

Heartland
AG SYSTEMS
EQUIPMENT

NITROMASTER TOOLBAR 7200 SERIES

**OWNERS MANUAL
ASSEMBLY INSTRUCTIONS
AND PARTS LIST
OM-7200**

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.

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

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.

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

PLEASE FILL OUT THIS SHEET AND RETURN TO HEARTLAND AG SYSTEMS
1180 State Highway 7 East Hutchinson, MN 55350



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7200CNT08
11/10/20

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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 _____

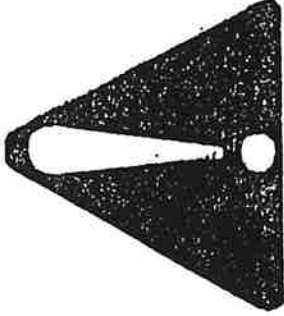
SERIAL NUMBER _____

DATE PURCHASED _____

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

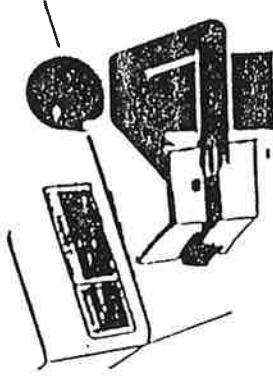
RECOGNIZE SAFETY INFORMATION

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

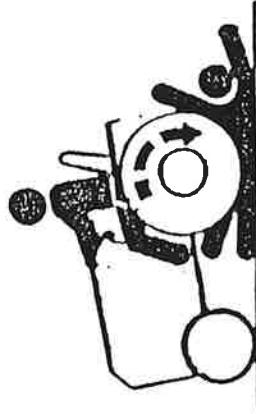
Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs.



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

6

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

PART # 699107



PART # 9744503



PART #699105

SAFETY INSTRUCTIONS

1. SAFETY DECAL PANELS must be in place and understood before operating this equipment.

2. Evacuate NHs from entire system, including ball valves, before servicing.

3. Replace outdated or damaged hoses and parts before each use.

4. Read and understand owner's manual before operating this equipment.

699105

PART #699102

HAZARDOUS PRESSURE
Have emergency WATER available.

DANGER

DO NOT breathe the vapor.

WEAR GOGGLES and GLOVES to operate or service.

FAILURE TO FOLLOW THESE INSTRUCTIONS WILL RESULT IN SERIOUS INJURY OR DEATH

699102

PART #699103

OPERATION INSTRUCTIONS

- Wear GOGGLES and GLOVES. Have EMERGENCY WATER available.
- Refer to step one. Stand on levelled side. CROSS all valves. Then open bleed. DIRECT BLEED SPRAY will be directed at the operator. This may cause an obstructed and flow from bleed has stopped.
- Use proper hand placement. Use correct connection from coupler.
- TO CONNECT:
 - Refer to step one. Screw across coupler.
 - Check hose connections to coupler.
 - If coupler is not connected, insert nipple into coupler body and push firmly. Check hose tank, hose to insure proper connection.

DAILY MAINTENANCE

Failure to follow these instructions may cause hazardous ammonia spray.

- Wear GOGGLES and GLOVES. Have EMERGENCY WATER available.
- Stand on levelled side. Close bleed. DIRECT BLEED SPRAY AWAY FROM FACE AND BODY.
- Use proper hand placement. Use correct connection from coupler.
- Check hose connections to coupler.
- Observe proper closure of coupler.
- Check hose connections to coupler.
- Replace entire coupler BEFORE attempting to connect. Do not use on paper construction.

699103

PART #699101

DANGER

STAND CLEAR
Falling Wings May Cause Bodily Injury or Death

699101

PART #699104

BE CAREFUL

Clear Machine of Personnel And Obstructions Before Operating Hydraulic Wings!

699104

PART# 699100

WARNING

Stand Clear Of Tongue

Implement may become Tongue Light when unhooked from tractor.

699100

PART #USA



PART # 699110

NITROMASTER SERIES

PART #7200

7200

7200 NITROMASTER TOOLBAR ASSEMBLY PROCEDURE

Your 7200 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: "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 If your toolbar is equipped with single hydraulic wheels on the center section, assemble per the illustration on page 13. Install the wheel mount brackets (item 54) on the rear tube of the center section. The cylinder lug should be pointing forward. For shanks mounted at 30 inch spacing and a 124 inch track width, position the brackets so that the cylinder lugs are spaced 141 1/2 inches apart, center to center (70 3/4 from the center of the tool bar). For other than 30 inch spacing, locate the brackets at any appropriate track width. Fasten each bracket with (2) u-bolts (item 55) and appropriate hardware.
- Step 3A If your toolbar is equipped with tandem walking wheels on the center section, assemble per the illustration on page 19 and steps 3A to 3E. Install the wheel mount bracket (item 1) on the rear tube of the center section. The cylinder lug should be pointing forward. Position the brackets so that the cylinder lugs are spaced 90 inches apart (45 inches from the center of the toolbar). Fasten each bracket with (2) u-bolts (item 10) and (4) bolts (item 7) and appropriate hardware. Refer to the illustrations on page 17 and note that a walking wheel assembly mounted on a center section is not identical to an assembly mounted on a primary wing.
- Step 3B Refer to the illustration on page 19. Assemble the pivot arm (item 30) to the wheel bracket (item 1) with the hinge pin (item 2) and secure the pin with the appropriate hardware.
- Step 3C Mount the bogie assembly (item 21) to the pivot arms with the pivot pins (item 22) and secure the pins with the appropriate hardware.
- Step 3D Mount the wheels with the tires (6-ply or 8-ply as supplied) to the hubs.
- Step 3E Position the hydraulic cylinders (item 31) to the brackets and pivot arms with the body at the bracket and the shaft on the pivot arm. Attach the body with the standard pins supplied. Leave the shaft end free until the system has been charged with oil. See step 35. The 4 x 12 cylinder would be mounted on the left and the 3 3/4 x 12 on the right of center.
- Step 4 Refer to the illustration on page 13. Assemble the wheel pivot arms (item 72) left hand and (item 73) right hand to the wheel brackets with the hinge pins (item 61) and secure the pins with appropriate hardware.
- Step 5 Mount the wheels with the tires (8-ply or 10-ply as supplied) to the hubs.
- Step 6 Position the wheel hydraulic cylinder (item 64) left wheel, size 4 x 12 and (item 65) right wheel, size 3 3/4 x 12 to the brackets and the pivot arms with the body at the bracket and the shaft on the pivot arm. Attach the body with the standard pins supplied. Leave the shaft end free until the system has been charged with oil. See step 35.
- Step 7 Install the poles (item 4) left hand and (item 5) right hand with the hitch mount (item 14) and appropriate hardware. Bolt the poles to the center section with the appropriate hardware.
- Step 8 Attach the hitch assembly (items 6 to 11) with the hitch pin (item 12).
- Step 9 Attach the jack (item 15) to the pole and assemble the miscellaneous items, depth control brackets (item 16), gauge bracket (item 20), hose brackets (item 21), and selector valve bracket (item 30), with the u-bolts (item 31) 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 40) and appropriate hardware.

MOUNT YOUR GAUGE WHEELS (MECHANICAL, HYDRAULIC OR TANDEM) PER STEPS 11 TO 25 THEN CONTINUE WITH STEP 26. IF YOUR TOOLBAR IS EQUIPPED WITH HYDRAULIC GAUGE WHEELS INSTALL PER STEPS 11 TO 14.

- Step 11 Refer to the illustration on page 17. Install the wheel mount bracket (item 2) on the rear tube of the primary wing. The cylinder lug should be pointing forward. For toolbars with shank spacing at 30 inches position the brackets so that the wheel track will be 179 inches from the center of the toolbar. Fasten each bracket with (2) u-bolts (item 21) and (2) bolts (item 20) and appropriate hardware. Note: If the shank spacing on your toolbar is something other than 30 inches locate the gauge wheel as far out to the end of the primary wing as is practical.
- Step 12 Assemble the wheel pivot arms (item 3) left hand and (item 4) right hand to the wheel brackets with the hinge pins (item 1) and secure the pins with the appropriate hardware.
- Step 13 Mount the wheels with the tires to the hubs.
- Step 14 Position the wheel hydraulic cylinder (item 11) left wheel, size 3 1/4 X 12 and (item 12) right wheel, size 3 1/2 X 12 to the brackets and pivot arms with the body at the brackets and the shaft on the pivot arms. Attach the body with the standard pins supplied. Leave the shaft end free until the system has been charged with oil. See step 35.

IF YOUR TOOLBAR IS EQUIPPED WITH MECHANICAL GAUGE WHEELS INSTALL PER STEPS 15 TO 20. THE MECHANICAL GAUGE WHEEL ASSEMBLY SHOULD BE USED ON 11 OR 13 SHANK TOOLBARS ONLY.

- Step 15 Refer to the illustration on page 13. Position the wing block (item 80) between the center section and the primary wing.
- Step 16 Refer to the illustration on page 18. Position the mounting bracket (item 1) on the secondary wing front tubes and attach with (2) u-bolts (item 5) and appropriate hardware, snug only.
- Step 17 Assemble the pivot arm (item 2) to the mounting bracket with the pivot pins (item 3) and appropriate hardware.
- Step 18 Install the turnbuckle jack (item 11) with the clevis pins (item 8 and item 12) and the hairpin (item 4) and the cotter pin (item 10).
- Step 19 Mount the wheels with the tires to the hubs.
- Step 20 Adjust the position of the gauge wheels to the desired track width and securely tighten the u-bolts (Reference Step 16). Note: The gauge wheels should be located as far out to the end of the toolbar as is practical. To ensure the bar is running level, the gauge wheel height should be adjusted to coincide with the depth control segments used on the hydraulic cylinders on the center section and any hydraulic gauge wheels.

IF YOU TOOLBAR IS EQUIPPED WITH TANDEM WALKING WHEELS ON THE WINGS INSTALL PER STEPS 21 TO 25.

- Step 21 Assemble the walking wheels per the illustration on page 19. Install the wheel mount bracket (item 1) on the rear tube of the primary wing. The cylinder lug should be pointing forward. Position the bracket so that the center of the cylinder lug is 163 inches from the center of the toolbar. Fasten each bracket with (2) u-bolts (item 10) and (2) bolts (item 7) and appropriate hardware.
- Step 22 Assemble the pivot arms (item 14) left hand and (item 15) right hand to the brackets with hinge

pins (item 2) and secure the pins with the appropriate hardware.

- Step 23 Mount the bogie assemblies (item 21) to the pivot arms with the pivot pins (item 22) and secure the pins with the appropriate hardware.
- Step 24 Mount the wheels with the tires to the hubs.
- Step 25 Position the hydraulic cylinders (item 13) to the bracket and pivot arms with the body at the bracket and the shaft on the pivot arms. Attach the body with the standard pins supplied. Leave the shaft end free until the system has been charged with oil. See step 35. The 3 1/2 x 12 cylinder would be on the right and the 3 1/4 x 12 cylinder would be on the left of center.
- Step 26 Refer to the illustration on page 13. Position the wing control cylinder (Item 44) size 3 1/2 x 30 or size 4 x 30 onto the center and primary wing sections. Attach the body with the standard pins supplied. Leave the shaft end free until the system has been charged with oil. See step 35. Then assemble with the hardware (item 45, item 46,47 and item 48.).
- Step 27 Generously grease the wing hinge and wheel pivot points.

IF YOUR TOOLBAR IS EQUIPPED WITH SECONDARY WINGS ASSEMBLE PER STEPS 28 TO 31

- Step 28 Refer to the illustration on page 15. Assemble the wing (item 1) to the primary wing with the clevis pins (item 3) and the cotter pins (item 4).
- Step 29 Mount the hydraulic cylinder (item 5) size 3 x 24 with the body on the primary wing. Assemble the link (item 9), the rollers (item 8), and the washers (item 7) to the cylinder with the clevis pin (item 3) and cotter pin (item 4). Do not attach the link to the secondary wing until the system has been charged with oil. See step 35.
- Step 30 Mount the wing hook assembly (item 15) and the hook retainer assembly (item 11) with the u-bolts (item 12) and appropriate hardware. Locate these items approximately 36 inches to each side of the pivot point . Adjust the locations after the hydraulics are operational.
- Step 31 Generously grease the hinge pins.
- Step 32 Assemble the field hitch (item 81, page 13) per illustration on page 21 Mount the field hitch centered on the rear tube of the center section.
- Step 33 Mount stagger brackets, knife shanks, coulters and disk covers per the illustration on pages 49 to 56. Starting at the center of the toolbar, mark the locations for your shank spacing. Install the stagger brackets located as shown on the above illustrations. The location of some shanks may have to be adjusted. Refer step 40.
- Step 34 Install the hydraulic fittings and hoses as shown on the hydraulic system schematic illustration on pages 24 and 25.
- Step 35 Purge the air from the hydraulic system. With the cylinders attached at the body only and the shaft ends free cycle all cylinders several times. This should remove most of the air from the system. Then attach the shaft ends with the pins supplied.
- A. CAUTION: When hydraulic pressure is applied, the pole could lift up. Firmly anchor the pole to a heavy stationary object or attach it to a tractor.
 - B. Pressurize the hydraulic system. Fully extend the wheel cylinders and remove the assembly supports. Fully extend all cylinders and circulate the oil for approximately 2 minutes.
 - C. Partially retract the hydraulic system. All wheels should lift simultaneously. If any wheel cylinder sag, this would indicate air in the system.

- D. Fully extend all wheel cylinders, circulate the oil and repeat Step C.
- E. Fully extend all wing cylinders. Partially lift the wings and stop. Observe if the wings will sag, this would indicate air in the system.
- F. Fully extend all wing cylinders, circulate the oil and repeat Step E.
- G. Repeat Steps D and F until the system operates satisfactorily.

Step 36 Assemble the desired knives to the shanks.

Step 37 NH3 APPLICATION. Refer to illustration on page 46. Mount the brackets supplied (See NH3 Box) in the positions shown with the appropriate hardware. Attach the hoses and components supplied for your application as shown on the NH3 plumbing schematic illustration on page 47. Install the break-away coupling device per manufacturers instructions. See page 47A of this manual for basic operation, maintenance and safety information.

Step 38 Check all hydraulic and chemical hose connections. Secure all hoses in a safe manner. Check all nuts and bolts to insure they are securely tightened and that all pins and cotter pins are in place and secure.

Step 39 Fold the wings & raise the machine to the full transport height. Place the transport locks pg13 (item 68) on the extended shafts of the center section wheel hydraulic cylinders and secure the transport locks with the pins (item 69 and 70). Release the hydraulic pressure and lower the machine to support it on the transport locks. "WARNING" READ OPERATING INSTRUCTIONS AND WARNINGS.

Step 40 CAUTION : With the toolbar fully assembled and operational and the transport lock installed check to make sure there is sufficient tongue weight for safe storage and transport. If the tongue weight seems to be light at any time move some shank assemblies to the front tube of the toolbar. This may require some additional stagger brackets.

