

OPERATOR'S AND PARTS MANUAL

BUCKET LOADER ATTACHMENTS

| AD11

| AD12

| AM11

| AR10

| AR12

| AY11

| AY12

| AV20F



MANUAL #5MP76314

FRONTIER™

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PREFACE

GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your attachment. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance.

These instructions have been compiled from field experience and engineering data. Some information may be general in nature, due to unknown and varying operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to your particular situation.


The illustrations and data used in this manual were current at the time of printing. However, due to possible inline production changes, your machine may vary slightly in detail. We reserve the right to redesign and change the machines as may be necessary without notification.

Throughout this manual, references are made to right and left direction. These are determined by standing behind the tractor facing the direction of forward travel.



¡LEA EL INSTRUCTIVO!

Si no lee Ingles, pida ayuda a
alguien que si lo lea para que le
truduzca lasmedidas de seguridad.

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

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 Frontier Dealer.

SERVICE

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

To facilitate parts ordering, record the model and serial number of your unit in the space provided on this page. This information may be obtained from the identification plate located on the product.

Any questions related to this attachment should be directed to your local Frontier dealer.

MODEL: _____ **DATE:** _____

SERIAL NUMBER: _____ (See parts section for location.)

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 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.

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.

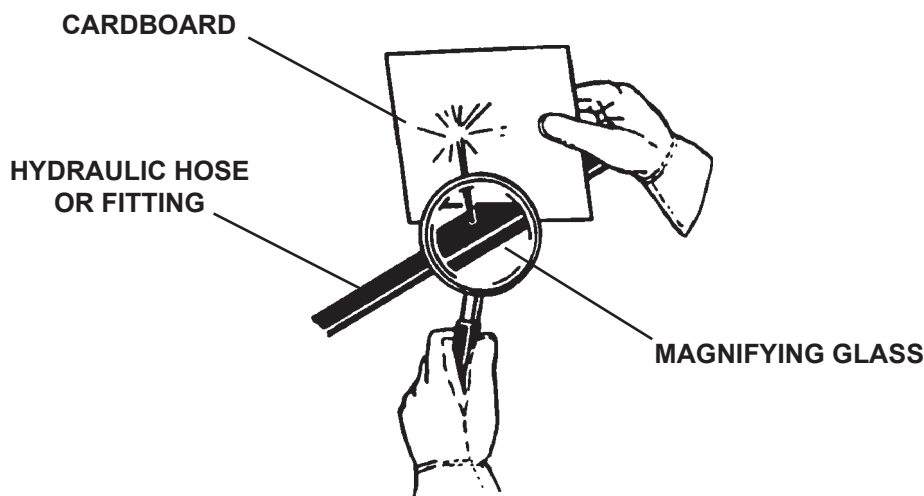
WARNING!



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 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!



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.

EQUIPMENT SAFETY PRECAUTIONS



TRANSPORTING ALL ATTACHMENTS

- Travel only with the attachment as close to the ground as possible. 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, excavations, etc., cave in could result.
- When on a slope, keep the load low and proceed with extreme caution. Do not drive ACROSS a steep slope - drive straight up and down.
 - With a LOADED attachment - face the attachment and load uphill.
 - With an EMPTY attachment - face the attachment downhill.
- Do not smoke when refueling. Allow room in the gas tank for expansion. Wipe up any spilled fuel. Secure cap tightly when done.



MAINTAINING ALL ATTACHMENTS

- Before performing maintenance, lower the attachment to the ground, apply the brakes, turn off the engine, and remove the key.
- Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from your Frontier Dealer.
- Never work under a raised attachment.



OPERATING ALL ATTACHMENTS

- Operate only from the operator's station. Always use the seat belt if the prime mover has a ROPS. Do not use a seat belt if there is not ROPS. Check the seat belt daily and replace if frayed or damaged.
- Specified lift capacities must not be exceeded. See loader specifications.
- 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.
- Never use any of these attachments for a work platform or personnel carrier.
- Always check locking pins before tilting or operating any attachment.
- Do not handle round bales unless loader is equipped with approved bale handling attachments.
- Stop loader gradually when lowering or lifting loads
- 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.
- Add the required amount of ballast or tractor. (See Preparing the Tractor section of the Loader Operator's Manual to determine the type and amount of ballast required.)

EQUIPMENT SAFETY PRECAUTIONS



ADDITIONAL PRECAUTIONS FOR AY11 & AY12 SERIES 4-IN-1 BUCKETS

- Make sure all loads are secure before lifting. If lifting with the clam and load appears to be unstable, lower the load, open the clam and reposition the load to attain full stability.
- Do not handle round bales.
- Do not exceed the lift capacity of your loader. See loader specifications.



ADDITIONAL PRECAUTIONS FOR AD11 & AD12 SERIES DEBRIS BUCKETS & AV20F ROOT GRAPPLE

- Do not heap load heavy material where the combined weight of the bucket and the material could exceed the rated lifting capacity of the loader.
- Be sure the load does not stick out too far in front of the bucket. A light load sticking out too far can have the same tipping effect as a heavy load carried in close.
- Do not exceed the lift capacity of your loader. See loader specifications.
- Make sure all loads are secure before lifting. If lifting with the grapple and the load appears to be unstable, lower the load, open the grapple and reposition the load to attain full stability.
- Do not handle round bales.



ADDITIONAL PRECAUTIONS FOR AR10 & AR12 SERIES ROCK BUCKETS

- Be sure the load does not stick out too far in front of the bucket. A light load sticking out too far can have the same tipping effect as a heavy load carried in close.
- Do not exceed the lift capacity of your loader. See loader specifications.
- Make sure all loads are secure before lifting. If lifting with the optional grapple and the load appears to be unstable, lower the load, open the grapple and reposition the load to attain full stability.
- Do not handle round bales.



ADDITIONAL PRECAUTIONS FOR AM11 SERIES MANURE FORKS WITH GRAPPLE

- Do not exceed the lift capacity of your loader. See loader specifications.
- Make sure all loads are secure before lifting. If lifting with the grapple and the load appears to be unstable, lower the load, open the grapple and reposition the load to attain full stability.
- Do not handle round bales.

SET-UP

GENERAL INFORMATION

The AY11 & AY12 Series 4-in-1 buckets, the AD11 & AD12 Series debris buckets, the AR10 & AR12 Series rock buckets, the AV20 root grapple and the AM11 Series Manure Fork with Grapple are shipped completely assembled and ready to install without any set-up required.

The optional grapple and hydraulic kit for the 66" and 75" rock buckets will need to be installed on the rock bucket before use.

GRAPPLE ASSEMBLY AND HYDRAULIC KIT INSTALLATION

Before installing the grapple assembly onto your rock bucket, park the tractor on a level surface with an overhead hoist available and with the rock bucket properly attached. Lower the bucket to the ground, turn off the engine, remove the key and apply the brakes.

1. With the grapple properly attached to the overhead hoist, lift the grapple and center it on the rock bucket.
2. Lower the rear columns into position over the top tubes on the back of the rock bucket.
3. Rotate the grapple up slightly to bring the bottom of the rear columns up against the bottom tube. Install the U-bolts supplied around the bottom tube and through the rear columns. Secure in place with the 1/2" hard flat washer and deformed lock nuts provided.
4. Install the two power and return lines to the bulkhead tees on the back right side of the grapple followed by the straight connectors and the couplers required for your loader.

NOTE:

- The 100/200/300/400 loaders require 5MP3457 straight connectors, 5MP106515 male coupler and 5MP106516 female coupler.
- The 600/700/Global Carrier loaders require 5MP3362 straight connectors and 5MP15512 male couplers with dust caps.
- The 800 loader requires 5MP3362 straight connectors, 5MP15512 male coupler, 5MP31886 female coupler, and one each dust plug and dust cap. Grapple Assembly and Hydraulic Kit Installation

INSTALLATION

ATTACHING

1. Attaching the equipment listed in this manual is the same as attaching a standard bucket. Follow the attaching instructions in your specific loader manual.
2. If a grapple or 4-in-1 bucket is being installed, relieve pressure from the auxiliary hydraulic lines to be used with equipment per the manufacturer's manual.
3. Make sure the hydraulic couplers are free from any foreign material or contaminants and connect the hydraulic lines of the equipment to the tractor.
4. Route the hoses in such a fashion that they will not be damaged during operation.
5. Start the tractor and put the loader and auxiliary functions through full range of motion to check proper function and hose routing.
6. Attachment installation is complete.

DETACHING

1. Choose a level place (max 8 degree incline) to detach the equipment.
2. Close the grapple or clam (if so equipped) and lower the unit to the ground.
3. If auxiliary hydraulics are attached, relieve hydraulic pressure per the manufacturer's manual and disconnect the hydraulic couplers.
4. Follow the detaching instruction in your specific loader manual.
5. Connect hydraulic couplers (if so equipped) together or install caps to prevent contaminants from entering the hydraulic system. Drape the lines over the top of the equipment or otherwise store hoses off of the ground to help prevent damage.

INSTALLATION

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 hardware and hydraulic connections.
- Coat exposed portions of the cylinder rods with grease (if so equipped).
- Lubricate grease fittings (if so equipped).
- Seal hydraulic system from contaminants by connecting hydraulic couplers together or installing caps and secure all hydraulic hoses off the ground to help prevent damage.
- Replace decals that are damaged or in unreadable condition.
- Store unit in a dry and protected place. Leaving the unit outside will shorten its life.

Additional Precautions for Long Term Storage:

- Touch up all unpainted surfaces with paint to prevent rust.

REMOVAL FROM STORAGE:

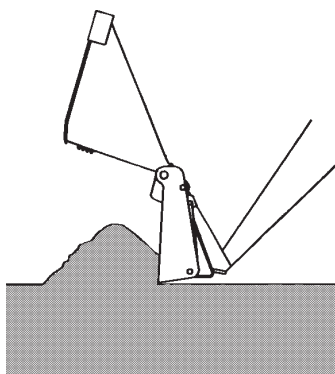
- Wash and inspect the unit. Replace any damaged and/or missing parts.
- Lubricate grease fittings (if so equipped).
- Check hydraulic hoses for damage and replace as necessary.

4-IN-1 BUCKET OPERATION

AY11 & AY12 SERIES 4-IN-1 BUCKETS

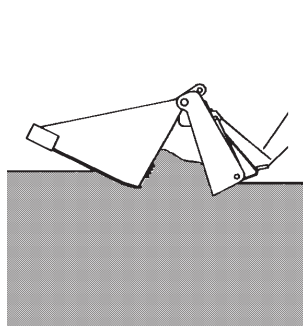
Read all Safety Precautions before operating your new attachment.
Refer to your machines operator's manual for attachment operation.

All AY11 & AY12 Series 4-IN-1 buckets are designed for various functions such as, digging with the bucket, grabbing with the clam, bulldozing, scraping or backfilling with the back blade and bottom dumping.



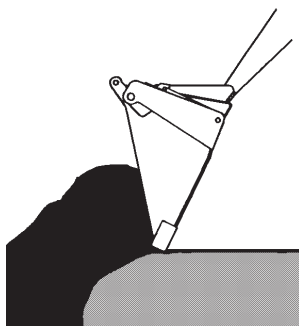
BULLDOZING

For all industry uses: road maintenance, clean up, grading, etc.



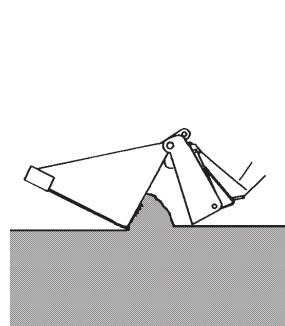
CLAM

Handles the hard to pick up material with ease. Complete control of loading.



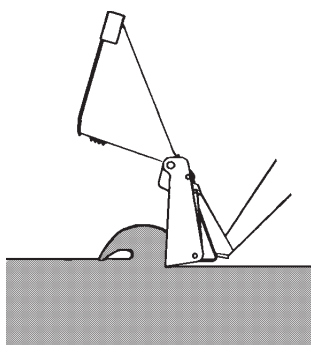
BACKFILLING

Backfilling is no problem.



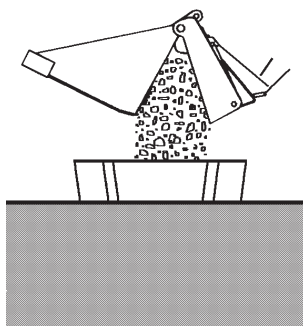
BACKDRAG

For working in close quarters such as between buildings and among trees.



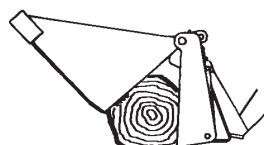
SCRAPING

Cleaning yards, leveling lawns: a landscaper's bucket.



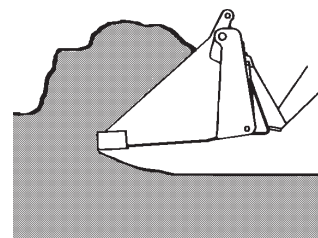
BOTTOM DUMPING

Ideal for trench filling or dumping into a container.



GRAB

Handles all undesirable loading: brush, timbers and all bulky materials.



DIGGING

Same as all conventional buckets.

4-IN-1 BUCKET OPERATION

AY11 & AY12 SERIES 4-IN-1 BUCKETS



Operate the attachment only when properly seated at the operator's station.

Do not exceed the lift capacity of your loader. See loader specifications.

Do not handle round bales.

When using the clam, lift the load slightly and make sure that the load is secure. If the load appears to be unstable, lower the load, open the clam and reposition the load to attain full stability.

Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.

Avoid side slope travel whenever possible. Drive up the slope to pick up a load and then down in reverse. Carry loads as close to the ground as possible.

Before exiting the prime mover, lower the bucket to the ground, turn off the prime mover's engine, remove the key and apply the brakes.

Do not detach loader from tractor with this attachment installed. Equip loader with materials bucket when detaching.

DEBRIS BUCKET OPERATION

AD11 & AD12 SERIES DEBRIS BUCKETS

**Read all Safety Precautions before operating your new attachment.
Refer to your machines operator's manual for attachment operation.**

All AD11 & AD12 Series debris buckets are designed to pick up bulky, unusually shaped, or long materials that would not stay in an ordinary bucket.

1. Approach the load in such a fashion that the weight will be centered on the floor of the bucket. The heaviest side should be closest to the back of the bucket and not near the bucket edge.
2. Before lifting, make certain the bucket is completely under the load and the bucket floor is level.
3. Close the grapples to their fullest extent possible and lift the bucket slightly to be certain that the load is secure.

NOTE: If the load appears to be unstable, lower the bucket to the ground, open the grapples and reposition the load to attain full stability. Repeat until full stability is achieved.

When using the grapples as a rake to drag materials into position for pick up, THE GRAPPLES MUST BE COMPLETELY OPEN.

NOTICE Applying a raking-type force to partially open grapples will greatly magnify the fluid pressure in the hydraulic hoses, fittings, and cylinders and may cause component failure.



Never heap load heavy material where the combined weight of the bucket and material could exceed the rated lifting capacity of the loader.

Be sure the load does not stick out too far in front of the bucket. A light load sticking out too far can have the same tipping effect as a heavy load carried in close.

Operate the attachment only when properly seated at the operator's station.

Do not exceed the lift capacity of your loader. See loader specifications.

Do not handle round bales.

When using the grapple, lift the load slightly and make sure that the load is secure. If the load appears to be unstable, lower the load, open the grapple and reposition the load to attain full stability.

Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.

Avoid side slope travel whenever possible. Drive up the slope to pick up a load and then down in reverse. Carry loads as close to the ground as possible.

Before exiting the prime mover, lower the bucket to the ground, turn off the prime mover's engine, remove the key and apply the brakes.

Do not detach loader from tractor with this attachment installed. Equip loader with materials bucket when detaching.

ROOT GRAPPLE OPERATION

AV20F ROOT GRAPPLE

**Read all Safety Precautions before operating your new attachment.
Refer to your machines operator's manual for attachment operation.**

All AV20F root grapple is designed to pick up bulky, unusually shaped, or long materials that would not stay in an ordinary bucket. In addition the root grapple is designed to rake large debris into a pile for easy pick up while leaving the soil and small rocks etc.

1. Approach the load in such a fashion that the weight will be centered in the grapple.
2. Close the grapple to its fullest extent possible and lift the attachment slightly to be certain that the load is secure.

NOTE: If the load appears to be unstable, lower the load to the ground, open the grapple and reposition the load to attain full stability. Repeat until full stability is achieved.

When using the grapple as a rake to drag materials into position for pick up, THE GRAPPLE MUST BE COMPLETELY OPEN.

NOTICE Applying a raking-type force to a partially open grapple will greatly magnify the fluid pressure in the hydraulic hoses, fittings, and cylinder and may cause component failure.

After all large debris has been removed and the area raked clean, lower the root grapple to the ground and while traveling in reverse, back drag the surface for a more finished look.



Never heap load heavy material where the combined weight of the attachment and material could exceed the rated lifting capacity of the loader. Be sure the load does not stick out too far in front of the attachment. A light load sticking out too far can have the same tipping effect as a heavy load carried in close.

Operate the attachment only when properly seated at the operator's station. Do not exceed the lift capacity of your loader. See loader specifications.

Do not handle round bales.

When using the grapple, lift the load slightly and make sure that the load is secure. If the load appears to be unstable, lower the load, open the grapple and reposition the load to attain full stability.

Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.

Avoid side slope travel whenever possible. Drive up the slope to pick up a load and then down in reverse. Carry loads as close to the ground as possible.

Before exiting the prime mover, lower the attachment to the ground, turn off the prime mover's engine, remove the key and apply the brakes.

ROCK BUCKET OPERATION

AR10 & AR12 SERIES ROCK BUCKETS

**Read all Safety Precautions before operating your new attachment.
Refer to your machines operator's manual for attachment operation.**

All AR10 & AR11 Series rock buckets are designed to collect rocks and debris, allowing the soil to sift through. The rake design is used for fast clean-up, ground leveling, sifting out debris and rocks, and gathering material away from buildings and obstructions.

1. Approach the load in such a fashion that the weight will be centered on the floor of the bucket. The heaviest side should be closest to the back of the bucket and not near the bucket edge.
2. Before lifting, make certain the bucket is completely under the load and the bucket floor is level.

OPTIONAL GRAPPLE OPERATION

The optional grapple fits all AR10 66" & 75" Series rock buckets. The grapple was designed with added structure between the grapple arms to trap and contain debris.

1. Follow Steps 1 and 2 above.
2. Close the grapples to their fullest extent possible and lift the bucket slightly to be certain that the load is secure.

NOTE: If the load appears to be unstable, lower the bucket to the ground, open the grapples and reposition the load to attain full stability. Repeat until full stability is achieved.

When using the grapples as a rake to drag materials into position for pick up, THE GRAPPLES MUST BE COMPLETELY OPEN.

NOTICE Applying a raking-type force to partially open grapples will greatly magnify the fluid pressure in the hydraulic hoses, fittings, and cylinders and may cause component failure.



Operate the attachment only when properly seated at the operator's station. Do not exceed the lift capacity of your loader. See loader specifications.

Do not handle round bales.

When using the grapple, lift the load slightly and make sure that the load is secure. If the load appears to be unstable, lower the load, open the grapple and reposition the load to attain full stability.

Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.

Avoid side slope travel whenever possible. Drive up the slope to pick up a load and then down in reverse. Carry loads as close to the ground as possible.

Before exiting the prime mover, lower the bucket to the ground, turn off the prime mover's engine, remove the key and apply the brakes.

Do not detach loader from tractor with this attachment installed. Equip loader with materials bucket when detaching.

MANURE FORK AND GRAPPLE OPERATION

AM11 SERIES MANURE FORK AND GRAPPLES

**Read all Safety Precautions before operating your new attachment.
Refer to your machines operator's manual for attachment operation.**

All AM11 Series manure fork and grapples are designed for moving loose hay, manure, brush and small branches.

1. Depending on the material being moved, approach so the fork tines are either centered under the load (brush or branches) or "stabbing" into the load (pile of hay or manure).
2. Close the grapples to their fullest extent possible and lift the attachment slightly to be certain that the load is secure.

NOTE: If the load appears to be unstable, lower the forks to the ground, open the grapples and reposition the load to attain full stability. Repeat until full stability is achieved.

When using the grapples as a rake to drag materials into position for pick up, THE GRAPPLES MUST BE COMPLETELY OPEN.

NOTICE Applying a raking-type force to partially open grapples will greatly magnify the fluid pressure in the hydraulic hoses, fittings, and cylinders and may cause component failure.



Never heap load heavy material where the combined weight of the attachment and material could exceed the rated lifting capacity of the loader. Be sure the load does not stick out too far in front of the bucket. A light load sticking out too far can have the same tipping effect as a heavy load carried in close.

Operate the attachment only when properly seated at the operator's station. Do not exceed the lift capacity of your loader. See loader specifications. Do not handle round bales.

When using the grapple, lift the load slightly and make sure that the load is secure. If the load appears to be unstable, lower the load, open the grapple and reposition the load to attain full stability.

Reduce speed when driving over rough terrain, on a slope, or turning, to avoid overturning the vehicle.

Avoid side slope travel whenever possible. Drive up the slope to pick up a load and then down in reverse. Carry loads as close to the ground as possible.

Before exiting the prime mover, lower the bucket to the ground, turn off the prime mover's engine, remove the key and apply the brakes.

Do not detach loader from tractor with this attachment installed. Equip loader with materials bucket when detaching.

MAINTENANCE

GENERAL INFORMATION

Your attachment was designed to be virtually maintenance free. Very little effort is needed to keep it in top condition. It is, however, important to follow these procedures to get full performance and longevity out of the equipment.

IMPORTANT: When replacing parts, use only factory approved replacement parts. Manufacturer will not accept responsibility for use of unapproved parts or accessories and/or other damages as a result of their use.

LUBRICATION

The only lubrication your attachment may need is the greasing of the cylinder ends and most pivot points. A grease fitting has been installed to facilitate this task. Following is a list of each of the attachments in this manual that require lubricating and the number of grease fittings. We recommend greasing all grease fittings after the initial 8 hours of operation and then every 40 hours of operation thereafter.

AY11 & AY12 Series 4-IN-1 Buckets = 6 (One fitting on each end of cylinders and on each clam/back blade pivot pin.) AY11F ONLY = 2 (One fitting on each clam/back blade pivot pin.)

AD11 & AD12 Series Debris Buckets = 8 (One fitting on each end of cylinders and on each grapple pin.)

AV20F Root Grapple = 2 (One fitting on each grapple pin.)

AR10 & AR12 Rock Bucket Grapple = 6 (One fitting on each end of cylinders and on each grapple pin.)

AM11 Series Manure Fork and Grapple = 2 (One fitting on each end of cylinder.)

DAILY OR EVERY 8 HOURS OF OPERATION

Replace any missing bolts or nuts with approved replacement parts.

Check hydraulic system for leaks. (If so equipped.) See procedure below.

Visually inspect the machine for worn parts or cracked welds. Repair as necessary.

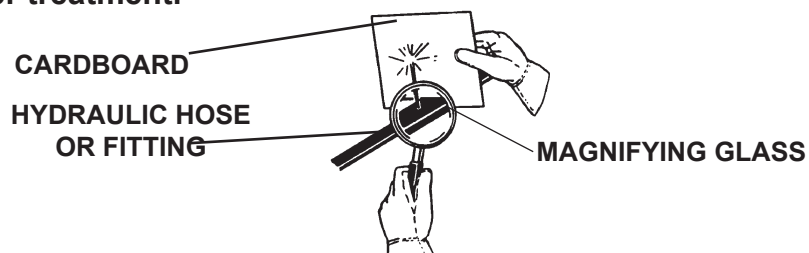
Replace any damaged, illegible or missing decals. See Decal Identification and Replacement

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.



MAINTENANCE

AV20F BRUSH GUARD KIT REPLACEMENT

Before installing the replacement brush guard kit onto your root grapple, park the tractor on a level surface, lower the attachment to the ground, turn off the engine, remove the key and apply the brakes.

