



# OPERATOR'S AND PARTS MANUAL

## SWING CARRIAGE

**FOR  
RTFL**



SERIAL NUMBER: \_\_\_\_\_

MODEL NUMBER: \_\_\_\_\_

Manual Number: 76834

Part Number: 76834

Rev. 5 August 2018



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## FOREWORD

Although Bradco has various swing carriages available, we are continually designing new sizes and mountings. If your combination is not listed, please contact the factory. We have extensive mounting information available to generate the product you need.

Below is a listing of the swing carriages that are currently available. See the "Parts" section of this manual for the assemblies "Shown".

<b>DESCRIPTION &amp; MOUNT</b>	<b>ASSEMBLY #</b>
<b>CATERPILLAR</b>	
72" Swing Carriage - CAT TH BOOM MOUNT (Shown)	12183
72" Swing Carriage - CAT IT/TH (Shown)	12536
<b>JCB</b>	
72" Swing Carriage - JCB 541-70	13347
72" Swing Carriage - JCB 550-140	13350
<b>LULL</b>	
72" Swing Carriage - LULL 1044C (Shown)	11498
<b>MANITOU</b>	
72" Swing Carriage - MANITOU (Shown)	12518
<b>NEW HOLLAND</b>	
72" Swing Carriage - NEW HOLLAND LM860 BOOM MOUNT (Shown)	12406

# PREFACE

## GENERAL COMMENTS

Congratulations on the purchase of your new attachment! 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.

This manual has been designed to help you do a better, safer job. Read this manual carefully and become familiar with its contents.

**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 this 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 the manufacturer to obtain further assistance. Keep this manual available for reference. Provide the manual to any new owners and/or operators.

## 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 for 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 not possible 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.paladinattachments.com/patents.asp>.

M-934 10-22-13-5

# SAFETY STATEMENTS



THIS SYMBOL BY ITSELF OR 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.



## DANGER

THIS SIGNAL WORD INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.



## WARNING

THIS SIGNAL WORD INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.



## CAUTION

THIS SIGNAL WORD INDICATES A HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN MINOR OR MODERATE INJURY.

## NOTICE

NOTICE IS USED TO ADDRESS PRACTICES NOT RELATED TO PHYSICAL INJURY.

## GENERAL SAFETY PRECAUTIONS

### WARNING!



#### READ MANUAL PRIOR TO INSTALLATION

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 MOVER'S MANUAL(S).**



#### 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 ensure 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 or hard to read.

## GENERAL SAFETY PRECAUTIONS

### WARNING!



#### PROTECT AGAINST FLYING DEBRIS

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

### WARNING!



#### LOWER OR SUPPORT RAISED EQUIPMENT

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

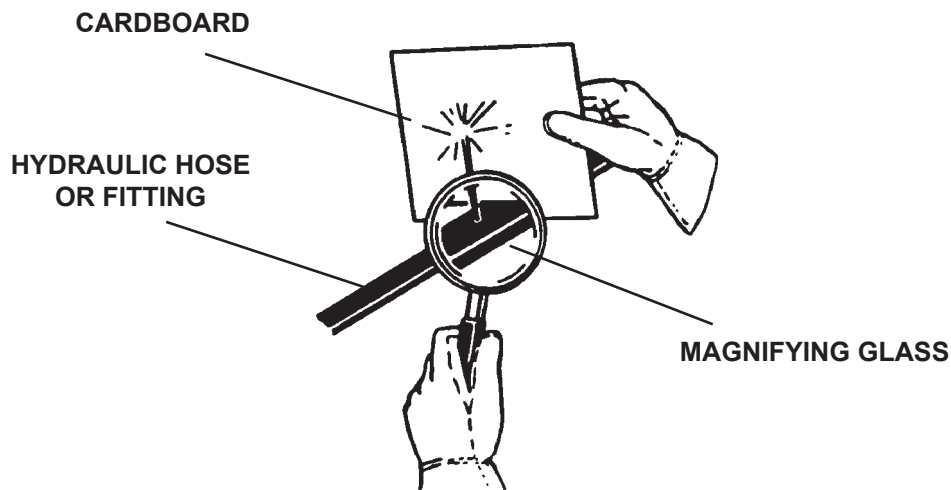
### WARNING!



#### 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 mover's 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 or her to research it immediately to determine proper treatment.
- Wear safety glasses, protective clothing, and use a piece of cardboard or wood when searching for hydraulic leaks. **DO NOT USE YOUR HANDS! SEE ILLUSTRATION.**



## GENERAL SAFETY PRECAUTIONS

### 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 Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any modifications must be authorized in writing by the manufacturer.

### WARNING!



### SAFELY MAINTAIN AND REPAIR EQUIPMENT

- Do not wear loose clothing or any accessories that can catch in moving parts. If you have long hair, cover or secure it so that it does not become entangled in the equipment.
- Work on a level surface in a well-lit area.
- Use properly grounded electrical outlets and tools.
- Use the correct tools 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.



### 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 machine's 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 operator's position.
- Never leave equipment unattended with the engine running, or with this attachment in a raised 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.

### WARNING!



### CALIFORNIA PROPOSITION 65 WARNING

This product may contain a chemical known to the state of California to cause cancer, or birth defects or other reproductive harm. [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



## EQUIPMENT SAFETY PRECAUTIONS

### WARNING!



### KNOW WHERE UTILITIES ARE

Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

### 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.



### WORKING WITH THE ATTACHMENT

- Never use the attachment for a work platform or personnel carrier.
- Specified lift capacities must not be exceeded, otherwise machine stability will not be sufficient. Always observe lift capacity limits listed in machine specifications or on load charts furnished with the prime mover.
- 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.
- Always check locking pins before operating any attachment.
- Never lift, move, or swing loaded forks over anyone.
- Always space the forks correctly for the load. Loads can fall off incorrectly spaced forks. Make sure the forks are completely under the load before lifting.
- Never stack loads on uneven ground.
- Never lift a load with one fork. A load lifted with one fork can slip off and cause injury.
- Secure loads properly. Unsecured loads can fall unexpectedly.
- Do not handle round bales with fork lift tines.
- Carry the forks low for maximum stability and visibility.
- When operating on slopes, drive up and down, not across. Avoid steep hillside operation, which could cause the prime mover to overturn.
- Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.



### MAINTAINING THE ATTACHMENT

- Never perform any work on the equipment unless you are authorized and qualified to do so. Always read the operator's and 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 attach a "DO NOT OPERATE" tag to the machine until all problems are corrected.
- Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from the manufacturer.

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# INSTALLATION AND OPERATION

## ATTACHING AND DETACHING EQUIPMENT

Please see your vehicle operator's manual for instructions on attaching and detaching your equipment.

### **WARNING!**



To prevent serious personal injury or death, only attach equipment that is designed for your prime mover.

Specified lift capacities must not be exceeded, otherwise machine stability will not be sufficient. Always observe lift capacity limits listed in machine specifications.

## OPERATING EQUIPMENT

Read all Safety Precautions before operating your new attachment.

For personal safety, lower the attachment to the ground, set the parking brake, shut off engine, and remove key before getting off of your prime mover.

# MAINTENANCE & SERVICE

## GENERAL INFORMATION

Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been kept to an absolute minimum. However, it is very important that these maintenance functions be performed as described in this section.

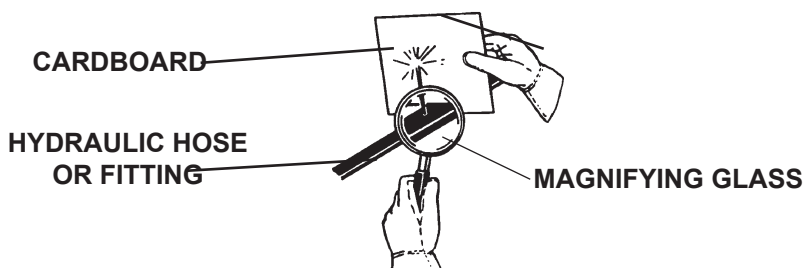
Procedure	Daily	Every 40 Hours
Check all bolts and nuts for tightness.	✓	
Replace any missing bolts or nuts with approved replacement parts.	✓	
Check hydraulic system for hydraulic oil leaks. See procedure below.	✓	
Visually inspect the machine for worn parts or cracked welds, and repair as necessary.	✓	
Check for missing or illegible Safety / Warning Decals.	✓	
Lubricate all grease fittings.		✓

**WARNING!** Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Fluid escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands to search for suspected leaks.



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 or her to research it immediately to determine proper treatment.



**IMPORTANT:** When replacing parts, use only factory-approved replacement parts. Manufacturer will not accept responsibility for use of unapproved parts or accessories, and damages that result from their use.