Step 41 Your 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 coulters 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 coulters 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.

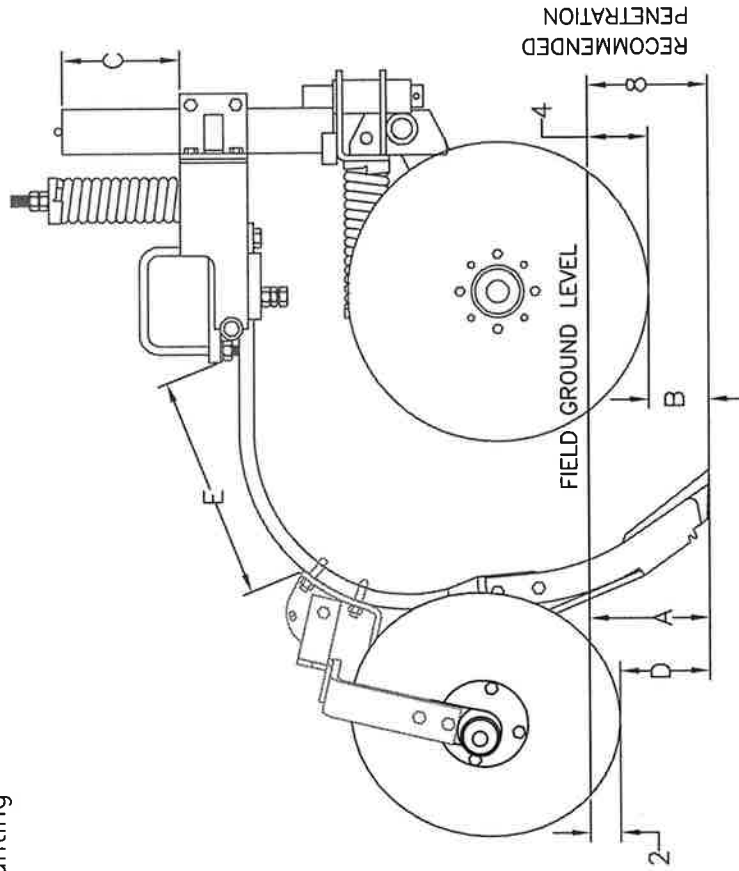
OTHER WORKING DEPTH: modify these dimensions in

relation to your working depth. If your knife is 10 inches in the ground (dim A), the dimension from the coulters 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, coulters and disk sealer is used.

NOTE::

It is important that the coulters and disk sealer blades are not set excessively deep. The coulters blades should be set just deep enough to cut the surface trash.

Coulters set too deep will cause the toolbar to float on the coulters and not allow your gauge wheels to contact the ground. Intermittent contact with the ground will cause excessive wear on the hydraulic cylinder clevises and the mounting lugs. Coulters 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 toolbar 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 toolbar 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. Use the cylinder spacers provided with your equipment. If two cylinders are used, place an equal number of spacers of equal size on each of the cylinders. It is very important that both toolbar 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.

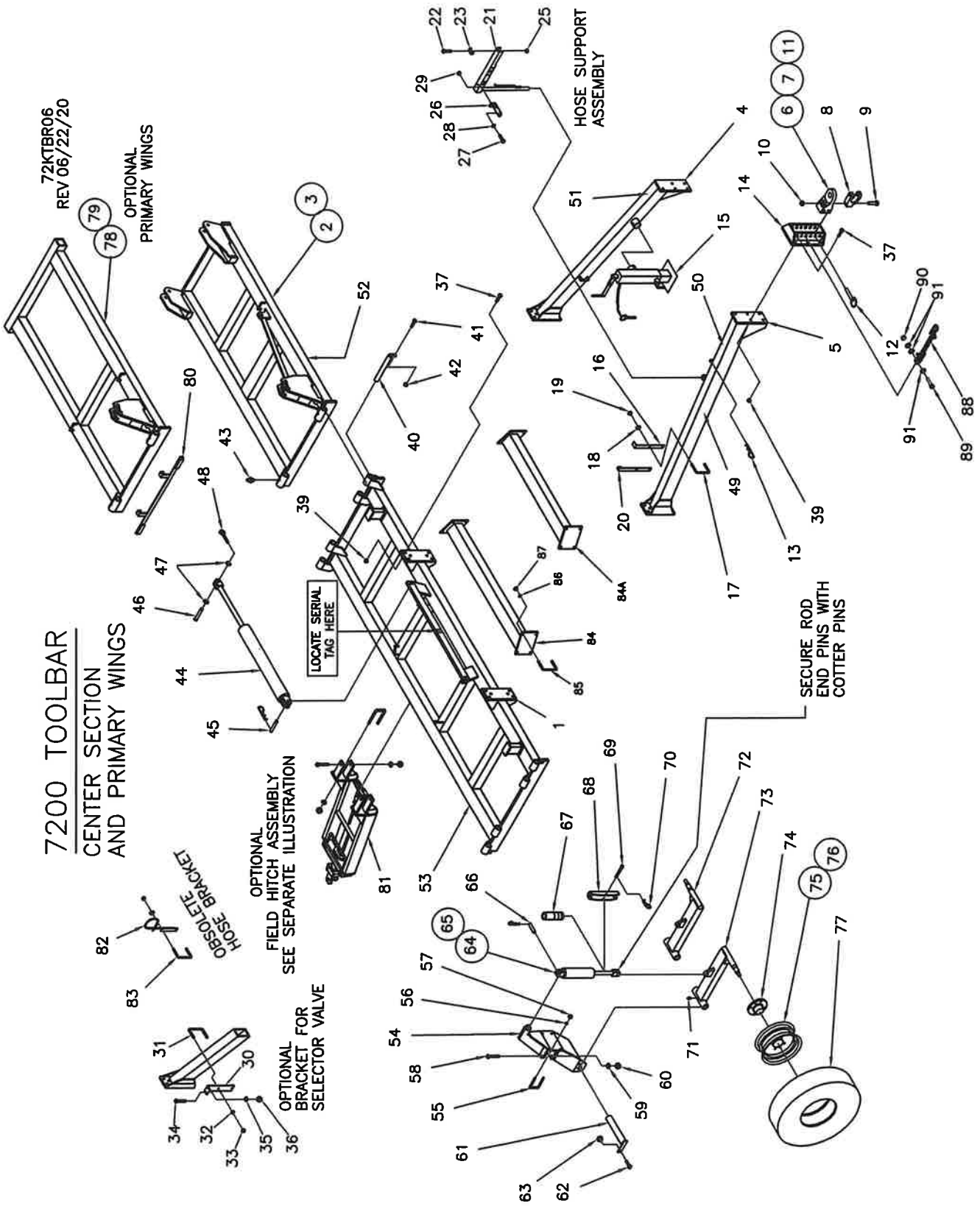
USE OF TRANSPORT LOCK

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.

7200 TOOLBAR CENTER SECTION AND PRIMARY WINGS

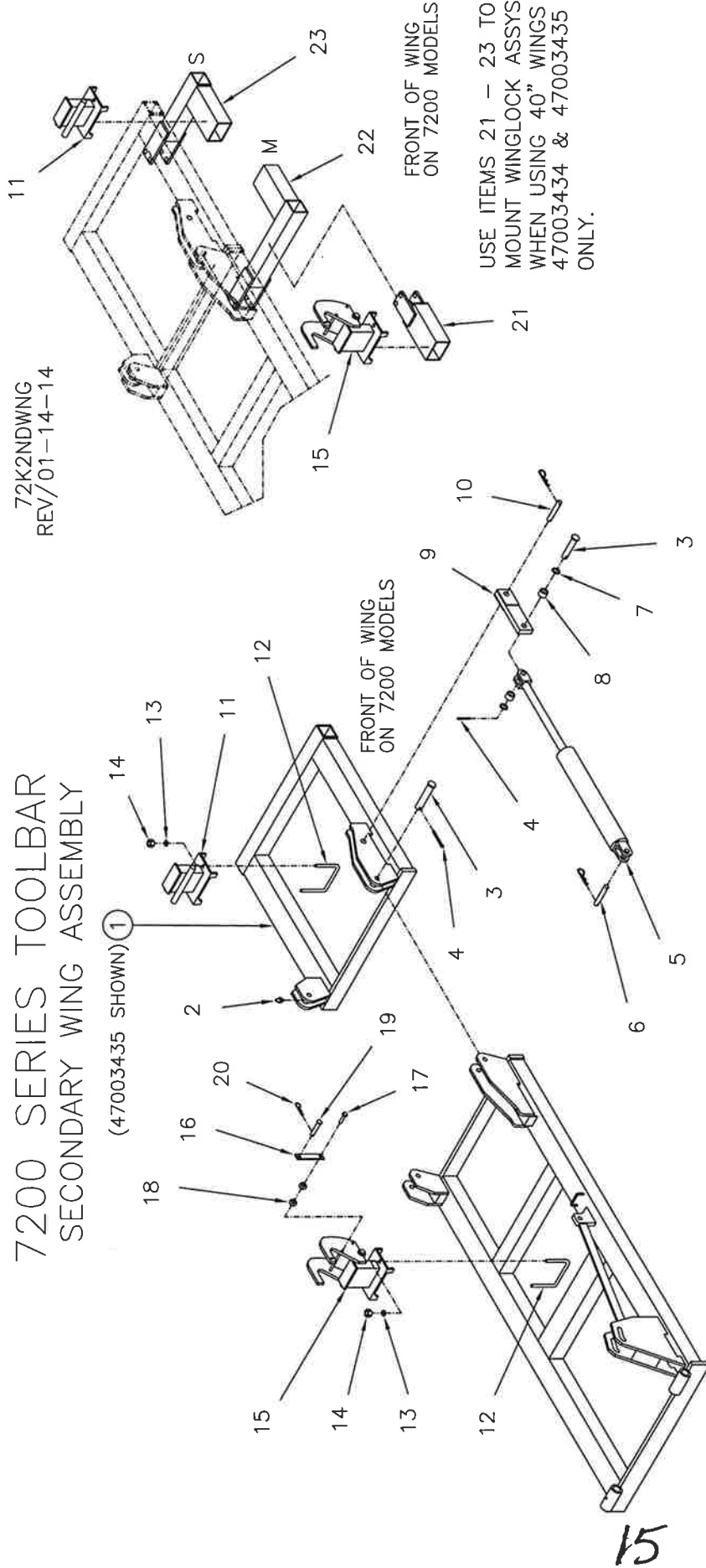
72KTR06
REV 06/22/20



7200 SERIES TOOLBAR SECONDARY WING ASSEMBLY

72K2NDWNG
REV/01-14-14

(47003435 SHOWN) ①

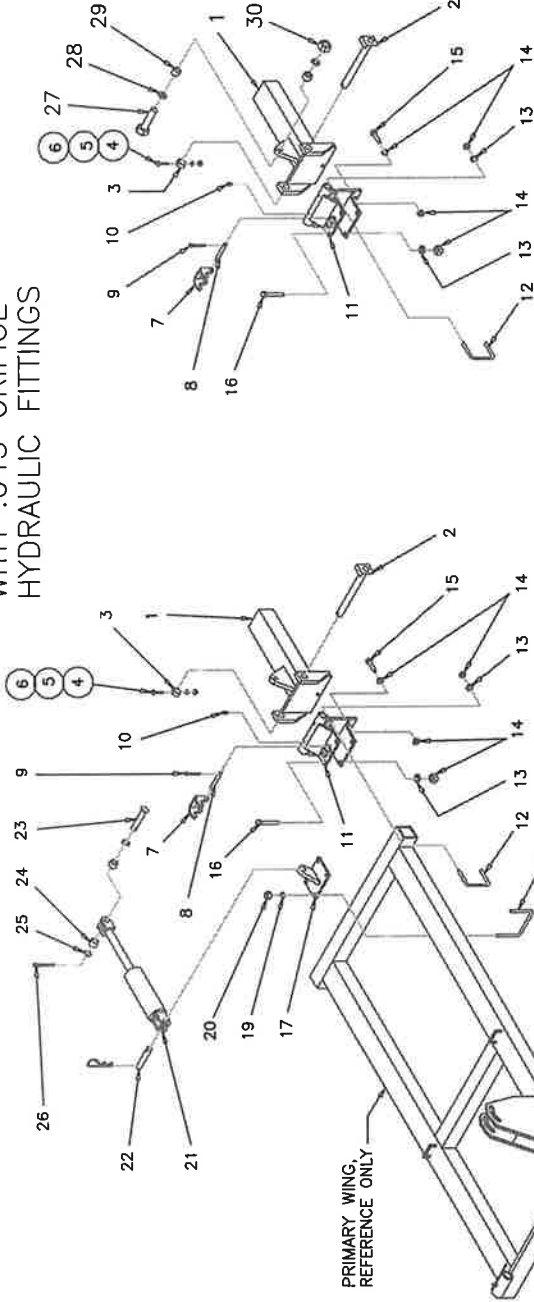


ITEM	PART NO.	DESCRIPTION	QTY
1	47003439	SECONDARY WING, L.H. (17 ROW)	1
	47003438	SECONDARY WING, R.H.	1
	47010178	SECONDARY WING, L.H. (12/16 COMBO)	
	47010179	SECONDARY WING, R.H.	
	47003434*	SECONDARY WING, RH (15 ROW)	
	47003435*	SECONDARY WING, LH (SHOWN)	
2	18901805	GREASE ZERK, STRAIGHT	4
3	18549054	CLEVIS PIN, (1 X 5)	6
4	18560826	COTTER PIN, (3/16 X 1 1/2)	4
5	47300093	HYDRAULIC CYLINDER, (3 X 24)	2
6	47003513	CYL. PIN KIT, (1 X 3 1/2) (2 PINS)	1
7	18852200	FLATWASHER, 1 INCH	4
8	47010032	ROLLER-CYL. LINK,	4
9	47010163	PIVOT LINK, HYD. CYL.	2
10	47003514	CYL. PIN KIT, (1 X 4) (2 PINS)	1
11	47010151	WING HOOK RETAINER	2
12	47010154	U-BOLT, 5/8-11NC.	4
13	18891600	LOCKWASHER, 5/8	8
14	18417900	HEX. NUT, 5/8-11NC.	8
15	47010149	WING HOOK ASSEMBLY	2
	ITEMS 16 TO 20	USED ON COMBO UNITS ONLY	
16	47009848	WING LOCK STRAP	2
17	18056828	BOLT, 3/8-16NC. X 1 3/4	2
18	18436800	HEX. NUT, 3/8-16NC	4
19	18541655	CLEVIS PIN, 3/8 X 1 3/4	2
20	18590091	HAIR PIN BRIDGE, .091 X 2 3/8	2
21	47003923	WINGLOCK MOUNT	2
22	47010234	STAGGER BRACKET, MEDIUM	2
23	47010182	STAGGER BRACKET, SHORT	2