1. Position the brush guard, coming up from the bottom, onto the grapple.
2. Secure in place with the 3/8" flange bolts and lock nuts provided.
3. Torque to specifications listed on the Bolt Torque Specifications page in this manual.

DECAL IDENTIFICATION AND REPLACEMENT

Decal placement and identification for all of the attachments can be found on the parts diagrams and lists located at the back of this manual. The decals are identified by their part numbers with reductions of the actual decals located on the page. Use this information to order replacements for missing, illegible or damaged deals. When replacing parts with safety signs attached, the safety sign must also be replaced. All Safety Decals are free of charge. Contact your local Frontier dealer for replacements.

REPLACING SAFETY SIGNS:

1. Clean the area of application with nonflammable solvent.
2. Wash the same area with soap and water.
3. Allow the surface to fully dry.
4. Remove the backing from the safety sign exposing the adhesive surface.
5. Apply the safety sign to the location shown in the parts diagram.
6. Smooth out any bubbles.

Helpful Hints: (1) Decals adhere to a warm surface better than a cold surface. (2) Applying heat (from a hair dryer) will greatly improve your ability to remove a damaged decal before preparing the surface for installation of a new one.

MONTHLY OR EVERY 40 HOURS OF OPERATION

Check all bolts, nuts and bearings for tightness. Tighten or replace as needed.

Clean equipment of dirt, oil, grease, etc. This will assist you in making a visual inspection and help avoid overlooking worn or damaged components.

MAINTENANCE

WARNING! Disconnect cylinder carefully from hydraulic hoses after removal from attachment. Hydraulic oil under pressure can cause severe injury or death.



CYLINDER SEAL REPLACEMENT

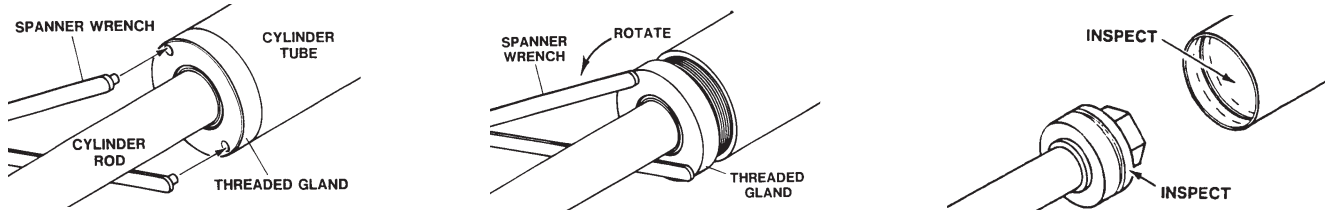
The following information is provided to assist you in the event you should need to repair or rebuild a hydraulic cylinder. When working on hydraulic cylinders, make sure that the work area and tools are clean and free of dirt to prevent contamination of the hydraulic system and damage to the hydraulic 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

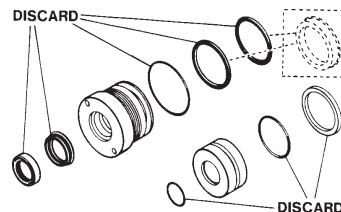
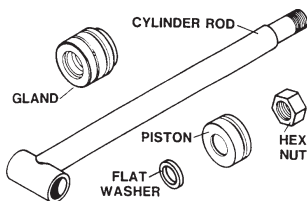
IMPORTANT: Do not contact the active surface of the cylinder rod with the vise. Damage to the rod could result.

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.



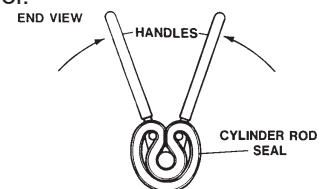
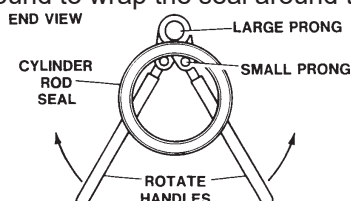
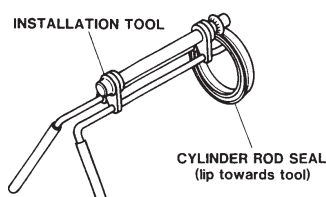
ASSEMBLY PROCEDURE

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 #5MP65349) 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.



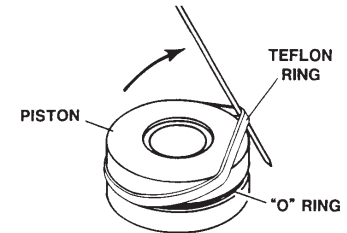
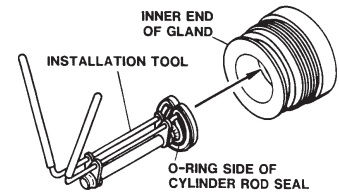
MAINTENANCE

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.

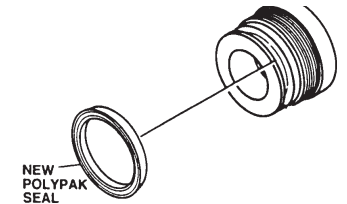
Be careful not to damage the seals. Caution must be used when installing the piston ring. The ring must be stretched carefully over the piston with a smooth, round, pointed tool.

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



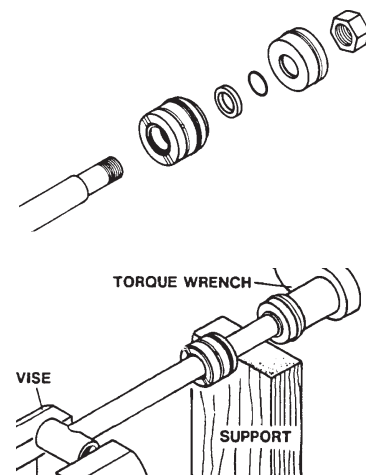
NOTE: Threaded glands may have been equipped with a separate O-ring and backup washer system or a polypak (all in one) type seal. Current seal kits contain a polypak (all in one) type seal to replace the discarded seal types on ALL THREADED GLANDS.

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.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
GRAPPLE OR CLAM FUNCTIONS SLOWLY	Cold Oil.	Warm oil at idle speed.
	Oil leaking past cylinder packings.	Replace cylinder seal kit.
	Obstruction in hydraulic lines.	Remove obstruction.
GRAPPLE OR CLAM FAILS TO FUNCTION.	Low oil supply.	Add oil.
	Improper hose hook-up.	Reinstall properly.
	Broken hydraulic line.	Check for leaks and replace.
	Bent cylinder rod.	Replace.
	Damaged hydraulic coupler.	Replace.
	Insufficient lubrication at pivot points.	Lubricate pivot points.
INSUFFICIENT CLAMPING FORCE.	Oil leaking past cylinder packings.	Replace cylinder seal kit.
	Damaged or loose piston in hydraulic cylinder.	Tighten or replace piston.
EXTERNAL LEAKAGE.	Damaged or loose hydraulic line or fitting.	Tighten or replace.
	Damaged hydraulic coupler.	Replace.
	Oil leaking past cylinder packings.	Replace cylinder seal kit.

SPECIFICATIONS

LOADER SERIES COMPATIBILITY:

A=800 SERIES D=600/700 SERIES E=300/400/500 SERIES F=100/200/300/400/500 SERIES
G=GLOBAL CARRIER SERIES H=300/400 SERIES

AY11 & AY12 SERIES 4-IN-1 BUCKET SPECIFICATIONS

Model Compatibility & Size	<u>AY11F 53"</u>	<u>AY11H 60"</u>	<u>AY12D 72"</u>	<u>AY11E 72"</u>	<u>AY12G 72"</u>	<u>AY12D 78"</u>
Overall Height (inches)	20.63	26.5	27.94	26.5	27.94	27.94
Overall Width (inches)	53	60	72	72	72	78
Overall Length (inches)	25	28.38	38.12	28.38	38.12	38.12
Clam Opening (inches)	32	28.45	35	28.45	35	35
Attachment Weight (lbs.)	282	360	920	425	900	955
Shipping Weight (lbs.)	302	400	960	465	940	995

AY11 & AY12 SERIES 4-IN-1 BUCKET SPECIFICATIONS

Model Compatibility & Size	<u>AY12G 78"</u>	<u>AY12D 84"</u>	<u>AY12G 84"</u>
Overall Height (inches)	27.94	27.94	27.94
Overall Width (inches)	78	84	84
Overall Length (inches)	38.12	38.12	38.12
Clam Opening (inches)	35	35	35
Attachment Weight (lbs.)	935	995	975
Shipping Weight (lbs.)	975	1035	1015

AD11 & AD12 SERIES DEBRIS BUCKET SPECIFICATIONS

Model Compatibility & Size	<u>AD11H 60"</u>	<u>AD11E 72"</u>	<u>AD12D 76"</u>	<u>AD12G 76"</u>	<u>AD12D 82"</u>	<u>AD12G 82"</u>
Overall Height (inches)	28.7	28.8	29	29	29	29
Overall Width (inches)	62.4	72.8	77	77	83	83
Overall Length (inches)	32.5	34.5	41	39	41	39
Grapple Opening (inches)	32.5	34.7	39.4	39.4	39.4	39.4
Attachment Weight (lbs.)	560	635	1100	1080	1150	1130
Shipping Weight (lbs.)	610	685	1150	1130	1200	1180

AD11 & AD12 SERIES DEBRIS BUCKET SPECIFICATIONS

Model Compatibility & Size	<u>AD12D 88"</u>	<u>AD12G 88"</u>	<u>AD12D 96"</u>	<u>AD12G 96"</u>
Overall Height (inches)	29	29	29	29
Overall Width (inches)	89	89	96	96
Overall Length (inches)	41	39	41	39
Grapple Opening (inches)	39.4	39.4	39.4	39.4
Attachment Weight (lbs.)	1200	1180	1250	1230
Shipping Weight (lbs.)	1250	1230	1300	1280

AV20F ROOT GRAPPLE SPECIFICATIONS

Model Compatibility & Size	<u>AV20F 53"</u>
Overall Height (inches)	25
Overall Width (inches)	53
Overall Length (inches)	23.2
Grapple Opening (inches)	36
Attachment Weight (lbs.)	203
Shipping Weight (lbs.)	223

AR10 SERIES ROCK BUCKET SPECIFICATIONS

Model Compatibility & Size	<u>AR10H 55"</u>	<u>AR10E 66"</u>	<u>AR10D 75"</u>	<u>AR10E 75"</u>	<u>AR10G 75"</u>
Overall Height (inches)	21.28	21.4	25.18	21.38	21.75
Overall Width (inches)	54.75	68.31	74.65	74.65	74.5
Overall Length (inches)	22.85	45	50.65	45	47.8
Opt. Grapple Opening (inches)	NA	63.5	63.5	63.5	63.5
Opt. Grapple Width (inches)	NA	63.62	63.62	63.62	63.62
Tine Diameter (inches)	1.12	1.12	1.12	1.12	1.12
Tine Spacing (inches)	2	2 or 3	2 or 3	2 or 3	2 or 3
Attachment Weight (3" spacing-w/o grapple)	620 (2" Spacing)	458	601	528	516
Shipping Weight (3" spacing-w/o grapple)	655 (2" Spacing)	493	638	563	551

SPECIFICATIONS

LOADER SERIES COMPATIBILITY:

A=800 SERIES D=600/700 SERIES E=300/400/500 SERIES F=100/200/300/400/500 SERIES

G=GLOBAL CARRIER SERIES H=300/400 SERIES

AR12 SERIES ROCK BUCKET SPECIFICATIONS

Model Compatibility & Size	AR12A 84"	AR12D 84"	AR12G 84"	AR12A 93"	AR12D 93"	AR12G 93"
Overall Height (inches)	34.83	35	35	35	35	35
Overall Width (inches)	85	85	85	85	94.15	94.15
Overall Length (inches)	61	57.5	55.62	55.62	57.5	55.62
Opt. Grapple Opening (inches)	63.5	63.5	63.5	NA	NA	NA
Opt. Grapple Width (inches)	63.62	63.62	63.62	NA	NA	NA
Tine Diameter (inches)	1.62	1.62	1.62	1.62	1.62	1.62
Tine Spacing (inches)	2 or 3	3	3	3	3	3
Attachment Weight (3" spacing-w/o grapple)	1536	1575	1480	1679	1718	1623
Shipping Weight (3" spacing-w/o grapple)	1571	1610	1515	1714	1753	1658

AM11 SERIES MANURE FORK AND GRAPPLE SPECIFICATIONS

Model Compatibility & Size	AM11H 60"	AM11E 72"	AM11D 84"	AM11G 84"	AM11D 96"	AM11G 96"
Overall Height (inches)	26.5	26.5	27.5	24	27.5	24
Overall Width (inches)	60	72	84	84	96	96
Overall Length (inches)	34	34	26	35	26	35
Grapple Opening (inches)	37	37	37	37	37	37
Attachment Weight (lbs.)	457	471	587	537	651	601
Shipping Weight (lbs.)	507	521	637	587	701	651

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BOLT TORQUE

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	19	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	




GRADE 2



GRADE 5






GRADE 8



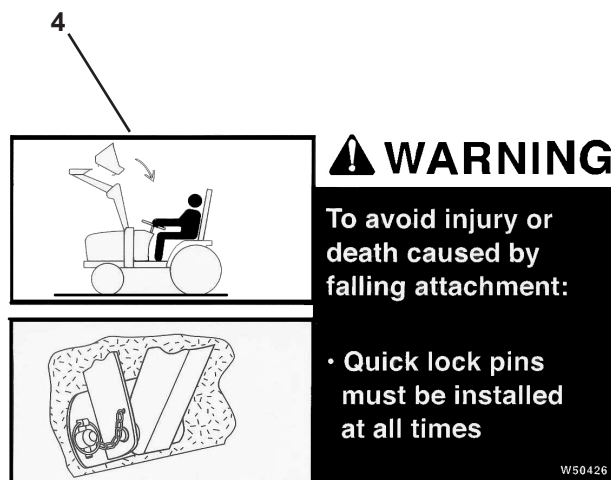
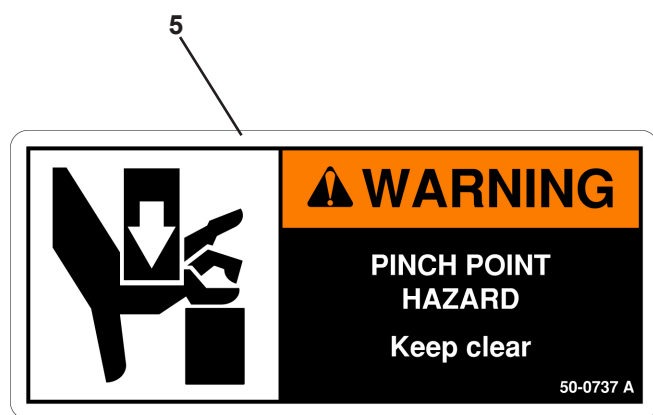
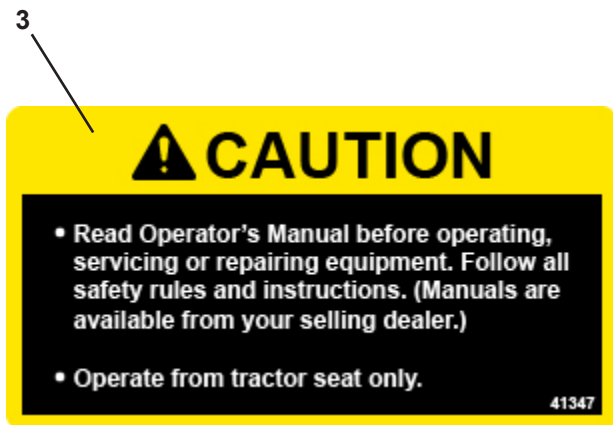
METRIC BOLT TORQUE SPECIFICATIONS

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

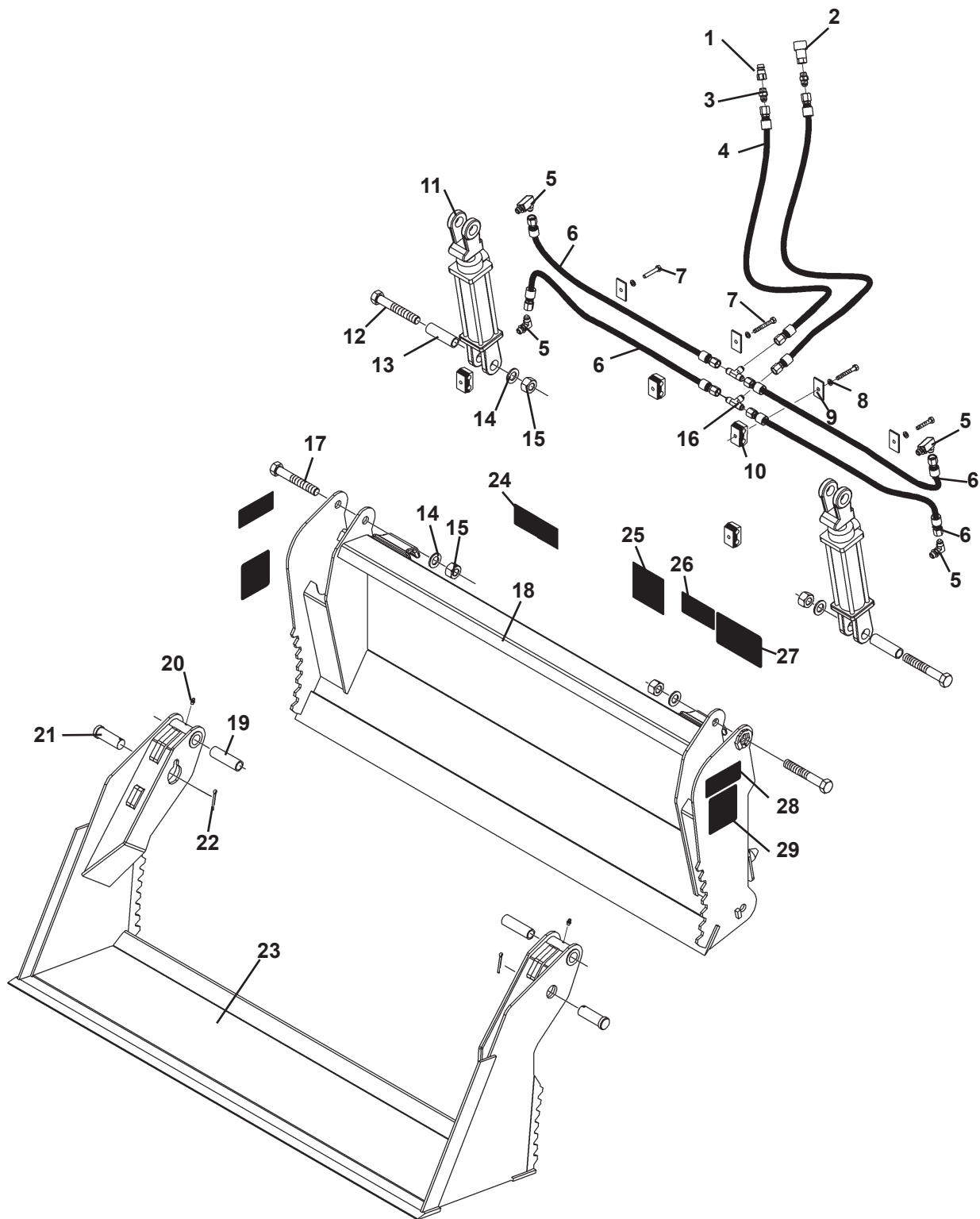
REPLACEMENT DECALS



REPLACEMENT DECALS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	---	Serial Number Identification Tag Location
2	1	5MP40151	Warning Decal, High Pressure Fluid
3	1	5MP41347	Caution Decal, Read Manual
4	1	5FPW50426	Warning Decal, Lock Pins
5	2	5FP500737	Warning Decal, Pinch Points
6	2	5FPRDL3125	Warning Decal, Crushing Hazard

AY11F 53" 4-IN-1 BUCKET **100, 200 & 300 SERIES LOADERS**

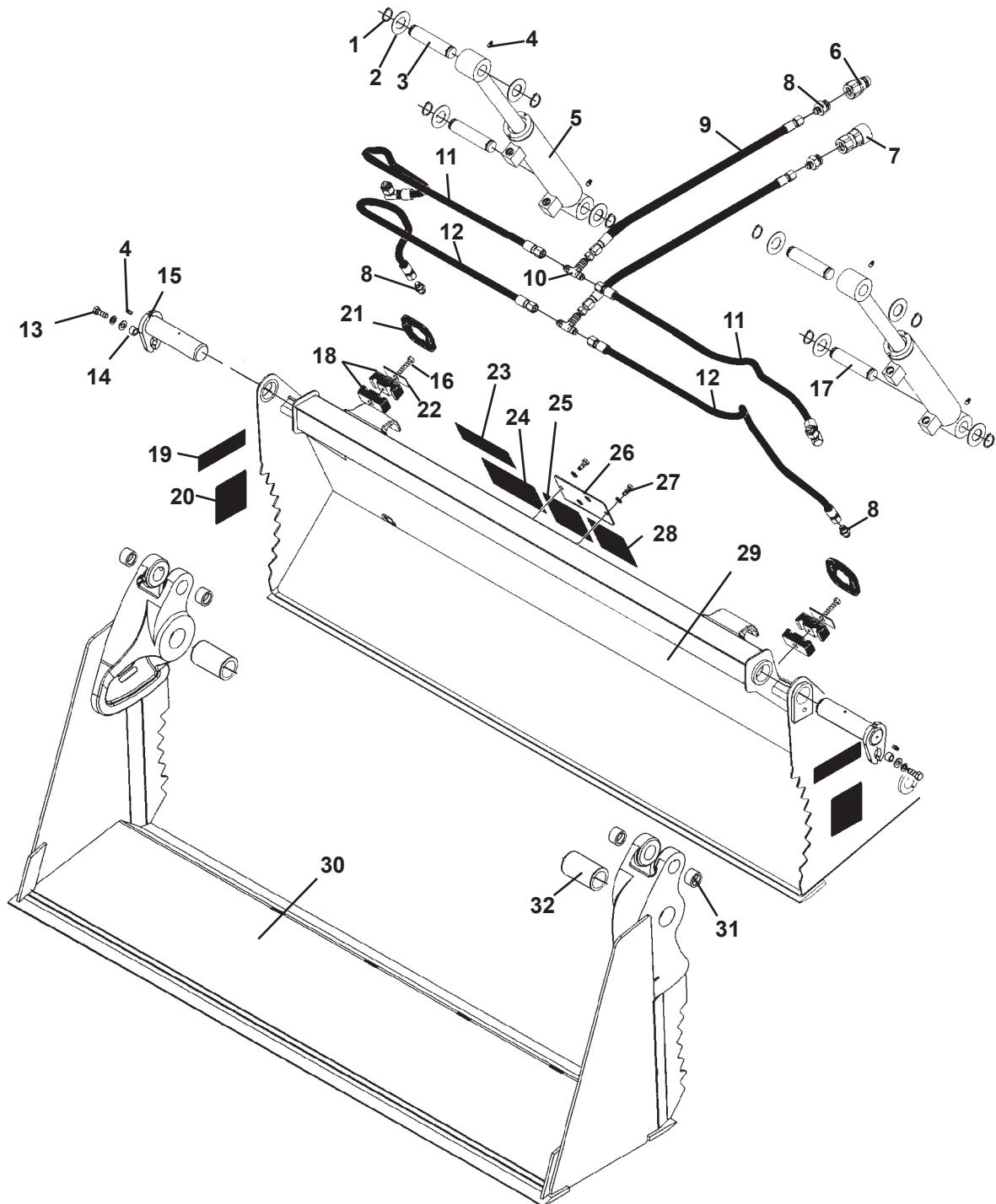


AY11F 53" 4-IN-1 BUCKET

100, 200 & 300 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP106515	Male Coupler 6FBo 1/4" Body
2	1	5MP106516	Female Coupler 6FBo 1/4" Body
3	2	5MP3457	Straight Connector 6MBo-6MJ
4	2	5MP37520	1/4" Hose X 42" 6FJX-6FJX
5	4	5MP3434	6MBo-6MJ 90° Elbow
6	4	5MP37421	1/4" Hose X 25" 6FJX-6FJX
7	4	5MP1024	5/16" UNC X 1-1/2" Hex Bolt
8	4	5MP1502	5/16" Lock Washer
9	4	5MP103183	Hose Clamp Plate
10	4	5MP103180	Hose Clamp
11	2	5MP124202	Cylinder Assembly
12	2	5MP10122	3/4" UNC X 5" Hex Bolt - GR8
13	2	5MP124201	Bushing
14	4	5MP1649	3/4" Hard Flat Washer
15	4	5MP1936	3/4" UNC Deformed Lock Nut
16	2	5MP3314	Tee 6MJ-6MJ-6MJ
17	2	5MP10122	3/4" UNC X 5" Hex Bolt - GR8
18	1	5MP124181	Back Blade
19	2	5MP124201	Bushing
20	2	5MP6616	Grease Fitting
21	2	5MP5097	Pivot Pin 1" X 2-7/16"
22	2	5MP1793	Cotter Pin
23	1	5MP124190	Clam
24	1	---	Serial Number Identification Tag Location
25	1	5MP40151	Warning Decal, High Pressure Fluid
26	1	5MP41347	Caution Decal, Read Manual
27	1	5FPW50426	Warning Decal, Lock Pins
28	2	5FP500737	Warning Decal, Pinch Points
29	2	5FPRDL3125	Warning Decal, Crushing Hazard