# MAINTENANCE AND SERVICE

## CYLINDER SEAL REPLACEMENT

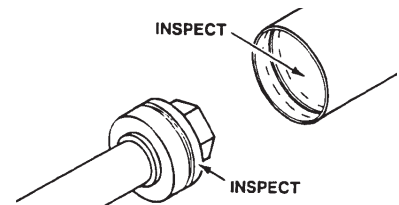
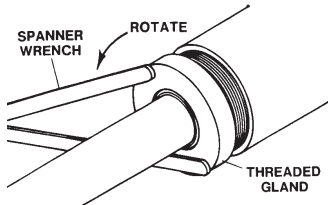
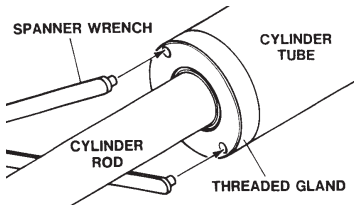
The following information is provided to assist you in the event you should need to repair or rebuild a hydraulic cylinder. When working on hydraulic cylinders, make sure that the work area and tools are clean and free of dirt to prevent contamination of the hydraulic system and damage to the hydraulic cylinders. Always protect the active part of the cylinder rod (the chrome section). Nicks or scratches on the surface of the rod could result in cylinder failure. Clean all parts thoroughly with a cleaning solvent before reassembly.

### DISASSEMBLY PROCEDURE

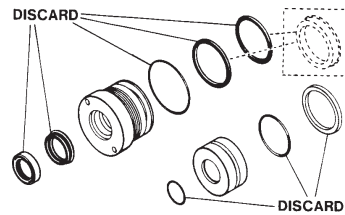
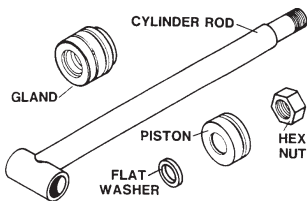
**IMPORTANT:** Do not contact the active surface of the cylinder rod with the vise. Damage to the rod could result.

#### THREADED TYPE GLAND

1. Rotate the gland with a spanner wrench counterclockwise until the gland is free of the cylinder tube.
2. Pull the cylinder rod from the cylinder tube and inspect the piston and the bore of the cylinder tube for deep scratches or galling. If damaged, the piston AND the cylinder tube must be replaced.



3. Remove the hex nut, piston, flat washer or spacer tube (if so equipped), and gland from the cylinder rod. If the cylinder rod is rusty, scratched, or bent, it must be replaced.
4. Remove and discard all the old seals.

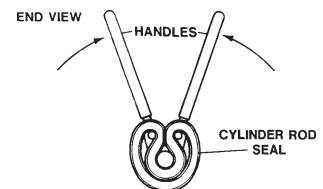
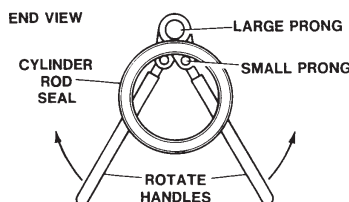
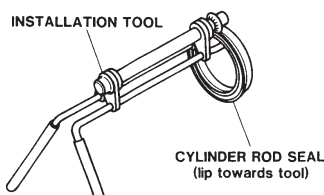


### ASSEMBLY PROCEDURE

**IMPORTANT:** Replace all seals even if they do not appear to be damaged. Failure to replace all seals may result in premature cylinder failure. **NOTE:** Seal kits will service most cylinders of similar bore size and rod diameter.

1. Install the cylinder rod seal in the gland first. Be careful not to damage the seal in the process, as it is somewhat difficult to install.

**NOTE:** A special installation tool (Part #65349) is available to help with installing the seal. Simply fit the end of the tool over the seal so that the large prong of the tool is on the outside of the seal, and the two smaller prongs on the inside. The lip of the seal should be facing towards the tool. Rotate the handles on the tool around to wrap the seal around the end of the tool.



Rotate the handles on the tool around to wrap the seal around the end of the tool.

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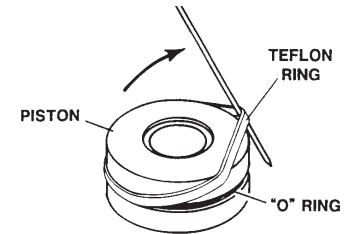
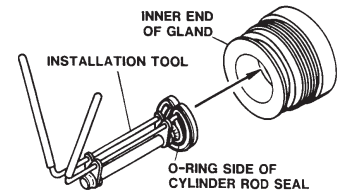
# MAINTENANCE AND SERVICE

Now insert the seal into the gland from the inner end. Position the seal in its groove, and release and remove the tool. Press the seal into its seat the rest of the way by hand.

2. Install the new piston ring, rod wiper, O-rings and backup washers, if applicable, on the piston.

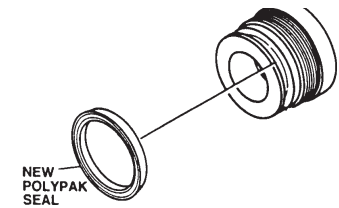
Be careful not to damage the seals. Caution must be used when installing the piston ring. The ring must be stretched carefully over the piston with a smooth, round, pointed tool.

3. After installing the rod seal inside the gland, as shown in step #1, install the external seal.



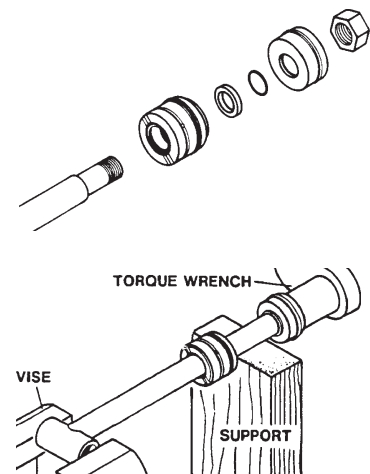
**NOTE:** Threaded glands may have been equipped with a separate O-ring and backup washer system or a polypak (all in one) type seal. Current seal kits contain a polypak (all in one) type seal to replace the discarded seal types on ALL THREADED GLANDS.

4. Slide the gland onto the cylinder rod, being careful not to damage the rod wiper. Then install the spacer, or flat washer (if so equipped), small o-ring, piston, and hex nut onto the end of the cylinder rod.
5. Secure the cylinder rod (mounting end) in a vise with a support at its center. Torque the nut to the amount shown for the thread diameter of the cylinder rod (see chart).



Thread Diameter	POUNDS - FEET
7/8"	150-200
*1"	230-325
1-1/8"	350-480
1-1/4"	490-670
1-3/8"	670-900
* 1" Thread Diameter WITH 1.25" Rod Diameter	
Min. 230 ft. lbs. Max. 250 ft. lbs.	

**IMPORTANT:** Do not contact the active surface of the cylinder rod with the vise. Damage to the rod could result.



6. Apply a lubricant (such as Lubriplate #105) to the piston and teflon ring. Insert the cylinder rod assembly into the cylinder tube.

**IMPORTANT:** Ensure that the piston ring fits squarely into the cylinder tube and piston groove, otherwise the ring may be damaged and a leak will occur.

7. Use a spanner wrench to rotate the gland clockwise into the cylinder. Continue to rotate the gland with the spanner wrench until it is tight.

## WARNING!



Cylinders serviced in the field are to be tested for leakage prior to the attachment being placed in work. Failure to test rebuilt cylinders could result in damage to the cylinder and/or the attachment, cause severe personal injury or even death.

# STORAGE

## GENERAL INFORMATION

The following storage procedure will help you to keep your attachment in top condition. It will also help you get off to a good start the next time your equipment is needed. We therefore strongly recommend that you take the extra time to follow these procedures whenever your attachment will not be used for an extended period of time.

## PREPARATION FOR STORAGE

1. Clean the attachment thoroughly, removing all mud, dirt, and grease.
2. Inspect for visible signs of wear, breakage, or damage. Order any parts required, and make the necessary repairs, to avoid delays when starting next season.
3. Tighten all loose nuts, capscrews, and hydraulic connections.
4. Lubricate all grease fittings.
5. Coat the exposed portions of the cylinder rods with grease.
6. Connect the hydraulic couplers together, or install covers, to protect the hydraulic system from contaminants.
7. Touch up all unpainted and exposed areas with paint, to prevent rust.
8. Replace decals, if damaged or in unreadable condition.
9. Store the attachment in a dry and protected place, with a cover, if possible. Leaving the attachment outside will materially shorten its life.

## REMOVING FROM STORAGE

1. Remove all protective coverings.
2. Check hydraulic hoses for deterioration, and replace if necessary.

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## LIMITED WARRANTY

In order to provide you with the most UP-TO-DATE Warranty information, Paladin Warranty Statement and Warranty Procedures along with Warranty Registration and Claim Forms have been moved to our website at [www.paladinattachments.com](http://www.paladinattachments.com).

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## PARTS

The following section contains detailed diagrams and parts lists which include your attachment. Please use these diagrams and parts lists to locate replacement parts, prior to contacting the parts department.

When servicing your attachment, remember to use only original manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation.

To facilitate parts ordering, have the model and serial number of your product ready, to ensure that you receive the correct parts for your specific attachment.

