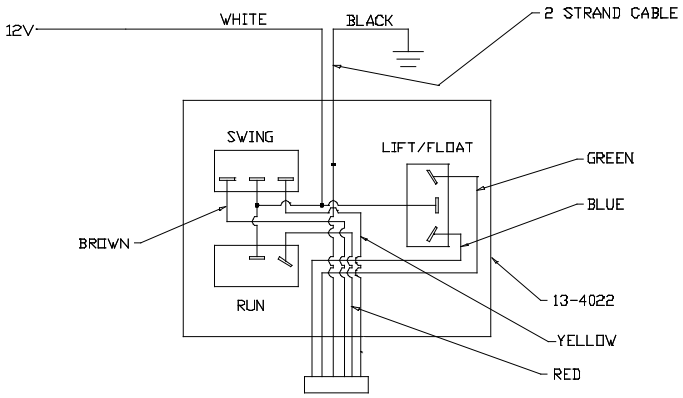
1. 03-4390 1 Valve, Delta, 3 position, 4 Way, 6gpm
2. 07-3148 1 Valve, Cartridge, Relief, Manifold Block
3. 03-5649 1 Valve, Cartridge, Relief, Pressure
4. 03-5571 1 Valve, Cartridge
5. 03-1396 1 Valve, Cartridge, Down, Manifold Block
   03-1509 Kit, Seal, for 07-3078/07-3079/07-3080
6. 07-3081 1 Valve, 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

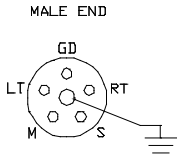
Replacement Part for 07-3148 :
03-2927 Seal Kit

