



# OPERATOR'S AND PARTS MANUAL

## X4075 / X5075

# HIGH TORQUE AUGER DRIVES



**PALADIN**  
LIGHT CONSTRUCTION GROUP

 **BRADCO**

 **FFC**

 **HARLEY**

 **McMILLEN**

 **SWEEPSTER**

*The Power of Combined Excellence*



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

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

**Manual Number: OM701**  
**Part Number: 75601**  
**Rev.**



# TABLE OF CONTENTS

## X4075 & X5075 AUGER DRIVES

<b>PREFACE</b> .....	3
<b>SAFETY PRECAUTIONS</b>	
SAFETY STATEMENTS .....	5
GENERAL SAFETY PRECAUTIONS .....	5-7
EQUIPMENT SAFETY PRECAUTIONS .....	8
<b>INSTALLATION</b> .....	9-11
<b>HYDRAULIC SYSTEM HOOK-UP INSTRUCTIONS</b> .....	12
<b>OPERATING INSTRUCTIONS</b> .....	13
<b>MAINTENANCE</b>	
LUBRICATION .....	14
DAILY INSPECTION .....	14
PLANETARY GEARBOX .....	15
STORAGE PROCEDURE .....	15
PLANETARY GEAR REDUCTION SERVICE PARTS .....	16
<b>OPTIONS</b>	
AUGER OPTIONS .....	17-18
AUGER WEAR PARTS .....	18-19
<b>TROUBLESHOOTING</b> .....	20
<b>SPECIFICATIONS</b> .....	21
<b>LIMITED WARRANTY</b> .....	23
<b>PARTS</b>	
X4075 AUGER DRIVE ASSEMBLY .....	24-25
X5075 AUGER DRIVE ASSEMBLY .....	26-27
STANDARD MOUNTING KITS	
UNIVERSAL SWIVEL KIT .....	30-31
SKID STEER LOADER MOUNTING .....	32-33
TRACTOR LOADER MOUNTING - JOHN DEERE LOADERS .....	34-35
SPECIAL OFFSET MOUNTING .....	36-37
FRONT END LOADER MOUNTING .....	38-39
QCP 700 COUPLER MOUNTING .....	40-41
DIPPER MOUNTING - PENDULUM STYLE .....	42-47
BRADCO BACKHOE DIPPER MOUNTING .....	48-49
MINI EXCAVATOR & SMALL BACKHOE MOUNTING .....	50-51
TLB & EXCAVATOR MOUNTING - QUICK HITCH COUPLER STYLE .....	52-53
EXCAVATOR MOUNTING - QUICK ATTACH STYLE .....	54-55
TLB & EXCAVATOR - PIN GRABBER/PIN ON STYLE - PIVOT MOUNTING .....	56-57
TLB & EXCAVATOR - PIN GRABBER/PIN ON STYLE - CRADLE READY MOUNTING .....	58-59
EXCAVATOR WELD ON MOUNTING .....	60-61
WHEEL LOADER MOUNTING .....	62-65
TELEHANDLER MOUNTING .....	66-67

**THIS PAGE  
IS INTENTIONALLY  
BLANK**

# PREFACE

## GENERAL COMMENTS

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

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

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

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

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

## BEFORE OPERATION

The primary responsibility for safety with this equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.

## SAFETY ALERT SYMBOL



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

## SERVICE

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 the cover of this manual. This information may be obtained from the identification plate located on the product.

The parts department needs this information to insure that you receive the correct parts for your specific model.

**THIS PAGE  
IS INTENTIONALLY  
BLANK**

# 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.

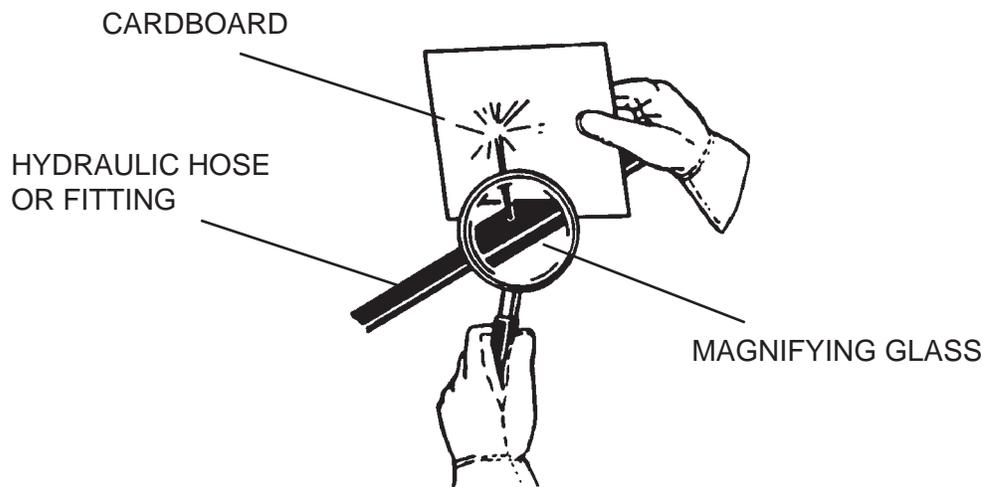
### WARNING!



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



M-807 7-28-05-2

# 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.

# EQUIPMENT SAFETY PRECAUTIONS

## **WARNING! KNOW WHERE UTILITIES ARE**



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



## **OPERATING THE PRIME MOVER**

Avoid steep hillside operation, which could cause the prime mover to overturn. Consult your prime mover operator's and safety manuals for maximum incline allowable.



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

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



## **WORKING WITH THE AUGER**

- All bystanders should be kept a minimum of 10 feet (3 meters) away from the working area of the earth auger.
- An operator must not use drugs or alcohol, which can change his or her alertness or coordination. An operator taking prescription or over-the-counter drugs should seek medical advice on whether or not he or she can safely operate equipment.
- Before exiting the prime mover, lower the earth auger to the ground, turn off the prime mover's engine, and lock the prime mover's brakes.
- Flow and pressure gauges, fittings, and hoses must have a continuous operating pressure rating of at least 25% higher than highest pressures of the system.



## **TRANSPORTING THE AUGER**

- Travel only with the earth auger in a safe transport position to prevent uncontrolled movement. Drive slowly over rough ground and on slopes.
- Tether the earth auger with a chain, if necessary, to prevent uncontrolled swinging of the auger when moving from hole to hole.
- Remove the earth auger from the prime mover before transporting to and from the job site.



## **MAINTAINING THE AUGER**

- Never adjust a relief valve for pressure higher than recommended by the prime mover manufacturer.
- Never perform any work on an earth auger unless you are authorized and qualified to do so. Always read the operator service manual(s) before any repair is made. After completing maintenance or repair, check for correct functioning of the earth auger. If not functioning properly, always tag "DO NOT OPERATE" until all problems are corrected.
- Worn, damaged, or illegible safety decals must be replaced. New safety decals can be ordered from McMillen®.

# INSTALLATION INSTRUCTIONS

## GENERAL INFORMATION

Find the mounting kit diagram and parts list for the kit you have received. Study the diagram and familiarize yourself with the names of the various parts. This knowledge will assist you in understanding these instructions.

Read these instructions carefully before attempting to mount the auger.

### READ AND UNDERSTAND ALL SAFETY INFORMATION PRIOR TO MOUNTING YOUR AUGER.

## QUICK ATTACH MOUNTING ASSEMBLIES

(Includes some Excavator Mounts, Telehandler Mounts and all Skid Steer & Wheel Loader Mounts.)

1. Remove the bucket or other attachment from the prime mover quick attach mechanism.
2. Attach the quick attach mounting bracket to the prime mover quick attach mechanism, as per manufacturer's recommendations.
3. Attach the swivel (#21694) to the quick attach mounting bracket with pin (#22255) provided. Secure the pin in place with klik pins (#21169).
4. If your mounting bracket is designed for the installation of a cradle, bolt the cradle to the bracket using the .50" UNC X 2.00" capscrews, lock washers and hex nuts provided.
5. Install the drive unit to the swivel using the pin provided with the drive unit assembly.
6. Install the auger to the drive unit with the bolt and nut provided with the drive unit assembly.
7. Refer to the **"HYDRAULIC SYSTEM HOOK-UP"** section in this manual for hydraulic connection instructions and recommendations.

## BACKHOE AND EXCAVATOR "PENDULUM" MOUNTING ASSEMBLIES

1. Remove the bucket from the dipper arm and curl cylinder pin connections. The dipper arm pin will be used to attach auger pendulum mounting to the dipper arm. Curl cylinder pin will not be required for auger installation.
2. If using a universal adjustable width pendulum mounting assembly: Space the two backhoe adapter ears to the same width as the dipper arm and secure to the base using the .50" hardware provided. After determining the correct width, the backhoe adapter ears must be welded to the base.

## INSTALLATION INSTRUCTIONS

3. Attach the pendulum mounting (all types) to the dipper using the dipper arm pin removed from the bucket in Step #1. Secure the bucket pin as per prime mover manufacturer's recommendation.
4. Install the auger drive unit to pendulum mount with pivot pin provided with the drive unit assembly.
5. Install the auger to the drive unit with the bolt and nut provided with the drive unit assembly.
6. Refer to the **"HYDRAULIC SYSTEM HOOK-UP"** section in this manual for hydraulic connection instructions and recommendations.

### BACKHOE AND EXCAVATOR "PIN GRABBER" MOUNTING ASSEMBLIES

1. Remove the bucket from the dipper arm and curl cylinder pin connections.
2. Attach the pin grabber mounting (all types) to the dipper and curl cylinder using the pivot pins and cotter pins provided.
3. Attach the swivel (#21694) to the pin grabber mounting bracket with pivot pin provided. Secure the pin in place with klik pins (#21169).

**NOTE: Some assemblies require the installation of step bushings on each side of the swivel when supplied with a pivot pin longer than the standard #22255 (1.25" diameter by 6.00" effective length) pivot pin.**

4. If your mounting bracket is designed for the installation of a cradle, bolt the cradle to the bracket using the .50" UNC X 2.00" capscrews, lock washers and hex nuts provided.
5. Install the drive unit to the swivel using the pin provided with the drive unit assembly.
6. Install the auger to the drive unit with the bolt and nut provided with the drive unit assembly.
7. Refer to the **"HYDRAULIC SYSTEM HOOK-UP"** section in this manual for hydraulic connection instructions and recommendations.

# INSTALLATION INSTRUCTIONS

## UNIVERSAL FRONT END LOADER MOUNTING ASSEMBLY

1. The universal front end loader mounting assembly (#21235) can be used to adapt your McMillen Earth Auger to the side of the loader arm, lip of a bucket, or fork lift forks. **DO NOT USE ON SKID -STEER LOADERS.**
2. Place loader bracket clamp plate (#21449) on the inside of the loader arm, top of the bucket lip or top of fork lift fork.

**NOTE: For mounting on lip of bucket you will need to drill two 7/16" diameter holes through the bucket.**

3. Place the loader bracket #21628 on the opposite side of clamp plate and secure with the four .44" bolts #1080 and hex nuts #1227 provided.
4. Attach the swivel (#21694) to the loader mounting bracket with pivot pin #22255 provided. Secure the pin in place with klik pins (#21169).
5. Install the drive unit to the swivel using the pin provided with the drive unit assembly.
6. Install the auger to the drive unit with the bolt and nut provided with the drive unit assembly.
7. Refer to the **"HYDRAULIC SYSTEM HOOK-UP"** section in this manual for hydraulic connection instructions and recommendations.

## WELD-ON EXCAVATOR MOUNTING

McMillen offers a blank weld on plate with mounting ears and swivel for welding onto your own excavator mounting bracket.

After securely welding the plate onto your bracket:

1. Attach the swivel (#21694) to the mounting plate with pivot pin #22255 provided. Secure the pin in place with klik pins #21169.
2. Install the drive unit to the swivel using the pin provided with the drive unit assembly.
3. Install the auger to the drive unit with the bolt and nut provided with the drive unit assembly.
4. Refer to the **"HYDRAULIC SYSTEM HOOK-UP"** section in this manual for hydraulic connection instructions and recommendations.

# HYDRAULIC SYSTEM HOOK-UP INSTRUCTIONS

## GENERAL INFORMATION

Once the installation instructions are complete, you are now ready to make the hydraulic connections necessary to operate your earth drill.

### READ AND UNDERSTAND SAFETY INFORMATION PRIOR TO MAKING HYDRAULIC CONNECTIONS.

Your equipment dealer is in the best position to advise you as to where the best place on your machine is to make the hydraulic connections to power your earth drill drive unit. The list below shows the most common places to “tap” into the hydraulic system on various types of machines.

- **SKID STEER LOADERS** - Auxiliary hydraulic outlets.
- **BACKHOES & EXCAVATORS** - Auxiliary hydraulic outlets or bucket curl cylinder circuit.
- **WHEEL LOADERS & TRACTOR LOADERS** - Auxiliary hydraulic outlets or bucket tilt (dump) cylinder circuit.

Determine the length of hydraulic hoses required to plumb drive unit into the place on your machine where you will be “tapping” into the hydraulics. Be sure the two hydraulic hoses are long enough to perform at the full range of the earth drill’s operating capacity. A case drain line will also be required to operate your earth drill.

- **Models X4075, X5075, X6075, X8075 & 8K2** - These models require two 3/4” (19mm) ID hydraulic hoses, with #12 JIC Female fittings on one end of each hose, to connect hoses to drive unit fittings. **A case drain line is also required.** The skid steer hydraulic kits for the high torque auger drives include a case drain line. A universal excavator Drain Line Kit #21218 is available through your local dealer.

**NOTE:** Fittings on the other end of each hydraulic hose should match the threads on the hydraulic quick couplers to be used.

**WARNING! HOSES AND FITTINGS MUST HAVE A CONTINUOUS OPERATING PRESSURE RATING OF AT LEAST 25% HIGHER THAN THE HIGHEST PRESSURES OF THE SYSTEM YOU ARE “TAPPING” INTO.**



Once all of the hydraulic connections have been made and checked for leaks, you are now ready to operate your earth drill. **READ AND UNDERSTAND OPERATING INSTRUCTIONS AND SAFETY INFORMATION PRIOR TO OPERATING YOUR EARTH DRILL.**

# OPERATING INSTRUCTIONS

1. After all installation instructions have been completed, safety information read and understood, and the rest of this operator's manual has been reviewed, your McMillen Hydraulic Earth Drill is now ready for use.
2. With the auger raised off the ground and the vehicle engine set at a low RPM, activate the earth drill control valve to determine which position the control valve lever must be in to turn auger in a forward (clockwise) rotation. This is the "digging" position.
3. Before beginning to dig, experiment with auger speed to determine a suitable auger RPM. Generally in light and sandy soil a high RPM is desirable. In hard, rocky, or frozen soils a slower RPM is desirable. To increase auger RPM, increase vehicle engine RPM. To decrease auger RPM, decrease vehicle engine RPM.
4. Return earth drill control valve to neutral position to stop the auger. Lower the auger to the ground so that only the center point penetrates the ground about 2" (51mm).
5. Activate the earth drill control valve so auger is turning in a forward (clockwise) rotation. Use only enough down pressure to assure positive penetration of auger into the ground. Ease up on down pressure if auger rotation slows down drastically or stalls.

**NOTE: Excessive down pressure will cause the auger to stall frequently.**

6. When auger has penetrated the ground about 24" (610mm), raise the auger from the hole to clean the dirt out. Repeat this procedure until the desired hole depth is obtained.
7. Once the required hole depth is reached, allow the auger to turn a few seconds at this depth to clean the hole.
8. Return the earth drill control valve to the neutral position to stop the rotation of the auger. Raise the auger out of the hole, move away from the hole, then activate the earth drill control valve to spin the loose soil off of the augers.

