



Heartland
AG SYSTEMS

Heartland Agriculture, LLC

NITROMASTER
TOOLBAR
8000 SERIES

OWNERS MANUAL
ASSEMBLY INSTRUCTIONS
AND PARTS LIST
OM-8000

HEARTLAND AG SYSTEMS
1180 STATE HWY 7 EAST
HUTCHINSON, MN. 55350
(320) 587-4030

ISSUE
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WARRANTY REGISTRATION

TO THE DEALER:

Inspect the implement thoroughly after assembly to be certain it is functioning properly before delivering it to the customer. Check off each item as it is found satisfactory or after proper adjust is made.

PRE -DELIVERY CHECKLIST

- _____ 1. All hardware properly tightened.
- _____ 2. Lubrication of grease fittings.
- _____ 3. All decals properly located and readable.
- _____ 4. Other adjustments, "level operation", "drawbar height", etc.
- _____ 5. Proper tongue weight after all options are mounted. Adjustments made if required.
- _____ 6. Overall condition. Touch-up paint any scratches. Clean and polish
- _____ 7. Operator's manual.

Review the operator's manual with the customer. Explain the following:

- _____ 1. Safe operation and service
- _____ 2. Correct machine installation and operation.
- _____ 3. Correct and periodic lubrication and maintenance.
- _____ 4. Daily and periodic inspection.
- _____ 5. Troubleshooting.
- _____ 6. Storing machine.
- _____ 7. Heartland AG Systems parts and service
- _____ 8. Have the customer write the machine model and serial number in the space provided in the manual introduction
- _____ 9. Give the customer the operator's manual and encourage the customer to read the manual carefully.

Seller Information	
Date set-up	_____
Signature	_____
Dealer name	_____
Address	_____
City, state, zip	_____
Phone	_____

Customer Information	
Date delivered	_____
Customer name	_____
Customer address	_____
Signature	_____
Model number	_____
Serial number	_____

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TO THE OWNER

This manual has been prepared to assist you in the assembly of your new equipment and contains information pertaining to safety, operating information and all its parts.

Our personnel in sales and service are always available to assist you when questions arise concerning the assembly and operation of your machine.

When ordering parts, please refer to part numbers and descriptions as listed throughout this book. All parts and whole goods will be shipped FOB Hutchinson, Minnesota. Always check merchandise immediately upon receipt for damage or shortage. Note any discrepancy on the carrier's bill of lading and notify Heartland AG Systems within 10 days.

Any returned goods will be subject to a 20 percent restocking charge.

Heartland AG Systems reserves the right to make improvements and modifications on equipment without obligation to change previously built equipment. All prices are subject to change without notice.

Warranty Policies and Terms

The Heartland Agriculture, LLC warranty is a limited warranty that is provided to the retail purchaser in return for consideration paid as part of the purchase price for a product. The selling dealer must review the warranty coverage with the retail purchaser and obtain a signature on the Operators Manual for warranty verification.

The warranty described here is for Heartland Agriculture, LLC doing business as Heartland AG Systems and its product line Heartland AG Systems Equipment sold and registered in the United States and Canada and normally operated in the United States and Canada.

Warranty Period

The warranty period for all coverage begins at the time that any person, dealer or agent first places the unit into service. At the latest, a unit is placed into service when purchased or delivered to a purchaser.

What's Covered

If a defect in material or workmanship is found in a unit and reported during the Warranty period, Heartland AG Systems will pay parts and labor costs to repair the defects if the services are performed by an authorized Heartland AG Systems dealer. If parts are needed during the repair, Heartland AG Systems will, at its option, use genuine Heartland AG Systems, or remanufactured parts.

Heartland AG Systems provides no warranty, express or implied, for a component or other item that is separately warranted to the purchaser by its manufacturer, such as tires. Check with your local dealer for these details.

Exclusive Remedy

The remedy of repairing a defect in material or workmanship at a Heartland AG Systems dealership under the terms of this warranty is the purchaser's exclusive remedy and is in lieu of any other remedy otherwise available.

No Modification or Extension of Warranty

The Heartland AG Systems Warranty is limited to the written terms in the warranty statement. Heartland AG Systems does not authorize any person, dealer, or agent to change or extend the terms of this warranty in any manner. Any assistance to the purchaser in the repair or operation of any Heartland AG Systems product outside the terms or limitations or exclusions of this warranty will not constitute a waiver of the terms, limitations or exclusions of this warranty, nor will such assistance extend or re-establish the warranty.

The warranty is void if the unit is used in an application for which it is not designed or the unit has been scrapped, salvaged, stolen, junked or totaled.

Limitations and Exclusions

The Heartland AG Systems warranty gives you specific legal rights and you may also have other rights, which vary from state to state. This section contains the entire Heartland AG Systems warranty. Heartland AG Systems makes no other representations or warranties, expressed or implied, and specifically excludes the implied warranties of merchantability and fitness for particular purpose. Heartland AG Systems will not be liable for incidental or consequential damages resulting from a breach of the written warranty or any implied warranty.

- These limitations and exclusions may not be allowed by some states or provinces and shall not apply to the extent such limitations or exclusions are not allowed by applicable state/provincial law.

Owner's Responsibility

The Heartland AG Systems Warranty remains in effect during the warranty period if the owner performs the required maintenance at the recommended intervals outlined in the product's operator's manual and the unit is operated within its rated capacity. Genuine Heartland AG Systems service parts or Heartland AG Systems approved service parts that meet Heartland AG Systems specifications must be used for maintenance and repairs.

What Is Not Covered

- Replacement of non-defective wear items expected to be replaced during the warranty period, including, but not limited to: lights, fuses, belts, drive sprockets and chains, hose, soil engaging tools, spray tips, fertilizer deflectors, spinner blades and accessories or items replaced due to customer demand.
- Normal maintenance parts and service, including, but not limited to lubrication, coolants, and filters.
- All travel costs associated with hauling or towing a customer's machine to and from a repair center related to any warranty repair unless specifically covered by a program or policy.
- Repairs arising from any unauthorized modification to the product.
- Repairs arising from service performed by agents not approved by Heartland AG Systems.
- Repairs arising from storage deterioration, failure to maintain the equipment, improper use of the equipment, collision or other accident, vandalism, or other casualty, or operation beyond the rated capacity or specifications.
- Repairs arising from abuse or neglect including, but not limited to operation without adequate lubricants or coolant, over-speeding, contaminated fluids, improper storage, starting, warm-up, or shutdown practices.
- Failure of the machine, its implements or attachments caused by improper field application or overloading.
- Premiums charged for over-time labor costs.
- Economic loss, including lost profits, crop loss, equipment rental or other expenses.
- Cost associated with cleaning of machine in preparation for service.
- Loss or damage during shipment.

- Cost of initial setup or installation of any optional equipment or attachments to a unit.
- Items used for repairs include, but are not limited to: solvents, cleaners, anti-seize lubricants, oil-dry, shop towels, shop supplies, special tools, etc.
- Included, but not limited to are checkups, adjustments, and shimming, tune-ups, spread pattern checks, etc.
- Unauthorized modification or field fixes.
- All costs of special tools or shop supplies incurred with repairs.
- Claims for stolen equipment or parts.
- Claims for replacing a complete assembly when the repair is less than the replacement.
- Claims involving the inspection or reconditioning of units.
- Shop comebacks: any duplicate, repeat, or comeback repair resulting from improper diagnosis, testing, or poor service work.
- Cost of removing or installing Non-Heartland AG Systems optional equipment or attachments.

Base Warranty Coverage

- Base Warranty is the factory warranty provided to the customer at no additional cost for a specific period covering the complete machine.
 - Liquid Applicators, except tires 1 Year
 - Spreaders and Tenders, except tires 1 Year
 - Nh3 Wagons, except tires 1 Year
 - Bumper Hitches 1 Year
 - Disc Covers 1 Year
 - Parts 90 Days
 - Tandem Wagons (except tires and main frame) 1 year
 - o Tandem Wagon main frame 5 Years
 - Nitromaster Toolbars shall carry the following pro-rated warranty:
 - o Year one, all components except tires 100%
 - o Year two, center section and wings 80%
 - o Year three, center section and wings 50%
 - o Year four, center section and wings 25%
 - o Year five, center section and wings 10%

Tires

Tires installed on all Heartland AG Systems Equipment are warranted and serviced by their manufacturer's service outlets. Some manufacturers have separate service outlets for off road agricultural and construction equipment. Service is available by contacting the tire manufacturer's local representative.

Warranty Registration

All machinery items, which are invoiced by Heartland AG Systems on separate receivables, must be registered for warranty. The warranty period for all coverage begins at the time that any person, dealer, or agent first places the unit into service. New machine warranty coverage begins when the machine is registered. Registration is accomplished when a properly completed Warranty Registration is received and processed by Heartland AG Systems.

Operator's Manual/Warranty Receipt Verification

The Heartland AG Systems New Equipment Limited Warranty for Agricultural Equipment statement must be filled out and signed by the customer indicating receipt and an understanding of the operator's manual and the warranty statement,

- The original form must be mailed to the address on the form.
- Make one copy for the Dealer. This copy must be retained by your dealership the same as any other legal document.
- Make a second copy for the customer.

Heartland AG Systems Responsibility

If a defect in material or workmanship is found in a product during its warranty period, Heartland AG Systems will pay parts and labor costs to repair the defect when the service is performed by an authorized Heartland AG Systems dealer or agent. If parts are needed during the repair, Heartland AG Systems will, at its option, use genuine Heartland AG Systems new or remanufactured parts. These responsibilities include, but are not limited to:

- Costs for repairs that are the result of defects in material and workmanship
- Payment to dealers per policy in a timely manner
- Service information to dealers
- Identify product deficiencies and take corrective action by field campaigns
- Make determination of premature wear
- Provide unit that is free of defects in material & workmanship

Dealer Responsibility

Heartland AG Systems dealers are responsible for providing prompt, courteous, and willing service to all Heartland AG Systems equipment owners. These responsibilities include but are not limited to:

- Equipment set-up and pre-delivery
- Sell the right product for the intended application
- Inspect the unit and initiate recovery action on any shipping damage and or shortages
- Instruct customer on proper use, maintenance, and safety features of machine
- Advise and explain warranty coverage to customer
- Diagnose the problem, repair the unit, and submit claims in accordance with the terms and conditions of the warranty claim policies
- Take responsibility for saying "NO" to customers on non-warranty failures
- Apply failure analysis to questionable repairs
- Complete product update campaigns
- Have properly trained technicians and adequate tools for the job
- Retain proper documentation of failure repaired

Owners Responsibility

The Heartland AG Systems warranty remains in effect during the stated warranty period if the owner performs the required maintenance at the recommended times as outlined in the products operator's manual. Genuine Heartland AG Systems or Heartland AG Systems approved service parts must be used for maintenance. Additionally, the owner will pay for all transportation or travel expenses related to any warranty repair.

These responsibilities include, but are not limited to:

- Perform maintenance as indicated in the operator's manual
- Use the unit in the correct application (non-abusive)
- Notify dealer of failures and have the machine available for repair in a timely manner
- Training operators
- Travel cost, towing charges, and service calls
- Normal wear items
- Machine damage (accidental)
- Adjustments for application
- Machine inspection (daily walk-around)

Warranty Eligibility

The dealer is responsible to determine that any Heartland AG Systems equipment is covered by Heartland AG Systems warranty before performing a repair and that the repair is a warrantable failure. Any dealer who is in doubt of the equipment's warranty eligibility may call Heartland AG Systems for verification.

Warranty Repairs Made by the Customer

If a Heartland AG Systems dealer determines that the customer is capable, and the customer requests permission to perform select(warranty)repairs on his product, the Heartland AG Systems dealer is authorized to grant this customer request. The servicing dealer should provide the parts to the customer upon request, and to assure that customer is properly instructed on how to perform the repairs correctly.

The servicing dealer is responsible and accountable for claim accuracy and validity; specifically, in areas such as the parts replaced date, and assurances that the parts are installed as instructed by Heartland AG Systems. The comments section of the claim should clearly state that the customer installed the parts. The claim reimbursement will be for parts and applicable handling only. No labor is allowed! All replacement parts must be held for possible recall.

Parts Shortages on Whole-Goods

Dealers may submit a claim for parts shortages discovered during pre-delivery or during final assembly at the dealer's location. All claims for shortages must be submitted 5 days from the original ship date from the plant and before the warranty start date.

Warranty Reimbursement Policies

Heartland AG Systems provides for warranty reimbursement due to defects in material or workmanship only. Warranty does not include restoring any machine or portion thereof, which has accumulated hours of operation, to factory new condition. This includes customer owned and used equipment.

Except for only a few items not available through Heartland AG Systems, all Heartland AG Systems manufactured equipment warranty repairs must be performed using only Heartland AG Systems genuine new or remanufactured parts and accessories. Installation of non-Heartland AG Systems parts does not qualify for warranty reimbursement and can void the machine's warranty.

Parts

It is fully expected that all claims be filed using part numbers from the applicable Heartland AG Systems equipment parts book whenever such part number exists. Heartland AG Systems shall reimburse the dealer at the dealer net price (cost) in effect on the parts replaced date.

Labor

Heartland AG Systems shall reimburse the dealer at 80% of the dealer's posted retail shop labor rate. The retail shop labor rate shall be subject to verification by Heartland AG Systems from copies of actual dealer invoices to customers.

Outside Charges

Specialized repair such as that done by a machine shop will be accepted as part of a warranty claim at actual cost. Explain the parts used and the service work performed in the description section of the claim and retain a copy of the receipt. Retain a copy of the invoice with the shop work order to support the claim. Outside repairs that exceed the cost of the same repair, if performed by the dealer, will be reimbursed at a lower rate.

Freight



Heartland AG Systems will pay the freight charges when a warranty recalled part is to be returned to Heartland AG Systems.

Travel

Travel will only be reimbursed when authorized by a field campaign.

Repairing or Replacing Parts and Components

When performing a warranty repair, a complete part or component should not be replaced under warranty if the repair can be accomplished at a lower cost. If the total cost of the repair including the cost of parts, labor, and/or outside labor or materials is less than 75% of the cost of the parts, the part must be repaired.

Filters and Lubricants

Replacement of lubricants and filters do not qualify for warranty reimbursement unless damage caused by a defect in material or workmanship results in contamination or sudden loss of fluid. Lack of maintenance, operator misuse, or neglect will not qualify for warranty reimbursement.

Claim Form Guidelines

Claims Must Have

1. Product identification number (PIN) or serial number. All characters of the PIN must be used on the warranty claim.
 - Claims for parts warranty must use the word "PARTS" for the PIN. An invoice that shows date of sale or date of installation must be supplied for all parts claims.
2. Model Number
3. Date of failure – Claims must be submitted within 30 days or repair.
4. Date of repair
5. Warranty start date. Date the unit warranty starts or date the parts were sold for parts warranty.
6. Description of the problem. Describe all problems pertinent to the claim.
Comments should be as precise as possible, attach a separate sheet if necessary, to describe the problem.
7. Description of the work performed. List each significant action of the repair.
8. Itemize labor. Provide a breakdown of labor for each significant repair action in the "Describe Work Performed" column.
9. Shop order numbers. The shop order number field is used for recording your shop work order number that is related to the claim. The shop order number field can also be used to record the parts invoice number when claiming a parts warranty.
10. Customer information. Customer information includes the customer name, city, state, county, and postal code. It must match the warranty registration.
11. Warranty claim total. The total of all reimbursement costs requested.
12. Dealer signature and date. All claims must be signed and dated by the distributor to be validated.

INTRODUCTION

Read this manual carefully. It will instruct you on how to operate and service your machine safely and correctly. Failure to do so could result in personal injury and/or equipment damage.

Right hand and left hand sides of the machine are determined by (standing behind the machine) facing in the direction the machine will travel when going forward.

SAFETY INFORMATION

DANGER: This message denotes the most serious specific potential hazard. This sign will have the color combination of RED and WHITE.

WARNING: This message denotes a specific potential hazard.

CAUTION: This message denotes a reminder of safety practices.

 **NOTE:** Indicates a special point of information.

Carefully read and follow all safety signs. Reinstall safety signs that are damaged or missing.

Warranty is provided for customers who operate and maintain their equipment as described in this manual. Warranty registration is accomplished by the dealer completing and forwarding the WARRANTY REGISTRATION FORM along with a copy of the dealer's invoice to Heartland Ag Systems. It is in your best interest to insure that this has been done.

WARRANTY does not cover the following.

- 1. Cleaning, transporting, mailing and service call charges.
- 2. Depreciation or damage caused by normal wear, accidents, improper protection or improper use.

***** See complete WARRANTY for details

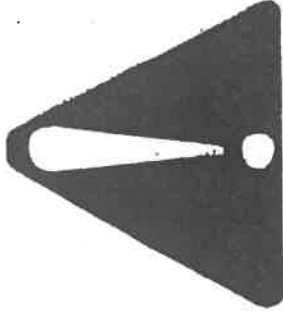
Record your machine model and serial number in the space provided. Your dealer needs this information to give you prompt, efficient service when you order parts.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE PURCHASED _____

***** SAFETY INFORMATION CONTINUED *****



RECOGNIZE SAFETY INFORMATION

This is the safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury. Follow recommended precautions and safe operating practices.

FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instructions.

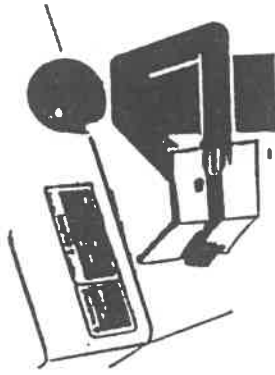
Keep your machine in proper working condition. Unauthorized modification to the machine may impair the function and/or safety and affect machine life.

PROTECT CHILDREN AND BYSTANDERS

Before you back, **LOOK CAREFULLY** behind for children. Clear area of children, pets and bystanders.

TRANSPORT SAFETY

- * Always use safety chains during road transportation.
- * Check wheel nuts daily.
- * Use hydraulic cylinder transport lock-up during road transportation.
- * Maximum recommended road speed is 25 mph.
- * Clear machine of personnel and obstructions.



DECALS

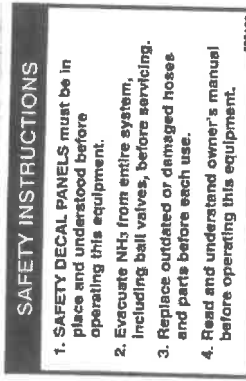
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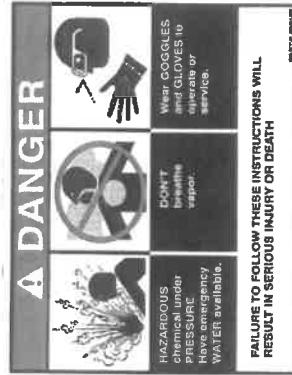
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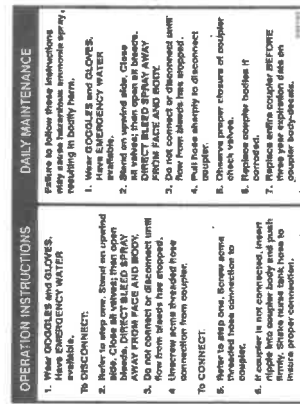
PART #699105



PART #699102



PART #699103



PART #699101



PART #699104



PART #699106



PART# 699100



PART #USA



8000 NITROMASTER TOOLBAR ASSEMBLY PROCEDURE

Your 8000 Nitromaster Toolbar is shipped with small parts and hardware packed in boxes marked for the different sections of the toolbar. If you find any items missing, please contact Ag Systems, Inc. immediately.

Note: In this manual “left hand” and “right hand” are determined by standing behind the toolbar looking in the direction of travel.

- Step 1 Select a smooth level surface for the assembly of your Nitromaster Toolbar.
- Step 2 Refer to the illustration on Page 13). Place the center section (item 1) upon (4) steel saw horses, one at each corner of the frame. Do not place the hinge plates on the saw horses.
- Step 3 Install the bogie arms (item 44) left hand and (item 45) right hand to the center section with the hinge pins (item 50) and appropriate hardware.
- Step 4 Install the walking wheel assembly (items 55-56) to the bogie arms with the hinge pins (item 51) and appropriate hardware.
- Step 5 Place the center section wheel lift cylinder (item 72) size 3 x 12 and (item 73) size 4 x 12 into position with the body towards the frame and the shaft on the bogie arms. Secure the cylinders with the appropriate pins.
- Step 6 Fully extend the wheel cylinders. Install the torsion tube (item 40) and (if required) the shim (item 41) with the appropriate hardware.
- Step 7 Install the poles (item 4) left hand and (item 5) right hand with the hitch mount (item 13) and appropriate hardware. Bolt the poles to the center section with the appropriate hardware.
- Step 8 Attach the hitch assembly (items 6, 7, or 8) with the hitch pin (item 12). If the pin adapter clevis (item 9) is used, make sure the hitch is installed with the clevis towards the bottom (as shown on page 13).
- Step 9 Attach the jack (item 18) to the pole and assemble the miscellaneous items, hose brackets (item 24) gauge bracket (item 23), depth control brackets (item 19), and selector valve bracket (item 29) with the u-bolts (item 20 & item 34) and appropriate hardware.
- Step 10 Place the primary wings (item 2) left hand and (item 3) right hand upon steel saw horses and assemble to the center section with the hinge pins (item 63) and appropriate hardware.
- Step 11 Install the wing bogie arms (item 47) left hand and (item 48) right hand to the wings with the hinge pins (item 50) and appropriate hardware.
- Step 12 Install the walking wheel assemblies. (Repeat step 4)
- Step 13 Place the wing wheel lift cylinders (item 77) size 3 3/4 x 12 and (item 78) size 3 1/2 x 12 into position on the wing frame with the body towards the frame and the shaft on the bogie arms. Secure the cylinders with the appropriate pins. Fully extend the cylinders.
- Step 14 Place the primary wing cylinders (item 67) size 4 x 36 onto the center section with the body on the center section and the shaft towards the wings. Secure the butt end with the pin (item 68). Do not secure the shaft end until the hydraulic system has been purged of air.

ATTACHING THE SECONDARY WINGS

FOR A 42 FOOT TOOLBAR (reference the illustration on page 15)

- Step 15 Place the secondary wing (item 1) left hand and (item 2) right hand on suitable supports and assemble to the primary wings with the hardware (item 13 and item 14).
- Step 16 Mount the hydraulic cylinder (item 3) size 3 x 24 to the primary wings. Attach the link (item 5) and the rollers (item 11) with the pins (item 14) to the hydraulic cylinders. Do not attach the links to the secondary wings until the hydraulic system has been purged of air.
- Step 17 Install the wing hook assemblies (item 7) and retainer (item 6) with the u-bolts (item 8) and appropriate hardware. Adjust the locations after the hydraulics are operational.
- Step 18 Generously grease the hinge and pivot points.

FOR A 52 FOOT TOOLBAR (reference the illustration on page 15)

- Step 19 Place the secondary wing (item 1) left hand and (item 2) right hand on suitable supports and assemble to the primary wings with the hardware (item 13 and item 14).
- Step 20 Mount the hydraulic cylinder (item 3) size 3 1/2 x 24 to the primary wings. Attach the link (item 5) and the rollers (item 11) with the pins (item 14) to the hydraulic cylinders. Do not attach the links to the secondary wings until the hydraulic system has been purged of air.
- Step 21 Perform steps 17 and 18.
- Step 22 Install the hydraulic hoses and fittings etc. per the hydraulic systems schematic drawings on --
page 21 for 34 foot toolbar without selector valve.
page 22 for 42 ft. and 52 foot toolbar without selector valve.
page 23 for 34 foot toolbar with selector valve.
page 24 for 42 ft. & 52 foot toolbar with selector valve.

PURGING THE AIR FROM THE HYDRAULIC SYSTEMS

- Step 23 Purging the are from the hydraulic system is best done with the toolbar on supports without the wheels mounted.
CAUTION: If the wheels are mounted, the pole could lift up when hydraulic pressure is applied. To proceed safely firmly, anchor the pole to a heavy stationary object or attach it to a tractor.
 - (A) Pressurize the wheel lift hydraulic circuit. Fully extend all wheel lift cylinders and circulate the oil for approximately two minutes.
 - (B) Fully retract the wheel cylinders. All wheel cylinders should retract simultaneously. If there is significant lag , or if after retracting there is noticeable sag, this indicates there is air in the system.
 - (C) To correct, repeat steps A and B
 - (D) Pressurize the wing lift hydraulic circuit.
CAUTION: The wing cylinders should be secured at the butt end only.
Fully "RETRACT" all wing cylinders and circulate the oil for approximately two minutes.
 - (E) Extend the wing cylinders. Make sure the shafts of the cylinders do not hit any obstructions as they are extending.

(F) Repeat steps D and E. This should purge all the air from the hydraulic system.

(G) If in field operation you are noticing uneven lifting of the wheels or wings refer to the trouble shooting page following the operating instructions.

Step 24 Refer to step 16. Attach the link (item5) to the secondary wing with the cylinder pin (item 15) and the retaining pins supplied.

Step 25 Mount the rim and tire assemblies to the hubs on the center section and wings. The toolbar parts list indicates which tires are correct for your toolbar.

Step 26 You may now remove the supports from the center section and wings.

CAUTION: When the wheels are mounted, the pole could lift up when hydraulic pressure is applied. To proceed safely, firmly anchor the pole to a heavy stationary object or attach it to a tractor.

**IF YOUR TOOLBAR IS EQUIPPED WITH MECHANICAL GAUGE WHEELS
INSTALL PER STEPS 27 TO 31.**

Step 27 Refer to the illustration on page 16. Position the mounting bracket (item 1) on the secondary wing front tube and attach with (2) u-bolts (item 5) and appropriate hardware. Snug only.

Step 28 Assemble the pivot arm (item 2) to the mounting bracket with the pivot pins (item 3) and appropriate hardware.

Step 29 Install the turnbuckle jack (item 11) with the clevis pins (items 8 & item 12) and the hairpin (item 4) and cotter pin (item 10).

Step 30 Mount the wheels with the tires to the hubs.

Step 31 The gauge wheels should be located as far out to the end of the toolbar as is practical. Adjust the position of the gauge wheels to the desired track width and securely tighten the u-bolts. Reference step 27.

Step 32 Attach the knife shanks (and coulters) at the desired spacing. Offset extension brackets may be required for some applications. Refer to the tool arrangement illustrations on pages 30 to 35.

Step 33 Assemble the knives (and disk covers) to the knife shanks.

Step 34 **NH3 APPLICATION SYSTEM.** Refer to the illustration on page 54. Mount the brackets as indicated with the appropriate hardware. Attach the hoses and components per the kit supplied for your application . See the plumbing schematic drawing on page 55. Install th NH3 break-away coupling device per manufacturers instructions, see page 55A for basic operation and maintainence information.

Step 35 Mount the field hitch (item 83) in the center of the center section with the appropriate hardware. Refer to the illustration on page 18.

Step 36 Fold the wings and raise the machine to the full transport height. Position the transport locks (item 69) on the extended shafts of the wheel lift cylinders on the center section and secure the transport locks with the pins (item 70 & item 71). Release the hydraulic pressure and lower the machine so that it is supported by the transport locks.

CAUTION: BEFORE MOVING THE MACHINE. Read the operating instruction and warnings on the page following these assembly instructions.

Step 37 Your 8000 Nitromaster Toolbar is now fully assembled and **READY TO GO TO WORK.**

COULTER and DISK SEALER MOUNTING INFO

SPGBDLSHK

With the toolbar parked on hard level ground fold out the wings and lower the toolbar so that it is supported on the knives. The toolbar should be level. If necessary, unhitch the toolbar and adjust the jack as required.

SETTING THE COULTER DEPTH: Assuming a working depth for your knife of 8 inches (dim A), adjust one coultter blade to a distance of 4 inches (dim B) above the knife point. This will run the blade 4 inches in the ground.

Measure the distance that the 1 x 3 bar extends above the mounting bracket (dim C). Adjust all coultters to this dimension.

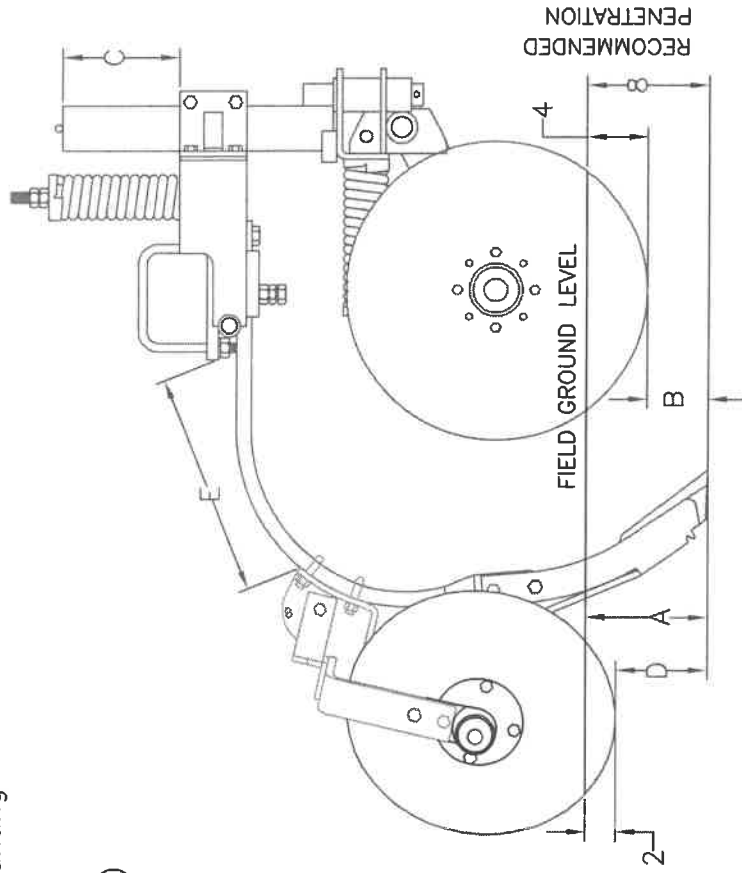
SETTING THE DISK SEALER DEPTH;

When the working depth is 8 inches, position one disk sealer assembly on the shank so that the blades are 6 inches (dim D) above the knife point. Measure the distance from the spring bundle bracket to the disk sealer bracket (dim E). Adjust all disk sealers to this dimension. This will run the disk sealers 2 inches in the ground.

OTHER WORKING DEPTH: modify these dimensions in relation to your working depth. If your knife is 10 inches in the ground (dim A), the dimension from the coultter blade to the knife point (dim B) would be 6 inches. The distance to the disk sealer (dim D) would be 8 inches. This "knife to blade" relationship would apply regardless of what combination of "AgSystems" bracket, shank, knife, coultter and disk sealer is used.

NOTE::

It is important that the coultter and disk sealer blades are not set excessively deep. The coultter blades should be set just deep enough to cut the surface trash. Coultters set too deep will cause the toolbar to float on the coultters and not allow your gauge wheels to contact the ground. Intermitant contact with the ground will cause excessive wear on the hydraulic cylinder clevises and the mounting lugs. Coultters running too deep could also form a trench that will not seal properly and allow excessive NH3 to escape into the atmosphere (smoking).



AG SYSTEMS INC. HUTCHINSON MN. 55350

DRAWN BY J.N.

NAME COULTER/SEALER ADJUSTMENT

FIRST USED

DATE 07/01/06

REV.

DATE

PART NUMBER

SPGBDLSHK

OPERATING INSTRUCTIONS

USE OF DEPTH CONTROL SPACERS

WARNING:

Failure to use, or incorrect use of the depth control spacers on the center section lift cylinders will result in voiding the equipment warranty.

Correct use of the lift cylinder depth control spacers is needed to maximize equipment performance. Incorrect use will cause the equipment to operate at uneven depths and even result in equipment damage.

To gain maximum performance from your equipment, the depth control spacers that have been provided with your equipment must be used when you place your equipment in the field. It is imperative that an equal number of spacers of equal size are placed on each of the center section lift cylinders before placing your equipment in service. Failure to do so may cause damage and result in voiding the equipment warranty. Use of stroke control spacers (depth control spacers) on the wing lift cylinders is not recommended, or necessary when spacers are properly placed on the center section lift cylinders.

To set the equipment to the proper depth for your field conditions, place the toolbar in the field to the desired tillage depth. Using the cylinder spacers provided with your equipment, place an equal number of spacers of equal size on both of the center section lift cylinders. It is very important that both center section lift cylinders are functioning with the same size of cylinder spacers before you continue to operate your equipment. If you require deeper depth, lift the equipment, remove and replace a spacer with a thinner spacer. If you require a shallower depth, remove a spacer and replace it with a thicker spacer. Once the equipment has been set to your desired tillage depth by using the correct depth control spacers you will not need to change them.

USE OF TRANSPORT LOCK

WARNING:

Failure to use the transport locks may result in equipment damage or personal injury. Equipment transport locks are provided for safety when transporting equipment over the road and should remain with the equipment. The transport locks also prevent the equipment from settling or dropping when the equipment is disconnected from the hydraulic power source. When you are finished with a field and you find it necessary to move the equipment to a new location, simply raise the toolbar out of the ground and place the transport locks provided on to the lift cylinder. You do not need to remove the spacers for transport. Slide the spacers up on the cylinder rod far enough so that the transport lock will pass below and around the spacers. Then secure the transport locks with the pins provided. When you are finished with the equipment and it is to be parked, it is imperative to place the transport locks around the lift cylinder rods to prevent the equipment from settling.

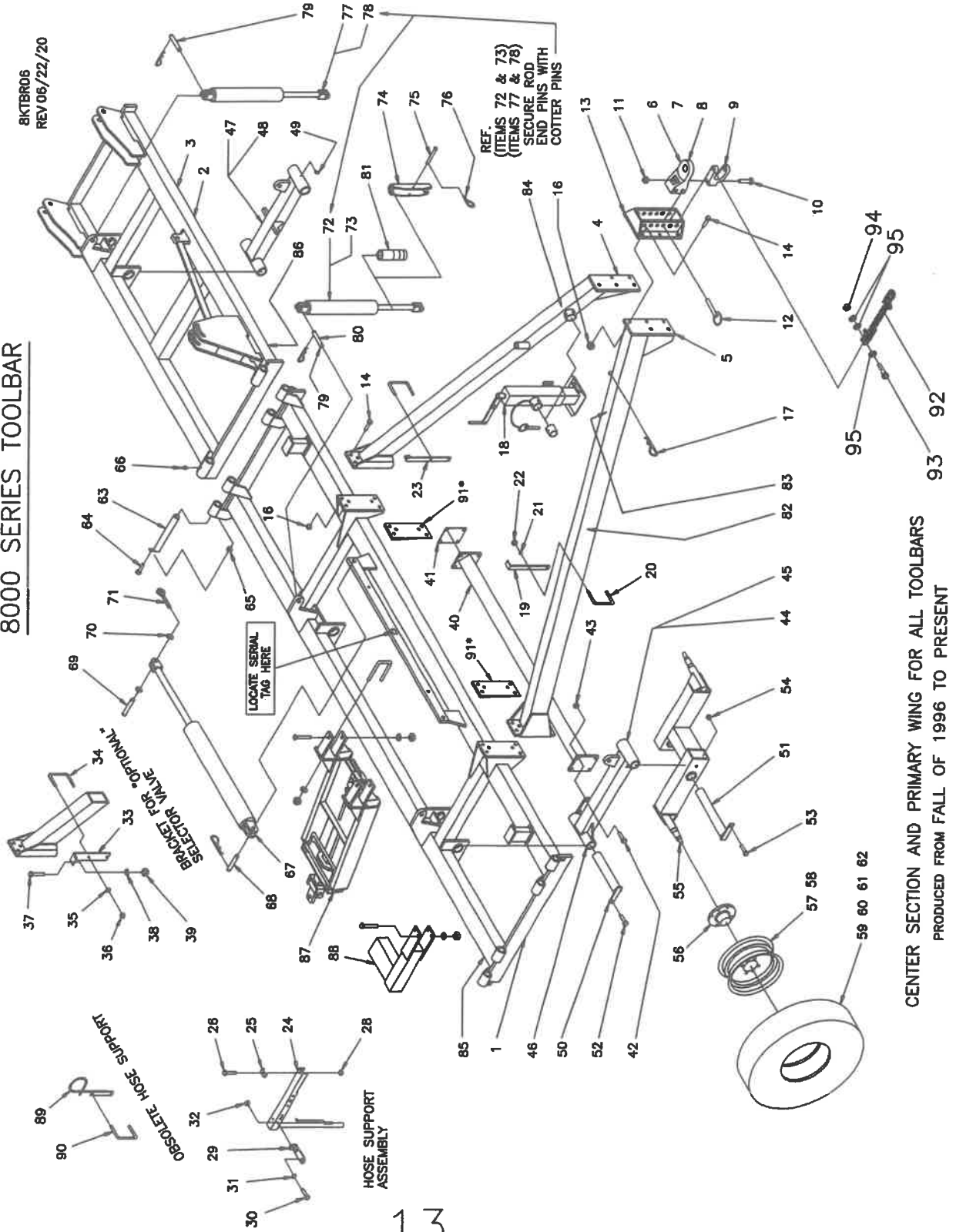
When operating your equipment in the field the lift wheels must be in contact with the ground at all times. Operating the equipment with the lift wheels retracted until the wheels are completely off the ground will be considered misuse of the equipment and may result in voiding the equipment warranty.