The model and serial number for your attachment should be recorded in the space provided on the cover of this manual. This information may be obtained from the serial number identification plate located on your attachment. **See the parts diagram for your attachment for the location.**

**NOTE: Most daily and emergency orders received by 2:00 P.M. will be shipped the same day received, with “Emergency-Machine-Down” orders receiving first priority.**



### PARTS DEPARTMENT

(734) 996-9116

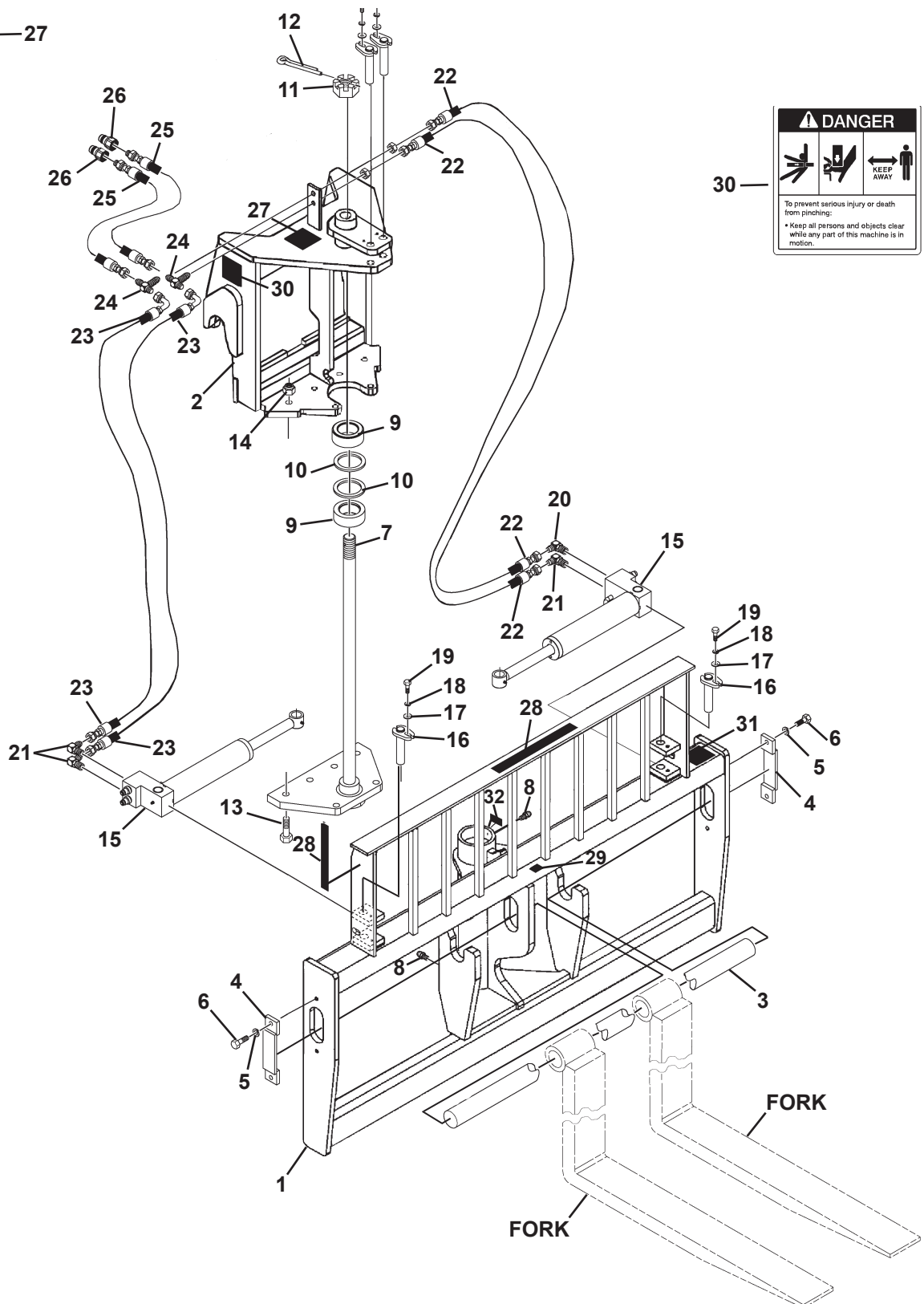
(800) 456-7100

We Encourage Fax Orders

(734) 996-9014

# SWING CARRIAGE

## 72" - ASSEMBLY #11498



M-1228 1-28-10-2

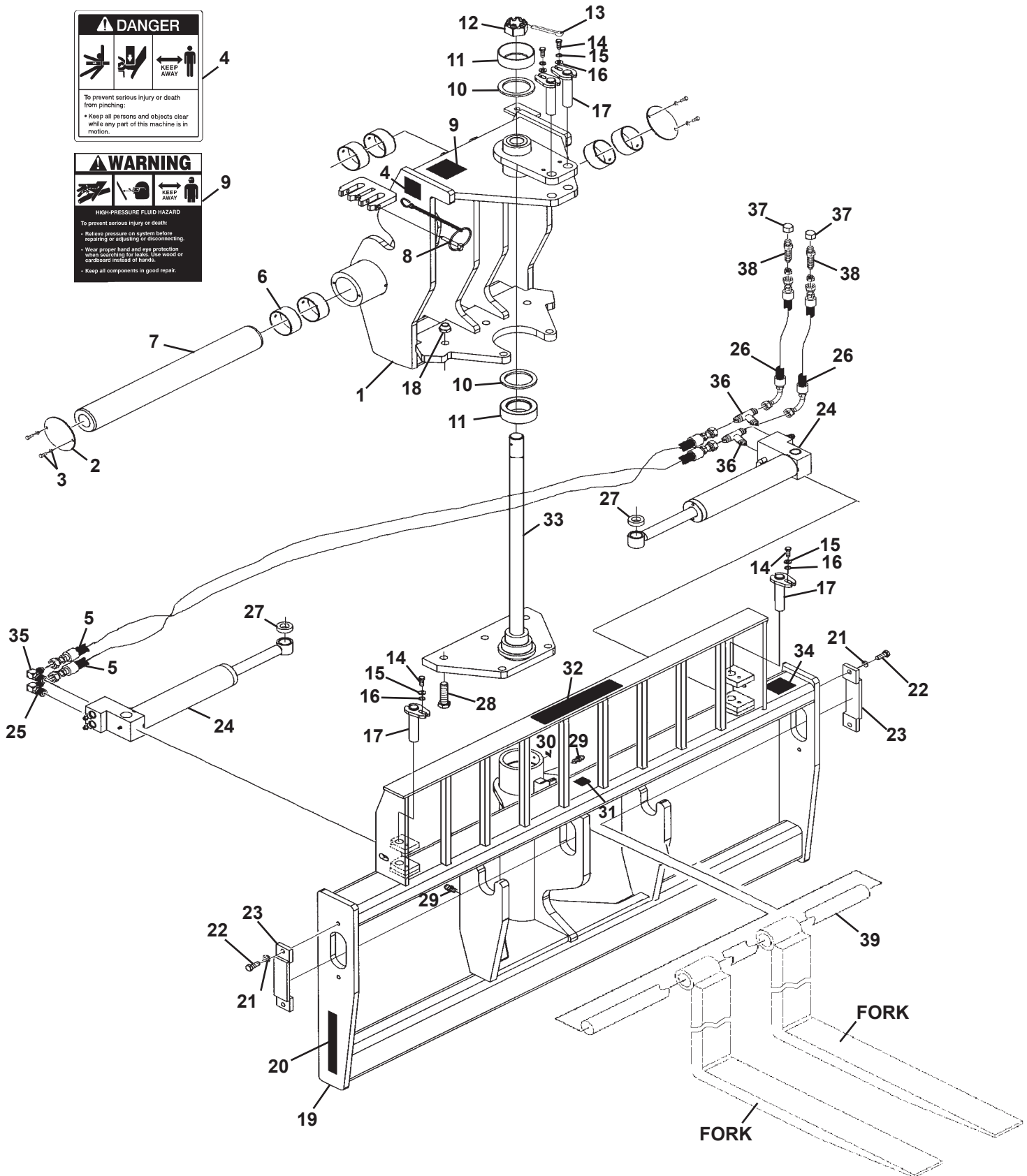
# SWING CARRIAGE

72" - ASSEMBLY #11498

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	33975	Swing Carriage
2	1	33974	Swing Frame
3	1	31240	Pin, 2.25" x 72.00"
4	2	14002	Pin Retainer
5	4	1505	.50" Lock Washer
6	4	1339	.50" UNF x 1.25" Hex Capscrew
7	1	33990	Swing Post
8	4	9371	Grease Zerk
9	2	31291	Bearing
10	2	31290	Thrust Washer, .25" x 3.93" x 3.00"
11	1	10019	1.50" UNF Castle Nut
12	1	1729	.25" x 2.50" Cotter Pin
13	6	1393	.75" UNF x 3.00" Hex Capscrew
14	6	10001	.75" UNF Top Lock Nut
15	2	89117	Cylinder Assembly
16	4	14173	Pin, 1.00" x 4.63"
17	4	1800	.38" Hard Flat Washer
18	4	1503	.38" Lock Washer
19	4	1293	.38" UNF x 1.00" Hex Capscrew
20	1	14067	90° Elbow, With .027 Orifice, 6MBo-6MJ
21	3	3434	90° Elbow, 6MBo-6MJ
22	2	35697	Hose .25" X 33.00" 6FJX-6FJX, HS
23	2	37805	Hose .25" X 34.00" 6FJX-6FJX, 90°
24	2	3498	Bulkhead Tee, Includes Nut 6MJ-6MJ-6MJ
25	2	38151	Hose .38" X 94.00" 6FJX-8MBo, HS
26	2	17139	Male Quick Coupler
27	1	40151	High Pressure Warning Decal
28	2	Varies	Logo
	1	Varies	Logo
29	1	4338	Made in the USA Decal
30	2	40149	Pinch Point Danger Decal
31	1	----	Serial Number Identification Tag Location
32	6	4084	Grease Decal