**NOTE: Do not reverse the auger rotation to remove from the hole as loose soil on the auger flights will fall back into the hole.**

9. If necessary, repeat steps 7 & 8 to obtain a cleaner hole.
10. In some soil conditions or when excessive down pressure is applied, auger may "screw" itself into the ground and become stuck causing earth drill to stall. If this happens, reverse the auger rotation (counter-clockwise) by moving the control valve lever to the reverse position and slowly raise the auger. Once unstuck, return the control valve lever to the forward rotation position and continue digging.
11. If the auger becomes lodged under rocks, roots, or other large obstructions, do not attempt to raise the auger out of the ground. See step 10 for proper procedure to relieve the auger.
12. Avoid excessive side loading to earth drill which can cause drive unit or auger damage.
13. Keep auger teeth and points in good condition. Check frequently and always keep spares on hand so they can be replaced as wear is detected to avoid damage to tooth holders and auger flighting.

**WARNING:** To prevent possible injury or death, keep all bystanders 10 feet or more away from rotating auger. Take extra precautions when digging in locations where any type of landscape fabric may be present.



M-1656 11-12-07

# MAINTENANCE

## GENERAL INFORMATION

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

## LUBRICATION

Change planetary gear reduction oil with API-GL-5, 80W or 90W lubricant after the first 50 hours of operation and then every 1000 hours or 12 months, whichever comes first.

## DAILY INSPECTION

- Check hydraulic oil for cleanliness and contamination. Change if necessary.
- 
- Check hydraulic hoses for damage, leaking and/or signs of excessive heat. Replace if necessary.
- 
- Check auger point for excessive wear or loose fit. Replace if necessary.
- 
- Check auger teeth for excessive wear or loose fit. Replace if necessary.
- 
- Check output shaft for excessive wear, damage or leakage. Replace if necessary.
- 
- Check all bolts and pivot pins for damage, breaks or wear. Replace if necessary.

**CAUTION!**  **EXCESSIVE VENTING OF LUBRICANT FROM PLANETARY MAY INDICATE THAT THE MOTOR SHAFT SEAL IS LEAKING. UNIT SHOULD BE REPAIRED IMMEDIATELY.**

**PLANETARY SHAFT SEAL REPLACEMENT IS THE ONLY PLANETARY REPAIR THAT CAN BE MADE WHILE THE UNIT IS UNDER WARRANTY. (SEE PARTS PAGES FOR PLANETARY SEAL NUMBER.)**

**MOTOR SHAFT SEAL REPLACEMENT IS THE ONLY HYDRAULIC MOTOR REPAIR THAT CAN BE MADE WHILE THE UNIT IS UNDER WARRANTY. (SEE PARTS PAGES FOR MOTOR SEAL NUMBER.)**

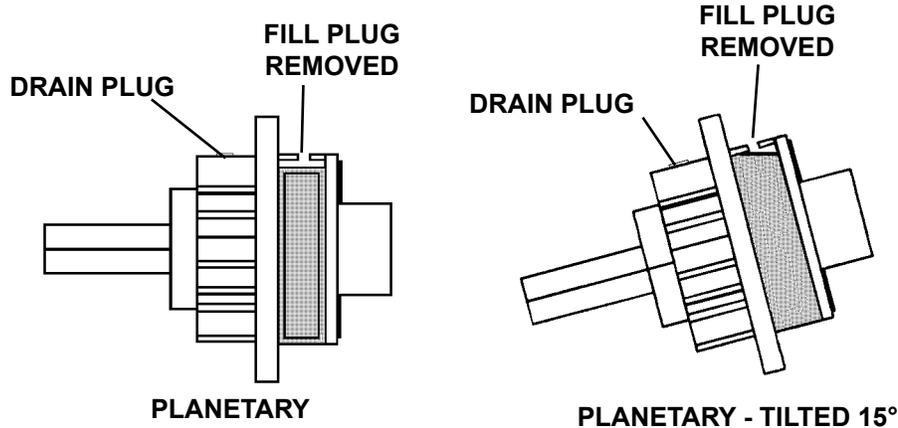
# MAINTENANCE

## PLANETARY GEARBOX

Change gear box oil using API-GL-5, 80W or 90W lubricant after the first 50 hours of operation and then every 1200 hours or 12 months, whichever comes first. Check oil level frequently to maintain proper lubrication.

## CHECKING PLANETARY LUBRICANT

1. Place the planetary in a horizontal position.
2. Remove fill plug.
3. Check the lubricant level. Gear lub level should be visible through the fill plug hole.
4. To Fill: Tilt the planetary slightly (maximum 15°) and add lubricant up to fill plug location. With the planetary in this position, lubricant should cover the internal gear and be visible through the fill hole when in a horizontal position.



## STORAGE PROCEDURE

1. Check to ensure that hydraulic motor and hoses are full of clean oil.
2. Be sure planetary is full of clean lubricant.
3. Clean unit thoroughly, removing all mud, dirt, and grease.
4. Tighten all loose hardware.
5. Touch up unpainted and exposed areas with paint to prevent rust.
6. Coat the drive unit output shaft, inside of auger collar, variable auger extension shaft and inside of auger extension collar to prevent rust and reduce wear.
7. Store the unit in a dry and protected place. Leaving the auger and drive unit outside, exposed to the elements, will materially shorten its life.
8. Inspect the unit for visible signs of wear, breakage or damage. Order any parts required and make necessary repairs to avoid delays when starting next season.
9. Replace decals if damaged or in unreadable condition.

## **MAINTENANCE**

PLANETARY GEAR REDUCTION FOR X4075 & X5075 AUGER DRIVES

**WARRANTY NOTICE: ANY ATTEMPT TO  
DISASSEMBLE OR MAKE FIELD REPAIRS  
TO THE PLANETARY WILL VOID WARRANTY.  
CONTACT YOUR DEALER/DISTRIBUTOR.**

# AUGER OPTIONS

## 2" HEX AUGERS

<b>AUGER SIZE</b>	<b>HDF</b> <i>(light to moderate ground conditions)</i>	<b>HDC</b> <i>(difficult ground conditions)</i>	<b>HTF</b> <i>(tree and shrub planting)</i>	<b>HDR</b> <i>(soid, fracturable rock &amp; frozen ground)</i>
4" x 3'	20000	--	--	--
6" x 3'	20018	20033	--	--
8" x 3'	20053	20068	--	--
9" x 3'	20092	20109	--	--
10" x 3'	20142	20157	--	--
12" x 3'	20180	20198	--	--
15" x 3'	20234	20251	--	--
16" x 3'	20266	20280	--	--
18" x 3'	20302	20318	--	--
20" x 3'	20347	20360	--	--
24" x 3'	20383	20397	--	--
30" x 3'	20426	20438	--	--
36" x 3'	20471	20483	--	--
<b> </b>				
4" x 4'	20003	--	--	--
6" x 4'	20021	20036	--	20046
8" x 4'	20056	20071	--	--
9" x 4'	20096	20113	--	20124
10" x 4'	20145	20160	--	20169
12" x 4'	20183	20201	--	20214
15" x 4'	20237	20254	--	--
16" x 4'	20269	20283	--	20293
18" x 4'	20306	20321	20334	20332
20" x 4'	20350	20363	--	20372
24" x 4'	20386	20401	20414	20412
30" x 4'	20429	20441	20454	20451
36" x 4'	20474	20486	20499	20497
42" x 4'	--	20512	20515	--
48" x 4'	--	20523	20525	--
<b> </b>				
4" x 5'	20007	--	--	--
6" x 5'	20027	20040	--	--
8" x 5'	20061	20075	--	--
9" x 5'	20103	20117	--	--
10" x 5'	20151	20163	--	--
12" x 5'	20190	20205	--	--
15" x 5'	20243	20257	--	--
16" x 5'	20274	20286	--	--
18" x 5'	20311	20325	--	--
20" x 5'	20354	20366	--	--
24" x 5'	20390	20404	--	--
30" x 5'	20432	20444	--	--
36" x 5'	20477	20489	--	--
<b> </b>				
4" x 6'	20010	--	--	--
6" x 6'	20030	20043	--	--
8" x 6'	20064	20078	--	--
9" x 6'	20106	20120	--	--
10" x 6'	20154	20166	--	--
12" x 6'	20193	20208	--	--
15" x 6'	20246	20260	--	--
16" x 6'	20277	20289	--	--
18" x 6'	20314	20328	--	--
20" x 6'	20357	20369	--	--
24" x 6'	20393	20407	--	--
30" x 6'	20435	20447	--	--
36" x 6'	20480	20492	--	--

## AUGER OPTIONS

### EXTENSIONS

DESCRIPTION	FIXED LENGTH	VARIABLE LENGTH
12" x 2" Hex	22839	23105
18" x 2" Hex	22845	23111
24" x 2" Hex	22851	23117
48" x 2" Hex	22858	23126
72" x 2" Hex	22865	23135
24" x 2" Hex HD Tube	22852	--
48" x 2" Hex HD Tube	22859	--
72" x 2" Hex HD Tube	22866	--
72" x 2.50" Hex	22868	23137

### ADAPTERS

PART #	DRIVE UNIT	AUGER COLLAR
21969	2" HEX	2" ROUND
21987	2" HEX	2.56" ROUND
21989	2" HEX	2.50" HEX
24546	2" HEX	2.62" HEX

### WEAR PARTS

PART #	DESCRIPTION	HDF	HDC	HTF	HDR	MDC
22190	Fishtail Point 3.50"	X	X	X		
22003	Fishtail Point 4.50"	X				
22169	Gage Tooth – Outside	X	X	X		
22168	Wisdom Tooth – Inside	X	X	X		
22306	.62" Bolt	X		X		
1839	.62" Nut	X		X		
22154	Rubber Lock		X			
22201	Rock Tooth				X	X
22176	Dirt Pilot – Standard					X
22160	Gage Tooth – Outside					X
22158	Dirt Tooth – Inside					X
22177	Carbide Pilot					X
22163	Carbide Gage Tooth - Outside					X
22162	Carbide Tooth – Inside					X

## HDC STYLE AUGER WEAR PARTS LIST

AUGER DIA.	8"	9"	10"	12"	15"	16"	18"	20"	24"	30"	36"	42"	48"	
<b>Part #</b>	152mm	203mm	229mm	254mm	305mm	381mm	406mm	457mm	508mm	610mm	762mm	914mm	1067mm	1219mm
<b>Qty</b>	2	2	2	2	2	2	2	2	2	2	2	2	2	2
<b>Description(Standard Components)</b>	Hardened Drive-In Gage Tooth													
22169	-	2	2	2	2	2	2	2	2	2	2	2	2	2
22168	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22190	2	4	4	4	4	4	4	4	4	4	4	4	4	4
22154	-	-	-	-	-	-	-	-	-	-	-	-	-	-

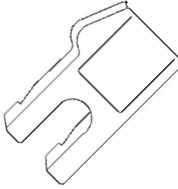
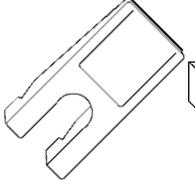
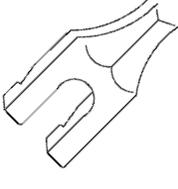
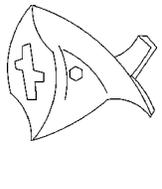
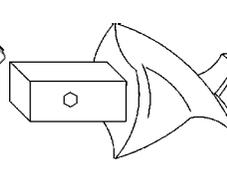
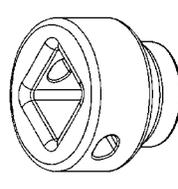
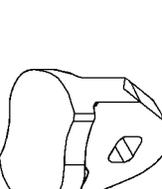
## HDF STYLE AUGER WEAR PARTS LIST

AUGER DIA.	6"	8"	9"	10"	12"	15"	16"	18"	20"	24"	30"	36"	
<b>Part #</b>	102mm	152mm	203mm	229mm	254mm	305mm	381mm	406mm	457mm	508mm	610mm	762mm	914mm
<b>Qty</b>	-	2	2	2	2	2	2	2	2	2	2	2	2
<b>Description(Standard Components)</b>	Hardened Bolt-on Gage Tooth												
22169	-	-	-	-	-	-	-	-	-	-	-	-	-
22168	1	1	1	1	1	1	1	1	1	1	1	1	1
22190	1	2	2	2	2	2	2	2	2	2	2	2	2
22003	-	-	-	-	-	-	-	-	-	-	-	-	-
22306	-	-	-	-	-	-	-	-	-	-	-	-	-
1839	-	-	-	-	-	-	-	-	-	-	-	-	-

## HTF STYLE AUGER WEAR PARTS LIST

AUGER DIA.	18"	24"	30"	36"	42"	48"
<b>Part #</b>	457mm	610mm	762mm	914mm	1067mm	1219mm
<b>Qty</b>	4	4	4	4	4	4
<b>Description(Standard Components)</b>	Hardened Bolt-on Gage Tooth					
22169	3	6	7	9	11	13
22168	1	1	1	1	1	1
22190	7	10	11	13	15	17
22306	7	10	11	13	15	17
1839	7	10	11	13	15	17

## OPTIONAL HARDFACED & CARBIDE WEAR COMPONENTS

Part #	Description	Gage Tooth	Wisdom Tooth	Chisel Tooth	Carbide Wisdom Tooth
22170	Hardfaced Wisdom Tooth				
22186	Carbide Wisdom Tooth				
22181	Hardened Chisel Tooth				
22183	Hardfaced Chisel Tooth				
22182	Carbide Chisel Tooth				
22190	3.50" Hardened Fishtail Point (Male Hub)				
22192	3.50" Hardfaced Fishtail Point (Male Hub)				
22191	3.50" Carbide Fishtail Point (Male Hub)				
22193	3.50" Hardfaced /Carbide Fishtail Point (Male Hub)				
22003	4.50" Hardened Fishtail Point (Female)				
22004	4.50" Hardfaced Fishtail Point (Female)				
22005	4.50" Hardfaced /Carbide Fishtail Point (Female)				
22171	3.50" Hardened Fishtail Point (Female)				
22172	3.50" Carbide Fishtail Point (Female)				
22173	3.50" Hardfaced Fishtail Point (Female)				
22174	3.50" Hardfaced /Carbide Fishtail Point (Female)				

**IMPORTANT:** McMillen does not recommend augers exceeding 36" diameter for C-Series Drive Units.

**NOTE:** Contact your equipment dealer for wear components not listed above. If you have any special auger needs or applications, feel free to contact McMillen.

# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Slow Speed	Low Flow	Check with flow meter. If low investigate cause.
	Line restrictions	Clear lines
	Fittings or connections too small	Replace with proper sizes.
	Oil filter dirty	Replace
	Hydraulic pump worn or damaged	See Dealer for repair
Insufficient Digging Power	Worn teeth or point	Replace
	Low system Pressure (PSI)	Check with pressure gauge. If low, investigate cause.
	Relief Valve damaged or setting wrong	Adjust or replace as required.
	Excessive load	Reduce load to within machine specifications.
Reverse Direction	Hoses reversed	Re-install hoses correctly.
Excessive Oil Heating	Line restrictions	Clear lines
	Fluid dirty	Replace hydraulic fluid and filter.
	Insufficient quantity of hydraulic fluid	Fill reservoir to proper level. increase reservoir storage capacity.
Oil Leaks	Hoses loose or damaged	Tighten or replace
	Fittings loose or damaged	Tighten or replace
	Hydraulic motor seals worn or damaged	See Dealer for repair.

# SPECIFICATIONS

## GENERAL INFORMATION

The X4075 and X5075 augers require a standard mounting kit with a maximum auger diameter of 48". A hydraulic motor drives the auger through a sealed planetary gear reduction. The heavy duty gear design gives these units a long life with minimal maintenance and service costs. McMillen planetary drives are completely sealed with all moving components running in oil for total lubrication on a constant basis. All models feature reverse rotation for quick backout when obstructions are encountered. The system's hydraulic relief valve protects the units from damage when the auger hits large immovable objects.