TROUBLE-SHOOTING
SERIES 8000 TOOLBAR FIELD OPERATIONS

INFO TO FOLLOW

8000 SERIES TOOLBAR

8KTBRO6
REV 06/22/20



CENTER SECTION AND PRIMARY WING FOR ALL TOOLBARS
PRODUCED FROM FALL OF 1996 TO PRESENT

8000 SERIES TOOLBAR PARTS LIST

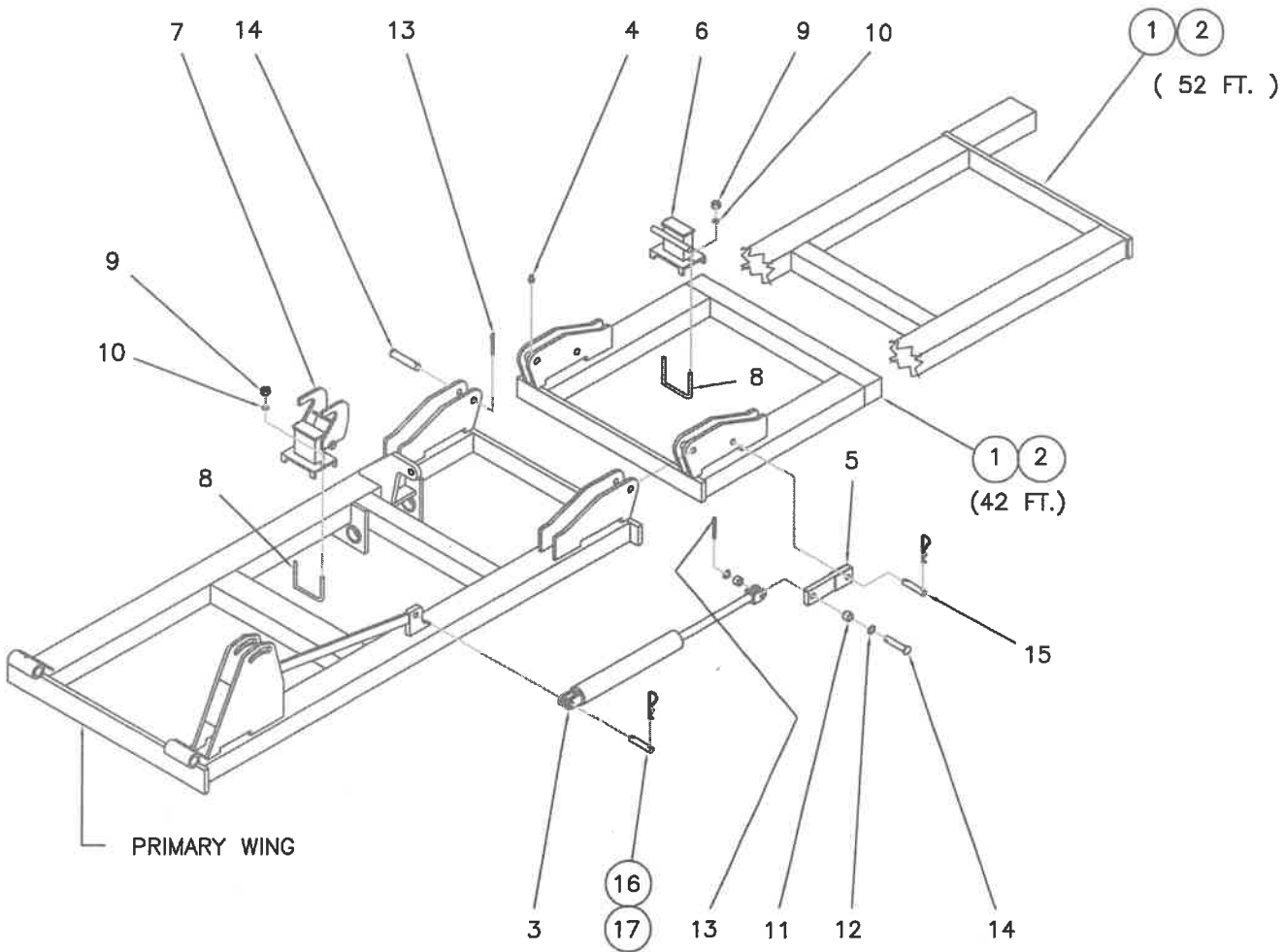
CENTER SECTION & PRIMARY WINGS

8KTBR06LST
REV 06/30/20

ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	47010049	CENTER SECTION	1	57	47005589	WHEEL RIM, 15 X 8	8
2	47010086	PRIMARY WING, LEFT HAND	1	58	20120012	VALVE STEM	8
3	47010087	PRIMARY WING, R.H. (NOT SHOWN)	1	59	20121114	TIRE, 11L X 6 PLY	QUANTITIES AND
4	47008349	POLE, LEFT HAND	1	60	10261	TIRE, 11L X 8 PLY	WHERE USED
5	47008350	POLE, RIGHT HAND	1	61	20111510	TIRE, 11L X 10 PLY	AS NOTED
6	PPi-421V3	PERFECT HITCH, (2" DRAWPIN)	1	62	20121115	TIRE, 11L X 12 PLY	
7	Pi-301V3C	PERFECT HITCH ASSY. (1 1/2 D'PIN)	1	ITEM 59	USE ON WINGS, ALL UNITS		4
		INCLUDES ITEMS 8 TO 11			USE ON CENTER SECTION ONLY (34 FT.)		
8	PPi-301V3	PERFECT HITCH, BASE HITCH	1	ITEM 59	30" SPACING, NO COULTERS		4
9	PPi-208VR	PERFECT HITCH CLEVIS (1 1/4 D'PIN)	1	ITEM 60	30" SPACING, WITH COULTERS		4
10	18058452	BOLT, 3/4-10NC. X 5 GR. 8	8	ITEM 60	15" SPACING, NO COULTERS		4
11	18458452	LOCKNUT, 3/4-10NC. GR. 8	1	ITEM 61	15" SPACING, WITH COULTERS		4
12	600182	HITCH PIN, 1 X 6	2		ON CENTER SECTION ONLY (42 FT.)		
13	47008355	HITCH MOUNT	1	ITEM 60	30" SPACING, NO COULTERS		4
14	18098435	BOLT, 3/4-10NC. X 2 1/2 GR.8	22	ITEM 61	30" SPACING, WITH COULTERS		4
15	---	---	---	ITEM 61	15" SPACING, NO COULTERS		4
16	18458452	LOCK NUT, 3/4-10NC.	22	ITEM 62	15" SPACING, WITH COULTERS		4
17	18590094	HAIRPIN BRIDGE, (#8) 3/16 DIA.	1		ON CENTER SECTION ONLY (52 FT.)		
18	70924	JACK COMPLETE, (FINISH PAINTED)	1	ITEM 61	30" SPACING, NO COULTERS		4
				ITEM 62	30" SPACING, WITH COULTERS		4
				ITEM 62	15" SPACING, NO COULTERS		4
				ITEM 62	15" SPACING, WITH COULTERS		4
19	47010170	BRACKET, DEPTH CONTROLS	2	63	47010132	HINGE PIN, PRIMARY WING	4
20	47001028	U-BOLT, 3/8-16NC	2	64	18057424	BOLT, 1/2-13NC. X 1 1/4	4
21	18891200	LOCKWASHER, 3/8	4	65	18497400	NUT, FLANGED 1/2-13NC.	4
22	18436800	HEX. NUT, 3/8-16NC.	4	66	18901805	GREASE ZERK, STRAIGHT	4
FOR 2006 ITEM	23	REPLACED BY ITEMS 29 TO 32		67	47300095	HYD. CYLINDER, CENTER (4 X 36)	2
23	47010168	PRESSURE GAUGE BRACKET		68	47003514	CYLINDER PIN KIT (1 X 4) (2 PINS)	1
24	47005087	PIVOTING HOSE BRACKET	1	69	18549054	CLEVIS PIN, (1 X 5)	2
25	47005091	HOSE CLAMP	4	70	18852200	FLATWASHER 1" I.D.	4
26	18056832	BOLT, 3/8-16NC. X 2 1/4	2	71	18560826	COTTER PIN (3/16 X 1 1/2)	2
27	OMITTED		2	72	47005414	HYD. CYLINDER, CENTER WHEELS	
28	18459200	LOCKNUT "NYLOK" 3/8-16NC.	2		PLAIN (3 X 12) 1 3/8 SHAFT		
29	47005092	GAUGE BRACKET,	1	73	47005459	HYD. CYLINDER, CENTER WHEELS	1
30	18056824	BOLT, 3/8-16NC. X 1 1/4	1		REPHASING (4 X 12) 1 3/8 SHAFT		1
31	18811200	FLAT WASHER, 3/8	1	74	47010150	TRAVEL LOCK- 1 3/8 SHAFT	2
32	18496800	FLANGE NUT, 3/8-16NC.	1	75	18541254	CLEVIS PIN, TRANSPORT LOCK	2
ITEMS 33 TO 39	33	USED FOR OPTIONAL SELECTOR VALVE		76	18590916	HAIRPIN BRIDGE, TRANSPORT LOCK	2
	34	SELECTOR VALVE BRACKET	1	77	47005449	HYD. CYLINDER, WING WHEELS	1
	35	U-BOLT, 3/8-16NC	1		REPHASING (3 3/4 X 12)		
	36	LOCKWASHER, 3/8	2	78	47005056	HYD. CYLINDER, WING WHEELS	1
	37	HEX. NUT, 3/8-16NC.	2		REPHASING (3 1/2 X 12)		
	38	BOLT, 5/16-18NC. X 3 1/4	2	79	47003514	CYLINDER PIN KIT (1 X 4) (2 PINS)	3
	39	LOCKWASHER, 5/16	2	80	47003513	CYL. PIN KIT (1 X 3 1/2) (2 PINS)	1
	40	HEX. NUT, 5/16-18NC.	2		USE WITH 3" CYLINDER ITEM 72		
	41	TORSION TUBE, (SQ. TUBING)	1	81	47005455	SET, DEPTH CONTROLS, 1 3/8 SHAFT	2
	42	SHIM PLATE, (TORSION TUBE) AS REQ'D.	8	82	699106	DECAL, NITROMASTER 8000	2
	43	BOLT, 3/4-10NC. X 3	16	83	699100	DECAL, WARNING-CLEAR TONGUE	1
	44	HEX. NUT, 3/4-10NC.	16	84	699104	DECAL, CAREFUL-CLEAR MACHINE	1
	45	BOGGIE ARM, L. H. (CENTER)	1	85	699107	DECAL, AG-SYSTEMS INC	2
	46	BOGGIE ARM, R. H. (CENTER)	1	86	699101	DECAL, DANGER-FALLING WINGS	2
	47	BOGGIE ARM, L. H. (WING)	1	87	AS NEEDED	FIELD HITCH ASSEMBLY,	
	48	BOGGIE ARM, R. H. (WING)	1		SEE SEPARATE ILLUSTRATION		
	49	GREASE ZERK, 90 DEG.	4	88	AS NEEDED	STAGGER BRACKET	
	50	HINGE PIN, BOGGIE ARM	4		SEE SEPARATE ILLUSTRATION		
	51	HINGE PIN, BOGGIE FRAME	4		OBsolete FOR 2006		
	52	BOLT, 1/2-13NC. X 2	4	89	47010165	HOSE BRACKET	1
	53	BOLT, 1/2-13NC. X 1 1/2	4	90	47001028	U-BOLT, 3/8-16NC	1
	54	NUT, FLANGED 1/2-13NC.	8	91*	47008269	POLE WEDGES (OPTIONAL*) MAY BE	2
						NEEDED WITH SHALLOW APPLICATION	
	47000050	WALKING WHEEL ASSEMBLY	4			& LOW TRACTOR DRAWBAR HEIGHT	
		INCLUDES ITEMS 55 & 56		92	PPSC4156BS	CHAIN, SAFETY 1/2" X 56" LG	1
55	47010050	BOGGIE FRAME	4	93	18059061	BOLT HX CAP GR5 NC ZC 1 X 4	1
56	47009618	HUB COMPLETE, FOR PARTS SEE SEPARATE ILLUSTRATION	8	94	18459002	NUT NYLOCK 1 GR 5	1
				95	18852200	WASHER FLAT 1" SAE ZC	3
						(ITEMS 92-5 CAN BE ORDERED AS A KIT P/N:47990314)	

SECONDARY WING ASSEMBLY
FOR 42 FT. AND 52 FT. TOOLBARS

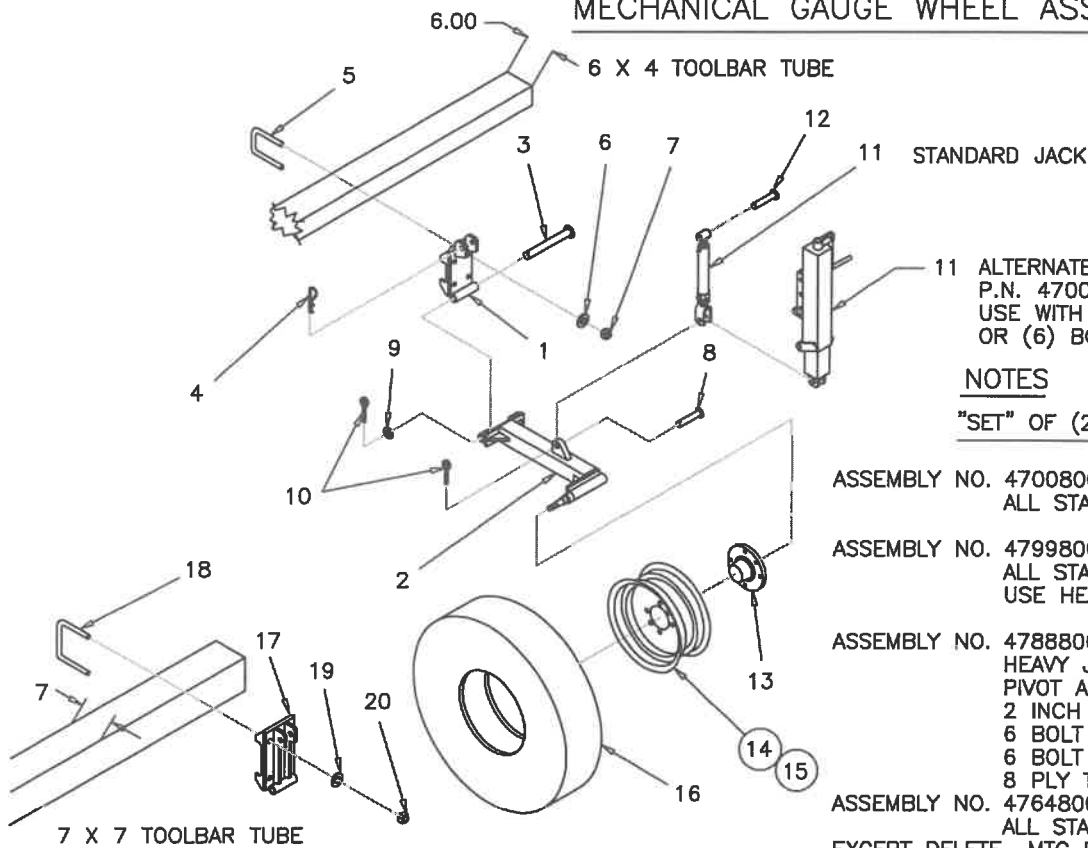
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ITEM	PART NO.	DESCRIPTION	QTY.
1	47010178	SECONDARY WING - LEFT (42 FT.)	1
2	47010179	IDENTICAL TO 47010178 (NOT SHOWN)	1
1	47010176	SECONDARY WING - LEFT (52 FT.)	1
2	47010177	SECONDARY WING- RIGHT (NOT SHOWN)	1
3	47300093	HYDRAULIC CYL.-(FOR 42 FT.) 3 X 24	2
3	47300094	HYDRAULIC CYL.-(FOR 52 FT.) 3 1/2 X 24	2
4	18901805	GREASE ZERK	4
5	47010163	LINK, HYDRAULIC CYLINDER	2
6	47010151	WING HOOK RETAINER	2
7	47010149	WING HOOK ASSEMBLY	2
8	47010154	5/8-11 NC U-BOLT	4
9	18417900	5/8-11 HEX. NUT	8
10	18891600	5/8 LOCKWASHER	8
11	47010032	ROLLER, CYL. LINK- (FOR 42 FT.)	4
11	47010441	ROLLER, CYL. LINK- (FOR 52 FT.)	4
12	18852200	1" FLAT WASHER	4
13	18560826	COTTER PIN, (3/16 X 1 1/2)	4
14	18549054	CLEVIS PIN, (1 X 5)	6
15	47003514	CYL. PIN KIT, (1 X 4) (2 PINS)	1
16	47003513	CYL. PIN KIT, (1 X 3 1/2) (2 PINS)	1
		USE WITH 3 X 24 CYL. (FOR 42 FT.)	
17	47003514	CYL. PIN KIT, (1 X 4) (2 PINS)	1
		USE WITH 3 1/2 X 24 CYL. (52 FT.)	

MECHANICAL GAUGE WHEEL ASSEMBLY

MCHGAWHL
REV C
REV 6-10-14



NOTES

"SET" OF (2) GAUGE WHEEL ASSEMBLIES

ASSEMBLY NO. 47008001 INCLUDES
ALL STANDARD COMPONENTS

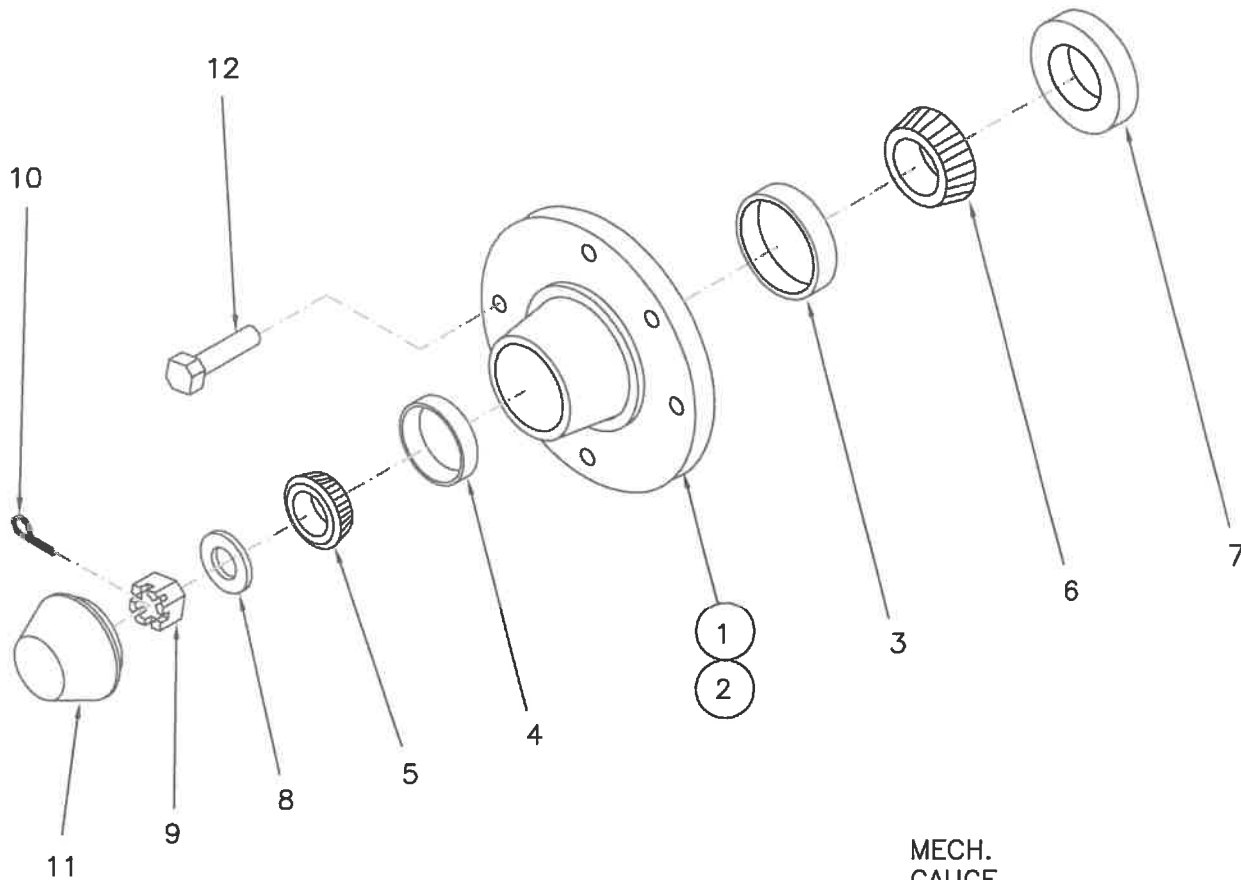
ASSEMBLY NO. 47998001 INCLUDES
ALL STANDARD COMPONENTS EXCEPT
USE HEAVY JACK. P.N. 47008514

ASSEMBLY NO. 47888001 INCLUDES
HEAVY JACK P.N. 47008514
PIVOT ARM WITH
2 INCH SPINDLE P.N. 47019335
6 BOLT HUB P.N. 47009611
6 BOLT WHEEL P.N. 47005589
8 PLY TIRE P.N. 10261

ASSEMBLY NO. 47648001
ALL STANDARD COMPONENTS
EXCEPT DELETE MTG BRACKET 47010412 AND
HARDWARE ITEMS 5, 6, AND 7
REPLACE WITH MTG BRACKET 47004742 AND
HARDWARE ITEMS 18, 19 AND 20

ITEM	PART NO.	DESCRIPTION	QTY FOR ASSY. NO. 47008001	QTY FOR ASSY. NO. 47998001	QTY FOR ASSY. NO. 47888001	QTY FOR ASSY. NO. 47648001
1	47010412	MOUNTING BRACKET	2	2	2	-
	47000413	PIVOT ARM COMPLETE, STANDARD	2	2	-	2
	47999335	PIVOT ARM COMPLETE, HEAVY DUTY INCLUDES ITEMS 2 AND 13	-	-	2	-
2	47010413	PIVOT ARM, STANDARD	2	2	-	2
	47019335	PIVOT ARM, HEAVY DUTY (2" SPINDLE)	-	-	2	-
3	47010425	PIVOT PIN	2	2	2	2
4	18560826	COTTER PIN, 3/16 X 1 1/2	2	2	2	2
5	47007286	U-BOLT, 3/4-10NC.	4	4	4	-
6	18891800	LOCKWASHER, 3/4	8	8	8	-
7	18418400	HEX. NUT, 3/4-10NC.	8	8	8	-
8	18541835	CLEVIS PIN, 3/4 X 2 1/2	2	2	2	2
9	18852200	FLATWASHER, 1" SAE ZC	2	2	2	2
10	18560726	COTTER PIN, 5/32 X 1 1/2	4	4	4	4
11	690063	JACK, TURNBUCKLE TYPE (STANDARD)	2	-	-	2
(ALT)	47008514	JACK COMPLETE, SQUARE BODY USE WITH HEAVY DUTY PIVOT ARM, OR WITH IN-LINE TOW BAR OPTION	-	2	2	-
12	18541566	CLEVIS PIN, 3/4 X 3 1/2	2	2	2	2
13	47005348	HUB ASSEMBLY COMPLETE, (5) BOLT	2	2	-	2
	47009611	HUB ASSEMBLY COMPLETE, (6) BOLT	-	-	2	-
14	47005590	WHEEL, 15" X 5 BOLT (STANDARD)	2	2	-	2
	47005589	WHEEL, 15" X 6 BOLT	-	-	2	-
15	20120012	VALVE STEM	2	2	2	2
16	20067015	TIRE, 670 X 15 (STANDARD) (32 PSI)	2	2	-	2
	10261	TIRE, 11L X 15, 8-PLY (36 PSI)	-	-	2	-
17	47004742	MOUNTING BRACKET (7 X 7 TUBE ONLY)	-	-	-	2
18	47005002	U-BOLT, 5/8-11NC. (FOR 7 X 7 BAR)	-	-	-	4
19	18891800	LOCK WASHER, 5/8 ZC	-	-	-	8
20	18417900	HEX. NUT, 5/8-NNC. ZC	-	-	-	8

HUB ASSEMBLIES



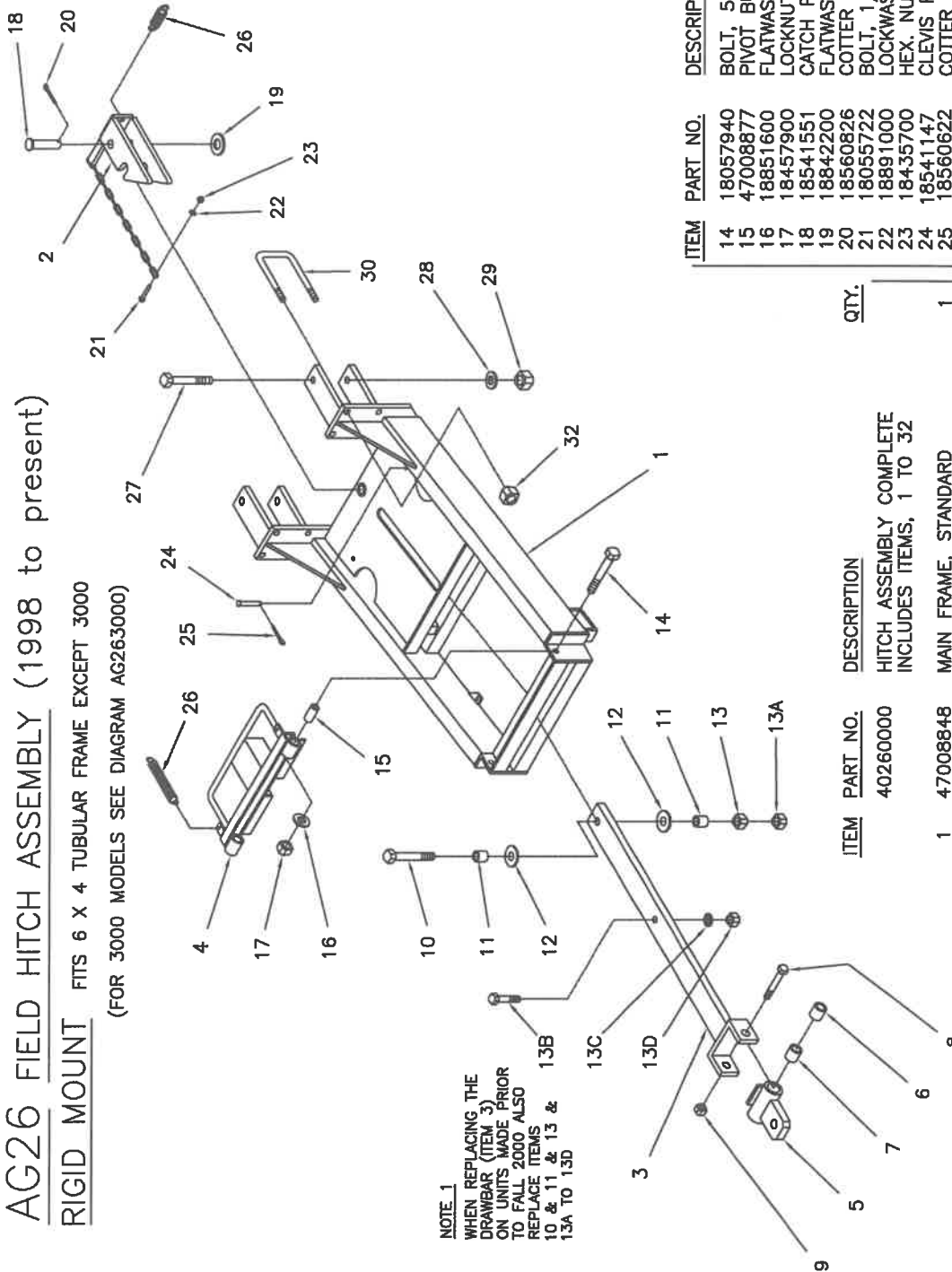
ITEM	DESCRIPTION	MECH. GAUGE WHEEL ONLY			QTY.
		5 BOLT HUB PART NO.	6 BOLT HUB PART NO.	6 BOLT HUB PART NO.	
1	HUB COMPLETE INCLUDES ITEMS 2 THRU 7 AND 11 THRU 12 ONLY MFGR. PART NUMBER	47005348 HA511	47009618 H618	47009611 H611	1
2	HUB WITH RACES	47006348	47005618	47005511	1
3	INNER BEARING RACE	47005010	47005520	47005710	1
4	OUTER BEARING RACE	44501910	47005510	47005010	1
5	OUTER BEARING CONE	44501949	47005548	47005048	1
6	INNER BEARING CONE	47005048	47005580	47005749	1
7	GREASE SEAL	47006011	47005030	47005013	1
8	SPINDLE WASHER		18000017	18000017	1
9	SPINDLE NUT	18488600	18489100	18489100	1
10	COTTER PIN	18560826	18560828	18560828	1
11	DUST CAP	47005297	47005515	47005513	1
12	LUG BOLT		47005012	47005014	6
12	LUG BOLT	47005014			5

AG26 FIELD HITCH ASSEMBLY (1998 to present)

RIGID MOUNT

FITS 6 X 4 TUBULAR FRAME EXCEPT 3000

(FOR 3000 MODELS SEE DIAGRAM AG263000)



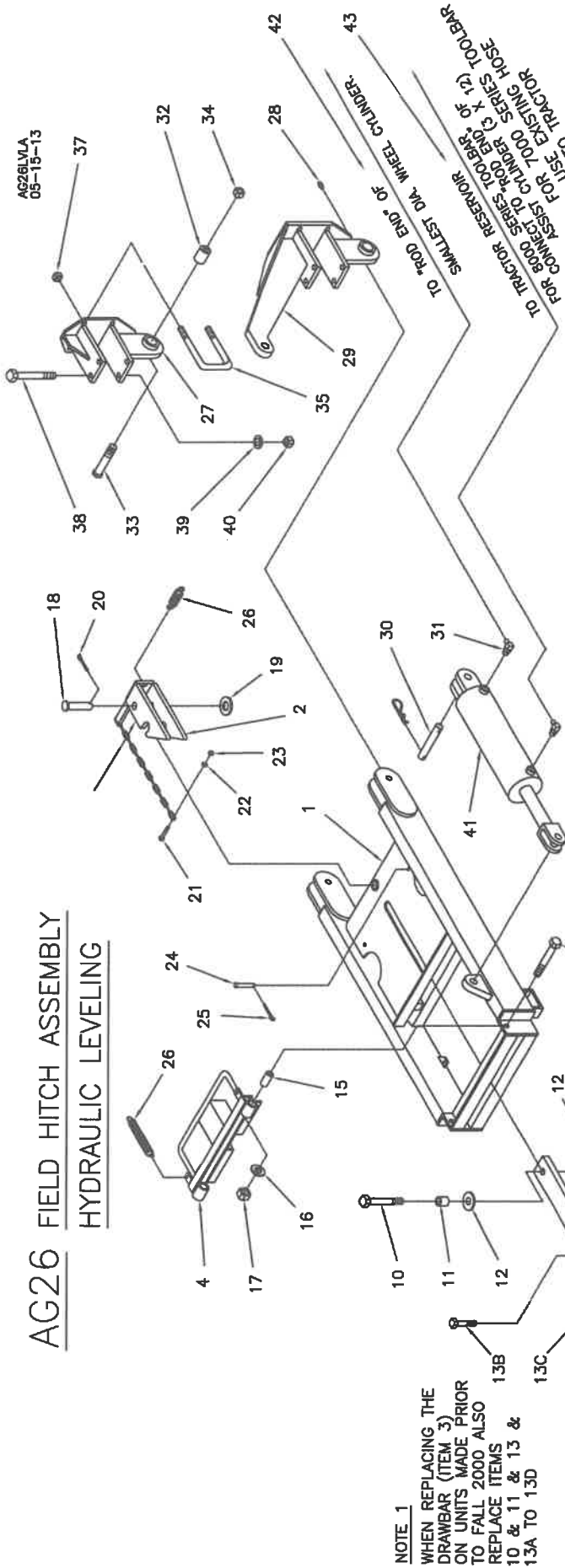
NOTE 1
WHEN REPLACING THE DRAWBAR (ITEM 3) ON UNITS MADE PRIOR TO FALL 2000 ALSO REPLACE ITEMS 10 & 11 & 13 & 13A TO 13D

AG26ISOC
05-15-13

ITEM	PART NO.	DESCRIPTION	QTY.
14	18057940	BOLT, 5/8-11NC. X 3 1/2	2
15	47008877	PIVOT BUSHING, 5/8 I.D.	2
16	18851600	FLATWASHER, 5/8 NOM. I.D. SAE.	2
17	18457900	LOCKNUT, 5/8-11NC.	2
18	18541551	CATCH PIVOT PIN, 1 X 4	1
19	18842200	FLATWASHER, 1" SAE	1
20	18560826	COTTER PIN, 3/16 X 1 1/2	1
21	18055722	BOLT, 1/4-18NC. X 1	1
22	18891000	LOCKWASHER, 1/4 NOM. I.D.	1
23	18435700	HEX. NUT, 1/4-18NC.	1
24	18541147	CLEVIS PIN, 5/16 X 2 1/4	1
25	18560622	COTTER PIN, 1/8 X 1	1
26	000018	EXTENSION SPRING	1
27	47992600	BOLT PKG. INCL. ITEMS, 27 TO 32	3
28	18058460	BOLT, 3/4-10NC. X 6 1/2	2
29	18891800	LOCKWASHER, 3/4 NOM. I.D.	2
30	18418400	HEX. NUT, 3/4-10NC.	2
30	47006951	U-BOLT, 5/8-11NC.	4
32	18457900	NUT, CENTER LOCK 5/8	8

ITEM	PART NO.	DESCRIPTION	QTY.
1	47008848	MAIN FRAME, STANDARD	1
2	47008852	DRAWBAR CATCH	1
3	47008853	DRAWBAR (SEE NOTE 1)	1
4	47008854	DRAWBAR LOCK	1
5	47008914	DRAWBAR HITCH, INCLUDES ITEMS, 6 AND 7	1
6	47008918	FIBER BUSHING	2
7	47008919	SPACER BUSHING	1
8	47008920	SPECIAL BOLT, 1-8NC. X 6 7/8	1
9	18459000	HEX. LOCKNUT, 1-8NC.	1
10	18098539	BOLT, 7/8-9NC. X 5 1/2	1
11	47009459	CATCH BUSHING, 7/8 I.D.	2
12	18852400	FLATWASHER, 1 1/4 NOM. I.D. (SAE)	2
13	18417800	HEX. NUT, 7/8-9NC.	1
13A	18458000	LOCKNUT, 7/8-9NC.	1
13B	18058430	BOLT, 3/4-10 NC. X 2	1
13C	18891800	LOCKWASHER, 3/4	1
13D	18418400	HEX. NUT, 3/4-10NC.	1

AG26 FIELD HITCH ASSEMBLY HYDRAULIC LEVELING



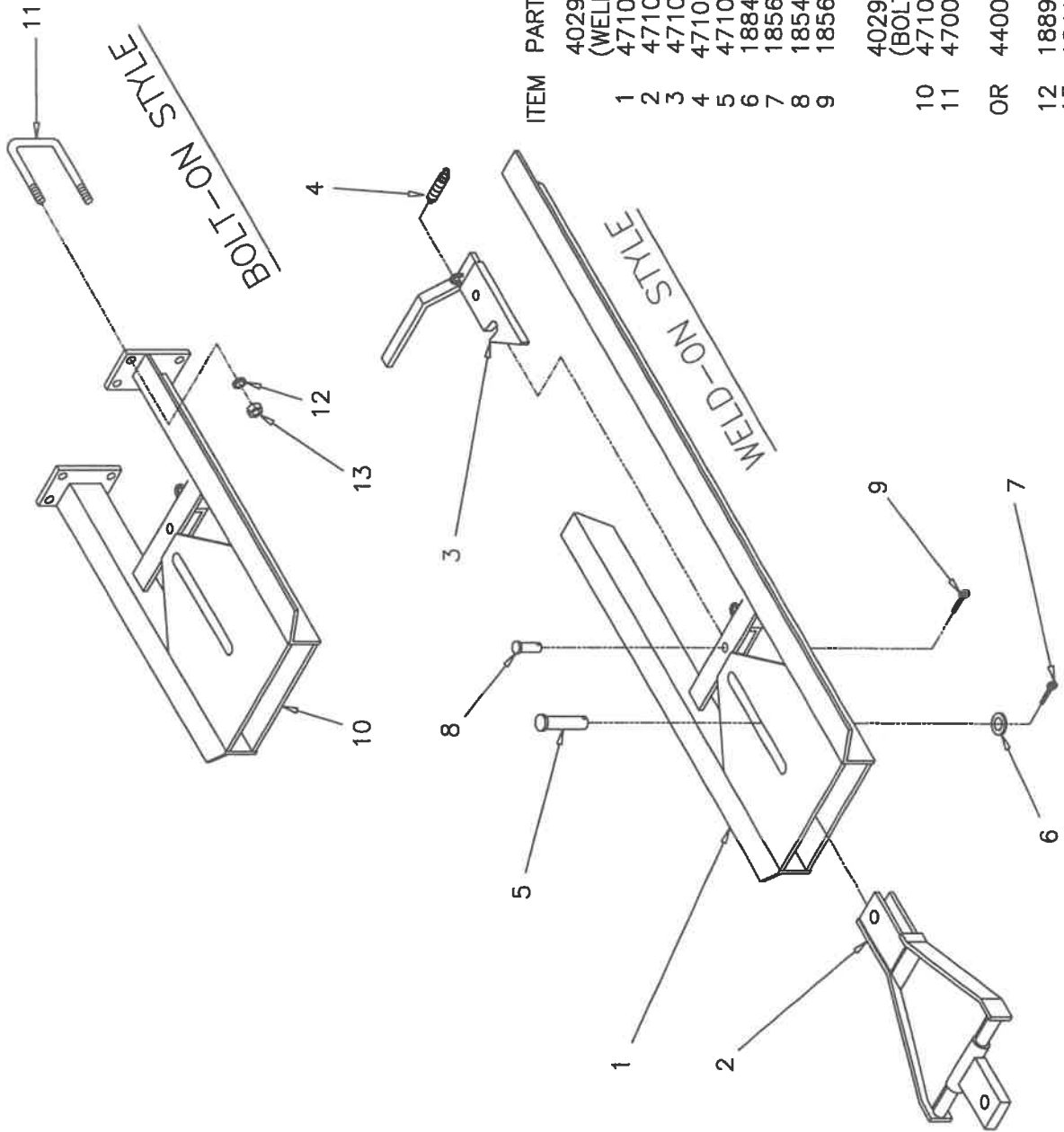
NOTE 1
WHEN REPLACING THE DRAWBAR (ITEM 3) ON UNITS MADE PRIOR TO FALL 2000 ALSO REPLACE ITEMS 10 & 11 & 13 & 13A TO 13D

ITEM	PART NO.	DESCRIPTION	QTY.
21	18055722	BOLT, 1/4-18NC, X 1	1
22	18891000	LOCKWASHER, 1/4-18NC, I.D.	1
23	18435700	HEX. NUT, 1/4-18NC.	1
24	18541147	CLEVIS PIN, 5/16 X 2 1/4	1
25	18560622	COTTER PIN, 1/8 X 1	1
26	000018	EXTENSION SPRING	3
27	47009301	HITCH MOUNT, L.H. INCL. ITEM 28	1
28	18901805	GREASE ZERK, STRAIGHT	1
29	47019302	HITCH MOUNT, R.H. INCL. ITEM 28	2
30	47003513	HARDWARE PKG INCL. ITEMS 30 TO 40	1
31	6801-6-8	CYLINDER PIN KIT, (1 X 3 1/2)	2
32	47008633	ADAPTER ELBOW (#6 MUC X #8 O-RING)	2
33	18058443	HINGE BUSHING	2
34	18458400	BOLT, 3/4-10NC, X 4	2
35	47006951	LOCK NUT, 3/4-10NC.	2
		U-BOLT, 5/8-11NC.	4
37	18457900	NUT, HEX CENTER LOCK 5/8-11NC.	8
38	18057971	BOLT, 5/8-11NC, X 6 1/2	4
39	18891600	LOCKWASHER, 5/8	4
40	18417900	HEX. NUT, 5/8-11NC.	4
		FOR 8000 SERIES TOOLBAR	
41	47005054	HYDRAULIC CYL. (3 1/4 X 12)	1
42	609648	HOSE 3/8 X 48" ADD TO EXISTING HOSE P.N. 609170 (210")	1
43	609684	HOSE 3/8 X 84" CONNECT TO ROD END OF "CENTER ASSIST CYL." (3 X 12) 7000 SERIES TOOLBAR	1
		FOR 7000 SERIES TOOLBAR	
41	47005490	HYDRAULIC CYL. (3 X 12)	1
42	609120	HOSE 3/8 X 144" W/O HYD. GA. WHLS	1
43	609648	HOSE 3/8 X 48" WITH HYD. GA. WHLS	1
		PLUS 609170	1
		USE EXISTING HOSE TO TRACTOR	1
			43

ITEM	PART NO.	DESCRIPTION	QTY.
1	47009295	HITCH ASSEMBLY COMPLETE 7000 TOOLBAR	1
2	47008652	HITCH ASSEMBLY COMPLETE 8000 TOOLBAR	1
3	47008853	INCLUDES ITEMS, 1 TO 43	1
4	47008854	HITCH ASSEMBLY, LESS MOUNTING HARDWARE	1
5	47008914	INCLUDES ITEMS, 1 TO 26	1
6	47008918	MAIN FRAME.	1
7	47008919	DRAWBAR CATCH (SEE NOTE 1)	1
8	47008920	DRAWBAR LOCK	1
9	18459000	DRAWBAR HITCH, (INCLUDES ITEMS, 6 AND 7)	1
10	18098539	FIBER BUSHING	2
11	47009459	SPECIAL BUSHING	1
12	18852400	SPACER BUSHING	1
13	18417800	HEX. LOCKNUT, 1-8NC.	1
13A	18458000	BOLT, 7/8-9NC, X 5 1/2	1
13B	18058430	CATCH BUSHING, 7/8 I.D.	2
13C	18891800	FLATWASHER, 1 1/4 NOM. I.D. (SAE)	2
13D	18418400	HEX. NUT, 7/8-9NC.	2
14	18057940	LOCKNUT, 7/8-9NC.	1
15	47008877	BOLT, 3/4-10NC, X 2	1
16	18851600	HEX. NUT, 3/4-10NC, X 2	1
17	18457900	BOLT, 5/8-11NC, X 3 1/2	2
18	18541551	PIVOT BUSHING, 5/8 I.D.	2
19	18842200	FLATWASHER, 5/8 NOM. I.D. SAE.	2
20	18560826	LOCKNUT, 5/8-11NC.	2
		CATCH PIVOT PIN, 1 X 4	1
		FLATWASHER, 1" SAE	1
		COTTER PIN, 3/16 X 1 1/2	1