SECONDARY WING ASSEMBLY

72K2NDSNGL

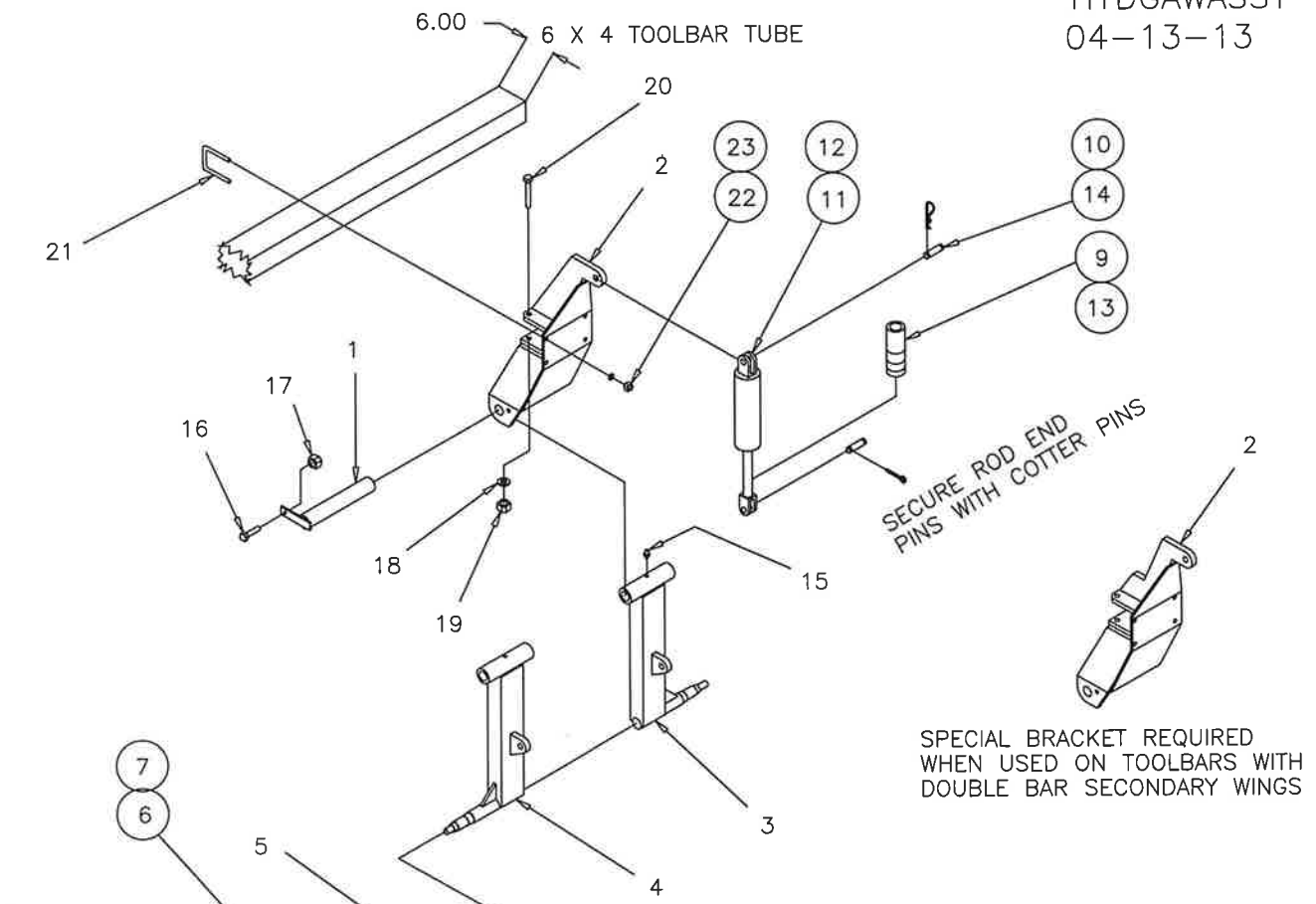
WITH .045 ORIFICE
HYDRAULIC FITTINGS



ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	47028166	(SET) 2NDRY. WING ASSY. COMPLETE (HYDRAULIC) INCL. ITEMS 1 TO 26	1	47028166	SECONDARY WING	1	1
2	47008166	SECONDARY WING, (2 FOOT)	2	47998166	SECONDARY WING	MANUAL FOLD	2
3	47009562	HINGE PIN	2	607112	HYDRAULIC HOSE PACKAGE, (INCLUDES)		2
4	47006310	COLLAR	2	609126	HOSE, 3/8 X 126"- #6 JICFS BOTH ENDS		2
5	18056834	LOCKWASHER, 3/8	2	609138	HOSE, 3/8 X 138"- #6 JICFS BOTH ENDS		2
6	18436800	HEX. NUT, 3/8-16NC.	2	608211	HYDRAULIC FITTING PKG. (INCLUDES)		1
7	47010351	PIVOT HOOK ASSEMBLY	2	6400-6-8	CONNECTOR, #6 MFC X #8 O-RING		1
8	47010393	PIN, PIVOT HOOK	2	6400-6-8R	CONNECTOR, #6 MFC X #8 O-RING WITH .045 ORIFICE		1
9	18560724	COTTER PIN, 5/32 X 1 1/4	2	6500-6	ELBOW, #6 MJIC X #6 FJIC SWIVEL		1
10	18901805	GREASE ZERK, STRAIGHT	4	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL		2
11	47010356	WING PIVOT ASSEMBLY	4	6602-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL		2
12	47006518	U-BOLT, 3/4-10 NC. (4 X 4 TUBE)	2	6801-6-8	ADAPTER ELBOW, #6 MJIC X #8 O-RING		1
13	18891800	LOCKWASHER, 3/4	4	6801-6-8R	ADAPTER ELBOW, #6 MJIC X #8 O-RING WITH .045 ORIFICE		1
14	18418400	HEX. NUT, 3/4-10NC.	4	47998166	(SET) 2NDRY. WING ASSY. (MANUAL FOLD)		2
15	18098437	BOLT, 3/4-10NC. X 2 1/2 (FULL THREAD)	20	47008166	INCLUDES ITEM 2 TO 16 PLUS 27 TO 31		2
16	18058460	BOLT, 3/4-10NC. X 6 1/2	4	18059062	SECONDARY WING, MANUAL FOLD		2
17	47010352	CYLINDER ANCHOR ASSEMBLY	2	18852200	BOLT, 1-8NC. X 6		4
18	47007083	U-BOLT, 5/8-11 NC. (6 X 4 TUBE)	4	47008162	FLATWASHER, 1" SAE		4
19	18891600	LOCKWASHER, 5/8	8	18439000	SPACER BUSHING		4
20	18417900	HEX. NUT, 5/8-11NC.	8		HEX. NUT, 1-8NC.		2
21	47005491	HYDRAULIC CYLINDER (3 X 14)	2				
22	47003513	CYLINDER PIN KIT, (1 X 3 1/2)	2				
23	18549054	CLEVIS PIN, (1 X 5)	4				
24	47010380	SPACER, CYLINDER CLEVIS	4				
25	18852200	FLATWASHER, 1" SAE	4				
26	18560826	COTTER PIN, 3/16 X 1 1/2	4				

HYDRAULIC GAUGE WHEEL ASSEMBLY

HYDGAWASSY
04-13-13



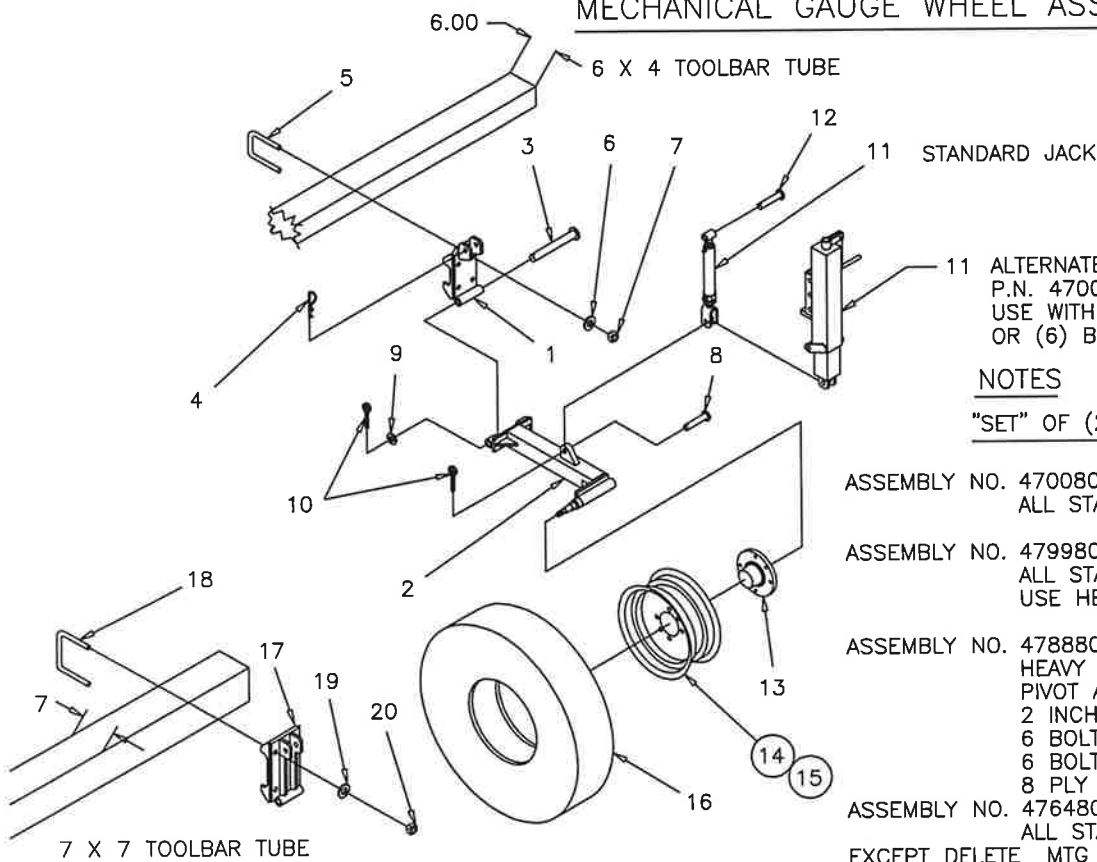
NOTE *
FOR 7000 SERIES 37 & 42 FT. TOOLBAR
WITH 15" TOOL SPACING
USE P.N. 20121115
TIRE, 11L X 12 PLY

ITEM	PART NO.	DESCRIPTION	QTY
	47018007	GAUGE WHEEL ASSEMBLY (SET) INCLUDES THE FOLLOWING	1
1	47010313	HINGE PIN, WHEEL ARM	2
2	47010302	WHEEL MOUNTING BRACKET	2
	47009885	WHEEL MOUNTING BRACKET (SPECIAL) (WITH DOUBLE BAR SECONDARY WINGS)	
	47000303	WHEEL PIVOT ARM COMPLETE, LEFT INCLUDES ITEMS 3 AND 5	1
3	47010303	WHEEL PIVOT ARM-LEFT	1
	47000315	WHEEL PIVOT ARM COMPLETE, RIGHT INCLUDES ITEMS 4 AND 5	1
4	47010315	WHEEL PIVOT ARM-RIGHT	1
5	47009618	HUB ASSEMBLY	2
6	47005589	WHEEL RIM, 15 X 8	2
7	20120012	VALVE STEM	2
8	10261	TIRE, 11L X 8 PLY (SEE NOTE *)	2
9	47005455	SET, DEPTH CONTROL (3 1/4 CYL.)	1
10	47003513	CYLINDER PIN KIT (3 1/4 CYL.)	1
11	47005054	HYDRAULIC CYL.-LEFT, (3 1/4 X 12)	1
		SPECIFY LEFT OR RIGHT	
12	47005056	HYDRAULIC CYL.-RIGHT, (3 1/2 X 12)	1
13	47005455	SET, DEPTH CONTROL (3 1/2 CYL.)	1
14	47003514	CYLINDER PIN KIT (3 1/2 CYL.)	1
15	18901805	GREASE ZERK, STRAIGHT	2
16	18057426	BOLT, 1/2-13NC. X 1 1/2	2
17	18497400	FLANGED NUT, 1/2-13NC.	2
18	18891800	LOCKWASHER, 3/4	4
19	18418400	HEX. NUT, 3/4-10NC.	4
20	18058470	BOLT, 3/4-10NC. X 7	4
21	47006951	U-BOLT, 5/8-11 NC.	4
22	18891600	LOCKWASHER, 5/8	8
23	18417900	HEX. NUT, 5/8-11NC.	8

MECHANICAL GAUGE WHEEL ASSEMBLY

MCHGAWHL
REV C

05-16-12



11 STANDARD JACK
11 ALTERNATE JACK
P.N. 47008514
USE WITH IN-LINE TOWBAR
OR (6) BOLT HUB

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

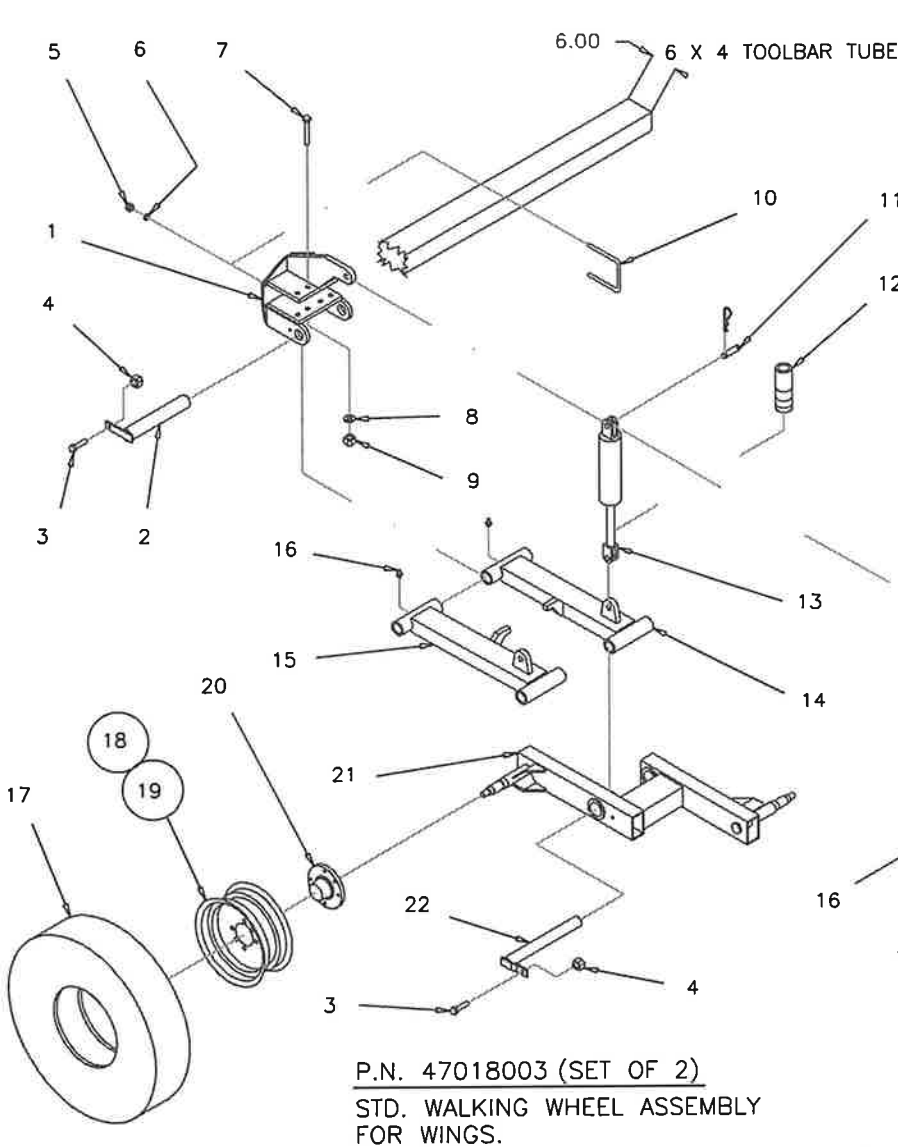
ASSEMBLY NO. 47888001 INCLUDES
HEAVY JACK P.N. 47008514
PIVOT ARM WITH
2 INCH SPINDLE P.N. 47019335
6 BOLT HUB P.N. 47009611
6 BOLT WHEEL P.N. 47005589
8 PLY TIRE P.N. 10261