### DRAIN LINE REQUIRED

#### MODEL X4075

Maximum Auger Diameter:	48" (1219mm)
Minimum Hydraulic Flow:	24 gpm (91 lpm)
Maximum Hydraulic Flow:	32 gpm (121 lpm)
Maximum Continuous Operating PSI:	4000 psi (281 kg/cm <sup>2</sup> )
Output shaft Options:	2" (51mm)Hexagon

OUTPUT SPEED			OUTPUT TORQUE		
FLOW	=	SPEED	PRESSURE	=	TORQUE
GPM (LPM)	=	RPM	PSI (kg/cm <sup>2</sup> )	=	Lb•Ft (N•m)
24 (91)	=	58	2000 (141)	=	2524 (3422)
26 (98)	=	63	2500 (176)	=	3155 (4278)
28 (106)	=	68	3000 (211)	=	3786 (5133)
30 (114)	=	73	3500 (241)	=	4417 (5989)
32 (121)	=	78	4000 (276)	=	5048 (6845)

### DRAIN LINE REQUIRED

#### MODEL X5075

Maximum Auger Diameter:	48" (1219mm)
Minimum Hydraulic Flow:	28 gpm (106 lpm)
Maximum Hydraulic Flow:	40 gpm (151 lpm)
Maximum Continuous Operating PSI:	3500 psi (246 kg/cm <sup>2</sup> )
Output shaft Options:	2" (51mm)Hexagon

OUTPUT SPEED			OUTPUT TORQUE		
FLOW	=	SPEED	PRESSURE	=	TORQUE
GPM (LPM)	=	RPM	PSI (kg/cm <sup>2</sup> )	=	Lb•Ft (N•m)
28 (106)	=	59	2000 (141)	=	2896 (3926)
30 (114)	=	63	2500 (176)	=	3620 (4908)
32 (121)	=	68	3000 (211)	=	4345 (5891)
34 (129)	=	72	3500 (241)	=	5069 (6909)
36 (136)	=	76		=	
38 (144)	=	80		=	
40 (151)	=	85		=	

Output speed and torque specifications are based on theoretical values and are provided for comparative purposes only.

McMillen is continually striving to improve its products. Specifications and design are subject to change without notice and without liability therefor.

**THIS PAGE  
IS INTENTIONALLY  
BLANK**

# Limited Warranty

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

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

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

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

2. Warranty Period. The Limited Warranty is provided only to those defects that occur during the Warranty Period, which is the period that begins on the first to occur of: (i) the date of initial purchase by an end-user, (ii) the date the product is first leased or rented, or (iii) the date that is six (6) months after the date of shipment by Paladin Light Construction as evidenced by the invoiced shipment date (the "Commencement Date") and ends on the date that is twenty-four (24) months after the Commencement Date.

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

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

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

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

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

## LIMITATIONS AND EXCLUSIONS.

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

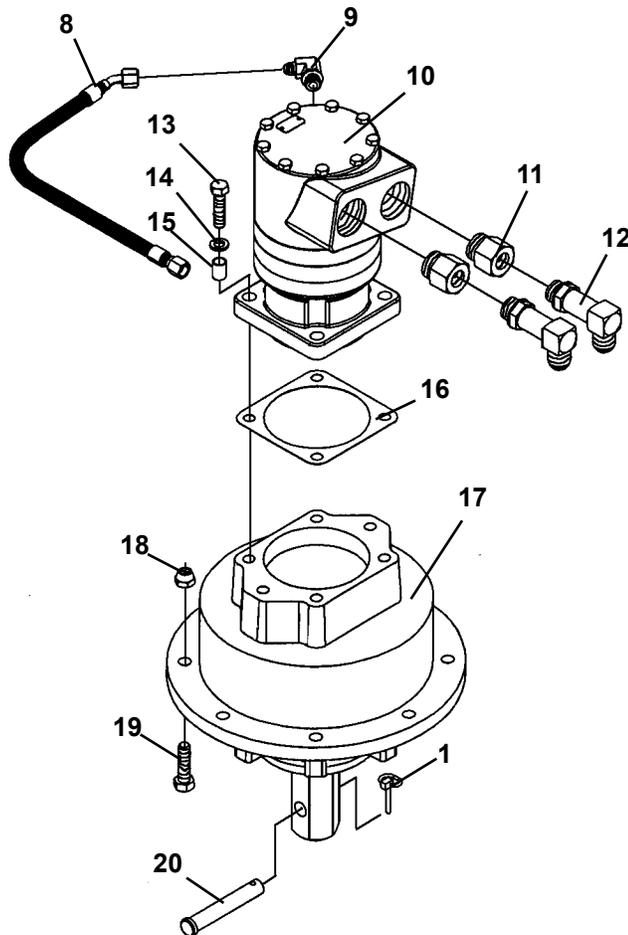
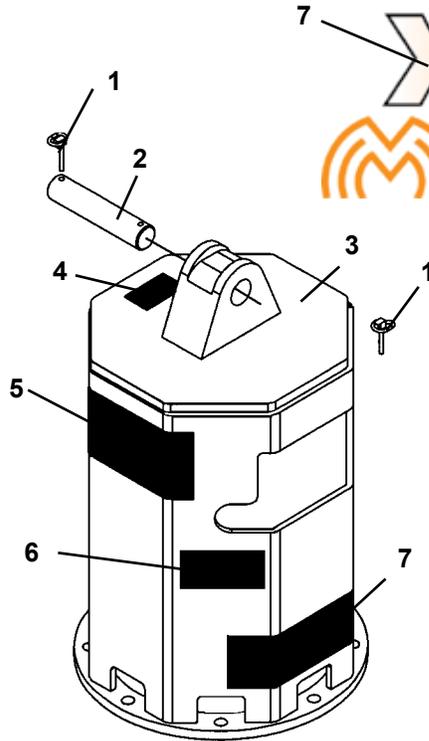
**IN NO EVENT SHALL PALADIN LIGHT CONSTRUCTION BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES.**

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

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

# X4075 AUGER DRIVE ASSEMBLY

ASSEMBLY #24900



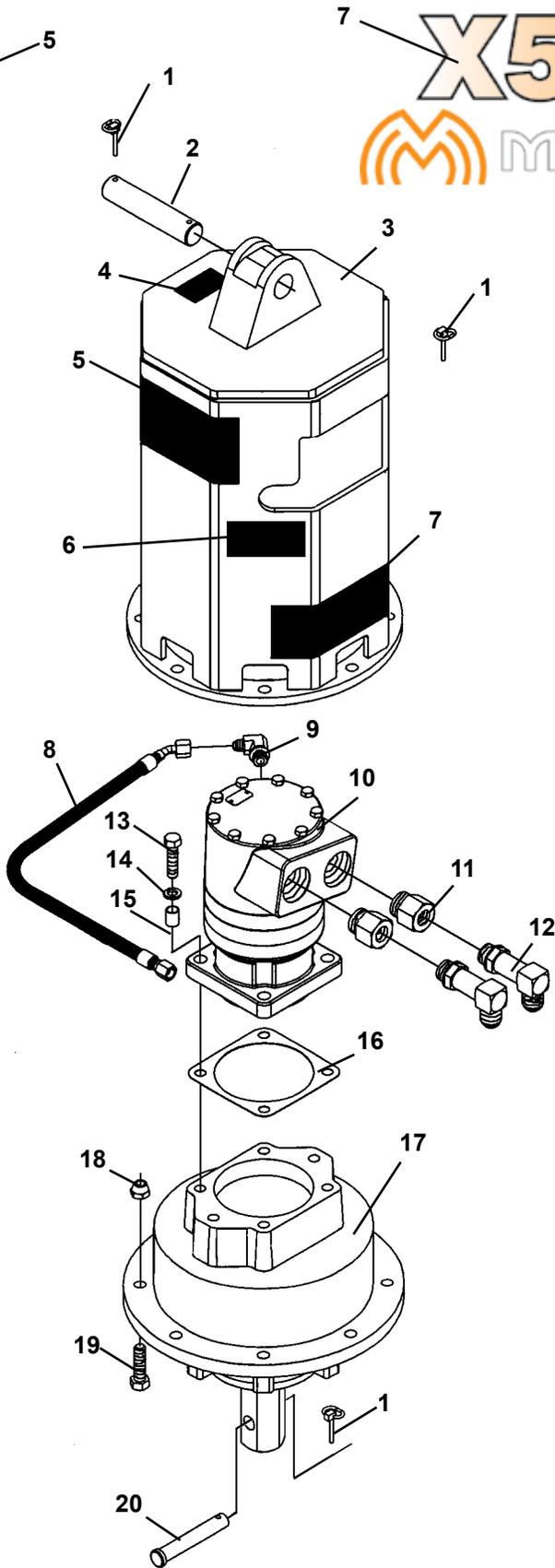
# X4075 AUGER DRIVE ASSEMBLY

ASSEMBLY #24900

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	3	21169	Klik Pin
2	1	22256	Pivot Pin
3	1	24893	Planetary Housing
4	1	----	Serial Number Identification Tag Location
5	2	22680	Danger Decal
6	1	41079	Notice Decal
7	1	41065	Model / Logo Decal
8	1	35754	Hose .25" X 24" 6FJX - 6MJ
9	1	30142	90° Elbow 8MBo-6MJ
10	1	107544	Hydraulic Motor 15.6 CID
		45897	Replacement Shaft Seal
11	2	30292	Straight Connector 16MBo-12FBo
12	2	30408	90° Elbow 12MBo-12MJ
13	4	1092	.50" UNC X 2.00" Hex Capscrew
14	4	1505	.50" Lock Washer
15	4	105803	Spacer
16	1	101864	Gasket
17	1	24909	Planetary Gearbox
		22445	Replacement Shaft Seal
18	8	22351	.56" UNC Lock Nut
19	8	22344	.56" UNC X 2.00" Hex Capscrew
20	1	22263	Pivot Pin

# X5075 AUGER DRIVE ASSEMBLY

ASSEMBLY #24901



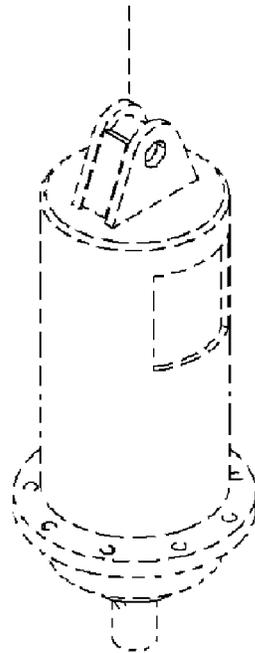
# X5075 AUGER DRIVE ASSEMBLY

ASSEMBLY #24901

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	3	21169	Klik Pin
2	1	22256	Pivot Pin
3	1	24893	Planetary Housing
4	1	----	Serial Number Identification Tag Location
5	2	22680	Danger Decal
6	1	41079	Notice Decal
7	1	41066	Model / Logo Decal
8	1	35754	Hose .25" X 24" 6FJX - 6MJ
9	1	30142	90° Elbow 8MBo-6MJ
10	1	107545	Hydraulic Motor 17.9 CID
		45897	Replacement Shaft Seal
11	2	30292	Straight Connector 16MBo-12FBo
12	2	30408	90° Elbow 12MBo-12MJ
13	4	1092	.50" UNC X 2.00" Hex Capscrew
14	4	1505	.50" Lock Washer
15	4	105803	Spacer
16	1	101864	Gasket
17	1	24909	Planetary Gearbox
		22445	Replacement Shaft Seal
18	8	22351	.56" UNC Lock Nut
19	8	22344	.56" UNC X 2.00" Hex Capscrew
20	1	22263	Pivot Pin



# **(STANDARD) MOUNTING KITS FOR MCMILLEN AUGER DRIVES UP TO X5075**



***NEW MOUNTS ARE BEING DESIGNED EVERY DAY.***

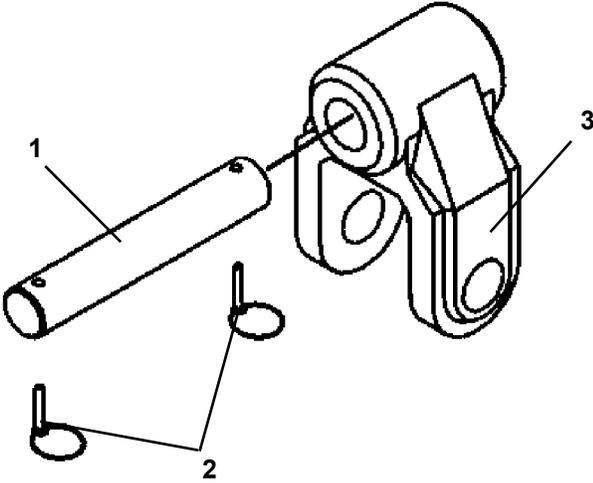
Contact the factory if you do not find your application listed.

The mounting kits included in this section are for all drives that have a standard pendant mounting. Auger drive specifications will determine if your drive unit can be mounted to any given host machine. The GPM and PSI of the host machine must be within the recommended range of the drive unit being installed.

**DEALERS AND/OR OWNERS MUST DETERMINE THAT  
COMPATIBILITY BETWEEN THE HOST MACHINE AND THE  
AUGER DRIVE EXISTS.**

Compatibility includes hydraulic flow and pressure along with structural integrity.

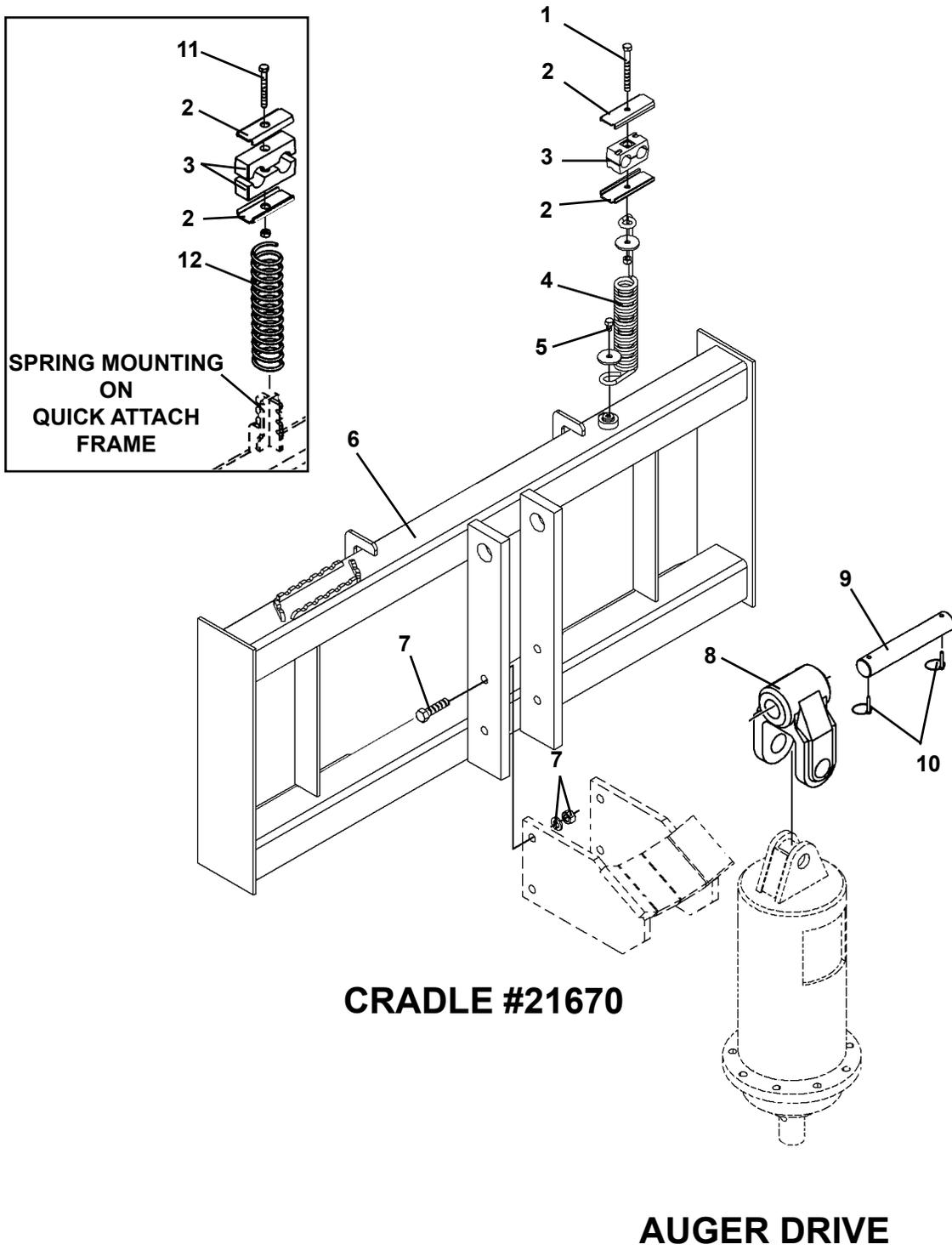
# UNIVERSAL SWIVEL KIT



# UNIVERSAL SWIVEL KIT

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	22255	Swivel Pivot Pin
2	2	21169	Klik Pin
3	1	21694	Swivel