AG29 FIELD HITCH ASSEMBLY

AG29ISO

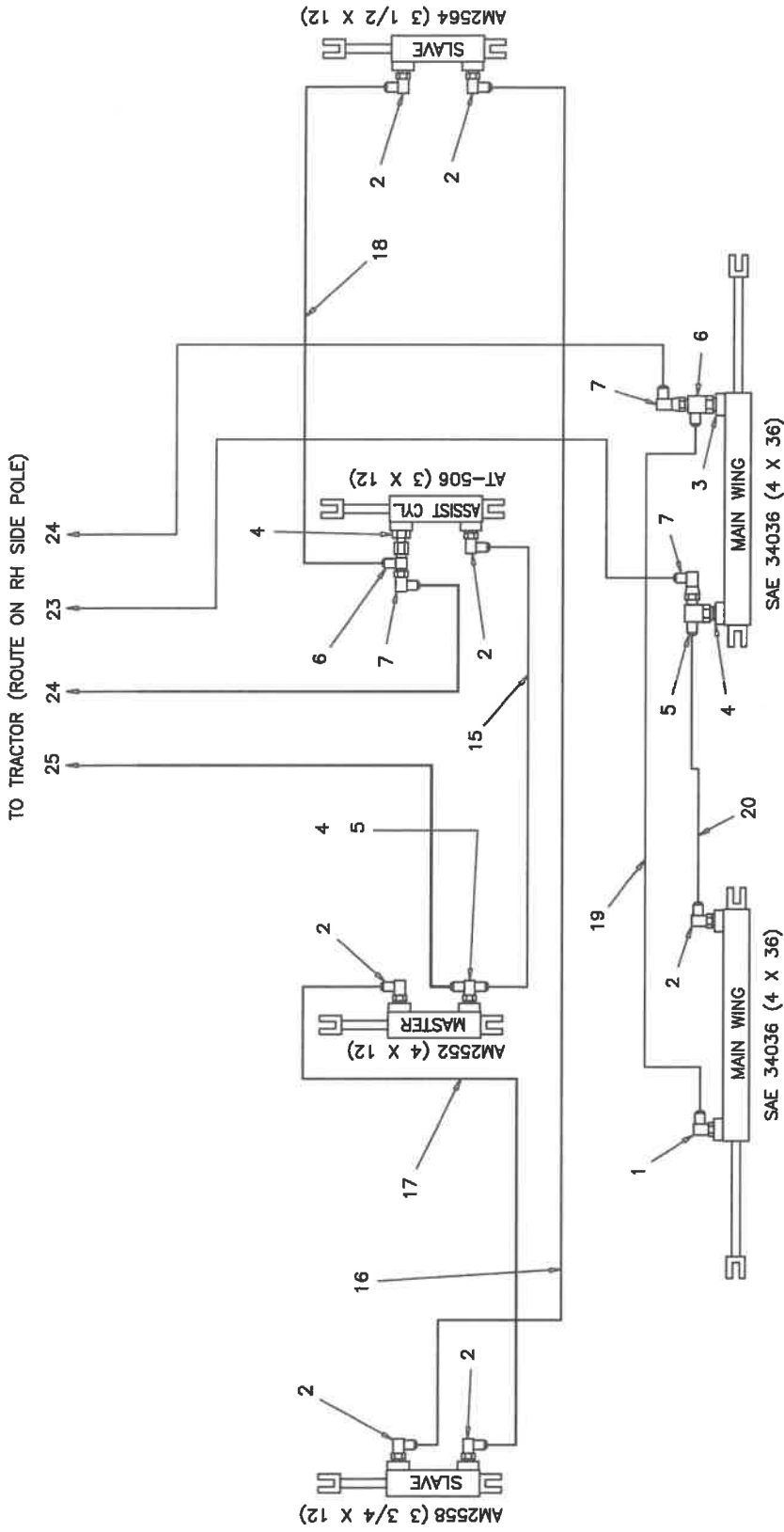


ITEM	PART NO.	DESCRIPTION	QTY.
1	40290000 (WELD-ON)	HITCH ASSEMBLY COMPLETE INCLUDES ITEMS 1 TO 9	1
2	47109011	HITCH FRAME WELDMENT	1
3	47109010	DRAWBAR WELDMENT	1
4	47109108	CATCH WELDMENT	1
5	47101013	EXTENSION SPRING	1
6	47109009	PIN 1" X 4"	1
7	18842200	WASHER 1" SAE SC	1
8	18561026	COTTER PIN 1/4 X 1 1/2	1
9	18541830	CLEVIS PIN 3/4 X 2	1
9	18569726	COTTER PIN 5/32 X 1 1/2	1
10	40290001 (BOLT-ON)	HITCH ASSEMBLY COMPLETE INCLUDES ITEMS 2 TO 13	1
11	47102411	HITCH FRAME	4
OR	47006951	U-BOLT, 5/8-11NC. for 6 X 4 TUBE, STANDARD	4
OR	44001616	U-BOLT, 5/8-11NC. for 4 X 4 TUBE, OPTIONAL	4
12	18891600	LOCKWASHER, 5/8	8
13	18417900	HEX. NUT, 5/8-11NC.	8

HYDRAULIC PLUMBING SCHEMATIC

8000 SERIES, WITHOUT SELECTOR VALVE
FOR 34 FT. TOOLBAR

80PMB97A
REV 8-29-07



HOSE PACKAGE NO. 608000

ITEM	PART NO.	DESCRIPTION	QTY
15	609011	HOSE, 3/8 X 132 - #6 JICFS BOTH ENDS	1
16	609320	HOSE, 3/8 X 420 - #6 JICFS BOTH ENDS	1
17	609152	HOSE, 3/8 X 182 - #6 JICFS BOTH ENDS	1
18	609170	HOSE, 3/8 X 210 - #6 JICFS BOTH ENDS	1
19	609128	HOSE, 3/8 X 152 - #6 JICFS BOTH ENDS	1
20	609060	HOSE, 3/8 X 72 - #6 JICFS BOTH ENDS	1
23	609161	HOSE, 3/8 X 213 - 1/2 MPT X #6 JICFS	1
24	609228	HOSE, 3/8 X 228 - 1/2 MPT X #6 JICFS	2
25	609380	HOSE, 3/8 X 380 - 1/2 MPT X #6 JICFS	1
	609220	HOSE, 1/4 X 264 - 1/2 MPT X 1/4 MPT	2
		NOT SHOWN	

ITEM	PART NO.	DESCRIPTION	QTY
1	6801-6-8R	ADAPTER ELBOW #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	1
2	6801-6-8	ADAPTER ELBOW #6 MJIC X #8 M O-RING	7
3	6400-6-8R	CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	1
4	6400-6-8	CONNECTOR, #6 MJIC X #8 M O-RING	3
5	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL	2
6	6602-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL	2
7	6500-6	ELBOW, #6 MJIC X #6 FJIC SWIVEL	3

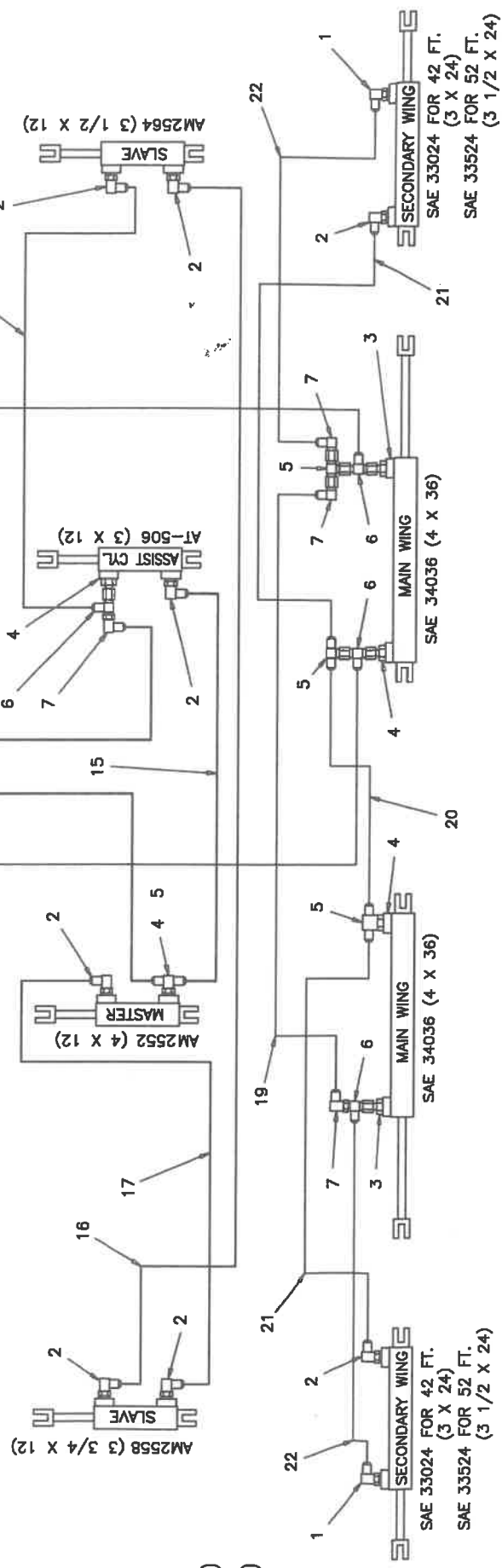
HYDRAULIC PLUMBING SCHEMATIC

8000 SERIES, WITHOUT SELECTOR VALVE

FOR 42 FT. TO 52 FT. TOOLBAR

TO TRACTOR (ROUTED ON RH SIDE POLE)

80PMB97B
REV 8-29-07



HOSE PACKAGE NO. 608001
CONSISTS OF HOSE PKG. 608000 AND 608112

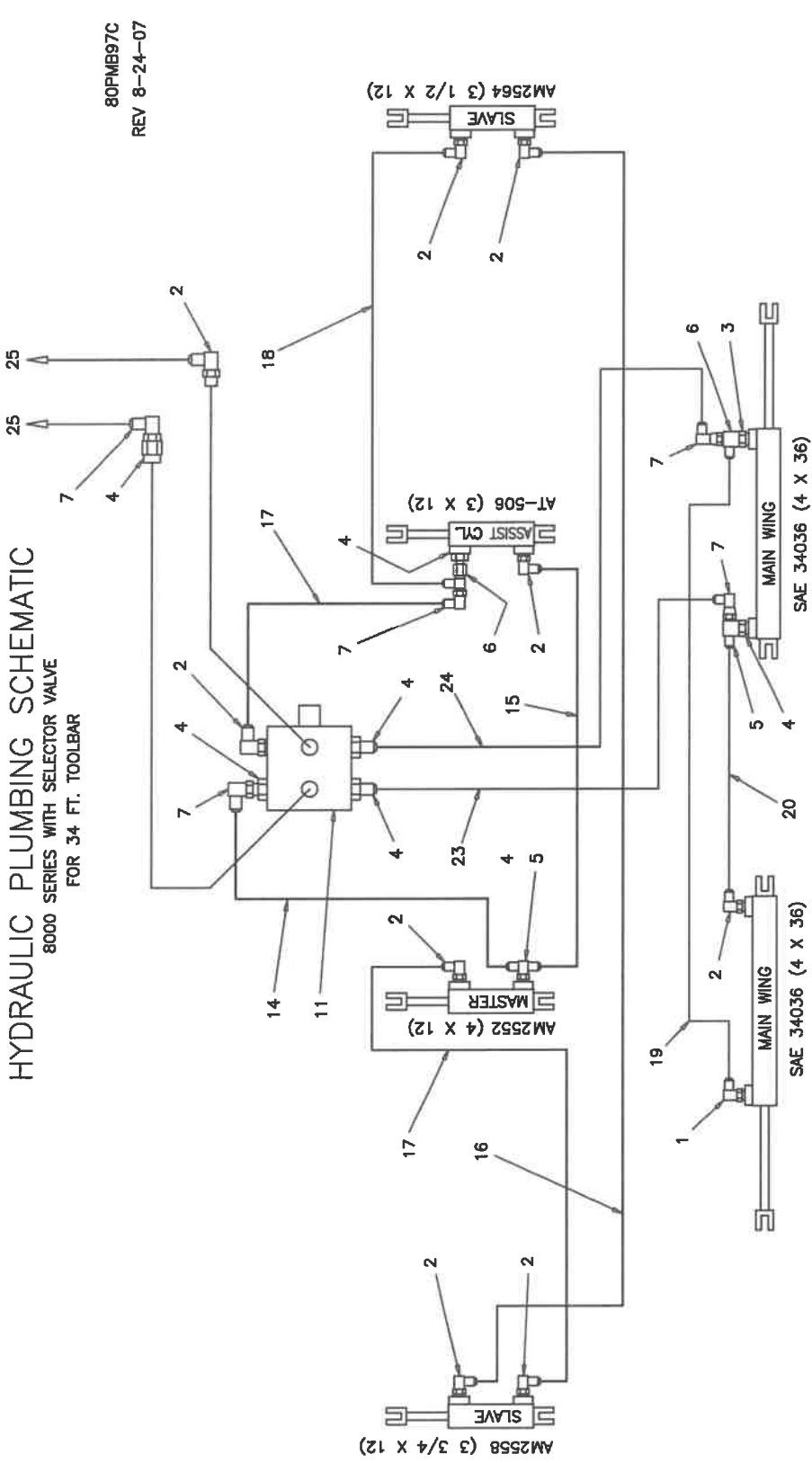
ITEM	PART NO.	DESCRIPTION	QTY	FITTING PACKAGE NO. 608300	DESCRIPTION	QTY	
15	609011	HOSE, 3/8 X 132 -	#6 JICFS BOTH ENDS	1	6801-6-8R	ADAPTER ELBOW #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	2
16	609320	HOSE, 3/8 X 420 -	#6 JICFS BOTH ENDS	1	6801-6-8	ADAPTER ELBOW #6 MJIC X #8 M O-RING	8
17	609152	HOSE, 3/8 X 182 -	#6 JICFS BOTH ENDS	1	6400-6-8R	CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	2
18	609170	HOSE, 3/8 X 210 -	#6 JICFS BOTH ENDS	1	6400-6-8	CONNECTOR, #6 MJIC X #8 M O-RING	4
19	609128	HOSE, 3/8 X 152 -	#6 JICFS BOTH ENDS	1	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL	4
20	609060	HOSE, 3/8 X 72 -	#6 JICFS BOTH ENDS	1	6602-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL	4
21	609109	HOSE, 3/8 X 129 -	#6 JICFS BOTH ENDS	2	6500-6	ELBOW, #6 MJIC X #6 FJIC SWIVEL	4
22	609096	HOSE, 3/8 X 114 -	#6 JICFS BOTH ENDS	2			4
23	609161	HOSE, 3/8 X 213 -	1/2 MPT X #6 JICFS	1			4
24	609228	HOSE, 3/8 X 228 -	1/2 MPT X #6 JICFS	2			4
25	609380	HOSE, 3/8 X 380 -	1/2 MPT X #6 JICFS	1			4
	609220	HOSE, 1/4 X 264 -	1/2 MPT X 1/4 MPT	2			NOT SHOWN

HYDRAULIC PLUMBING SCHEMATIC

8000 SERIES WITH SELECTOR VALVE
FOR 34 FT. TOOLBAR

80PMB97C
REV 8-24-07

TO TRACTOR (ROUTED ON RH SIDE POLE)

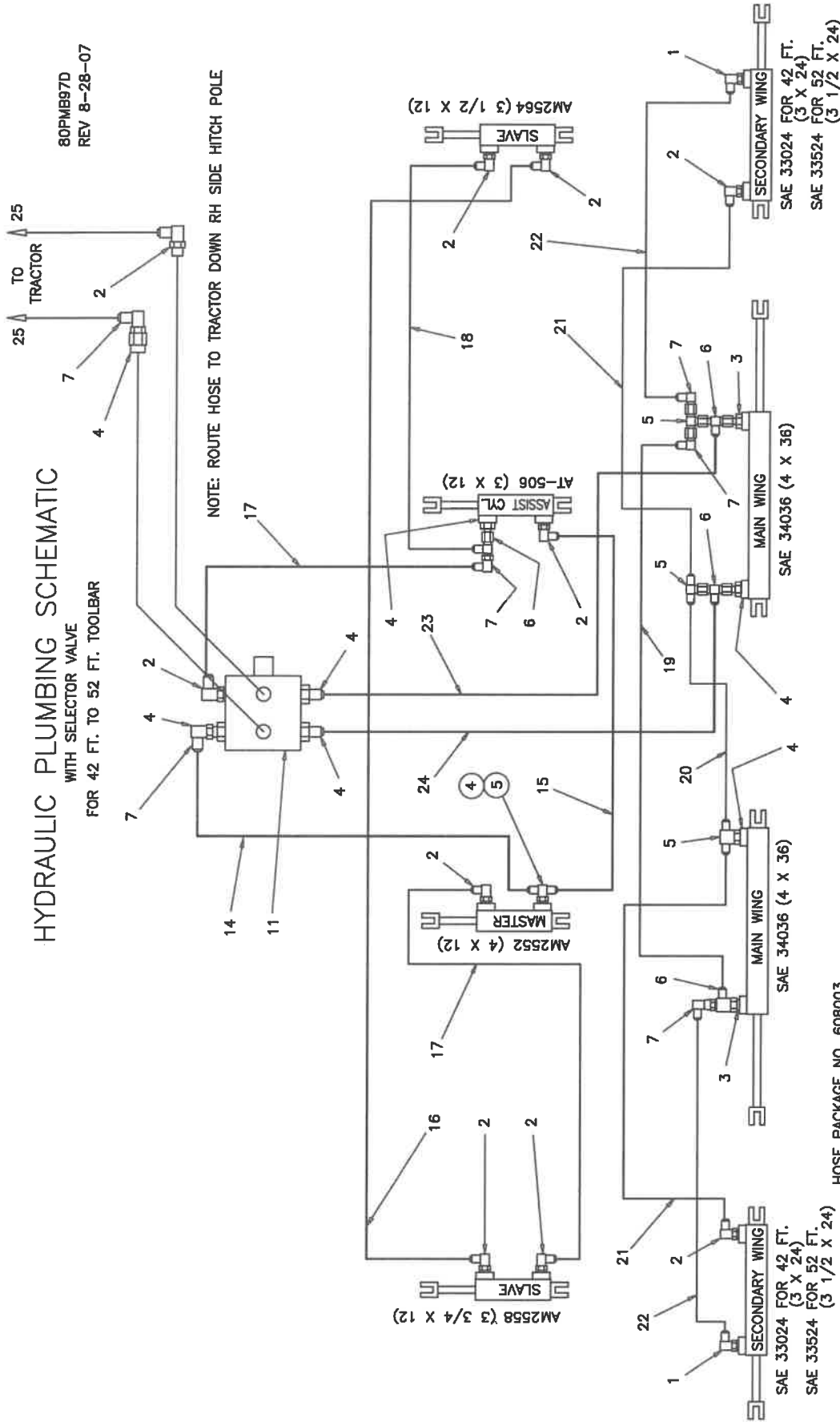


ITEM	PART NO.	HOSE PACKAGE NO. 608002	DESCRIPTION	QTY	FITTING PACKAGE NO. 608200SV	DESCRIPTION	QTY
14	609040	HOSE, 3/8 X 48	- #6 JICFS BOTH ENDS	1	1	6801-6-8R	ADAPTER ELBOW #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)
15	609011	HOSE, 3/8 X 132	- #6 JICFS BOTH ENDS	1	1	6801-6-8	ADAPTER ELBOW #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)
16	609320	HOSE, 3/8 X 420	- #6 JICFS BOTH ENDS	1	2	6400-6-8R	CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)
17	609152	HOSE, 3/8 X 182	- #6 JICFS BOTH ENDS	2	1	6400-6-8	CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)
18	609170	HOSE, 3/8 X 210	- #6 JICFS BOTH ENDS	1	1	6400-6-8	CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)
19	609128	HOSE, 3/8 X 152	- #6 JICFS BOTH ENDS	1	1	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL
20	609060	HOSE, 3/8 X 72	- #6 JICFS BOTH ENDS	1	2	6500-6	ELBOW, #6 MJIC X #6 FJIC SWIVEL
23	609310	HOSE, 3/8 X 46	- #6 JICFS BOTH ENDS	1	1	100902	SELECTOR VALVE ASSEMBLY
24	609026	HOSE, 3/8 X 26	- #6 JICFS BOTH ENDS	1	2		
25	609150	HOSE, 3/8 X 180	- 1/2 MPT X #6 JICFS	2			
609220		HOSE, 1/4 X 264	- 1/2 MPT X 1/4 MPT	2	NOT SHOWN		

HYDRAULIC PLUMBING SCHEMATIC

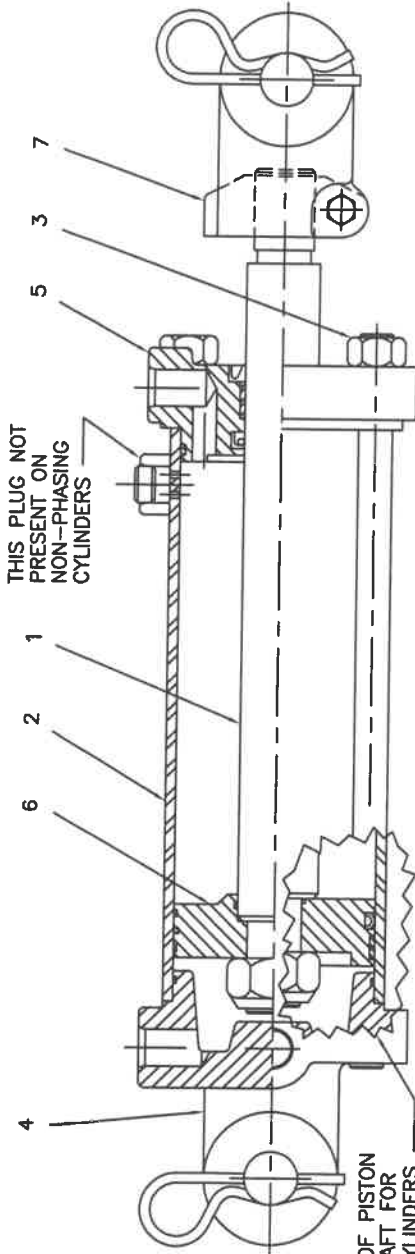
WITH SELECTOR VALVE
FOR 42 FT. TO 52 FT. TOOLBAR

80PMB97D
REV 8-28-07



ITEM	PART NO.	DESCRIPTION	QTY
14	609040	HOSE, 3/8 X 48 - #6 JICFS BOTH ENDS	1
15	609011	HOSE, 3/8 X 132 - #6 JICFS BOTH ENDS	1
16	609320	HOSE, 3/8 X 420 - #6 JICFS BOTH ENDS	1
17	609152	HOSE, 3/8 X 182 - #6 JICFS BOTH ENDS	2
18	609170	HOSE, 3/8 X 210 - #6 JICFS BOTH ENDS	1
19	609128	HOSE, 3/8 X 152 - #6 JICFS BOTH ENDS	1
20	609060	HOSE, 3/8 X 72 - #6 JICFS BOTH ENDS	1
21	609109	HOSE, 3/8 X 129 - #6 JICFS BOTH ENDS	2
22	609096	HOSE, 3/8 X 114 - #6 JICFS BOTH ENDS	2
23	609310	HOSE, 3/8 X 46 - #6 JICFS BOTH ENDS	1
24	609026	HOSE, 3/8 X 26 - #6 JICFS BOTH ENDS	1
25	609150	HOSE, 3/8 X 180 - #6 JICFS BOTH ENDS	2
	609220	HOSE, 1/4 X 264 - 1/2 MPT X 1/4 MPT	2
1	SAE 33024	FOR 42 FT. (3 X 24)	
2	SAE 33524	FOR 52 FT. (3 1/2 X 24)	
3	SAE 34036	(4 X 36)	
4	SAE 34036	(4 X 36)	
5	SAE 34036	(4 X 36)	
6	SAE 34036	(4 X 36)	
7	SAE 34036	(4 X 36)	
8	SAE 34036	(4 X 36)	
9	SAE 34036	(4 X 36)	
10	SAE 34036	(4 X 36)	
11	SAE 34036	(4 X 36)	
12	SAE 34036	(4 X 36)	
13	SAE 34036	(4 X 36)	
14	SAE 34036	(4 X 36)	
15	SAE 34036	(4 X 36)	
16	SAE 34036	(4 X 36)	
17	SAE 34036	(4 X 36)	
18	SAE 34036	(4 X 36)	
19	SAE 34036	(4 X 36)	
20	SAE 34036	(4 X 36)	
21	SAE 34036	(4 X 36)	
22	SAE 34036	(4 X 36)	
23	SAE 34036	(4 X 36)	
24	SAE 34036	(4 X 36)	
25	SAE 34036	(4 X 36)	
1	AM2558	(3 3/4 X 12) SLAVE	
2	AM2552	(4 X 12) MASTER	
3	AM2564	(3 1/2 X 12) SLAVE	
4	AT-506	(3 X 12) ASSIST CYL	
5	AT-506	(3 X 12) ASSIST CYL	
6	AT-506	(3 X 12) ASSIST CYL	
7	AT-506	(3 X 12) ASSIST CYL	
8	AT-506	(3 X 12) ASSIST CYL	
9	AT-506	(3 X 12) ASSIST CYL	
10	AT-506	(3 X 12) ASSIST CYL	
11	AT-506	(3 X 12) ASSIST CYL	
12	AT-506	(3 X 12) ASSIST CYL	
13	AT-506	(3 X 12) ASSIST CYL	
14	AT-506	(3 X 12) ASSIST CYL	
15	AT-506	(3 X 12) ASSIST CYL	
16	AT-506	(3 X 12) ASSIST CYL	
17	AT-506	(3 X 12) ASSIST CYL	
18	AT-506	(3 X 12) ASSIST CYL	
19	AT-506	(3 X 12) ASSIST CYL	
20	AT-506	(3 X 12) ASSIST CYL	
21	AT-506	(3 X 12) ASSIST CYL	
22	AT-506	(3 X 12) ASSIST CYL	
23	AT-506	(3 X 12) ASSIST CYL	
24	AT-506	(3 X 12) ASSIST CYL	
25	AT-506	(3 X 12) ASSIST CYL	
1	6801-6-8R	ADAPTER ELBOW #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	2
2	6801-6-8	ADAPTER ELBOW #6 MJIC X #8 M O-RING	10
3	6400-6-8R	CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	2
4	6400-6-8	CONNECTOR, #6 MJIC X #8 M O-RING	8
5	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL	4
6	6602-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL	4
7	6500-6	ELBOW #6 MJIC X #6 FJIC SWIVEL	6
11	100902	SELECTOR VALVE ASSEMBLY	1

NOT SHOWN



CONFIGURATION OF PISTON AND END OF SHAFT FOR NON-PHASING CYLINDERS

ITEM NO.	DESCRIPTION	MAIN CYL. CNTR. SCTN.	WING CYL. 32-42 FT. BAR	WING CYL. 52 FT. BAR	WHEEL CYL. CNTR. MASTER	WHEEL CYL. CNTR. ASSIST	WHEEL CYL. WING, SLAVE	WHEEL CYL. WING, SLAVE	QTY. REQ'D
1	SHAFT	011041438A	010729750A	010729750B	010700698	010600379	010600379	1	
2	TUBE	051938563A	051526063A	051726063A	061900598	051500708	061800022	1	
3	TIE ROD ASSM.	170301414	170201282	170201285	170301173	170301163	170201163	4	
4	BUTT	1419005SF	1415005SF	1417005SF	141900037	141500043	141700023	1	
5	GLAND ASSM.	0819BBSNF	0815BBSGF	0817BBSGF	081900374	082500337	081800022	1	
6	PISTON	071900260	071500244	071700174	071900273	071500267	071700208	1	
7	CLEVIS ASSM. REPAIR KIT	100000326 47034000	100000423 47033000	100000577 47033500	100000577 47002552	100000577 470AT506	100000423 47002564	1	

Repair kit items not available individually.

TIE ROD DISASSEMBLY--/ASSEMBLY PROCEDURE.

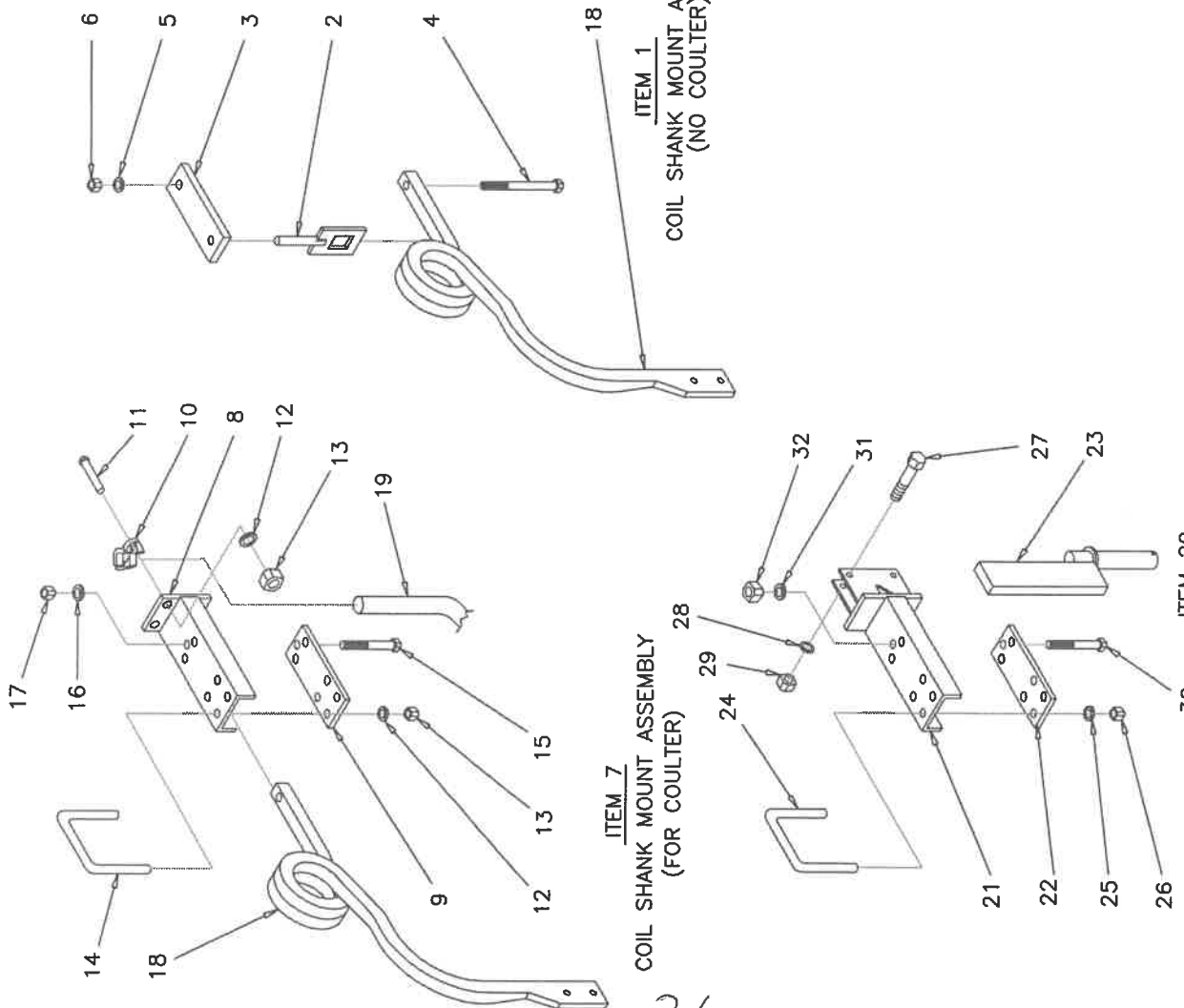
With the cylinder removed from the machine, cleaned, drained of oil and fully retracted, proceed as follows. DISASSEMBLY.

1. Secure the cylinder in a vice or other method to prevent rotation. Clean the immediate area so the parts can be laid out.
2. Remove the tie rod nuts. Pull the shaft assembly from the cylinder. Remove the tube item (2).
3. Loosen the clevis nut and remove the clevis item (7) from the shaft assembly.
4. Place the shaft assembly in a vice with brass or copper jaws so as not to damage the shaft.
5. Remove all seals from the butt, (item 4) gland assembly, (item 5) and piston (item 6) for replacement. Clean and inspect all parts for damage, (nicks, scratches, cracks etc.). Replace as necessary. If you have any question please contact Prince Engineering (712-277-4061)

REASSEMBLY.

1. Replace all the seals on items (4), (5), and (6) except, for non-phasing cylinders do not replace the small o-ring on the ID of the piston item (6) until you are ready to attach the shaft item (1).
2. For non-phasing cylinders, place the small o-ring seal for the piston over the shaft turnaround. Apply a light coat of grease to the seal. Slip the piston item (6) onto the turnaround with the o-ring counterbore towards the shaft shoulder. Take care not to pinch the o-ring between the piston and the shoulder.
3. Replace the shaft end nut and secure.
4. Apply a light coat of grease to the seals on the gland item (5) and slip the gland over the shaft end. Be very careful not to damage the seals. Slip the entire assembly into the lightly oiled tube, item (2) with the piston first making sure the tube slips over the OD seals of the gland.
5. Take the entire assembly from step 4 and slip the tube over the OD seal on the butt item (4). Align the ports in the butt and the gland and assemble the nuts to the tie rods and torque uniformly.
6. Test the reassembled cylinder for leaks and install in your machine. If you have any problems please contact Prince Engineering (712-277-4061)

STANDARD UNIVERSAL MOUNT



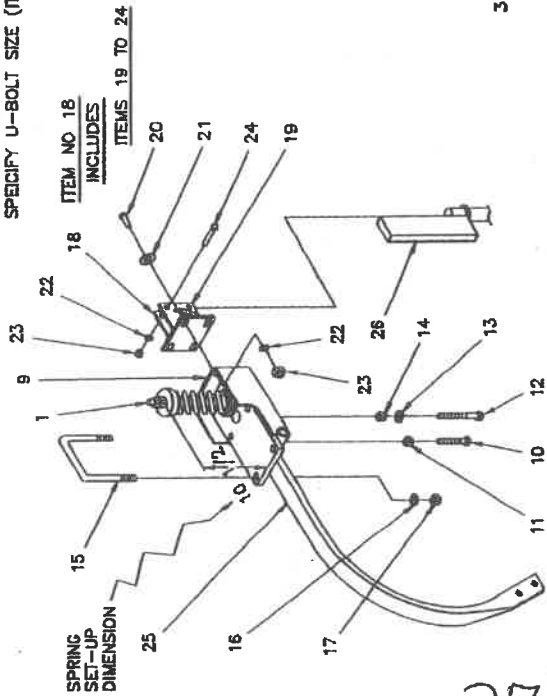
COIL SHANK MOUNTING

ITEM	PART NO.	DESCRIPTION	QTY
1	40511000	SHANK CLAMP SET, (6 X 4 BAR)	1
	40512000	SHANK CLAMP SET, (4 X 4 BAR)	OPT.
		INCLUDES ITEMS 2 TO 6	
2	44009306	LOLLIPOP, FOR SQUARE SHANK	1
	602083	LOLLIPOP, FOR 1 X 2 SHANK WITH LOCKWASHER & NUT	OPT.
3	44006685	TOP PLATE, (6 X 4 BAR)	1
	44006685	TOP PLATE, (4 X 4 BAR)	OPT.
4	18058470	BOLT, 3/4-10NC. X 7	1
5	18891800	LOCKWASHER, 3/4	2
6	18418400	HEX. NUT, 3/4-10NC.	2
7	47309184	SHANK MOUNT ASS'Y. (SQUARE SHANK)	1
		INCLUDES ITEMS 8 TO 14	
	47309177	SHANK MOUNT ASS'Y. (1 X 2 SHANK)	OPT.
		ON 6 X 4 BAR	
	47308184	SHANK MOUNT ASS'Y. (1 X 2 SHANK)	OPT.
		ON 4 X 4 BAR	
		INCLUDES ITEMS 8 TO 14	
8	47309406	SHANK HOLDER, (SQUARE SHANK)	1
	47302890	SHANK HOLDER, (1 X 2 SHANK)	OPT.
9	47306005	CLAMP PLATE, (SQUARE SHANK)	1
	47006832	CLAMP PLATE, (1 X 2 SHANK)	OPT.
10	47301538	CLAMP, COULTER SHANK	2
11	18057940	BOLT, 5/8-11NC. X 3 1/2	4
12	18891600	LOCKWASHER, 5/8	8
13	18417900	HEX. NUT, 5/8-11NC.	8
14	47006950	U-BOLT, 5/8-11NC. (6 X 4 BAR)	2
	47006951	U-BOLT, 5/8-11NC. (4 X 4 BAR)	OPT.
15	18057938	BOLT, 5/8-11NC. X 3	1
16	18891600	LOCKWASHER, 5/8	1
17	18417900	HEX. NUT, 5/8-11NC.	1
18	80310	COIL SHANK (OR AS SPECIFIED)	1
19	4036000	COULTER ASSEMBLY, AG36	1
		W/STRAIGHT OR BENT COULTER SHANK AS SPEC'FD.	
20	47999370	SHANK MOUNT ASSEMBLY COMPLETE	1
		INCLUDES ITEMS 21 TO 29	
21	47309370	SHANK HOLDER, (1 X 2 SHANK)	1
22	47006832	CLAMP PLATE, (1 X 2 SHANK)	1
23	47303811	FLAT BAR COULTER SHANK, 18"	1
	47309811	FLAT BAR COULTER SHANK, 12"	OPT.
24	47006950	U-BOLT, 5/8-11NC. (6 X 4 BAR)	2
	47006951	U-BOLT, 5/8-11NC. (4 X 4 BAR)	OPT.
25	18891600	LOCKWASHER, 5/8	4
26	18417900	HEX. NUT, 5/8-11NC.	4
27	18057434	BOLT, 1/2-13NC. X 2 1/2	2
28	18891400	LOCKWASHER, 1/2	2
29	18417400	HEX. NUT, 1/2-13NC.	2
30	18057938	BOLT, 5/8-11NC. X 3	1
31	18891600	LOCKWASHER, 5/8	1
32	18417900	HEX. NUT, 5/8-11NC.	1

SPRING BUNDLE ASSEMBLY

FOR 6 X 4 BAR YEAR 2000 TO PRESENT
AND 6 X 6 BAR

SPECIFY U-BOLT SIZE (ITEM 15)



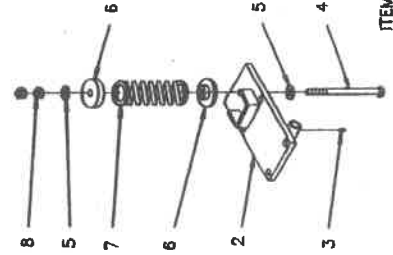
ITEM NO. 9
INCLUDES ITEM 1
AND 10 TO 17

ITEM	PART NO.	DESCRIPTION	QTY
1	47010082	SPRING SHANK MOUNT ASSEMBLY	1
2	47010189	INCLUDES ITEMS 2 TO 8	1
3	18901805	SHANK MOUNTING BASE	1
4	47007786	GREASE ZERK	1
5	18851800	BOLT, 3/4-10NC, X 1 3/4	2
6	47007085	FLATWASHER, 3/4	2
7	47007585	END COLLAR	1
8	18446880	COMPRESSION SPRING	2
9	47020082	HEX. NUT, 3/4-10NC, GR. 5	2
10	18058429	SPRING LOADED SHANK MOUNT COMPLETE (NO COULTER)	1
11	18448003	INCLUDES ITEMS 1 AND 10 TO 17	1
12	47980082	(SHIPPING INFO) HARDWARE PACKAGE	1
13	18058436	INCLUDES ITEMS 10 TO 17	1
14	18991800	BOLT, 3/4-10NC, X 1 3/4	1
15	18418400	HEX. JAM NUT, 3/4-10NC.	1
16	47007085	FLATWASHER, 3/4	1
17	18991800	LOCKWASHER, 5/8	1
18	18418400	HEX. NUT, 3/4-10NC.	1
19	47007085	U-BOLT, 5/8-11NC. (4 X 6 BAR)	2
20	18991800	LOCKWASHER, 5/8	2
21	18417900	HEX. NUT, 5/8-11NC.	4
22	18417900	HEX. NUT, 5/8-11NC.	4
23	18417900	HEX. NUT, 5/8-11NC.	4
24	18417900	HEX. NUT, 5/8-11NC.	4
25	18417900	HEX. NUT, 5/8-11NC.	4
26	18417900	HEX. NUT, 5/8-11NC.	4