# SWING CARRIAGE

## 72" - ASSEMBLY #12183



M-1414 1-28-10-2

## SWING CARRIAGE

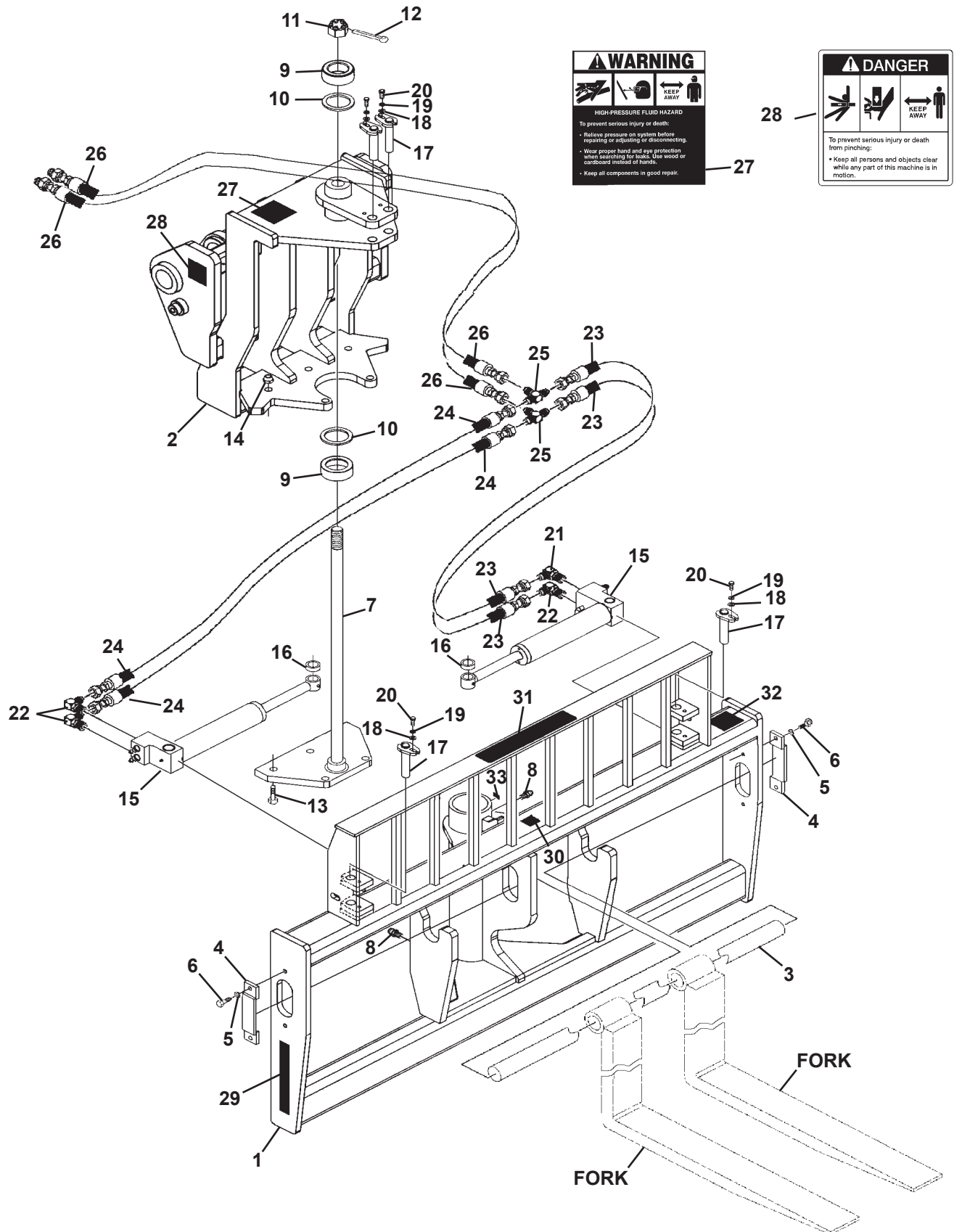
72" - ASSEMBLY #12183

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	32449	Swing Frame
2	2	32499	Pin Cover Plate
3	4	2660	M 6x20-933, 8.8, Hex Capscrew
	4	1501	.25" Lock Washer
4	2	40149	Pinch Point Danger Decal
5	2	37896	Hose .38" X 52.00" 6FJX-6FJX
6	6	32515	Bushing
7	1	32534	Pin, 3.148" x 25.97"
8	2	31796	Klik Pin With Chain
9	1	40151	High Pressure Warning Decal
10	2	31290	Thrust Washer, 3.93" x 3.00" x .25"
11	2	31291	Bearing
12	1	10019	1.50" UNF Castle Nut
13	1	1729	Cotter Pin, .25" x 2.50"
14	4	1293	.38" UNF x 1.00" Hex Capscrew
15	4	1503	.38" Lock Washer
16	4	1800	.38" Hard Flat Washer
17	4	14173	Pin, 1.00" x 4.63"
18	5	10001	.75" UNF Top Lock Nut
19	1	32448	Swing Carriage
20	2	Varies	Logo
21	4	1505	.50" Lock Washer
22	4	1339	.50" UNF x 1.25" Hex Capscrew
23	2	14002	Pin Retainer
24	2	89117	Cylinder Assembly
25	1	3434	90° Elbow, 6MBo-6MJ
26	2	37897	Hose .38" X 52.00" 6FJX-6FJX 90°
27	2	31255	Spacer
28	5	1393	.75" UNF x 3.00" Hex Capscrew
29	6	9371	Grease Zerk
30	4	4084	Grease Decal
31	1	4338	Made in USA Decal
32	1	Varies	Logo
33	1	31973	Swing Post
34	1	----	Serial Number Identification Tag Location
35	1	14067	90° Elbow, W/.027 Orifice, 6MBo-6MJ
36	2	30137	Tee Run, 6MBo-6MJ-6MJ
37	2	3285	Cap
38	2	3297	Bulkhead Connector, 6MJ-6MJ (Includes Nut)
39	1	32516	Pin, 60mm x 72.00"

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# SWING CARRIAGE

72" - ASSEMBLY #12406



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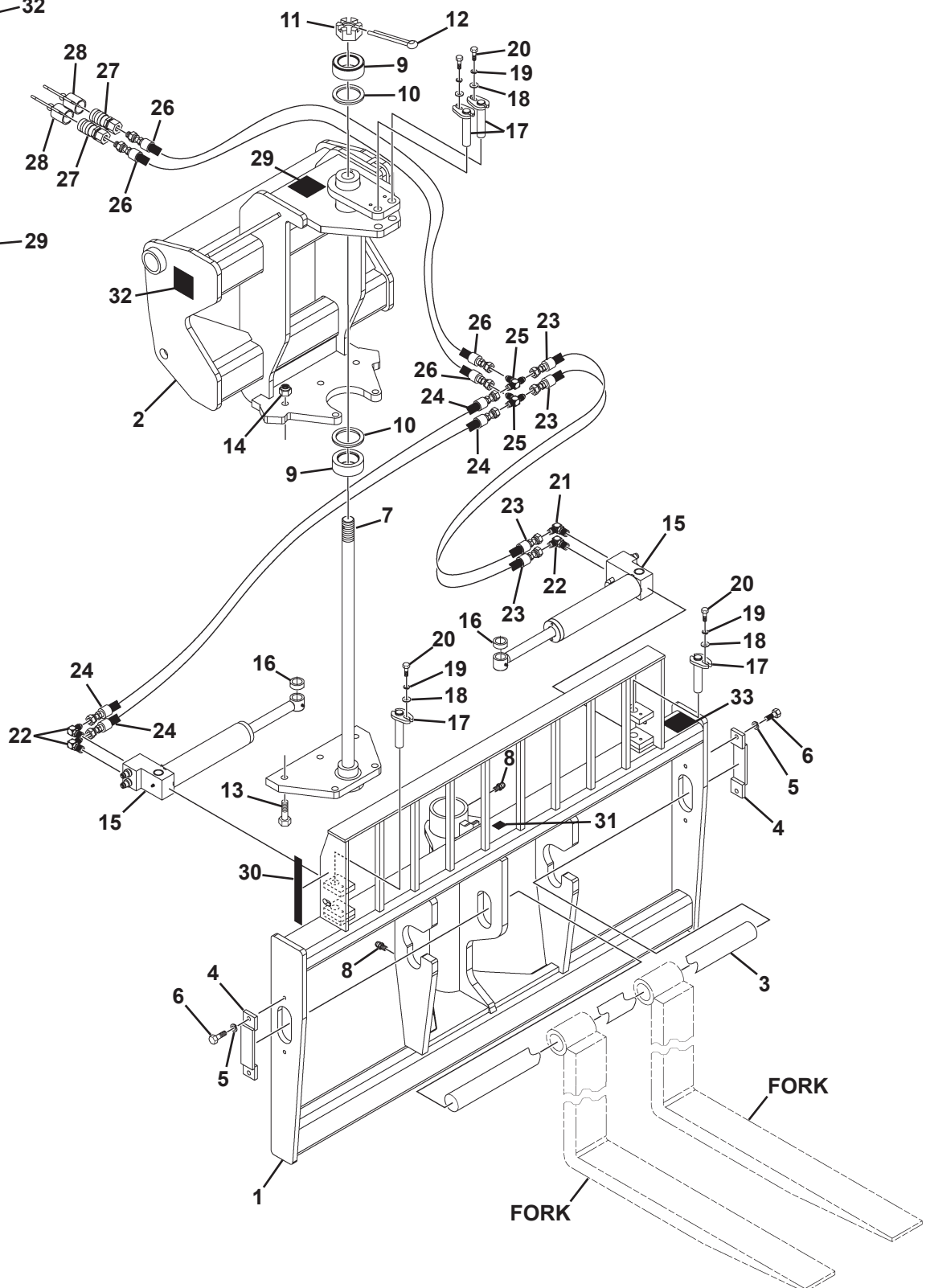
## SWING CARRIAGE