# SKID STEER LOADER MOUNTING



## SKID STEER LOADER MOUNTING

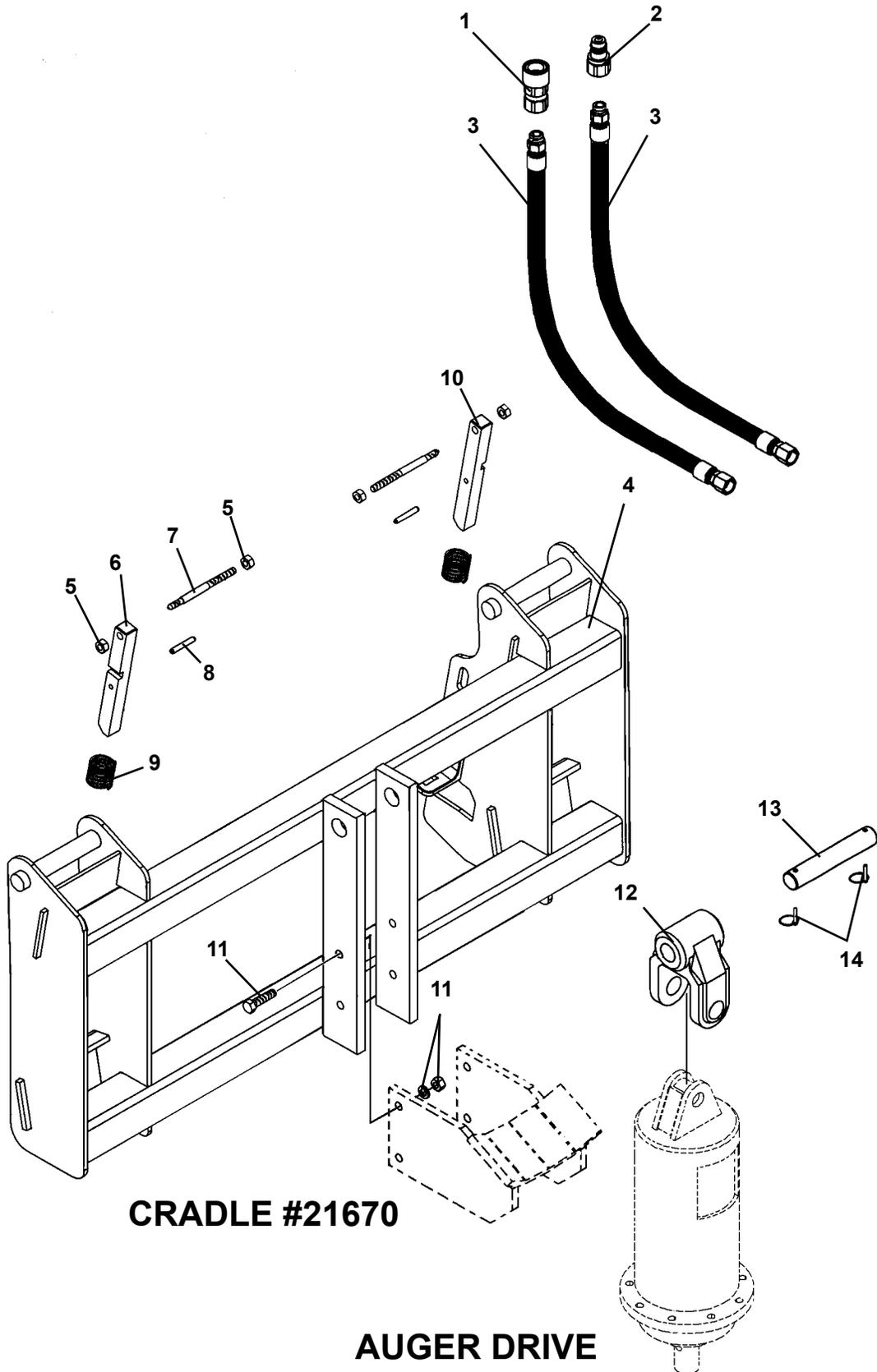
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	1031	.31" UNC X 3.25" Hex Capscrew
		105840	Fender Washer
		1753	.31" UNC Nylock Hex Nut
2	2	22315	Clamp Plate
3	1	22316	Hose Cushion (.62" Hose)
4	1	RHW8618	Hose Spring
5	1	1020	.31" UNC X .50" Hex Capscrew
		1502	.31" Lock Washer
		105840	Fender Washer
6	1	VARIES*	Quick Attach Mount
		21659	Universal Quick Attach (Shown) - Assembly 21236
		23897	John Deere 570/575 - Assembly 21249
		23897	New Holland L225/325/454/455/464 - Assembly 21249
		23423	Thomas T103/T133 - Assembly 21245
23420	Thomas T173/T233 - Assembly 21241		
7	4	1092	.50" UNC X 2.00" Hex Capscrew
		1505	.50" Lock Washer
		1228	.50" UNC Hex Nut
8	1	21694	Swivel
9	1	22255	Swivel Pivot Pin
10	2	21169	Klik Pin
11	1	1094	.50" UNC X 2.50" Hex Capscrew - Use with Spring 22288
		1790	.50" UNC Serrated Flange Hex Nut - Use with Spring 22288
12	1	22288	Spring

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1690 11-8-07

# TRACTOR LOADER MOUNTING

## JOHN DEERE LOADER MOUNTING



**CRADLE #21670**

**AUGER DRIVE**

# TRACTOR LOADER MOUNTING

## JOHN DEERE LOADER MOUNTING

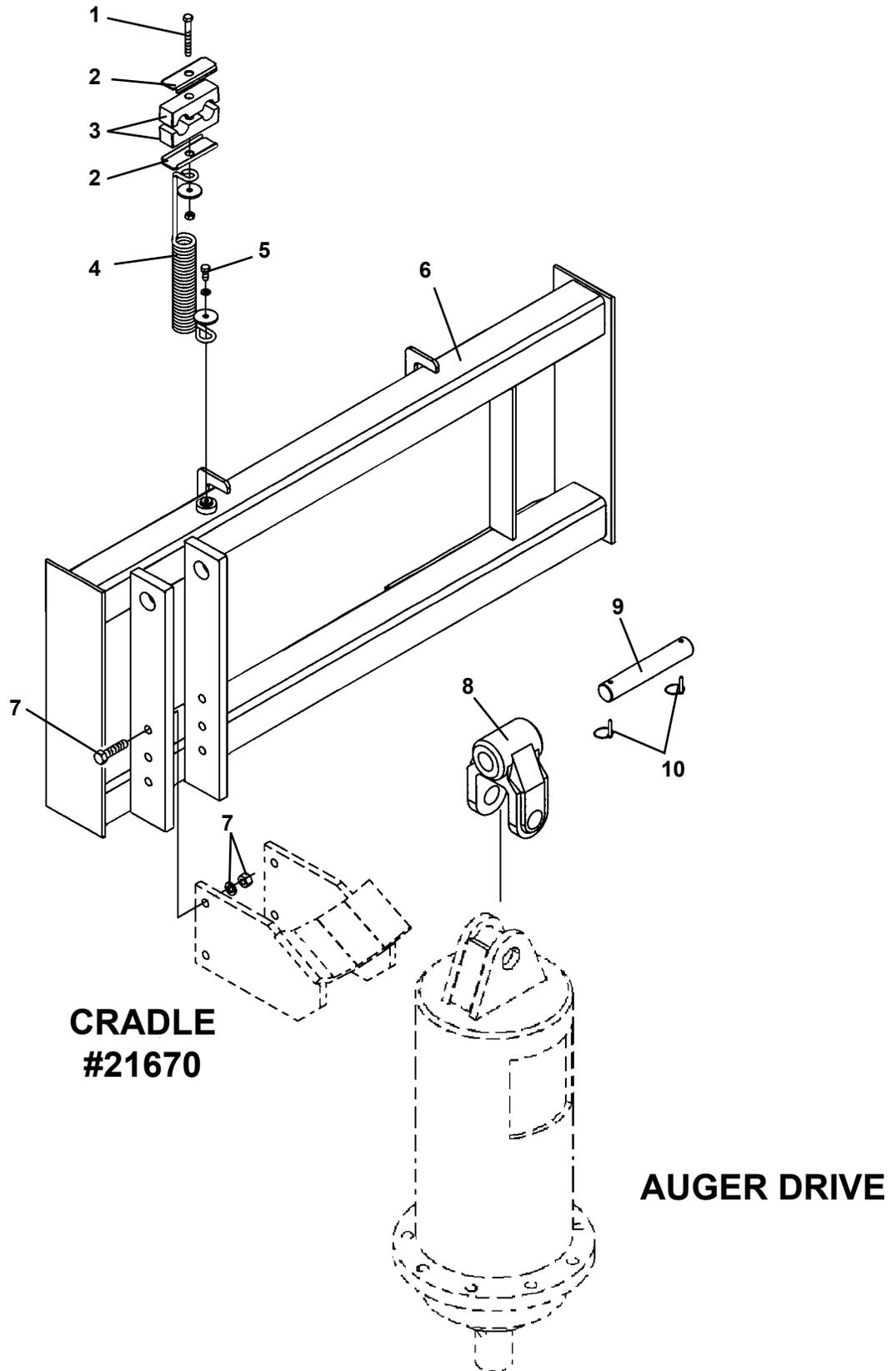
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	-	31886	Female Coupler 10FBo .50" Body (Application Specific)
2	-	15512	Male Coupler 10FBo .50" Body (Application Specific)
3	2	38262	Hose .50" X 108" 10MBo-10FJX (Application Specific)
4	1	VARIES* 15278 111334	Quick Attach Mount John Deere 4000 / 5000 John Deere 6000 / 7000
5	4	07-52073	M12 Hex Nut (Used with John Deere 6000 & 7000 Only)
6	1	13-52136	Right Latch Pin (Used with John Deere 6000 & 7000 Only)
7	2	07-10145	Trip Pin (Used with John Deere 6000 & 7000 Only)
8	2	RHW8028	Roll Pin (Used with John Deere 6000 & 7000 Only)
9	2	07-10144	Spring (Used with John Deere 6000 & 7000 Only)
10	1	13-52135	Left Latch Pin (Used with John Deere 6000 & 7000 Only)
11	4	1092	.50" UNC X 2.00" Hex Capscrew
	4	1505	.50" Lock Washer
	4	1228	.50" UNC Hex Nut
12	1	21694	Swivel
13	1	22255	Swivel Pivot Pin
14	2	21169	Klik Pin

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1710 11-26-07

# SPECIAL OFFSET MOUNTING

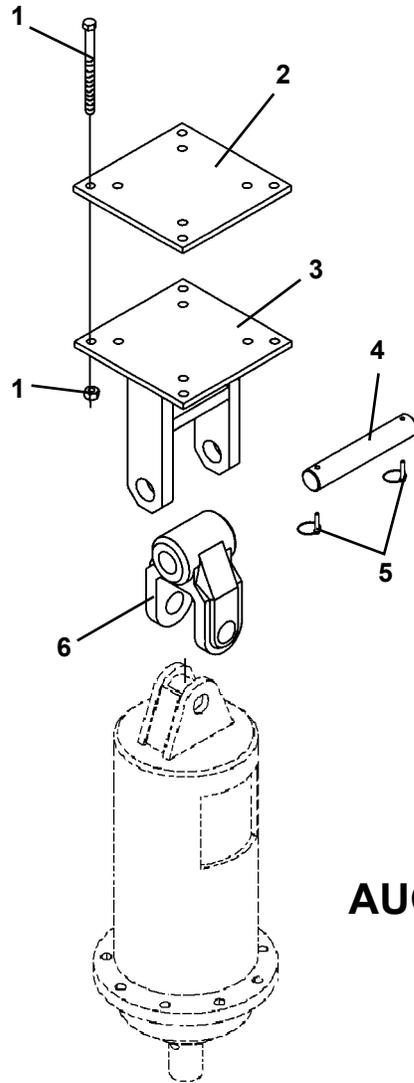
FOR TRACTORS WITH UNIVERSAL SKID STEER QUICK ATTACH



**SPECIAL OFFSET MOUNTING**  
FOR TRACTORS WITH UNIVERSAL SKID STEER QUICK ATTACH

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	1031	.31" UNC X 3.25" Hex Capscrew
		105840	Fender Washer
		1753	.31" UNC Nylock Hex Nut
2	2	22315	Clamp Plate
3	1	22316	Hose Cushion (.62" Hose)
4	1	RHW8618	Hose Spring
5	1	1020	.31" UNC X .50" Hex Capscrew
		1502	.31" Lock Washer
		105840	Fender Washer
6	1	24778	Quick Attach Offset Mount
7	4	1092	.50" UNC X 2.00" Hex Capscrew
		1505	.50" Lock Washer
		1228	.50" UNC Hex Nut
8	1	21694	Swivel
9	1	22255	Swivel Pivot Pin
10	2	21169	Klik Pin

# FRONT END LOADER MOUNTING



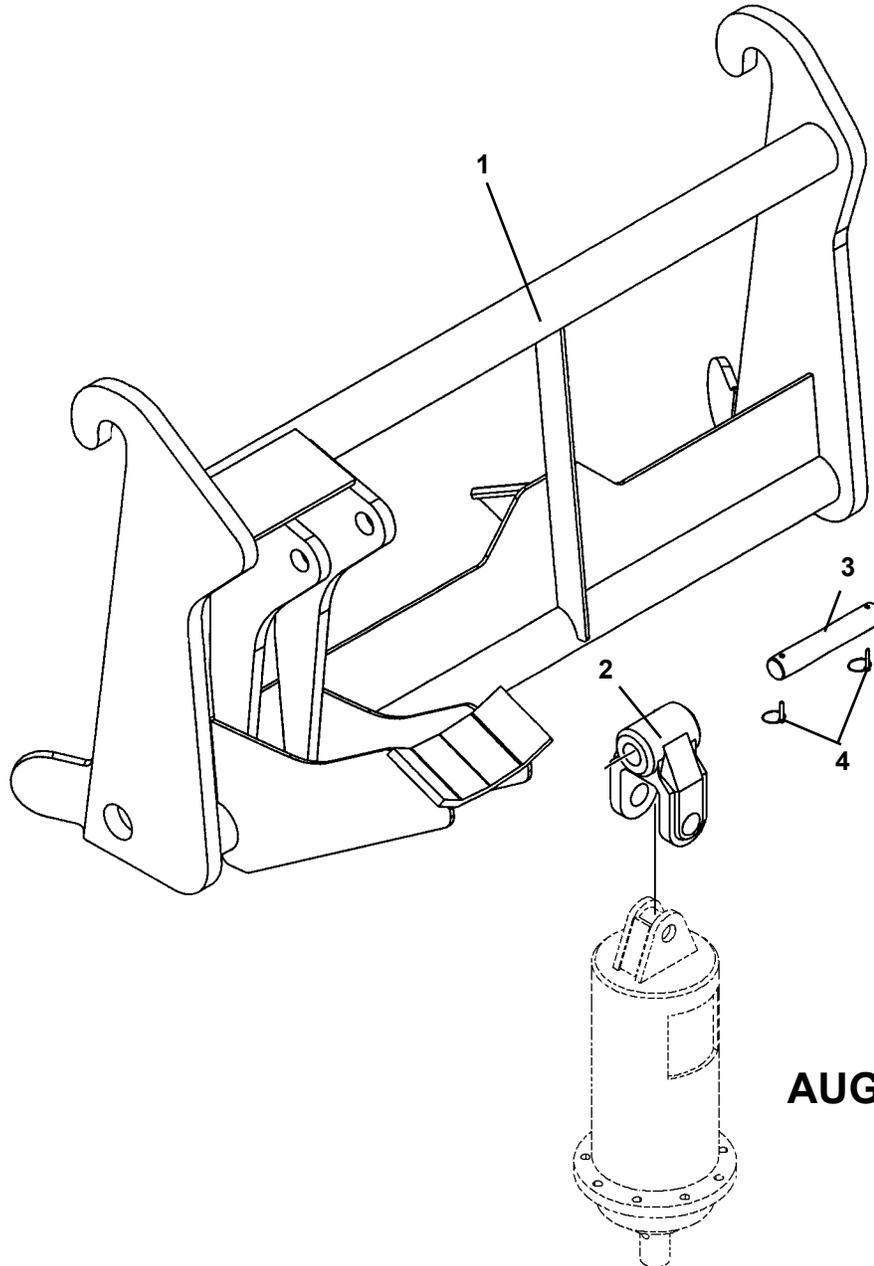
**AUGER DRIVE**

## FRONT END LOADER MOUNTING

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	4	1080	.44" UNC X 5.00" Hex Capscrew
	4	1227	.44" UNC Hex Nut
2	1	21449	Clamp Plate
3	1	21628	Loader Bracket
4	1	22255	Swivel Pivot Pin
5	2	21169	Klik Pin
6	1	21694	Swivel