P.N. 47039417

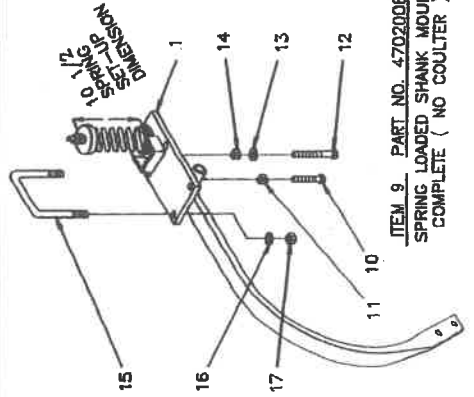
SPRING BUNDLE ASSEMBLY COMPLETE
INCLUDES AT ITEMS (1 TO 25)
DOES NOT INCLUDE THE SHANK OR COULTER

ITEM	PART NO.	DESCRIPTION	QTY
1	47029413	SPRING SHANK MOUNT ASSEMBLY	1
2	47019413	INCLUDES ITEMS 2 TO 8	1
3	18901805	SHANK MOUNTING BASE	1
4	47007786	GREASE ZERK	2
5	18811800	BOLT, 3/4-10NC, X 1 15	1
6	47007085	FLATWASHER, 3/4	2
7	47007585	END COLLAR	2
8	18446880	COMPRESSION SPRING	1
9	47039413	HEX. NUT, 3/4-10NC, GR. 5	2
10	47029413	SPRING LOADED SHANK MOUNT COMPLETE (NO COULTER)	1
11	18058429	INCLUDES ITEMS 1 AND 10 TO 17	1
12	18448003	BOLT, 3/4-10NC, X 1 3/4	1
13	18058436	HEX. JAM NUT, 3/4-10NC.	1
14	18891800	BOLT, 3/4-10NC, X 3	1
15	18418400	LOCKWASHER, 3/4	1
16	47007085	HEX. NUT, 3/4-10NC.	1
17	47009847	U-BOLT, 5/8-11NC. (4 X 6 BAR)	2
18	18991800	LOCKWASHER, 5/8	2
19	18417900	HEX. NUT, 5/8-11NC.	4
20	18417900	HEX. NUT, 5/8-11NC.	4
21	18417900	HEX. NUT, 5/8-11NC.	4
22	18417900	HEX. NUT, 5/8-11NC.	4
23	18417900	HEX. NUT, 5/8-11NC.	4
24	18057434	COULTER MOUNTING BRACKET ASSEMBLY	1
25	47019417	INCLUDES ITEM 19 TO 24	1
26	18057426	COULTER MOUNTING BRACKET	4
27	18811400	BOLT, 1/2-13NC, X 1 1/2	4
28	18891400	FLATWASHER, 1/2	4
29	18891400	LOCKWASHER, 1/2	6
30	18417400	HEX. NUT, 1/2-13NC.	6
31	18057434	BOLT, 1/2-13NC, X 2 1/2	2
32	103471	SPRING SHANK (OR AS SPECIFIED)	1
33	47029413	SPRING SHANK MOUNT ASSEMBLY COMPLETE	1
34	47029413	REFER TO COULTER ASSEMBLY COMPLETE	1
35	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
36	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
37	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
38	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
39	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
40	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
41	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
42	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
43	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
44	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
45	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
46	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
47	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
48	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
49	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
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65	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
66	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
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68	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
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81	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
82	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
83	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
84	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
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87	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
88	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
89	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
90	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
91	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
92	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
93	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
94	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
95	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
96	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
97	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
98	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
99	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1
100	47029413	REFER TO COULTER ILLUSTRATIONS (AG36 OR AG38)	1



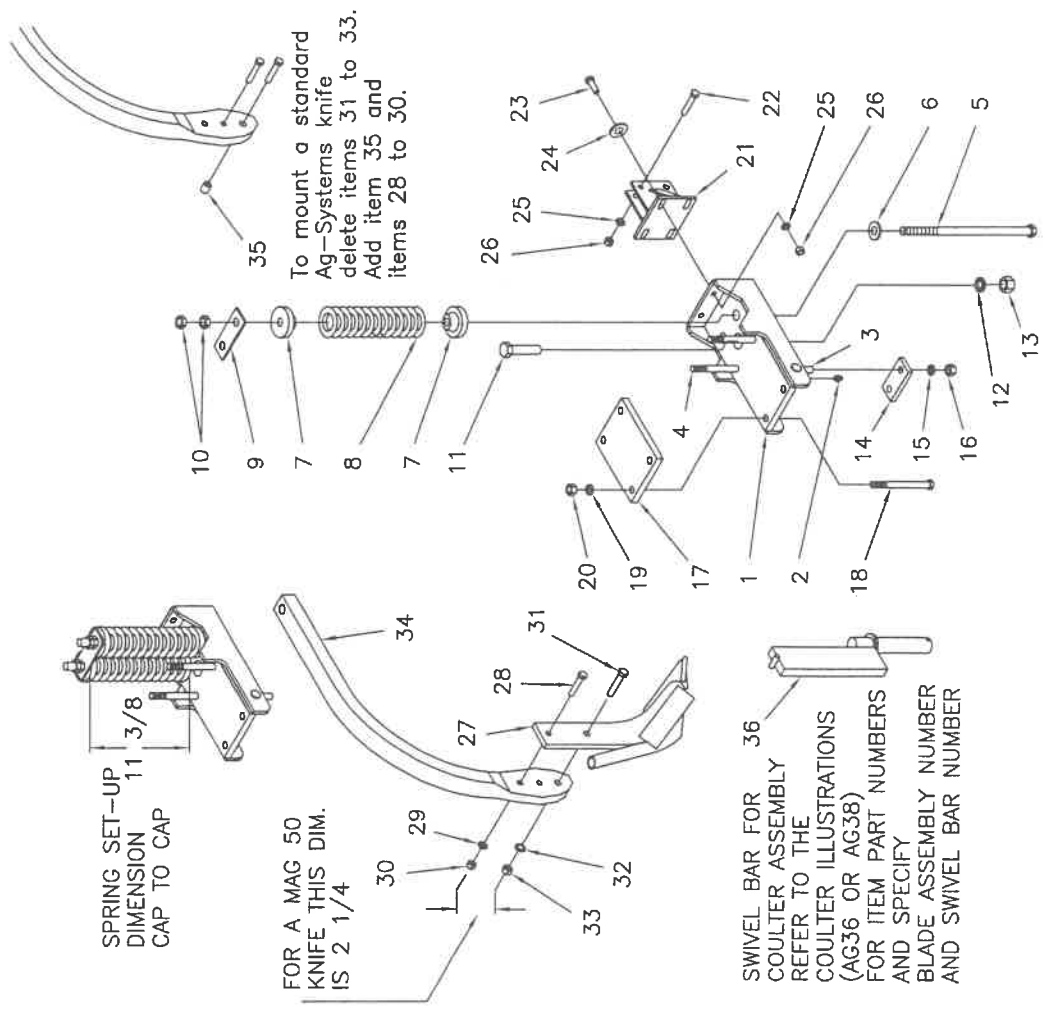
ITEM 1 (REPAIR PARTS)
SPRING SHANK MOUNT ASSEMBLY
INCLUDES ITEMS 2 TO 8

SPRING LOADED SHANK MOUNTING



ITEM 9 PART NO. 47020082
SPRING LOADED SHANK MOUNT
COMPLETE (NO COULTER)

SPRING BUNDLE ASSEMBLY WITH DUAL SPRINGS AND HEAVY SHANK



SPRING SET-UP
DIMENSION 11 3/8
CAP TO CAP

FOR A MAG 50
KNIFE THIS DIM.
IS 2 1/4

SWIVEL BAR FOR
COULTER ASSEMBLY
REFER TO THE
COULTER ILLUSTRATIONS
(AG36 OR AG38)
FOR ITEM PART NUMBERS
AND SPECIFY
BLADE ASSEMBLY NUMBER
AND SWIVEL BAR NUMBER

To mount a standard
Ag-Systems knife
delete items 31 to 33.
Add item 35 and
items 28 to 30.

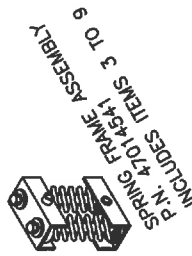
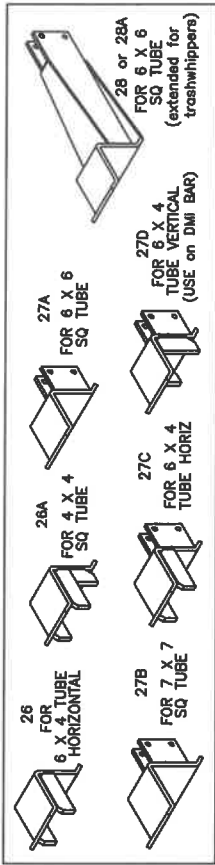
THESE ARE
HEAVY
KNIVES
9/16 X 3
BODY WITH
5/8 DIA.
SHEAR
BOLT.

ITEM	PART NO.	DESCRIPTION	QTY
	47009661	SPRING BUNDLE COMPLETE	
	INCLUDES ITEMS 1 TO 20 PREASSEMBLED		
1	47019661	SPRING BUNDLE BRACKET	1
2	18901805	GREASE ZERK, 1/4-28NF	2
	ITEMS 3 AND 4 ARE CAPTURED IN THE ASSEMBLY WHEN THE SPRINGS ARE INSTALLED.		
3	18057942	BOLT, 5/8-11NC. X 3 3/4	2
4	18057971	BOLT, 5/8-11NC. X 6 1/2	2
5	47007766	BOLT, 5/8-11NC. X 8 1/2	OPT
6 X 6 TUBE	18811800	SPRING BOLT, 3/4-10NC. X 15 1/2	2
6	18811800	FLAT WASHER, 3/4	2
7	47007085	SPRING CAP	4
8	47007565	COMPRESSION SPRING, 5/8 WIRE	2
9	47019672	TOP WASHER PLATE	1
10	18446890	HEX. NUT, 3/4-10NC	4
11	18058501	BOLT, 7/8-9NC. X 3 3/4	1
12	18892000	LOCK WASHER, 7/8	1
13	18417800	HEX. NUT, 7/8-9NC.	1
14	47009671	CLAMP PLATE-SHANK	1
15	18891600	LOCK WASHER, 5/8	2
16	18417900	HEX. NUT, 5/8-11NC.	2
17	47009678	CLAMP PLATE-TOOLBAR	1
18	18057971	BOLT, 5/8-11NC. X 6 1/2	2
6 X 6 TUBE	18057976	BOLT, 5/8-11NC. X 8 1/2	2
19	18891600	LOCK WASHER, 5/8	4
20	18417900	HEX. NUT, 5/8-11NC.	4
47029417		COULTER MOUNTING BRACKET INCLUDES ITEMS 21 TO 26	
21	47019417	COULTER MOUNTING BRACKET	1
22	18057434	BOLT, 1/2-13NC. X 2 1/2	2
23	18057426	BOLT, 1/2-13NC. X 1 1/2	4
24	18811400	FLATWASHER, 1/2	4
25	18891400	LOCKWASHER, 1/2	6
26	18417400	HEX. NUT, 1/2-13NC.	6
27	201996	KNIFE, MAG 50 W/3/8 NH3 TUBE	
	201997	KNIFE, GOPHER W/1/2 LIQ. TUBE	
	201998	KNIFE, GOPHER W/1 1/4 DRY TUBE	
	201999	KNIFE, GOPHER for DUAL SHOOT	
		1/2 NH3 TUBE & 1 1/4 DRY TUBE	
		KNIFE, GOPHER for DUAL SHOOT	
		3/8 NH3 TUBE & 1 1/4 DRY TUBE	
	203998	KNIFE, GOPHER W/ 1" DRY TUBE	
	47309997	KNIFE, MAG 50 W/ 1" DRY TUBE	
28	18037433	BOLT, 1/2-13NC. X 2 1/2 GR2	1
29	18891400	LOCK WASHER, 1/2	1
30	18417400	HEX. NUT, 1/2-13NC.	1
31	18057934	BOLT, 5/8-11NC. X 2 1/2	1
32	18891600	LOCK WASHER, 5/8	1
33	18417900	HEX. NUT, 5/8-11NC.	1
34	200999	KNIFE SHANK 1 1/4 THK (TO SPRING 2007)	1
	201000	KNIFE SHANK 1 1/2 THK (FALL 07 TO PRESENT)	1
35	47009960	KNIFE MOUNT BUSHING	OPT.
36		COULTER SWIVEL BAR, (SEE NOTE)	

SPRING BUNDLE ASSEMBLY(FOR EDGE-BENT SHANK) 2014 & NEWER

HI-TRIP EDGE BENT SHANK ASSEMBLY

- (COMPLETE W/ SHANK P.N. 47953973 4" X 6" MOUNTING BRKT) [NO COULTER]
- (COMPLETE W/ SHANK P.N. 47983973 6" X 6" MOUNTING BRKT) [NO COULTER]



ITEM PART NO.	DESCRIPTION	QTY
47013973	HI-TRIP SPRING BUNDLE COMPLETE INCLUDES ITEMS 1 TO 18 (PREASSEMBLED)	1
47004530	MAIN BRACKET, (6 X 6 BAR)	OR
47015003	MAIN BRACKET, (7 X 7 BAR)	1
47003973	SHANK PIVOT BRACKET (2014)	1
47014541	SPRING FRAME ASSEMBLY INCLUDES ITEMS 3 TO 9	1
47004541	SPRING FRAME, BOTTOM	1
47004538	SPRING FRAME, TOP	1
47004544	SPRING RETAINER	2
47007565	COMPRESSION SPRING, 5/8 WIRE	2
47004549	SPRING CAP, TOP	2
47005330	SPRING CAP, BOTTOM	2
47004547	BOLT, 5/8-11NC. X 3 3/4 (SPECIAL)	2
18891600	LOCK WASHER, 5/8	2
47004551	INNER BUSHING, (TOP) 5.13/16	1
47004550	INNER BUSHING, (BOTTOM) 5.1	1
18057464	BOLT, 1/2-13NC. X 7	1
18811400	FLAT WASHER, 1/2	4
18891400	LOCK WASHER, 1/2	2
18417400	HEX. NUT, 1/2-13NC	2
18057462	BOLT, 1/2-13NC. X 6	1
18058422	BOLT, 3/4-10NC. X 7 1/2 GR. 5	1
18418400	HEX. NUT, 3/4-10NC.	2
18058436	BOLT, HEX HD 3/4NC X 3 GR5 ZC	2
20	OMITTED	2
21	18458400	2
22	18458400	2
23	47004532	2
23A	47015004	OR
24	18098453	4
25	18458451	4
26	47004555	4
26A	47004555	1
27A	47004553	1
27B	47015005	1
27C	47004557	1
27D	47004557D	1
28	47005894	1
28A	47007894	1
29	18057434	2
30	18891400	2
31	18417400	2
32	47303811	2
33	47304522	1
34	18511032	1
35	OPTIONAL	1
36	OPTIONAL	1
37	OPTIONAL	1
38	OPTIONAL	1
39	OPTIONAL	1
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94	OPTIONAL	1
95	OPTIONAL	1
96	OPTIONAL	1
97	OPTIONAL	1
98	OPTIONAL	1
99	OPTIONAL	1
100	OPTIONAL	1

LIST OF KNIVES TO SUIT THIS SHANK
 47005564 KNIFE, GOPHER W 1.5" DRY TUBE
 47005565 KNIFE, GOPHER DUAL-SHOOT WITH 3/8" OPEN TUBE AND 1.50" DRY TUBE
 47005857 KNIFE, MAG 50 DUAL-SHOOT WITH 3/8" OPEN TUBE AND 1.50" DRY TUBE

(with optional coulters order option item 28)

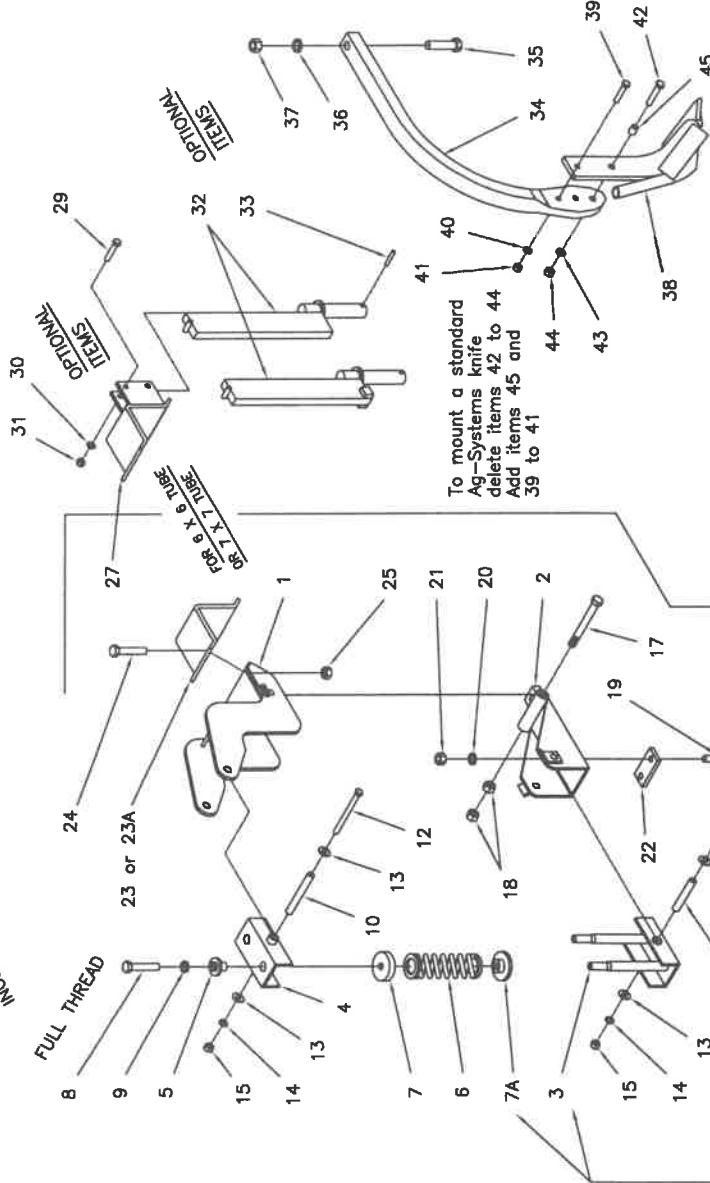
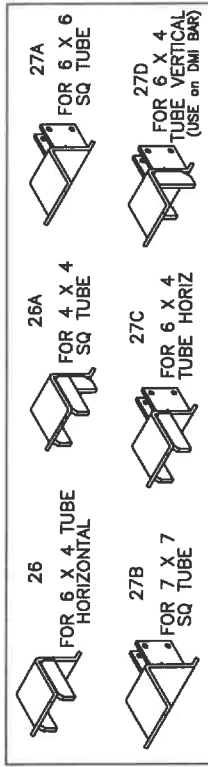
SPRING BUNDLE ASSEMBLY (PRE 2014)

HI-TRIP SHANK ASSEMBLY (HTS ASSEMBLY)

(COMPLETE W/ SHANK & KNIFE P.N. 4703650H)

SPBNDLHTS
REV 01/28/22

ITEM	PART NO.	DESCRIPTION	QTY
	47014530	SPRING BUNDLE COMPLETE	
	INCLUDES ITEMS 1 TO 19 (PREASSEMBLED)		
1	47004530	MAIN BRACKET, (STANDARD)	1 OR
2	47004533	SHANK PIVOT BRACKET	1
	47014541	SPRING FRAME ASSEMBLY	
	INCLUDES ITEMS 3 TO 9		
3	47004541	SPRING FRAME, BOTTOM	1
4	47004538	SPRING FRAME, TOP	1
5	47004544	SPRING RETAINER	2
6	47007565	COMPRESSION SPRING, 5/8 WIRE	2
7	47004549	SPRING CAP, TOP	2
7A	47005530	SPRING CAP, BOTTOM	2
NEW	FOR 2008	SEE NOTE RE ITEM 7A (ON ILLUSTRATION)	
8	47004547	LOCK WASHER, 5/8	2
9	18891600	BOLT, 5/8-11NC. X 3 3/4 (SPECIAL)	2
10	47004551	INNER BUSHING, (TOP) 5 13/16	1
11	47004550	INNER BUSHING, (BOTTOM) 5	1
12	18057464	BOLT, 1/2-13NC. X 7	1
13	18811400	FLAT WASHER, 1/2	4
14	18891400	LOCK WASHER, 1/2	2
15	18417400	HEX. NUT, 1/2-13NC	2
16	18057462	BOLT, 1/2-13NC. X 6	1
17	18058422	BOLT, 3/4-10NC. X 7 1/2 GR 5	1
18	18418400	HEX. NUT, 3/4-10NC.	2
19	18057946	BOLT, 5/8-11NC. X 4 GR5 ZC	2
20	18891600	LOCK WASHER, 5/8	2
21	18417900	HEX. NUT, 5/8-11NC	2
22	47009671	SHANK CLAMP PLATE	1
23	47004532	SPRING BUNDLE CLAMP (6X6 BAR)	1
23A	47015004	SPRING BUNDLE CLAMP (7X7 BAR)	OR
24	18098453	BOLT, 5/8-11NC. X 3 GR 8	4
25	18458451	TOP LOCK NUT, 5/8-11NC	4
	ITEMS 26 TO 45 ARE CONSIDERED "OPTIONAL"		
26	47004555	SPRING BUNDLE CLAMP (6X4 HORIZ)	1
26A	47004555S	SPRING BUNDLE CLAMP (4X4 BAR)	1
27	47004553	CLAMP W/CLTR MOUNT (6X6 BAR)	1
27B	47015005	CLAMP W/CLTR MOUNT (7X7 BAR)	1
27C	47004557	CLAMP W/CLTR MOUNT (6X4 BAR)	1
27D	47004557D	CLAMP W/CLTR MNT DMI (6X4 VERT)	1
29	18057434	BOLT, 1/2-13NC. X 2 1/2	2
30	18891400	LOCK WASHER, 1/2	2
31	18417400	HEX. NUT, 1/2-13NC.	2
32	47303811	COULTER SWIVEL BAR (INCL ITEM 33)	1
33	18511032	SPRING PIN, 1/4 X 2 1/4 (STD)	1
	OPTIONAL	COULTER BAR WITH RESTRICTED SWING 10 DEG. AND 15 DEG. AVAILABLE.	
	CALL AG SYSTEMS FOR INFO.		
SEE	AG37	GENERATION THREE COULTER ILLUSTRATION	
32	47304522	COULTER SWIVEL BAR (SPECIAL)	1
34	200999	KNIFE SHANK, 1/4 THK (NO SPRING 2007)	1
35	201000	KNIFE SHANK, 1/2 THK (FALL 07 TO PRESENT)	1
36	18058501	BOLT, 7/8-9NC. X 4	1
37	18417800	HEX. NUT, 7/8-9NC.	1
38	SEE LIST OF KNIVES AT LEFT		
	THESE ARE HEAVY KNIVES WITH 9/16 X 3 BODY		
39	18037432	BOLT, 1/2-13NC. X 2 1/4 GR.2	1
40	18891400	LOCK WASHER, 1/2	1
41	18417400	HEX. NUT, 1/2-13NC.	1
42	18057934	BOLT, 5/8-11NC. X 2 1/2	1
43	18891600	LOCK WASHER, 5/8	1
44	18417900	HEX. NUT, 5/8-11NC.	1
45	47009960	KNIFE MOUNT BUSHING	OPT.



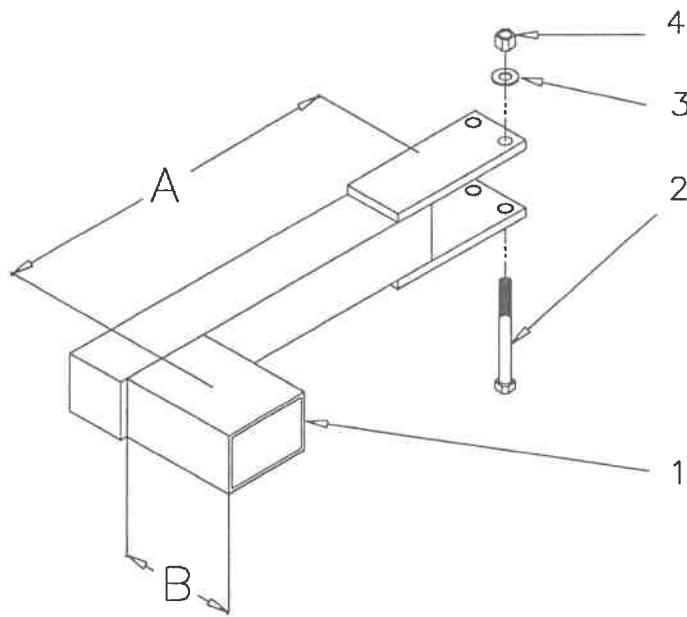
- LIST OF KNIVES TO SUIT THIS SHANK
- 201996 KNIFE, MAG 50 W/3/8 NH3 TUBE
 - 201997 KNIFE, GOPHER W/1/2 LIQ. TUBE
 - 201998 KNIFE, GOPHER W/1 1/4 DRY TUBE
 - 201999 KNIFE, GOPHER FOR DUAL SHOOT
 - 202999 1/2 NH3 TUBE & 1 1/4 DRY TUBE
 - 203998 KNIFE, GOPHER FOR DUAL SHOOT
 - 47309997 3/8 NH3 TUBE & 1 1/4 DRY TUBE
 - KNIFE, GOPHER W/ 1" DRY TUBE
 - KNIFE, MAG 50 W/ 1" DRY TUBE

NOTE:
BOLT ITEM 17 IS REVISED FOR YEAR 2006. WHEN REPLACING THE BOLT (ITEM 17) ON UNITS BUILT BEFORE 2006, YOU MUST DRILL OUT THE HOLE IN THE LEFT HAND PLATE OF THE MAIN BRACKET (ITEM 1) TO 3/4 DIAMETER.

NOTE:
ITEM 7A IS NEW FOR FALL 2008. WHEN REPLACING SPRING FRAME ITEM 3, ALSO ORDER ITEM 7A OR DRILL OUT EXISTING SPRING CAPS ITEM 7 TO 1.260 DIA. (BOTTOM (2) CAPS ONLY)

STGBKISO

STAGGER BRACKET ASSEMBLY

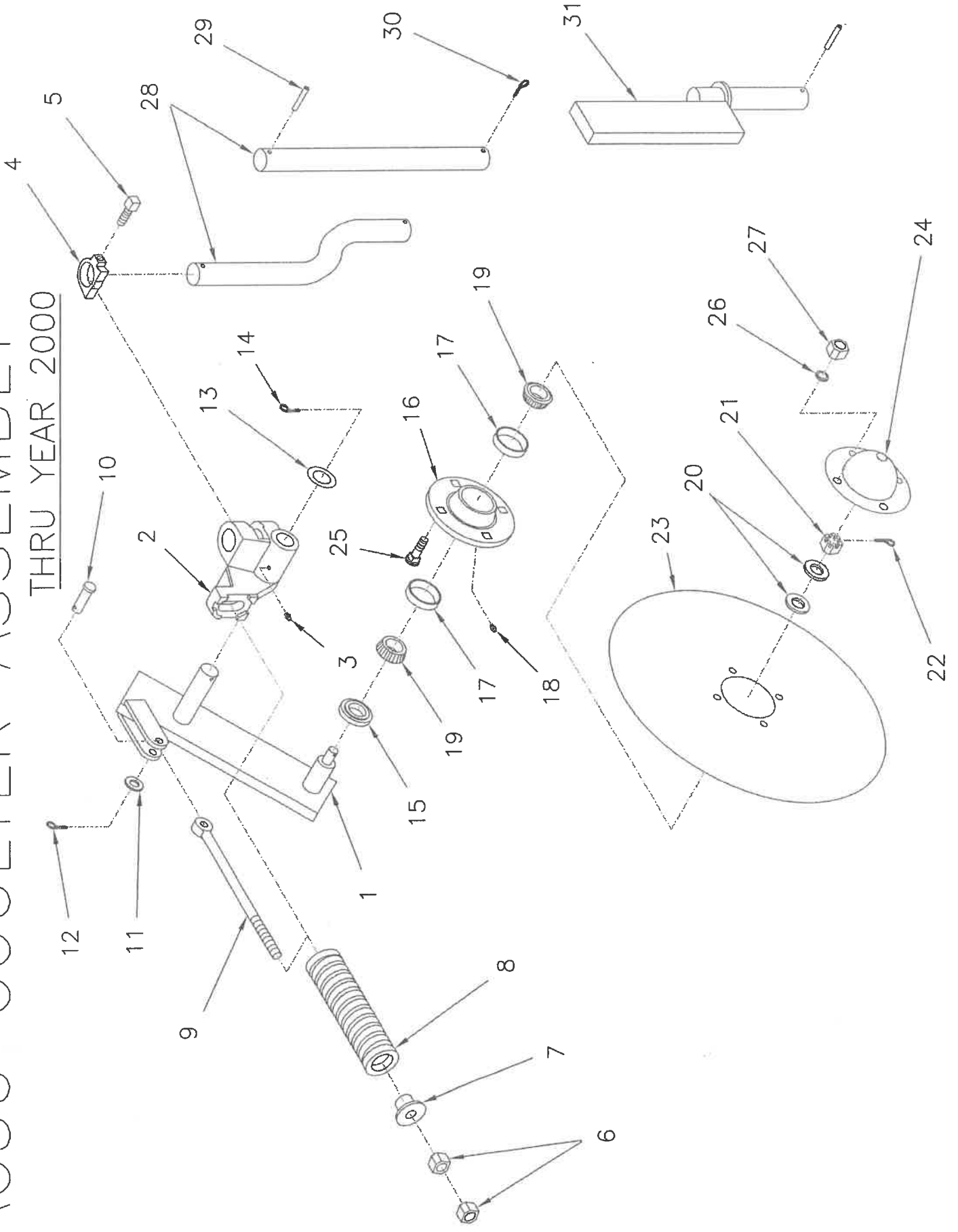


ITEM	PART NO.	DESCRIPTION	DIM. A	DIM. B	QTY.
1	47010182	STAGGER BRACKET - SHORT	18	12	1
	47010234	STAGGER BRACKET - MEDIUM	24	12	1
	47010181	STAGGER BRACKET - LONG	30	8	1
	47010434	STAGGER BRACKET - XT. LONG	36	8	1
	47009431	STAGGER BRACKET - 2-XT. LONG	40	8	1
	47010235	STAGGER BRACKET - SPECIAL	24	15	1
2	18058460	BOLT, 3/4-10NC. X 6 1/2	---	---	2
3	18891800	LOCKWASHER, 3/4	---	---	2
4	18418400	HEX. NUT, 3/4-10NC.	---	---	2

30A

AG36 COULTER ASSEMBLY

THRU YEAR 2000



AG36 COULTER ASSEMBLY
MOUNTING INSTRUCTIONS AND PARTS LIST

1. Your AG36 coultter blade and main bracket are pre-assembled at the factory, and the trip spring is pre-loaded to provide 250 pound blade pressure. This should be adequate for normal field conditions. The coultter arm should trip up only when hitting a solid obstruction. During your field operation, check to make sure the coultter arm is staying rigid most of the time. Excessive flexing will cause premature spring failure. If repeated tripping is occurring tighten the spring tension till rigid operation is achieved.
2. Assemble the shank (item 28) bracket casting (item 2), and the coultter stop (item 4).
3. Install the cottter pin (item 30) at the lower end of the shank (item 28).
4. Install the set screw (item 5) finger tight only.
5. Position the coultter mounting brackets at the desired spacing and fasten securely. The mounting brackets are not shown in this illustration. NOTE: There are several types mounting brackets listed.
6. Adjust the coultter blade to the desired depth and securely tighten the set screw (item 5).
Make sure all hardware is securely tightened.
7. Install the upper roll pin (item 29). Grease the bracket casting (item 2).
8. During field operation, grease the coultter blade hubs daily with one shot of good quality grease.
Do not over grease so that grease is forced past the seal. This will roll-over the sealing lip, damage the seal and allow contaminants to enter the hub and damage the bearing.

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	47309189	BLADE AND ARM ASSEMBLY INCLUDES ITEMS 1 TO 27	1	22	18560722	COTTER PIN, 5/32 X 1	1
2	47309415	ARM ASSEMBLY	1	23	47305027	COULTER BLADE, 20" RIPPLED	1
3	47305037	BRACKET, DUCTILE CASTING	1	24	47305227	DUST CAP, (BOLT ON)	1
4	18901805	GREASE ZERK, STRAIGHT	1	25	18177131	CARRIAGE BOLT, 1/2-13NC. X 1 1/2	4
5	47301531	COULTER STOP CASTING	1	26	18891400	LOCKWASHER, 1/2	4
6	18767324	SET SCREW, SQ. HEAD, 1/2-13NC. X 1 1/4	1	27	18417400	HEX NUT, 1/2-13NC.	4
7	18407900	HEX. NUT, 5/8-11NC.	2	28	47301904	SHANK, 1 1/2 DIA. STRAIGHT	1
8	47301530	SPRING CAP	1	29	47304131	SHANK, 1 1/2 DIA. BENT	OPT.
9	47301547	COMPRESSION SPRING	1	30	18511032	ROLL PIN, 1/4 X 2 1/4	1
10	18541428	EYE BOLT, SPRING RETAINER	1	31	18561030	COTTER PIN, 1/4 X 2	1
11	18841600	CLEVIS PIN 1/2 X 1 3/4	1		47303811	FLAT BAR COULTER SHANK. 18"	OPT.
12	18560722	FLATWASHER, SAE, 1/2	1		47309811	FLAT BAR COULTER SHANK. 12"	OPT.
13	18302403	COTTER PIN, 5/32 X 1	1			INCLUDES ROLL PIN SHOWN	
14	18561026	MACHINERY BUSHING, (NARROW) 1 1/4	2				
15	47301999	COTTER PIN, 1/4 X 1 1/2	1				
16	47302400	BEARING BUSHING	1				
		HUB WITH CUPS & GREASE ZERK	1				
		INCL. ITEMS 17 AND 18	2				
17	47005010	BEARING CUP	1				
18	18901805	GREASE ZERK, STRAIGHT	1				
19	47305035	BEARING CONE, 1 1/4 I.D.	2				
20	18801600	FLATWASHER, 5/8	2				
21	18488000	SLOTTED NUT, 5/8-18NF.	1				

AG38 COULTER ASSEMBLY

AG38LSTA

MOUNTING INSTRUCTIONS AND PARTS LIST

1. Your AG38 coultter blade and main bracket are pre-assembled at the factory, and the trip springs are pre-loaded to provide 525 pounds blade pressure. This should be adequate for normal field conditions. The coultter arm should trip up only when hitting a solid obstruction. During your field operation, check to make sure the coultter arm is staying rigid most of the time. Excessive flexing will cause premature spring failure. If repeated tripping is occurring tighten the spring tension till rigid operation is achieved
2. Assemble the swivel bar (item 22) to the main bracket (item 1). Make sure that the 1 x 3 flat bar is positioned between the half moon stops on top of the main bracket. Install the roll pin (item 23).
3. Position the mounting brackets (item 30) at the desired spacing and fasten with the U-bolts (item 27) and hardware (item 28 and item 29).
4. Install the coultter assemblies to the mounting brackets (item 30) and fasten with the bolts (item 24) and hardware (items 25 and 26). Assemble the hardware snug only.
5. Adjust the coultter blades to the desired depth and tighten hardware (item 24, item 25 and item 26) securely.
6. Make sure all hardware is tightened securely.
7. During field operation, grease the coultter blade hubs daily with one shot of good quality grease. Do not over grease so that grease is forced past the seal lip. This will roll-over the sealing lip, damage the seal and allow contaminants to enter the hub and damage the bearing.

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ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	47308805	BLADE AND BRACKET ASSEMBLY INCLUDES ITEMS 1 TO 21	1	27	47006951	WHEN ORDERING, PLEASE SPECIFY SIZE OF TUBE U-BOLT, 5/8-11NC. (4 X 6 BAR) STD.	1
2	47308729	MAIN BRACKET	2		47306659	U-BOLT, 5/8-11NC. (2, 1/2" BAR) (2)	OPT.
3	18901805	GREASE ZERK, STRAIGHT	2		47306677	U-BOLT, 5/8-11NC. (3" BAR)	(2) OPT.
4	18407900	HEX. NUT, 5/8-11NC.	2		44001616	U-BOLT, 5/8-11NC. (4 X 4 BAR)	(2) OPT.
5	47301530	SPRING CAP	2		47306830	U-BOLT, 5/8-11NC. (6" BAR)	(2) OPT.
6	47301524	COMPRESSION SPRING	2		47302730	U-BOLT, 1/2-13NC (7" BAR)	(2) OPT.
7	47301547	EYE BOLT, SPRING RETAINER	2	28	18891600	LOCKWASHER, 5/8 WITH OPT. 5/8" U-BOLT (4) REQ'D.	2
8	18541428	CLEVIS PIN, 1/2 X 1 3/4	2		18891400	LOCKWASHER, 1/2	
9	18560722	COTTER PIN, 5/32 X 1	2	29	18417900	WITH OPT. 1/2" U-BOLT (4) REQ'D. HEX. NUT, 5/8-11NC.	2
10	47301999	BEARING BUSHING	1		18417400	WITH OPT. 5/8" U-BOLT (4) REQ'D.	
11	47302400	HUB WITH CUPS & GREASE ZERK	1	30	18417400	HEX. NUT, 1/2-13NC. WITH OPT. U-BOLT 4	1
12	47005010	INCLUDES ITEMS 11 AND 12 BEARING CUP	2		47309893	MOUNTING BRACKET, 4" BAR (OFFSET)	1
13	18901805	GREASE ZERK, STRAIGHT	1		47309887	MOUNTING BRACKET, 2 1/2" BAR (JOHN DEERE)	OPT.
14	47305035	BEARING CONE, 1 1/4 I.D.	2		47309732	MOUNTING BRACKET, 3" BAR	OPT.
15	18801600	FLATWASHER, 5/8	2		47309907	MOUNTING BRKT. (EXTENDED) 3" BAR	OPT.
16	18488000	SLOTTED NUT, 5/8-18NF.	1		47309888	MOUNTING BRACKET, 6" BAR	OPT.
17	18560722	COTTER PIN, 5/32 X 1	1		47309736	MOUNTING BRACKET, 7" BAR	OPT.
18	47305027	COULTER BLADE, 20" RIPPLED	1	31	47999370	BRACKET, UNIV. MT FOR 1 X 2 COMP. OPTION FOR 6 X 4 OR 4 X 4 BAR	OPT.
19	47305227	DUST CAP, (BOLT ON)	4		47994604	BRACKET, UNIV. MT FOR 1 1/4 COMP. OPTION FOR 6 X 4 OR 4 X 4 BAR	OPT.
20	18177131	CARRIAGE BOLT, 1/2-13NC. X 1 1/2	4			INCLUDES ITEMS SHOWN EXCEPT ITEMS 32, 33 & 34	
21	18891400	LOCKWASHER, 1/2	4	32	18058436	BOLT, 3/4-10NC. X 3	1
22	18417400	HEX NUT, 1/2-13NC.	4	33	18891800	LOCKWASHER, 3/4	1
23	47303811	COULTER SWIVEL BAR, 18"	1	34	18418400	HEX. NUT, 3/4-10NC.	1
24	47309811	COULTER SWIVEL BAR, 12"	OPT			WHEN USING THIS BRACKET DELETE ITEMS 24 TO 30.	
25	18511032	ROLL PIN, 1/4 X 2 1/4	1				
26	18057434	BOLT, 1/2-13NC. X 2 1/2	2				
27	18891400	LOCKWASHER, 1/2	2				
28	18417400	HEX. NUT, 1/2-13NC.	2				

PROCEDURE TO SERVICE A COULTER HUB
(WITH BOLT-ON DUST CAP)

The factory procedure to assemble the coultter hub has been developed to obtain maximum life and eliminate damage to components. IT IS IMPORTANT to understand and follow this procedure when servicing the coultter hub. If possible, obtain an illustration of the coultter before proceeding.

ASSEMBLE THE COULTER HUB AS FOLLOWS:

Refer to the illustration for the AG37 coultter. (AG36 and AG38 are similar).