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

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

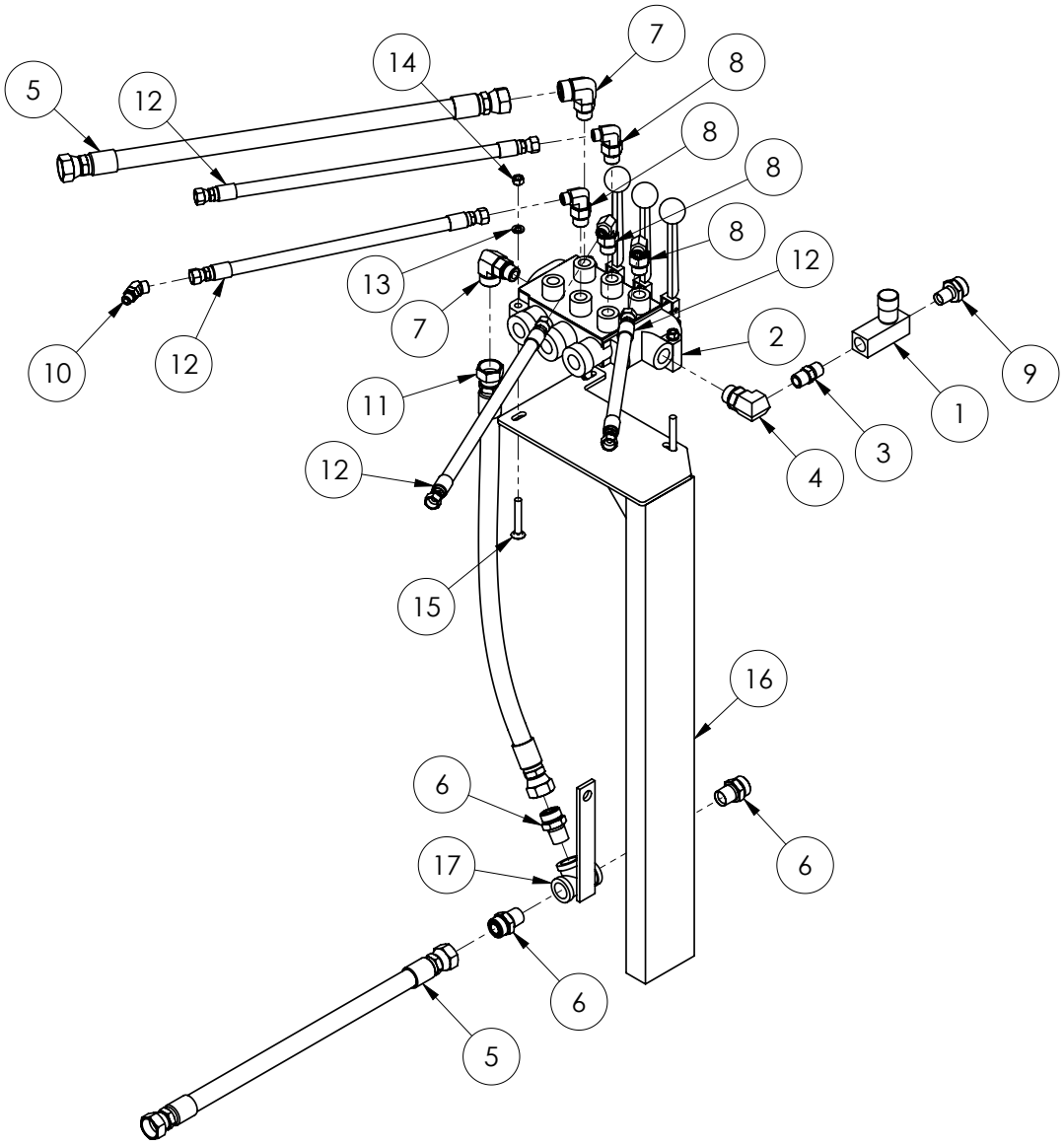
13-4022 CONTROL BOX WIRING SCHEMATIC





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

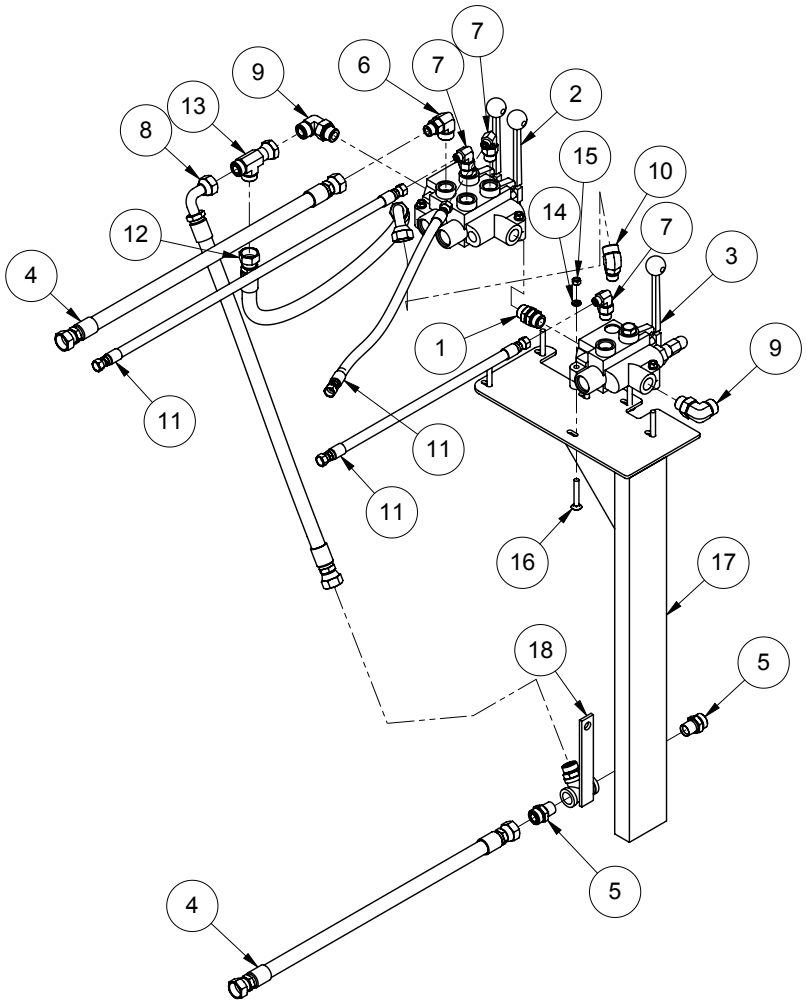
11-4773 MANUAL VALVES, AHH/CHH WITH CLOSED CENTER HYDRAULIC SYSTEMS



Item	Part	Qty	Description
1.	03-0072	1	Valve, Crtg, DCV, 8, 15gpm, 2P-1W
2.	03-0605	1	Valve, Closed Center, O-Ring Ports
	03-0665		Handle, Valve, No Hole
	03-0666		Kit, Pin/Clip, for Mounting Handle
	03-1272		Kit, Relief
3.	03-1022-7	1	Fitting, 8MP-8MP, 1/2FF-S
4.	03-1076	1	Elbow, 90, 8FP-12MB
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