# QCP 7000 COUPLER MOUNTING

QUICK ATTACH STYLE MOUNTING



# QCP 7000 COUPLER MOUNTING

## QUICK ATTACH STYLE MOUNTING

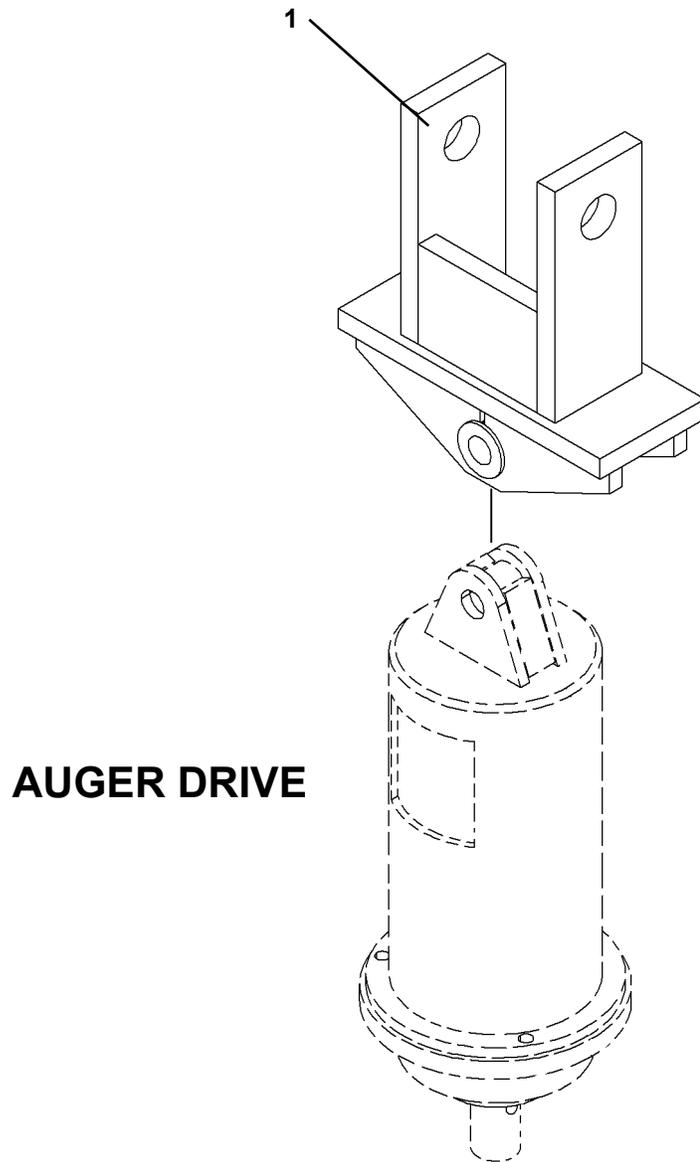
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	24794	Quick Attach Mount
2	1	21694	Swivel
3	1	22255	Swivel Pivot Pin
4	2	21169	Klik Pin

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1716 11-8-07

# DIPPER MOUNTING

## PENDULUM STYLE MOUNTING



# DIPPER MOUNTING

## PENDULUM STYLE MOUNTING

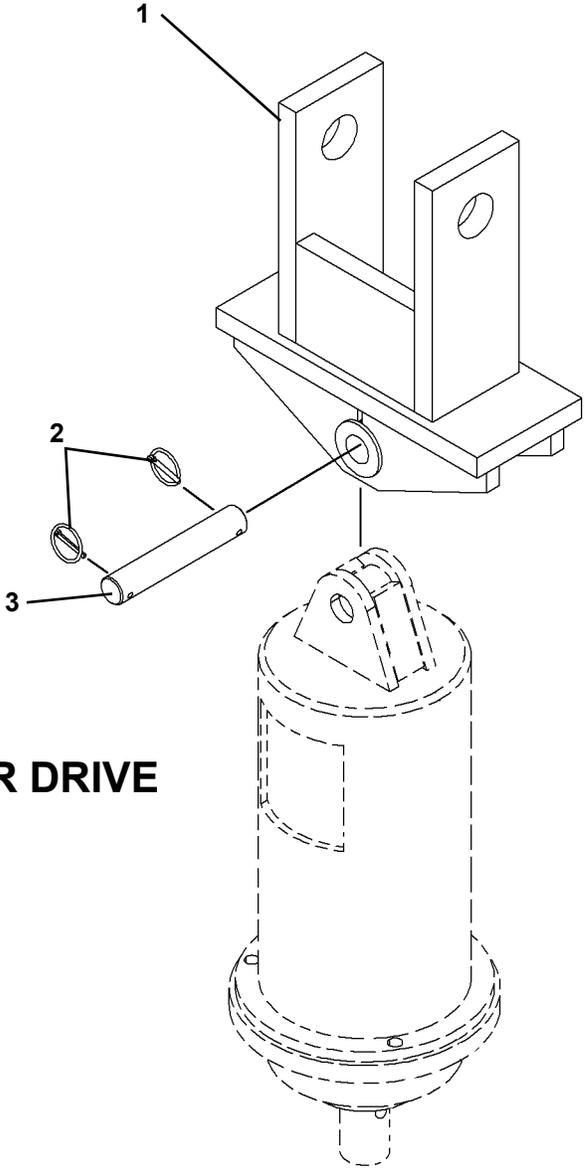
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	VARIES	Pendulum Mount
		21255	Kubota KH35 / KH41 / KX36 / KX41 / KX41-2
		21258	Kubota KH60 / KH61 / KH66 / KX61 / KX71
		21261	Kubota KH90 / KH01 / KH101 / KX91-2 / KX101 / KX121-2
		21264	Kubota KH151 / KH191 / KX151 / KX161-2
		21267	Kubota KH28 / KH170
		21268	Kubota KX61-2

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1692 11-8-07

# DIPPER MOUNTING

## PENDULUM STYLE MOUNTING



**AUGER DRIVE**

# DIPPER MOUNTING

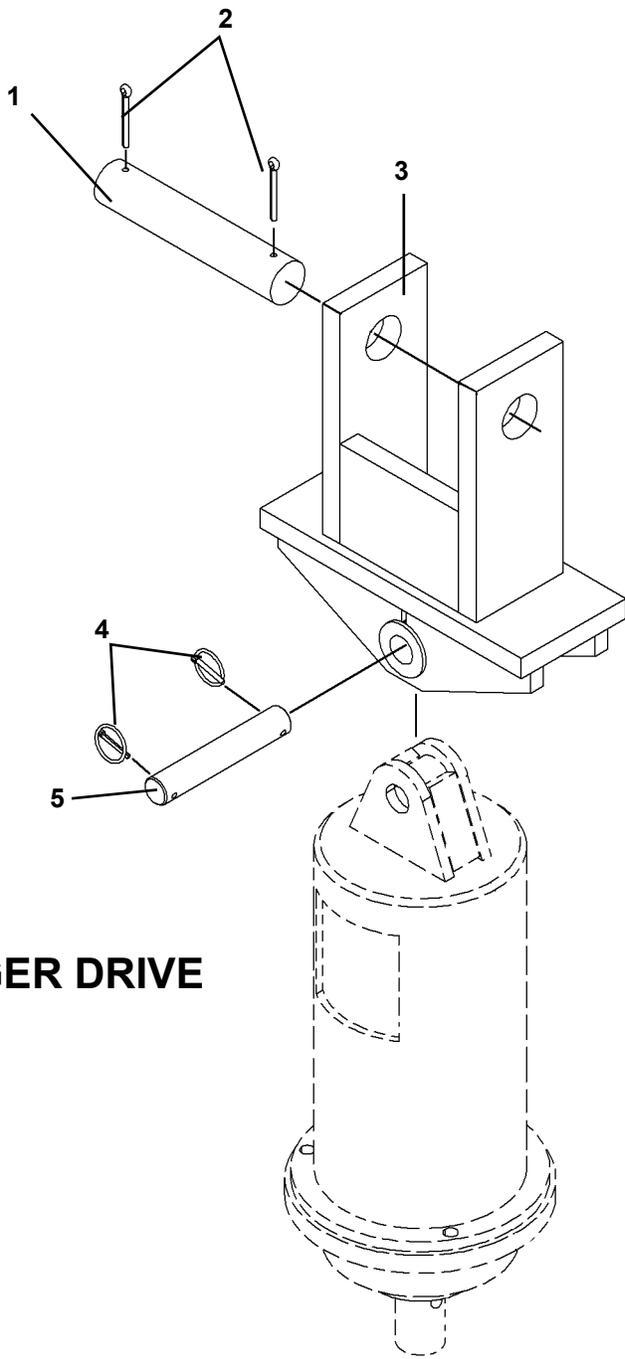
## PENDULUM STYLE MOUNTING

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	VARIES*	Pendulum Mount
		23234	Case 580/590 - Assembly 21279
		23295	Case 9010B - Assembly 23294
		23395	Caterpillar 312 / 314 - Assembly 23394
		23463	Caterpillar 315 - Assembly 23461
		24472	Caterpillar 320 / E200B & John Deere 200LC - Assembly 24471
		23623	Caterpillar 325 - Assembly 23622
		23272	Caterpillar 416 / 426 / 428 - Assembly 21283
		23287	Caterpillar 446 - Assembly 24005
		23917	Daewoo 5130W Model 5 - Assembly 23916
		23455	Daewoo 170-3 / 170-W - Assembly 23454
		23898	Fermec 760 - Assembly 23899
		23891	Hitachi EX50V - Assembly 23890
		24425	Hitachi UH9 - Assembly 24427
		23896	Hyundai 200 LC - Assembly 23895
		24690	John Deere 120 - Assembly 24689
		23498	John Deere 200C-LC - Assembly 23492
		23271	John Deere 310 / 410 / 510 - Assembly 21281
		23425	John Deere 310D with Quick Coupler - Assembly 23424
		21280	John Deere 310SE / 410E - Assembly 21289
		23386	John Deere 310SE / 410E with Quick Coupler - Assembly 23385
		23567	John Deere 490 - Assembly 23566
		23360	John Deere 710D - Assembly 23359
		23606	Kobelco SK025 - Assembly 23605
		23782	Kobelco SK200 Mark 2 / Mark 4 - Assembly 23781
		23291	Kobelco SR35 - Assembly 23290
		23555	Komatsu PC100 - Assembly 23554
		23282	Komatsu PC60 - Assembly 23281
		23558	Komatsu PC95 / PC78 (PC75UU?) - Assembly 23557
		23902	Linkbelt 2650C - Assembly 23901
		23270	New Holland 400 / 500 / 600 / 700 - Assembly 21285
		24635	Volvo BL70 - Assembly 24634
		23475	Volvo EX140 - Assembly 23471
2	2	21169	Klik Pin
3	1	22255	Auger Pivot Pin

\* New mounts are being designed every day. Contact Factory if your application is not listed.

# DIPPER MOUNTING

## PENDULUM STYLE MOUNTING



**AUGER DRIVE**

# DIPPER MOUNTING

## PENDULUM STYLE MOUNTING

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	VARIES	Pendulum Pivot Pin (Diameter X Effective Length)
		23789	Pin, 1.38" X 8.05"
		24029	Pin, 1.77" X 10.13"
		24402	Pin, 1.38" X 7.32"
		23927	Pin, 1.58" X 7.63"
		23993	Pin, 1.58" X 8.40"
		24639	Pin, 1.50" X 7.48"
		24415	Pin, 1.18" X 6.44"
		23922	Pin, 1.58" X 9.13"
		24732	Pin, 1.91" X 11.66"
		24633	Pin, 1.38" X 8.32"
		23982	Pin, 1.38" X 7.97"
		23943	Pin, 1.77" X 8.75"
		23989	Pin, 1.58" X 7.78"
		23922	Pin, 1.58" X 9.13"
		24556	Pin, 1.38" X 7.57"
		24907	Pin, 1.77" X 10.50"
		24555	Pin, 1.58" X 7.31"
		23999	Pin, 1.97" X 10.31"
		24954	Pin, 1.97" X 10.126"
24947	Pin, 2.17" X 9.62"		
24941	Pin, 2.36" X 11.38"		
2	2	1729	Cotter Pin .25"
	1	10040	Safety Pin (Use with Pin #23789)
	2	10050	Cotter Pin .31" (Use with Pin #24907)
3	1	VARIES*	Pendulum Mount
		23787	Bobcat 325 - Assembly 23786
		24721	Bobcat 442 - Assembly 24720
		24400	Case CX25 - Assembly 24399
		24952	Case CX80 - Assembly 24955
		23926	Caterpillar 3035 - Assembly 23925
		23991	Caterpillar 3045 - Assembly 23990
		23699	Caterpillar 307 / 308 / E70B - Assembly 23698
		24638	Earth Force EF4 - Assembly 24637
		24945	Gehl 803 - Assembly 24944
		24766	Hitachi EX75ER5 - Assembly 24765
		24413	IHI 17NE / 18J - Assembly 24412
		23920	JCB 8052 / 8060 - Assembly 23919
		24729	John Deere 310SG - Assembly 24728
		23519	Komatsu PC35 & Bobcat 337 - Assembly 23518
		23981	Komatsu PC30 MRX-1 - Assembly 23980
		24532	Komatsu PC50 MR-2 - Assembly 24531
		24970	Kubota KX080 - Assembly 24939
		23987	New Holland EC35 - Assembly 23986
		24468	New Holland EC45 (Komatsu WB140?) - Assembly 24467
24549	New Holland EC25 & JCB 8032Z - Assembly 24548		
24529	New Holland LB75 / 90 / 110 / 115 - Assembly 24528		
23941	Samsung SE50 & Bobcat 341 - Assembly 23940		
24553	Takeuchi TB135 & Volvo EC35 - Assembly 24552		
109933	Takeuchi TB070 / TB175 / TB180 - Assembly 109934		
23997	Yanmar VI070 - Assembly 23996		
4	2	21169	Klik Pin
5	1	22255	Auger Pivot Pin

\* New mounts are being designed every day. Contact Factory if your application is not listed.