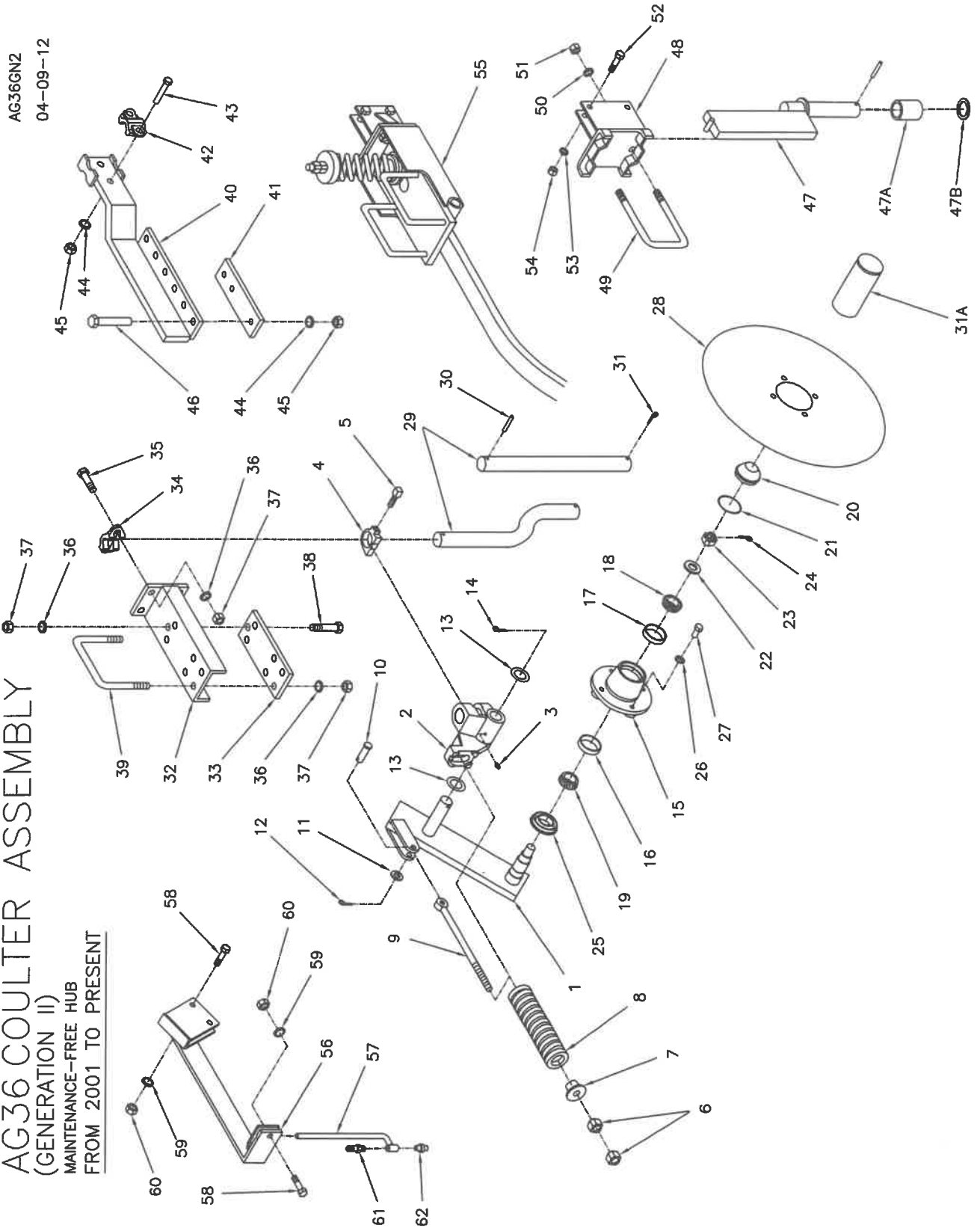
1. Assemble the steel pr-seal (item 9) on the spindle so that the flat surface is next to the arm and the machined shoulder is facing the inner bearing cone. This performs as a dust and dirt pre-seal.
2. CAUTION: Do not put the bearing cone on the spindle at this time.
3. Pack the inner bearing cone with grease and install it into the hub. You will note that the bearing has the grease seal molded to the outer edge. The seal has two sealing surfaces. The inner surface (nearest the rollers) is the grease seal. The outer surface is the dust seal. Hold the bearing as square as possible to the hub and with hand pressure only, push the bearing into the hub until the inner seal is seated squarely against the bearing cup and the outer seal is approximately 3/16 inch inside the casting.
4. Hold the bearing in place and install the hub on the spindle. Note: It is not recommended that you put the bearing on the spindle and then push the hub over the bearing. There is a possibility that you might roll-over the inner seal and damage the seal.
5. Pack the hub and outer bearing cone with grease. With the hub firmly in place on the spindle install the outer bearing cone into the hub. Push the bearing into the hub until the inner seal is seated squarely against the bearing cup inside the hub. Refer to step 3.
6. Install the two flat washers (item 14) and the spindle nut (item 15) and while rotating the hub by hand, tighten the nut until the hub locks up. Then back off the nut until the hub rotates freely. Check to make sure the seals do not rotate on the spindle. The hub rotates around the seal. Then install the cotter pin (item 16).
7. Pack the dust cap with grease and assemble the blade and the dust cap to the hub.
8. With a grease gun, fill up the hub with grease. PROPER GREASING is as important as Proper seal installation. Over greasing could "roll-over" the inner seal and allow dirt and moisture to enter the bearing. Watch the outer lip of the seal. Grease the hub until you notice some lifting of the sealing lip. Rotate the hub. This will re-distribute the grease and you may be able to add some grease. DO NOT over grease so that the grease is forced out past the grease seal. If this happens, disassemble and make sure the seal lips are in the proper position, not rolled-over. Reassemble and readjust.
9. During field operation, adding one shot of grease per day should be adequate. Check the coultter blades periodically for wobble. This could be the result of hitting rocks and/or normal wear. Readjust the bearing tension (refer to step 6) Wobble in the hub could damage the seal and cause bearing failure.

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AG36 COULTER ASSEMBLY

(GENERATION II)

MAINTENANCE-FREE HUB
FROM 2001 TO PRESENT



AG36 COULTER ASSEMBLY (GENERATION II)

AG36GN2LS
01/28/22

MAINTENANCE-FREE HUB MOUNTING INSTRUCTIONS AND PARTS LIST

1. Your AG36 main bracket and hub are pre-assembled at the factory, and the trip spring is pre-loaded to provide 250 pounds blade pressure. This should be adequate for normal field conditions. The coultter arm should trip up only when hitting a solid obstruction. During your field operation check to make sure the coultter arm is staying rigid most of the time. Excessive flexing will cause premature spring failure. If repeated tripping is occurring, tighten the spring tension until rigid operation is achieved.
2. Assemble the blade (item 28) to the hub.
3. Round Type Coultter mount: Insert the shank (item 29) into the castings (item 2) and (item 4) simultaneously and insert cotter pin (item 31) Positions the shank so not rub on the casting and securely tighten the set screw.
(Rect. 1 x 3 Type Coultter mount) Insert the rect shank (item 47) into the rect mtg bracket (item 48) and tighten nuts (item 52) to hold rect. shank in place.
Install spacer bushing (item 47A) onto item 47, then install coultter casting (item 2) and slide on retaining washer (item 47B) and secure these items with the with rollpin.
4. Position the coultter mounting brackets at the desired spacing and fasten securely. NOTE:: There are a number of types and styles of brackets shown.
5. Assemble the coultter shank to the mounting bracket. Adjust the blade to the desired depth and tighten the hardware. Make sure all hardware is securely tightened.
6. Install the upper roll pin on round shank types (item 30) Grease the bracket casting (item 2). During field operation grease this casting weekly. And grease for end-of-season storage.
7. The coultter hub is greased-for-life and should need no regular maintenance. Check for damage to the dust cap and grease seal daily.

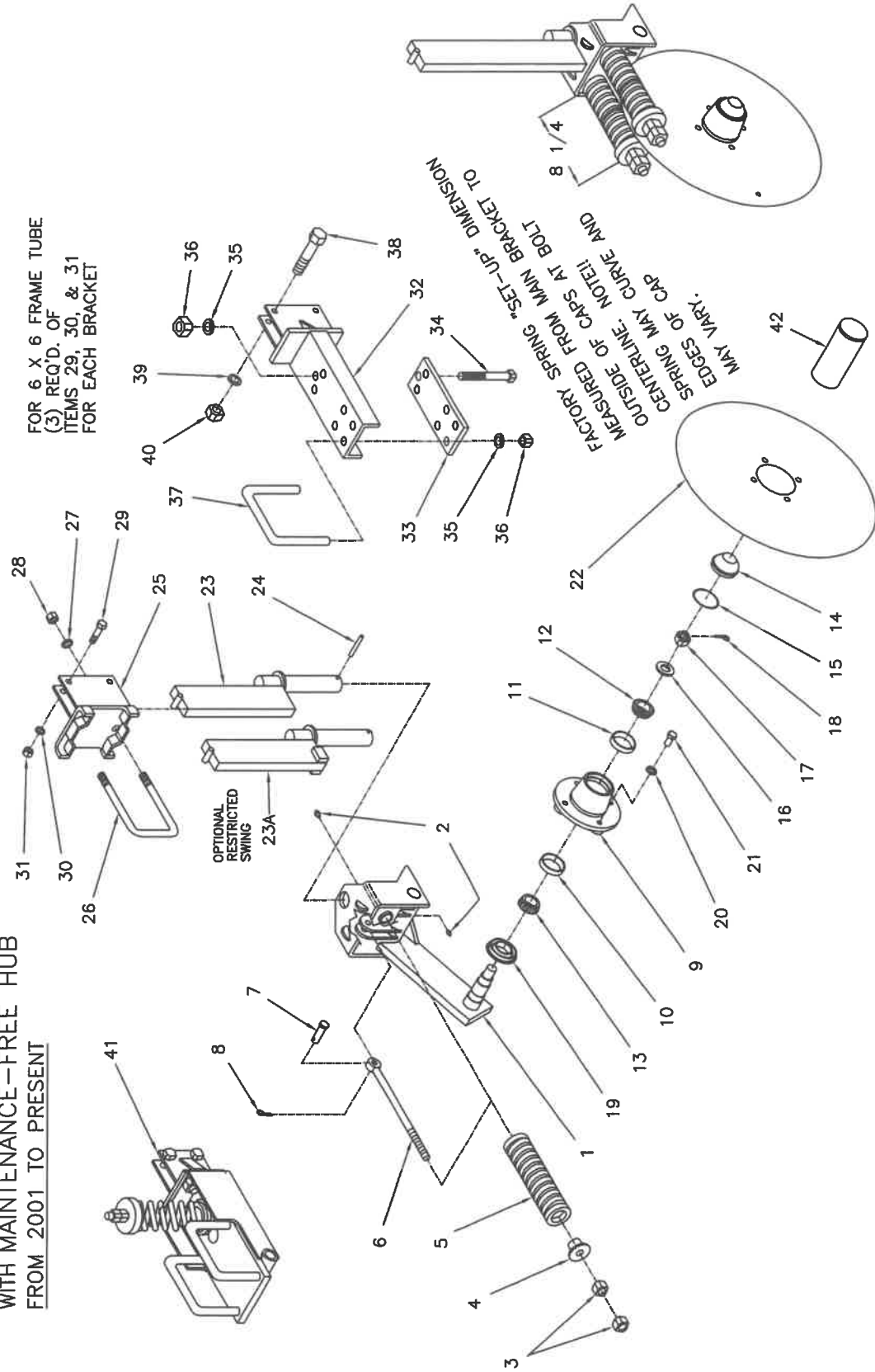
ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	47309189	BLADE AND ARM ASSEMBLY	1	32	47309184	STANDARD UNIVERSAL MOUNT COMPLETE	1	47	47303811	FLAT BAR COULTER SHANK, 18"	OPT.
2	47305037	INCLUDES ITEMS 1 TO 28	1	33	47309406	FOR SQUARE KNIFE SHANK AND ROUND COULTER BAR	1	47A	47005287	CASTING SPACER BUSHING	OPT.
3	18901805	ARM AND HUB ASSEMBLY (W/O BLADE)	1	34	47301538	ON 4 X 6 TOOLBAR FOR 1 1/4 SHANK	1	47B	18300323	RETAINING WASHER 1 1/2" ID	OPT.
4	47301531	INCLUDES ITEMS 1 TO 27	1	35	18057940	INCLUDES ITEMS 32 TO 39	4				
5	18767324	ARM ASSEMBLY	1	36	18891600	LOCKWASHER, 5/8	9				
6	18767324	BRACKET, DUCTILE CASTING	1	37	18417900	HEX. NUT, 5/8-11NC.	9				
7	18767324	BRACKET, 7ERK, STRAIGHT	1	38	18057938	HEX. NUT, 5/8-11NC. X 3	1				
8	18767324	COULTER STOP CASTING	1	39	47006950	U-BOLT, 5/8-11NC. (4 X 4 BAR)	2				
9	18407900	SET SCREW, SQ. HEAD, 1/2-13NC. X 1 1/4	1		47006951	U-BOLT, 5/8-11NC. (4 X 4 BAR)	OPT.				
10	18407900	HEX. NUT, 5/8-11NC.	2								
11	47301530	SPRING CAP	1								
12	47301524	COMPRESSION SPRING	1								
13	47301547	EYE BOLT, SPRING RETAINER	1								
14	18541428	FLATWASHER, 1/2 X 1 3/4	1								
15	18841600	FLATWASHER, SAE, 1/2	1								
16	18560722	COTTER PIN, 5/32 X 1	1								
17	18302403	MACHINE BUSHING, (NARROW)	1 1/4								
18	18561026	COTTER PIN, 1/4 X 1 1/2	1								
19	47300350	HUB COMPLETE, (W/O SEAL & BOLTS)	1								
20	47300351	INCLUDES ITEMS 15 TO 21	1								
21	47005510	HUB WITH CUPS, ITEMS 16 & 17	1								
22	47005510	BEARING CUP, INNER	1								
23	47005010	BEARING CUP, OUTER	1								
24	47005048	BEARING CONE, OUTER	1								
25	47005548	BEARING CONE, INNER	1								
26	47005513	DUST CAP	1								
27	47990351	O-RING DUST SEAL	1								
28	47300352	SPINDLE WASHER	1								
29	47300353	SLOTTED NUT, 7/8-14UNF.	1								
30	18560724	COTTER PIN, 7/8 X 1 1/4	1								
31	40030326	GREASE SEAL	1								
32	18891400	LOCKWASHER, 1/2	4								
33	18057522	WHEEL BOLT, 1/2-20NF. X 1	4								
34	47305027	COULTER BLADE, 20" RIPPLED	1								
35	47301904	SHANK, 1 1/2 DIA. STRAIGHT	1								
36	47304131	SHANK, 1 1/2 DIA. BENT (4" OFFSET)	OPT.								
37	47304248	SHANK, 1 1/2 DIA. BENT (1" OFFSET)	OPT.								
38	18511032	ROLL PIN, 1/4 X 2 1/4	1								
39	18561030	COTTER PIN, 1/4 X 2	1								
40	47005500	DUSTCAP INSTALLATION TOOL (OPTIONAL)	1								

REF 47300300 SPINDLE ONLY

AG38 COULTER ASSEMBLY

GENERATION II
 WITH MAINTENANCE-FREE HUB
 FROM 2001 TO PRESENT

AG38GN2
 REV 10-22-09



AG38 COULTER ASSEMBLY (GENERATION II)
with MAINTENANCE-FREE HUB
MOUNTING INSTRUCTIONS AND PARTS LIST

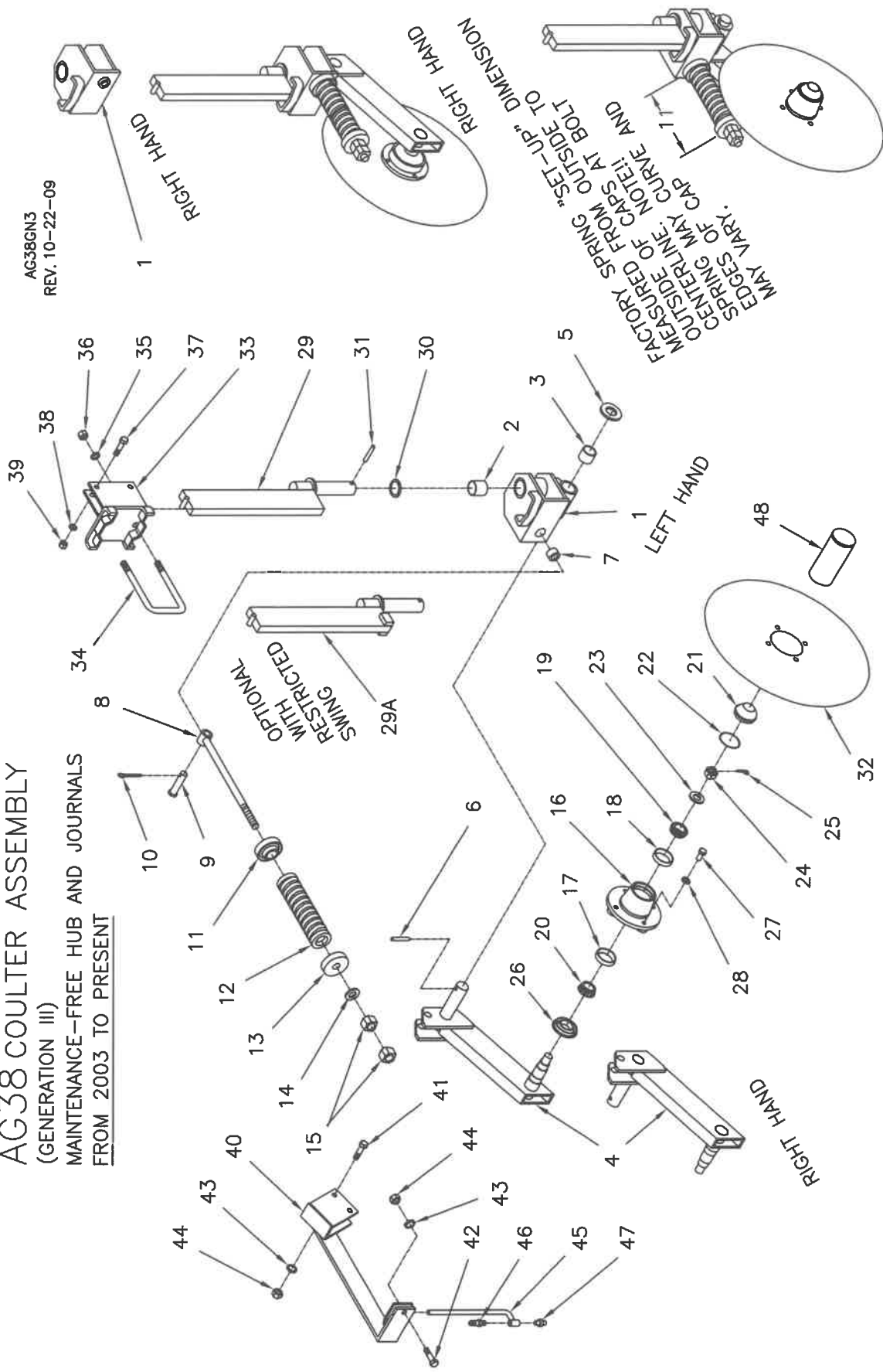
AG38GNZLS
REV.01/28/22

1. Your AG38 main bracket and hub are pre-assembled at the factory, and the trip springs are pre-loaded to provide 525 pounds blade pressure. This should be adequate for normal field conditions. The coultter arm should trip up only when hitting a solid obstruction. During your field operation check to make sure the coultter arm is staying rigid most of the time. Excessive flexing will cause premature spring failure. If repeated tripping is occurring tighten the spring tension till rigid operation is achieved.
2. Assemble the blade (item 22) to the hub.
3. Assemble the swivel bar (item 23) to the main bracket (item 1). Make sure that the 1 x 3 flat bar is positioned between the half moon stops on top of the main bracket. Install the roll pin (item 24).
4. Position the mounting brackets (item 25) at the desired spacing and fasten with the u-bolts (item 26) and hardware (item 27 and item 28).
5. Install the coultter assemblies to the mounting brackets (item 25) and fasten with the bolts (item 29) and hardware (item 30 and item 31). Assemble the hardware snug only.
6. Adjust the coultter blade to the desired depth and tighten the hardware securely.
7. Make sure "oil" hardware is tightened securely.
8. During field operation grease the swivel bar journals weekly. And grease for end-of-season storage. The coultter hub is greased-for-life and should need no regular maintenance. Check for damage to the dust cap and grease seal daily.

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	47308805	MAIN BRACKET & BLADE ASSEMBLY	1	24	18511032	ROLL PIN, 1/4 X 2 1/4	1	31	18417400	HEX. NUT, 1/2-13NC.	2
2	47109572	INCLUDES ITEMS 1 TO 22	1	25	47309893	MOUNTING BRACKET, (4" VERTICAL)	1	32	47309370	UNIV MT BRKT FOR 1 X 2 COMP. OPTION	1
3	47309572	MAIN BRKT. W/HUB ASSEMBLY	1	26	47006951	U-BOLT, 5/8-11NC. (4" V X 6" BAR)	1	33	47006832	ON 4 X 6 OR 4 X 4 TOOLBARS.	1
4	18407900	INCLUDES ITEMS 1 TO 21 (W/O BLADE)	1	26	44001616	U-BOLT, 5/8-11NC. (4" V X 4" BAR)	1	34	18057938	ON 4 X 6 OR 4 X 4 TOOLBARS.	1
5	47301524	MAIN BRACKET	1	25	47009887	OTHER MOUNTING BRACKET OPTIONS	1	35	18891600	ON 4 X 6 OR 4 X 4 TOOLBARS.	1
6	18901805	GREASE ZERK, STRAIGHT	2	26	47009887	CALL AG SYSTEMS FOR INFO.	1	36	47006950	ALL ITEMS IDENTICAL EXCEPT ITEM 37	37
7	47301530	HEX NUT, 5/8-11NC.	4	26	47006659	MOUNTING BRACKET, (2 1/2" VERTICAL)	1	37	47006951	INCLUDE ITEMS 32 TO 40	40
8	47301530	SPRING CAP	2	25	47309732	U-BOLT, 5/8-11NC. (2 1/2" V X 2 1/2" BAR)	1	38	18057434	SHANK HOLDER, (1 X 2 KNIFE SHANK)	1
9	47301547	COMPRESSION SPRING	2	25	47309907	MOUNTING BRACKET, (3" VERTICAL STD.)	1	39	18891400	CLAMP PLATE	1
10	18541428	EYE BOLT, SPRING RETAINER	2	26	47308677	MOUNTING BRKT., (3" VERT., EXT.)	1	40	18417400	BOLT, 5/8-11NC. X 3	3
11	18560722	CLEVIS PIN, 1/2 X 1 3/4	2	26	47308677	MOUNTING BRACKET, (3" VERT., EXT.)	1	41	47039413	LOCKWASHER, 5/8	5
12	18560722	CLEVIS PIN, 1/2 X 1 3/4	2	25	47309732	MOUNTING BRACKET, (3" VERTICAL)	1	42	47029417	HEX. NUT, 5/8-11NC. (6 X 4 TUBE)	2
13	47300350	HUB COMPLETE (W/O SEAL & BOLTS)	1	26	47309736	MOUNTING BRACKET, (7" VERTICAL)	1	43	47009847	U-BOLT, 5/8-11NC. (6 X 6 TUBE)	2
14	47300351	INCLUDES ITEMS 9 TO 15	1	26	47302730	U-BOLT, 1/2-13NC. (7" V X 7" BAR)	1	44	47009847	U-BOLT, 5/8-11NC. (6 X 6 TUBE)	2
15	47005510	HUB WITH CUPS ITEMS 10 & 11	1	27	18891600	NOTE FOR 7" U-BOLT USE 1/2-13NC. HEX. NUTS	2	45	47009847	BOLT, 1/2-13NC. X 2 1/2	2
16	47005510	BEARING CUP, INNER	1	28	18417900	LOCKWASHER, 5/8	2	46	47005500	HEX. NUT, 5/8-11NC.	1
17	47005010	BEARING CUP, OUTER	1	29	18057434	HEX. NUT, 5/8-11NC.	2	47	47005500	DUST CAP INSTALLATION TOOL (OPTIONAL)	1
18	47005048	BEARING CONE, OUTER	1	30	18891400	LOCKWASHER, 1/2	2				
19	47005548	BEARING CONE, INNER	1								
20	47005513	DUST CAP	1								
21	47300352	O-RING DUST SEAL	1								
22	18560724	SLOTTED NUT, 7/8-14UNF.	1								
23	47300326	GREASE SEAL	1								
24	18891400	LOCKWASHER, 1/2	1								
25	18057522	WHEEL BOLT, 1/2-20NF. X 1	1								
26	47303811	COULTER SWIVEL BAR, 18" (INCL ITEM 24)	1								
27	47309811	COULTER SWIVEL BAR, 12" (INCL ITEM 24)	1								
28	OPTIONAL	COULTER BAR W/RESTRICTED SWING	1								
29	OPTIONAL	10 DEG. AND 15 DEG. AVAILABLE	1								
30	47005147	18" BAR 10" RESTR. SWING (BOTH WAYS)	1								

REF 47300300 SPINDLE ONLY

AG38 COULTER ASSEMBLY
 (GENERATION III)
 MAINTENANCE-FREE HUB AND JOURNALS
 FROM 2003 TO PRESENT



AG38 COULTER ASSEMBLY (GENERATION III)
 with MAINTENANCE-FREE HUB
 MOUNTING INSTRUCTIONS AND PARTS LIST

AG38GN3LS
 REV. 01/28/22

1. Your AG38 main bracket and hub are pre-assembled at the factory, and the trip springs are pre-loaded to provide 600 pounds blade pressure. This should be adequate for normal field conditions. The coulters should trip up only when hitting a solid obstruction. During your field operation check to make sure the coulters are staying rigid most of the time. Excessive flexing will cause premature spring failure. If repeated tripping is occurring tighten the spring tension till rigid operation is achieved.
2. Assemble the blade (item 32) to the hub.
3. Assemble the swivel bar (item 29) to the main bracket (item 1). Make sure that the 1 x 3 flat bar is positioned between the U-bracket stop on top of the main bracket. Install the washer (item 30) and roll pin (item 31).
4. Position the mounting brackets (item 33) at the desired spacing and fasten with the U-bolts (item 34) and hardware (item 35 and item 36).
5. Install the coulters assemblies to the mounting brackets (item 33) and fasten with the bolts (item 37) and hardware (item 38 and item 39). Assemble the hardware snug only.
6. Adjust the coulters blade to the desired depth and tighten the hardware securely.
7. Make sure "all" hardware is tightened securely.
8. No field operation lubrication is required. The hubs are sealed and greased for life. The swivel journals are assembled with grease-less bushings. For repair procedure, see separate sheet titled PROCEDURE TO SERVICE A COULTER HUB.

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
1	47004500	MAIN BRKT. & BLADE, L.H. (STANDARD)	1	21	47005513	DUST CAP	1	37	18057434	BOLT, 1/2-13NC. X 2 1/2	2
2	47014500	MAIN BRKT. & BLADE, RIGHT HAND	OPT	22	47990351	O-RING DUST SEAL	1	38	18891400	LOCKWASHER, 1/2	2
3	47009954	INCLUDES ITEMS 1 TO 32		23	47300352	SPINDLE WASHER	1	39	18417400	HEX. NUT, 1/2-13NC.	2
4	47304508	MAIN BRKT. W/HUB, L.H. (STANDARD)	1	24	47300353	SLOTTED NUT, 7/8-14UNF.	1	ITEMS	37, 38, & 39. (3) REQ'D. WITH (6" BAR, VERT.)		
5	47314508	MAIN BRKT. W/HUB, RIGHT HAND	OPT	25	18560726	COTTER PIN, 5/32 X 1 1/2	1	47995062	HI-PRESSURE NOZZLE BRKT. COMPLETE		
6	47004500	INCLUDES ITEMS 1 TO 31 (W/O BLADE)	1	26	40030326	GREASE SEAL	1	40	47015062	INCLUDES ITEMS 40 TO 45	1
7	47014500	HOUSING W/BUSHINGS, L.H. (STD.)	1	27	18057522	WHEEL BOLT 1/2-20NF. X 1	4	41	18057434	MOUNTING BRACKET	2
8	47009954	HOUSING W/BUSHINGS, RIGHT HAND	OPT	28	18891400	LOCK WASHER, 1/2	4	42	18057430	BOLT, 1/2-13NC. X 2 1/2	2
9	47004500	SWIVEL BUSHING, 1 1/2 I.D.	2	29	47304522	COULTER SWIVEL BAR, 18"	1	43	18891400	BOLT, 1/2-13NC. X 2	1
10	47009954	SWIVEL BUSHING, 1 3/8 I.D.	2	OPTIONAL				44	18417400	LOCK WASHER, 1/2	3
11	47004508	PIVOT ARM, L.H. STANDARD	1	47005144	COULTER BARS W/RESTRICTED SWING			45	47008501	NOZZLE BAR	3
12	47014508	PIVOT ARM, RIGHT HAND	OPT	47005144R	18" BAR 10" RESTR. SWING BOTH WAYS			46	100859	HOSEBARB, 1/4P X 1/2T	1
13	18300326	RETAINING WASHER, 1 3/8 I.D.	1	47005145	18" BAR 10" RESTR. SWING RH ONLY			47	504017	NOZZLE BODY ASSEMBLY	1
14	18511035	EXPANSION PIN, 3/8 X 2	1	47005145L	18" BAR 15" RESTR. SWING LH ONLY			(ORIFICE DISK VARIES) SEE AG 37 ILLUSTRATION			
15	2-6668	EYE BOLT GUIDE	1	47005145R	18" BAR 15" RESTR. SWING RH ONLY			48	47005500	DUST CAP INSTALLATION TOOL (OPTIONAL)	1
16	47004518	EYE BOLT, SPRING RETAINER	1	CALL AG SYSTEMS FOR INFO.							
17	18541835	CLEVIS PIN, 3/4 X 2 1/2	1	18300323	RETAINING WASHER, 1 1/2 I.D.						
18	18560726	COTTER PIN, 5/32 X 1 1/2	1	18511036	EXPANSION PIN, 3/8 X 2 1/4						
19	47004521	SPRING CAP, WITH COUNTER-BORE	1	47305027	COULTER BLADE, 20" RIPPLED						
20	47007565	COMPRESSION SPRING	1	47309893	MOUNTING BRACKET, (4" VERTICAL) STD.						
21	18851800	SPRING CAP, STANDARD CASTING	1	47006891	U-BOLT, 5/8-11NC. (4" V X 6" HORIZ BAR)						
22	18446890	HEX. NUT, 3/4-10NC.	2	44001616	U-BOLT, 5/8-11NC. (4" V X 4" HORIZ BAR)						
23	47300350	HUB COMPLETE (W/O SEAL & BOLTS)	1	47309888	MOUNTING BRACKET, (6" VERTICAL)						
24	47300351	HUB WITH CUPS, ITEMS 17 & 18	1	47101054	U-BOLT, 5/8-11NC. (6" V X 4" HORIZ BAR)						
25	47005510	BEARING CUP, INNER	1	47009847	U-BOLT, 5/8-11NC. (6" V X 6" HORIZ BAR)						
26	47005048	BEARING CUP, OUTER	1	18891600	LOCKWASHER, 5/8						
27	47005548	BEARING CONE, OUTER	1	18417900	HEX. NUT, 5/8-11NC.						
28		BEARING CONE, INNER	1								

REF 47300300 SPINDLE ONLY

**PROCEDURE TO SERVICE A COULTER HUB
“MAINTENANCE-FREE” HUB**

The factory procedure to assemble the coultter hub has been developed to obtain maximum life and to eliminate damage to the components. IT IS IMPORTANT to understand and follow this procedure when servicing the coultter hub. If possible, obtain an illustration of the coultter before proceeding.

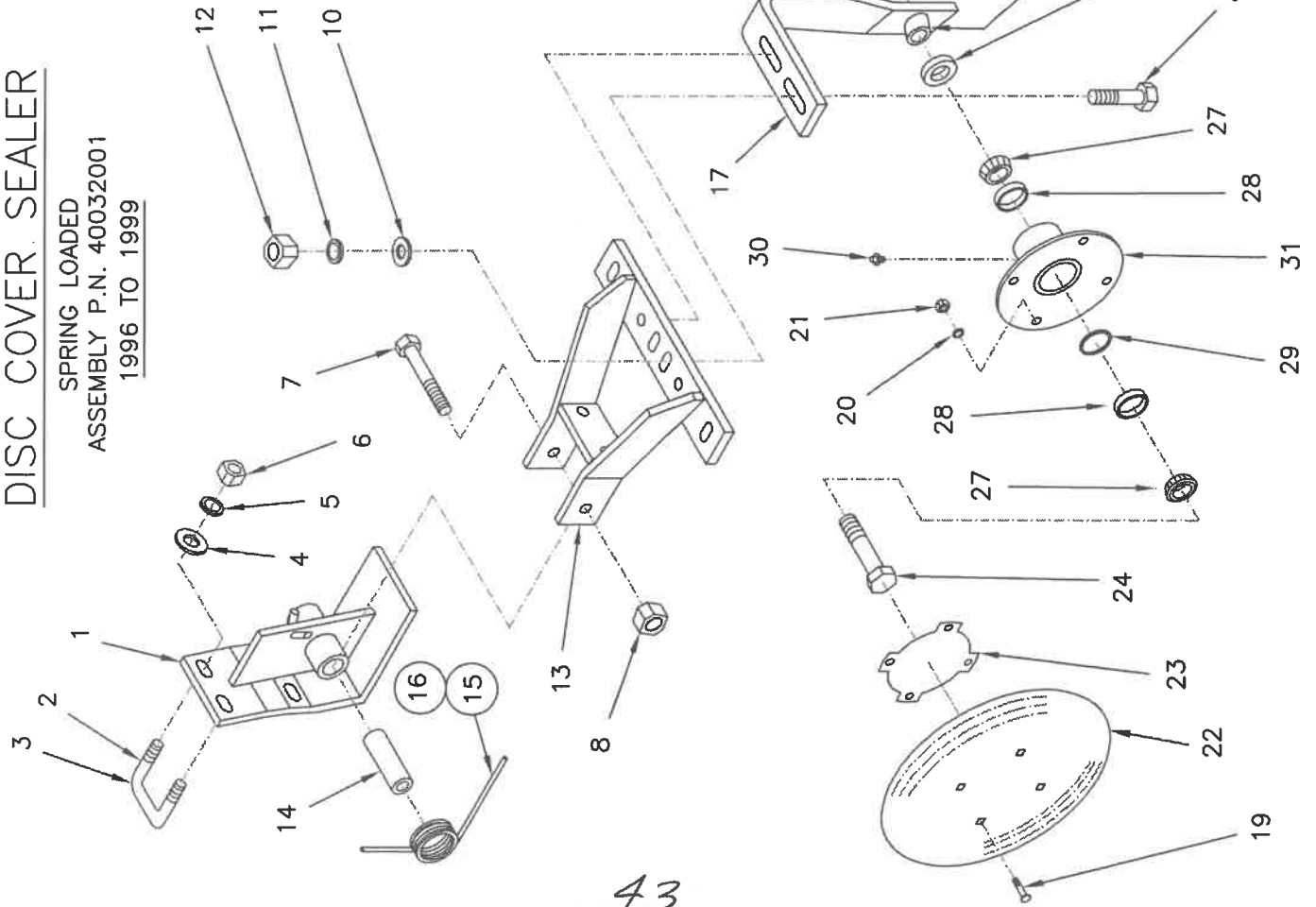
ASSEMBLE THE COULTER HUB AS FOLLOWS.

- 1: Pre-pack the inner bearing cone with grease and insert it into the back of the hub.
- 2: Add grease to cover the back of the bearing and cup. CAUTION – CAUTION : Do not “fill” the back of the hub with grease. Do not get any grease on the sealing seat for the grease seal. The seal is treated with a sealing agent and grease or oil on the sealing surface will destroy the effectiveness of the seal. If there is any grease on the sealing surface in the hub wipe it with a degreasing agent.
- 3: Carefully insert the grease seal. Do not get any grease on the outer sealing surface of the seal. Tap or press the seal in place. Make sure the seal is entering and seating squarely.
- 4: Turn the hub over and fill the center cavity with grease. Pre-pack the outer bearing with grease and insert it into the hub.
- 5: Position the hub on the spindle and install the spindle washer and the slotted nut.
- 6: Rotate the hub by hand while tightening the slotted nut until the hub locks-up. This will align and seat the bearing rollers. Back off the nut until you can freely rotate the hub by hand and install the cotter pin. Bend the ends of the cotter pin “down” only. Not one half up and one half down.
- 7: Completely fill the front cavity of the hub with grease.
- 8: Inspect the hub to make sure it is properly assembled and then install the dust cap.
CAUTION: Once the dust cap is installed it cannot be removed with out destroying it. Take care to be sure the dust cap is square to the bore when starting and seating it. An old dust cap or a piece of tubing with the right I. D. and O. D. may be helpful.
- 9: You may now assemble the coultter blade. During field operation check the coultter blade periodically for wobble. This could be a result of hitting rocks and/or normal wear. Re-adjust the bearing tension (see step 6). Wobble in the hub could damage the seal and cause bearing failure. Note that you will need to install a new dust cap after a bearing adjustment. REVIEW step 8.