Item	Part	Qty	Description
9.	03-2031	1	Fitting, 8MP-12MF
10.	03-2115	1	Elbow, 45º, 6MB-6MF
11.	03-2268	1	Hose, .75 x 42, 12FF-12FF, 3.1K
12.	03-2340	4	Hose, .75 x 144, 6FF-6FF, 2.25K
13.	07-1718	3	Washer, Lock, Split, 3/8
14.	07-3654	3	Nut, Hex, 3/8-16
15.	07-3704	3	Bolt, Carriage, 3/8-16 x 1 1/2
16.	13-4209	1	Weld, Mounting, V, Pedestal, Closed Center
17.	13-4226	1	Weld, Mounting, Tee, Hydraulic

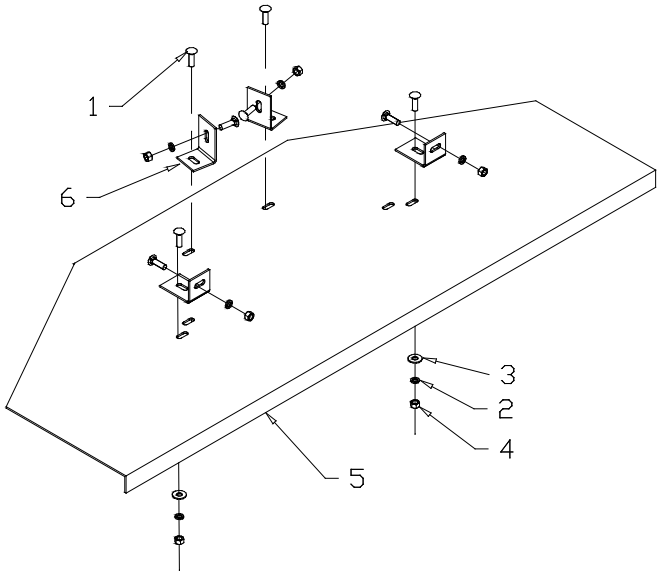
11-4772 MANUAL VALVES, AHH/CHH WITH OPEN CENTER HYDRAULIC SYSTEMS



Item	Part	Qty	Description
1.	03-0573	1	Fitting, 12MB-12MB, Union
2.	03-0601	1	Valve, 2 Spool, Run/Swing, with Handles
	03-0665		Handle, Valve, No Hole
	03-0666		Kit, Pin/Clip, for Mounting Handle
	03-1272		Kit, Relief
3.	03-0602	1	Valve, 3 Way, 1 Spline, Lift, with Handles
	03-0665		Handle, Valve, No Hole
	03-0666		Kit, Pin/Clip, for Mounting Handle
	03-1272		Kit, Relief
4.	03-1918	2	Hose, .75 x 156,12FF-12FF, 2.25K
5.	03-1943	3	Fitting, 12MF-12MF,12FLO-S
6.	03-1946	1	Elbow, 90, 10MB-12MF
7.	03-1953	3	Elbow, 90, 6MF-10MB
8.	03-1971	1	Hose, .75 x 56, 12FF-12FF90, 1.525K
9.	03-2177	2	Elbow, 90º, 12MB-12MF
10.	03-2181	1	Elbow, 45º, 10MB-12MF
11.	03-2340	3	Hose, .38 x 144, 6FF-6FF, 2.25K
12.	03-3158	1	Hose, .75 x 156, 12FF-12FF, 2.25K
13.	03-4637	1	Tee, 12FF-12MF-12MF
14.	07-1718	6	Washer, Lock, Split, 3/8
15.	07-3654	6	Nut, Hex, 3/8-16
16.	07-3704	6	Bolt, Carriage, 3/8-16 x 2 1/2
17.	13-3900	1	Weld, Mounting, Valve, Pedestal
18.	13-4226	1	Weld, Mounting, Tee, Hydraulic