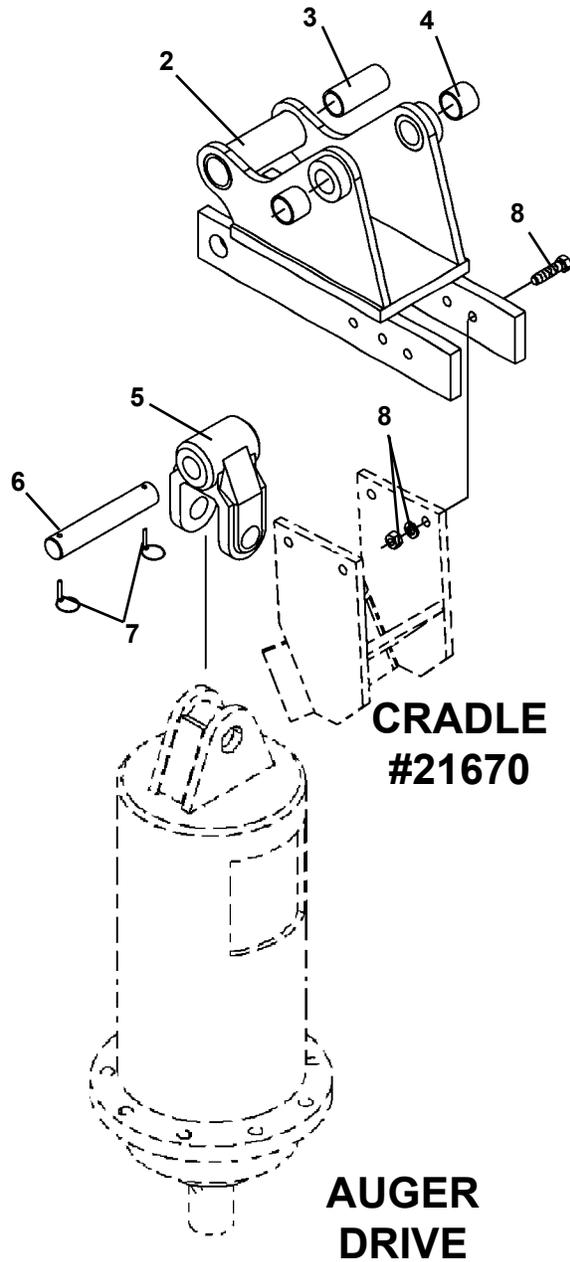
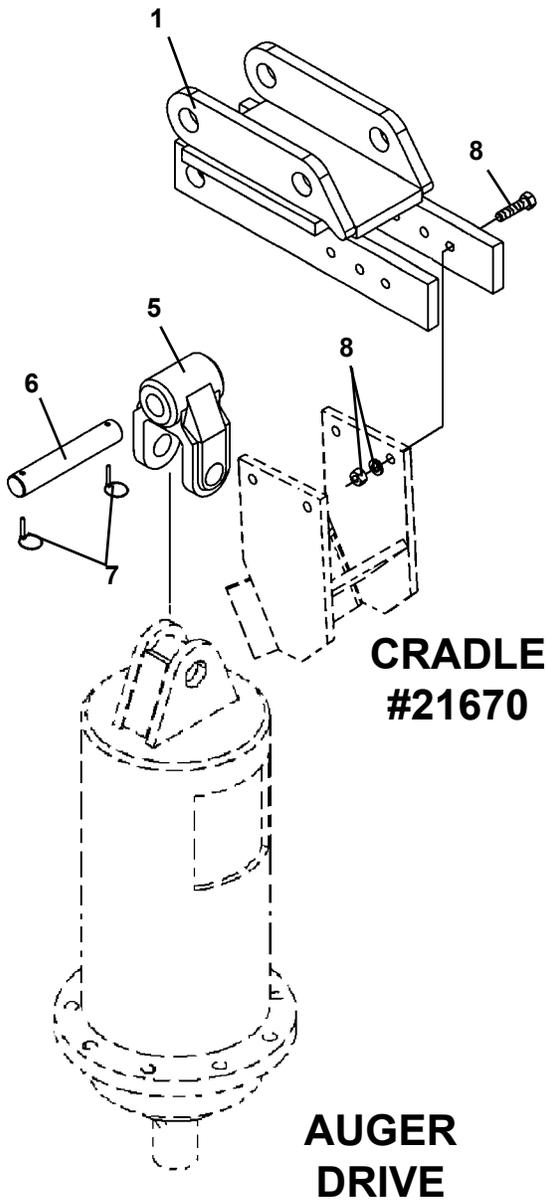
M-1696 11-8-07

# BRADCO BACKHOE DIPPER MOUNTING

BRADCO BACKHOE DIPPER MOUNTING

## 375/3375/408 BACKHOES

## 509/511/609/611 BACKHOES



# BRADCO BACKHOE DIPPER MOUNTING

## BRADCO BACKHOE DIPPER MOUNTING

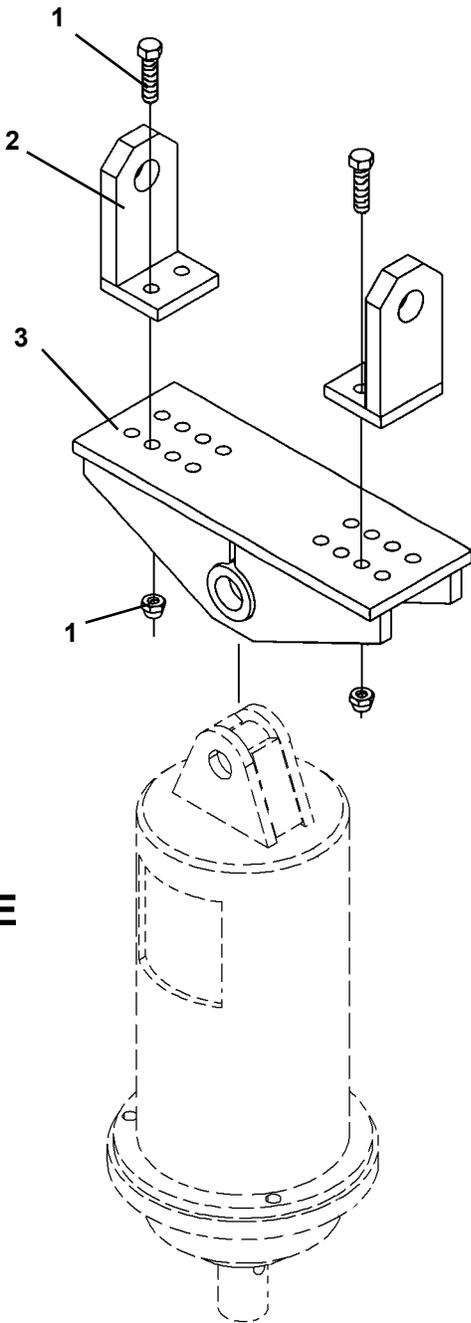
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	23929	375/3375/408 Backhoe Dipper Mount - Assembly 23930
2	1	23443	509/511/609/611 Backhoe Dipepr Mount - Assembly 23561
3	1	68482	Sleeve (Use with 23443 Mount)
4	2	6355	Bushing (Use with 23443 Mount)
5	1	21694	Swivel
6	1	22255	Swivel Pivot Pin
7	2	21169	Klik Pin
8	4	1092	.50" UNC X 2.00" Hex Nut
	4	1505	.50" Lock Washer
	4	1228	.50" UNC Hex Nut

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1698 11-8-07

# MINI EXCAVATOR & SMALL BACKHOE MOUNTING

ADJUSTABLE PENDULUM STYLE MOUNTING



**AUGER DRIVE**

# MINI EXCAVATOR & SMALL BACKHOE MOUNTING

## ADJUSTABLE PENDULUM STYLE MOUNTING

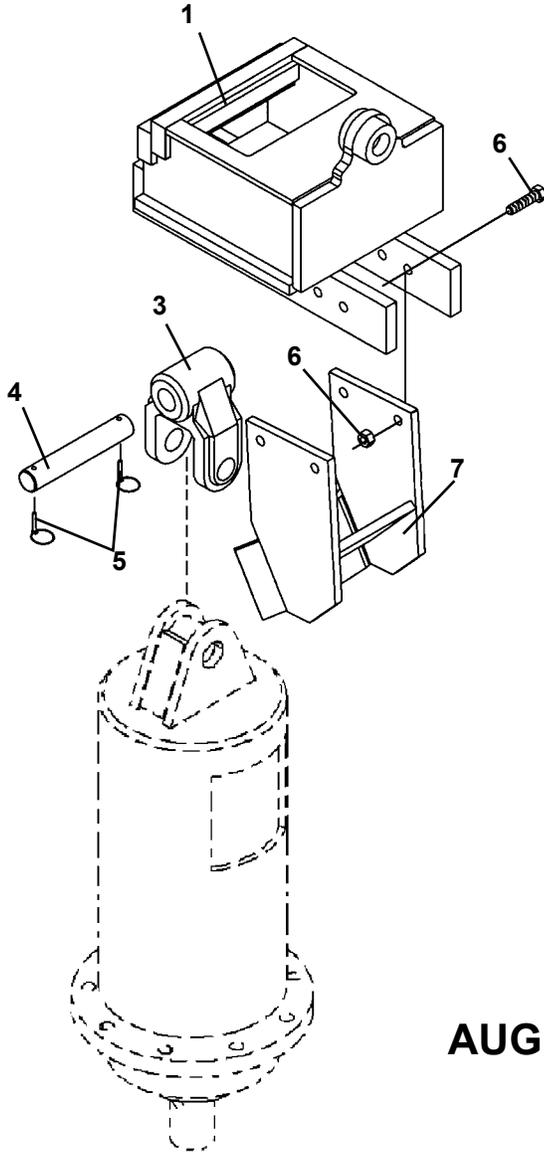
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	4	1091	.50" UNC X 1.75" Hex Capscrew
	4	1841	.50" UNC Deformed Lock Nut
2	2	VARIES*	Adjustable Adapter
		21673	For 25mm Diameter Bucket Pin - Assembly 21226
		21674	For 1.00" Diameter Bucket Pin - Assembly 21234
		21675	For 30mm Diameter Bucket Pin - Assembly 21229
		21676	For 1.25" Diameter Bucket Pin - Assembly 21224
		21677	For 35mm/1.38" Diameter Bucket Pin - Assembly 21225
		21679	For 1.50" Diameter Bucket Pin - Assembly 21223
		21680	For 40mm Diameter Bucket Pin - Assembly 21230
		21682	For 1.75" Diameter Bucket Pin - Assembly 21228
		21683	For 45mm Diameter Bucket Pin - Assembly 21231
21684	For 50mm/2.00" Diameter Bucket Pin - Assembly 21232		
3		21626	Auger Mounting Base

\* New mounts are being designed every day. Contact Factory if your application is not listed.

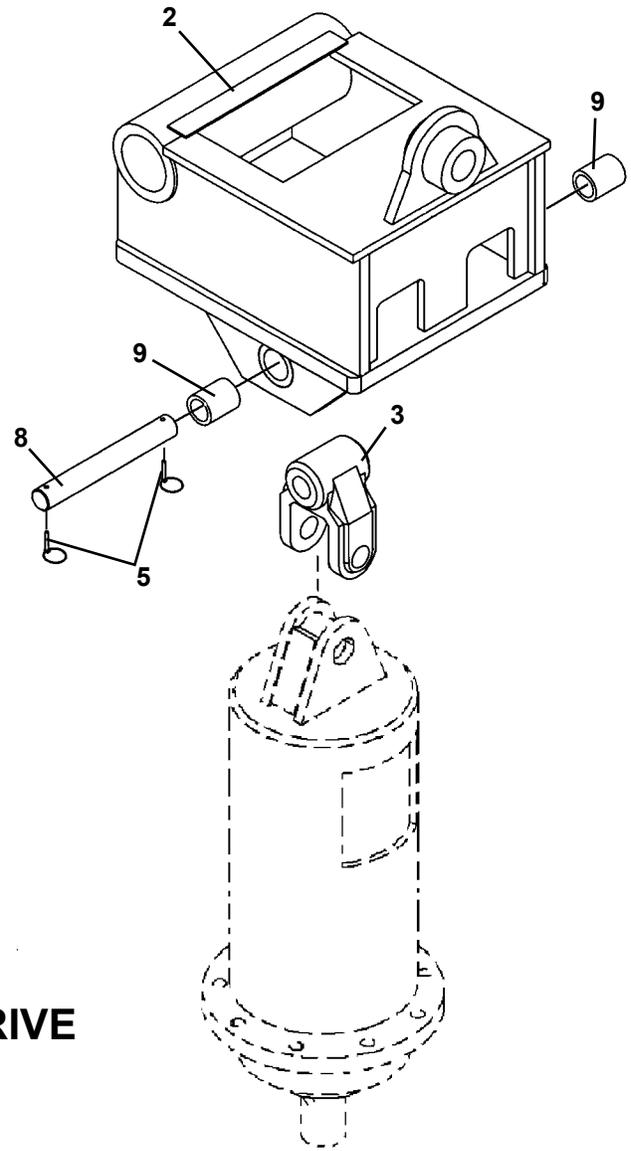
# TLB & EXCAVATOR MOUNTING

## QUICK HITCH COUPLER STYLE MOUNTING

### CRADLE STYLE



### PENDULUM STYLE



**AUGER DRIVE**

## TLB & EXCAVATOR MOUNTING

### QUICK HITCH COUPLER STYLE MOUNTING

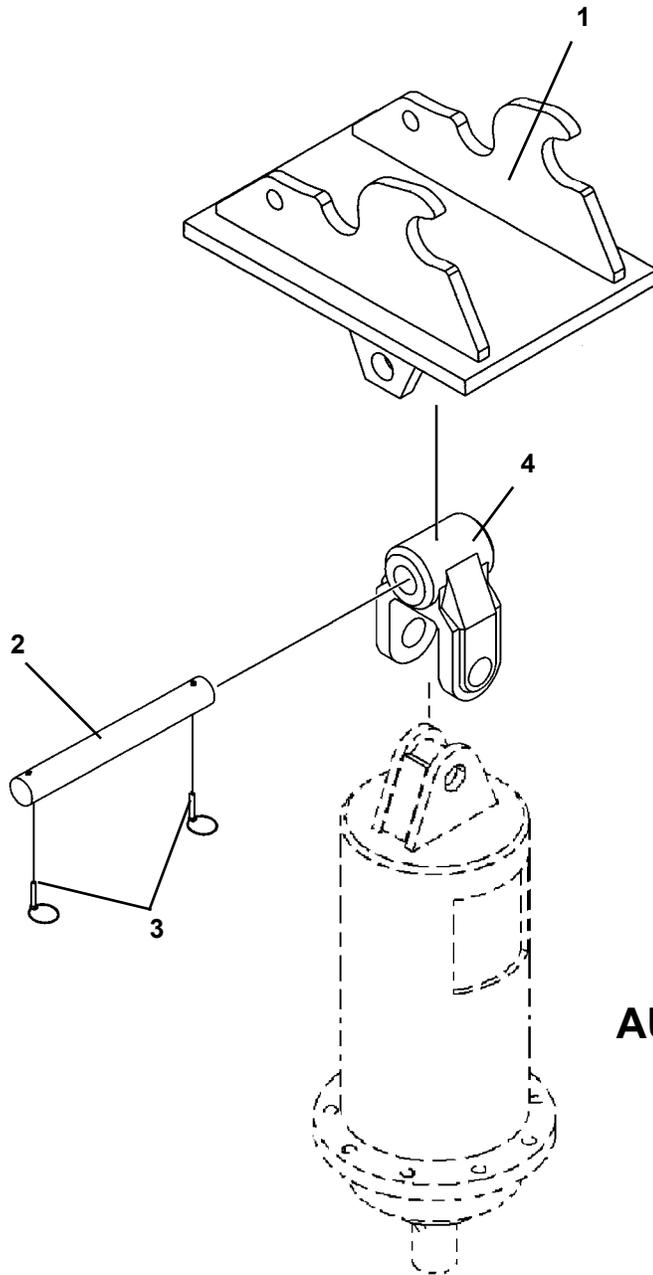
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	VARIES* 23363 108904	Quick Hitch Coupler Mount (Cradle Style) C & P #027 Quick Hitch - Assembly 23362 WainRoy HDM 30/45 - Assembly 108903
2	1	VARIES* 23436 23437 24831	Quick Hitch Coupler Mount (Pendulum Style) C & P #030 Quick Hitch - Assembly 23435 C & P #034 / #036 Quick Hitch - Assembly 23439 Bobcat Excavator Xchange QA - Assembly 24829
3	1	21694	Swivel
4	1	22255	Swivel Pivot Pin
5	2	21169	Klik Pin
6	4 4	1092 1228	.50" UNC X 2.00" Hex Capscrew .50" UNC Hex Nut
7	1	21670	Cradle
8	1	23431	Swivel Pivot Pin
9	2	23432	Bushing