SRVCLTRHUB

SINGLE DISC COVER SEALER

SPRING LOADED
ASSEMBLY P.N. 40032001
1996 TO 1999



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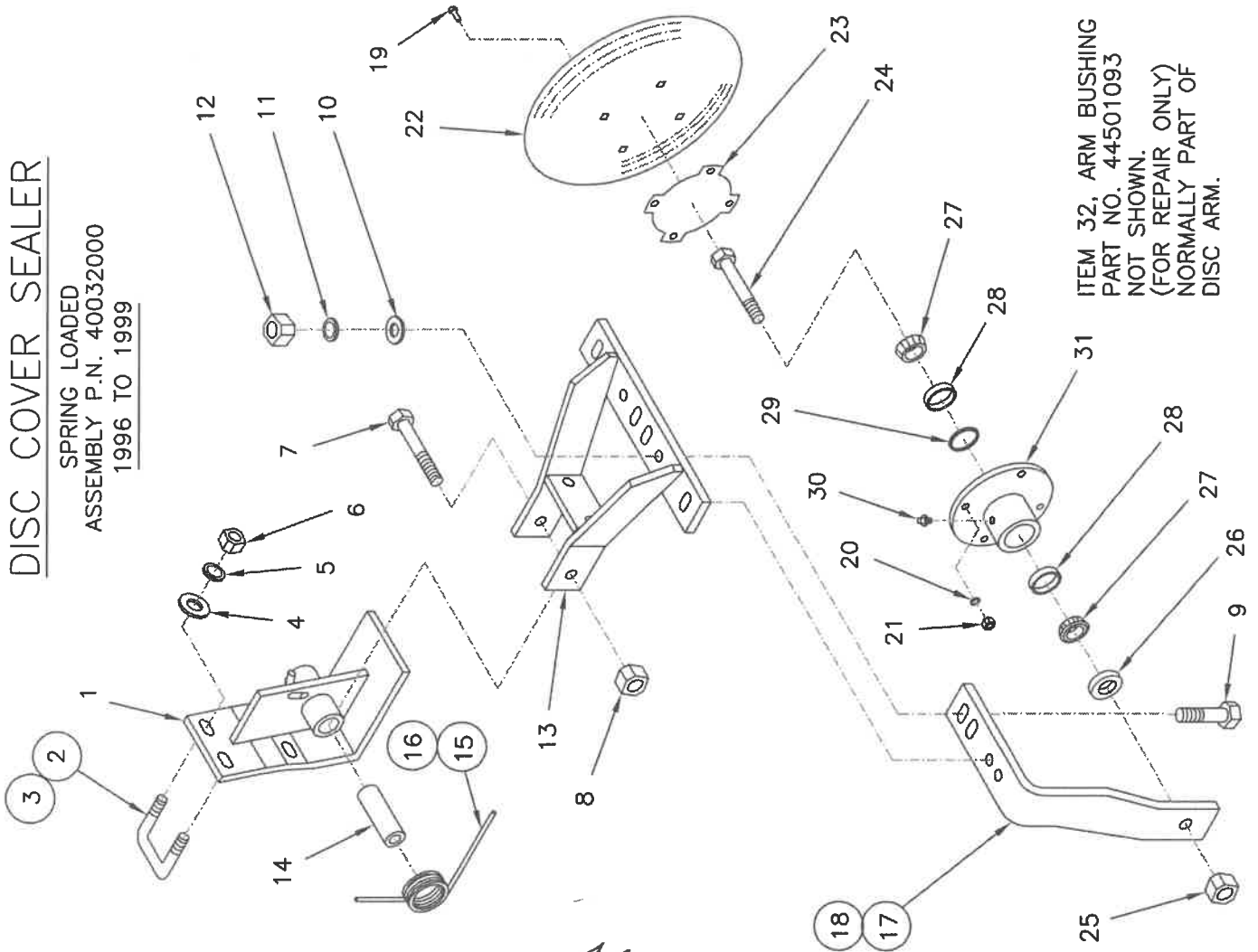
ITEM PART NO.	DESCRIPTION	QTY.
1	47008367 MOUNTING BRACKET	1
2	47008396 U-BOLT, 1/2-13NC. 2 in. SHANK	2
3	47008397 U-BOLT, 1/2-13NC. 1 1/4 in. SHANK	2
4	18811400 FLATWASHER, 1/2	4
5	18891400 LOCKWASHER, 1/2	4
6	18417400 HEX. NUT, 1/2-13NC.	4
7	18057456 BOLT, 1/2-13NC. X 5 1/2	1
8	18457650 HEX. LOCKNUT, 1/2-13NC	1
9	18057430 BOLT, 1/2-13NC. X 2	2
10	18811400 FLATWASHER, 1/2	3
11	18891400 LOCKWASHER, 1/2	2
12	18417400 HEX. NUT, 1/2-13NC.	2
13	47008370 A-FRAME BRACKET	1
14	47008374 INNER BUSHING	1
15	47008375 TORSION SPRING, L.H.	1
16	47008376 TORSION SPRING, R.H.	1
17	47003182 DISC ARM, SINGLE DISC	1
18		
19	18126422 CARRIAGE BOLT, 5/16-18NC. X 1	4
20	18881100 LOCKWASHER, 5/16	4
21	18446400 HEX. NUT, 5/16-18NC.	4
22	44501090 DISC BLADE	1
23	44502547 GASKET, HUB	1
24	18048442 BOLT, 3/4-10NC. X 3 1/2	1
25	18458400 LOCK NUT, 3/4-10NC	1
26	44501164 GREASE SEAL	1
27	44501949 BEARING CONE	2
28	44501910 BEARING RACE (CUP)	2
29	44500175 SNAP RING	1
30	18901805 GREASE ZERK	1
31	44509107 HUB COMPLETE, INCL ITEMS 26 TO 31	1
	44509007 HUB, INCL. ITEMS 29,30 AND 31	1

32 ARM BUSHING
PART NO. 44501093
(FOR REPAIR ONLY)
NORMALLY PART OF
DISC ARM.

DSKCVRD

DOUBLE DISC COVER SEALER

SPRING LOADED
ASSEMBLY P.N. 40032000
1996 TO 1999



ITEM	PART NO.	DESCRIPTION	QTY.
1	47008367	MOUNTING BRACKET	1
2	47008396	U-BOLT, 1/2-13NC. 2 in. SHANK	2
3	47008397	U-BOLT, 1/2-13NC. 1 1/4 in. SHANK	2
4	18811400	FLATWASHER, 1/2	4
5	18891400	LOCKWASHER, 1/2	4
6	18417400	HEX. NUT, 1/2-13NC.	4
7	18057456	BOLT, 1/2-13NC. X 5 1/2	1
8	18457650	HEX. LOCKNUT, 1/2-13NC.	1
9	18057430	BOLT, 1/2-13NC. X 2	4
10	18811400	FLATWASHER, 1/2	4
11	18891400	LOCKWASHER, 1/2	4
12	18417400	HEX. NUT, 1/2-13NC.	4
13	47008370	A-FRAME BRACKET	1
14	47008374	INNER BUSHING	1
15	47008375	TORSION SPRING, L.H.	1
16	47008376	TORSION SPRING, R.H.	1
17	44509038	DISC ARM, L.H.	1
18	44509138	DISC ARM, R.H.	1
19	18126422	CARRIAGE BOLT, 5/16-18NC. X 1	8
20	18881100	LOCKWASHER, 5/16	8
21	18446400	HEX. NUT, 5/16-18NC.	8
22	44501090	DISC BLADE	2
23	44502547	GASKET, HUB	2
24	18048442	BOLT, 3/4-10NC. X 3 1/2	2
25	18458400	LOCK NUT, 3/4-10NC	2
26	44501164	GREASE SEAL	2
27	44501949	BEARING CONE	4
28	44501910	BEARING RACE (CUP)	4
29	44500175	SNAP RING	2
30	18901805	GREASE ZERK	2
31	44509107	HUB COMPLETE, INCL ITEMS 26 TO 31	2
31	44509007	HUB, INCL. ITEMS 29, 30 AND 31	2

ITEM 32, ARM BUSHING
PART NO. 44501093
NOT SHOWN.
(FOR REPAIR ONLY)
NORMALLY PART OF
DISC ARM.

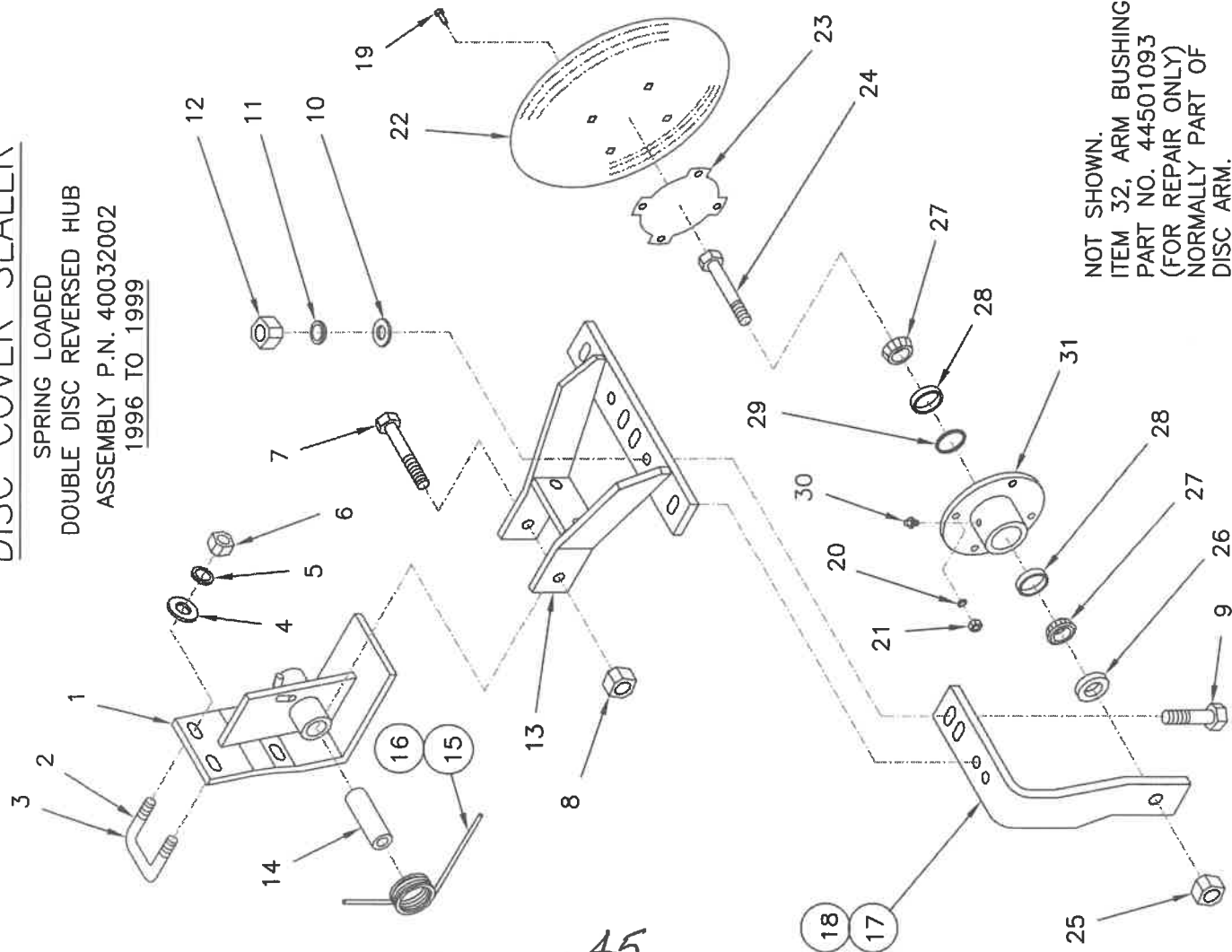
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DSKCVRR

INVERTED DISC COVER SEALER

SPRING LOADED
DOUBLE DISC REVERSED HUB
ASSEMBLY P.N. 40032002
1996 TO 1999



ITEM	PART NO.	DESCRIPTION	QTY.
1	47008367	MOUNTING BRACKET	1
2	47008396	U-BOLT, 1/2-13NC. 2 in. SHANK	2
3	47008397	U-BOLT, 1/2-13NC. 1 1/4 in. SHANK	2
4	18811400	FLATWASHER, 1/2	4
5	18891400	LOCKWASHER, 1/2	4
6	18417400	HEX. NUT, 1/2-13NC.	4
7	18057456	BOLT, 1/2-13NC. X 5 1/2	1
8	18457650	HEX. LOCKNUT, 1/2-13NC	1
9	18057430	BOLT, 1/2-13NC. X 2	4
10	18811400	FLATWASHER, 1/2	4
11	18891400	LOCKWASHER, 1/2	4
12	18417400	HEX. NUT, 1/2-13NC.	4
13	47008370	A-FRAME BRACKET	1
14	47008374	INNER BUSHING	1
15	47008375	TORSION SPRING, L.H.	1
16	47008376	TORSION SPRING, R.H.	1
17	44507101	DISC ARM, L.H.	1
18	44507102	DISC ARM, R.H.	1
19	18126422	CARRIAGE BOLT, 5/16-18NC. X 1	8
20	18881100	LOCKWASHER, 5/16	8
21	18446400	HEX. NUT, 5/16-18NC.	8
22	44501090	DISC BLADE	2
23	44502547	GASKET, HUB	2
24	18048442	BOLT, 3/4-10NC. X 3 1/2	2
25	18458400	LOCK NUT, 3/4-10NC	2
26	44501164	GREASE SEAL	2
27	44501949	BEARING CONE	4
28	44501910	BEARING RACE (CUP)	4
29	44500175	SNAP RING	2
30	18901805	GREASE ZERK	2
31	47007296	HUB COMPLETE, INCL ITEMS 26 TO 31	2
31	47007196	HUB, INCL. ITEMS 29, 30 AND 31	2

NOT SHOWN.
ITEM 32, ARM BUSHING
PART NO. 44501093
(FOR REPAIR ONLY)
NORMALLY PART OF
DISC ARM.

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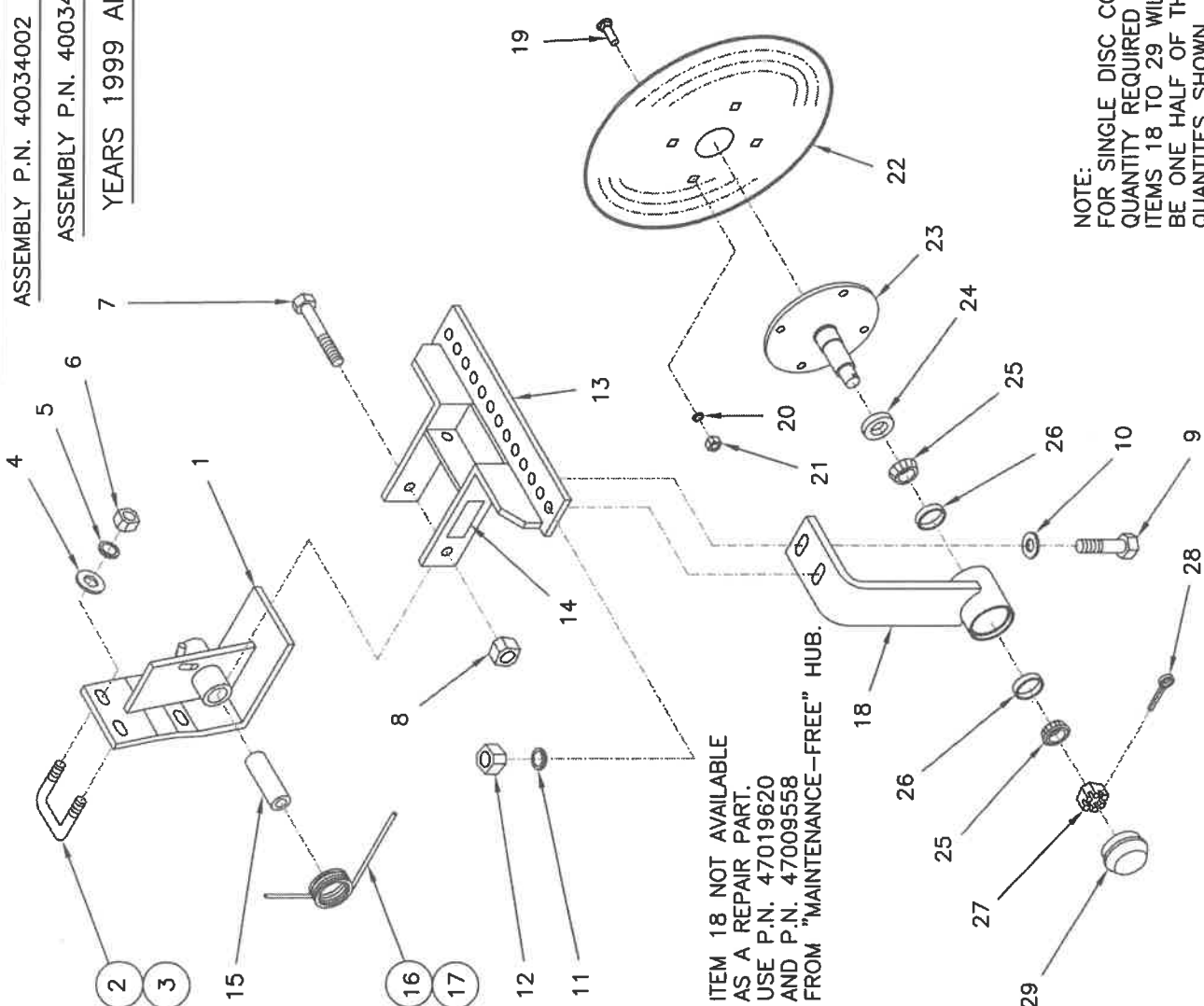
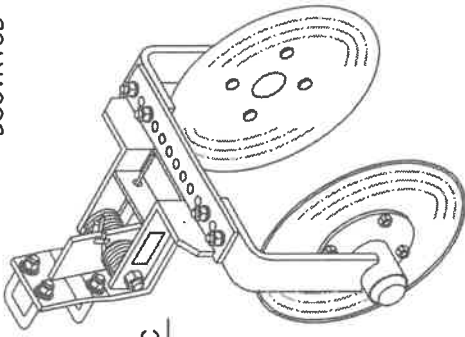
DSCVR13D

DISC COVER SEALER SPRING LOADED

ASSEMBLY P.N. 40034002 SMOOTH 13" DISC DOUBLE DISC

ASSEMBLY P.N. 40034004 SMOOTH 13" DISC SINGLE DISC

YEARS 1999 AND 2000



ITEM PART NO.	DESCRIPTION	QTY.
1	47008367 MOUNTING BRACKET	1
2	47008396 U-BOLT, 1/2-13NC. 2 in. SHANK	2
3	47008397 U-BOLT, 1/2-13NC. 1 1/4 in. SHANK	2
4	18811400 FLATWASHER, 1/2	4
5	18891400 LOCKWASHER, 1/2	4
6	18417400 HEX. NUT, 1/2-13NC.	4
7	18057956 BOLT, 5/8-11NC. X 5 1/2	1
8	18457900 HEX. LOCKNUT, 5/8-11NC.	1
9	18057430 BOLT, 1/2-13NC. X 2	4
10	18811400 FLATWASHER, 1/2	4
11	18891400 LOCKWASHER, 1/2	4
12	18417400 HEX. NUT, 1/2-13NC.	4
13	47019309 DISC ARM FRAME	1
14	97445303 DECAL, "AG SYSTEMS" SMALL	1
15	47009340 INNER BUSHING	1
16	47008375 TORSION SPRING, L.H.	1
17	47008376 TORSION SPRING, R.H.	1
18	47999308 DISC ARM ASSEMBLY	2
19	47009308 INCLUDES ITEMS 18 & 23 TO 29	2
20	18176450 DISC ARM	8
21	18891200 CARRIAGE BOLT, 3/8-16NC. X 1	8
22	18436800 LOCKWASHER, 3/8	8
23	44501310 HEX. NUT, 3/8-16NC	8
24	47009328 DISC BLADE, 13 INCH DIA.	2
25	40030325 SPINDLE WITH FLANGE	2
26	10659 GREASE SEAL	2
27	10658 BEARING CONE	4
28	18488600 BEARING RACE (CUP)	4
29	18560724 SLOTTED NUT, 3/4-16NF.	2
	47005911 COTTER PIN, 5/32 X 1 1/4	2
	40039998 DUST CAP	2
	BOLT PACKAGE INCLUDES ITEMS 4 TO 12 & 19 TO 21	1

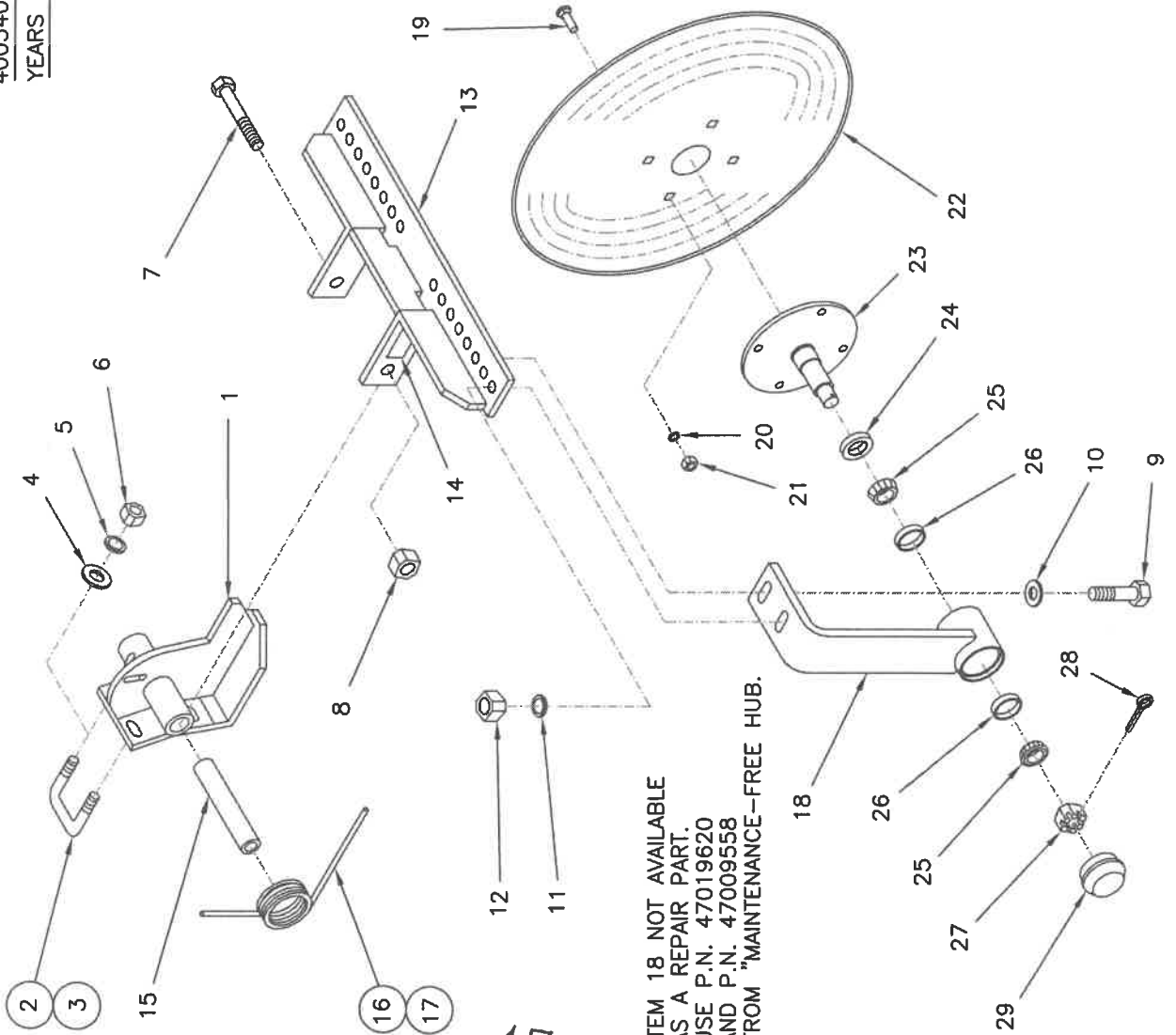
ITEM 18 NOT AVAILABLE AS A REPAIR PART. USE P.N. 47019620 AND P.N. 47009558 FROM "MAINTENANCE-FREE" HUB.

NOTE: FOR SINGLE DISC COVER QUANTITY REQUIRED FOR ITEMS 18 TO 29 WILL BE ONE HALF OF THE QUANTITIES SHOWN

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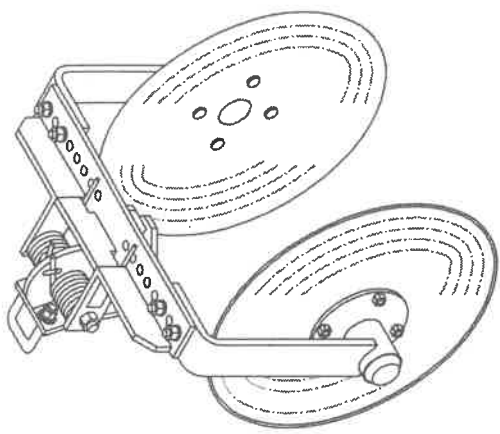
DOUBLE DISC COVER SEALER

SPRING LOADED ASSEMBLY P.N. 40034000 SMOOTH 18" DISC
 40034001 NOTCHED 18" DISC
 YEARS 1999 AND 2000



ITEM 18 NOT AVAILABLE
 AS A REPAIR PART.
 USE P.N. 47019620
 AND P.N. 47009558
 FROM "MAINTENANCE-FREE HUB."

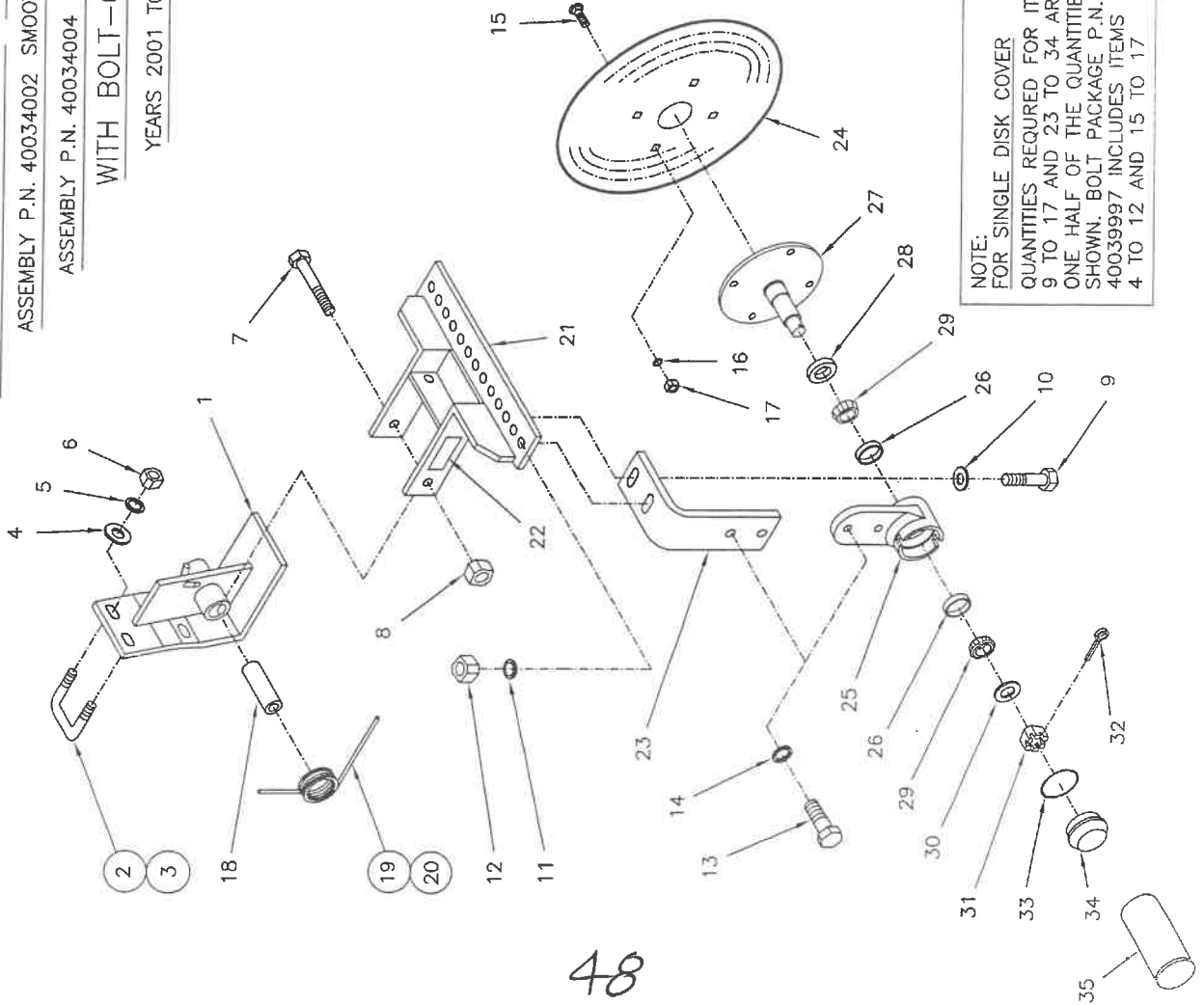
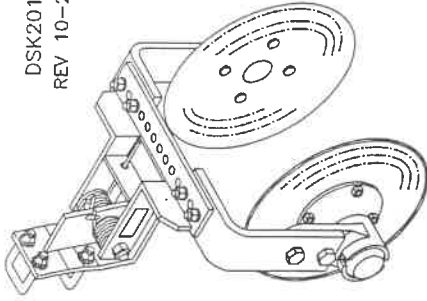
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DESCRIPTION	QTY.
MOUNTING BRACKET	1
U-BOLT, 1/2-13NC. 2 in. SHANK	2
U-BOLT, 1/2-13NC. 1 1/4 in. SHANK	2
FLATWASHER, 1/2	4
LOCKWASHER, 1/2	4
HEX. NUT, 1/2-13NC.	4
BOLT, 5/8-11NC. X 7 1/2	1
HEX. LOCKNUT, 5/8-11NC.	1
BOLT, 1/2-13NC. X 2	4
FLATWASHER, 1/2	4
LOCKWASHER, 1/2	4
HEX. NUT, 1/2-13NC.	4
DISC ARM FRAME	1
DECAL, "AG SYSTEMS" SMALL	1
INNER BUSHING	1
TORSION SPRING, L.H.	1
TORSION SPRING, R.H.	1
DISC ARM ASSEMBLY	1
INCLUDES ITEMS 18 & 23 TO 29	
DISC ARM	2
CARRIAGE BOLT, 3/8-16NC. X 1	8
LOCKWASHER, 3/8	8
HEX. NUT, 3/8-16NC	8
DISC BLADE, SMOOTH EDGE	2
DISC BLADE, NOTCHED EDGE	OPT.
SPINDLE WITH FLANGE	2
GREASE SEAL	2
BEARING CONE	4
BEARING RACE (CUP)	4
SLOTTED NUT, 3/4-16NF.	2
COTTER PIN, 5/32 X 1 1/4	2
DUST CAP	2
BOLT PACKAGE INCLUDES ITEMS 4 TO 12 & 19 TO 21	

DISC COVER SEALER SPRING LOADED

ASSEMBLY P.N. 40034002 SMOOTH 13" DISC DOUBLE DISC
ASSEMBLY P.N. 40034004 SMOOTH 13" DISC SINGLE DISC
WITH BOLT-ON HUB
YEARS 2001 TO PRESENT

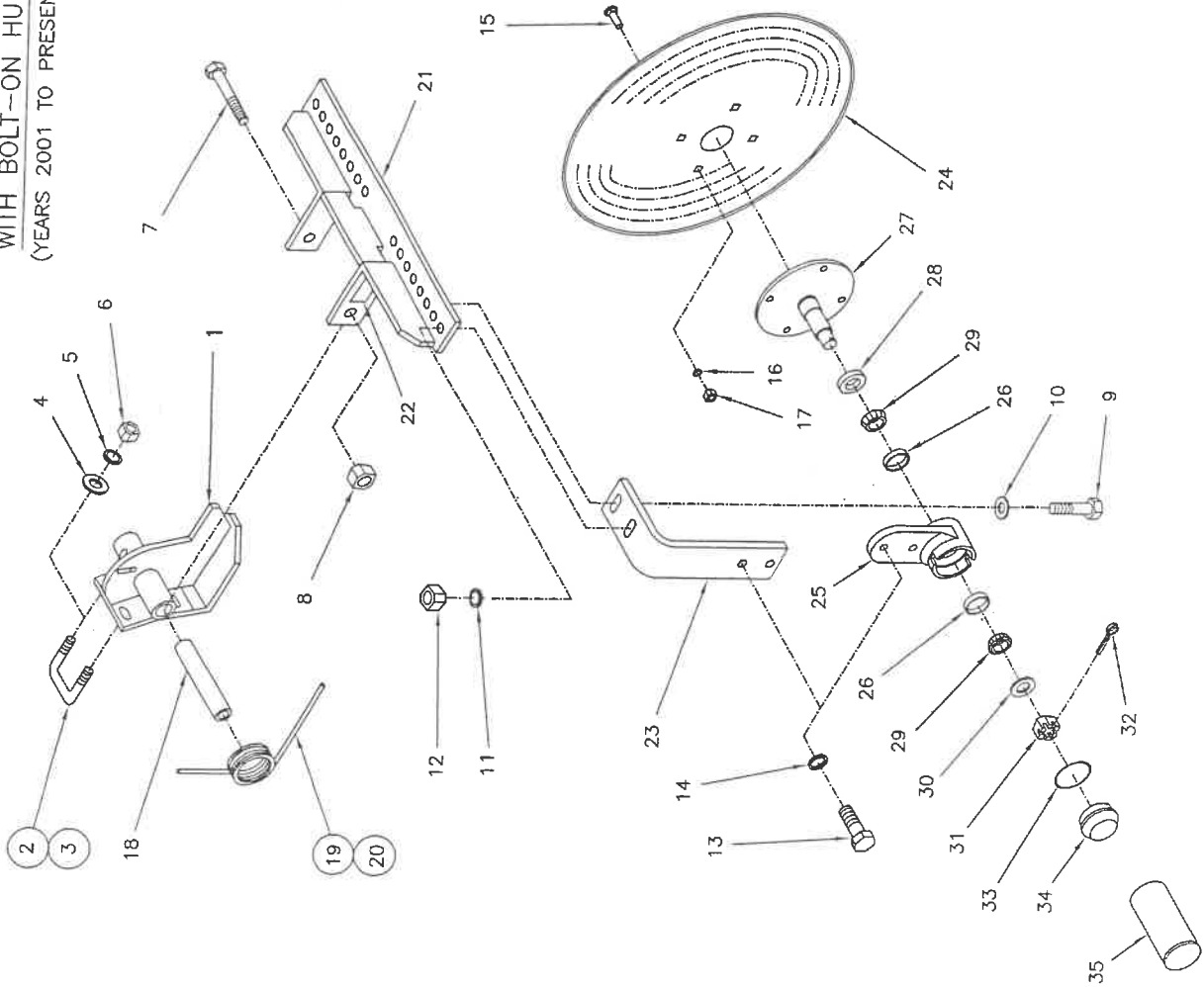


NOTE:
FOR SINGLE DISK COVER
QUANTITIES REQUIRED FOR ITEMS
9 TO 17 AND 23 TO 34 ARE
ONE HALF OF THE QUANTITIES
SHOWN. BOLT PACKAGE P.N.
40039997 INCLUDES ITEMS
4 TO 12 AND 15 TO 17

ITEM PART NO.	DESCRIPTION	QTY.
1	47008367 MOUNTING BRACKET	1
2	47008396 U-BOLT, 1/2-13NC. 2 in. SHANK	2
3	47008397 U-BOLT, 1/2-13NC. 1 1/4 in. SHANK	2
4	18811400 FLATWASHER, 1/2	4
5	18891400 FLATWASHER, 1/2	4
6	18417400 HEX. NUT, 1/2-13NC.	4
7	18057956 BOLT, 5/8-11NC. X 5 1/2	4
8	18457900 HEX. LOCKNUT, 5/8-11NC.	1
9	18057430 BOLT, 1/2-13NC. X 2	4
10	18811400 FLATWASHER, 1/2	4
11	18891400 FLATWASHER, 1/2	4
12	18417400 HEX. NUT, 1/2-13NC.	4
13	18057523 BOLT, 1/2-20NF. X 1 1/4	4
14	18891400 FLATWASHER, 1/2	4
15	18176450 CARRIAGE BOLT, 3/8-16NC. X 1	4
16	18891200 LOCKWASHER, 3/8	8
17	18436800 HEX. NUT, 3/8-16NC.	8
18	47009340 INNER BUSHING	1
19	47008375 TORSION SPRING, L.H.	1
20	47008376 TORSION SPRING, R.H.	1
21	47019309 DISC ARM FRAME	1
22	97445302 DECAL, "AG SYSTEMS" SMALL	1
23	47019620 DISC ARM	1
24	44501310 DISC BLADE, 13 INCH DIA.	2
25	47109558 HUB ASSEMBLY COMPLETE	2
26	47009558 HUB WITH CUPS ITEM 26	2
27	10658 BEARING CUP	4
28	47009328 SPINDLE WITH FLANGE	2
29	40030325 GREASE SEAL	2
30	10659 BEARING CONE	4
31	18841800 FLATWASHER, 3/4 SAE (1 1/2 O.D.)	2
32	18488600 SLOTTED NUT, 3/4-16NF.	2
33	18560722 COTTER PIN, 5/32 X 1	2
34	47999558 O-RING DUST SEAL	2
35	47005911 DUST CAP	2
	40039999 BOLT PACKAGE INCLUDES ITEMS- 4 TO 6, 8 TO 12, AND 15 TO 17	1
	47005502 DUST CAP INSTALLATION TOOL (OPTIONAL)	1

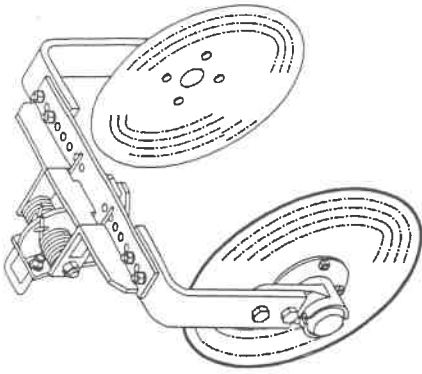
DOUBLE DISC COVER SEALER "SPRING LOADED"

ASSEMBLY P.N. 40034000 SMOOTH 18" DISC
 40034001 NOTCHED 18" DISC
 WITH BOLT-ON HUB
 (YEARS 2001 TO PRESENT)



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DSK201X18
 REV 10-22-09



ITEM	PART NO.	DESCRIPTION	QTY.
1	47019325	MOUNTING BRACKET	1
2	47008396	U-BOLT, 1/2-13NC. 2 in. SHANK	2
3	47008397	U-BOLT, 1/2-13NC. 1 1/4 in. SHANK	2
4	18811400	FLATWASHER, 1/2	4
5	18891400	FLATWASHER, 1/2	4
6	18417400	LOCKWASHER, 1/2	4
7	18057972	HEX. NUT, 1/2-13NC.	4
8	18457900	BOLT, 5/8-11NC. X 7 1/2	1
9	18057430	HEX. LOCKNUT, 5/8-11NC.	1
10	18811400	BOLT, 1/2-13NC. X 2	4
11	18891400	FLATWASHER, 1/2	4
12	18417400	LOCKWASHER, 1/2	4
13	18057523	HEX. NUT, 1/2-13NC. X 1 1/4	4
14	18891400	FLATWASHER, 1/2	4
15	18176450	CARRIAGE BOLT, 3/8-16NC. X 1	4
16	18891200	LOCKWASHER, 3/8	8
17	18436800	HEX. NUT, 3/8-16NC.	8
18	47009320	INNER BUSHING	1
19	47009326	TORSION SPRING, L.H.	1
20	47009327	TORSION SPRING, R.H.	1
21	47009317	DISC ARM FRAME	1
22	97445302	DECAL, "AG SYSTEMS" SMALL	1
23	47009621	DISC ARM	1
24	44501810	DISC BLADE, SMOOTH EDGE	2
OR	44501811	DISC BLADE, NOTCHED EDGE	2
	47109558	HUB ASSEMBLY COMPLETE	OPT.
25	47009558	INCLUDES ITEMS 13 & 14 & 25 TO 34	34
26	10658	HUB WITH CUPS ITEM 26	2
27	47009328	BEARING CUP	4
28	40030325	SPINDLE WITH FLANGE	2
29	10659	GREASE SEAL	2
30	18841800	BEARING CONE	4
31	18488600	FLATWASHER, 3/4 SAE (1 1/2 O.D.)	2
32	18560722	SLOTTED NUT, 3/4-16NF.	2
33	47999558	COTTER PIN, 5/32 X 1	2
34	47005911	O-RING DUST SEAL	2
	40039999	DUST CAP	2
35	47005502	BOLT PACKAGE INCLUDES ITEMS-- 4 TO 6, 8 TO 12, AND 15 TO 17 DUST CAP INSTALLATION TOOL (OPTIONAL)	1

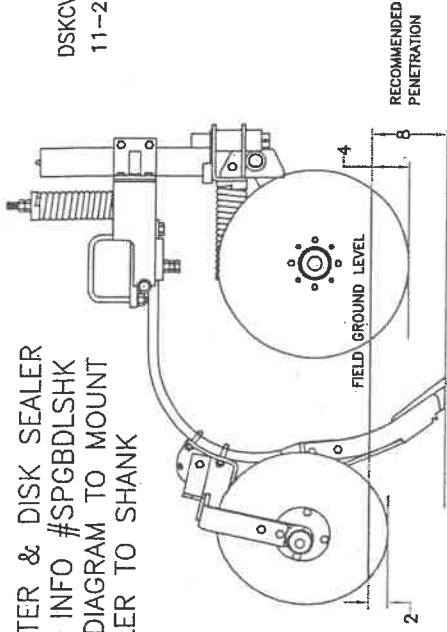
SEE COULTER & DISK SEALER
MOUNTING INFO #SPGBDLSHK
DETAILED DIAGRAM TO MOUNT
DISK SEALER TO SHANK

DSKCYRMT1318
11-28-07

ASSEMBLY INSTRUCTIONS

DISC COVER SEALER

- 13 inch and 18 inch (WITH BOLT-ON-HUB)
- 13 INCH (REFER TO DIAGRAM DSK201X13)
- 18 INCH (REFER TO DIAGRAM DSK201X18)



Your disc cover sealer assembly is partially assembled at the factory. The spindle (item 27) and all hub components are pre-assembled and greased for life.