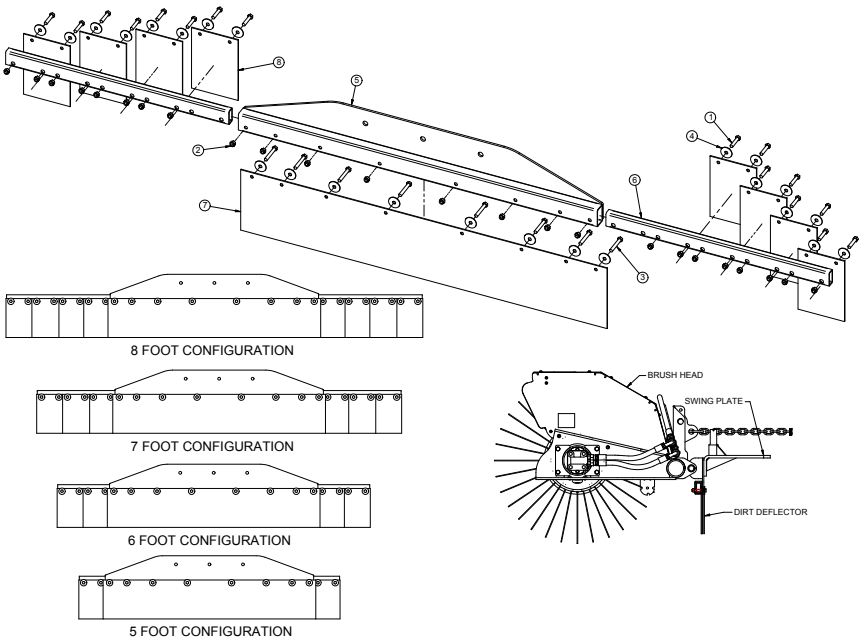
Replacement Part for 03-0601 :
03-1332 Seal Kit

RHFADD FOR RLH/RLCH



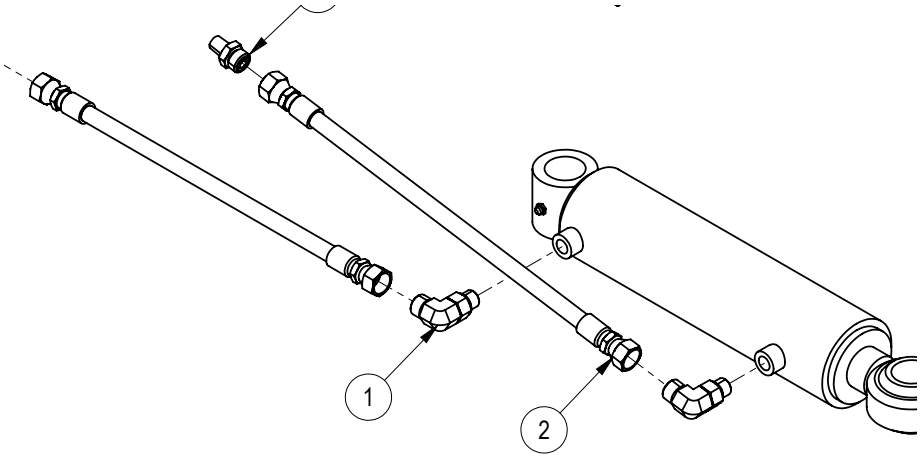
Item	Part	Qty	Description
1.	07-1717	8	Bolt, Carriage, 3/8-16 x 1 1/4
2.	07-1718	8	Washer, Lock, Split, 3/8
3.	07-3279	4	Washer, Flat, 3/8
4.	07-3654	8	Nut, Hex, 3/8-16
5.	11-9491	1	Deflector, Dirt
6.	13-0351	4	Angle, Mounting, Dirt Deflector

28-9951



Item	Part	Qty	Description
1.	07-3656	16	Screw, HHC, Gr8, 3/8-16 x 1 3/4
2.	07-4036	24	Nut, Hex, Nylock, 3/8-16
3.	07-4053	8	Screw, HHC, Gr8, 3/8-16 x 2 1/2
4.	07-5030	24	Washer, Fender, 3/8 x 1 1/2
5.	13-14789	1	Weld, Mounting
6.	13-14792	2	Tube, 2 x 1 x 1/8 x 30
7.	13-14793	1	Flap, Middle
8.	13-14794	8	Flap, Side