AY11H 60" 4-IN-1 BUCKET **300 & 400 SERIES LOADERS**



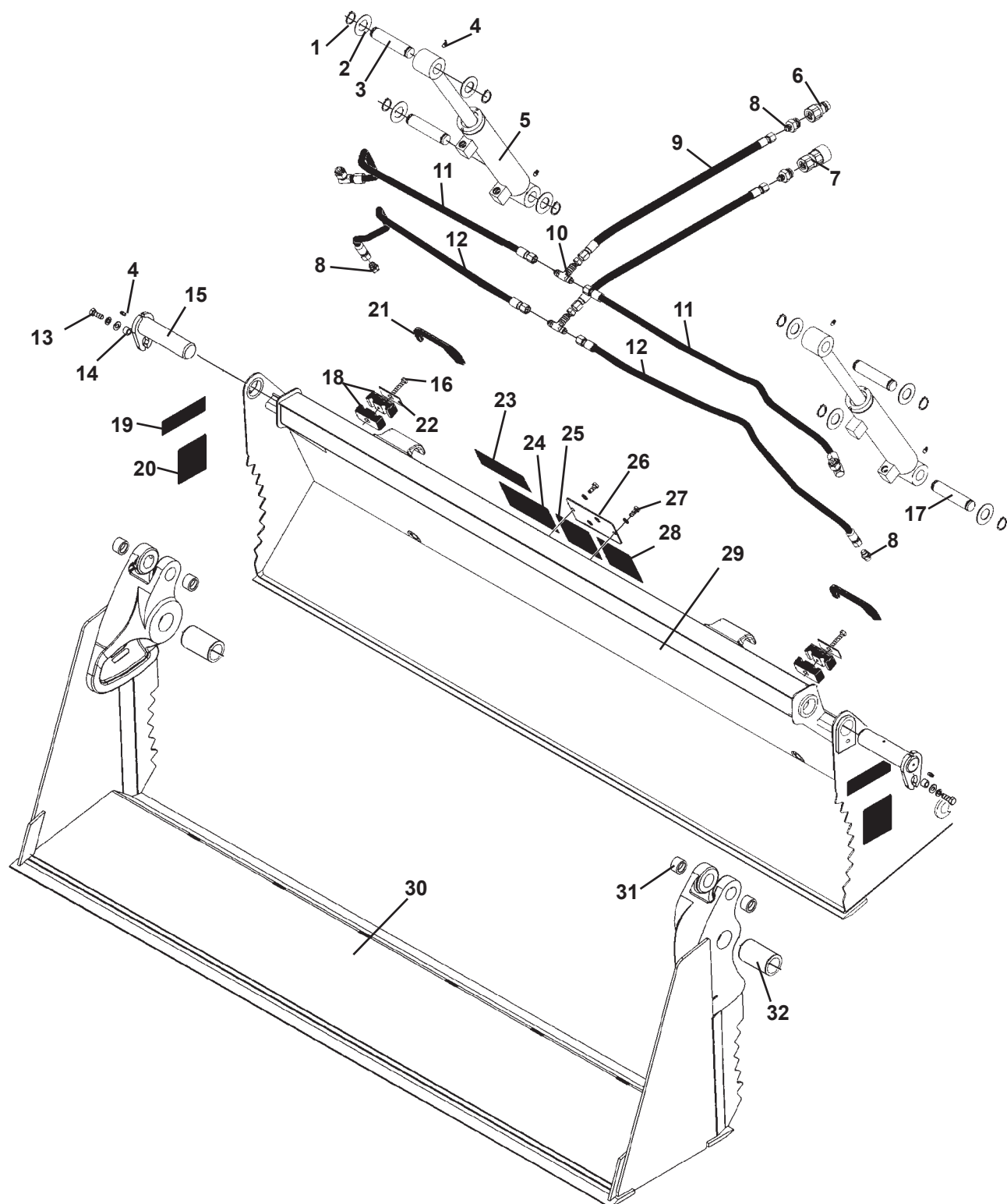
AY11H 60" 4-IN-1 BUCKET

300 & 400 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	8	5MP6612	Snap Ring
2	8	5MP57462	Thrust Washer
3	2	5MP107569	Pivot Pin 1" x 3-7/8"
4	6	5MP6616	Grease Fitting
5	2	5MP106528	Cylinder Assembly
6	1	5MP106515*	Male Coupler 6FBo 1/4" Body
7	1	5MP106516*	Female Coupler 6FBo 1/4" Body
8	4	5MP3457	Straight Connector 6MBo-6MJ
9	2	5MP35829	1/4" Hose X 60" 6FJX-6FJX
10	2	5MP3498	Bulkhead Tee 6MJ-6MJ-6MJ
11	2	5MP38473	1/4" Hose X 36-1/2" 6FJX-6MBoX 90°
12	2	5MP38472	1/4" Hose X 40-1/2" 6FJX-6FJX
13	2	5MP1043	3/8" UNC X 1" Hex Bolt
	2	5MP1503	3/8" Lock Washer
	2	5MP1800	3/8" Hard Flat Washer
14	2	5FP81595	Spacer Tube
15	2	5MP111823	Pivot Pin
16	2	5MP1029	5/16" UNC X 2-3/4" Hex Bolt
17	2	5MP107569	Pivot Pin 1" x 3-7/8"
18	2	5MP103180	Hose Clamp
19	2	5FP500737	Warning Decal, Pinch Points
20	2	5FPRDL3125	Warning Decal, Crushing Hazard
21	2	5MP89088	Rubber Grommet
22	2	5MP103183	Hose Clamp Plate
23	1	-----	Serial Number Identification Tag Location
24	1	5MP41347	Caution Decal, Read Manual
25	1	5FPW50426	Warning Decal, Lock Pins
26	1	5MP106575	Cover
27	2	5MP1021	5/16" UNC X 3/4" Hex Bolt
	2	5MP1502	5/16" Lock Washer
28	1	5MP40151	Warning Decal, High Pressure Fluid
29	1	5MP111885	Back Blade
30	1	5MP111884	Clam
31	4	5MP108675	Bushing
32	2	5MP112057	Bushing

* Hydraulic Kit 5MP107610 required to adapt 4-IN-1 buckets to 1/2" Body couplers which are required for 3rd function attachment on 500 series loaders.

AY11E 72" 4-IN-1 BUCKET 300, 400 & 500 SERIES LOADERS



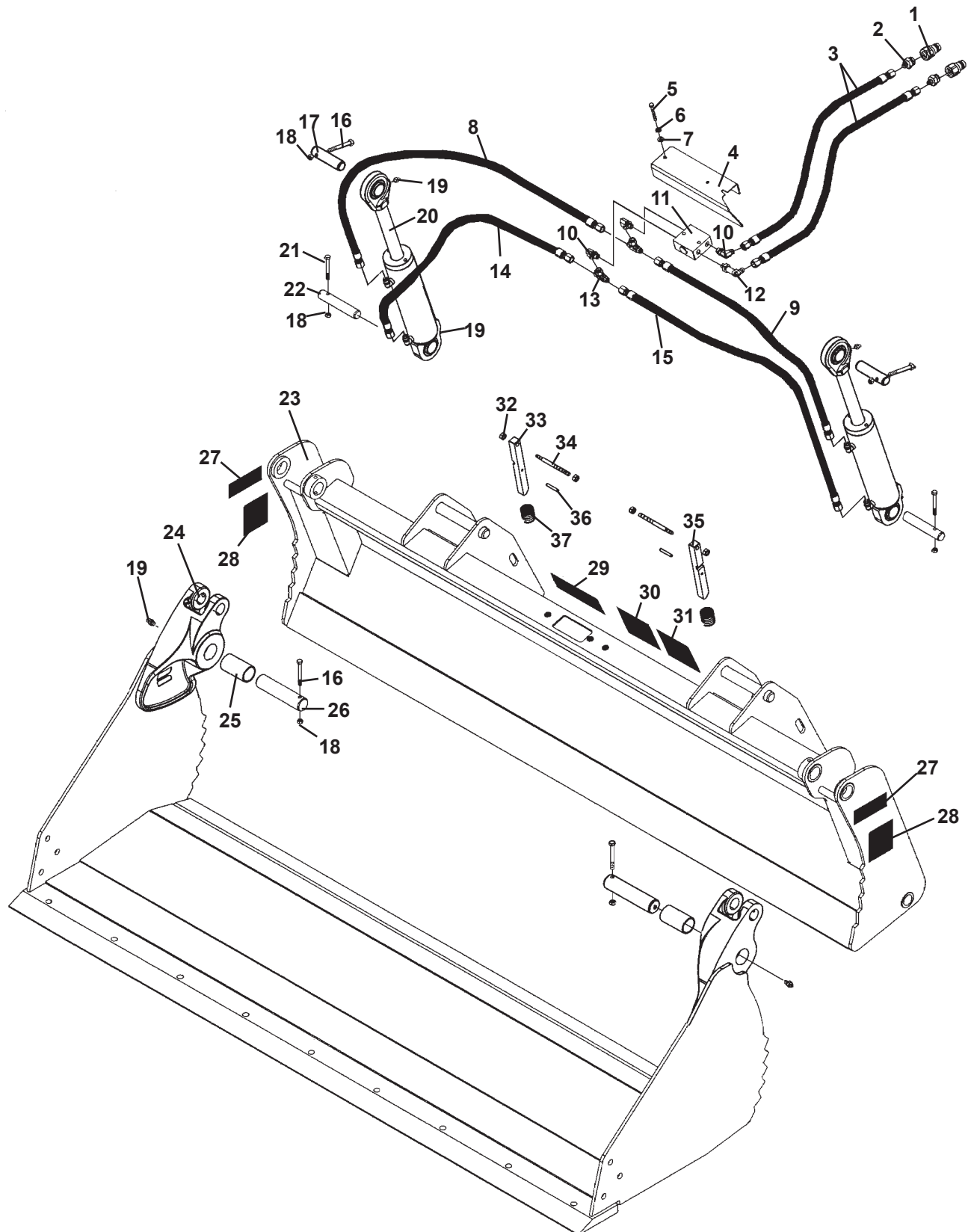
AY11E 72" 4-IN-1 BUCKET

300, 400 & 500 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	8	5MP6612	Snap Ring
2	8	5MP57462	Thrust Washer
3	2	5MP107569	Pivot Pin 1" x 3-7/8"
4	6	5MP6616	Grease Fitting
5	2	5MP106528	Cylinder Assembly
6	1	5MP106515*	Male Coupler 6FBo 1/4" Body
7	1	5MP106516*	Female Coupler 6FBo 1/4" Body
8	4	5MP3457	Straight Connector 6MBo-6MJ
9	2	5MP35829	1/4" Hose X 60" 6FJX-6FJX
10	2	5MP3498	Bulkhead Tee 6MJ-6MJ-6MJ
11	2	5MP38431	1/4" Hose X 41" 6FJX-6MBoX 90°
12	2	5MP38430	1/4" Hose X 45" 6FJX-6FJX
13	2	5MP1043	3/8" UNC X 1" Hex Bolt
	2	5MP1503	3/8" Lock Washer
	2	5MP1800	3/8" Hard Flat Washer
14	2	5FP81595	Spacer Tube
15	2	5MP111823	Pivot Pin
16	2	5MP1029	5/16" UNC X 2-3/4" Hex Bolt
17	2	5MP107569	Pivot Pin 1" x 3-7/8"
18	2	5MP103180	Hose Clamp
19	2	5FP500737	Warning Decal, Pinch Points
20	2	5FPRDL3125	Warning Decal, Crushing Hazard
21	2	5MP34107	Rubber Edge
22	2	5MP103183	Hose Clamp Plate
23	1	----	Serial Number Identification Tag Location
24	1	5MP41347	Caution Decal, Read Manual
25	1	5FPW50426	Warning Decal, Lock Pins
26	1	5MP106575	Cover
27	2	5MP1021	5/16" UNC X 3/4" Hex Bolt
	2	5MP1502	5/16" Lock Washer
28	1	5MP40151	Warning Decal, High Pressure Fluid
29	1	5MP110929	Back Blade
30	1	5MP110928	Clam
31	4	5MP108675	Bushing
32	2	5MP112057	Bushing

* Hydraulic Kit 5MP107610 required to adapt 4-IN-1 buckets to 1/2" Body couplers which are required for 3rd function attachment on 500 series loaders.

AY12D & AY12G 72" 4-IN-1 BUCKET **600, 700, GLOBAL CARRIER SERIES LOADERS**



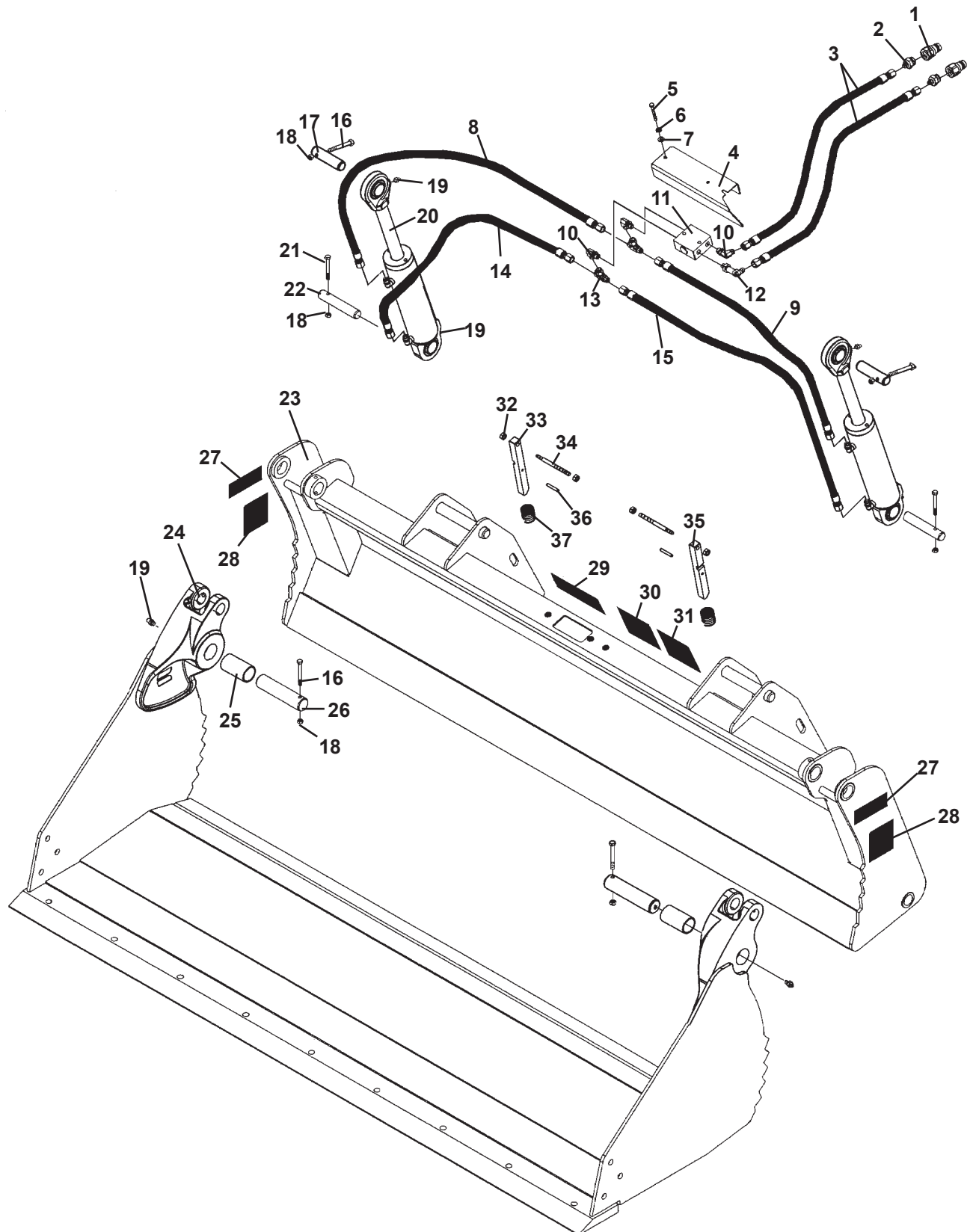
AY12D & AY12G 72" 4-IN-1 BUCKET 600, 700, GLOBAL CARRIER SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP15512	Male Coupler 10FBo 1/2" Body
	2	5MP51753	Male Coupler Cover
2	2	5MP3362	10MBo-6MJ Straight Connector
3	2	5MP37886	3/8" Hose X 60" 6FJX-6FJX
4	1	5MP107758	Valve Cover
5	3	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
6	3	5MP1502	5/16" Lock Washer
7	3	5MP1513	5/16" Flat Washer
8	1	5MP37521	1/4" Hose X 39" 6FJX-6FJX
9	1	5MP38579	1/4" Hose X 37" 6FJX-6FJX
10	3	5MP3434	6MBo-6MJ 90° Elbow
11	1	5MP88536	Valve - Gresen
12	1	5MP30169	6MBo-6MJ 90° Long Elbow
13	2	5MP30031	6MJ-6FJX-6MJ Tee
14	1	5MP35806	1/4" Hose X 45" 6FJX-6FJX
15	1	5MP37264	1/4" Hose X 43" 6FJX-6FJX
16	4	5MP1030	5/16" UNC X 3" Hex Bolt
17	2	5MP107553	Cylinder Pin
18	6	5MP1753	5/16" UNC Nylock Nut
19	6	5MP6616	Grease Fitting
20	2	5MP111736	Cylinder Assembly
21	2	5MP1029	5/16" UNC X 2-3/4" Hex Bolt
22	2	5MP107552	Cylinder Pin
23	1	5MP111342	72" Back Blade (600 & 700 Series Loader)
		5MP111746	72" Back Blade (Global Carrier Series Loader)
24	1	5MP111804	72" Clam
25	2	5MP112057	Bushing
26	2	5MP107551	Pivot Pin
27	2	5FP500737	Warning Decal, Pinch Points
28	2	5FPRDL3125	Warning Decal, Crushing Hazard
29	1	----	Serial Number Identification Tag Location
30	1	5MP41347	Caution Decal, Read Manual
31	1	5MP40151	Warning Decal, High Pressure Fluid

ITEMS #32 THROUGH #37 ARE USED ON 600 & 700 SERIES LOADERS ONLY

32	4	5MP2560	M12 Hex Nut
33	1	5FP1352136	Right Latch Pin
34	2	5FP0710145	Trip Pin
35	1	5FP1352135	Left Latch Pin
36	2	5MP10195	Roll Pin
37	2	5FP0710144	Compression Spring

AY12D & AY12G 78" 4-IN-1 BUCKET **600, 700, GLOBAL CARRIER SERIES LOADERS**



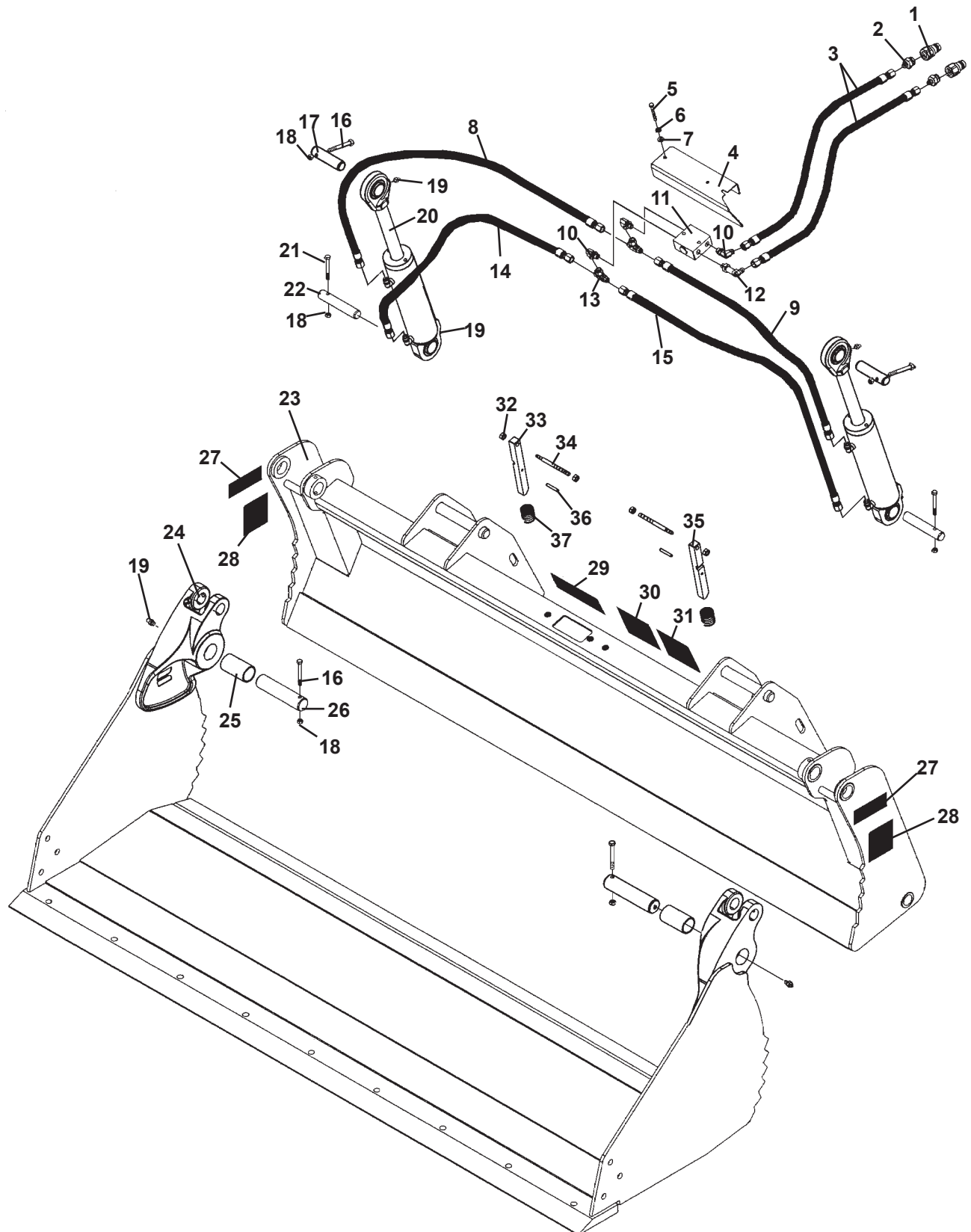
AY12D & AY12G 78" 4-IN-1 BUCKET 600, 700, GLOBAL CARRIER SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP15512	Male Coupler 10FBo 1/2" Body
	2	5MP51753	Male Coupler Cover
2	2	5MP3362	10MBo-6MJ Straight Connector
3	2	5MP37886	3/8" Hose X 60" 6FJX-6FJX
4	1	5MP107758	Valve Cover
5	3	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
6	3	5MP1502	5/16" Lock Washer
7	3	5MP1513	5/16" Flat Washer
8	1	5MP37520	1/4" Hose X 42" 6FJX-6FJX
9	1	5MP37916	1/4" Hose X 40" 6FJX-6FJX
10	3	5MP3434	6MBo-6MJ 90° Elbow
11	1	5MP88536	Valve - Gresen
12	1	5MP30169	6MBo-6MJ 90° Long Elbow
13	2	5MP30031	6MJ-6FJX-6MJ Tee
14	1	5MP37263	1/4" Hose X 48" 6FJX-6FJX
15	1	5MP38278	1/4" Hose X 46" 6FJX-6FJX
16	4	5MP1030	5/16" UNC X 3" Hex Bolt
17	2	5MP107553	Cylinder Pin
18	6	5MP1753	5/16" UNC Nylock Nut
19	6	5MP6616	Grease Fitting
20	2	5MP111736	Cylinder Assembly
21	2	5MP1029	5/16" UNC X 2-3/4" Hex Bolt
22	2	5MP107552	Cylinder Pin
23	1	5MP111343	78" Back Blade (600 & 700 Series Loader)
		5MP111747	78" Back Blade (Global Carrier Series Loader)
24	1	5MP111805	78" Clam
25	2	5MP112057	Bushing
26	2	5MP107551	Pivot Pin
27	2	5FP500737	Warning Decal, Pinch Points
28	2	5FPRDL3125	Warning Decal, Crushing Hazard
29	1	----	Serial Number Identification Tag Location
30	1	5MP41347	Caution Decal, Read Manual
31	1	5MP40151	Warning Decal, High Pressure Fluid