72" - ASSEMBLY #12406

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	15090	Swing Carriage
	3	15176	Split Bushing
2	1	15100	Swing Frame
3	1	31240	Pin, 2.25" x 72.00"
4	2	14002	Pin Retainer
5	4	1505	.50" Lock Washer
6	4	1339	.50" UNF x 1.25" Hex Capscrew
7	1	31973	Swing Post
8	5	9371	Grease Zerk
9	2	31291	Bearing
10	2	31290	Thrust Washer, 3.93" x 3.00" x .25"
11	1	10019	1.50" UNF Castle Nut
12	1	1729	Cotter Pin, .25" x 2.50"
13	5	1393	.75" UNF x 3.00" Hex Capscrew
14	5	10001	.75" UNF Top Lock Nut
15	2	89117	Cylinder Assembly
16	2	31255	Spacer
17	4	14173	Pin, 1.00" x 4.63"
18	4	1800	.38" Hard Flat Washer
19	4	1503	.38" Lock Washer
20	4	1293	.38" UNF x 1.00" Hex Capscrew
21	1	14067	90° Elbow, W/.027 Orifice, 6MBo-6MJ
22	3	3434	90° Elbow, 6MBo-6MJ
23	2	37222	Hose .38" X 18.00" 8FJX-6FJX
24	2	37193	Hose .38" X 36.00" 6FJX-8FJX
25	2	30264	Tee Run, 8MJ-8MJ-8MJ
26	2	37992	Hose .38" X 55.00" 8FJX-12FDHORX90°
27	1	40151	High Pressure Warning Decal
28	2	40149	Pinch Point Danger Decal
29	2	Varies	Logo
30	1	4338	Made in USA Decal
31	1	Varies	Logo
32	1	----	Serial Number Identification Tag Location
33	5	4084	Grease Decal

# SWING CARRIAGE

## 72" - ASSEMBLY #12518



12518

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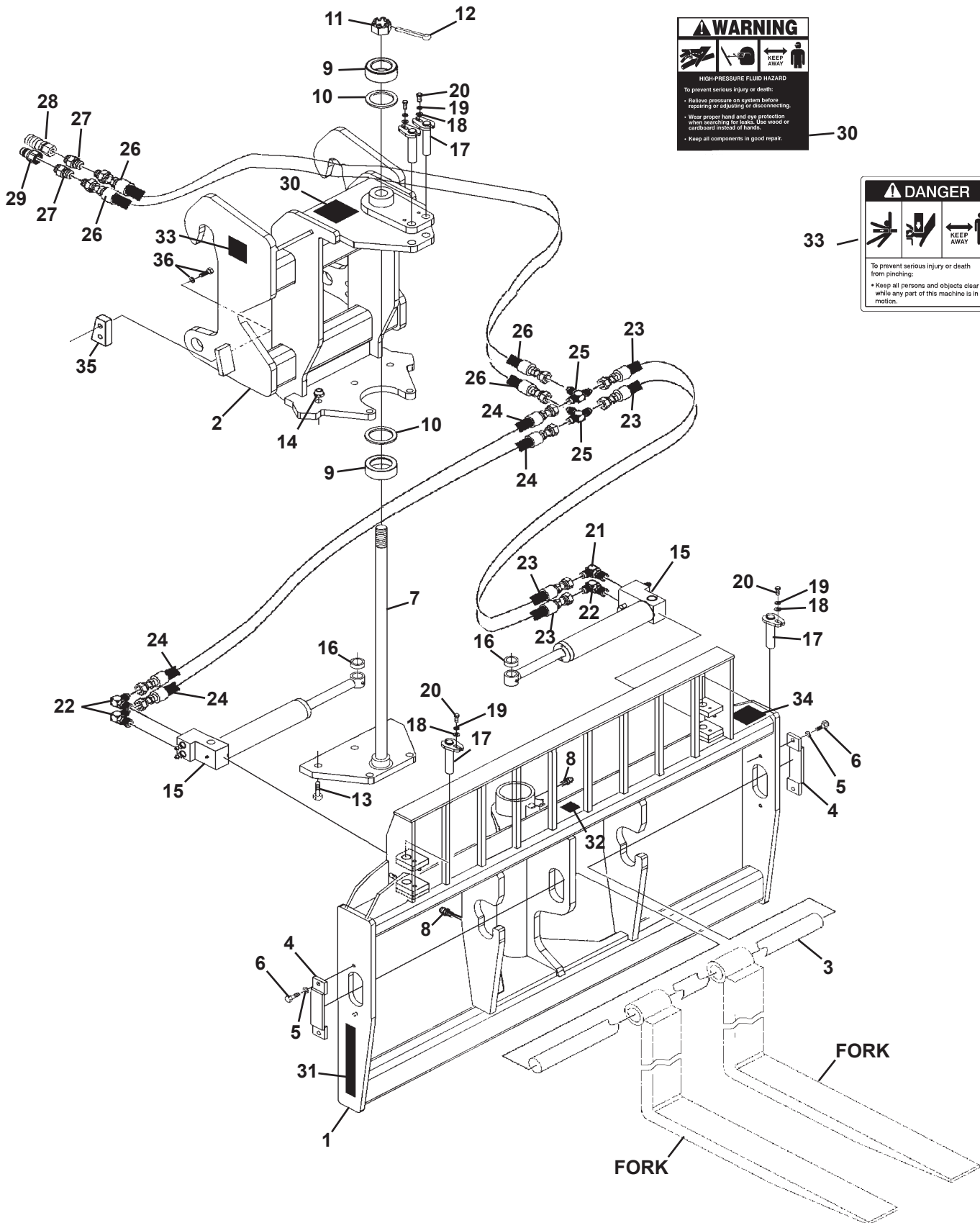
# SWING CARRIAGE

72" - ASSEMBLY #12518

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	16675	Swing Carriage
2	1	18183	Swing Frame
3	1	14780	Pin, 2.00" x 74.25"
4	2	14002	Pin Retainer
5	4	1505	.50" Lock Washer
6	4	1339	.50" UNF x 1.25" Hex Capscrew
7	1	31168	Swing Post
8	2	9371	Grease Zerk
9	2	31291	Bearing
10	2	31290	Thrust Washer, .25" x 3.93" x 3.00"
11	1	10019	1.50" UNF Castle Nut
12	1	1729	.25" x 2.50" Cotter Pin
13	5	1393	.75" UNF x 3.00" Hex Capscrew
14	5	10001	.75" UNF Top Lock Nut
15	2	89117	Cylinder Assembly
16	2	31255	Spacer
17	4	14173	Pin, 1.00" x 4.63"
18	4	1800	.38" Hard Flat Washer
19	4	1503	.38" Lock Washer
20	4	1293	.38" UNF x 1.00" Hex Capscrew
21	1	30209	90° Elbow, W/.027 Orifice, 6MBo x 6MFS
22	3	30204	90° Elbow, 6MBo-6MFS
23	2	38124	Hose .25" X 22.00" 6FFS-6FFS, HS
24	2	38333	Hose .25" X 34.00" 6FFS-6FFS, HS
25	2	30203	Tee Run, 6MFS-6MFS-6MFS
26	2	38082	Hose .38" X 87.00" 6FFS-8MBo
27	2	84928	Female Quick Coupler
28	2	32548	Female Quick Coupler Cover
29	1	40151	High Pressure Warning Decal
30	2	Varies	Logo
31	1	4338	Made in the USA Decal
32	2	40149	Pinch Point Danger Decal
33	1	-----	Serial Number Identification Tag Location