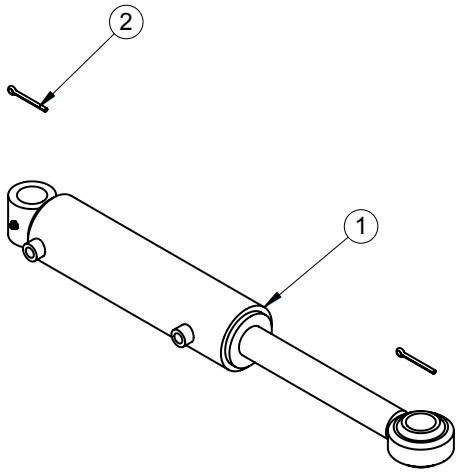
HYDRAULIC ANGLE KIT



Item	Part	Qty	Description
1.	03-2092	2	Elbow, 90º, 6MB-6MF
2.	03-2155	2	Hose, .25 x 72, 6FF-6FF, 3.25K
3.	03-2159	2	Fitting, 6MF-4MP
4.	03-5724	1	Cylinder, 2.5 x 1.25 x 7.5, 3.5K
6.	07-0206	2	Pin, Cotter, Gr2, 3/16 x 2

Replacement Parts for 03-5724
45617 Seal Kit
104605 Rod (Not Shown)

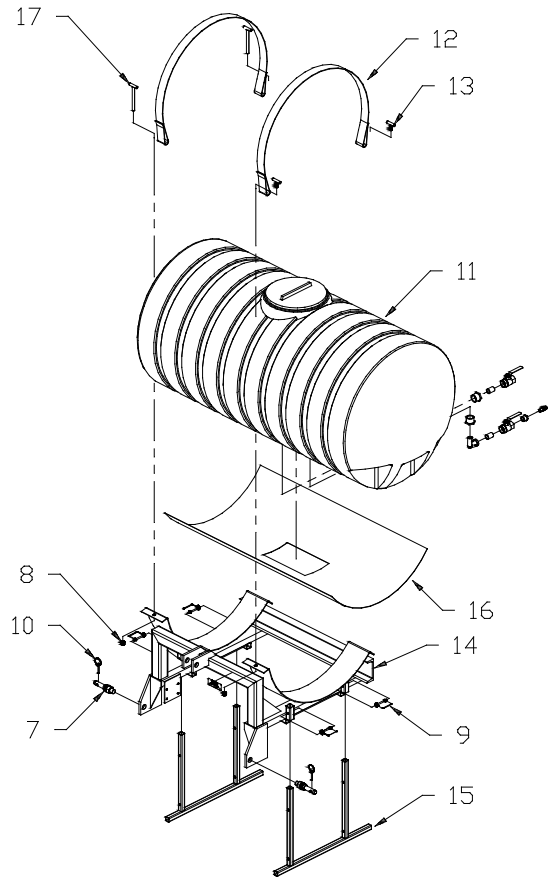
HYDRAULIC ANGLE CYLINDER

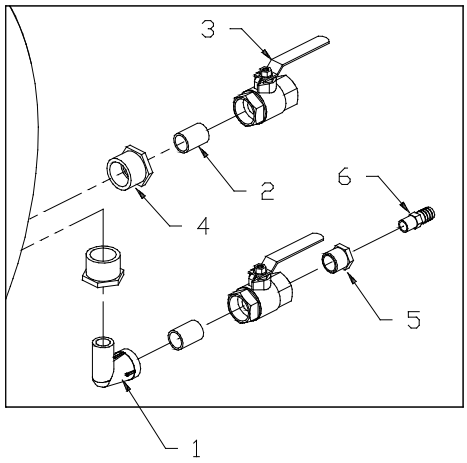


Replacement Parts for 03-5724
45617 Seal Kit
104605 Rod (Not Shown)

Item	Part	Qty	Description
1.	03-5724	1	Cylinder, 2.5 x 1.25 x 7.5, 3.5K
2.	07-0206	2	Pin, Cotter, Gr2, 3/16 x 2