ITEMS #32 THROUGH #37 ARE USED ON 600 & 700 SERIES LOADERS ONLY

32	4	5MP2560	M12 Hex Nut
33	1	5FP1352136	Right Latch Pin
34	2	5FP0710145	Trip Pin
35	1	5FP1352135	Left Latch Pin
36	2	5MP10195	Roll Pin
37	2	5FP0710144	Compression Spring

AY12D & AY12G 84" 4-IN-1 BUCKET **600, 700, GLOBAL CARRIER SERIES LOADERS**



AY12D & AY12G 84" 4-IN-1 BUCKET 600, 700, GLOBAL CARRIER SERIES LOADERS

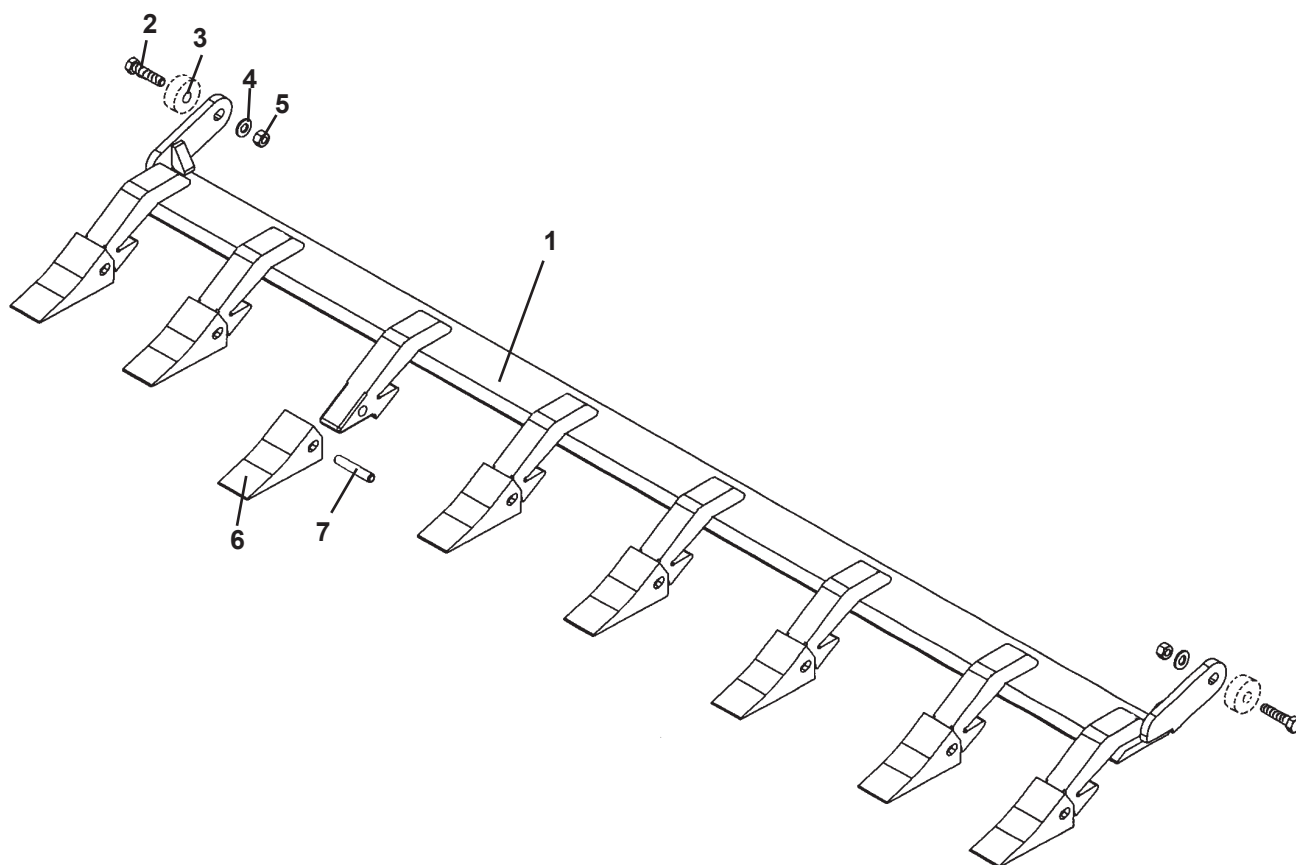
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP15512	Male Coupler 10FBo 1/2" Body
	2	5MP51753	Male Coupler Cover
2	2	5MP3362	10MBo-6MJ Straight Connector
3	2	5MP37886	3/8" Hose X 60" 6FJX-6FJX
4	1	5MP107758	Valve Cover
5	3	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
6	3	5MP1502	5/16" Lock Washer
7	3	5MP1513	5/16" Flat Washer
8	1	5MP35806	1/4" Hose X 45" 6FJX-6FJX
9	1	5MP37264	1/4" Hose X 43" 6FJX-6FJX
10	3	5MP3434	6MBo-6MJ 90° Elbow
11	1	5MP88536	Valve - Gresen
12	1	5MP30169	6MBo-6MJ 90° Long Elbow
13	2	5MP30031	6MJ-6FJX-6MJ Tee
14	1	5MP37579	1/4" Hose X 51" 6FJX-6FJX
15	1	5MP35807	1/4" Hose X 50" 6FJX-6FJX
16	4	5MP1030	5/16" UNC X 3" Hex Bolt
17	2	5MP107553	Cylinder Pin
18	6	5MP1753	5/16" UNC Nylock Nut
19	6	5MP6616	Grease Fitting
20	2	5MP111736	Cylinder Assembly
21	2	5MP1029	5/16" UNC X 2-3/4" Hex Bolt
22	2	5MP107552	Cylinder Pin
23	1	5MP111344	84" Back Blade (600 & 700 Series Loader)
		5MP111748	84" Back Blade (Global Carrier Series Loader)
24	1	5MP111806	84" Clam
25	2	5MP112057	Bushing
26	2	5MP107551	Pivot Pin
27	2	5FP500737	Warning Decal, Pinch Points
28	2	5FPRDL3125	Warning Decal, Crushing Hazard
29	1	----	Serial Number Identification Tag Location
30	1	5MP41347	Caution Decal, Read Manual
31	1	5MP40151	Warning Decal, High Pressure Fluid

ITEMS #32 THROUGH #37 ARE USED ON 600 & 700 SERIES LOADERS ONLY

32	4	5MP2560	M12 Hex Nut
33	1	5FP1352136	Right Latch Pin
34	2	5FP0710145	Trip Pin
35	1	5FP1352135	Left Latch Pin
36	2	5MP10195	Roll Pin
37	2	5FP0710144	Compression Spring

OPTIONAL TOOTHBAR ASSEMBLY

4-IN-1 BUCKETS (AY11F NOT AVAILABLE)



OPTIONAL TOOTHBAR ASSEMBLY

4-IN-1 BUCKETS (AY11F NOT AVAILABLE)

5FP10642 OPTIONAL 60" TOOTH BAR ASSEMBLY - AY11H 60" BUCKET ONLY

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	----	Tooth Bar
2	2	5MP1117	5/8" UNC X 2-1/4" Hex Bolt
3	-	---	Spacer (Used with 5MP15527 Tooth Bar Only)
4	2	5MP1517	5/8" Flat Washer
	2	5MP1506	5/8" Lock Washer
5	2	5MP1230	5/8" UNC Hex Nut
6	7	5FPLAF1000	Replaceable Tooth Point
7	7	5FPRHW8026	Replaceable Roll Pin

5FP10643 OPTIONAL 72" TOOTH BAR ASSEMBLY - AY11E 72" BUCKET ONLY

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	----	Tooth Bar
2	2	5MP1117	5/8" UNC X 2-1/4" Hex Bolt
3	-	---	Spacer (Used with 5MP15527 Tooth Bar Only)
4	2	5MP1517	5/8" Flat Washer
	2	5MP1506	5/8" Lock Washer
5	2	5MP1230	5/8" UNC Hex Nut
6	8	5FPLAF1000	Replaceable Tooth Point
7	8	5FPRHW8026	Replaceable Roll Pin

5FP33823 OPTIONAL 72" TOOTH BAR ASSEMBLY - AY12D & AY12G 72" BUCKETS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5FP15527	Tooth Bar
2	2	5MP1781	1/2" UNC X 2" Hex Bolt
	2	5MP1818	1/2" UNC X 2-3/4" Hex Bolt (Use With Spacer)
3	2	5MP19019	Spacer (Use as required between tooth bar and bucket.)
4	2	5MP1646	1/2" Hard Flat Washer
5	2	5MP1841	1/2" UNC Deformed Lock Nut
6	8	5MP88893	Replaceable Tooth Point
7	8	5MP88894	Replaceable Flex Pin

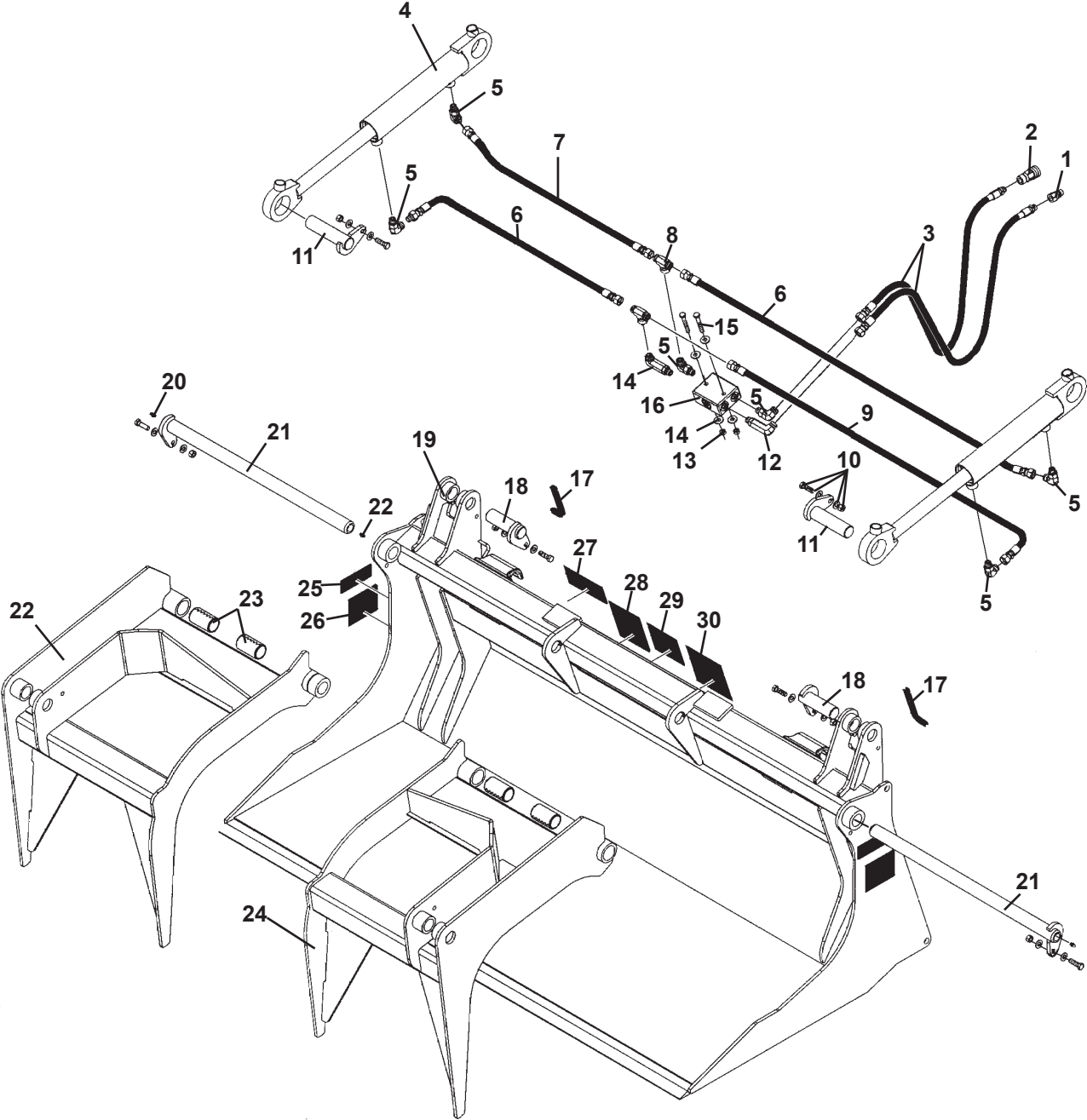
5FP16288 OPTIONAL 78" TOOTH BAR ASSEMBLY - AY12D & AY12G 78" BUCKETS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5FP16511	Tooth Bar
2	2	5MP1781	1/2" UNC X 2" Hex Bolt
3	-	----	Spacer (Used with 5MP15527 Tooth Bar Only)
4	2	5MP1646	1/2" Hard Flat Washer
5	2	5MP1841	1/2" UNC Deformed Lock Nut
6	8	5MP88893	Replaceable Tooth Point
7	8	5MP88894	Replaceable Flex Pin

5FP16193 OPTIONAL 84" TOOTH BAR ASSEMBLY - AY12D & AY12G 84" BUCKETS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5FP16513	Tooth Bar
2	2	5MP1781	1/2" UNC X 2" Hex Bolt
3	-	----	Spacer (Used with 5MP15527 Tooth Bar Only)
4	2	5MP1646	1/2" Hard Flat Washer
5	2	5MP1841	1/2" UNC Deformed Lock Nut
6	9	5MP88893	Replaceable Tooth Point
7	9	5MP88894	Replaceable Flex Pin

AD11H 60" DEBRIS BUCKET **300 & 400 SERIES LOADERS**



AD11H 60" DEBRIS BUCKET

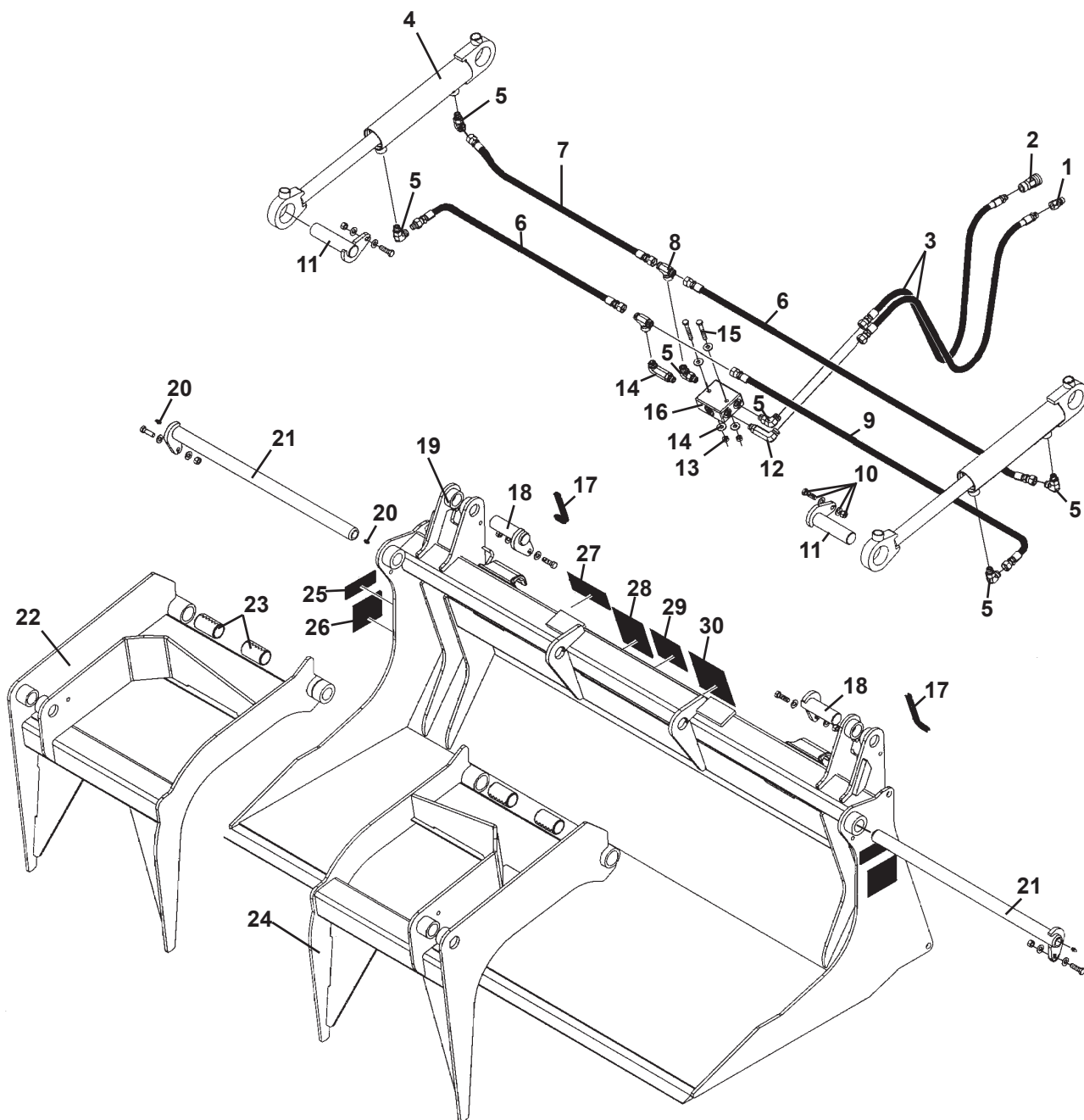
300 & 400 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP106515*	Male Coupler 6FBo 1/4" Body
2	1	5MP106516*	Female Coupler 6FBo 1/4" Body
3	2	5FP0310115	1/4" Hose X 60" 6FFS-6MBo
4	2	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit - Cylinder 5MP107856
5	6	5MP30204	6MFS-6MBo 90° Elbow
6	2	5FP0310107	1/4" Hose X 44" 6FFS-6FFS
7	1	5FP0310109	1/4" Hose X 36" 6FFS-6FFS
8	2	5MP30381	6MFS-6MFS-6FFS Tee
9	1	5FP0310108	1/4" Hose X 50" 6FFS-6FFS
10	6	5MP1045	3/8" UNC X 1-1/2" Hex Bolt
	12	5MP1525	3/8" SAE Flat Washer
	6	5FP81595	Spacer Tube
	6	5MP1837	3/8" UNC Torque Lock Nut
11	2	5FP1352370	Cylinder Pin 4-15/32" Long
12	2	5MP30380	6MFS-6MBo Long 90° Elbow
13	2	5MP1934	5/16" UNC Center Dented Lock Nut
14	4	5MP1513	5/16" Flat Washer
15	2	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
16	1	5MP88536	Check Valve
17	2	5MP34114	Rubber Edge
18	2	5FP1352369	Cylinder Pin 3-15/32" Long
19	1	5FP1352287	60" Bucket
20	4	5MP6616	Grease Fitting
21	2	5FP1352371	Grapple Pivot Pin
22	1	5FP1352273	Right Grapple
23	4	5FPLAF9517	Replacement Bushing
24	1	5FP1352274	Left Grapple
25	2	5FP500737	Warning Decal, Pinch Points
26	2	5FPRDL3125	Warning Decal, Crushing Hazard
27	1	----	Serial Number Identification Tag Location
28	1	5MP41347	Caution Decal, Read Manual
29	1	5FPW50426	Warning Decal, Lock Pins
30	1	5MP40151	Warning Decal, High Pressure Fluid

* Hydraulic Kit 5MP107610 needed to adapt debris buckets to 1/2" Body couplers which are required for 3rd function attachment on 500 series loaders.