# SWING CARRIAGE

## 72" - ASSEMBLY #12536



M-1401 1-28-10-2

# SWING CARRIAGE

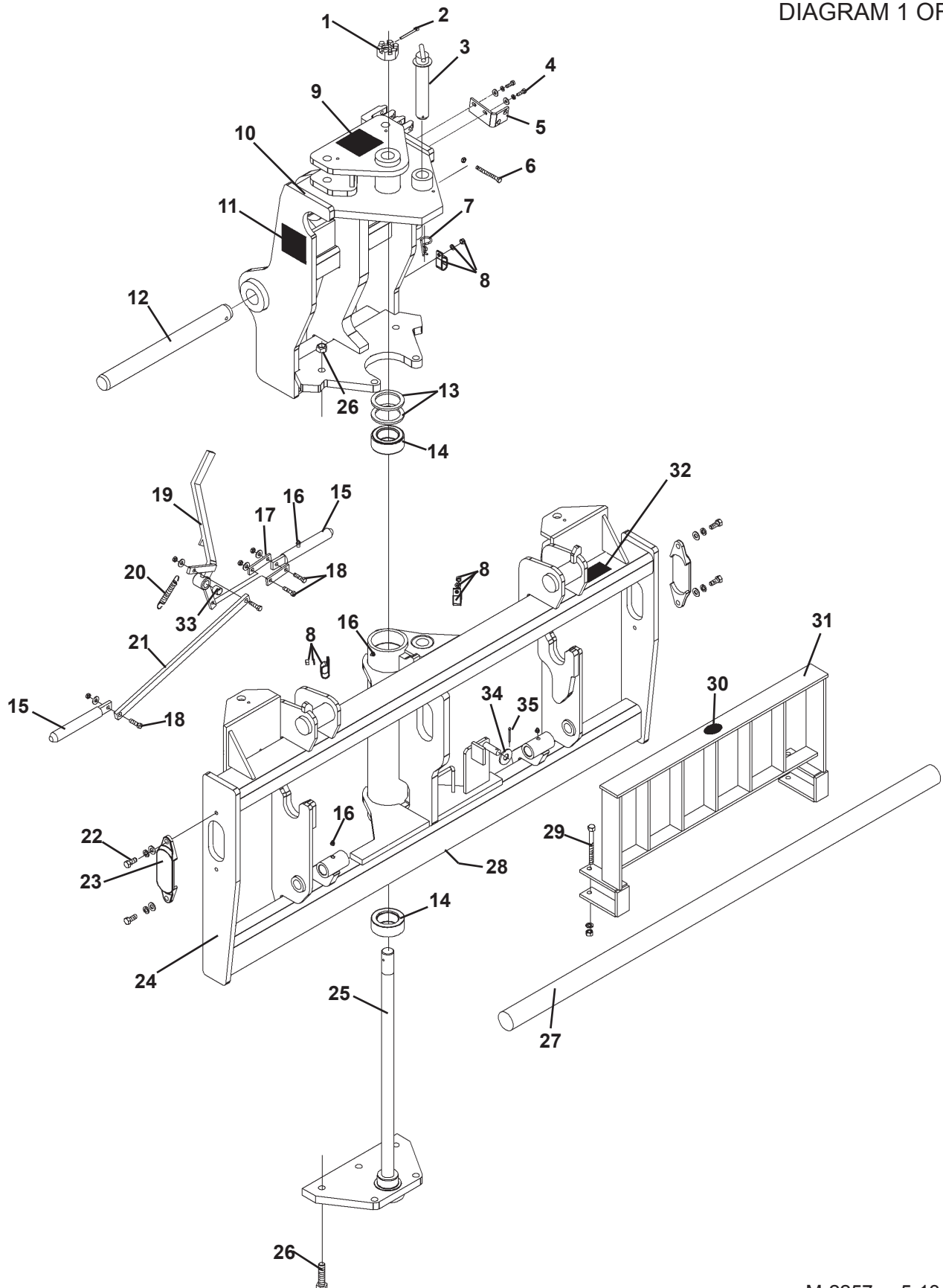
72" - ASSEMBLY #12536

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	18697	Swing Carriage
2	1	18687	Swing Frame
3	1	32516	Pin, 60mm x 72.00"
4	2	14002	Pin Retainer
5	4	1505	.50" Lock Washer
6	4	1339	.50" UNF x 1.25" Hex Capscrew
7	1	31168	Swing Post
8	2	9371	Grease Zerk
9	2	31291	Bearing
10	2	31290	Thrust Washer, 3.93" x 3.00" x .25"
11	1	10019	1.50" UNF Castle Nut
12	1	1729	Cotter Pin, .25" x 2.50"
13	5	1393	.75" UNF x 3.00" Hex Capscrew
14	5	10001	.75" UNF Top Lock Nut
15	2	89117	Cylinder Assembly
16	2	31255	Spacer
17	4	14173	Pin, 1.00" x 4.63"
18	4	1800	.38" Hard Flat Washer
19	4	1503	.38" Lock Washer
20	4	1293	.38" UNF x 1.00" Hex Capscrew
21	1	14067	90° Elbow, W/.027 Orifice, 6MBo-6MJ
22	3	3434	90° Elbow, 6MBo-6MJ
23	2	37884	Hose .38" X 21.00" 6FJX-6FJX
24	2	37889	Hose .38" X 35.00" 6FJX-6FJX
25	2	3314	Tee Run, 6MJ-6MJ-6MJ
26	2	35762	Hose .38" X 85.00" 6FJX-6FJX
27	2	30201	Straight Connector, 12MBo-6MJ
28	1	22518	Female Quick Coupler
29	1	22519	Male Quick Coupler
30	1	40151	High Pressure Warning Decal
31	2	Varies	Logo
32	1	4338	Made in USA Decal
33	2	40149	Pinch Point Danger Decal
34	1	-----	Serial Number Identification Tag Location
35	2	14228	Stop Block
36	4	10012	.75" UNC x 2.25" Hex Capscrew, Grade 8
	4	1507	.75" Lock Washer

# SWING CARRIAGE

72" ASSEMBLY #13347

DIAGRAM 1 OF 2



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# SWING CARRIAGE

72" ASSEMBLY #13347

LIST 1 OF 2

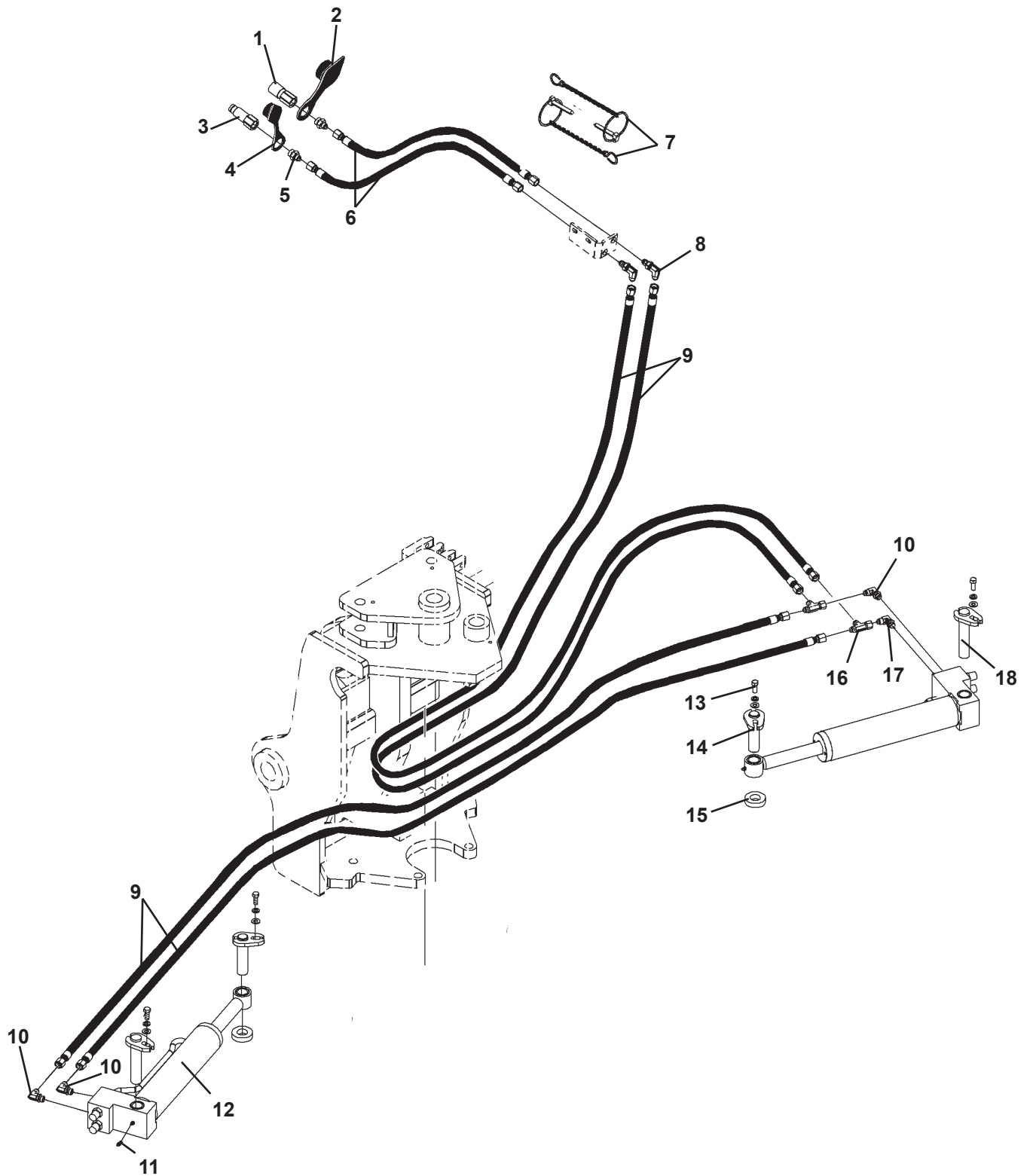
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	10019	1.50" UNF Castle Hex Nut
2	1	1729	Cotter Pin (2.50")
3	1	119453	Swing Lock Pin
4	2	10023	.31" UNF X 1.00" Hex Capscrew
	2	1502	.31" Lock Washer
	2	1513	.31" Flat Washer
5	1	33492	Bulkhead Bracket
6	1	1056	.38" UNC X 4.50" Hex Capscrew
	1	1536	.38" UNC Nylock Nut
7	1	1860	Cotter Hair Pin
8	3	82859	Double Hose Clamp
	3	1503	.38" Lock Washer
	3	1226	.38" UNC Hex Nut
9	1	40151	Warning Decal, High Pressure Fluid
10	1	119439	Swing Carriage Frame
11	2	40149	Danger Decal, Pinch Point
12	1	100876	Pivot Pin 2.00" X 21.14"
13	2	31290	Thrust Washer
14	2	31291	Spherical Bearing
15	2	31801	Lock Pin
16	3	9371	Grease Fitting
17	2	31798	Linkage Plates
18	4	1490	.38" UNF Jam Nut
	4	1514	.38" Flat Washer
	4	1295	.38" UNF X 1.50" Hex Capscrew
19	1	31793	Lock Handle
20	1	31795	Spring
21	1	11740	Linkage
22	4	1339	.50" UNF X 1.25" Hex Capscrew
	4	1505	.50" Lock Washer
	4	1646	.50" Hard Flat Washer
23	2	14002	Fork Pin Retainer
24	1	119438	Carriage Frame
25	1	31973	Swing Post Shaft
26	4	1393	.75" UNF X 3.00" Hex Capscrew
	4	10001	.75" UNF Deformed Lock Nut
27	1	119448	Fork Pin 2.50" X 72.00"
28	1	6133	90° Grease Fitting
29	2	1102	.50" UNC X 5.00" Hex Capscrew
	2	1505	.50" Lock Washer
	2	1228	.50" UNC Hex Nut
30	1	4338	Made in U.S.A. Decal
31	1	32187	Load Guard
32	1	----	Serial Number Identification Tag Location
33	2	31794	Bushing
34	1	1518	Thrust Washer
35	1	1614	Cotter Pin