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

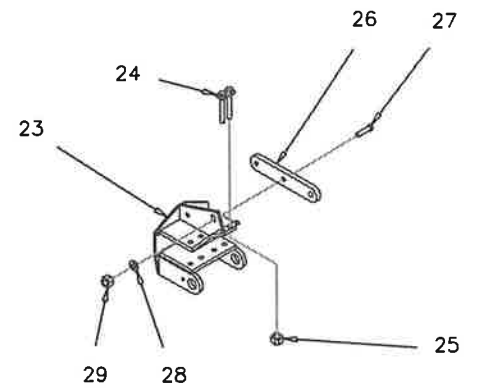
ITEM	PART NO.	DESCRIPTION	QTY FOR ASSY. NO. 47008001	QTY FOR ASSY. NO. 47998001	QTY FOR ASSY. NO. 47888001	QTY FOR ASSY. NO. 47648001
1	47010412	MOUNTING BRACKET	2	2	2	-
	47000413	PIVOT ARM COMPLETE, STANDARD	2	2	-	2
	47999335	PIVOT ARM COMPLETE, HEAVY DUTY INCLUDES ITEMS 2 AND 13	-	-	2	-
2	47010413	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)	2	2	-	2
	10261	TIRE, 11L X 15, 8-PLY	-	-	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	18891600	LOCK WASHER, 5/8 ZC	-	-	-	8
20	18417900	HEX. NUT, 5/8-NNC. ZC	-	-	-	8

TANDEM "WALKING WHEEL" ASSEMBLY

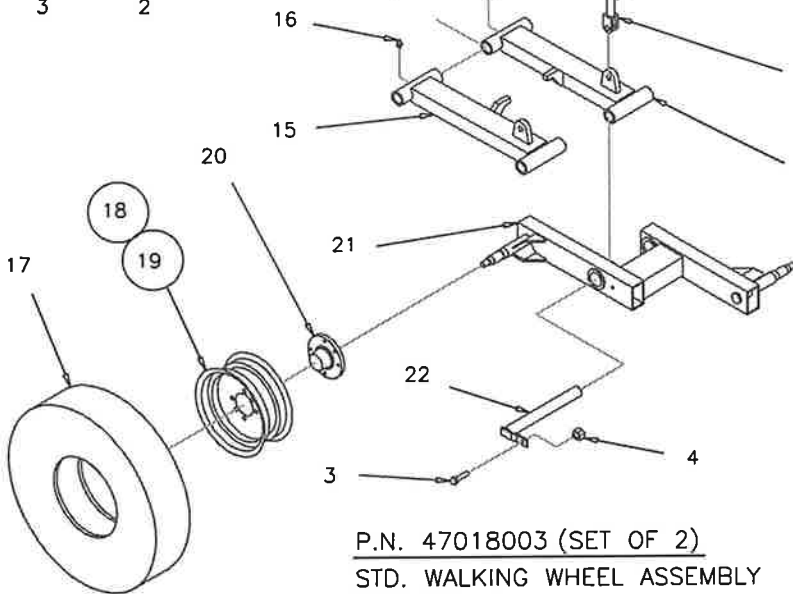
7000TWWL



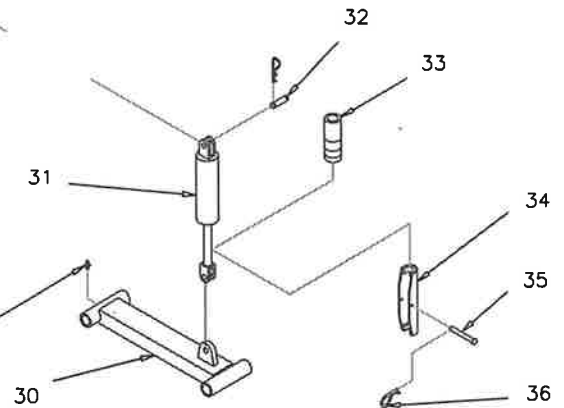
P.N. 47018003 (SET OF 2)
STD. WALKING WHEEL ASSEMBLY
FOR WINGS.



P.N. 47018004 (SET OF 2)
ADJ. WALKING WHEEL ASSEMBLY
FOR WINGS ONLY



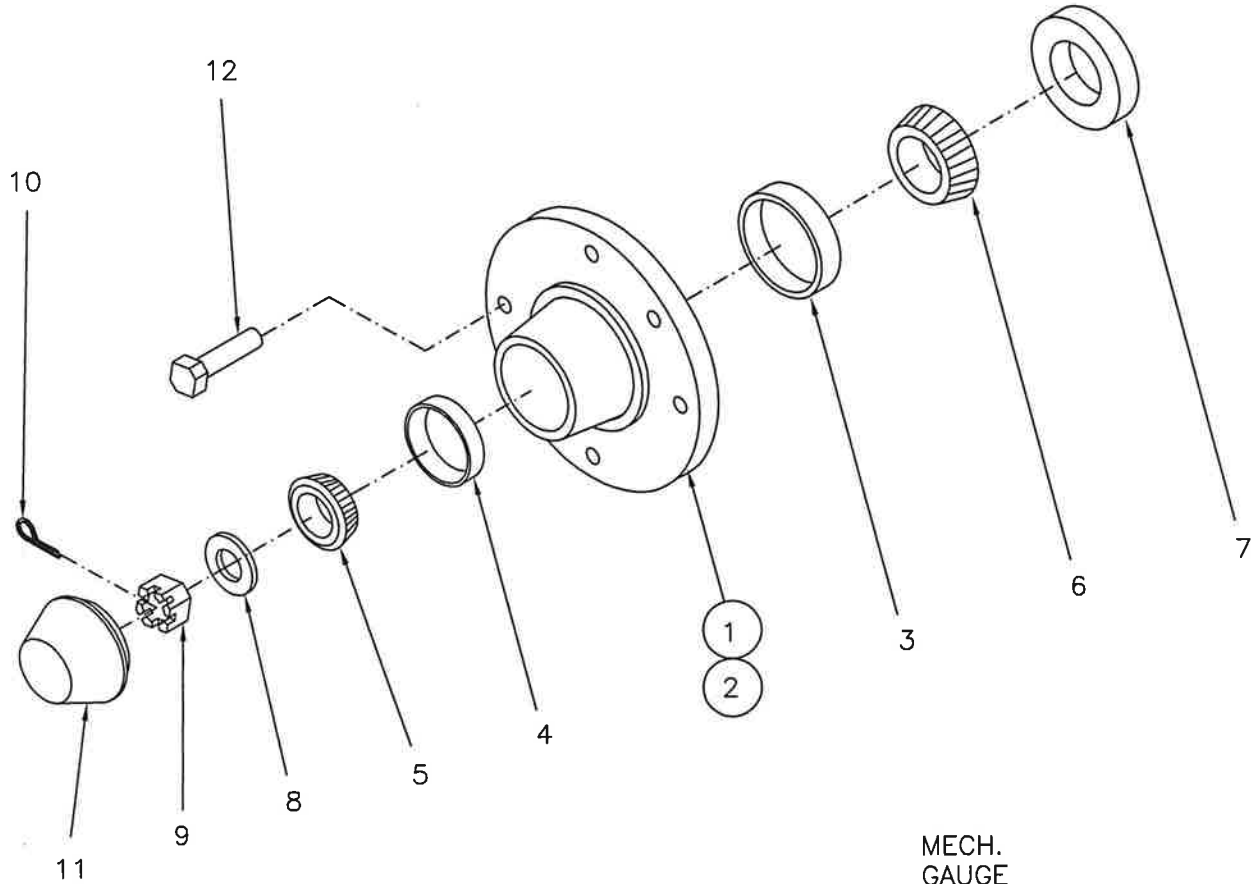
P.N. 47018003 (SET OF 2)
STD. WALKING WHEEL ASSEMBLY
FOR WINGS.



P.N. 47018002 (SET OF 2)
STD. WALKING WHEEL ASSEMBLY
FOR CENTER SECTION
(DELETE ITEMS 11 TO 15)
(ADD ITEMS 30 TO 36)

ITEM	PART NO.	DESCRIPTION	PER SET QTY	ITEM	PART NO.	DESCRIPTION	PER SET QTY
1	47007378	WHEEL MOUNT BRACKET (STD.)	2	20	47009618	HUB ASSEMBLY	4
2	47007394	ARM PIVOT PIN	2		47997388	BOGGIE ASSEMBLY COMPLETE	2
3	18057426	BOLT, 1/2-13NC. X 1 1/2	4			INCLUDES ITEMS 20 AND 21	
4	18497400	FLANGED NUT, 1/2-13NC.	4	21	47007388	BOGGIE ASSEMBLY	2
5	18417900	HEX. NUT, 5/8-11NC.	8	22	47007396	PIVOT PIN, BOGGIE	2
6	18891600	LOCKWASHER, 5/8	8			FOR ADJUSTABLE WALKING WHEEL ASSEMBLY	
7	18058470	BOLT, 5/8-11NC. X 7	8			DELETE ITEM 1, USE ALL ITEMS 2 TO 29	
8	18891800	LOCKWASHER, 3/4	8	23	47007429	WHEEL MOUNT BRACKET	2
9	18418400	HEX. NUT, 3/4-10NC.	8	24	47007433	BAR CLAMP	2
10	47006951	U-BOLT, 5/8-11 NC.	4	25	18458400	SELF-LOCKING NUT, 3/4-10NC.	4
11	ITEMS 11 TO 15 USED ON WINGS ONLY			26	47007445	CYLINDER MOUNT BAR	2
12	47003514	CYLINDER PIN KIT (3 1/2" CYLINDER)	1	27	18058436	BOLT, 3/4-10NC. X 3	4
13	47003513	CYLINDER PIN KIT (3 1/4" CYLINDER)	1	28	18891800	LOCKWASHER, 3/4	4
14	47005455	SET, DEPTH CONTROL (3 1/2 & 3 1/4 CYL.)	2	29	18418400	HEX. NUT, 3/4-10NC.	4
15	47005056	WING CYLINDER (3 1/2" CYLINDER)	1			FOR CENTER SECTION ONLY USE ITEMS 1 TO 10 & 16 TO 22	
16	47005054	WING CYLINDER (3 1/4" CYLINDER)	1			DELETE ITEMS 11 TO 15 ADD ITEMS 30 TO 36	
17	47009123	PIVOT ARM, LEFT HAND	1	30	47007384	PIVOT ARM	2
18	47009124	PIVOT ARM, RIGHT HAND	1	31	47005459	MASTER CYLINDER (4" CYLINDER)	1
19	18901806	GREASE ZERK, 90 DEG.	2		47005449	SLAVE CYLINDER (3 3/4" CYL.)	1
	20121114	TIRE, 11L X 15, 6 PLY	4	32	47003514	CYLINDER PIN KIT (3 3/4 & 4" CYL.)	2
	10261	TIRE, 11L X 15, 8 PLY	4	33	47005455	SET, DEPTH CONTROL (3 3/4 & 4" CYL.)	2
	47005589	WHEEL RIM, 15 X 8	4	34	47010150	TRANSPORT LOCK	2
	20120012	VALVE STEM	4	35	18541254	CLEVIS PIN, TRANSPORT LOCK	2
				36	18590916	HAIRPIN BRIDGE	2

HUB ASSEMBLIES



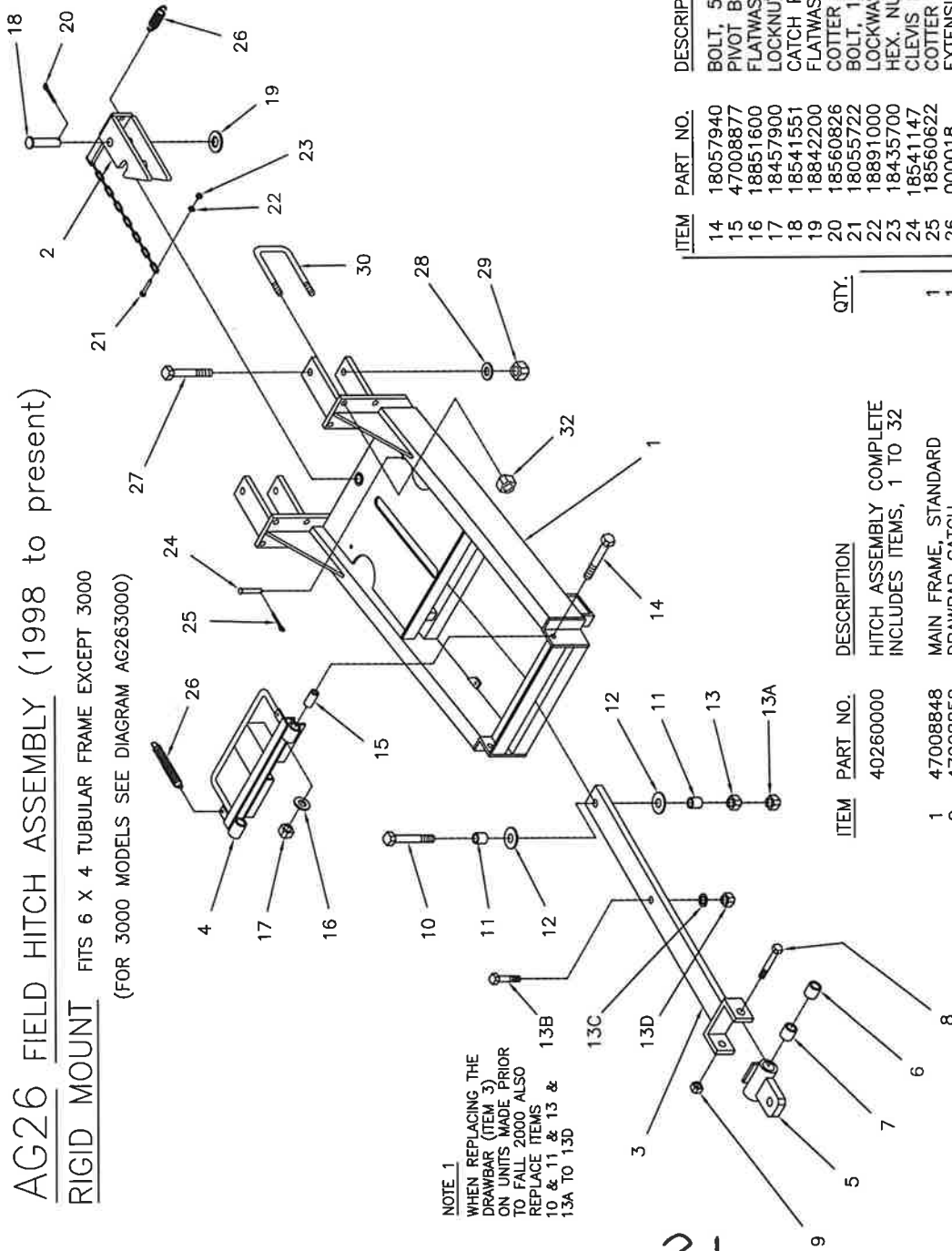
ITEM	DESCRIPTION	MECH. GAUGE WHEEL ONLY			QTY.
		5 BOLT HUB PART NO.	6 BOLT HUB PART NO.	6 BOLT HUB PART NO.	
1	HUB COMPLETE INCLUDES ITEMS 2 THRU 7 AND 11 THRU 12 ONLY MFR. PART NUMBER	47005348 HA511	47009618 H618	47009611 H611	1
2	HUB WITH RACES	47006348	47005618	47005511	1
3	INNER BEARING RACE	47005010	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 AG2630000)