AD11E 72" DEBRIS BUCKET

300, 400 & 500 SERIES LOADERS



AD11E 72" DEBRIS BUCKET

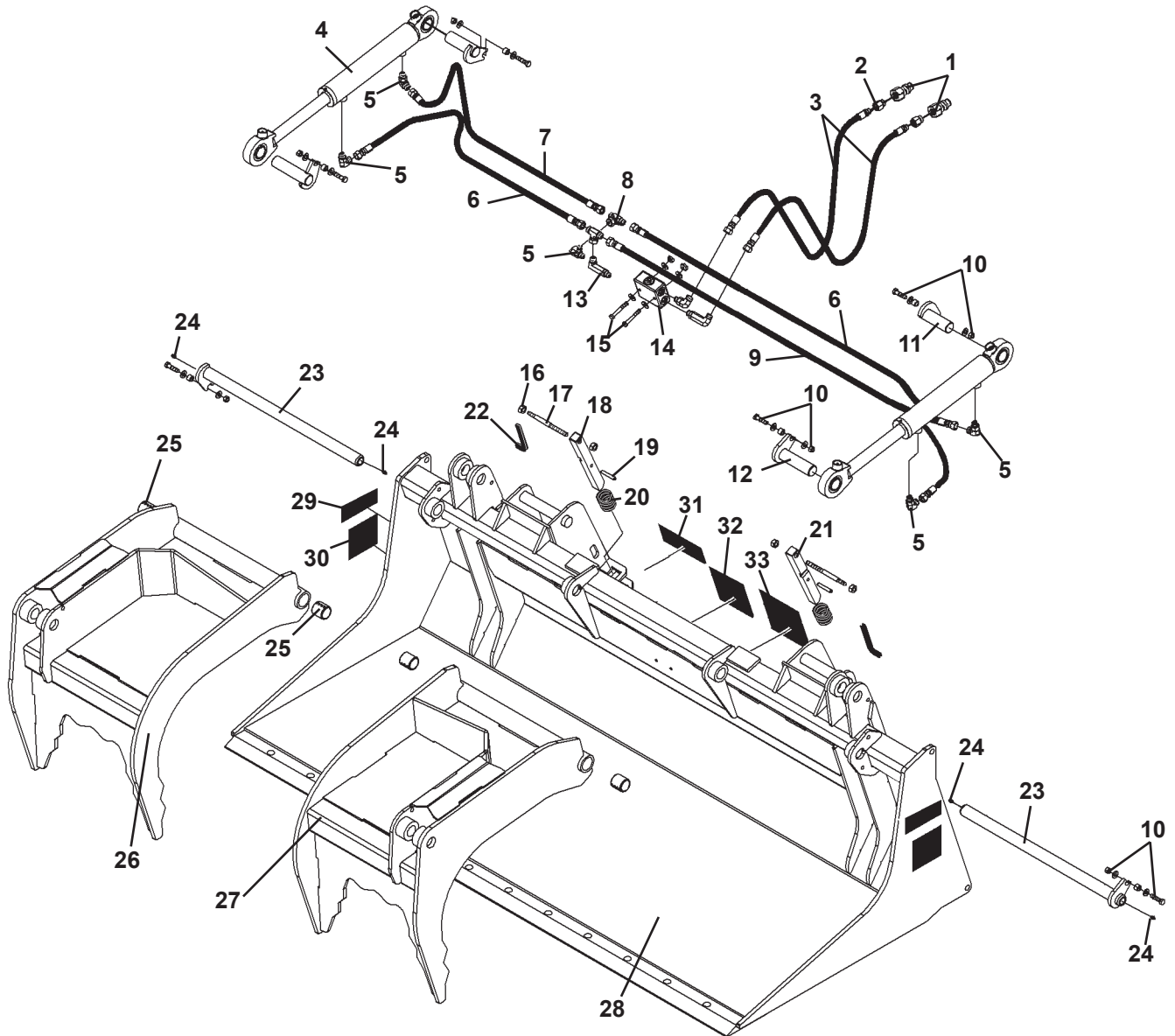
300, 400 & 500 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP106515*	Male Coupler 6FBo 1/4" Body
2	1	5MP106516*	Female Coupler 6FBo 1/4" Body
3	2	5FP0310115	1/4" Hose X 60" 6FFS-6MBo
4	2	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
5	6	5MP30204	6MFS-6MBo 90° Elbow
6	2	5FP0310107	1/4" Hose X 44" 6FFS-6FFS
7	1	5FP0310109	1/4" Hose X 36" 6FFS-6FFS
8	2	5MP30381	6MFS-6MFS-6FFS Tee
9	1	5FP0310108	1/4" Hose X 50" 6FFS-6FFS
10	6	5MP1045	3/8" UNC X 1-1/2" Hex Bolt
	6	5FP81595	Spacer Tube
	12	5MP1525	3/8" SAE Flat Washer
	6	5MP1837	3/8" UNC Torque Lock Nut
11	2	5FP1352370	Cylinder Pin 4-15/32" Long
12	2	5MP30380	6MFS-6MBo Long 90° Elbow
13	2	5MP1934	5/16" UNC Center Dented Lock Nut
14	4	5MP1513	5/16" Flat Washer
15	2	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
16	1	5MP88536	Check Valve
17	2	5MP34114	Rubber Edge
18	2	5FP1352369	Cylinder Pin 3-15/32" Long
19	1	5FP1352243	72" Bucket
20	4	5MP6616	Grease Fitting
21	2	5FP1352371	Grapple Pivot Pin
22	1	5FP1352241	Right Grapple
23	4	5FPLAF9517	Replacement Bushing
24	1	5FP1352242	Left Grapple
25	2	5FP500737	Warning Decal, Pinch Points
26	2	5FPRDL3125	Warning Decal, Crushing Hazard
27	1	----	Serial Number Identification Tag Location
28	1	5MP41347	Caution Decal, Read Manual
29	1	5FPW50426	Warning Decal, Lock Pins
30	1	5MP40151	Warning Decal, High Pressure Fluid

* Hydraulic Kit 5MP107610 needed to adapt debris buckets to 1/2" Body couplers which are required for 3rd function attachment on 500 series loaders.

AD12D & AD12G 76" DEBRIS BUCKET

600, 700 & GLOBAL CARRIER SERIES LOADERS

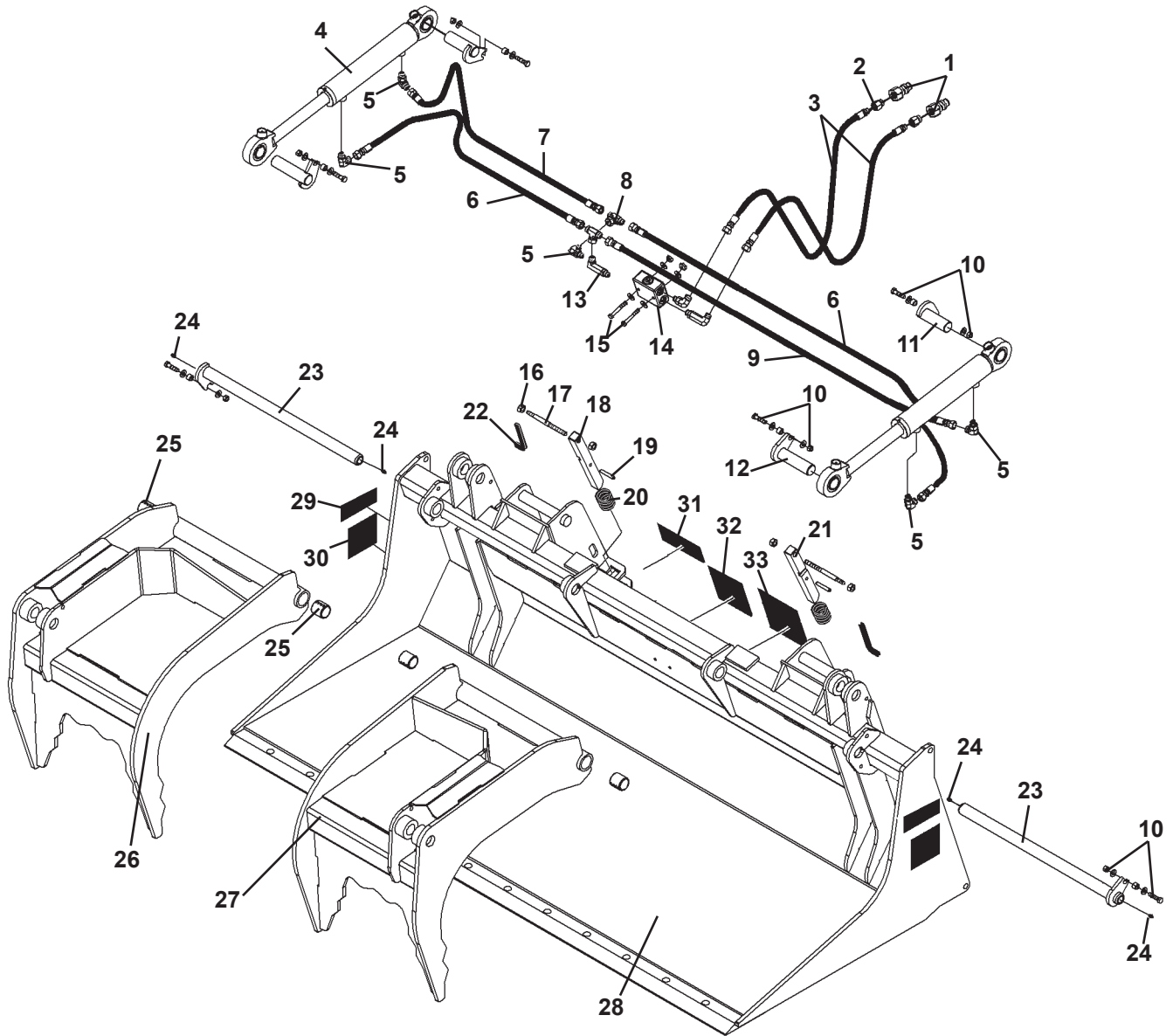


AD12D & AD12G 76" DEBRIS BUCKET 600, 700 & GLOBAL CARRIER SERIES LOADERS

ITEM	REQ'D	PART NO.	DESCRIPTION
1	2	5MP17139	Male Coupler 8FBo 1/2" Body
2	2	5MP3338	8MBo-6FBo Straight Connector
3	2	5FP0310115	1/2" Hose X 60" 6FFS-6MBo
4	2	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
5	6	5MP30204	6MFS-6MBo 90° Elbow
6	2	5FP0310107	1/4" Hose X 44" 6FFS-6FFS
7	1	5FP0310109	1/4" Hose X 36" 6FFS-6FFS
8	2	5MP30381	6MFS-6MFS-6FFS Tee
9	1	5FP0310108	1/4" Hose X 50" 6FFS-6FFS
10	6	5MP1045	3/8" UNC X 1-1/2" Hex Bolt
	12	5MP1525	3/8" SAE Flat Washer
	6	5FP81595	Spacer Tube
	6	5MP1837	3/8" UNC Torque Lock Nut
11	2	5FP1352369	Cylinder Pin 3-15/32" Long
12	2	5FP1352370	Cylinder Pin 4-15/32" Long
13	2	5MP30380	6MFS-6MBo Long 90° Elbow
14	1	5MP88536	Check Valve
15	2	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
	4	5MP1513	5/16" Flat Washer
	2	5MP1934	5/16" UNC Center Dented Lock Nut
16	4	5MP2560	M12 Hex Nut (600 & 700 Series Loader ONLY)
17	2	5FP0710145	Trip Pin (600 & 700 Series Loader ONLY)
18	1	5FP1352136	Right Latch Pin (600 & 700 Series Loader ONLY)
19	2	5MP10195	Roll Pin (600 & 700 Series Loader ONLY)
20	2	5FP0710144	Compression Spring (600 & 700 Series Loader ONLY)
21	1	5FP1352135	Left Latch Pin (600 & 700 Series Loader ONLY)
22	2	5MP34114	Rubber Edge
23	2	5FP1352371	Grapple Pivot Pin
24	4	5MP6616	Grease Fitting
25	4	5FPLAF9544	Replacement Bushing
26	1	5FP1352377	Right Grapple
27	1	5FP1352376	Left Grapple
28	1	5FP135245409	76" Bucket (Global Carrier Series Loader)
	1	5FP135245407	76" Bucket (600 & 700 Series Loader)
29	2	5FP500737	Warning Decal, Pinch Points
30	2	5FPRDL3125	Warning Decal, Crushing Hazard
31	1	----	Serial Number Identification Tag Location
32	1	5MP41347	Caution Decal, Read Manual
33	1	5MP40151	Warning Decal, High Pressure Fluid

AD12D & AD12G 82" DEBRIS BUCKET

600, 700 & GLOBAL CARRIER SERIES LOADERS

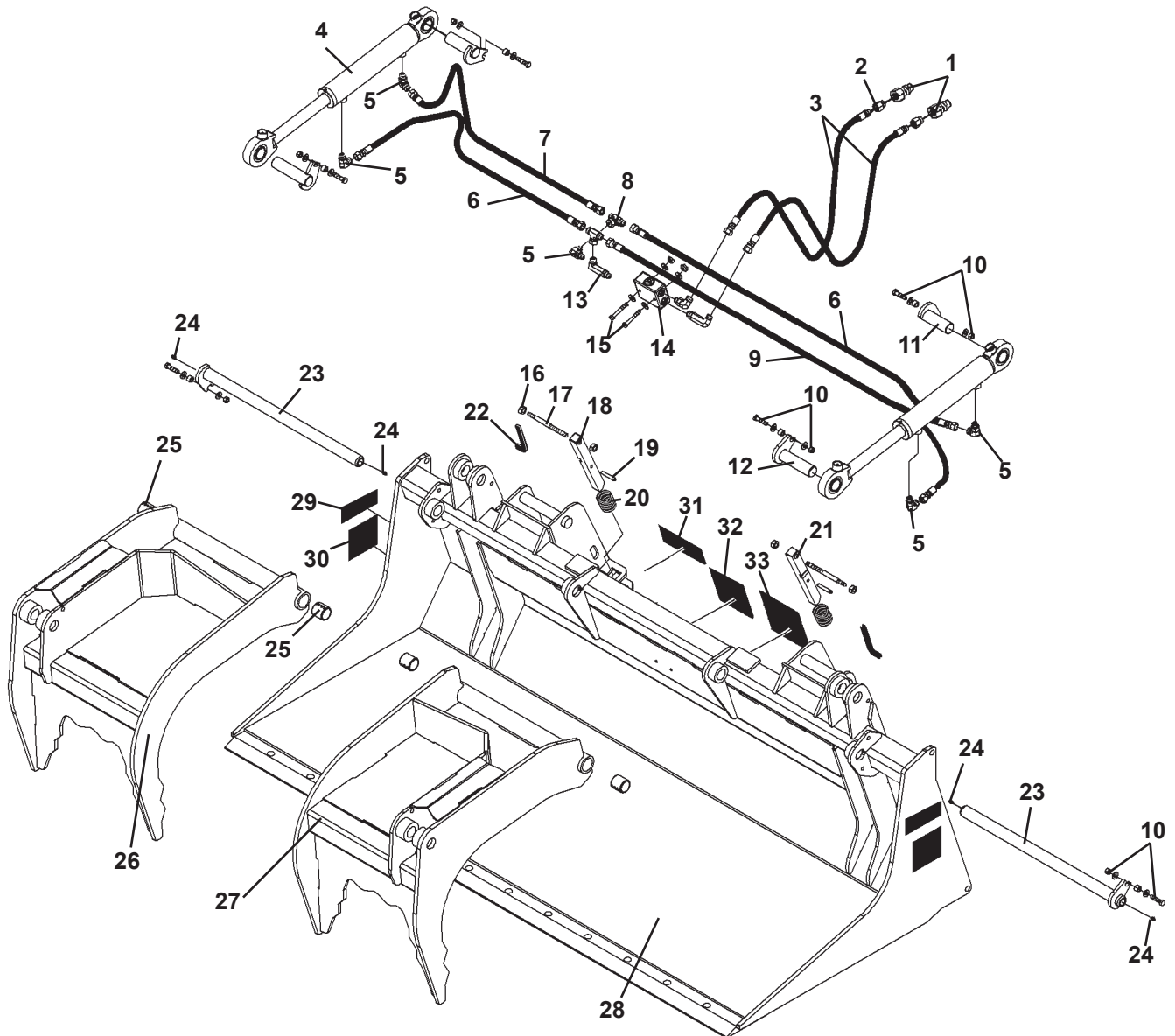


AD12D & AD12G 82" DEBRIS BUCKET 600, 700 & GLOBAL CARRIER SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP17139	Male Coupler 8FBo 1/2" Body
2	2	5MP3338	8MBo-6FBo Straight Connector
3	2	5FP0310115	1/2" Hose X 60" 6FFS-6MBo
4	2	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
5	6	5MP30204	6MFS-6MBo 90° Elbow
6	2	5FP0310107	1/4" Hose X 44" 6FFS-6FFS
7	1	5FP0310109	1/4" Hose X 36" 6FFS-6FFS
8	2	5MP30381	6MFS-6MFS-6FFS Tee
9	1	5FP0310108	1/4" Hose X 50" 6FFS-6FFS
10	6	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	12	5MP1525	3/8" SAE Flat Washer
	6	5FP81595	Spacer Tube
	6	5MP1837	3/8" UNC Torque Lock Nut
11	2	5FP1352369	Cylinder Pin 3-15/32" Long
12	2	5FP1352370	Cylinder Pin 4-15/32" Long
13	2	5MP30381	6MFS-6MBo Long 90° Elbow
14	1	5MP88536	Check Valve
15	2	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
	4	5MP1513	5/16" Flat Washer
	2	5MP1934	5/16" UNC Center Dented Lock Nut
16	4	5MP2560	M12 Hex Nut (600 & 700 Series Loader ONLY)
17	2	5FP0710145	Trip Pin (600 & 700 Series Loader ONLY)
18	1	5FP1352136	Right Latch Pin (600 & 700 Series Loader ONLY)
19	2	5MP10195	Roll Pin (600 & 700 Series Loader ONLY)
20	2	5FP0710144	Compression Spring (600 & 700 Series Loader ONLY)
21	1	5FP1352135	Left Latch Pin (600 & 700 Series Loader ONLY)
22	2	5MP34114	Rubber Edge
23	2	5FP1352371	Grapple Pivot Pin
24	4	5MP6616	Grease Fitting
25	4	5FPLAF9544	Replacement Bushing
26	1	5FP1352377	Right Grapple
27	1	5FP1352376	Left Grapple
28	1	5FP135245309	82" Bucket (Global Carrier Series Loader)
	1	5FP135245307	82" Bucket (600 & 700 Series Loader)
29	2	5FP500737	Warning Decal, Pinch Points
30	2	5FPRDL3125	Warning Decal, Crushing Hazard
31	1	-----	Serial Number Identification Tag Location
32	1	5MP41347	Caution Decal, Read Manual
33	1	5MP40151	Warning Decal, High Pressure Fluid

AD12D & AD12G 88" DEBRIS BUCKET

600, 700 & GLOBAL CARRIER SERIES LOADERS

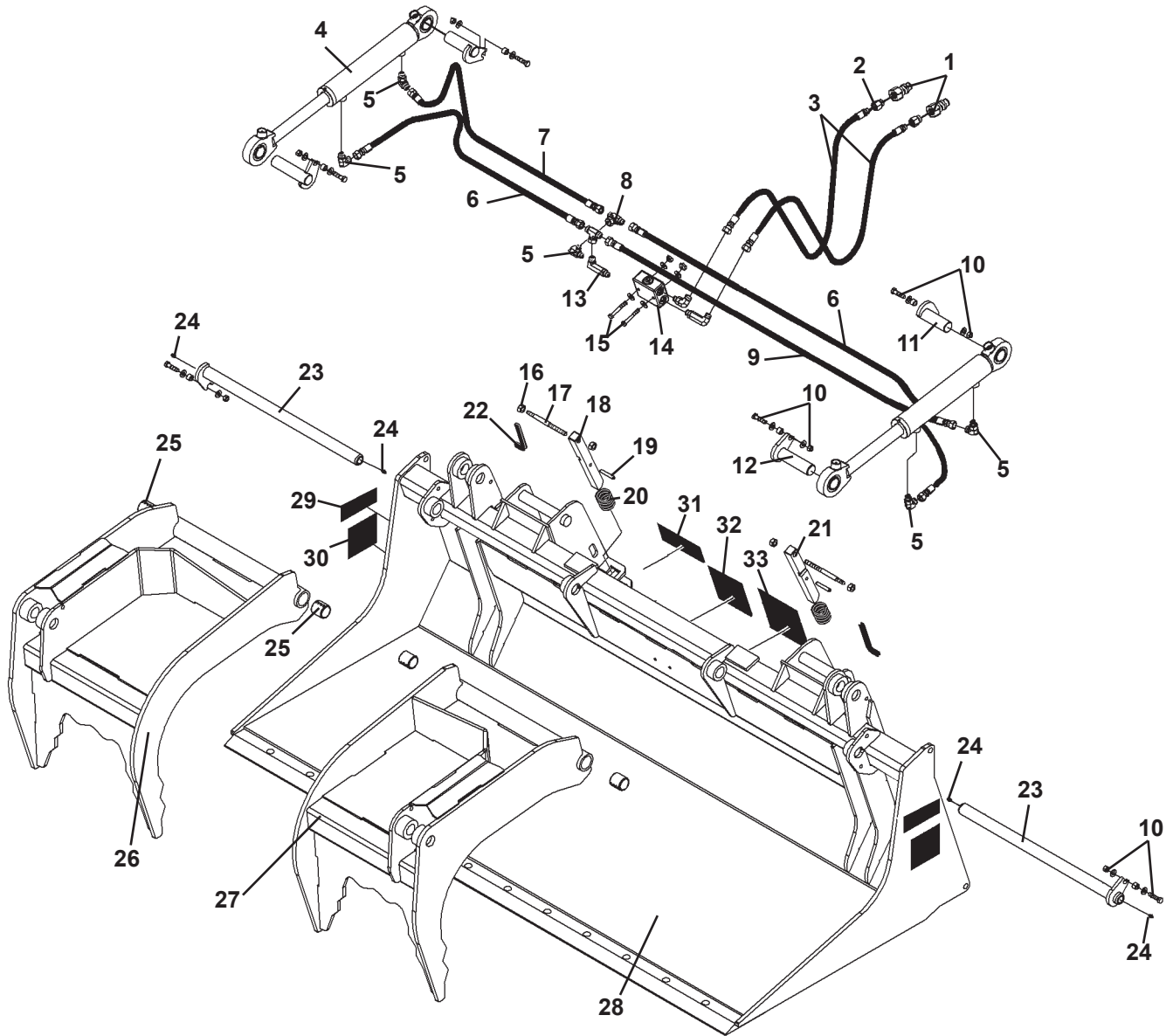


AD12D & AD12G 88" DEBRIS BUCKET 600, 700 & GLOBAL CARRIER SERIES LOADERS

ITEM	REQ'D	PART NO.	DESCRIPTION
1	2	5MP17139	Male Coupler 8FBo 1/2" Body
2	2	5MP3338	8MBo-6FBo Straight Connector
3	2	5FP0310115	1/2" Hose X 60" 6FFS-6MBo
4	2	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
5	6	5MP30204	6MFS-6MBo 90° Elbow
6	2	5FP0310107	1/4" Hose X 44" 6FFS-6FFS
7	1	5FP0310109	1/4" Hose X 36" 6FFS-6FFS
8	2	5MP30381	6MFS-6MFS-6FFS Tee
9	1	5FP0310108	1/4" Hose X 50" 6FFS-6FFS
10	6	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	12	5MP1525	3/8" SAE Flat Washer
	6	5FP81595	Spacer Tube
	6	5MP1837	3/8" UNC Torque Lock Nut
11	2	5FP1352369	Cylinder Pin 3-15/32" Long
12	2	5FP1352370	Cylinder Pin 4-15/32" Long
13	2	5MP30380	6MFS-6MBo Long 90° Elbow
14	1	5MP88536	Check Valve
15	2	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
	4	5MP1513	5/16" Flat Washer
	2	5MP1934	5/16" UNC Center Dented Lock Nut
16	4	5MP2560	M12 Hex Nut (600 & 700 Series Loader ONLY)
17	2	5FP0710145	Trip Pin (600 & 700 Series Loader ONLY)
18	1	5FP1352136	Right Latch Pin (600 & 700 Series Loader ONLY)
19	2	5MP10195	Roll Pin (600 & 700 Series Loader ONLY)
20	2	5FP0710144	Compression Spring (600 & 700 Series Loader ONLY)
21	1	5FP1352135	Left Latch Pin (600 & 700 Series Loader ONLY)
22	2	5MP34114	Rubber Edge
23	2	5FP1352371	Grapple Pivot Pin
24	4	5MP6616	Grease Fitting
25	4	5FPLAF9544	Replacement Bushing
26	1	5FP1352377	Right Grapple
27	1	5FP1352376	Left Grapple
28	1	5FP135240709	88" Bucket (Global Carrier Series Loader)
	1	5FP135240707	88" Bucket (600 & 700 Series Loader)
29	2	5FP500737	Warning Decal, Pinch Points
30	2	5FPRDL3125	Warning Decal, Crushing Hazard
31	1	----	Serial Number Identification Tag Location
32	1	5MP41347	Caution Decal, Read Manual
33	1	5MP40151	Warning Decal, High Pressure Fluid