1. Secure the mounting bracket (item 1) in a vise or assemble to the tool shank or some temporary assembly fixture.
2. Insert the bushing (item 18) into the mounting bracket (item 1). Position the torsion springs (item 19) left hand and (item 20) right hand over the pivot tube on the mounting bracket (item 1). The short legs of the springs should be next to the center gusset on the mounting bracket.
3. Position the disc arm frame (item 21) to the mounting bracket (item 1). Insert the long legs of the torsion springs into the holes in the crossbar on the disc arm frame. Assemble all with the bolt (item 7) and the locknut (item 8). Securely tighten the locknut and bolt so that the inner bushing (item 18) and the disc arm frame rotate as one unit.
4. Increase the tension on the torsion springs by hooking the short leg of the spring behind the retaining lugs welded to the gusset on the mounting bracket. A short length of 3/8 or 1/2 inch pipe will be helpful to bend the spring leg into position behind the lug.
5. Assemble the disc arm (item 23) to the hub assembly with the bolts (item 13) and lock washers (item 14). Secure the disc arm assembly in a vice and assemble the disc (item 24) to the spindle flange with the hardware (items 15, 16 and 17). The disc may be mounted concave to the row or convex (reverse) to the row. There is no difference between left hand or right hand assemblies or single or double disc assemblies.
6. Mount the disc arm assembly to the disc arm frame (item 21) with the bolts (item 9) and the hardware (items 10, 11 and 12) as illustrated with the nut on top of the disc arm frame. The suggested start-up position for a double disc assembly would be to mount the disc arm in the holes in the frame that are farthest to the outside. For a single disc cover or a reversed disc cover, holes farther to the center would be more appropriate. The slotted holes in the disc arm provide the angular adjustment for the disc. Position the disc(s) at the angle desired and securely tighten the hardware.
7. Your disc cover assembly is shipped with (2) U-bolts for a 1 1/4 square shank and (2) U-bolts for a 2 inch wide shank. Select the appropriate U-bolts and mount the disc cover assembly to the shank at the desired operating depth. Securely tighten the hardware.

49A

DOUBLE DISK SEALER ASSEMBLY WITH FLOATING ARMS

ASSEMBLY P.N. 40034010 SMOOTH 18" DISK
40034011 NOTCHED 18" DISK

**KIT TO CONVERT
EXISTING 18 INCH DISK SEALER
TO FLOATING ARM STYLE**
P.N. 47994693
INCLUDES ITEMS 1 TO 10

**CASE/DMI
SHANK
OPTION**

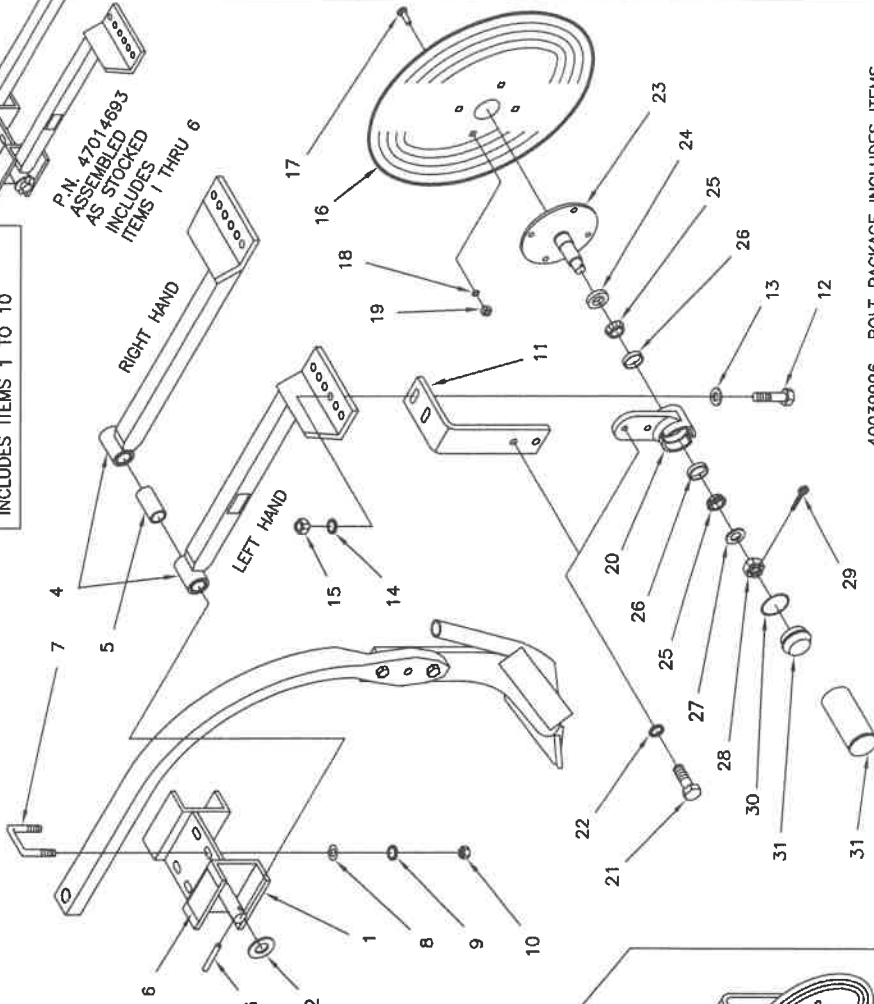
NOTE BRACKET
FLIPPED OVER
FOR ASSY

HOLE MOUNTS TO CASE
OR DMI BUNDLE

VIEW OF COMPLETE
FLOATING ASSEMBLY
WITH CASE/DMI
BUNDLE

P.N. 47014693
ASSEMBLED
AS STOCKED
INCLUDES
ITEMS 1 THRU 6

VIEW OF
COMPLETE FLOATING
ASSEMBLY



ITEM	PART NO.	DESCRIPTION	QTY
1	47004693	MOUNTING BRACKET (W/DECAL)	1
2	18852200	FLAT WASHER, 1" SAE, ZC.	2
3	18511036	EXPANSION PIN, 3/8 X 2 1/4	2
4	47004697	PIVOT ARM, L.H. (INCL ITEM 5)	1
5	47004698	PIVOT ARM, R.H. (INCL ITEM 5)	1
6	47009952	FIBER BUSHING, (1" I.D. X 2 1/2)	2
7	47008396	DECAL, "AG SYSTEMS" SMALL	1
8	18811400	U-BOLT, 1/2-13NC. (2" SHANK)	2
9	18891400	FLAT WASHER, 1/2	4
10	18417400	LOCK WASHER, 1/2	4
11	47009621	HEX NUT, 1/2-13NC.	4
12	18057430	DISK ARM, 1/2-13NC. X 2	2
13	18811400	FLAT WASHER, 1/2	4
14	18891400	LOCK WASHER, 1/2	4
15	18417400	HEX. NUT, 1/2-13NC.	4
16	44501810	OR 44501811 DISK BLADE, SMOOTH EDGE	2
17	18176450	CARRIAGE BOLT, 3/8-16NC. X 1	8
18	18891200	LOCK WASHER, 3/8	8
19	18436800	HEX. NUT, 3/8-16NC.	8
20	47109558	HUB ASSEMBLY COMPLETE INCLUDES ITEMS 20 TO 31	1
21	47009558	HUB WITH CUPS, ITEM 26	2
22	18057523	BOLT, 1/2-20NF. X 1 1/4	4
23	18891400	LOCK WASHER, 1/2	4
24	40030325	SPINDLE WITH FLANGE	2
25	10659	GREASE SEAL	2
26	10658	BEARING CUP	4
27	18841800	FLAT WASHER, 3/4 SAE (1 1/2 O.D.)	4
28	18486600	SLOTTED NUT, 3/4-16NF	2
29	18560722	COTTER PIN, 5/32 X 1	2
30	47999558	O-RING DUST SEAL	2
31	47005911	DUST CAP	2
31A	47005502	DUST CAP INSTALLATION TOOL (OPTIONAL)	1
32	47005794	FLOATING ARM BRKT CASE/DMI SHANK	1
33	47008397	U-BOLT-AG 3 1/2 X 1 5/16 W	2
34	18057428	BOLT, HEX HD. GR5ZC. 1/2 X 1 3/4	4
35	18891400	LOCK WASHER, 1/2	4
36	18417400	HEX. NUT, 1/2-13NC.	4

40039996 BOLT PACKAGE INCLUDES ITEMS
2 & 3, 8 TO 10, 12 TO 15, AND 17 TO 19

50

ASSEMBLY INSTRUCTIONS

FLTGDNST

DISK COVER SEALER

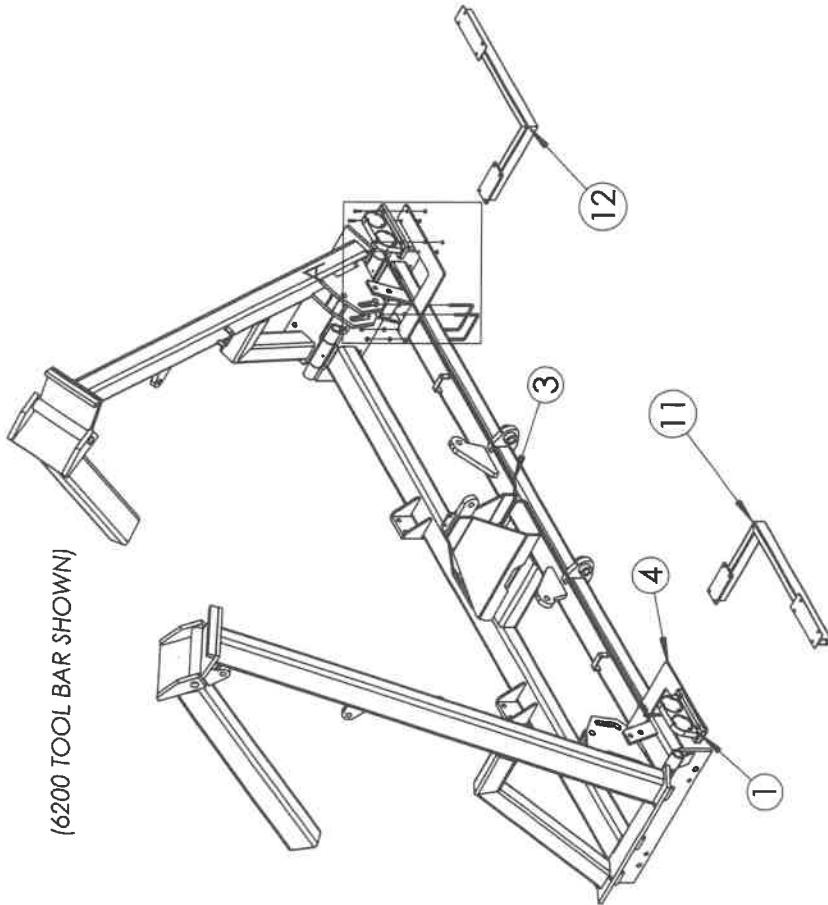
18 INCH WITH FLOATING ARMS

Your disc cover sealer assembly is partially assembled at the factory. The spindle (item 22) and all hub components are pre-assembled and greased for life.

1. Due to the weight of a complete disk sealer assembly, it is recommended that the disk sealer be assembled to a shank already mounted on a toolbar. Position the mounting bracket (item 1) on the bottom side of the shank (as illustrated) and the u-bolt straddling the top of the shank. The mounting bracket should be located on the flat part of the shank. When using the disk sealer with a "Hi-Trip" spring bundle, position the mounting bracket as far forward on the shank as the spring bundle bracket will allow. Securely tighten the hardware.
2. Position the pivot arm (item 4) left hand and right hand, to the mounting bracket (item 1) and assemble with the washers (item 2) and the expansion pins (item 3).
3. Secure the disk arm (item 10) in a vice and assemble the hub assembly to the arm with the bolts (item 21) and lock washers (item 20). Assemble the disk (item 15) to the spindle flange with the bolts (item 16) and hardware items (17 and 18). There is no difference between the left hand and right hand assemblies.
4. Mount the disk arm assemblies to the pivot arms with the bolts (item 11) and the hardware (items 12, 13 and 14) as illustrated with the nut on top of the pivot arm plate. The suggested start-up position would be to mount the disk arm in the holes in the pivot arm plate that are farthest to the outside. The slotted holes in the disk arm provide the angular adjustment for the disk. Position the disks at the desired angle and tighten the hardware securely.

SAFETY LIGHT KIT FOR TOOLBARS

P/N: 47999316

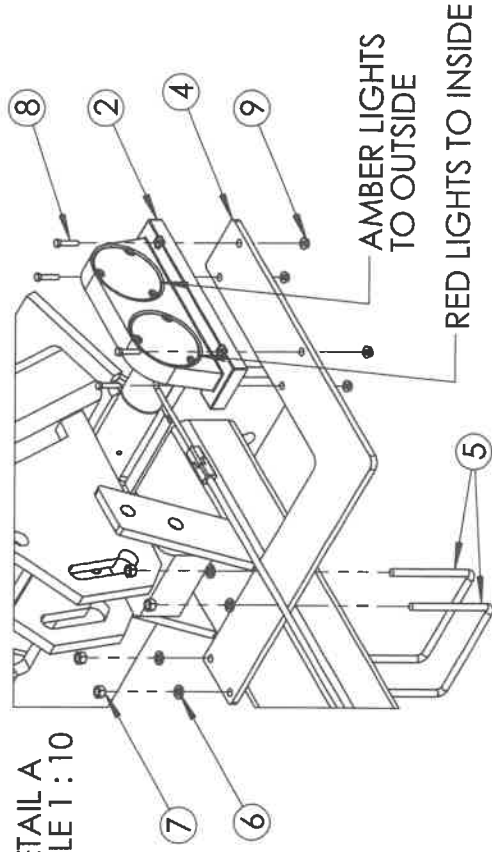


ITEMS 11 AND 12 ARE OPTIONAL

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
11	47009789	LITE BRACKET, LH	1
12	47009790	LITE BRACKET, RH	1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	54209-008	DUAL LAMP ASSY, LH	1
2	54209-022	DUAL LAMP ASSY, RH	1
3	71675	35' HD CABLE WITH 7 PIN PLUG	1
4	47009316	LIGHT MOUNTING BRACKET	2
5	47001028	U-BOLT, 3/8-16NC.	4
6	18891200	LOCKWASHER, 3/8 ZC	8
7	18436800	NUT 3/8 NCZC	8
8	18055724	BOLT HX CAP G5 NCZC 1/4 X 1 1/4	8
9	18495700	NUT HX SER FLG 1/4 NC ZC	8
10	504560	NYLON TIE STRAP	5

DETAIL A
SCALE 1 : 10



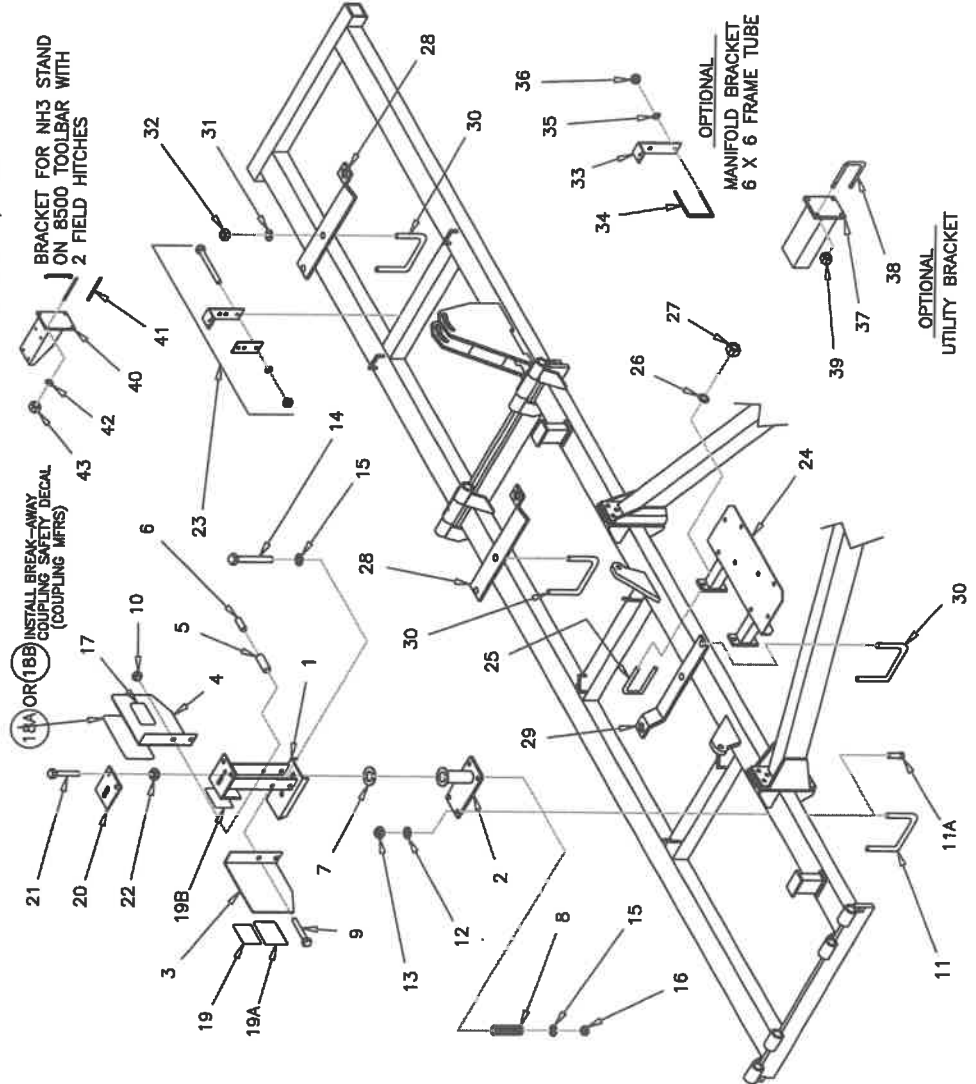
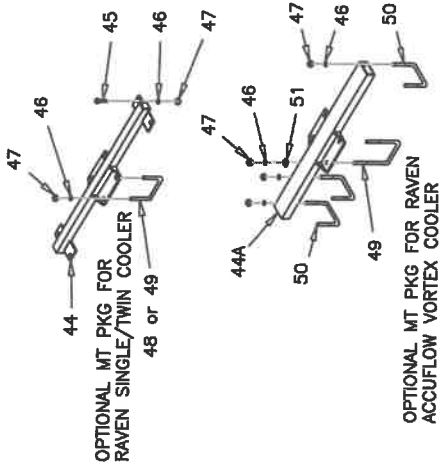
AMBER REPLACEMENT LENS PN 802650
RED REPLACEMENT LENS PN 802651

NH3 APPLICATION OPTIONS
PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	47010175	CENTER MANIFOLD STAND ASSEMBLY COMPLETE	1
2	47010124	UPPER STAND	1
3	47010172	LOWER STAND	1
4	47010129	DECAL WING - LEFT	1
5	47010130	DECAL WING - RIGHT	1
6	47010128	BUSHING TUBE	2
7	47010242	SPACER TUBE	2
8	47010174	SPACER WASHER, SS	1
9	47003898	SPRING, 4.50 LONG	1
10	18056468	BOLT, 5/16-18NC, X 3 1/2	2
11	18496400	FLANGE NUT, 5/16-18NC	2
12	47001028	U-BOLT, 3/8-16NC, (6 X 4 TUBE)	2
13	47009986	U-BOLT, 3/8-16NC, (6 X 6 TUBE)	2
14	47009986	U-BOLT, 3/8-16NC, (6 X 6 TUBE)	2
15	18891200	LOCKWASHER, 3/8	4
16	18436800	HEX NUT, 3/8-16NC	4
17	18057425	BOLT, 1/2-13NC, X 5 1/4	1
18	18811400	WASHER, FLAT, USS 1/2 ZC	1
19	18457650	HEX. NUT, CTR LOCK 1/2-13 ZC	2
20	97445303	DECAL - AG SYSTEMS (SMALL)	1
21	FM125-2000	DECAL - DANGER (FLOWAX)	1
22	90700034	DECAL - DANGER (PIONEER)	1
23	899103	DECAL - OPERATION & MAINT. INSTRUCTIONS	1
24	899102	DECAL - DANGER	1
25	899105	DECAL - SAFETY INSTRUCTIONS	1
26	47010155	CLAMP PLATE	1
27	18056458	BOLT, 5/16-18NC, X 3	3
28	18496400	FLANGE NUT, 5/16-18NC	3
29	70245	MANIFOLD STAND ASSEMBLY	1
30	2-2524	MANIFOLD SUPPORT	1 EACH
31	2-6321	CLAMP PLATE	1 EACH
32	18057456	BOLT, 1/2-13NC, X 5 1/2	2 EACH
33	18891400	LOCKWASHER, 1/2	2 EACH
34	18417400	HEX. NUT, 1/2-13NC	2 EACH
35	OPTIONAL	OPTIONAL	
36	47010236	NH3 CONTROL BRACKET	1
37	47008951	U-BOLT, 5/8-11NC, (6 X 4 TUBE)	2
38	18891600	LOCKWASHER, 5/8	4
39	18417900	HEX. NUT, 5/8-11NC	4
40	OPTIONAL	OPTIONAL	
41	47010381	MANIFOLD SUPPORT (3" OFFSET)	4
42	47010382	MANIFOLD SUPPORT (2" OFFSET)	1
43	47001028	U-BOLT, 3/8-13NC	5
44	18891200	LOCKWASHER, 3/8	10
45	18436800	HEX. NUT, 3/8-16NC	10
46	OPTIONAL	OPTIONAL	
47	47019993	MANIFOLD SUPPORT, (6 X 6 TUBE)	2
48	47019993	MANIFOLD SUPPORT, (6 X 6 TUBE)	2
49	47009986	LOCKWASHER, 3/8	4
50	18891200	HEX. NUT, 3/8-16NC	4
51	18436800	HEX. NUT, 3/8-16NC	4
52	OPTIONAL	OPTIONAL	
53	47004592	UTILITY BRACKET (6 X 6 TUBE)	1
54	47004621	UTILITY BRACKET (UNIV) (6 X 4 TUBE)	2
55	47006950	U-BOLT, 5/8-11NC, (6 X 6 TUBE)	2
56	44001616	U-BOLT, 5/8-11NC, (4 X 4 TUBE)	2
57	47006951	U-BOLT, 5/8-11NC, (6 X 4 TUBE)	2
58	18457900	HEX. LOCKNUT, 5/8-11NC	4
59	18457900	HEX. LOCKNUT, 5/8-11NC	4
60	47004625	STAND MOUNT BRACKET	1
61	47009986	U-BOLT, 3/8-16NC	2
62	18891200	LOCKWASHER, 3/8	4
63	18436800	HEX NUT, 3/8-16NC	4

NH3 DISTRIBUTION
STANDS AND BRACKETS

44	47025077	OPTIONAL MT PKG FOR RAVEN COOLER (8000)	2
45	47005077	BRACKET	8
46	18057926	BOLT, HEX HD 5/8 X 1 1/2 GR5 ZC	16
47	18891600	LOCKWASHER, 5/8 ZC	16
48	18417900	NUT, 5/8 NC ZC	4
49	47010154	U-BOLT 5/8 (fits 4 x 6 tube)	4
44	47015077	OPTIONAL MT PKG FOR RAVEN COOLER (8500)	2
45	47005077	BRACKET	8
46	18057926	BOLT, HEX HD 5/8 X 1 1/2 GR5 ZC	16
47	18891600	LOCKWASHER, 5/8 ZC	16
48	18417900	NUT, 5/8 NC ZC	4
49	47006950	U-BOLT 5/8 (fits 6 x 6 tube)	4
44A	47995838	OPT. MT PKG FOR RAVEN Vortex COOLER (8500)	1
46	47005838	BRACKET (for Raven Accuflow Vortex)	10
47	18891600	LOCKWASHER, 5/8 ZC	10
48	18417900	NUT, 5/8-11 NC ZC	2
49	47006950	U-BOLT 5/8 (fits 6 x 6 tube)	3
50	47015839	U-BOLT 5/8 (fits 2 x 4 tube)	4
51	18811600	FLATWASHER, 5/8 ZC	4



NH3 DISTRIBUTION STAND AND BREAK-AWAY COUPLING
DEVICE INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

NH3STNDKIT2
REV 08-29-12

BREAK-AWAY COUPLING DEVICE & NH3 STAND

THE PURPOSE OF THE BREAK-AWAY COUPLING DEVICE IS THAT IN THE EVENT OF A TRAILING NURSE TANK WAGON BECOMING INADVERTENTLY UNHITCHED AND DISCONNECTED FROM THE TOOLBAR, THE BREAK-AWAY COUPLING IS INSTALLED TO PROVIDE AN AUTOMATIC VALVE CLOSURE TO REDUCE THE AMOUNT OF NH3 THAT IS RELEASED INTO THE AIR AND REDUCE THE HAZARD TO THE TOOLBAR OPERATOR AND OTHERS.

THE NH3 STAND MOUNTS THE BREAK-AWAY COUPLING DEVICE TO THE TOOLBAR SECURELY BUT ALLOWS THE COUPLING DEVICE TO SWIVEL FREELY AND ALLOWS IT TO SAFELY DISCONNECT DURING AN INCIDENT WITHOUT CAUSING DAMAGE TO THE BREAK-AWAY COUPLING DEVICE. THE HOSE OR FITTINGS ATTACHED TO THE COUPLER AT THE SWIVEL BRACKET MUST NOT CATCH ON ANYTHING THAT WOULD PREVENT THE REQUIRED MOVEMENT DURING A PULL-AWAY EVENT.

NH3 STAND/ BREAK AWAY COUPLER INSTALLATION PROCEDURE

1. BOLT THE PRE-ASSEMBLED NH3 STAND ASSEMBLY TO THE REAR OF THE TOOLBAR CENTERED OVER THE FIELD HITCH USING U-BOLTS OR SUPPLIED BRACKETS. SEE YOUR SPECIFIC TOOLBAR MODEL OWNERS MANUAL AND NH3 STAND ILLUSTRATION FOR PARTS REQUIRED. (REF DETAIL A) MAKE SURE THE NH3 STAND DECALS CAN BE EASILY READ FACING THE REAR OF THE TOOLBAR. IMPORTANT! INSTALL THE BREAK-AWAY COUPLING MANUFACTURERS WARNING DECAL ON THE TOOLBAR CENTERED OVER THE FIELD HITCH WHERE IT CAN BE EASILY READ.
2. MOUNT THE BREAK-AWAY COUPLER PER THE INSTRUCTIONS INCLUDED BY THE SPECIFIC COUPLERS MANUFACTURER. THE MOUNTED COUPLER MUST BE ABLE TO FREELY SWIVEL APPROXIMATELY 80 DEGREES TO EACH SIDE AND ABOUT 30 DEGREES UP AND DOWN. (REFERENCE DETAILS B AND C) BE SURE TO READ AND FOLLOW ALL MANUFACTURERS SAFETY PRECAUTIONS. THIS MUST BE DONE SO THE COUPLER WILL BE PRESENTED WITH A STRAIGHT PULL BY THE HOSE IN THE EVENT OF A SITUATION WHERE THE NURSE TANK COMES FREE OF ITS ATTACHMENT TO THE TOOLBAR.

IF THE COUPLER CANNOT SWIVEL PROPERLY, THE HOSE MAY PULL AT AN ANGLE WHICH CAUSES THE SEPARATION FORCE TO INCREASE GREATLY AND MAY BIND THE COUPLER PREVENTING SEPARATION. SINCE PULL AWAY EVENTS OFTEN OCCUR DURING A TURN, THE ABILITY OF THE COUPLER TO SWIVEL IS DESCRIBED AS CRITICAL TO THE OPERATION OF THE BREAK-AWAY COUPLING DEVICE.

ALL PIPING AND VALVES IN THE SYSTEM SHOULD BE ABLE TO WITHSTAND A PULL FORCE GREATER THAN 450 POUNDS. READ ALL MANUFACTURERS OPERATING INSTRUCTIONS AND DECALS BEFORE WORKING WITH ANY CONNECTIONS. READ AND FOLLOW THE BREAK-AWAY DEVICE MANUAL FOR CONNECTION AND DISCONNECTION PROCEDURES AND SAFETY PRECAUTIONS.

SAFETY

WHEN WORKING WITH NH3 CONNECTIONS, WEAR PROTECTIVE CLOTHING, GOGGLES AND GLOVES AND HAVE EMERGENCY WATER AVAILABLE FOR WASHING. ALWAYS STAND ON THE UPWIND SIDE AND AVOID BREATHING IN ANY CHEMICAL VAPORS.

MAINTENANCE

BEFORE EACH USE, VISUALLY INSPECT THE BREAK-AWAY COUPLING FOR LEAKS, DAMAGED OR BROKEN COMPONENTS. ALSO CHECK THAT THE NH3 STAND OPERATES PROPERLY, THAT THE VERTICAL SPRING IS NOT BROKEN, AND ALLOWS FREE SWIVEL MOVEMENT AS SHOWN IN DETAILS B & C AND SPRINGS BACK INTO THE NORMAL OPERATING POSITION AS SHOWN IN DETAIL A. CHECK AND TIGHTEN ALL HARDWARE AS NEEDED. THE BREAK AWAY COUPLING DEVICE SHOULD BE FULLY INSPECTED AT LEAST ONCE A YEAR OR REPLACED OR REPAIRED AS REQUIRED. REPLACE ENTIRE COUPLER BASED ON EXPIRATION DATES ON COUPLER DECALS.

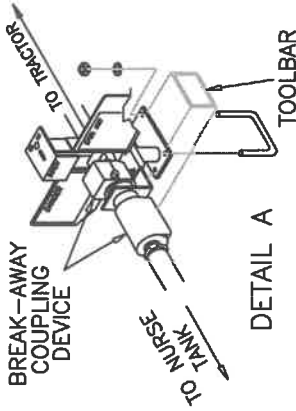
MANUALLY DISCONNECT OR RECONNECT INSTRUCTIONS

DANGER! DO NOT DISCONNECT OR RECONNECT UNDER PRESSURE

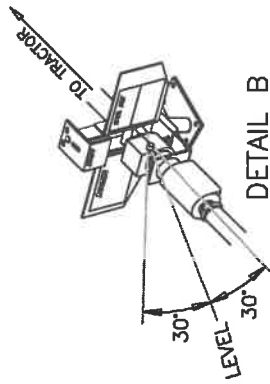
READ AND UNDERSTAND THE BREAK-AWAY COUPLING DEVICE MANUFACTURERS INSTRUCTIONS, WARNINGS AND SPECIFICATIONS BEFORE ATTEMPTING TO MANUALLY DISCONNECT OR RECONNECT THE COUPLING. FOLLOW THE BREAK-AWAY COUPLING DEVICE MANUFACTURERS BLEEDING THE SYSTEM PROCEDURES LISTED IN THEIR OWNERS MANUAL OR ON THEIR DANGER DECAL. ALWAYS WEAR PROTECTIVE GOGGLES, GLOVES, CLOTHING AND HAVE EMERGENCY WATER AVAILABLE FOR WASHING WHEN WORKING WITH NH3. ALWAYS DIRECT BLEEDS AWAY FROM YOUR FACE OR BODY.

WARNING

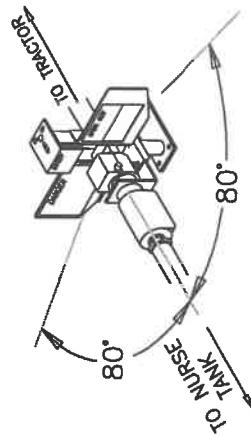
FAILURE TO READ AND UNDERSTAND THE INSTRUCTIONS CONTAINED IN THESE INSTALLATION, OPERATION, AND MAINTENANCE INSTRUCTIONS COULD LEAD TO PROPERTY DAMAGE, SERIOUS INJURY OR DEATH! READ AND UNDERSTAND THE BREAK-AWAY COUPLING AND NH3 STAND MANUFACTURERS MANUALS COMPLETELY.



DETAIL A



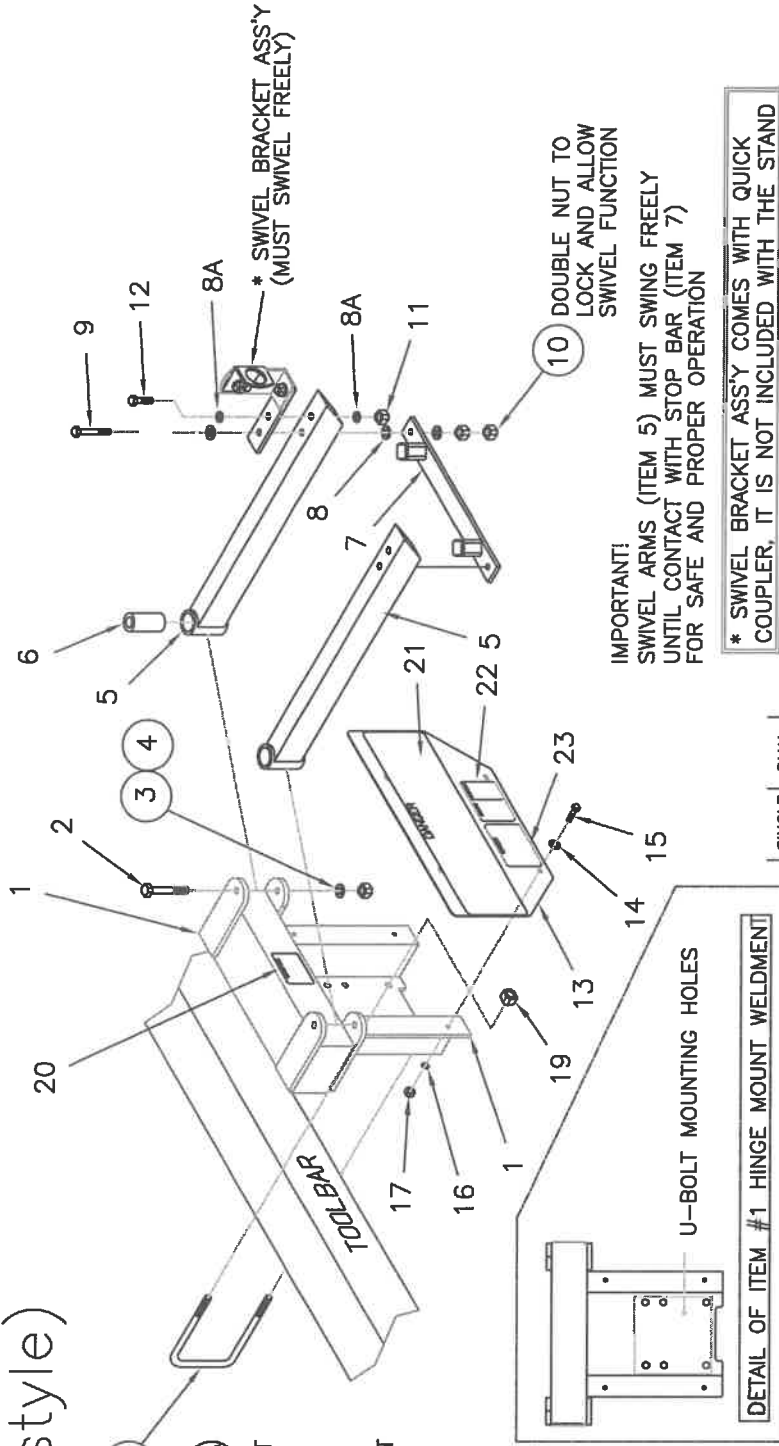
MUST SWIVEL A MINIMUM OF
30° UP AND 30° DOWN
(VERTICAL MOVEMENT)
(SHOWN 30° DOWN)



MUST SWIVEL A MINIMUM OF
80 DEGREES RIGHT AND 80° LEFT
(HORIZONTAL MOVEMENT)

NH3 QUICK COUPLER STAND KIT (2015) for NH3 TOOLBARS (swing arm style)

NH3STND2014
1/6/16



47015908
COMPLETE SINGLE QUICK DISCONNECT BRKT
ASSEMBLY (INCLUDES ITEMS 1 THRU 24)
(FITS 4 X 6 TOOLBAR FRAME ONLY)

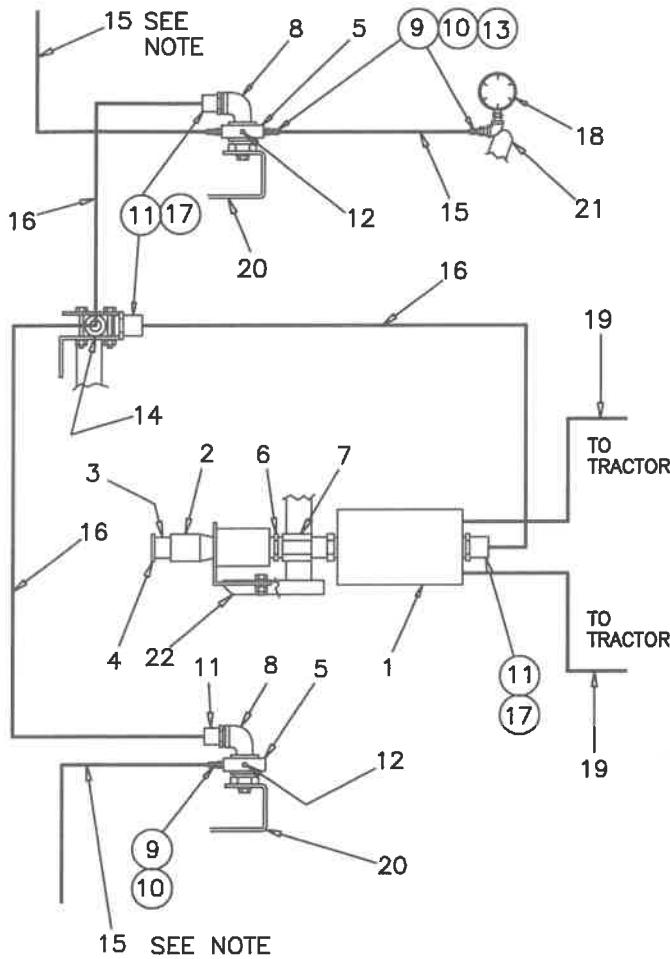
47025908
COMPLETE SINGLE QUICK DISCONNECT BRKT
ASSEMBLY (INCLUDES ITEMS 1 THRU 24)
(FITS 6 X 6 TOOLBAR FRAME ONLY)

47035908
COMPLETE DUAL QUICK DISCONNECT BRKT
ASSEMBLY (INCLUDES ITEMS 1 THRU 24)
(FITS 4 X 6 TOOLBAR FRAME ONLY)

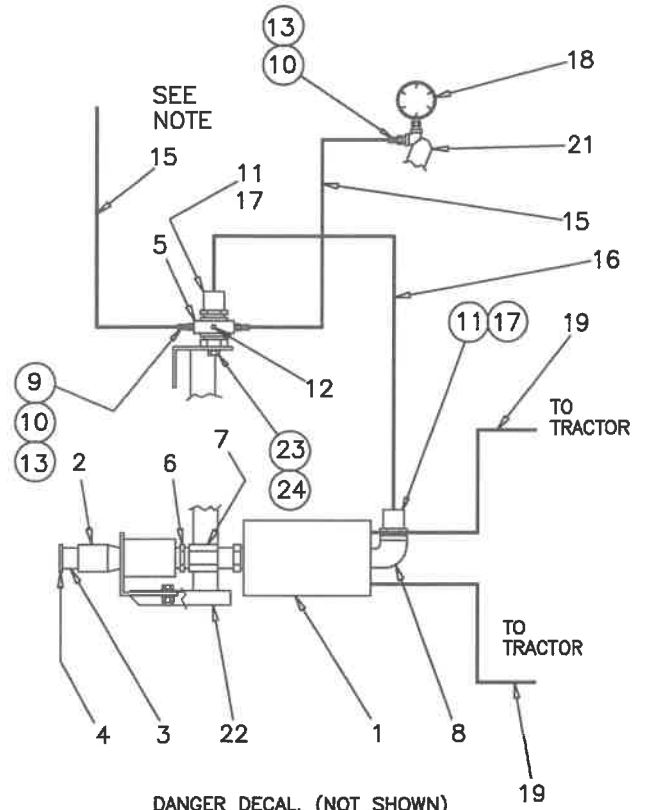
47045908
COMPLETE DUAL QUICK DISCONNECT BRKT
ASSEMBLY (INCLUDES ITEMS 1 THRU 24)
(FITS 6 X 6 TOOLBAR FRAME ONLY)

ITEM	SINGLE QTY	DUAL QTY	PART NO.	DESCRIPTION	ITEM	SINGLE QTY	DUAL QTY	PART NO.	DESCRIPTION
1	1	1	47005908	HINGE MOUNT WELDMENT	14	4	4	18811100	FLATWASHER, USS 5/16 ZC
2	1	2	18058458	BOLT, HEX 3/4 NC X 6 GR5 ZC	15	4	4	18056424	BOLT, HEX 5/16NC X 1 1/4 ZC
3	1	2	18811800	FLATWASHER, 3/4 ZC	16	4	4	18891110	LOCKWASHER, 5/16 ZC
4	1	2	18458400	NUT, CENTER LOCK 3/4 NC ZC	17	4	4	18406400	NUT, HEX 5/16 NC ZC
5	1	2	47005901	SWING ARM WELDMENT	18	2	2	47009847	U-BOLT, 5/8 (fits 6 x 6 tube)
6	1	2	47005904	SWIVEL BUSHING	OR				
7	1	1	47005914	TIE BAR WELDMENT	18A	2	2	47006951	U-BOLT, 5/8 (fits 4 x 6 tube)
8	3	6	18811400	FLATWASHER, 1/2 USS ZC	19	4	4	18417900	NUT, HEX 5/8 NC ZC
8A	2	4	18851400	FLATWASHER, 1/2 SAE ZC	20	1	1	699105	DECAL, SAFETY INSTRUCTIONS
9	-	2	18057454	BOLT, 1/2 NC X 5 LONG GR5 ZC	21	1	1	FM125-2000	DECAL, DANGER,(Flomax coupler safety)
10	-	4	18417400	NUT, HEX 1/2 NC ZC	22	1	1	699103	DECAL, OPER & MAINT. INSTRUCTIONS
11	2	4	18457650	LOCKNUT, HEX 1/2 NC ZC	23	1	1	699102	DECAL, DANGER, (hazard, don't breathe)
12	2	2	18057424	BOLT, 1/2 NC X 1 1/4 LG GR5 ZC					
13	1	1	47005900	DECAL PANEL					

NH3 APPLICATION SCHEMATIC WITH 2 MANIFOLDS



NH3 APPLICATION SCHEMATIC WITH ONE MANIFOLD



DANGER DECAL, (NOT SHOWN) WHICH IS SUPPLIED WITH ITEM 2, (QUICK COUPLER) ATTACH TO FIELD HITCH

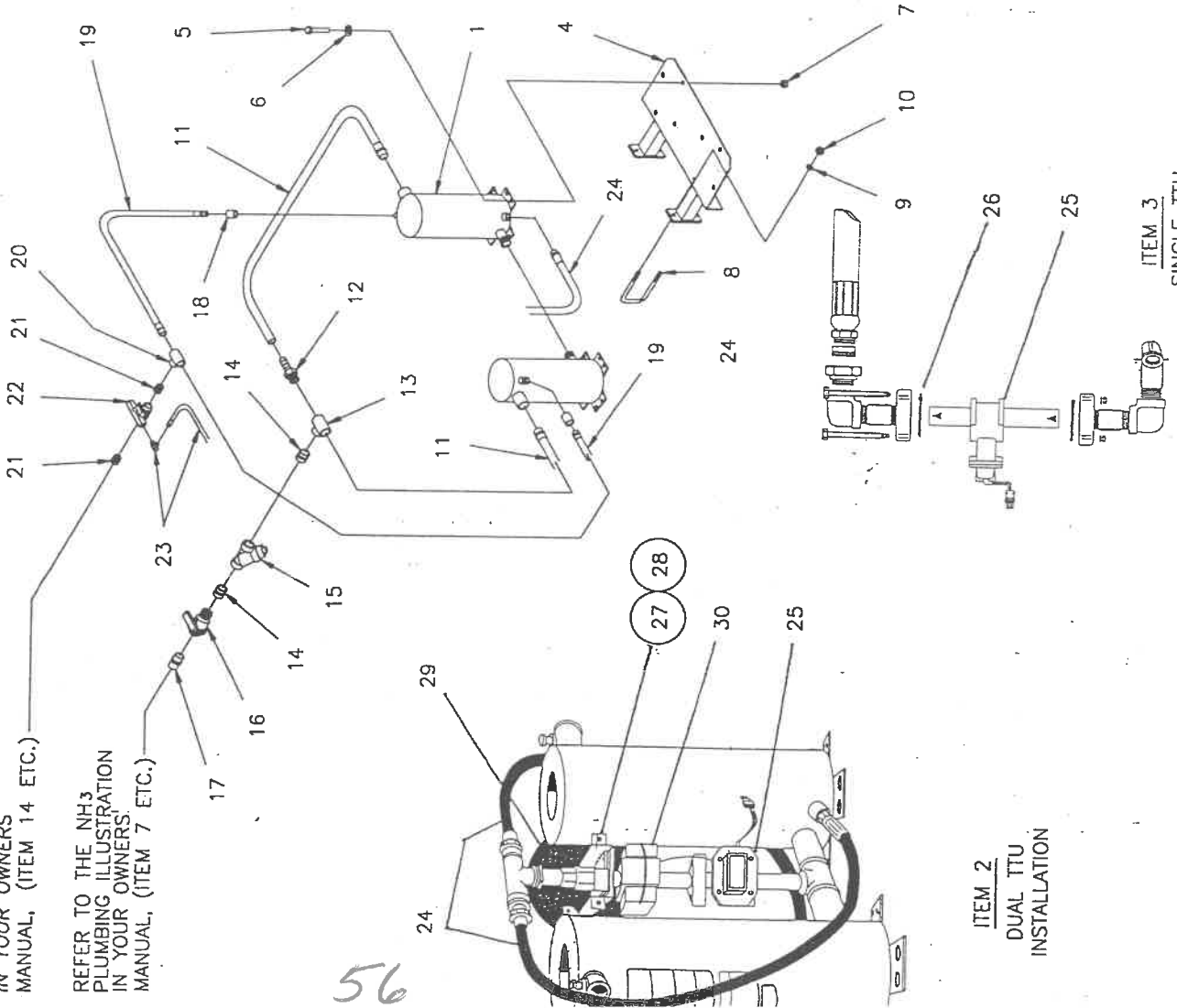
NOTE: FOR ITEM 15 CUT IDENTICAL LENGTHS OF TUBING FOR EACH KNIFE.