AG26ISOC
05-15-13



NOTE 1

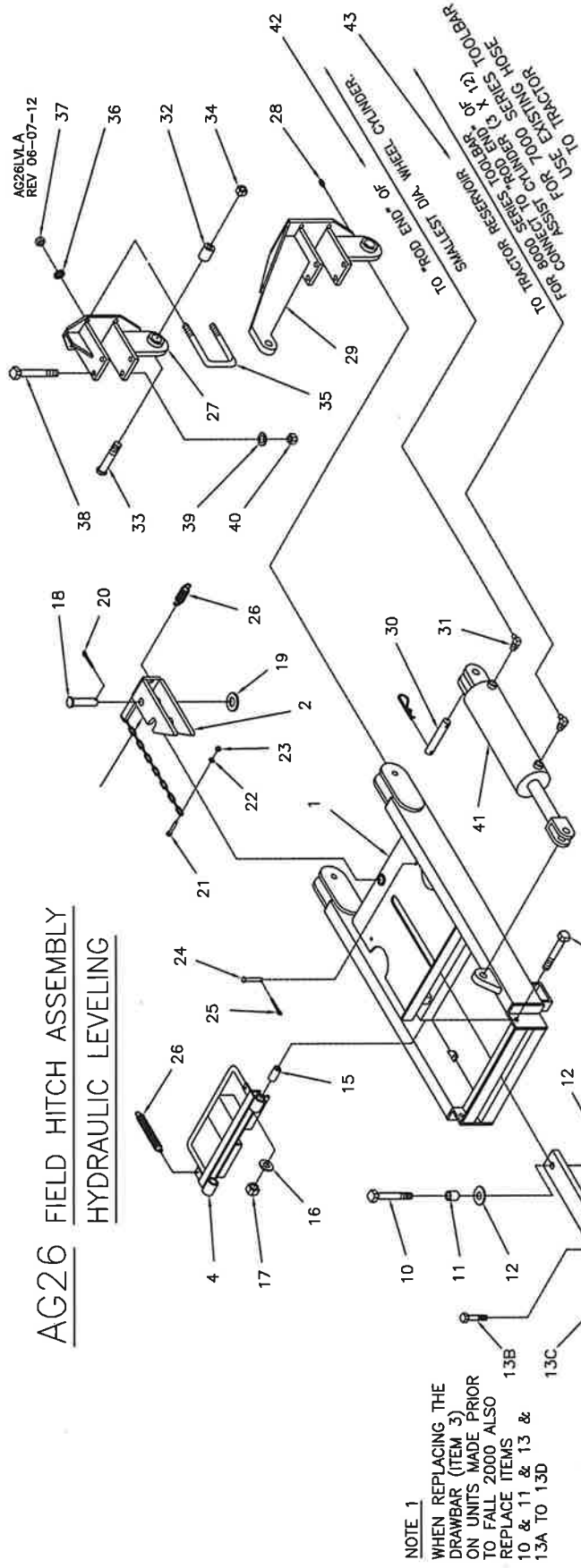
WHEN REPLACING THE DRAWBAR (ITEM 3) ON UNITS MADE PRIOR TO FALL 2000 ALSO REPLACE ITEMS 10, 11, 12, 13 & 13A TO 13D

21

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	3
27	47992600	BOLT PKG. INCL. ITEMS, 27 TO 32	2
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.	4
32	18457900	U-BOLT, 5/8-11NC.	8

ITEM	PART NO.	DESCRIPTION	QTY.
1	40260000	HITCH ASSEMBLY COMPLETE INCLUDES ITEMS, 1 TO 32	1
2	47008848	MAIN FRAME, STANDARD	1
3	47008852	DRAWBAR CATCH	1
4	47008853	DRAWBAR LOCK (SEE NOTE 1)	1
5	47008854	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

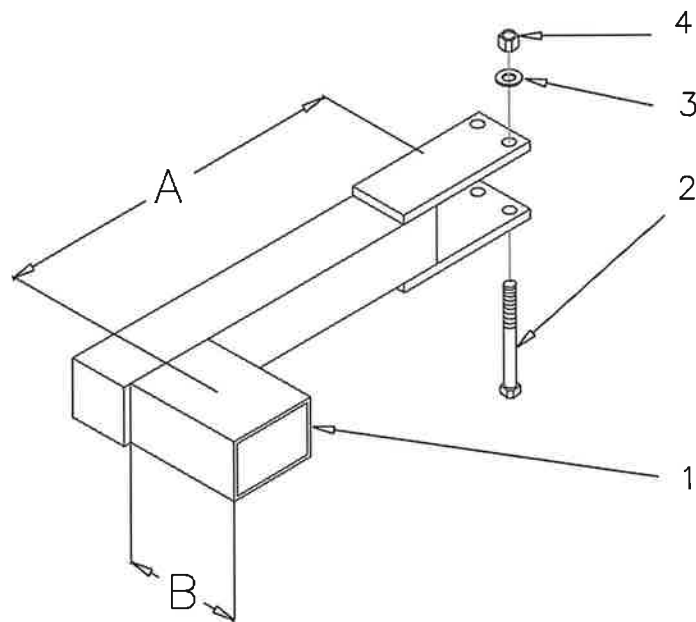


NOTE 1
WHEN REPLACING THE
DRAWBAR (ITEM 3)
ON UNITS MADE PRIOR
TO FALL 2000 ALSO
REPLACE ITEMS
10 & 11 & 13 &
13A TO 13D

ITEM	PART NO.	DESCRIPTION	QTY.
21	18055722	BOLT, 1/4-18NC, X 1	1
22	18891000	LOCKWASHER, 1/4 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	3
27	47009301	HITCH MOUNT, L.H. INCL. ITEM 28	1
28	18901805	GREASE ZERK, STRAIGHT	2
29	47019302	HITCH MOUNT, R.H. INCL. ITEM 28	1
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 MJIC 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
36	18891600	U-BOLT, 5/8-11NC.	4
37	18417800	LOCKWASHER, 5/8	8
38	18057971	HEX. NUT, 5/8-11NC.	8
39	18891600	BOLT, 5/8-11NC, X 6 1/2	4
40	18417900	LOCKWASHER, 5/8	4
41	47005054	HEX. NUT, 5/8-11NC.	4
42	609648	8000 SERIES TOOLBAR	1
43	609684	HYDRAULIC CYL. (3 1/4 X 12)	1
41	47005490	HOSE 3/8 X 48" ADD TO EXISTING	1
42	609120	HOSE P.N. 609170 (210")	1
43	609684	HOSE 3/8 X 84" CONNECT TO ROD	1
41	47005490	END OF "CENTER ASSIST CYL." (3 X 12)	1
42	609120	FOR 7000 SERIES TOOLBAR	1
43	609170	HYDRAULIC CYL. (3 X 12)	1
PLUS		HOSE 3/8 X 144" W/O HYD. GA. WHLS	1
		HOSE 3/8 X 48" WITH HYD. GA. WHLS	1
		HOSE 3/8 X 210" ADD TO 609648	1
		USE EXISTING HOSE TO TRACTOR	

ITEM	PART NO.	DESCRIPTION	QTY.
1	40268000	HITCH ASSEMBLY COMPLETE 7200 TOOLBAR	1
2	40261000	INCLUDES ITEMS, 1 TO 43	1
3	47009295	HITCH ASSEMBLY, LESS MOUNTING HARDWARE	1
4	47008853	INCLUDES ITEMS, 1 TO 26	1
5	47008854	MAIN FRAME	1
6	47008914	DRAWBAR CATCH (SEE NOTE 1)	1
7	47008918	DRAWBAR LOCK	1
8	47008920	DRAWBAR HITCH	1
9	18459000	INCLUDES ITEMS, 6 AND 7	2
10	18098539	FIBER BUSHING	1
11	47009459	SPECIAL BOLT, 1-8NC, X 6 7/8	1
12	18852400	SPACER BUSHING	1
13	18417800	SPECIAL BOLT, 1-8NC, X 5 1/2	1
13A	18458000	HEX. LOCKNUT, 1-8NC.	1
13B	18058430	BOLT, 7/8-9NC, X 5 1/2	2
13C	18891800	CATCH BUSHING, 7/8 I.D.	2
13D	18418400	FLATWASHER, 1 1/4 NOM. I.D. (SAE)	2
14	18057940	LOCKNUT, 7/8-9NC.	1
15	47008877	BOLT, 3/4-10NC, X 2	1
16	18851600	LOCKWASHER, 3/4	1
17	18457900	HEX. NUT, 3/4-10NC.	1
18	18541551	BOLT, 5/8-11NC, X 3 1/2	2
19	18842200	PIVOT BUSHING, 5/8 I.D.	2
20	18560626	FLATWASHER, 5/8 NOM. I.D. SAE.	2
		LOCKNUT, 5/8-11NC.	2
		CATCH PIVOT PIN, 1 X 4	2
		FLATWASHER, 1" SAE	1
		COTTER PIN, 3/16 X 1 1/2	1

STAGGER BRACKET ASSEMBLY



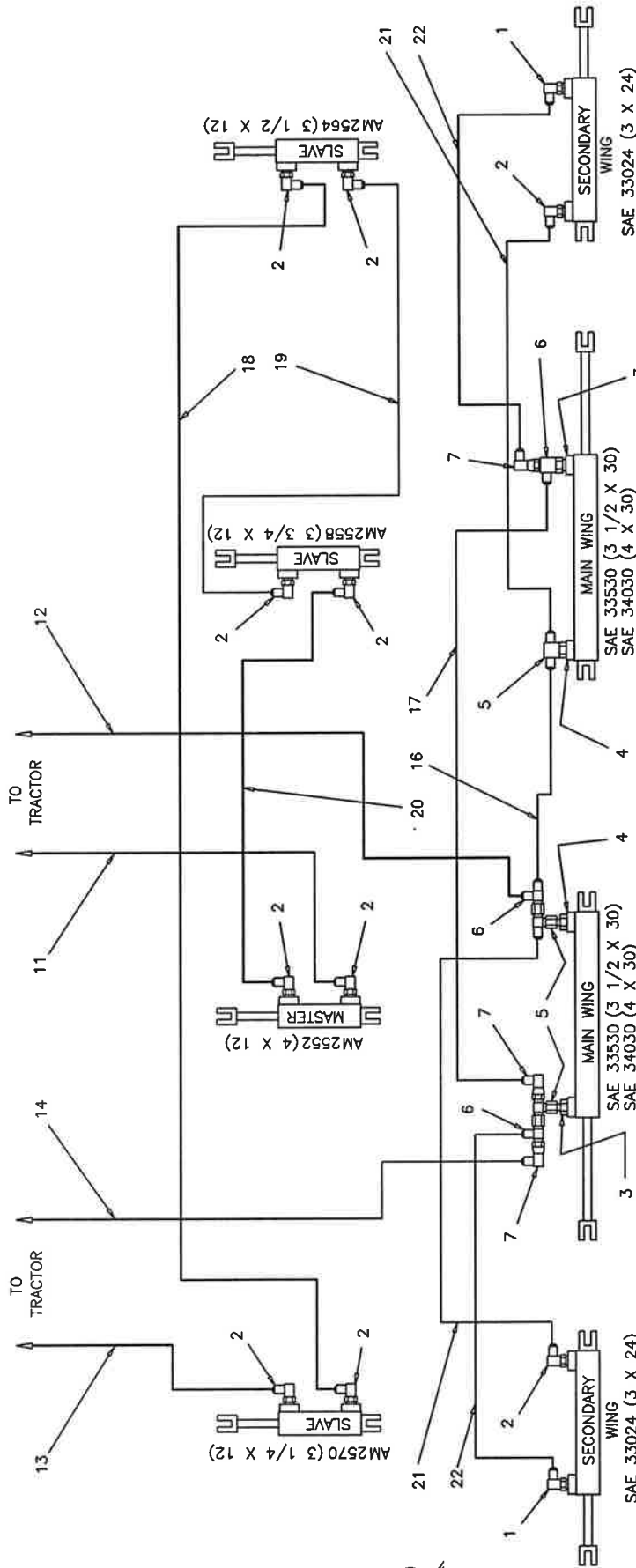
ITEM	PART NO.	DESCRIPTION	DIM. A	DIM. B	QTY.
1	47010182	STAGGER BRACKET - SHORT	18	12	1
	47010234	STAGGER BRACKET - MEDIUM	24	12	1
	47010181	STAGGER BRACKET - LONG	30	8	1
	47010434	STAGGER BRACKET - XT. LONG	36	8	1
	47009431	STAGGER BRACKET - 2-XT. LONG	40	8	1
	47010235	STAGGER BRACKET - SPECIAL	24	15	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

HYDRAULIC PLUMBING SCHEMATIC

72KPMBC
 AB/06/24/D3
 REV 02-10-09

7200 SERIES TOOLBAR WITH SECONDARY WINGS
 AND HYDRAULIC GAUGE WHEELS

NOTE: ROUTE HOSES TO TRACTOR ALONG LH
 HITCH POLE, THEN ACROSS TO PIVOT BRACKET.