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# SWING CARRIAGE

72" ASSEMBLY #13347

DIAGRAM 2 OF 2



M-2259 5-13-14



# SWING CARRIAGE

72" ASSEMBLY #13347

LIST 2 OF 2

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	84928	Female Quick Coupler - 8FBo
2	1	32548	Dust Cap
3	1	84923	Male Quick Coupler - 8FBo
4	1	32549	Dust Cap
5	2	3269	Straight Connector 8MBo-6MJ
6	2	37866	Hose .38" X 32" 6FJX-6FJX
7	2	31796	Klik Pin with Chain
8	2	3282	90° Bulkhead Elbow 6MJ-6MJ (Includes Nut)
9	4	37872	Hose .25" X 72" 6FJX-6FJX
10	3	3434	90° Elbow 6MBo-6MJ
11	4	6616	Grease Fitting (Included in Cylinder Assembly)
12	2	108972	Cylinder Assembly
	~	45617	Replacement Seal Kit
13	4	1293	.38" UNF X 1.00" Hex Capscrew
	4	1503	.38" Lock Washer
	4	1800	.38" Hard Flat Washer
14	2	12054	Cylinder Pin 1.00" X 3.75"
15	2	32131	Spacer
16	2	3346	Tee 6MJ-6FJX-6MJ
17	1	30259	90° Elbow 6MBo-6MJ .060" Orifice
18	2	14070	Cylinder Pin 1.00" X 4.72"

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72" ASSEMBLY #13350

This exploded view diagram illustrates the assembly of a mechanical component, likely a pump or motor housing. The components are numbered 1 through 35. The assembly is shown in a disassembled state to show the relationship between parts. Key components include a main housing (10), a top cover (9), a shaft (12), a coupling (13), a base (28), and a mounting bracket (31). The diagram shows how these parts fit together, with various bolts, nuts, and washers (e.g., 1, 2, 3, 4, 5, 6, 7, 8, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 32, 33, 34, 35) used for assembly. The exploded view is a common technical drawing used to show the relationship between parts in a product.

76834

# SWING CARRIAGE

72" ASSEMBLY #13350

LIST 1 OF 2

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	10019	1.50" UNF Castle Hex Nut
2	1	1729	Cotter Pin (2.50")
3	1	119453	Swing Lock Pin
4	2	10023	.31" UNF X 1.00" Hex Capscrew
	2	1502	.31" Lock Washer
	2	1513	.31" Flat Washer
5	1	33492	Bulkhead Bracket
6	1	1101	.50" UNC X 4.50" Hex Capscrew
	1	1841	.50" UNC Deformed Lock Nut
7	1	1860	Cotter Hair Pin
8	3	82859	Double Hose Clamp
	3	1503	.38" Lock Washer
	3	1226	.38" UNC Hex Nut
9	1	40151	Warning Decal, High Pressure Fluid
10	1	32120	Swing Carriage Frame
11	2	40149	Danger Decal, Pinch Point
12	1	33054	Pivot Pin 2.50" X 20.63"
13	2	31290	Thrust Washer
14	2	31291	Spherical Bearing
15	2	31801	Lock Pin
16	3	9371	Grease Fitting
17	2	31798	Linkage Plates
18	4	1490	.38" UNF Jam Nut
	4	1514	.38" Flat Washer
	4	1295	.38" UNF X 1.50" Hex Capscrew
19	1	31793	Lock Handle
20	1	31795	Spring
21	1	11740	Linkage
22	4	1339	.50" UNF X 1.25" Hex Capscrew
	4	1505	.50" Lock Washer
	4	1646	.50" Hard Flat Washer
23	2	14002	Fork Pin Retainer
24	1	119438	Carriage Frame
25	1	31973	Swing Post Shaft
26	4	1393	.75" UNF X 3.00" Hex Capscrew
	4	10001	.75" UNF Deformed Lock Nut
27	1	119448	Fork Pin 2.50" X 72.00"
28	1	6133	90° Grease Fitting
29	2	1102	.50" UNC X 5.00" Hex Capscrew
	2	1505	.50" Lock Washer
	2	1228	.50" UNC Hex Nut
30	1	4338	Made in U.S.A. Decal
31	1	32187	Load Guard
32	1	----	Serial Number Identification Tag Location
33	2	31794	Bushing
34	1	1518	Thrust Washer
35	1	1614	Cotter Pin

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## 72" ASSEMBLY #13350

[illegible]