AD12D & AD12G 96" DEBRIS BUCKET

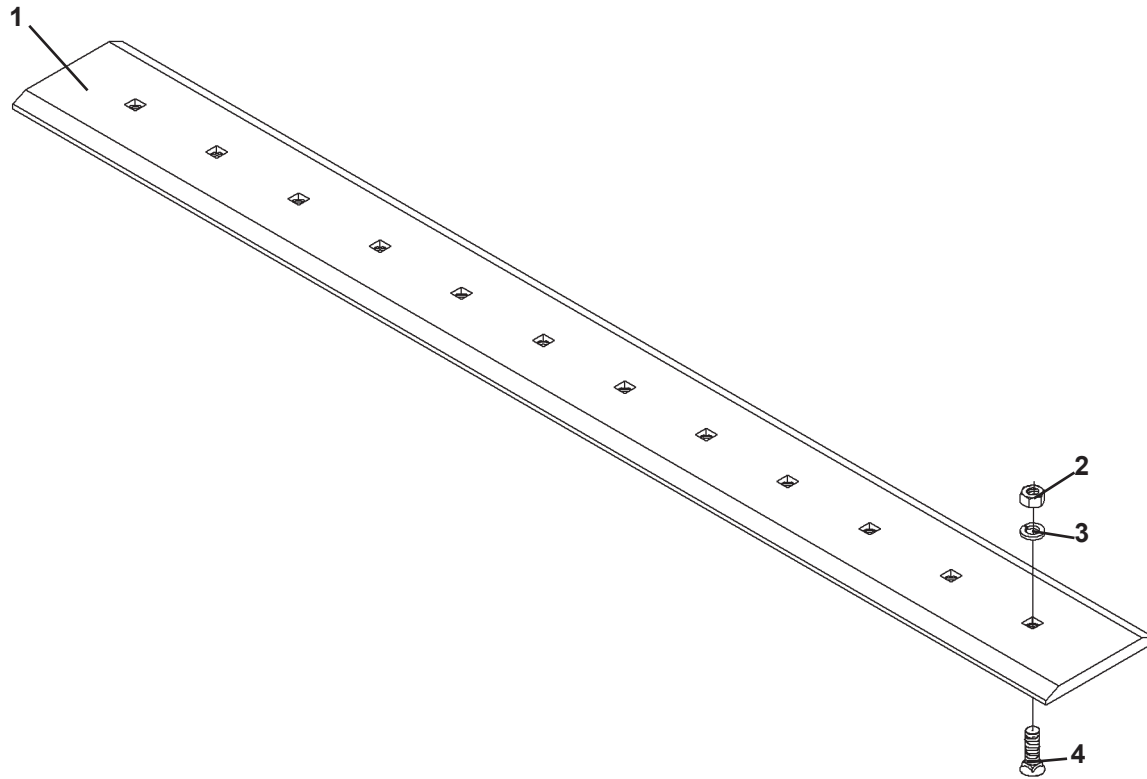
600, 700 & GLOBAL CARRIER SERIES LOADERS



AD12D & AD12G 96" DEBRIS BUCKET 600, 700 & GLOBAL CARRIER SERIES LOADERS

ITEM	REQ'D	PART NO.	DESCRIPTION
1	2	5MP17139	Male Coupler 8FBo 1/2" Body
2	2	5MP3338	8MBo-6FBo Straight Connector
3	2	5FP0310115	1/2" Hose X 60" 6FFS-6MBo
4	2	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
5	6	5MP30204	6MFS-6MBo 90° Elbow
6	2	5FP0310107	1/4" Hose X 44" 6FFS-6FFS
7	1	5FP0310109	1/4" Hose X 36" 6FFS-6FFS
8	2	5MP30381	6MFS-6MFS-6FFS Tee
9	1	5FP0310108	1/4" Hose X 50" 6FFS-6FFS
10	6	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	12	5MP1525	3/8" SAE Flat Washer
	6	5FP81595	Spacer Tube
	6	5MP1837	3/8" UNC Torque Lock Nut
11	2	5FP1352369	Cylinder Pin 3-15/32" Long
12	2	5FP1352370	Cylinder Pin 4-15/32" Long
13	2	5MP30380	6MFS-6MBo Long 90° Elbow
14	1	5MP88536	Check Valve
15	2	5MP1027	5/16" UNC X 2-1/4" Hex Bolt
	4	5MP1513	5/16" Flat Washer
	2	5MP1934	5/16" UNC Center Dented Lock Nut
16	4	5MP2560	M12 Hex Nut (600 & 700 Series Loader ONLY)
17	2	5FP0710145	Trip Pin (600 & 700 Series Loader ONLY)
18	1	5FP1352136	Right Latch Pin (600 & 700 Series Loader ONLY)
19	2	5MP10195	Roll Pin (600 & 700 Series Loader ONLY)
20	2	5FP0710144	Compression Spring (600 & 700 Series Loader ONLY)
21	1	5FP1352135	Left Latch Pin (600 & 700 Series Loader ONLY)
22	2	5MP34114	Rubber Edge
23	2	5FP1352371	Grapple Pivot Pin
24	4	5MP6616	Grease Fitting
25	4	5FPLAF9544	Replacement Bushing
26	1	5FP1352377	Right Grapple
27	1	5FP1352376	Left Grapple
28	1	5FP135261109	96" Bucket (Global Carrier Series Loader)
	1	5FP135261107	96" Bucket (600 & 700 Series Loader)
29	2	5FP500737	Warning Decal, Pinch Points
30	2	5FPRDL3125	Warning Decal, Crushing Hazard
31	1	----	Serial Number Identification Tag Location
32	1	5MP41347	Caution Decal, Read Manual
33	1	5MP40151	Warning Decal, High Pressure Fluid

OPTIONAL BOLT ON EDGE ASSEMBLIES DEBRIS BUCKETS

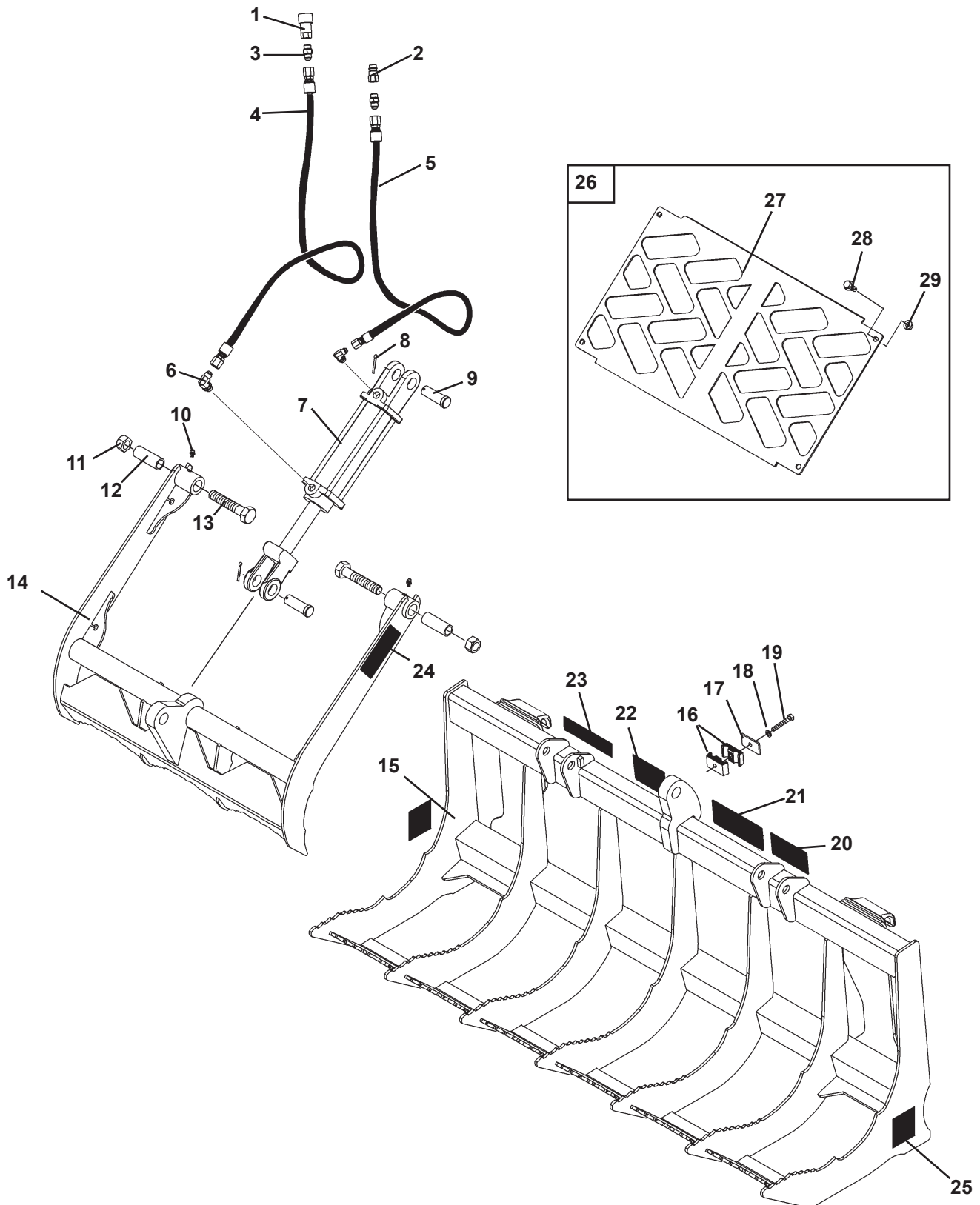


OPTIONAL BOLT ON EDGE ASSEMBLIES DEBRIS BUCKETS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5FP10123	76" Bolt On Edge Assembly
	1	5FP10089	82" Bolt On Edge Assembly
	1	5FP10124	88" Bolt On Edge Assembly
	1	5FP10125	96" Bolt On Edge Assembly
2	Varies	5MP1936	3/4" UNC Hex Nut
3	Varies	5MP1507	3/4" Lock Washer
4	Varies	5MP1937	3/4" UNC X 2-1/2" Plow Bolt

AV20F 53" ROOT GRAPPLE

100, 200 & 300 SERIES LOADERS

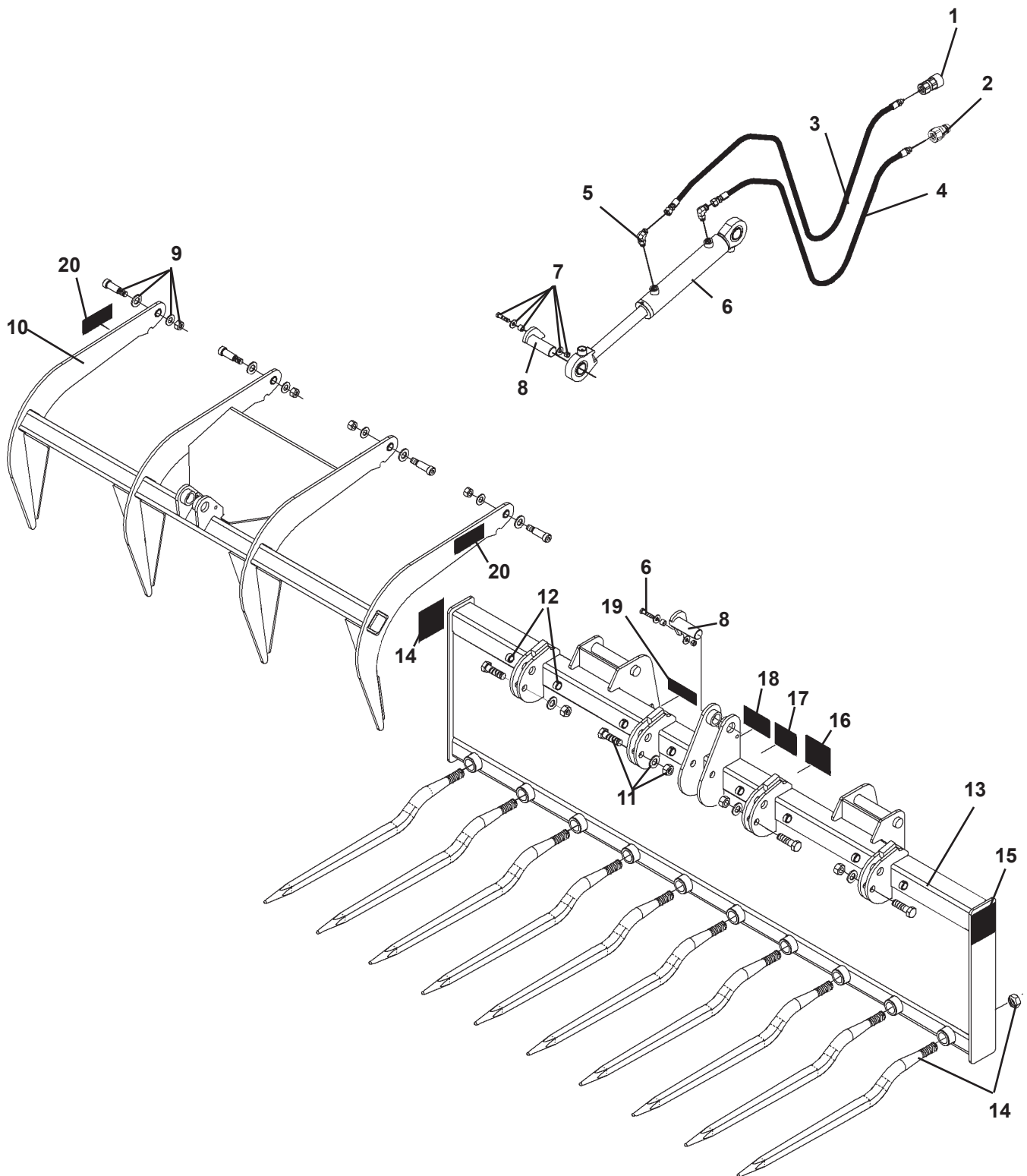


AV20F 53" ROOT GRAPPLE

100, 200 & 300 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5FP106516	Female Coupler 6FBo 1/4" Body
2	1	5FP106515	Male Coupler 6FBo 1/4" Body
3	2	5MP3457	6MBo-6MJ Straight Connector
4	1	5MP36397	1/4" Hose X 60" 6FJX-6FJX-HS
5	1	5MP36398	1/4" Hose X 52" 6FJX-6FJX-HS
6	2	5MP3434	6MBo-6MJ 90° Elbow
7	1	5MP124202	Cylinder Assembly
8	2	5MP1793	Cotter Pin
9	2	5MP5097	Pivot Pin 1" X 2-7/16"
10	2	5MP6616	Grease Fitting
11	2	5MP1936	3/4" UNC Torque Lock Nut
12	2	5MP124019	Bushing
13	2	5MP1147	3/4" UNC X 4" Hex Bolt
14	1	5MP124006	Grapple
15	1	5MP124005	Root Grapple Frame
16	1	5MP103180	Hose Clamp
17	1	5MP103183	Hose Clamp Plate
18	1	5MP1502	5/16" Lock Washer
19	1	5MP1024	5/16" UNC X 1-1/2" Hex Bolt
20	1	5MP41347	Caution Decal, Read Manual
21	1	5FPW50426	Warning Decal, Lock Pins
22	1	5MP40151	Warning Decal, High Pressure Fluid
23	1	-----	Serial Number Identification Tag Location
24	2	5FP500737	Warning Decal, Pinch Points
25	2	5FPRDL3125	Warning Decal, Crushing Hazard
26	1	5MP124135	Brush Guard Kit (Includes Items 27 through 29)
27	1	5MP124023	Brush Guard
28	4	5MP10218	3/8" UNC X 1" Flange Bolt
29	4	5MP2005510	3/8" UNC Serrated Flange Lock Nut

AM11H 60" MANURE FORK AND GRAPPLE 300 & 400 SERIES LOADERS



AM11H 60" MANURE FORK AND GRAPPLE

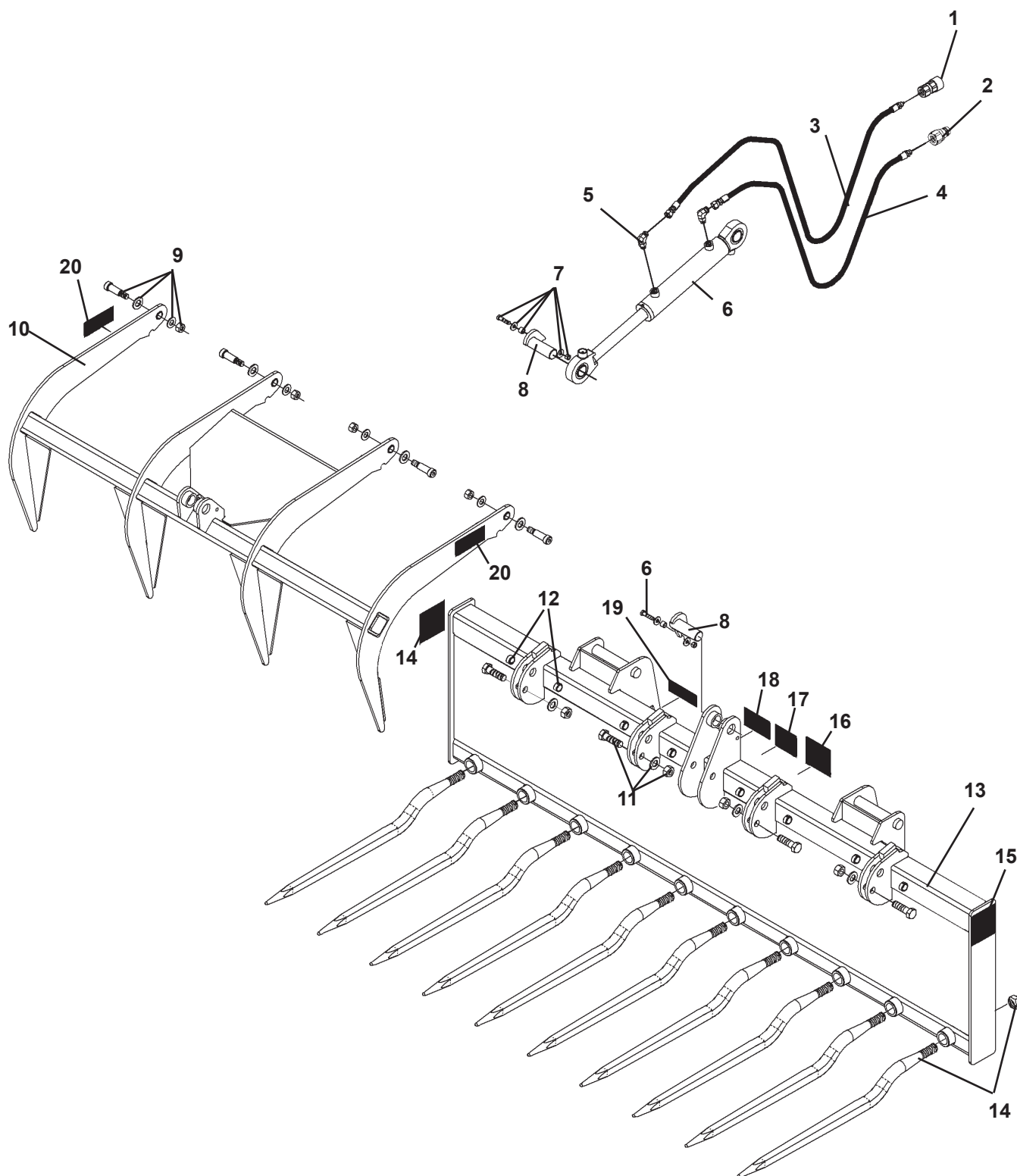
300 & 400 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5FP106516*	Female Coupler 6FBo 1/4" Body
2	1	5FP106515*	Male Coupler 6FBo 1/4" Body
3	1	5FP0310125	1/4" Hose X 81" 6FFS-6MBo
4	1	5FP0310124	1/4" Hose X 72" 6FFS-6MBo
5	2	5MP30204	6MFS-6MBo 90° Elbow
6	1	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
7	2	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	4	5MP1525	3/8" SAE Flat Washer
	2	5FP81595	Spacer Tube
	2	5MP1837	3/8" UNC Torque Lock Nut
8	2	5FP1352369	Cylinder Pin 3-15/32" Long
9	4	5MP10016	3/4" UNC X 1-3/4" Socket Head Shoulder Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1528	5/8" SAE Flat Washer
	4	5MP1839	5/8" UNC Torque Lock Nut
10	1	5FP1352577	Grapple
11	4	5MP1141	3/4" UNC X 2-1/2" Hex Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1936	3/4" UNC Torque Lock Nut
12	8	5FPLAF9481	Replacement Bushing
13	1	5FP135255004	Back Frame
14	8	5FP0710157	Fork Tine
	8	5FP0710159	Replacement Nut
15	2	5FPRDL3125	Warning Decal, Crushing Hazard
16	1	5MP41347	Caution Decal, Read Manual
17	1	5MP40151	Warning Decal, High Pressure Fluid
18	1	5FPW50426	Warning Decal, Lock Pins
19	1	-----	Serial Number Identification Tag Location
20	2	5FP500737	Warning Decal, Pinch Points

* Hydraulic Kit 5MP107610 needed to adapt manure fork and grapple to 1/2" Body couplers which are required for 3rd function attachment on 500 series loaders.

AM11E 72" MANURE FORK AND GRAPPLE

300, 400 & 500 SERIES LOADERS



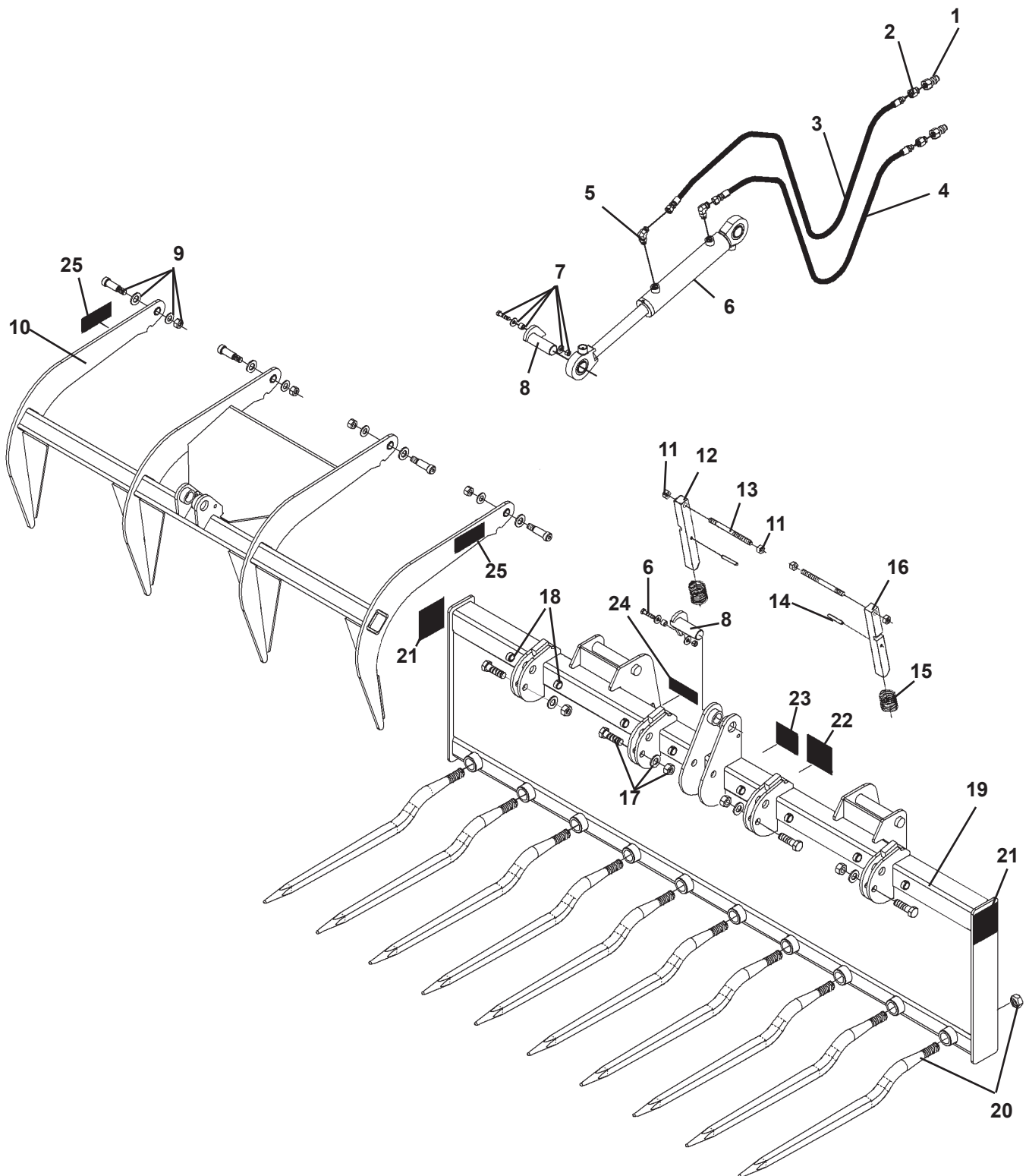
AM11E 72" MANURE FORK AND GRAPPLE

300, 400 & 500 SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5FP106516*	Female Coupler 6FBo 1/4" Body
2	1	5FP106515*	Male Coupler 6FBo 1/4" Body
3	1	5FP0310125	1/4" Hose X 81" 6FFS-6MBo
4	1	5FP0310124	1/4" Hose X 72" 6FFS-6MBo
5	2	5MP30204	6MFS-6MBo 90° Elbow
6	1	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
7	2	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	4	5MP1525	3/8" SAE Flat Washer
	2	5FP81595	Spacer Tube
	2	5MP1837	3/8" UNC Torque Lock Nut
8	2	5FP1352369	Cylinder Pin 3-15/32" Long
9	4	5MP10016	3/4" UNC X 1-3/4" Socket Head Shoulder Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1528	5/8" SAE Flat Washer
	4	5MP1839	5/8" UNC Torque Lock Nut
10	1	5FP1352577	Grapple
11	4	5MP1141	3/4" UNC X 2-1/2" Hex Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1936	3/4" UNC Torque Lock Nut
12	8	5FPLAF9481	Replacement Bushing
13	1	5FP135255106	Back Frame
14	9	5FP0710157	Fork Tine
	9	5FP0710159	Replacement Nut
15	2	5FPRDL3125	Warning Decal, Crushing Hazard
16	1	5MP41347	Caution Decal, Read Manual
17	1	5MP40151	Warning Decal, High Pressure Fluid
18	1	5FPW50426	Warning Decal, Lock Pins
19	1	-----	Serial Number Identification Tag Location
20	2	5FP500737	Warning Decal, Pinch Points

* Hydraulic Kit 5MP107610 needed to adapt manure fork and grapple to 1/2" Body couplers which are required for 3rd function attachment on 500 series loaders.