HOSE LIST CONSISTS OF
 P.N. 607002 (CMPLT PKG) AND P.N. 650002 (WING PKG)

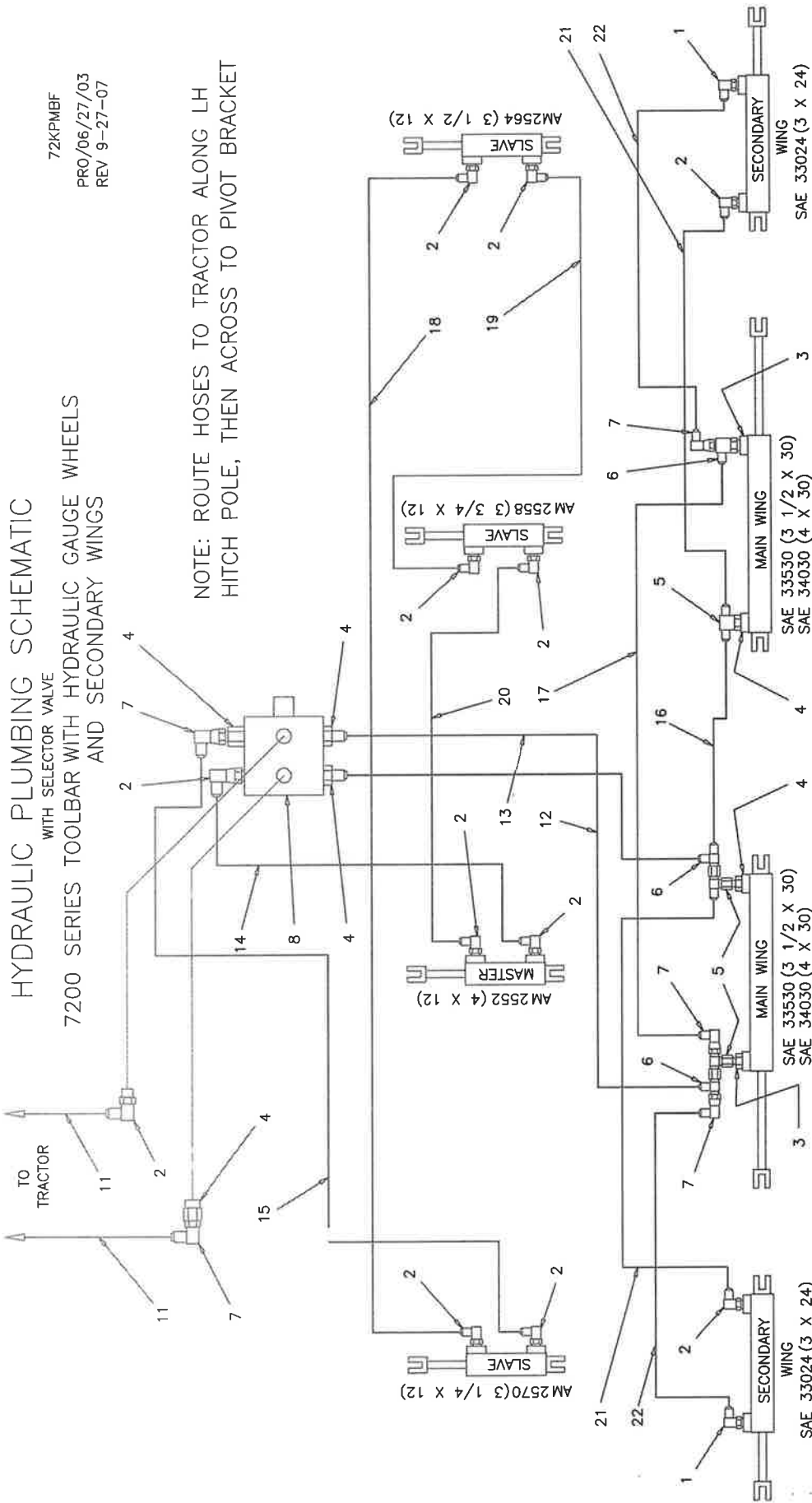
ITEM	PART NO.	DESCRIPTION	QTY
11	609317	HOSE, 3/8 X 317"	1
12	609236	HOSE, 3/8 X 236"	1
13	609432	HOSE, 3/8 X 432"	1
14	609248	HOSE, 3/8 X 248"	1
16	609600	HOSE, 3/8 X 61"	1
17	609126	HOSE, 3/8 X 126"	1
18	609330	HOSE, 3/8 X 396"	1
19	601310	HOSE, 3/8 X 166"	1
20	609120	HOSE, 3/8 X 144"	1
21	609114	HOSE, 3/8 X 114"	2
22	608108	HOSE, 3/8 X 108"	2
	609220	HOSE, 1/4 X 264"	2
		1/2 MPT X 1/4 MPT	2
		NOT SHOWN	2

ITEM	PART NO.	DESCRIPTION	QTY
1	6801-6-BR	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 WITH .045 ORIFICE (BLACK FINISH)	10
3	6400-6-8R	CONNECTOR, #6 MJIC X #8 M O-RING	2
4	6400-6-8	CONNECTOR, #6 MJIC X #8 M O-RING	2
5	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL	3
6	6602-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL	3
7	6500-6	ELBOW, #6 MJIC X #6 FJIC SWIVEL	3

HYDRAULIC PLUMBING SCHEMATIC

72KPMBF
 PRO/06/27/03
 REV 9-27-07

7200 SERIES TOOLBAR WITH HYDRAULIC GAUGE WHEELS AND SECONDARY WINGS



HOSE PACKAGE NO. 607005

CONSISTS OF HOSE PACKAGE 607000 AND _____

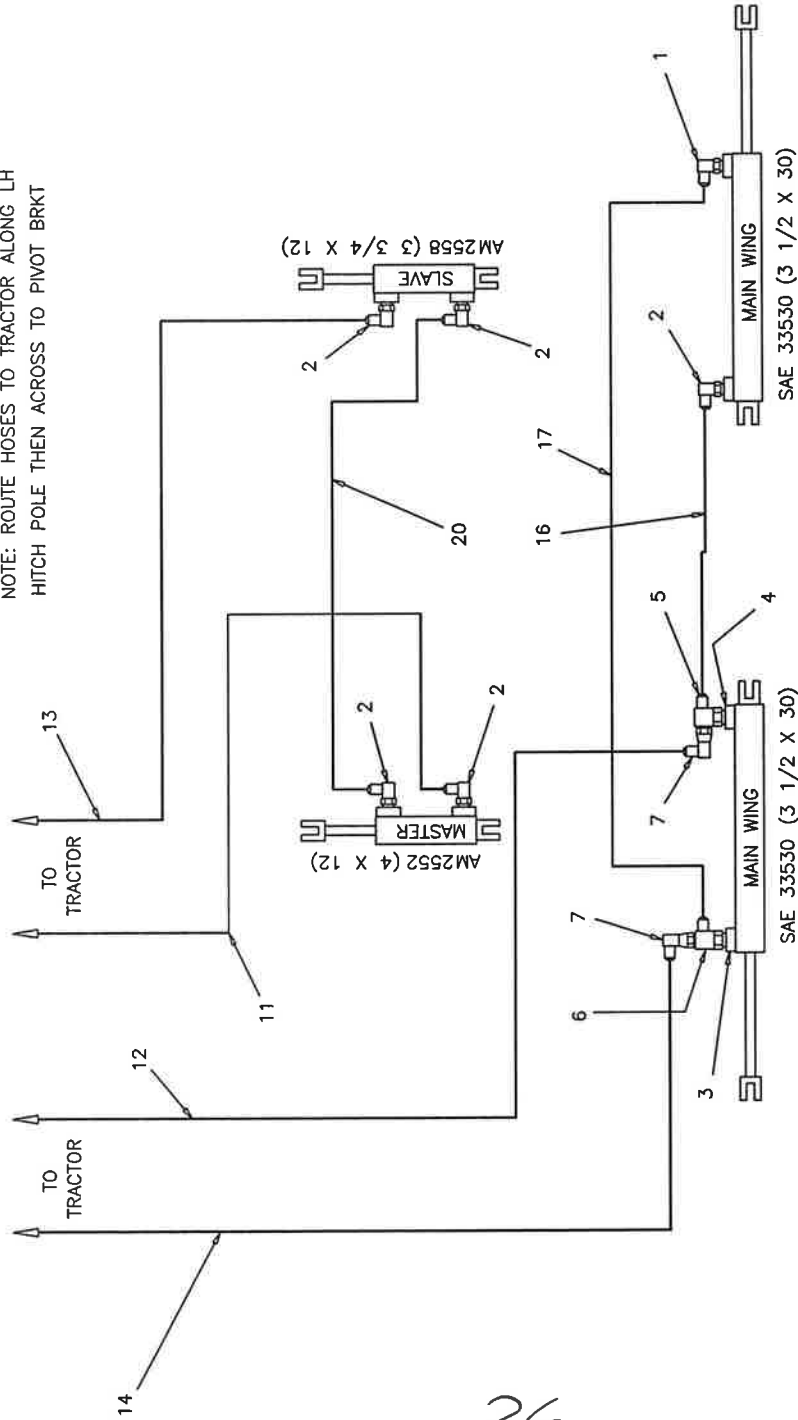
ITEM	PART NO.	DESCRIPTION	QTY
11	609212	HOSE, 3/8 X 212" - 1/2 MPT X #6 JICFS	2
12	609030	HOSE, 3/8 X 36" - #6 JICFS BOTH ENDS	1
13	609040	HOSE, 3/8 X 48" - #6 JICFS BOTH ENDS	1
14	609090	HOSE, 3/8 X 90" - #6 JICFS BOTH ENDS	1
15	609184	HOSE, 3/8 X 220" - #6 JICFS BOTH ENDS	1
16	609600	HOSE, 3/8 X 61" - #6 JICFS BOTH ENDS	1
17	609126	HOSE, 3/8 X 126" - #6 JICFS BOTH ENDS	1
18	609330	HOSE, 3/8 X 396" - #6 JICFS BOTH ENDS	1
19	601310	HOSE, 3/8 X 166" - #6 JICFS BOTH ENDS	1
20	609120	HOSE, 3/8 X 144" - #6 JICFS BOTH ENDS	1
21	609114	HOSE, 3/8 X 114" - #6 JICFS BOTH ENDS	2
22	608126	HOSE, 3/8 X 126" - #6 JICFS BOTH ENDS	2
		HOSE, 1/4 X 264" - 1/2 MPT X 1/4 MPT	2
		PKG NO. 650002	2
		NOT SHOWN	2

ITEM	PART NO.	DESCRIPTION	QTY
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 CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	12
3	6400-6-8R	CONNECTOR, #6 MJIC X #8 M O-RING	2
4	6400-6-8	CONNECTOR, #6 MJIC X #8 M O-RING	6
5	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL	3
6	6602-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL	3
7	6500-6	ELBOW, #6 MJIC X #6 FJIC SWIVEL	5
8	100902	SELECTOR VALVE ASSEMBLY	1

HYDRAULIC PLUMBING SCHEMATIC

7000 SERIES 32 FT. TOOLBAR WITH MANUAL GAUGE WHEELS

NOTE: ROUTE HOSES TO TRACTOR ALONG LH HITCH POLE THEN ACROSS TO PIVOT BRKT



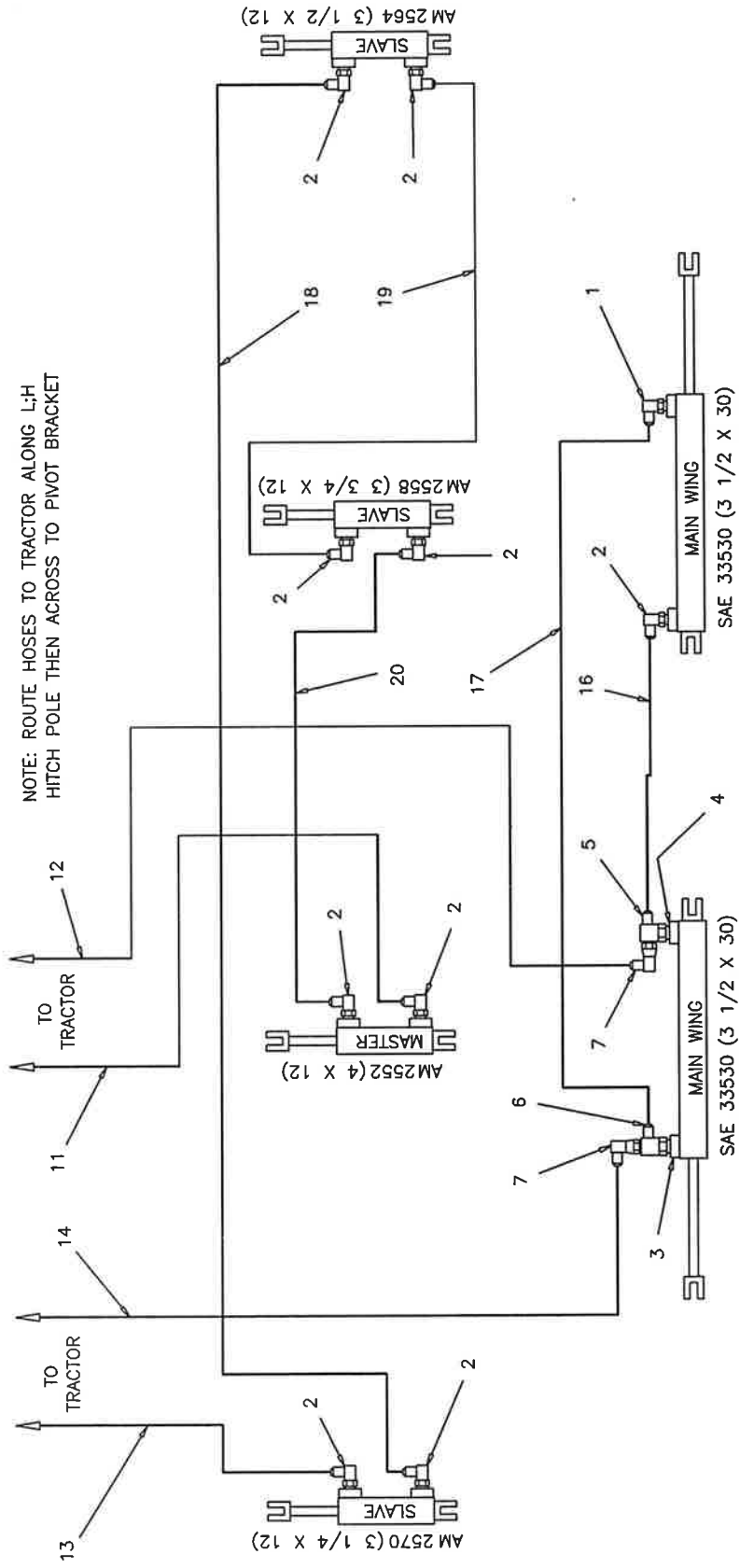
26

HOSE PACKAGE NO. 607001		FITTING PACKAGE NO. 607201	
ITEM	PART NO.	ITEM	PART NO.
DESCRIPTION		DESCRIPTION	
11	609317	1	6801-6-8R
12	609236	2	6801-6-8
13	609380	3	6400-6-8R
14	609248	4	6400-6-B
16	609600	5	6600-6
17	609126	6	6602-6
20	609120	7	6500-6
609220			