76834

# SWING CARRIAGE

72" ASSEMBLY #13350

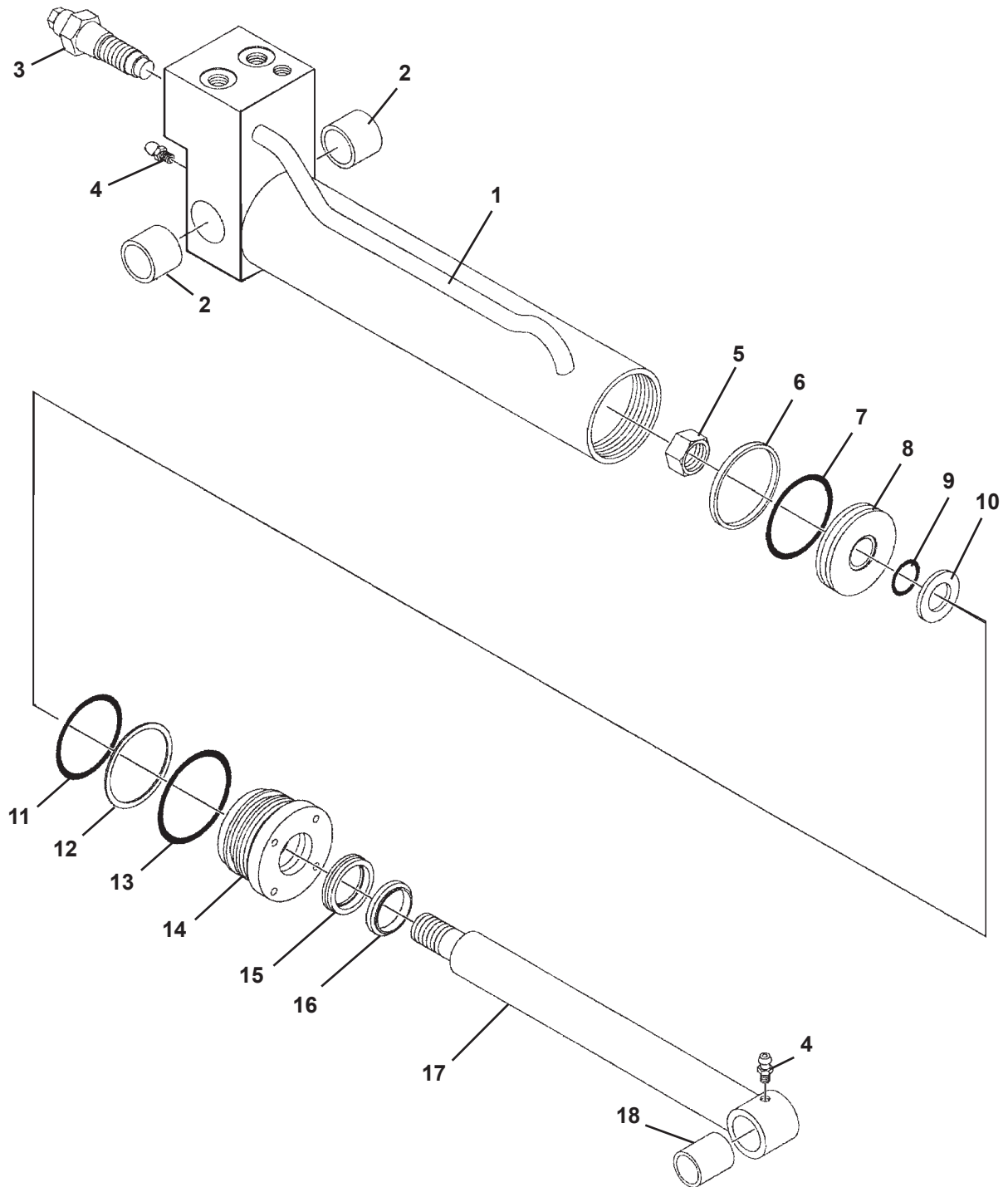
LIST 2 OF 2

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	84928	Female Quick Coupler - 8FBo
2	1	32548	Dust Cap
3	1	84923	Male Quick Coupler - 8FBo
4	1	32549	Dust Cap
5	2	3269	Straight Connector 8MBo-6MJ
6	2	37866	Hose .38" X 32" 6FJX-6FJX
7	2	31796	Klik Pin with Chain
8	2	3282	90° Bulkhead Elbow 6MJ-6MJ (Includes Nut)
9	4	37872	Hose .25" X 72" 6FJX-6FJX
10	3	3434	90° Elbow 6MBo-6MJ
11	4	6616	Grease Fitting (Included in Cylinder Assembly)
12	2	108972	Cylinder Assembly
	~	45617	Replacement Seal Kit
13	4	1293	.38" UNF X 1.00" Hex Capscrew
	4	1503	.38" Lock Washer
	4	1800	.38" Hard Flat Washer
14	2	12054	Cylinder Pin 1.00" X 3.75"
15	2	32131	Spacer
16	2	3346	Tee 6MJ-6FJX-6MJ
17	1	30259	90° Elbow 6MBo-6MJ .060" Orifice
18	2	14070	Cylinder Pin 1.00" X 4.72"

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# CYLINDER ASSEMBLY

ASSEMBLY #89117



# CYLINDER ASSEMBLY

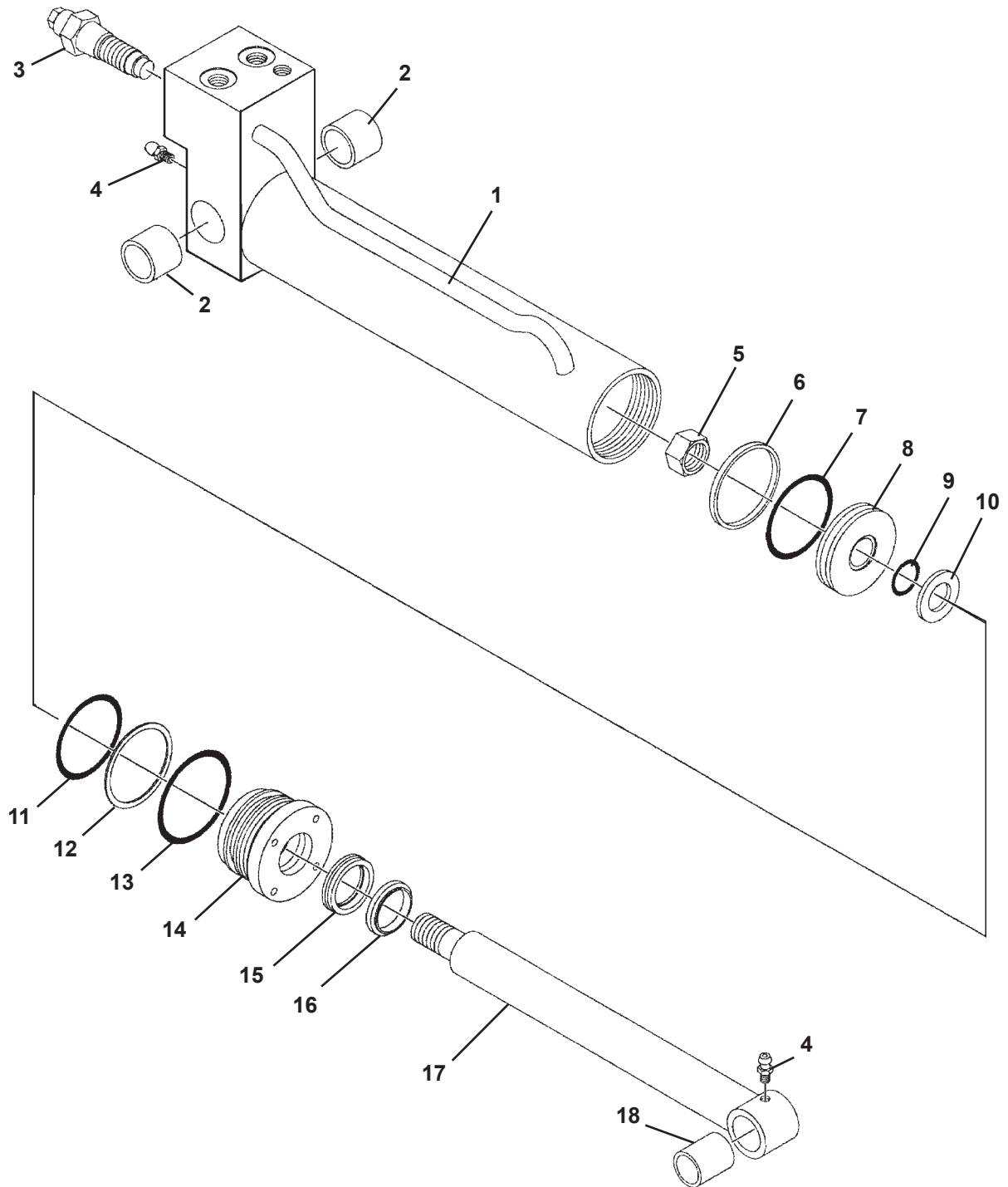
ASSEMBLY #89117

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	89118	Cylinder Tube with Valve
2	2	88919	Bronze Bushing
3	2	89120	Valve Cartridge - Over Center
4	2	6616	Grease Fitting
5	1	1483	Hex Nut
6	1	4644*	Piston Ring
7	1	4645*	O-Ring
8	1	50252	Piston
9	1	4641*	O-Ring
10	1	5421	Washer
11	1	4509*	O-Ring
12	1	4510*	Back-Up Washer
13	1	45250*	O-Ring
14	1	77458	Cylinder Gland
15	1	45219*	Polypak Seal
16	1	45389*	Rod Wiper
17	1	88915	Piston Rod
18	1	88918	Bronze Bushing

**NOTE:** Seal Kit #45617 includes all parts marked with an asterisk (\*). Parts are not sold separately.

# CYLINDER ASSEMBLY

ASSEMBLY #108972





# CYLINDER ASSEMBLY

ASSEMBLY #108972

<u>ITEM</u>	<u>QTY.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	89118	Cylinder Tube with Valve
2	2	88919	Bronze Bushing
3	2	45975	Valve Cartridge - Counter Balance
4	2	6616	Grease Fitting
5	1	1483	Hex Nut
6	1	4644*	Piston Ring
7	1	4645*	O-Ring
8	1	50252	Piston
9	1	4641*	O-Ring
10	1	5421	Washer
11	1	4509*	O-Ring
12	1	4510*	Back-Up Washer
13	1	45250*	O-Ring
14	1	77458	Cylinder Gland
15	1	45219*	Polypak Seal
16	1	45389*	Rod Wiper
17	1	88915	Piston Rod
18	1	88918	Bronze Bushing

**NOTE:** Seal Kit #45617 includes all parts marked with an asterisk (\*). Parts are not sold separately.



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**(800) 456-7100**

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