3PT WATER TANK AND MOUNTING
11-5734

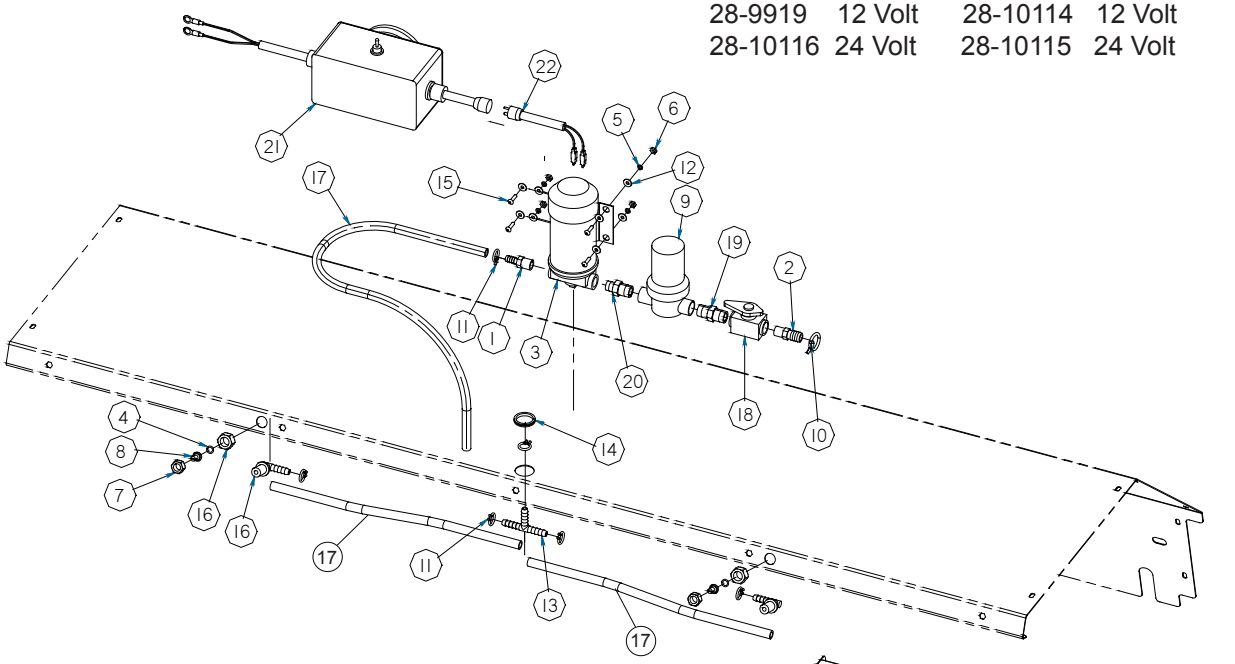


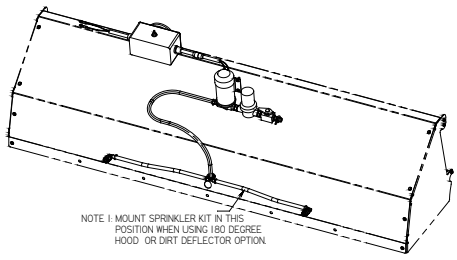


Item	Part	Qty	Description
1.	03-0029	1	Elbow, 90, 12FP-12MP, BP
2.	03-0054	2	Nipple, 12MP-12MP, BP
3.	03-0569	2	Valve, Ball, BR, 12FP-12FP
4.	03-0572	2	Fitting, 12FP-20MP, BP
5.	03-1068-9	1	Fitting, 8FP-12MP
6.	03-1226	1	Barb, 10, 8MP
7.	07-0285	2	Pin, Link, CAT1, Gr2
8.	07-4037	4	Nut, Hex, Gr2, 1/2-13, 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