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1702 11-8-07

# EXCAVATOR MOUNTING

## QUICK ATTACH STYLE MOUNTING



**AUGER DRIVE**

# EXCAVATOR MOUNTING

## QUICK ATTACH STYLE MOUNTING

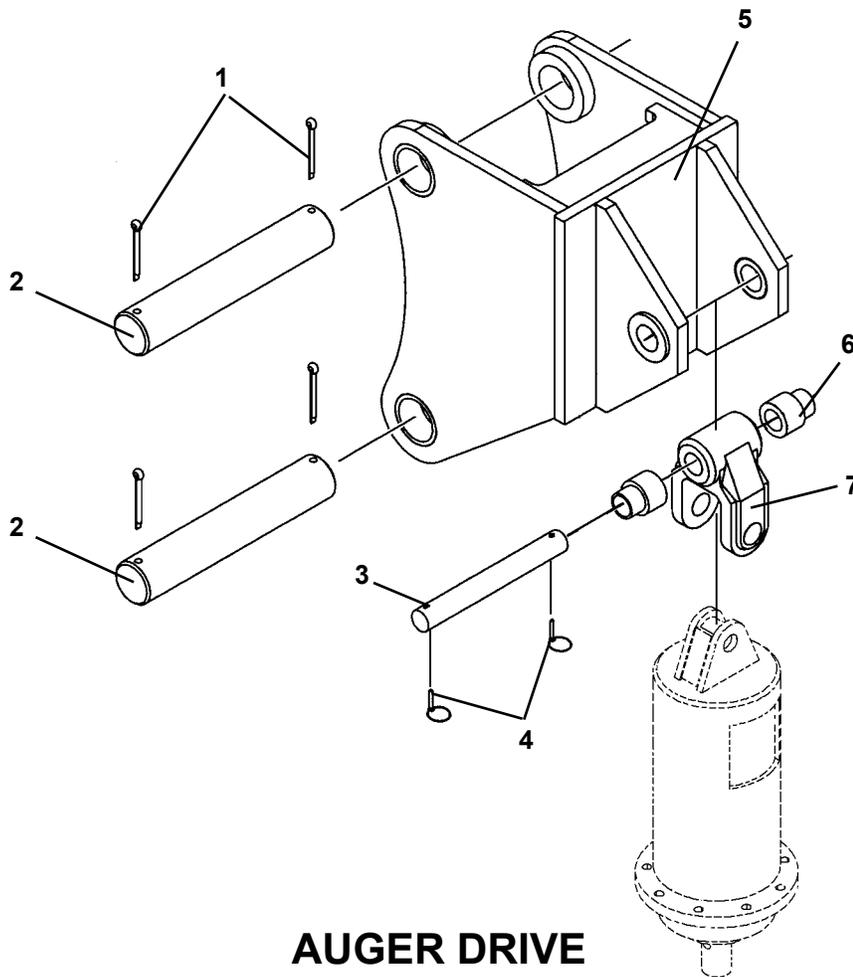
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	VARIES*	Quick Attach Mount
		24926	Kubota U25 with Quick Coupler - Assembly 24925
		24750	Kubota KX41-3 / U15 with Quick Coupler - Assembly 24749
		16665	Kubota KX71-3 / KX91-3 / KX121-3 / U35 with Quick Coupler - Assembly 24282
		24449	Kubota KX161-3 / U45 with Quick Coupler - Assembly 24450
2	1	22255	Swivel Pivot Pin
3	2	21169	Klik Pin
4	1	21694	Swivel

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1704 11-8-07

# TLB & EXCAVATOR MOUNTING

## PIN GRABBER STYLE MOUNTING



**AUGER DRIVE**

# TLB & EXCAVATOR MOUNTING

## PIN GRABBER STYLE MOUNTING

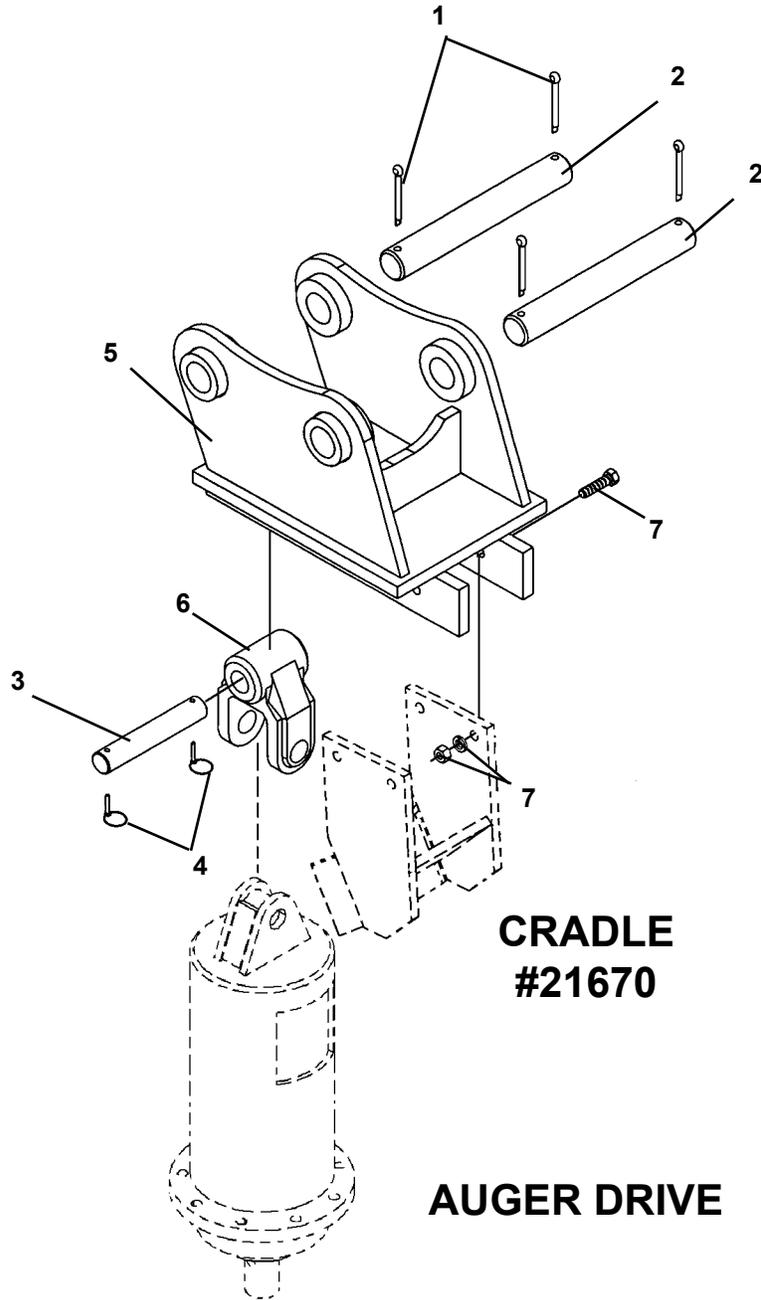
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	4	10050	Cotter Pin (.31" X 4.00")
	2	10040	Safety Pin (.31" X 2.50") (Use with Pivot Pin #24410, 24959, 24840 & #17918 only.)
2	2	VARIES	Pin Grabber Pivot Pin (Diameter X Effective Length)
		24933	Pin, 2.50" X 12.83"
		23938	Pin, 1.77" X 13.25"
		23939	Pin, 1.97" X 13.25"
		23945	Pin, 3.15" X 15.44"
		24619	Pin, 1.52" X 11.25"
		24620	Pin, 1.77" X 11.25"
		24097	Pin, 2.15" X 11.25"
		24465	Pin, 1.95" X 11.25"
		23853	Pin, 1.97" X 11.25"
		23854	Pin, 2.17" X 11.25"
		24410	Pin, 1.77" X 9.06"
		23881	Pin, 2.75" X 16.00"
		17918	Pin, 1.38" X 7.75"
		24959	Pin, 1.77" X 9.67"
		24840	Pin, 1.97" X 10.92"
3	1	VARIES	Swivel Pivot Pin (Diameter X Effective Length)
		23855	Pin, 1.25" X 9.00"
		22255	Pin, 1.25" X 6.00"
4	2	21169	Klik Pin
5	1	VARIES*	Pin Grabber Mount
		24957	Caterpillar 308 - Assembly 24956
		24932	Caterpillar 311 / 312 - Assembly 109772
		24375	Caterpillar 416C / 420C / 436B - Assembly 24374
		23936	Caterpillar 420D / 416D / 430D - Assembly 23937
		23944	John Deere 160 - Assembly 23887
		24786	John Deere 200 CLC with BMP Quick Attach - Assembly 24785
		24618	John Deere 310G - Assembly 24617
		24093	John Deere 310SE / 310SG / 410E / 410G - Assembly 24092
		23852	John Deere 310SE / 310SG / 410E / 410G with JD Universal Coupler- Assembly 23796
		24407	Komatsu PC58UU-3 - Assembly 24406
		23876	Linkbelt LS2800C2 - Assembly 23874
		24366	New Holland LB 75 / 90 / 110 / 115 - Assembly 24365
		24404	Yanmar VI027 / VI035 - Assembly 24403
24461	Yanmar VI040 / VI050 / VI045 / VI055 - Assembly 24460		
24838	Yanmar VI075 / B7 / SV100 - Assembly 24837		
6	2	23856	Step Bushing (Not used with Swivel Pivot Pin #22255)
7	1	21694	Swivel

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1706 11-8-07

# TLB & EXCAVATOR MOUNTING

PIN GRABBER STYLE MOUNTING (CRADLE READY)



**CRADLE  
#21670**

**AUGER DRIVE**

## TLB & EXCAVATOR MOUNTING

### PIN GRABBER STYLE MOUNTING (CRADLE READY)

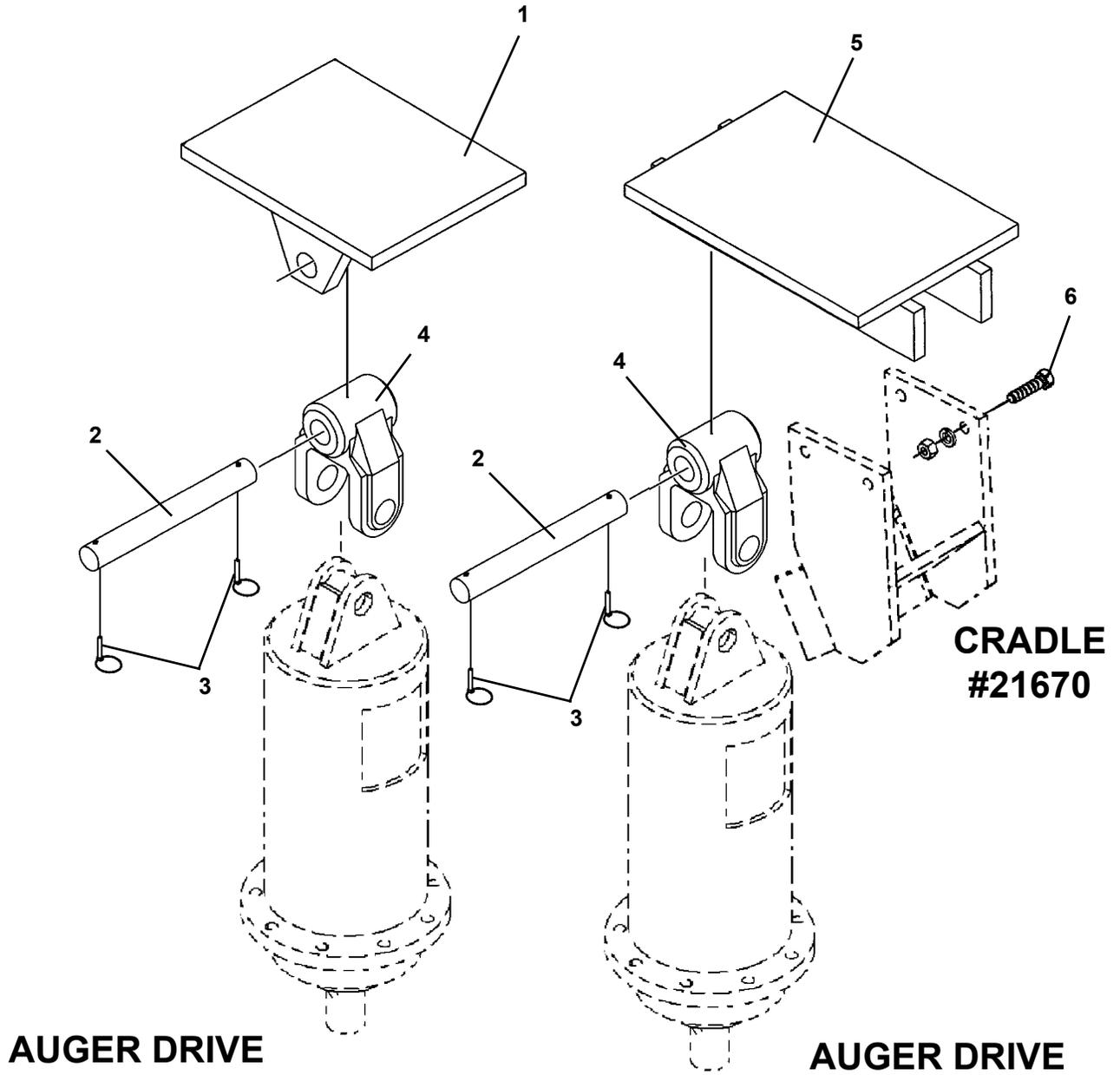
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	
1	4	10050	Cotter Pin (.31" X 4.00")	
	4	1729	Cotter Pin (.25" X 2.50") (Use with Pivot Pin 107779, 23982 & 24954)	
	4	1786	Cotter Pin (.19" X 3.00") (Use with Pivot Pin 110722)	
	2	10040	Safety Pin (.31" X 2.50") (Use with Pivot Pin 100010 & 17918 only.)	
	2	1058	.38" UNC X 5.50" Capscrew (Use with Pivot Pin 24855 only)	
	1	1048	.38" UNC X 2.25" Capscrew (Use with Pivot Pin 23839)	
	2	1837	.38" UNC Deformed Lock Nut (Use with Pivot Pin 24855 only)	
	2	2	VARIES	Pin Grabber Pivot Pin (Diameter X Effective Length)
			100010	Pin, 1.58" X 7.75"
24373			Pin, 1.77" X 11.25"	
24727			Pin, 1.75" X 10.94"	
24097			Pin, 2.15" X 11.25"	
24465			Pin, 1.95" X 11.25"	
24737			Pin, 2.50" X 12.25"	
107779			Pin, 1.38" X 10.25"	
110722			Pin, 2.63" X 14.00"	
109493			Pin, 1.38" X 9.57"	
23982			Pin, 1.38" X 7.97"	
24907			Pin, 1.77" X 10.50"	
24029			Pin, 1.77" X 10.12"	
24954			Pin, 1.96" X 12.12"	
24855			Pin, 3.15" X 15.85"	
23839	Pin, 1.50" X 8.75"			
3	1	22255	Pin, 1.25" X 6.00"	
4	2	21169	Klik Pin	
5	1	VARIES*	Pin Grabber Mount	
		24850	Case CX160 / 155CE - Assembly 24849	
		105450	Case 580M / 590M (with Cradle) - Assembly 105455	
		110771	Caterpillar 303.5 - Assembly 110770	
		109231	Caterpillar 307 / 308 - Assembly 109230	
		24725	JCB 214 - Assembly 24724 (Includes Cradle)	
		110762	John Deere 310SE - Assembly 110761	
		24734	Kobelco SK115SR0Z - Assembly 24733 (Includes Cradle)	
		24976	Komatsu 146 - Assembly 24975	
		110200	Komatsu PC27MR-2 - Assembly 110212	
		24370	Komatsu PC45R-8E - Assembly 24369	
		110719	Komatsu PC138 - Assembly #110718	
		109491	Kubota R520BH - Assembly 109490	
		24898	Kubota 45SR - Assembly 24897	
24972	Kubota 161-3 - Assembly 24971			
24874	New Holland EC25 (with Cradle) - Assembly 24873			
6	1	21694	Swivel	
7	4	1092	.50" UNC X 2.00" Hex Capscrew	
	4	1505	.50" Lock Washer	
	4	1228	.50" UNC Hex Nut	

\* New mounts are being designed every day. Contact Factory if your application is not listed.