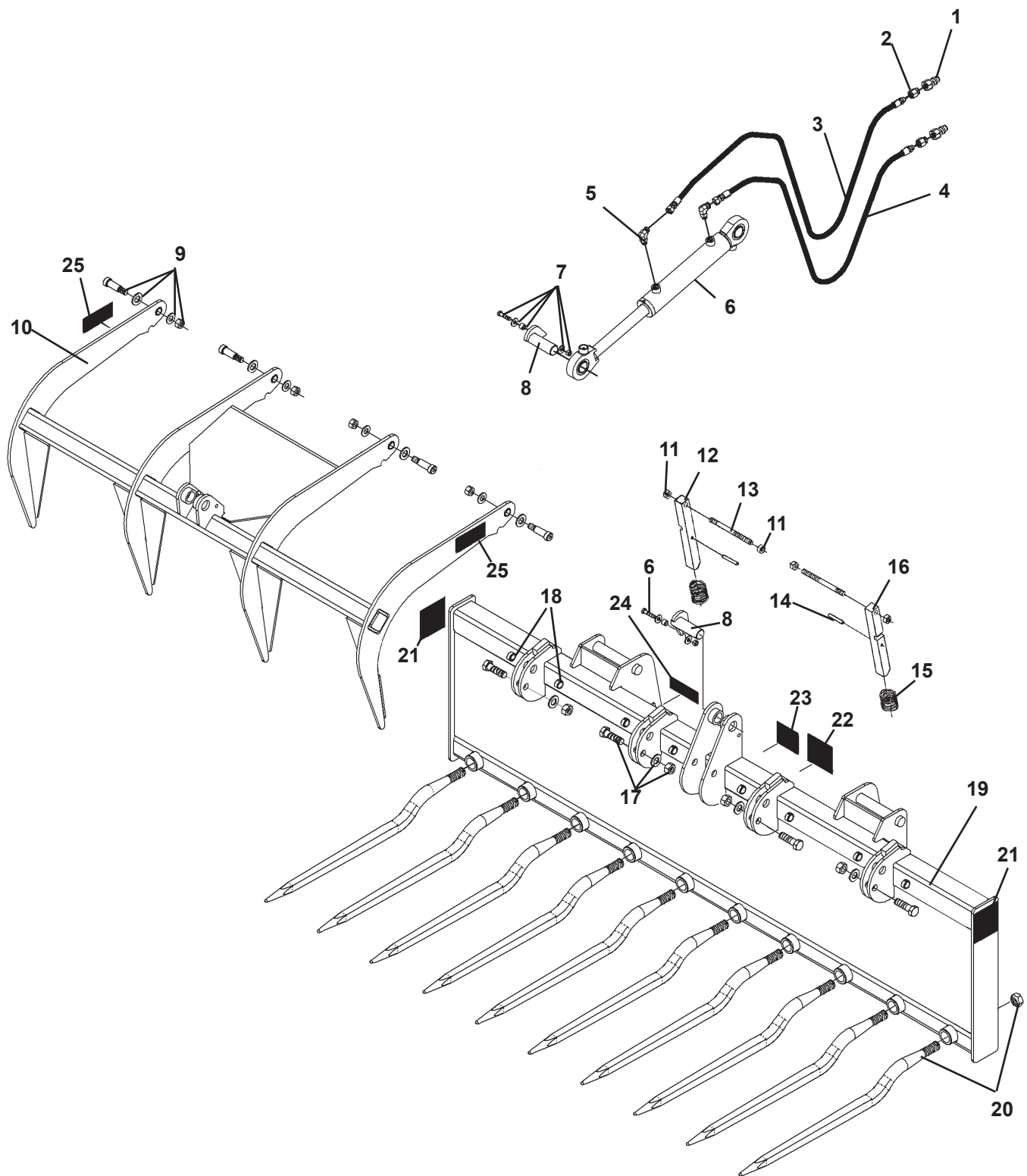
AM11D & AM11G 84" MANURE FORK AND GRAPPLE 600, 700 & GLOBAL CARRIER SERIES LOADERS



AM11D & AM11G 84" MANURE FORK AND GRAPPLE 600, 700 & GLOBAL CARRIER SERIES LOADERS

ITEM	REQ'D	PART NO.	DESCRIPTION
1	2	5MP17139	Male Coupler 8FBo 1/2" Body
2	2	5MP3338	8MBo-6FBo Straight Connector
3	1	5FP0310125	1/4" Hose X 81" 6FFS-6MBo
4	1	5FP0310124	1/4" Hose X 72" 6FFS-6MBo
5	2	5MP30204	6MFS-6MBo 90° Elbow
6	1	5MP107865	Cylinder Assembly
	-	5MP45136	Replacement Cylinder Seal Kit
7	2	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	4	5MP1525	3/8" SAE Flat Washer
	2	5FP81595	Spacer Tube
	2	5MP1837	3/8" UNC Torque Lock Nut
8	2	5FP1352369	Cylinder Pin 3-15/32" Long
9	4	5MP10016	5/8" UNC X 1.75" Socket Head Shoulder Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1528	5/8" SAE Flat Washer
	4	5MP1839	5/8" UNC Torque Lock Nut
10	1	5FP1352577	Grapple
11	4	5MP2560	M12 Hex Nut (600 & 700 Series Loader ONLY)
12	1	5FP1352136	Right Latch Pin (600 & 700 Series Loader ONLY)
13	2	5FP0710145	Trip Pin (600 & 700 Series Loader ONLY)
14	2	5MP10195	Roll Pin (600 & 700 Series Loader ONLY)
15	2	5FP0710144	Compression Spring (600 & 700 Series Loader ONLY)
16	1	5FP1352135	Left Latch Pin (600 & 700 Series Loader ONLY)
17	4	5MP1141	3/4" UNC X 2-1/2" Hex Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1936	3/4" UNC Torque Lock Nut
18	8	5FPLAF9481	Replacement Bushing
19	1	5FP135255207	Back Frame (600 & 700 Series Loader)
	1	5FP135255209	Back Frame (Global Carrier Series Loader)
20	10	5FP0710157	Fork Tine
	10	5FP0710159	Replacement Nut
21	2	5FPRDL3125	Warning Decal, Crushing Hazard
22	1	5MP41347	Caution Decal, Read Manual
23	1	5MP40151	Warning Decal, High Pressure Fluid
24	1	-----	Serial Number Identification Tag Location
25	2	5FP500737	Warning Decal, Pinch Points

AM11D & AM11G 96" MANURE FORK AND GRAPPLE 600, 700 & GLOBAL CARRIER SERIES LOADERS



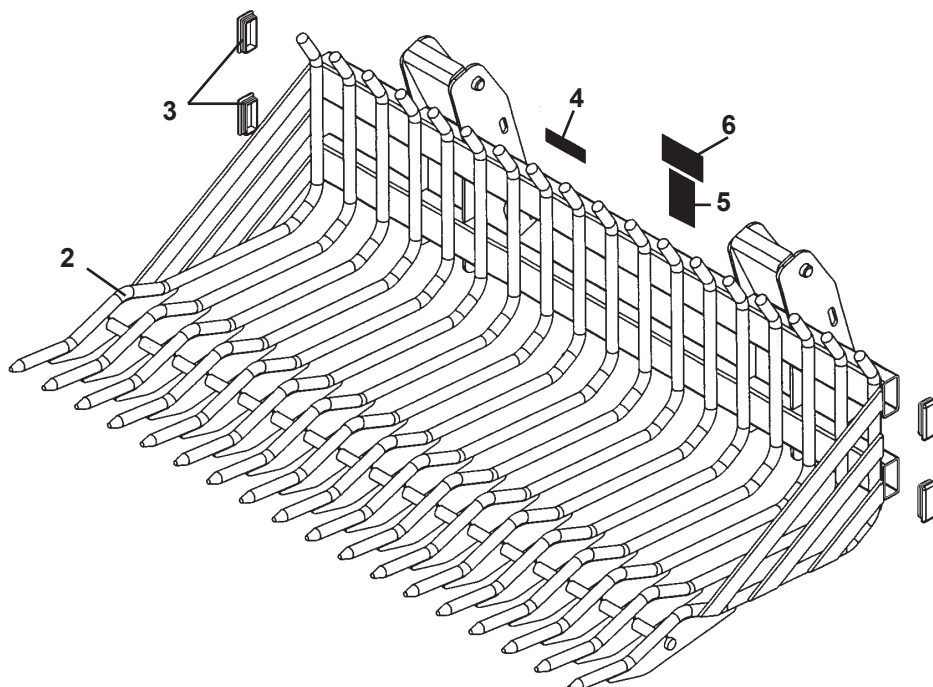
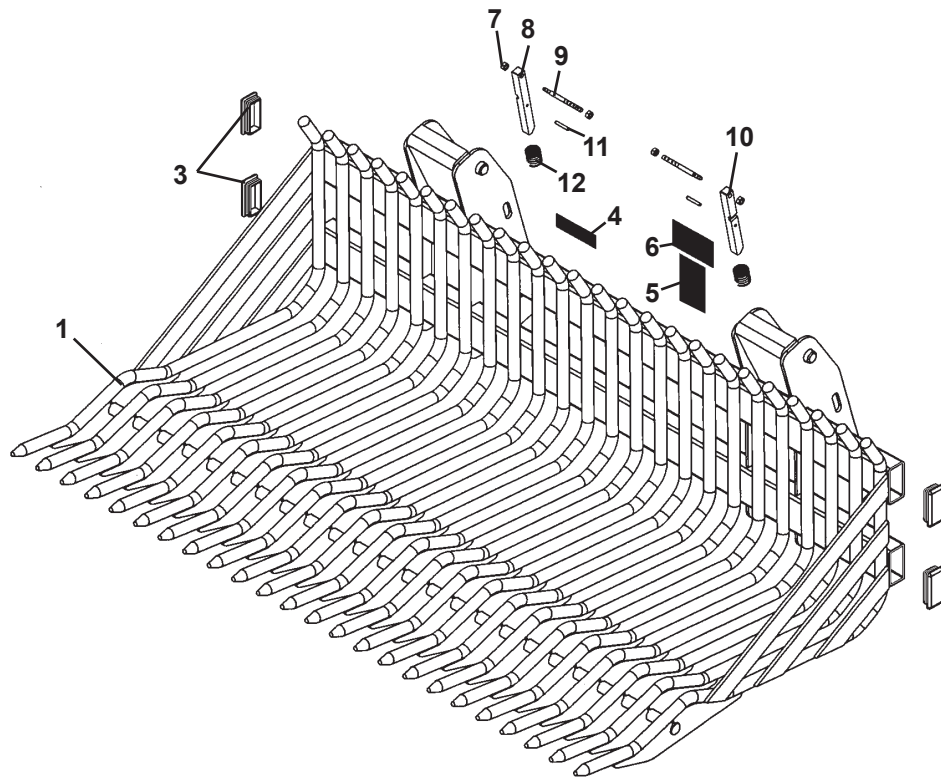
AM11D & AM11G 96" MANURE FORK AND GRAPPLE

600, 700 & GLOBAL CARRIER SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP17139	Male Coupler 8FBo 1/2" Body
2	2	5MP3338	8MBo-6FBo Straight Connector
3	1	5FP0310125	1/4" Hose X 81" 6FFS-6MBo
4	1	5FP0310124	1/4" Hose X 72" 6FFS-6MBo
5	2	5MP30204	6MFS-6MBo 90° Elbow
6	1	5MP107865	Cylinder Assembly
	-	5MP451361	Replacement Cylinder Seal Kit
7	2	5MP1045	3/8" UNC X1-1/2" Hex Bolt
	4	5MP1525	3/8" SAE Flat Washer
	2	5FP81595	Spacer Tube
	2	5MP1837	3/8" UNC Torque Lock Nut
8	2	5FP1352369	Cylinder Pin 3-15/32" Long
9	4	5MP10016	5/8" UNC X 1.75" Socket Head Shoulder Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1528	5/8" SAE Flat Washer
	4	5MP1839	5/8" UNC Torque Lock Nut
10	1	5FP1352577	Grapple
11	4	5MP2560	M12 Hex Nut (600 & 700 Series Loader ONLY)
12	1	5FP1352136	Right Latch Pin (600 & 700 Series Loader ONLY)
13	2	5FP0710145	Trip Pin (600 & 700 Series Loader ONLY)
14	2	5MP10195	Roll Pin (600 & 700 Series Loader ONLY)
15	2	5FP0710144	Compression Spring (600 & 700 Series Loader ONLY)
16	1	5FP1352135	Left Latch Pin (600 & 700 Series Loader ONLY)
17	4	5MP1141	3/4" UNC X 2-1/2" Hex Bolt
	4	5MP1529	3/4" SAE Flat Washer
	4	5MP1936	3/4" UNC Torque Lock Nut
18	8	5FPLAF9481	Replacement Bushing
19	1	5FP135255307	Back Frame (600 & 700 Series Loader)
	1	5FP135255309	Back Frame (Global Carrier Series Loader)
20	12	5FP 0710157	Fork Tine
	12	5FP0710159	Replacement Nut
21	2	5FPRDL3125	Warning Decal, Crushing Hazard
22	1	5MP41347	Caution Decal, Read Manual
23	1	5MP40151	Warning Decal, High Pressure Fluid
24	1	-----	Serial Number Identification Tag Location
25	2	5FP500737	Warning Decal, Pinch Points

AR10 & AR12 SERIES ROCK BUCKET

300, 400, 500, 600, 700 & GLOBAL CARRIER SERIES LOADERS



AR10 & AR12 SERIES ROCK BUCKET

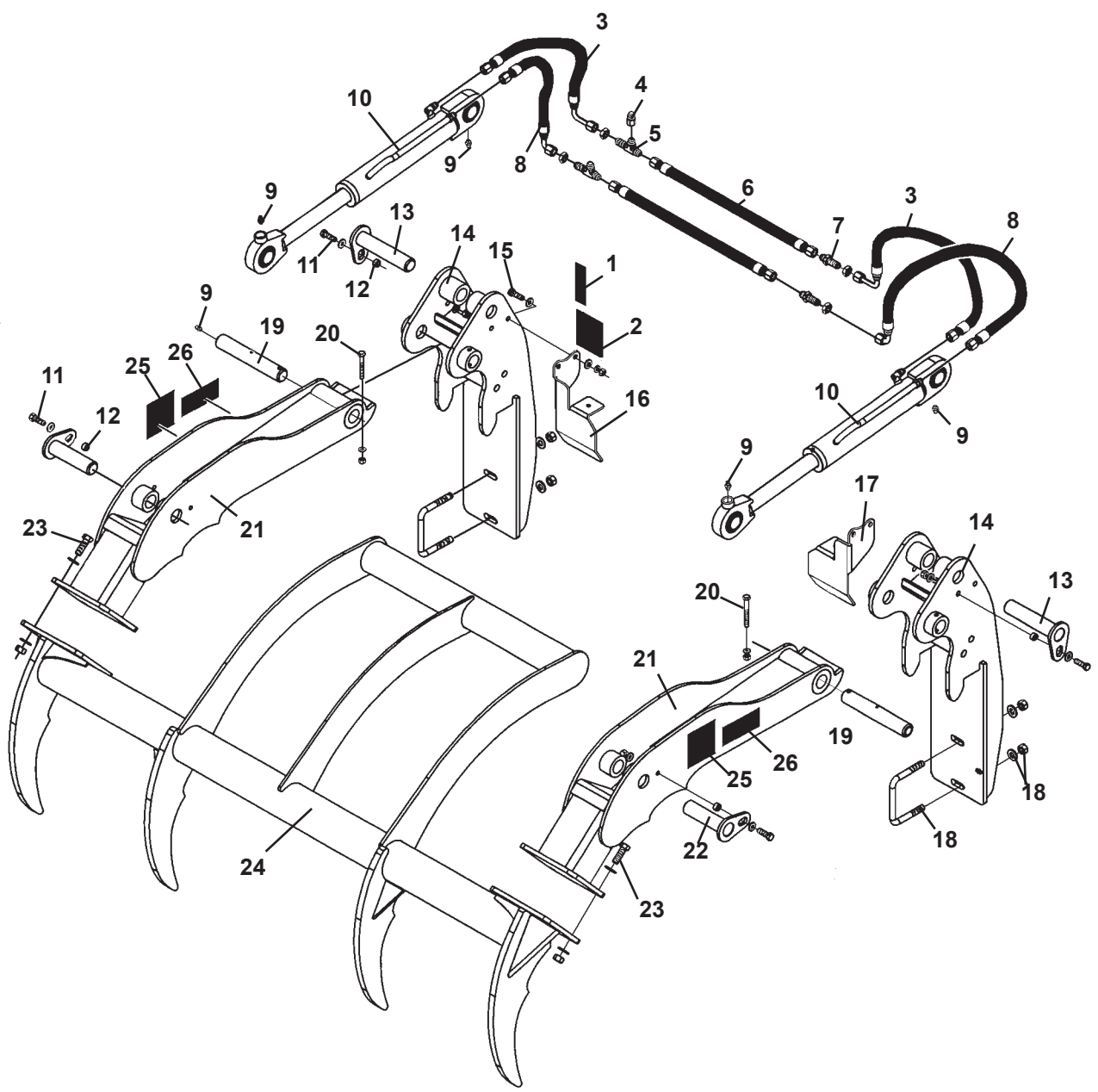
300, 400, 500, 600, 700 & GLOBAL CARRIER SERIES LOADERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
<i>Rock Bucket with 2" Tine Spacing</i>			
1	1	5MP108652	AR10H 55" Rock Bucket (300/400 Series Loaders)
	1	5MP106177	AR10E 66" Rock Bucket (300/400/500 Series Loaders)
	1	5MP101788	AR10E 75" Rock Bucket (300/400/500 Series Loaders)
	1	5MP111351	AR10D 75" Rock Bucket (600/700 Series Loaders)
	1	5MP109572	AR10G 75" Rock Bucket (Global Carrier Series Loader)
<i>Rock Bucket with 3" Tine Spacing</i>			
2	1	5MP89622	AR10E 66" Rock Bucket (300/400/500 Series Loaders)
	1	5MP89645	AR10E 75" Rock Bucket (300/400/500 Series Loaders)
	1	5MP111352	AR10D 75" Rock Bucket (600/700 Series Loaders)
	1	5MP109573	AR10G 75" Rock Bucket (Global Carrier Series Loader)
	1	5MP106463	AR12A 84" Rock Bucket (800 Series Loader)
	1	5MP111353	AR12D 84" Rock Bucket (600/700 Series Loaders)
	1	5MP109574	AR12G 84" Rock Bucket (Global Carrier Series Loader)
	1	5MP109871	AR12A 93" Rock Bucket (800 Series Loader)
	1	5MP111354	AR12D 93" Rock Bucket (600/700 Series Loaders)
	1	5MP109872	AR12G 93" Rock Bucket (Global Carrier Series Loader)
3	4	5MP88798	Plastic Plug (All 66" and 75" Rock Buckets)
4	1	----	Serial Number Identification Tag Location
5	1	5MP41347	Caution Decal, Read Manual
6	1	5FPW50426	Warning Decal, Lock Pins (300/400/500 Series Loaders)

ITEMS #7 THROUGH #12 ARE USED ON 600 & 700 SERIES LOADERS ONLY

7	4	5MP2560	M12 Hex Nut
8	1	5FP1352136	Right Latch Pin
9	2	5FP0710145	Trip Pin
10	1	5FP1352135	Left Latch Pin
11	2	5MP10195	Roll Pin
12	2	5FP0710144	Compression Spring

OPTIONAL ROCK BUCKET GRAPPLE
AR10 SERIES 66" & 75" ROCK BUCKETS



OPTIONAL ROCK BUCKET GRAPPLE

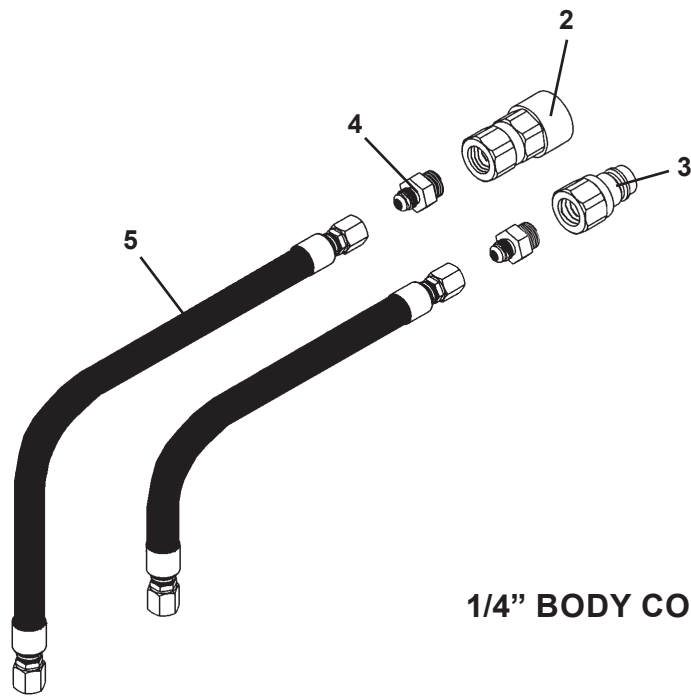
AR10 SERIES 66" & 75" ROCK BUCKETS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	-----	Serial Number Identification Tag Location
2	1	5MP40151	Warning Decal, High Pressure Fluid
3	2	5MP38359	1/4" Hose X 15" 6FJX-6FJX 90° Long
4	1	5MP30383	Straight Connector 6MJ-6FJ W/.0625 Orifice
5	2	5MP30379	Bulkhead Tee 6MJ-6MJ-6MJ (Includes Nut)
6	2	5MP38114	1/4" Hose X 50" 6FJX-6FJX
7	2	5MP3297	Straight Bulkhead Connector 6MJ-6MJ (Includes Nut)
8	2	5MP38360	1/4" Hose X 13-1/2" 6FJX-6FJX 90° Short
9	6	5MP6616	Grease Fitting
10	2	5MP107567	Cylinder Assembly
	-	5MP45822	Replacement Cylinder Seal Kit
11	4	5MP1044	3/8" UNC X 1-1/4" Hex Bolt
	8	5MP1514	3/8" Flat Washer
	4	5MP1226	3/8" UNC Hex Nut
12	4	5MP81807	Spacer
13	2	5MP104642	Cylinder Pin
14	2	5MP104650	Rear Column
15	4	5MP1044	3/8" UNC X 1-1/4" Hex Bolt
	8	5MP1514	3/8" Flat Washer
	4	5MP1503	3/8" Lock Washer
	4	5MP1226	3/8" UNC Hex Nut
16	1	5MP105590	Fitting Guard - Right
17	1	5MP105591	Fitting Guard - Left
18	2	5MP88713	U-Bolt
	4	5MP1646	1/2" Hard Flat Washer
	4	5MP1841	1/2" UNC Deformed Lock Nut
19	2	5MP104957	Grapple Pin
20	2	5MP1030	5/16" UNC X 3" Hex Bolt
	2	5MP1502	5/16" Lock Washer
	2	5MP1225	5/16" UNC Hex Nut
21	2	5MP104640	Arm
22	2	5MP104644	Cylinder Pin
23	8	5MP1090	1/2" UNC X 1-1/2" Hex Bolt
	16	5MP1646	1/2" Hard Flat Washer
	8	5MP1841	1/2" UNC Deformed Hex Nut
24	1	5MP104648	Grapple
25	2	5FPRDL3125	Warning Decal, Crush Hazard
26	2	5FP500737	Warning Decal, Pinch Points