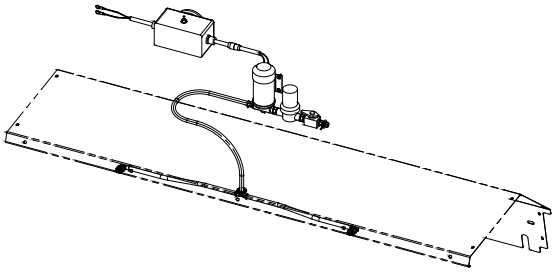
SPRINKLER KIT WITHOUT TANK

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





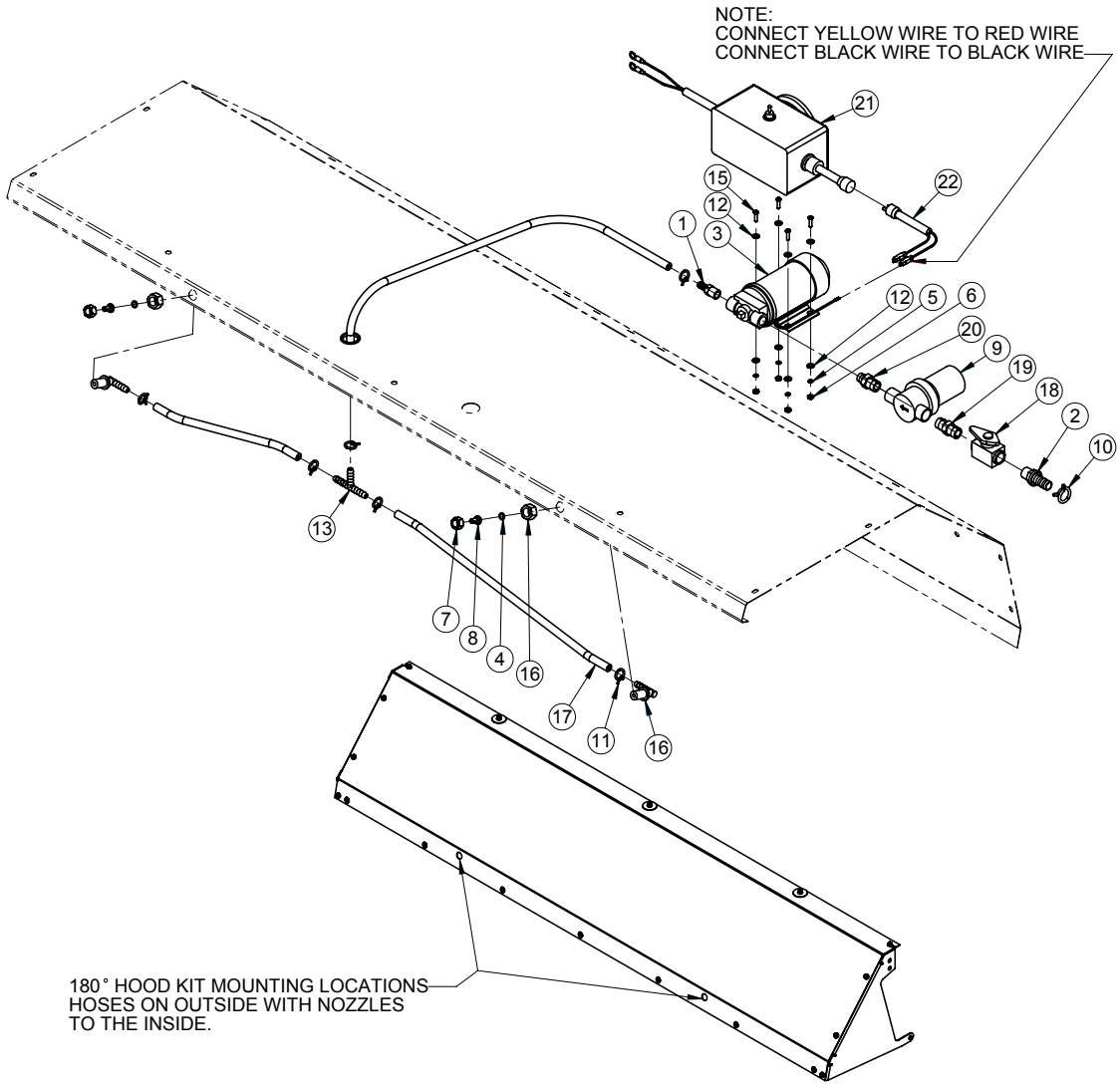
Item	Part	Qty	Description
1.	03-0457	1	Fitting, Barb, Nylon, 3/8, 3/8MP
2.	03-1226	1	Fitting, Barb, HP, 5/8, 1/2MP
3.	03-1326	1	Pump, Flojet, 2.1gpm, 12 volt, 7amp, 35psi
	03-2558	1	Pump, Flojet, 2.1gpm, 24 volt, 3.5amp, 60psi
4.	03-3537	2	O-Ring, #8 Face Seal
5.	07-0140	4	Washer, Lock, Gr2, #10
6.	07-0141	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