M-1708 11-8-07

# EXCAVATOR MOUNTING

## WELD ON MOUNTING



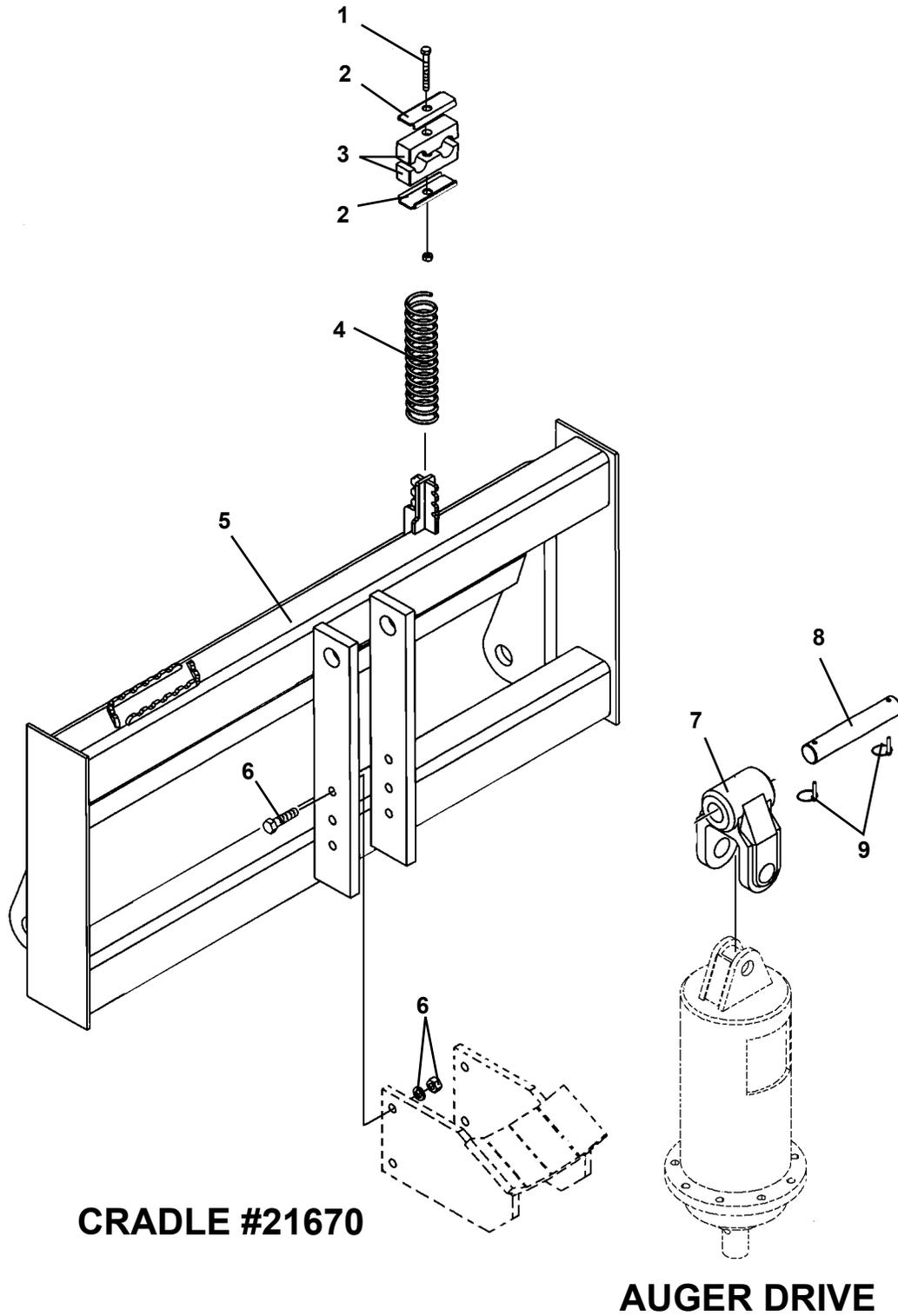
# EXCAVATOR MOUNTING

## WELD ON MOUNTING

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	24464	Universal Weld-On Mounting Plate - Pivot
2	1	22255	Swivel Pivot Pin
3	2	21169	Klik Pin
4	1	21694	Swivel
5	1	24616	Universal Weld-On Mounting Plate - Cradle Ready
6	4	1092	.50" UNC X 2.00" Hex Capscrew
	4	1505	.50" Lock Washer
	4	1228	.50" UNC Hex Nut

# WHEEL LOADER MOUNTING

## WHEEL LOADER MOUNTING



# WHEEL LOADER MOUNTING

## WHEEL LOADER MOUNTING

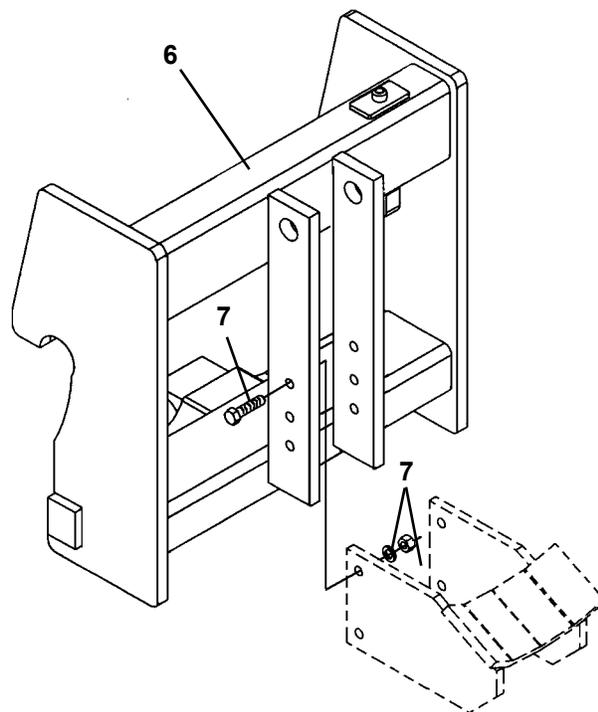
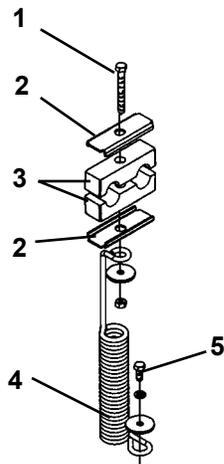
<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	1030 1753	.31" UNC X 3.00" Hex Capscrew .31" UNC Nylock Hex Nut
2	2	22315	Clamp Plate
3	1	22316	Hose Cushion
4	1	22288	Hose Clamp Spring
5	1	VARIES* 23248 103792 23268	Quick Attach Mount Caterpillar IT/TH (Mounting Includes (2) Stop Blocks 21336, 1139 Capscrews and 1518 Washers) - Assembly 21247 Caterpillar 902 / 906 / 908 - Assembly 103804 Kubota R400 / R410 / R510 / R520 - Assembly 21244
6	4 4 4	1092 1505 1228	.50" UNC X 2.00" Hex Capscrew .50" Lock Washer .50" UNC Hex Nut
7	1	21694	Swivel
8	1	22255	Swivel Pivot Pin
9	2	21169	Klik Pin

\* New mounts are being designed every day. Contact Factory if your application is not listed.

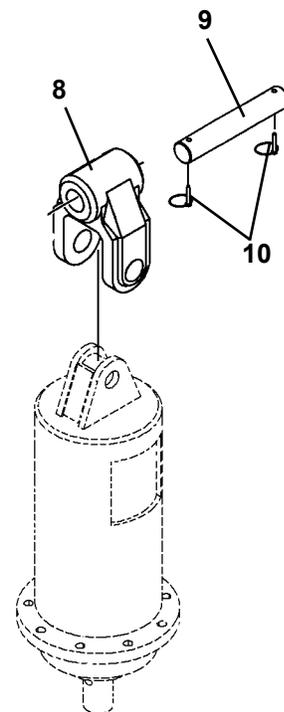
M-1722 11-8-07

# WHEEL LOADER MOUNTING

## WHEEL LOADER MOUNTING



**CRADLE #21670**



**AUGER DRIVE**

# WHEEL LOADER MOUNTING

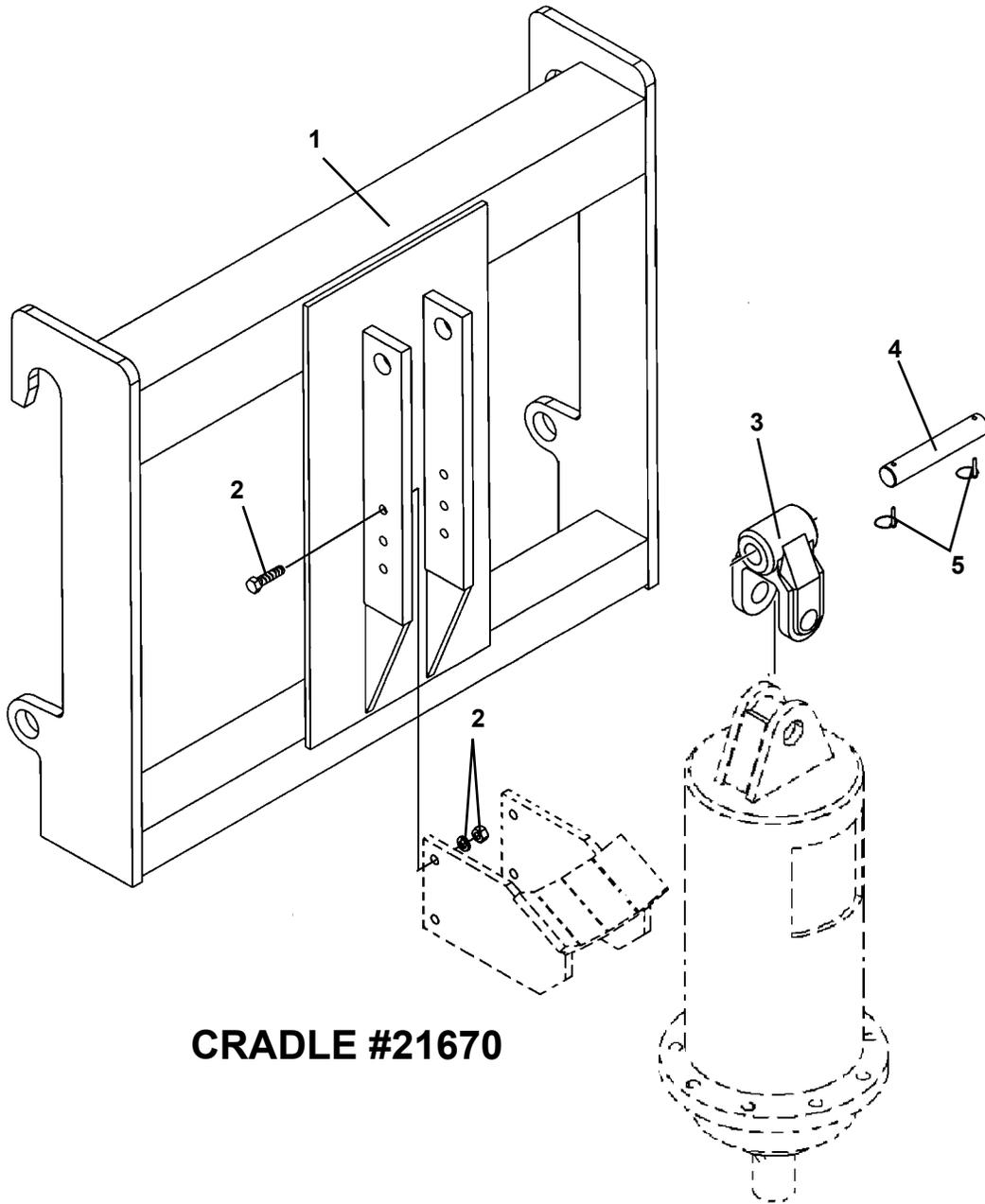
## WHEEL LOADER MOUNTING

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	1030	.31" UNC X 3.00" Hex Capscrew
		105840	Fender Washer
		1753	.31" UNC Nylock Hex Nut
2	2	103184	Clamp Plate (Use with 103182 Hose Cushions)
		22315	Clamp Plate (Use with 22316 & 22317 Hose Cushions)
3	1	103182	Hose Cushion (.50" Hose)
		22316	Hose Cushion (.62" Hose)
		22317	Hose Cushion (.75" Hose)
4	1	RHW8618	Hose Spring
5	1	1020	.31" UNC X .50" Hex Capscrew
		1502	.31" Lock Washer
		105840	Fender Washer
6	1	VARIES*	Quick Attach Mount
		24830	Caterpillar IT38 / IT62 - Assembly 12881
		107128	JLG / Gradall "C" and "D" Series Hitch - Assembly 12929
		106785	JLG / Gradall "G" Series Hitch - Assembly 12914
		25851	JCB 212S Q-Fit - Assembly 25858
		23735	JCB 407-409 - Assembly 23740
		24844	JCB 520 - Assembly 24843
		103807	JRB 416 Series Hltch - 103806
		23735	John Deere 244 - Assembly 23740
		110427	Pettibone 8044 - Assembly 13058
23735	Volvo L30/35- Assembly 23740		
7	4	1092	.50" UNC X 2.00" Hex Capscrew
		1505	.50" Lock Washer
		1228	.50" UNC Hex Nut
8	1	21694	Swivel
9	1	22255	Swivel Pivot Pin
10	2	21169	Klik Pin

\* New mounts are being designed every day. Contact Factory if your application is not listed.

# TELEHANDLER MOUNTING

## TELEHANDLER STYLE MOUNTING



**CRADLE #21670**

**AUGER DRIVE**

# TELEHANDLER MOUNTING

## TELEHANDLER STYLE MOUNTING

<u>ITEM</u>	<u>REQ'D</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	1	VARIES*	Quick Attach Mount
		24068	Bobcat V518/V523 - JCB 530 Q-Fit - NH Versattach - Assembly 24067
		16173	Carelift ZB 10044 / 10055 - Assembly 16174
		15996	Ingersol Rand VR518 / VR623 - Assembly 15995
		16154	JCB 506 / 508 - Trak Q-Hitch - Assembly 12402
		24379	JCB 526 Q-Fit - Assembly 24378
		24436	John Deere 3200 / 3400 - Assembly 24437
		23185	NH Versatile 276 / 9030 - Assembly 21254
		15403	NH TV140 - Assembly 15775
2	4	1092	.50" UNC X 2.00" Hex Capscrew
		1505	.50" Lock Washer
		1228	.50" UNC Hex Nut
3	1	21694	Swivel
4	1	22255	Swivel Pivot Pin
5	2	21169	Klik Pin

\* New mounts are being designed every day. Contact Factory if your application is not listed.