ROCK BUCKET GRAPPLE HYDRAULIC KITS

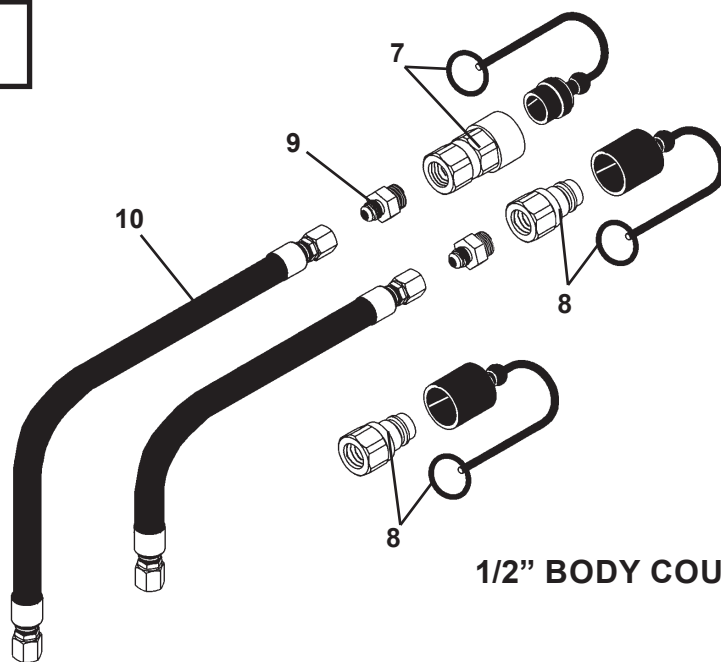
AR10 SERIES 66" & 75" ROCK BUCKETS

1



1/4" BODY COUPLERS

6



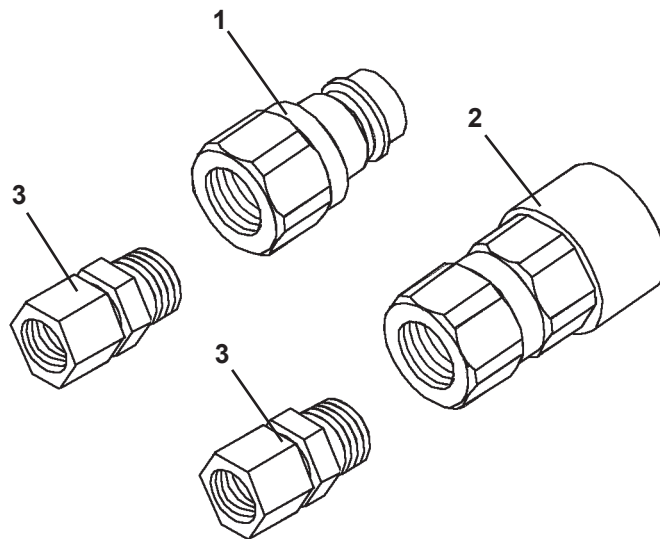
1/2" BODY COUPLERS

ROCK BUCKET GRAPPLE HYDRAULIC KITS

AR10 SERIES 66" & 75" ROCK BUCKETS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP106524	Hydraulic Kit (200/300/400 Series Loader) Includes Items 2, 3, 4 & 5
3	1	5MP106515	Male Coupler 6FBo- 1/4" Body
2	1	5MP106516	Female Coupler 6FBo 1/4" Body
4	2	5MP3457	Straight Connector 6MBo-6MJ
5	2	5MP35829	1/4" Hose X 60" 6FJX-6FJX
6	1	5MP109874	Hydraulic Kit (500/600/700/800/Global Carrier Series Loader) Includes Items 7, 8, 9 & 10
7	1	5MP31886	Female Coupler 10FBo 1/2" Body (800 Series Loader Only)
	1	5MP51754	Dust Plug
8	2	5MP15512	Male Coupler 10FBo 1/2" Body
	2	5MP51753	Dust Cap
9	2	5MP3362	Straight Connector 10MBo-6MJ
10	2	5MP35829	1/4" Hose X 60" 6FJX-6FJX

5MP107610 HYDRAULIC KIT
ADAPTS FROM 1/4" BODY COUPLERS TO 1/2" BODY COUPLERS



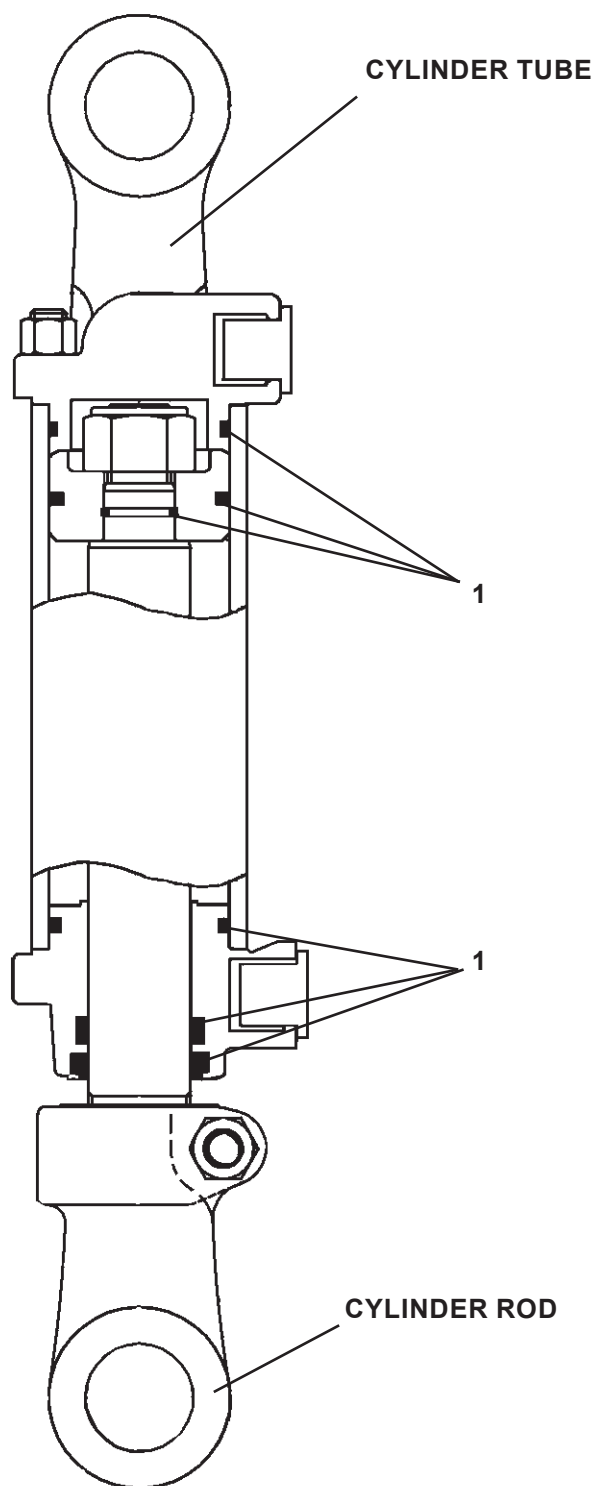
5MP107610 HYDRAULIC KIT
ADAPTS FROM 1/4" BODY COUPLERS TO 1/2" BODY COUPLERS

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP17139	Male Coupler 8FBo 1/2" Body
2	1	5MP17140	Female Coupler 8FBo 1/2" Body
3	2	5MP3338	Straight Connector 8MBo-6FBo

INSTALLATION INSTRUCTIONS:

1. Remove existing 1/4" Body couplers from the power and return lines on the attachment.
2. Install Straight Connectors (5MP3338) into the existing fittings.
3. Install 1/2" Body couplers to straight connectors.

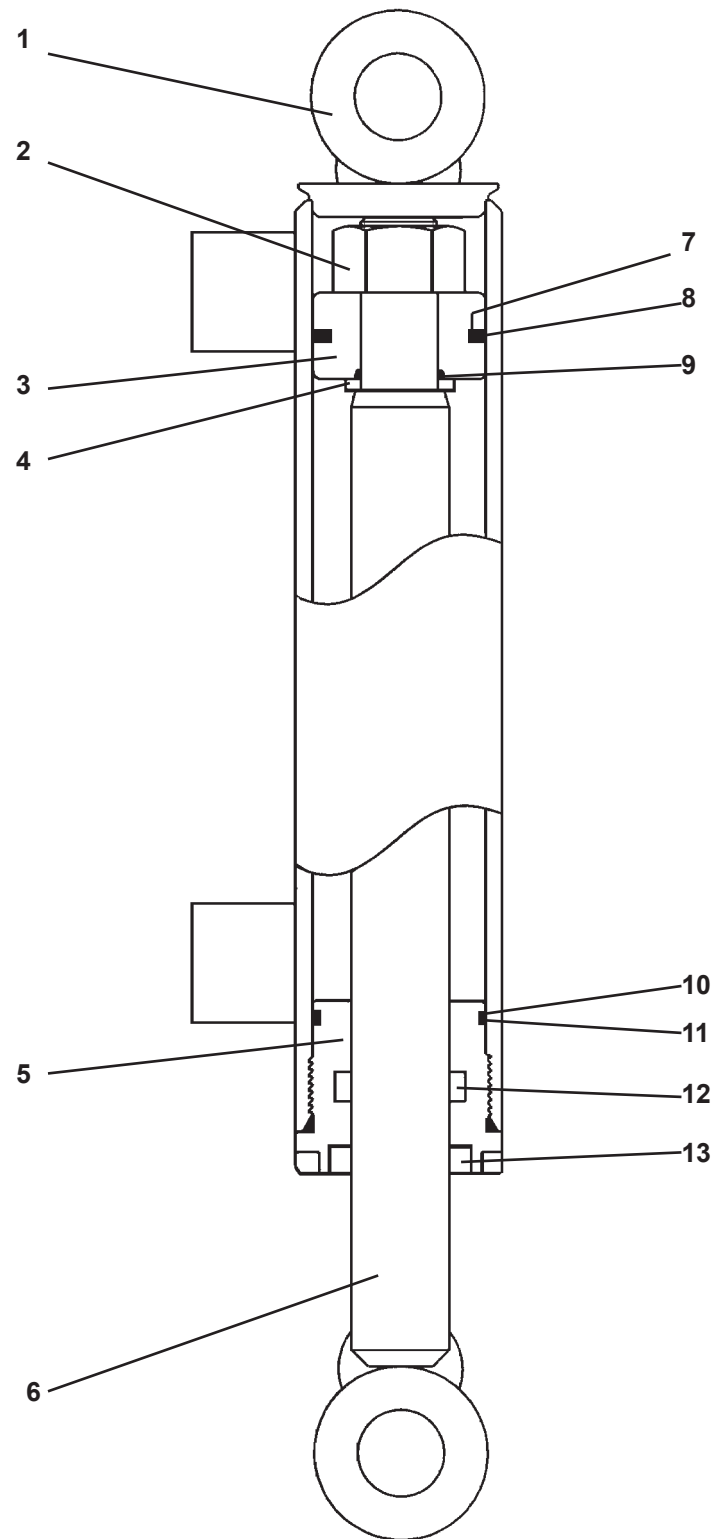
5MP124202 CYLINDER ASSEMBLY
(AY11F 53" 4-IN-1 BUCKET & AV20F ROOT GRAPPLE)



5MP124202 CYLINDER ASSEMBLY
(AY11F 53" 4-IN-1 BUCKET & AV20F ROOT GRAPPLE)

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP46447	Cylinder Seal Kit (Includes all seals and o'rings)
		5MP65349	Installation Tool (Used for cylinder seal replacement.) (Not included with cylinder assembly.)

5MP106528 CYLINDER ASSEMBLY (AY11H 60" & AY11E 72" 4-IN-1 BUCKETS)

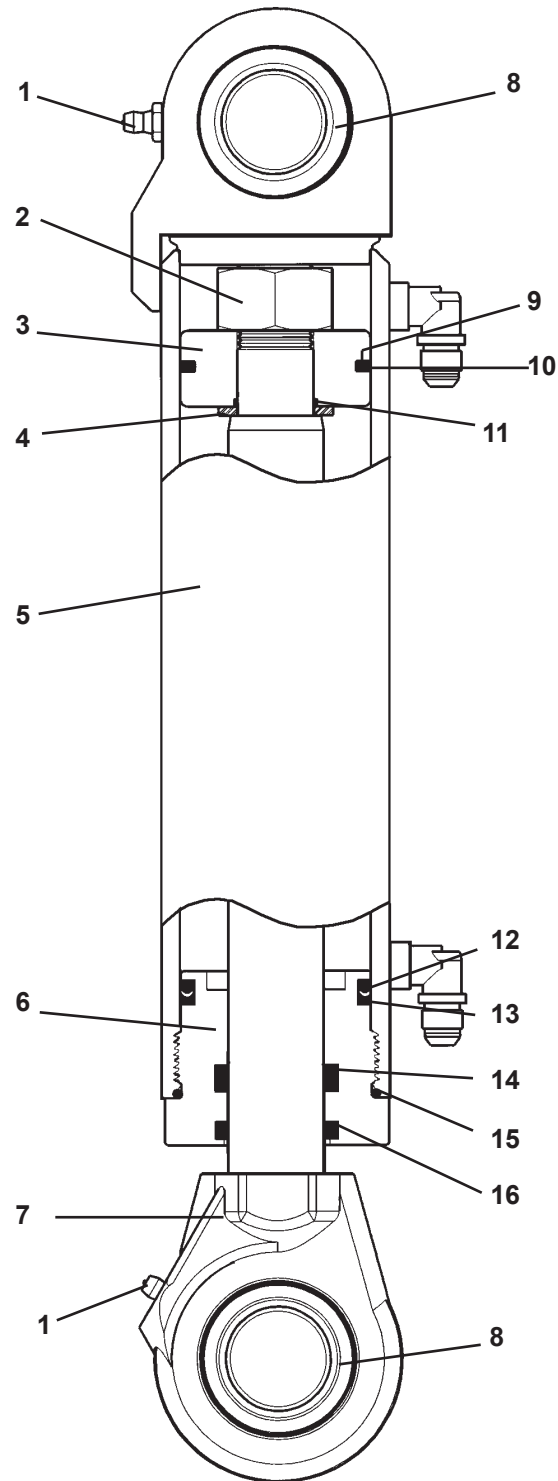


5MP106528 CYLINDER ASSEMBLY

(AY11H 60" & AY11E 72" 4-IN-1 BUCKETS)

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP107358	Cylinder Tube
2	1	5MP1482	Hex Nut (Torque to 150-200 ft. lbs.)
3	1	5MP6992	Piston
4	1	5MP52644	Washer
5	1	5MP89527	Gland
6	1	5MP106555	Cylinder Rod
7	1	*	O'Ring
8	1	*	Piston Ring
9	1	*	O'Ring
10	1	*	O'Ring
11	1	*	Back-Up Washer
12	1	*	Poly-Pak Seal
13	1	*	Rod Wiper
			5MP45581 Cylinder Seal Kit (Includes all parts marked with an asterisk (*). Parts are not sold separately.)
			5MP65349 Installation Tool (Used for cylinder seal replacement.) (Not included with cylinder assembly.)

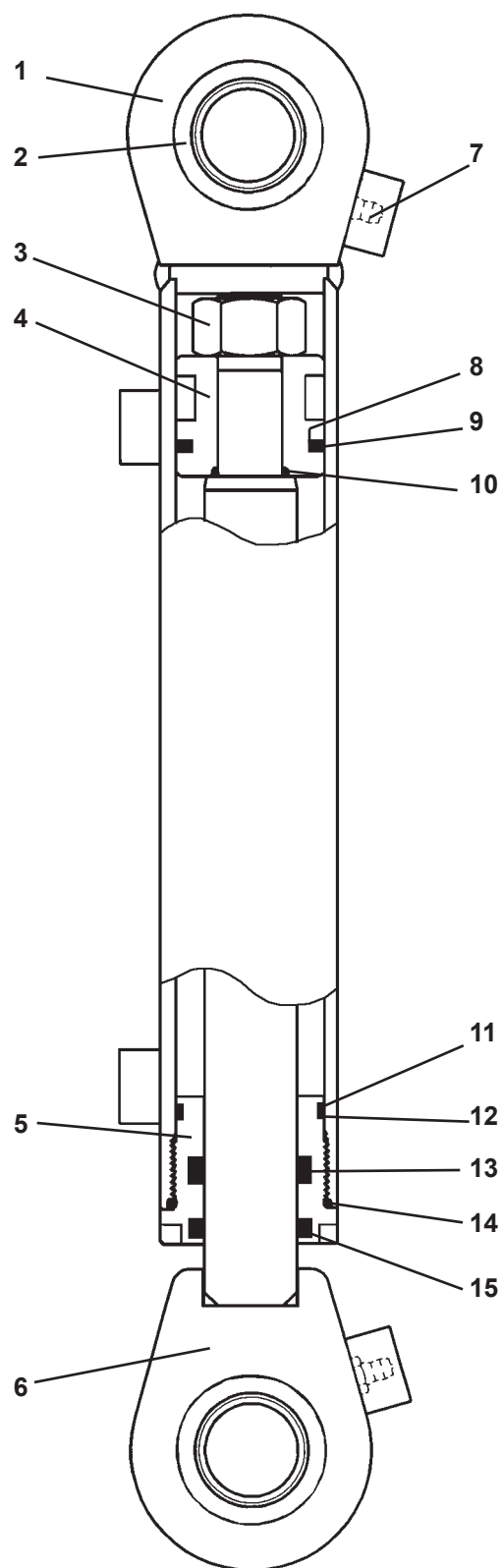
5MP111736 CYLINDER ASSEMBLY **(AY12 SERIES 4-IN-1 BUCKETS)**



5MP111736 CYLINDER ASSEMBLY (AY12 SERIES 4-IN-1 BUCKETS)

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP6616	Grease Fitting
2	1	5MP1483	Hex Nut (Torque to 150-200 ft. lbs.)
3	1	5MP50252	Piston
4	1	5MP5421	Washer
5	1	5MP111737	Cylinder Tube
6	1	5MP77458	Gland
7	1	5MP107539	Cylinder Rod
8	2	5MP62523	Self-Aligning Bushing
9	1	*	O'Ring
10	1	*	Piston Ring
11	1	*	O'Ring
12	1	*	O'Ring
13	1	*	Back-Up Washer
14	1	*	Poly-Pak Seal
15	1	*	O'Ring
16	1	*	Rod Wiper
		5MP45617	Cylinder Seal Kit (Includes all parts marked with an asterisk (*). Parts are not sold separately.
		5MP65349	Installation Tool (Used for cylinder seal replacement.) (Not included with cylinder assembly.)

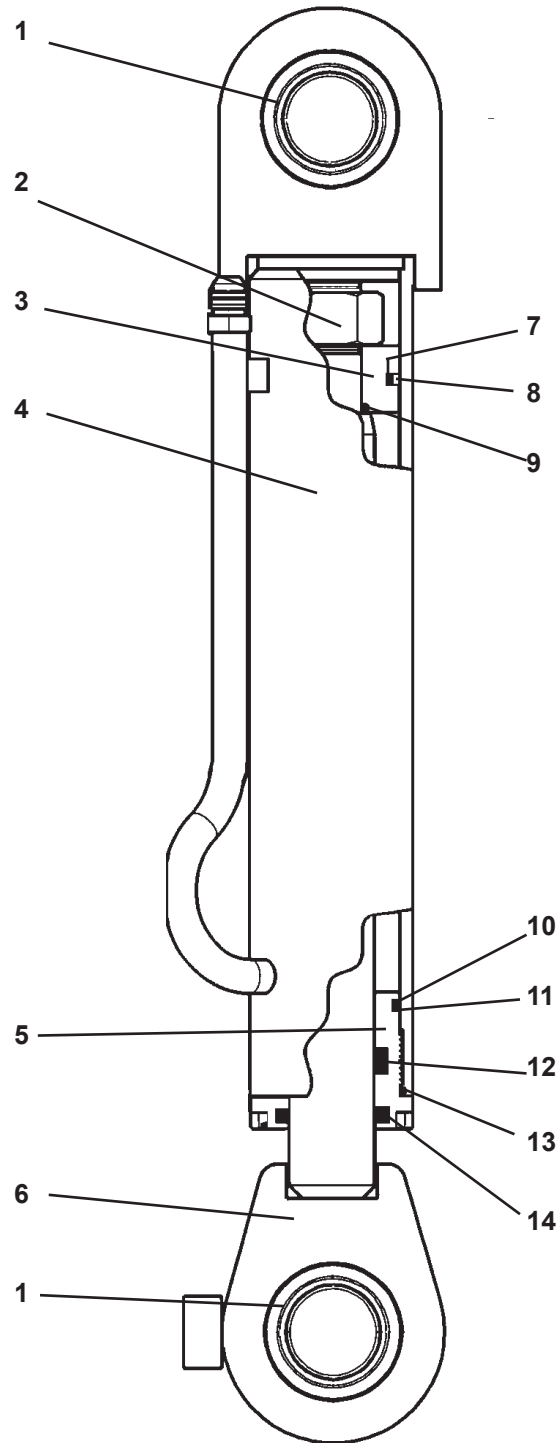
5MP107865 CYLINDER ASSEMBLY (DEBRIS BUCKETS & MANURE FORK AND GRAPPLES)



5MP107865 CYLINDER ASSEMBLY (DEBRIS BUCKETS & MANURE FORK AND GRAPPLES)

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	5MP107916	Cylinder Tube
2	2	5MP62523	Bushing
3	1	5MP1482	Hex Nut (Torque to 150-200 ft. lbs.)
4	1	5MP108342	Piston
5	1	5MP18994	Gland
6	1	5MP107913	Cylinder Rod
7	2	5MP6616	Grease Fitting
8	1	*	O-Ring
9	1	*	Piston Ring
10	1	*	O'Ring
11	1	*	O-Ring
12	1	*	Back-Up Washer
13	1	*	Poly-Pak Seal
14	1	*	O'Ring
15	1	*	Rod Wiper
		5MP45136	Cylinder Seal Kit (Includes all parts marked with an asterisk (*). Parts are not sold separately.
		5MP65349	Installation Tool (Used for cylinder seal replacement.) (Not included with cylinder assembly.)

5MP107567 CYLINDER ASSEMBLY (OPTIONAL ROCK BUCKET GRAPPLE)



5MP107567 CYLINDER ASSEMBLY (OPTIONAL ROCK BUCKET GRAPPLE)

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	2	5MP62523	Self-Aligning Bushing
2	1	5MP1482	Hex Nut (Torque to 150-200 ft. lbs.)
3	1	5MP6992	Piston
4	1	5MP107566	Cylinder Tube
5	1	5MP18994	Gland
6	1	5MP79252	Cylinder Rod
7	1	*	O'Ring
8	1	*	Piston Ring
9	1	*	O'Ring
10	1	*	O'Ring
11	1	*	Back-Up Washer
12	1	*	Poly-Pak Seal
13	1	*	O'Ring
14	1	*	Rod Wiper
		5MP45822	Cylinder Seal Kit (Includes all parts marked with an asterisk (*). Parts are not sold separately.)
		5MP65349	Installation Tool (Used for cylinder seal replacement.) (Not included with cylinder assembly.)

PART NUMBER
5MP76314
REV. 9