ITEM	PART NO.	DESCRIPTION	34 FT. TOOLBAR SHANK SPACING				42 FT. TOOLBAR SHANK SPACING				52 FT. TOOLBAR SHANK SPACING			
			15"	18"	30"	36"	15"	18"	30"	36"	15"	18"	30"	36"
1	100186	B-9500 METER	1 - ALL											
2	100399	QUICK COUPLER	1 - ALL											
3	111430	ACME ADAPTER	1 - ALL											
4	111585	DUST CAP W/CHAIN	1 - ALL											
5	111259	MANIFOLD, 1/4 X 16 PORT	X	X	1	1								
5	100147	MANIFOLD, 1/8 X 18 PORT	2	X	X	X	2	2	1	1	X	2	2	
5	100170	MANIFOLD, 1/8 X 24 PORT	X	1	1	1	X	X	X	X	2	X	X	
6	5404-20	HEX. PIPE NIPPLE, 1 1/4"	1 - ALL											
7	5000-20-HEX	HEX. COUPLING, 1 1/4"	1 - ALL											
8	72306	STREET ELBOW, 1" NPT	2	1	1	1	2	2	1	1	2	2	2	
9	100172	HOSE BARB, 1/8 X 3/8 HOSE	28	24	X	X	36	29	18	16	42	35	22	
10	111510	HOSE BARB, 1/4 X 3/8 HOSE	1	1	15	13	1	1	1	1	1	1	1	
11	200277	HOSE BARB, 1 X 1 HOSE	3	2	2	2	3	3	2	2	3	3	3	
12	72025	PIPE PLUG, 1/8 NPT	8	X	X	X	X	7	X	2	6	1	14	
12	72019	PIPE PLUG, 1/4 NPT	X	X	3	5								
13	602305	HOSE CLAMP, (WIRE TYPE)	56	48	28	24	72	58	36	32	85	70	44	
14	72292	TEE, 1" NPT	1	X	X	X	1	1	X	X	1	1	1	
15	15017005	TUBING 3/8" (FT.=)	325	440	280	240	545	450	440	390	840	700	440	
16	15018576	TUBING 1" (FT.=)	31	3	3	3	31	31	3	3	31	31	31	
17	200252	HOSE CLAMP, (SCREW TYPE)	6	2	2	2	6	6	2	2	6	6	6	
18	100352	GAUGE, (0-60)	1 - ALL											
19	609220	HYD. HOSE, 1/4 X 22 FT.	2 - ALL											
20	70245	MANIFOLD STAND	2	X	X	X	2	2	X	X	2	2	2	
21	47010168	GAUGE BRACKET	1 - ALL											
22	47010175	NH3 STAND ASSEMBLY	1 - ALL											
23	18056822	3/8-16 NC X 1" BOLT	X	X	2	2								
24	18406800	3/8 LOCKWASHER	X	X	2	2								

DICKEY-john TTU ASSEMBLY (THERMAL TRANSFER UNIT)

REFER TO THE NH₃ PLUMBING ILLUSTRATION IN YOUR OWNERS MANUAL, (ITEM 14 ETC.)

REFER TO THE NH₃ PLUMBING ILLUSTRATION IN YOUR OWNERS MANUAL, (ITEM 7 ETC.)



ITEM 2
DUAL TTU
INSTALLATION

ITEM 3
SINGLE TTU
INSTALLATION

ITEM	PART NO.	DESCRIPTION	QTY.
1	457902500A	DICKEY-john THERMAL TRANSFER UNIT, (CANISTER ONLY)	1
2	600906	INSTALLATION KIT WITH FLO-METER	1
3	600910	DICKEY-john SINGLE TTU INSTALLATION KIT WITH FLO-METER SHOWN ARE FOR DUAL TTU INSTALLATION MOUNTING BRACKET COMPLETE INCLUDES ITEMS 4 TO 10	1
4	47010236	TTU MOUNTING BRACKET (DUAL TTU)	1
5	18057424	BOLT, 1/2-13NC. X 1 1/4	4
6	18811400	FLATWASHER, 1/2	4
7	18497400	FLANGE NUT, 1/2-13NC.	4
8	47006951	U-BOLT, 5/8-11NC	2
9	18891600	LOCKWASHER, 5/8	4
10	18417900	HEX. NUT, 5/8-11NC.	4
11	10079004	NH ₃ HOSE ONLY, 1 1/4 I.D. (2 PC. @ 96") ADD HOSE ENDS	16 FT.
12	100375	HOSE END, 1 1/4 HOSE X 1 1/4MPT	4
13	100650	PIPE TEE, 1 1/4 NPT	1
14	100532	CLOSE NIPPLE, 1 1/4 NPT	2
15	100518	IN-LINE STRAINER, 1 1/4 FPT	1
16	20010018	BALL VALVE, 1/4 TURN, 1 1/4 NPT	1
17	5404-20	HEX. CLOSE NIPPLE, 1 1/4 NPT	1
18	100711	PIPE COUPLING, 1" NPT	2
19	10078506	NH ₃ HOSE ONLY, 1" I.D. (2 PC. @ 90") ADD HOSE ENDS (HOSE ENDS 1" X 1" MPT)	15 FT.
20	110100	PIPE TEE, 1" NPT	2
21	72315	CLOSE NIPPLE, 1" NPT	1
22	100530	GROMO VALVE, 1" FPT	2
23	10070	HOSE PACKAGE, INCL. (2) EA. 1/8 HYD. HOSE X 22 FT. PLUS BUSHINGS AND ELBOW FITTINGS	1
24	610264	NH ₃ HOSE, 1" I.D X 30" WITH 1" MPT FITTINGS EACH END	2
25	145404	REPLACEMENT HOSE (INCLUDED IN ITEM 2 OR 3) FLO-METER	1
26	457901610	GASKET, FOR FLO-METER	2
27	457901620	BALL VALVE ASSEMBLY	1
28	98127	BALL VALVE ASSEMBLY	1
29	42786	BALL VALVE COUPLING DISK	1
30	98126	BALL VALVE ACTUATOR	1
	46431-001051	VAPOR DETECTOR	1

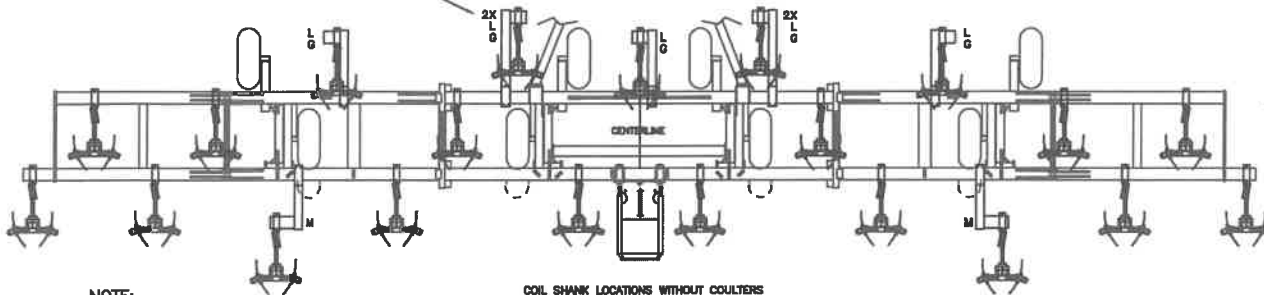
8000 52 FT TOOLBAR (STANDARD)

30 INCH SPACING, ODD NUMBER OF ROWS WITH 18 INCH DISK COVERS

IN MANUAL

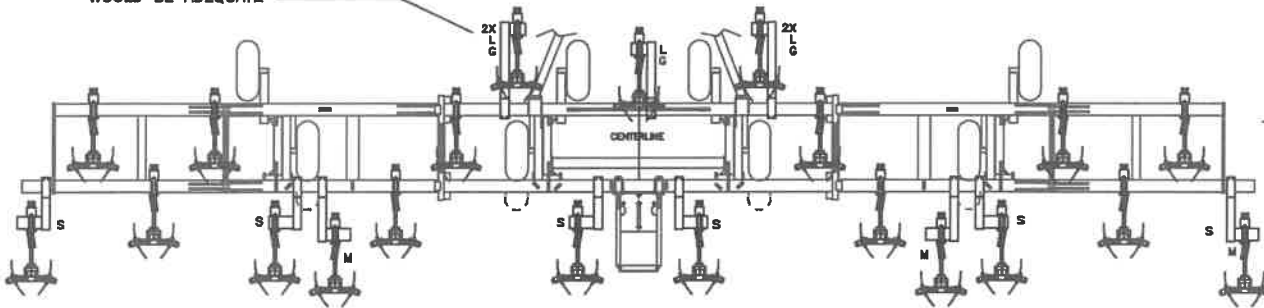
BK30STD
REVJAD3

NOTE:
FOR 13" DISKS, EXTRA-LONG BRACKETS
WOULD BE ADEQUATE



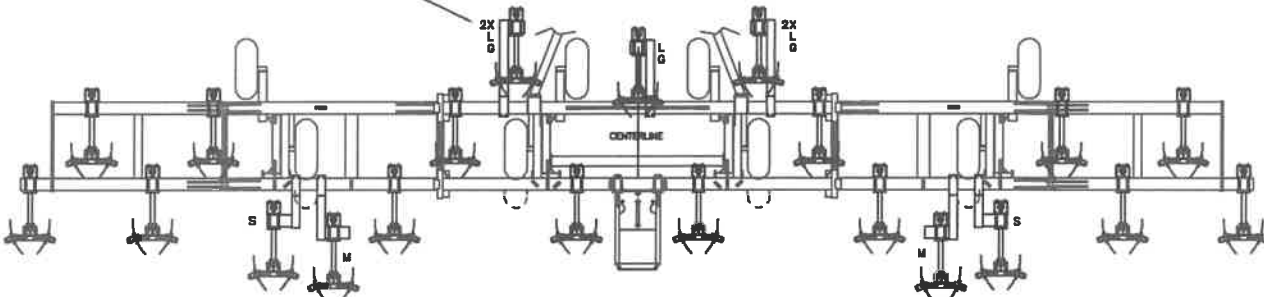
STAGGER BRACKETS
QTY 2 MEDIUMS
QTY 2 LONGS
QTY 2 2XLG

NOTE:
FOR 13" DISKS, EXTRA-LONG BRACKETS
WOULD BE ADEQUATE



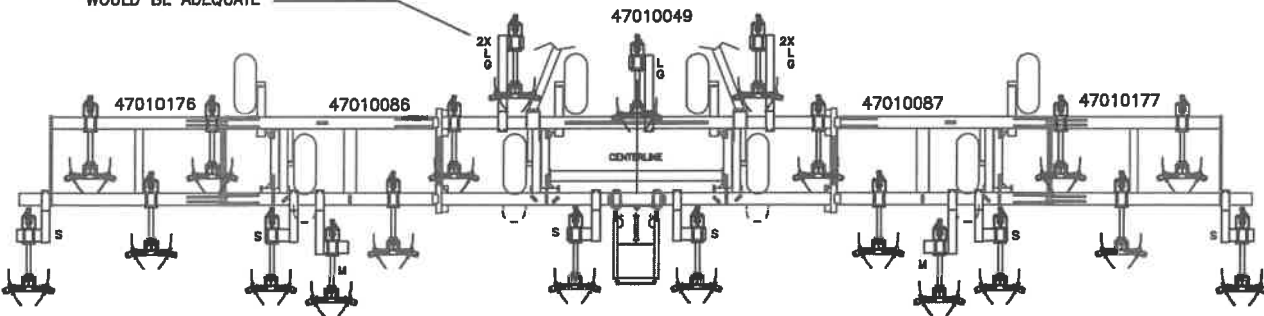
STAGGER BRACKETS
QTY 6 SHORTS
QTY 2 MEDIUMS
QTY 1 LONG
QTY 2 2XLG

NOTE:
FOR 13" DISKS, EXTRA-LONG BRACKETS
WOULD BE ADEQUATE



STAGGER BRACKETS
QTY 2 SHORTS
QTY 2 MEDIUMS
QTY 1 LONG
QTY 2 2XLG

NOTE:
FOR 13" DISKS, EXTRA-LONG BRACKETS
WOULD BE ADEQUATE



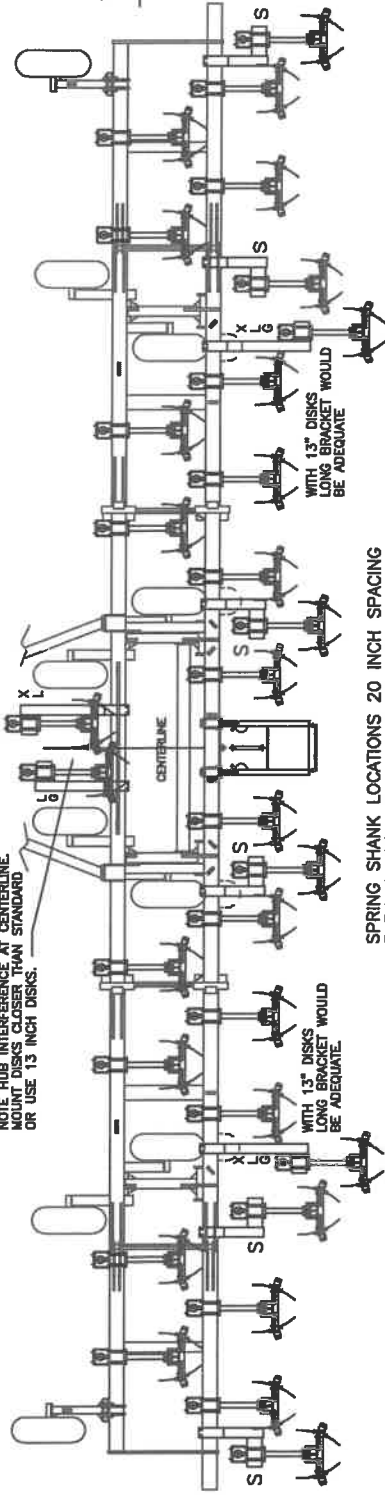
STAGGER BRACKETS
QTY 6 SHORTS
QTY 2 MEDIUMS
QTY 1 LONG
QTY 2 2XLG

8000 TOOLBAR (SPECIAL) SHANK ARRANGEMENTS

IN MANUAL

8KSPCL1
REV0603

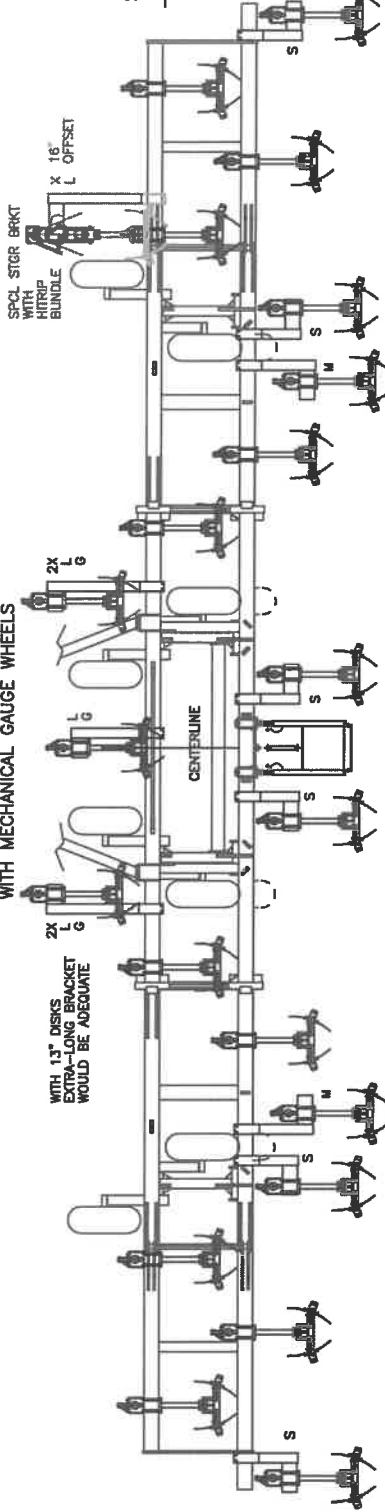
NOTE: HUB INTERFERENCE AT CENTERLINE.
MOUNT DISKS CLOSER THAN STANDARD
OR USE 13 INCH DISKS.



STAGGER BRACKETS
(52 FT TOOLBAR)

QTY 6 SHORTS
QTY 1 LONG
QTY 3 XTRA-LONG

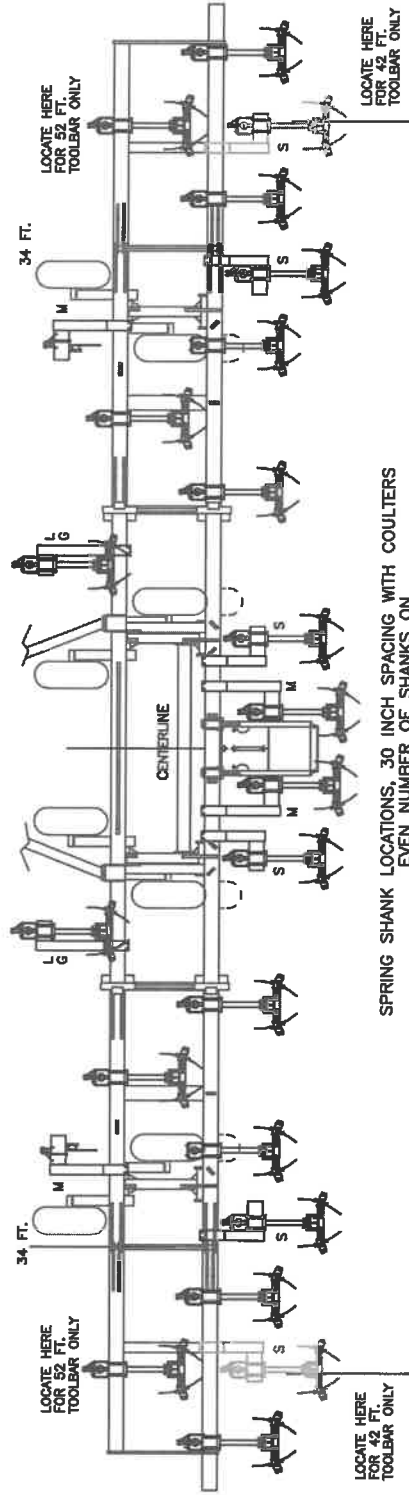
SPRING SHANK LOCATIONS 20 INCH SPACING
EVEN NUMBER OF SHANKS, 52 FT. TOOLBAR
WITH MECHANICAL GAUGE WHEELS



STAGGER BRACKETS
(52 FT TOOLBAR)

QTY 6 SHORTS
QTY 1 LONG
QTY 3 XTRA-LONG

SPRING SHANK LOCATIONS, 30" SPACING WITH COULTERS
FOR 52 FT. TOOLBAR WITH HYDRAULIC GAUGE WHEELS



STAGGER BRACKETS
(52 FT TOOLBAR)

QTY 6 SHORTS
QTY 4 MEDIUMS
QTY 2 LONGS

SPRING SHANK LOCATIONS, 30 INCH SPACING WITH COULTERS
EVEN NUMBER OF SHANKS ON
32 FT. 42 FT. OR 52 FT. TOOLBAR

END OF 42 FT. TOOLBAR

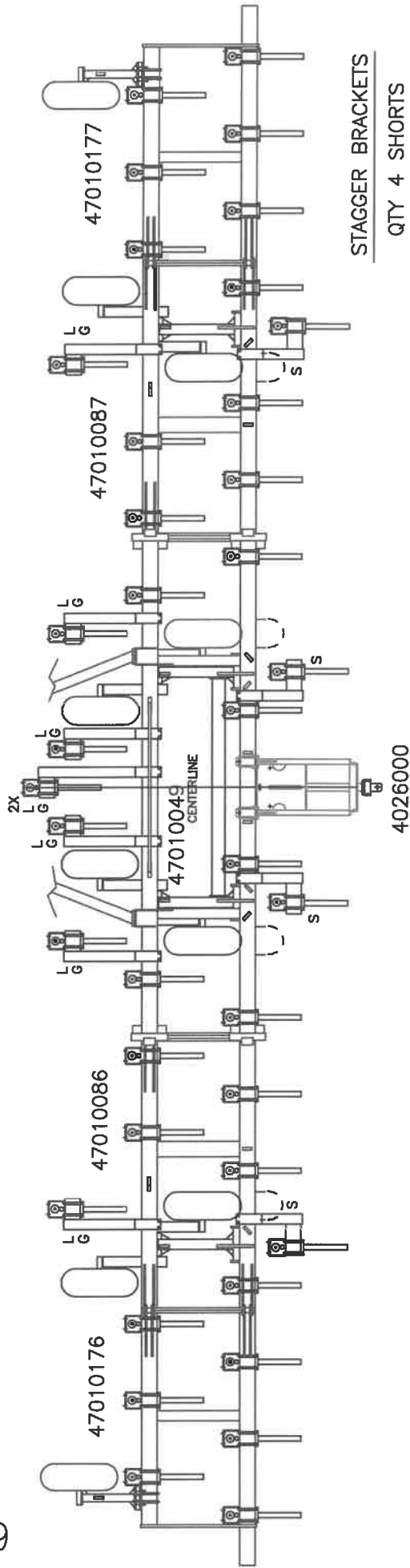
END OF 42 FT. TOOLBAR

8000 TOOLBAR (52 FT TOOLBAR)

IN MANUAL

39 ROWS AT 15 INCH SPACING
SPRING SHANK LOCATIONS WITHOUT COULTERS
WALKERS ON CENTER & PRIMARY WINGS
AND MANUAL GAUGE WHEELS ON SECONDARY WINGS

8K15X39SBSFH
PRO 04-22-11



WITH OPTIONAL SINGLE DELUXE FIELD HITCH

(NOTE: MOUNTING DISK COVERS AT 15 INCH SPACING IS NOT RECOMMENDED)

8000 TOOLBAR

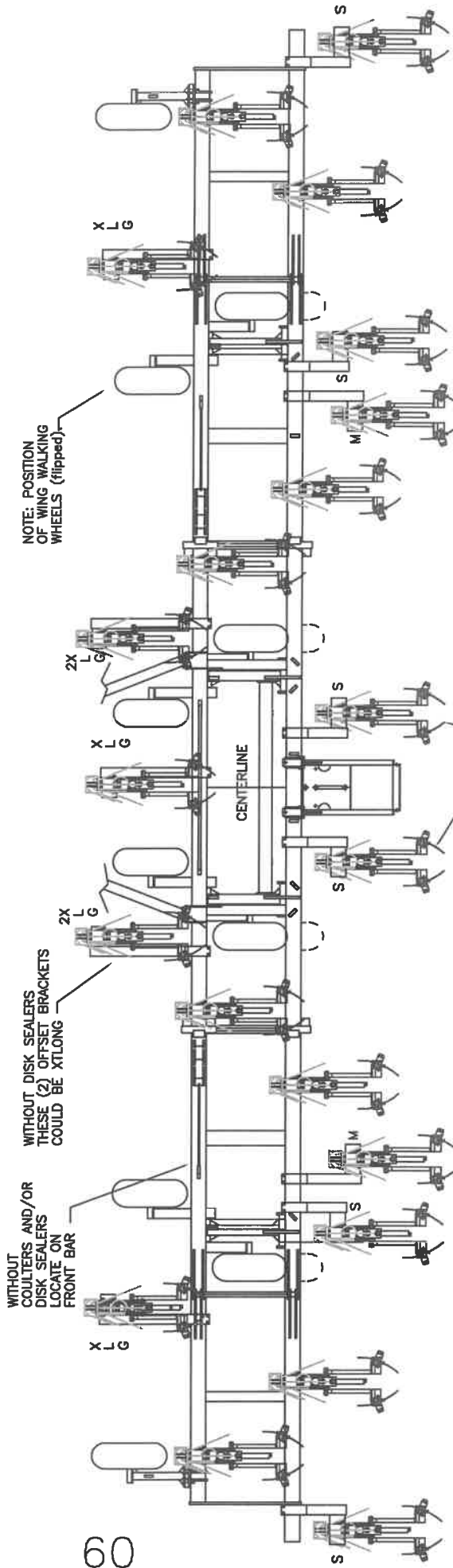
W/ HI-TRIP BUNDLES

30 INCH SPACING, 21 ROWS

WITH COULTERS AND DISK SEALERS AND FLOATING ARMS

IN MANUAL

8K30HTRP
 REV. A 08/01/07
 REV. B 04/22/08
 08-25-11
 REV. C 11-08-11

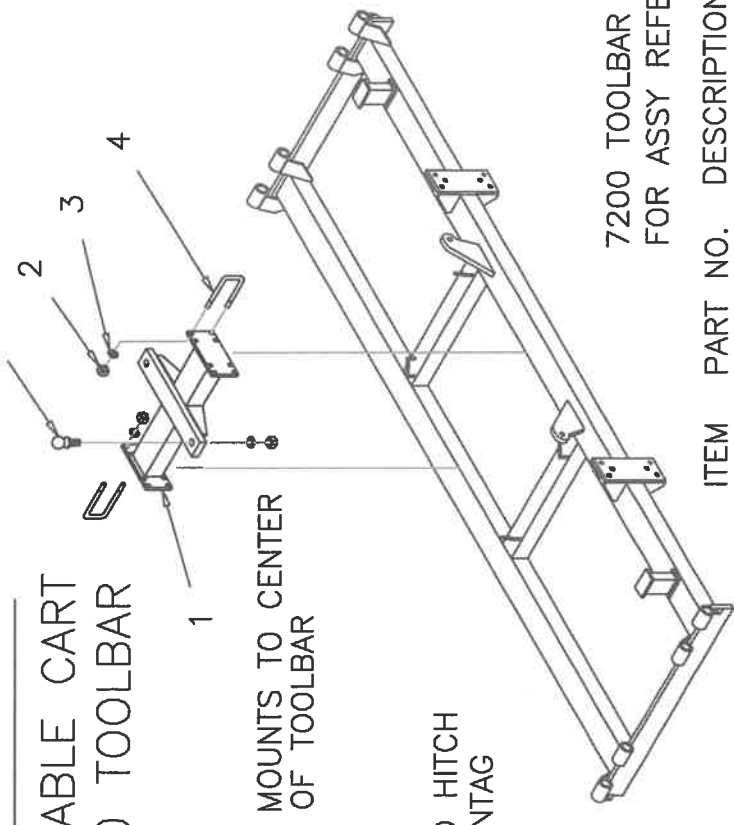


STAGGER BRACKETS

- QTY 6 SHORTS
- QTY 2 MEDIUMS
- QTY 3 XLG
- QTY 2 2XLG

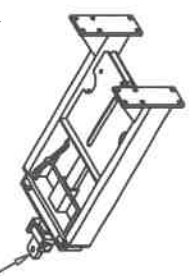
ON UNITS WITHOUT COULTERS
 LOCATE THESE 2 BUNDLES
 ON THE CENTER SECTION
 WITHOUT OFFSET BRACKETS

TWIN BALL HITCH MOUNT
FOR MONTAG STEERABLE CART
ON A 7200 OR 8000 TOOLBAR



MOUNTS TO CENTER
OF TOOLBAR

6 AG26 MONTAG CART FIELD HITCH
MOUNTS TO REAR OF MONTAG
STEER CART ONLY



FOR MONTAG CART FIELD HITCH
SERVICE PARTS SEE SEPARATE
ILLUSTRATION "AG26 MONTAG"

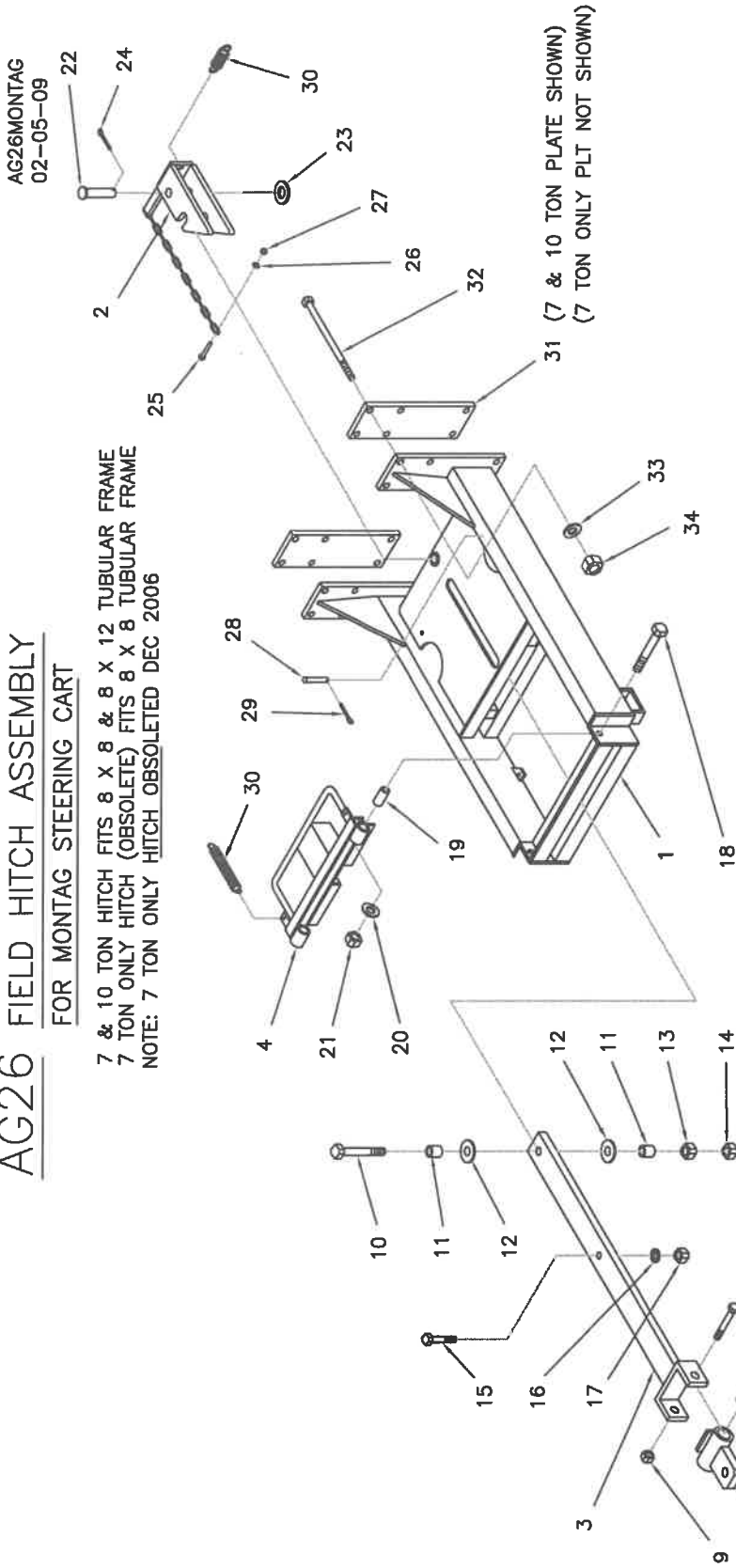
7200 TOOLBAR SHOWN
FOR ASSY REFERENCE ONLY

ITEM	PART NO.	DESCRIPTION	QTY
1	47995298	32" BALL HITCH ASSY (INCLUDES ITEMS 1 TO 4)	1
2	47005298	32" BALL HITCH WELDT (FITS AG SYSTEMS 7200/8000)	1
3	18417900	HEXNUT, 5/8	16
4	18891600	LOCKWASHER, 5/8	16
5	47007083	U-BOLT, 5/8 (7200)	8
6	47002516	HITCH BALL W HARDWARE (included with Montag Autosteer cart)	2
		FIELD HITCH (separate item)	

AG26 FIELD HITCH ASSEMBLY

FOR MONTAG STEERING CART

7 & 10 TON HITCH FITS 8 X 8 & 8 X 12 TUBULAR FRAME
 7 TON ONLY HITCH (OBSOLETE) FITS 8 X 8 TUBULAR FRAME
 NOTE: 7 TON ONLY HITCH OBSOLETE DEC 2006



ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	40269900	HITCH ASSY (7 TON ONLY) OBS 2006	1	15	18058430	BOLT, 3/4-10 NC. X 2	1
2	40268599	HITCH ASSY (7 & 10 TON) COMPLETE	1	16	18891800	LOCKWASHER, 3/4	1
3	40269901	INCLUDES ITEMS, 1 THRU 34	1	17	18418400	HEX. NUT, 3/4-10NC.	1
4	40269901	HITCH ASSY, (7 TON ONLY) LESS MTG	1	18	18057940	BOLT, 5/8-11NC. X 3 1/2	2
5	40268598	BOLTS OBSOLETE 2006	1	19	47009877	PIVOT BUSHING,	2
6	47005153	HITCH ASSY, (7 & 10 TON) LESS MTG	1	20	18851600	FLATWASHER, 5/8, 10MM I.D. SAE.	2
7	47008919	BOLTS INCLUDES ITEMS, 1 THRU 30	1	21	18457900	LOCKNUT, 5/8-11NC.	2
8	47008920	MAIN FRAME, 7 TON ONLY	1	22	18541551	CATCH PIVOT PIN,	1
9	47008852	MAIN FRAME, 7 & 10 TON MONTAG	1	23	18842200	FLATWASHER, 1", SAE X 4	1
10	47008853	DRAWBAR CATCH	1	24	18560826	COTTER PIN, 3/16 X 1 1/2	1
11	47008854	DRAWBAR (SEE NOTE 1)	1	25	18055722	BOLT, 1/4-18NC. X 1	1
12	47008854	DRAWBAR LOCK	1	26	18891000	LOCKWASHER, 1/4 NOM. I.D.	1
13	47008914	DRAWBAR HITCH,	1	27	18435700	HEX. NUT, 1/4-18NC.	1
14	47008918	INCLUDES ITEMS, 6 AND 7	1	28	18541147	CLEVIS PIN, 5/16 X 2 1/4	1
15	47008919	FIBER BUSHING	2	29	18560622	COTTER PIN, 1/8 X 1	1
16	47008920	SPACER BUSHING	1	30	000018	EXTENSION SPRING	3
17	18459000	SPECIAL BOLT, 1-8NC. X 6 7/8	1	31	47005155	CLAMPING PLATE (7 TON ONLY)	2
18	18098539	HEX. LOCKNUT, 1-8NC.	1			CLAMPING PLATE (7 & 10 TON)	2
19	18098539	BOLT, 7/8-9NC. X 5 1/2	1				
20	47009459	CATCH BUSHING, 7/8 I.D.	1				
21	18852400	FLATWASHER, 1 1/4 NOM. I.D. (SAE)	2				
22	18417800	HEX. NUT, 7/8-9NC.	1				
23	18458000	LOCKNUT, 7/8-9NC.	1				
24	40269998	BOLT PKG. INCL. ITEMS 32 THRU 34	1				
25	18058486	BOLT HEX 3/4-10 X 1 1/2 GR 5	8				
26	18891800	LOCKWASHER, 3/4 NOM. I.D.	8				
27	18418400	HEX. NUT, 3/4-10NC.	8				