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 CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	5
3	6400-6-8R	CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	1
4	6400-6-B	CONNECTOR, #6 MJIC X #8 M O-RING BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL	1
5	6600-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL	1
6	6602-6	ELBOW #6 MJIC X #6 FJIC SWIVEL	1
7	6500-6	ELBOW #6 MJIC X #6 FJIC SWIVEL	2

HYDRAULIC PLUMBING SCHEMATIC

7000 SERIES 32 FT. TOOLBAR WITH 2 HYDRAULIC GAUGE WHEELS



NOTE: ROUTE HOSES TO TRACTOR ALONG L:H HITCH POLE THEN ACROSS TO PIVOT BRACKET

27

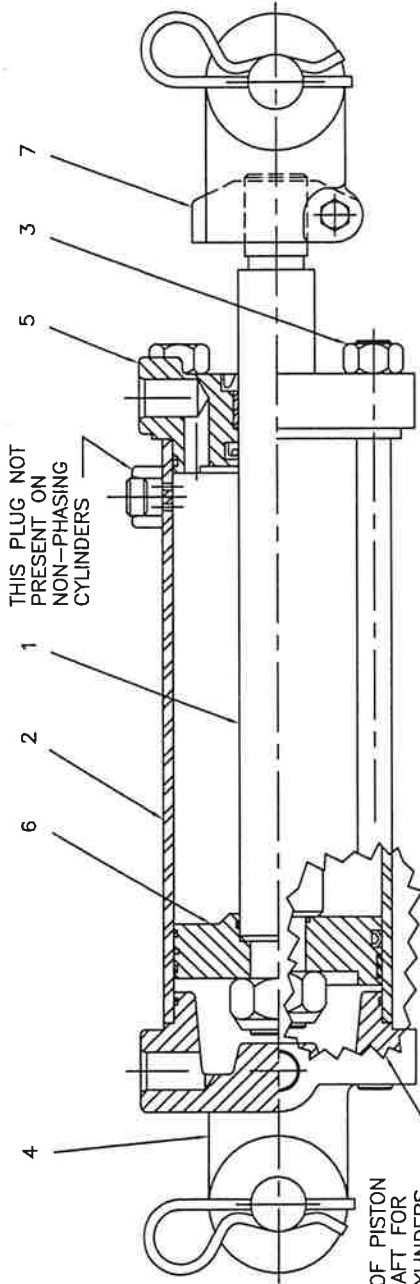
ITEM	PART NO.	DESCRIPTION	QTY
11	609317	HOSE, 3/8 X 317" - 1/2 MPT X #6 JICFS	1
12	609236	HOSE, 3/8 X 236" - 1/2 MPT X #6 JICFS	1
13	609432	HOSE, 3/8 X 432" - 1/2 MPT X #6 JICFS	1
14	609248	HOSE, 3/8 X 248" - 1/2 MPT X #6 JICFS	1
16	609600	HOSE, 3/8 X 61" - #6 JICFS BOTH ENDS	1
17	609126	HOSE, 3/8 X 126" - #6 JICFS BOTH ENDS	1
18	609330	HOSE, 3/8 X 396" - #6 JICFS BOTH ENDS	1
19	601310	HOSE, 3/8 X 166" - #6 JICFS BOTH ENDS	1
20	609120	HOSE, 3/8 X 144" - #6 JICFS BOTH ENDS	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	9
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	1
5	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL	1
6	6602-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL	1
7	6500-6	ELBOW #6 MJIC X #6 FJIC SWIVEL	2

FITTING PACKAGE NO. 607202

HOSE PACKAGE NO. 607002

7300CYL06
07-28-11



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

ITEM NO.	DESCRIPTION	WING CYL. 3 1/2 X 30	WING CYL. 4 X 30	2ndry. WING CYL. 3 X 14	2ndry. WING CYL. 3 X 24	WHEEL CYL. 4 X 12	WHEEL CYL. 3 3/4 X 12	WHEEL CYL. 3 1/2 X 12	WHEEL CYL. 3 1/4 X 12	QTY.	REQ. D.
1	SHAFT	010735750B	011035438A	010719750A	010729750A	010700698	010700098	010600379	010600379	1	
2	TUBE	051732063A	051932563A	051516083A	051526063A	061900598	061800022	061700366	061600028	1	
3	TIE ROD ASSM.	170201343	170301354	170201182	170201282	170301173	170301173	170201163	170201163	4	
4	BUTT	1417005SF	1419005SF	1415005SF	1415005SF	141900037	141800009	141700023	141600002	1	
5	GLAND ASSM.	0817BBGSF	0819BBGSF	0815BBGSF	0815BBGSF	081900374	081800022	081700269	081600038	1	
6	PISTON	071700174	071900260	071500244	071500244	071900273	071800021	071700208	071600025	1	
7	CLEVIS ASSM.	100000577	100000326	100000423	100000423	100000577	100000577	100000423	100000423	1	
	REPAIR KIT	47033500	47034000	47033000	47033000	47002552	47032558	47002564	47002570	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.

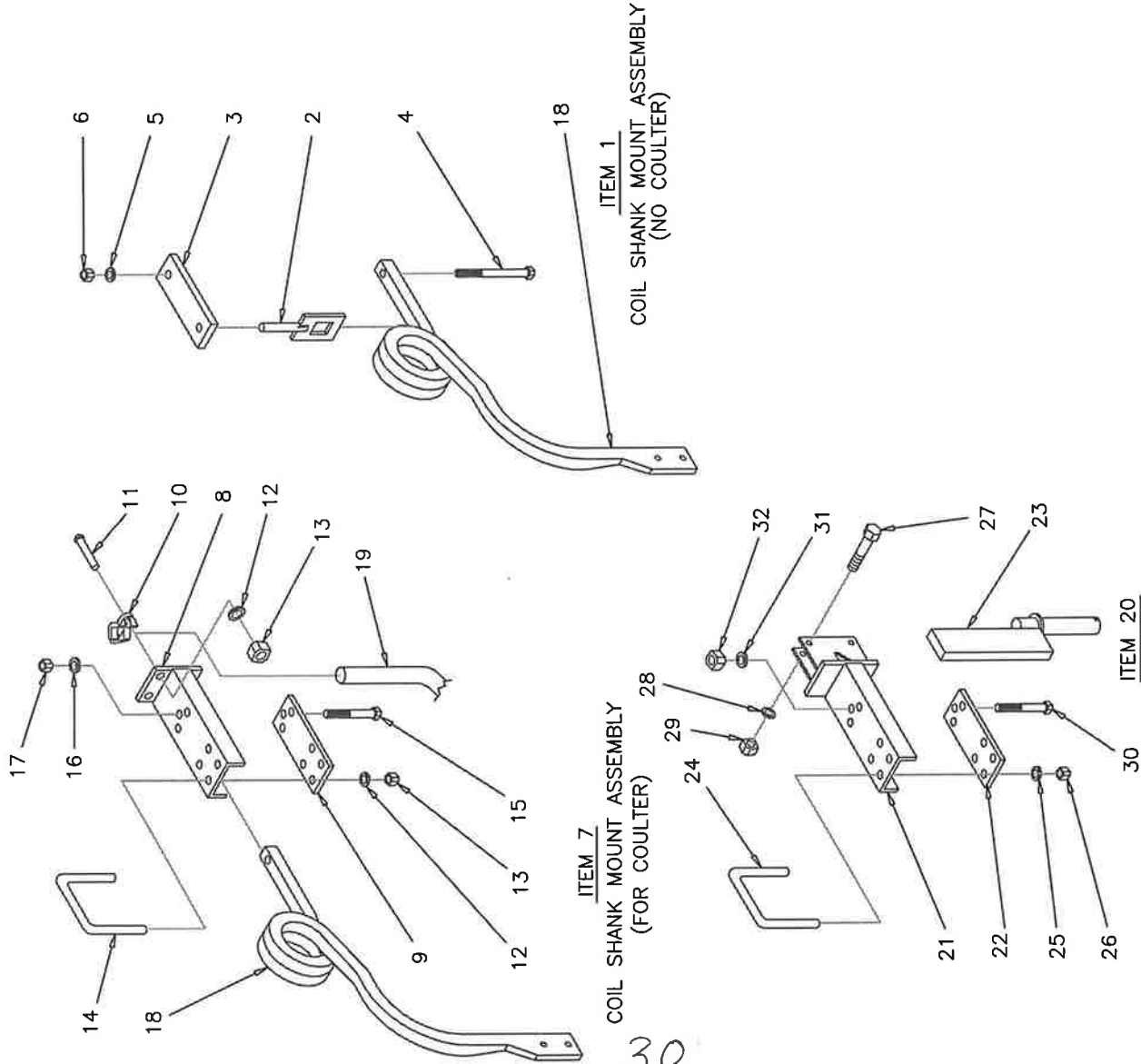
1. Secure the cylinder in a vice or other method to prevent rotation. Clean the immediate area so the parts can be laid out.
2. Remove the tie rod nuts. Pull the shaft assembly from the cylinder. Remove the tube item (2).
3. Loosen the clevis nut and remove the clevis item (7) from the shaft assembly.
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 turndown. Apply a light coat of grease to the seal. Slip the piston item (6) onto the turndown 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.
5. 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. 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)

29

STANDARD UNIVERSAL MOUNT

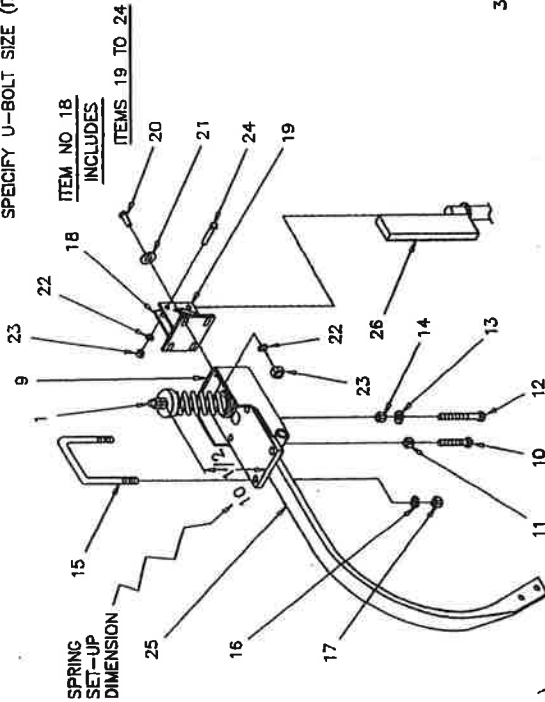


ITEM	PART NO.	DESCRIPTION	QTY
1	40511000 40512000	SHANK CLAMP SET, (6 X 4 BAR) SHANK CLAMP SET, (4 X 4 BAR) INCLUDES ITEMS 2 TO 6	1 OPT.
2	44009306 602083	LOLLIPOP, FOR SQUARE SHANK LOLLIPOP, FOR 1 X 2 SHANK WITH LOCKWASHER & NUT	1 OPT.
3	44006685	TOP PLATE, (6 X 4 BAR)	1 OPT.
4	44006685	TOP PLATE, (4 X 4 BAR)	1 OPT.
5	18058470	BOLT, 3/4-10NC. X 7	1
6	18891800	LOCKWASHER, 3/4	2
7	18418400	HEX. NUT, 3/4-10NC.	2
8	47309184	SHANK MOUNT ASS'Y. (SQUARE SHANK)	1
9	47309177	INCLUDES ITEMS 8 TO 14 SHANK MOUNT ASS'Y. (1 X 2 SHANK)	OPT.
10	47308184	ON 6 X 4 BAR SHANK MOUNT ASS'Y. (1 X 2 SHANK)	OPT.
11	47309406	ON 4 X 4 BAR INCLUDES ITEMS 8 TO 14	OPT.
12	47302890	SHANK HOLDER, (SQUARE SHANK)	1
13	47306005	SHANK HOLDER, (1 X 2 SHANK)	OPT.
14	47006832	CLAMP PLATE, (SQUARE SHANK)	1
15	47301538	CLAMP, COULTER SHANK	2
16	18057940	BOLT, 5/8-11NC. X 3 1/2	4
17	18891600	LOCKWASHER, 5/8	8
18	18417900	HEX. NUT, 5/8-11NC.	8
19	47006950	U-BOLT, 5/8-11NC. (6 X 4 BAR)	2
20	47006951	U-BOLT, 5/8-11NC. (4 X 4 BAR)	OPT.
21	18057938	BOLT, 5/8-11NC. X 3	1
22	18891600	LOCKWASHER, 5/8	1
23	18417900	HEX. NUT, 5/8-11NC.	1
24	80310	COIL SHANK (OR AS SPECIFIED)	1
25	4036000	COULTER ASSEMBLY, AG36	1
26	W/STRAIGHT OR BENT COULTER SHANK AS SPEC'FD.		
27	47999370	SHANK MOUNT ASSEMBLY COMPLETE	1
28	47309370	INCLUDES ITEMS 21 TO 29	1
29	47006832	SHANK HOLDER, (1 X 2 SHANK)	1
30	47303811	CLAMP PLATE, (1 X 2 SHANK)	1
31	47309811	FLAT BAR COULTER SHANK, 18"	1
32	47006950	FLAT BAR COULTER SHANK, 12"	OPT.
33	47006951	U-BOLT, 5/8-11NC. (6 X 4 BAR)	2
34	47006951	U-BOLT, 5/8-11NC. (4 X 4 BAR)	OPT.
35	18891600	LOCKWASHER, 5/8	4
36	18417900	HEX. NUT, 5/8-11NC.	4
37	18057434	BOLT, 1/2-13NC. X 2 1/2	2
38	18891400	LOCKWASHER, 1/2	2
39	18417400	HEX. NUT, 1/2-13NC.	2
40	18057938	BOLT, 5/8-11NC. X 3	1
41	18891600	LOCKWASHER, 5/8	1
42	18417900	HEX. NUT, 5/8-11NC.	1

SPRING BUNDLE ASSEMBLY

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

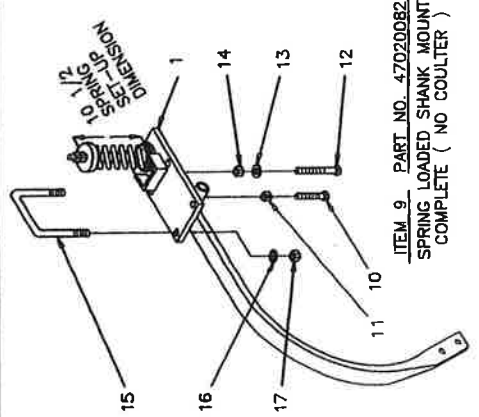
SPECIFY U-BOLT SIZE (ITEM 15)