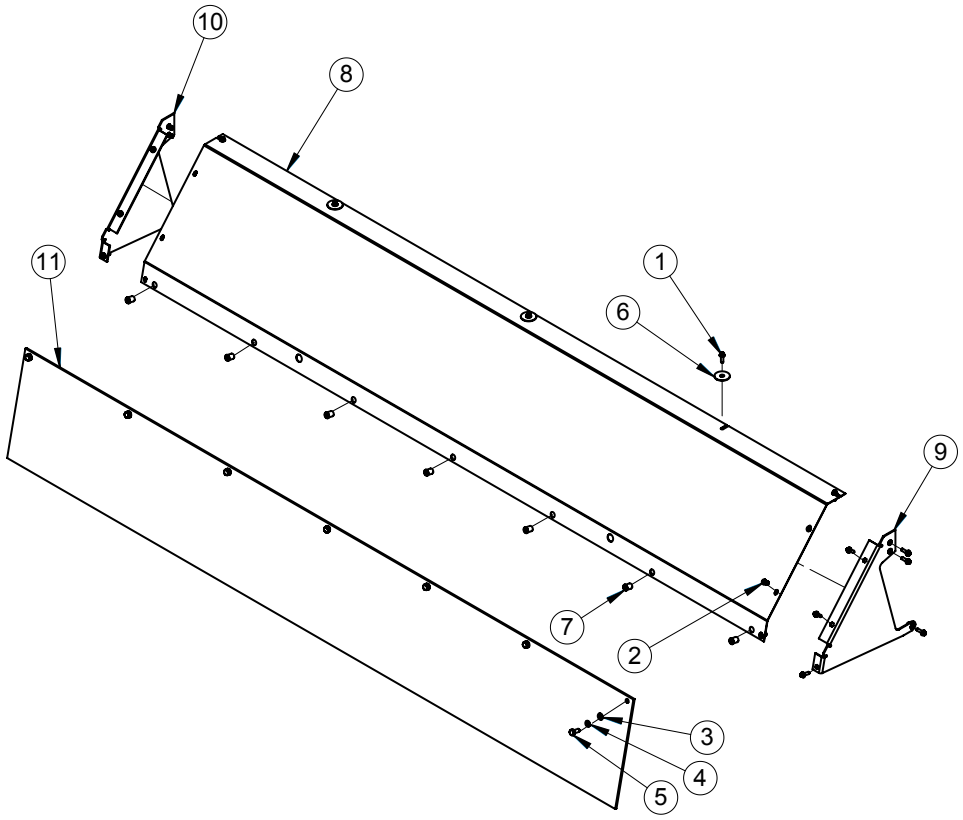


Replacement Parts for 03-1326 and 03-2558 :

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

Item	Part	Qty	Description
1.	03-0457	1	Barb, 6, 6MP, Nylon
2.	03-1226	1	Barb, 10, 8MP
3.	03-1326	1	Pump, Flojet, Water, 2.1 gpm, 12V
	03-2558	1	Pump, Flojet, Water, 2.9 gpm, 24V
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, Hypro, 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 x 7/8 x 1/16
15.	07-4831	4	Screw, BHC, 10-24UNC 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, 1/2 x 3/8, Nylon
21.	LAF8316	1	Wire Harness, with Control Box
22.	LAF8320	1	Wire Harness, Water Pump

HOOD EXTENSION AND DRAPE ASSEMBLY

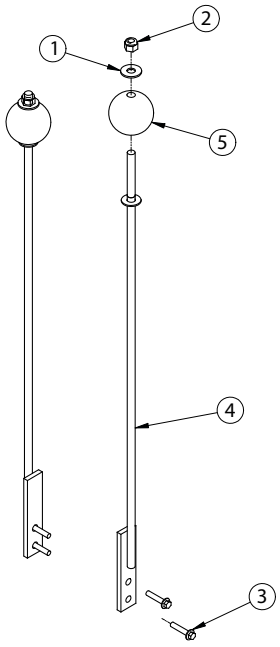


Item	Part	Qty	Description
1.	07-3522	17	Screw, HFH, CL10.9, M6 x 1
2.	07-3617	12	Nut, Insert, Hex, M6 x 1
3.*	07-3736	5	Washer, Flat, CL8.8, M8 4 Ft, 5 Ft
	07-3736	7	Washer, Flat, CL8.8, M8 6 Ft
4.*	07-3738	5	Washer, Lock, Split, Medium, M8 4 Ft, 5 Ft
	07-3738	7	Washer, Lock, Split, Medium, M8 6 Ft
5.*	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
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
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
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

* Designates Drape Assembly

SIGHT INDICATORS

Kit: 28-9965



Item	Part	Qty	Description
1.	07-3279	2	Washer, Flat, Gr8, 3/8
2.	07-5839	2	Nut, Hex, Lock, GrC, 3/8-24
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