ITEM NO. 9
INCLUDES ITEM 1
AND 10 TO 17

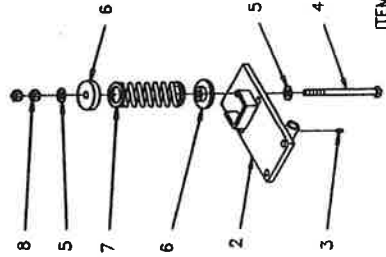
ITEM NO. 1
INCLUDES ITEMS 2 TO 8

SPRING LOADED SHANK MOUNTING



ITEM 9 PART NO. 47020082
INCLUDES ITEMS 10 TO 17

ITEM	PART NO.	DESCRIPTION	QTY
1	47029413	SPRING SHANK MOUNT ASSEMBLY INCLUDES ITEMS 2 TO 8	1
2	47019413	SHANK MOUNTING BASE	2
3	1801805	GREASE ZERK	1
4	47007766	BOLT, 3/4-10NC. X 15	2
5	18811800	FLATWASHER, 3/4	2
6	47007085	END COLLAR	2
7	47007565	COMPRESSION SPRING	1
8	18446890	HEX. NUT, 3/4-10NC. GR. 5	2
9	47039413	SPRING LOADED SHANK MOUNT COMPLETE (NO COULTER) INCLUDES ITEMS 1 AND 10 TO 17	1
10	18058429	BOLT, 3/4-10NC. X 1 3/4	1
11	18449003	HEX. JAM NUT, 3/4-10NC.	1
12	18058436	BOLT, 3/4-10NC. X 3	1
13	18891800	LOCKWASHER, 3/4	1
14	18418400	HEX. NUT, 3/4-10NC.	1
15	47007083	U-BOLT, 5/8-11NC. (4 X 6 BAR)	2
16	47009847	U-BOLT, 5/8-11NC. (6 X 6 BAR) OR	4
17	18417900	LOCKWASHER, 5/8	4
18	47029417	COULTER MOUNTING BRACKET ASSEMBLY INCLUDES ITEM 19 TO 24	1
19	47019417	COULTER MOUNTING BRACKET	4
20	18057426	BOLT, 1/2-13NC. X 1 1/2	4
21	18811400	FLATWASHER, 1/2	6
22	18891400	LOCKWASHER, 1/2	6
23	18417400	HEX. NUT, 1/2-13NC.	2
24	18057434	BOLT, 1/2-13NC. X 2 1/2	2
25	103471	SPRING SHANK (OR AS SPECIFIED)	1
26		REFER TO COULTER ASSEMBLY COMPLETE FOR ITEM PART NUMBERS AND SPECIFY BLADE ASSEMBLY NUMBER AND SWIVEL BAR NUMBER.	1

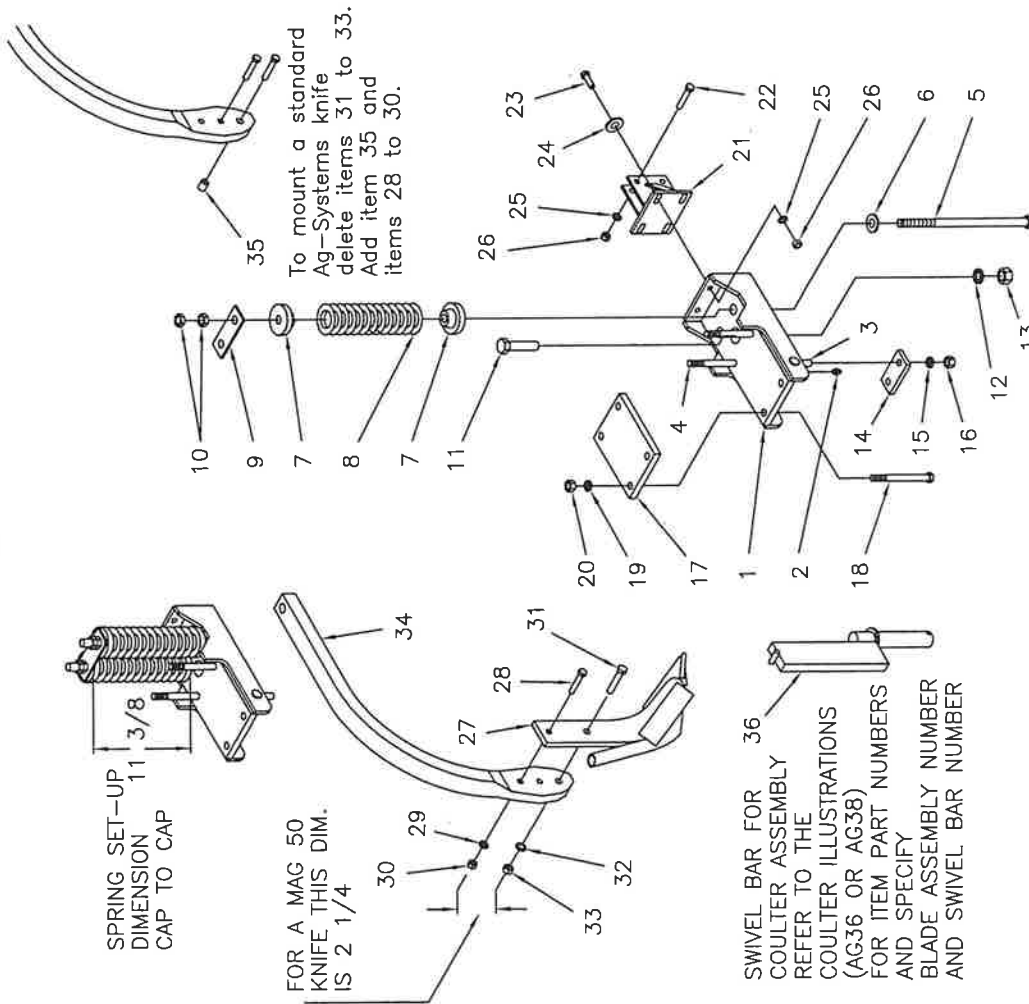


ITEM 1 (REPAIR PARTS)
INCLUDES ITEMS 2 TO 8

ITEM	PART NO.	DESCRIPTION	QTY
1	47010082	SPRING SHANK MOUNT ASSEMBLY INCLUDES ITEMS 2 TO 8	1
2	47010189	SHANK MOUNTING BASE	1
3	1801805	GREASE ZERK	2
4	47007766	BOLT, 3/4-10NC. X 15	2
5	18811800	FLATWASHER, 3/4	2
6	47007085	END COLLAR	1
7	47007565	COMPRESSION SPRING	2
8	18446890	HEX. NUT, 3/4-10NC. GR. 5	2
9	47020082	SPRING LOADED SHANK MOUNT COMPLETE (NO COULTER) INCLUDES ITEMS 1 AND 10 TO 17 (SHIPPING INFO) HARDWARE PACKAGE	1
10	18058429	BOLT, 3/4-10NC. X 1 3/4	1
11	18449003	HEX. JAM NUT, 3/4-10NC.	1
12	18058436	BOLT, 3/4-10NC. X 3	1
13	18891800	LOCKWASHER, 3/4	1
14	18418400	HEX. NUT, 3/4-10NC.	1
15	47007083	U-BOLT, 5/8-11NC. (4 X 6 BAR)	2
16	47009847	U-BOLT, 5/8-11NC. (6 X 6 BAR) OR	4
17	18417900	LOCKWASHER, 5/8	4

W

SPRING BUNDLE ASSEMBLY WITH DUAL SPRINGS AND HEAVY SHANK



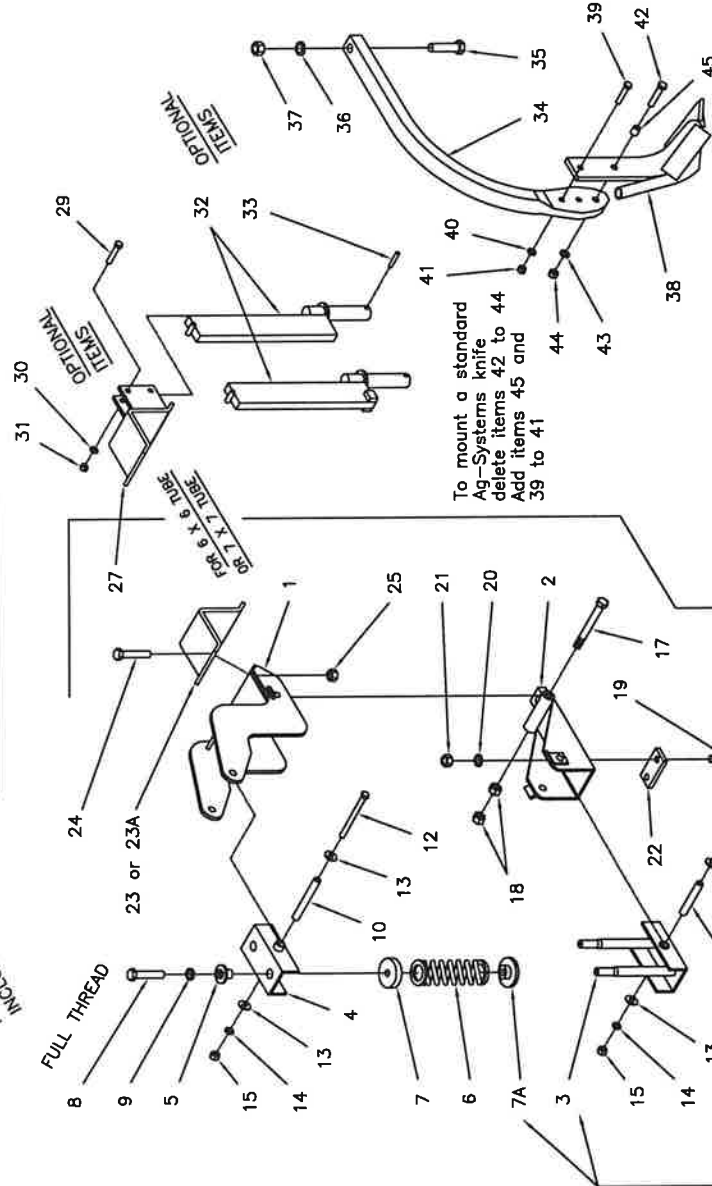
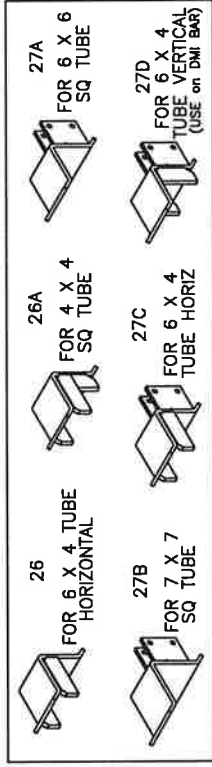
ITEM	PART NO.	DESCRIPTION	QTY
1	47009661	SPRING BUNDLE COMPLETE	1
2	47019661	INCLUDES ITEMS 1 TO 20 PREASSEMBLED	1
3	47019661	SPRING BUNDLE BRACKET	2
4	18901805	GREASE ZERK, 1/4-28NF	2
5	ITEMS 3 AND 4	ARE CAPTURED IN THE ASSEMBLY WHEN THE SPRINGS ARE INSTALLED.	2
6	18057942	BOLT, 5/8-11NC. X 3 3/4	2
7	18057971	BOLT, 5/8-11NC. X 6 1/2	2
8	18057976	BOLT, 5/8-11NC. X 8 1/2	OPT
9	47007766	SPRING BOLT, 3/4-10NC. X 15 1/2	2
10	18811800	FLAT WASHER, 3/4	2
11	47007085	SPRING CAP	4
12	47007565	COMPRESSION SPRING, 5/8 WIRE	2
13	47019672	TOP WASHER PLATE	1
14	18446890	HEX. NUT, 3/4-10NC	4
15	18058501	BOLT, 7/8-9NC. X 3 3/4	1
16	18892000	LOCK WASHER, 7/8	1
17	18417800	HEX. NUT, 7/8-9NC.	1
18	47009671	CLAMP PLATE-SHANK	1
19	18891600	LOCK WASHER, 5/8	2
20	18417900	HEX. NUT, 5/8-11NC.	2
21	47009678	CLAMP PLATE-TOOLBAR	2
22	18057971	BOLT, 5/8-11NC. X 6 1/2	1
23	18057976	BOLT, 5/8-11NC. X 8 1/2	1
24	18891600	LOCK WASHER, 5/8	4
25	18417900	HEX. NUT, 5/8-11NC.	4
26	47029417	COULTER MOUNTING BRACKET	6
27	47019417	COULTER MOUNTING BRACKET	6
28	18057434	BOLT, 1/2-13NC. X 2 1/2	1
29	18057426	BOLT, 1/2-13NC. X 1 1/2	2
30	18811400	FLATWASHER, 1/2	4
31	18891400	LOCKWASHER, 1/2	4
32	18417400	HEX. NUT, 1/2-13NC.	6
33	201996	KNIFE, MAG 50 W/3/8 NH3 TUBE	1
34	201997	KNIFE, GOPHER W/1/2 LIQ. TUBE	1
35	201998	KNIFE, GOPHER W/1 1/4 DRY TUBE	1
36	201999	KNIFE, GOPHER for DUAL SHOOT	1
	202999	1/2 NH3 TUBE & 1 1/4 DRY TUBE	1
	203998	KNIFE, GOPHER for DUAL SHOOT	1
	47309997	3/8 NH3 TUBE & 1 1/4 DRY TUBE	1
	18037433	KNIFE, GOPHER W/ 1" DRY TUBE	1
	18891400	KNIFE, MAG 50 W/ 1" DRY TUBE	1
	18417400	BOLT, 1/2-13NC. X 2 1/2 GR2	1
	18057934	LOCK WASHER, 1/2	1
	18417900	HEX. NUT, 1/2-13NC.	1
	18891600	BOLT, 5/8-11NC. X 2 1/2	1
	18417900	LOCK WASHER, 5/8	1
	200999	HEX. NUT, 5/8-11NC.	1
	201000	KNIFE SHANK 1/4 THK (TO SPRING 2007)	1
	47009960	KNIFE SHANK 1/2 THK (FALL 07 TO PRESENT)	1
	47009960	KNIFE MOUNT BUSHING	OPT.
	47009960	COULTER SWIVEL BAR, (SEE NOTE)	1

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SPRING BUNDLE ASSEMBLY (PRE 2014)

HI-TRIP SHANK ASSEMBLY (HTS ASSEMBLY)

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



- 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 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.

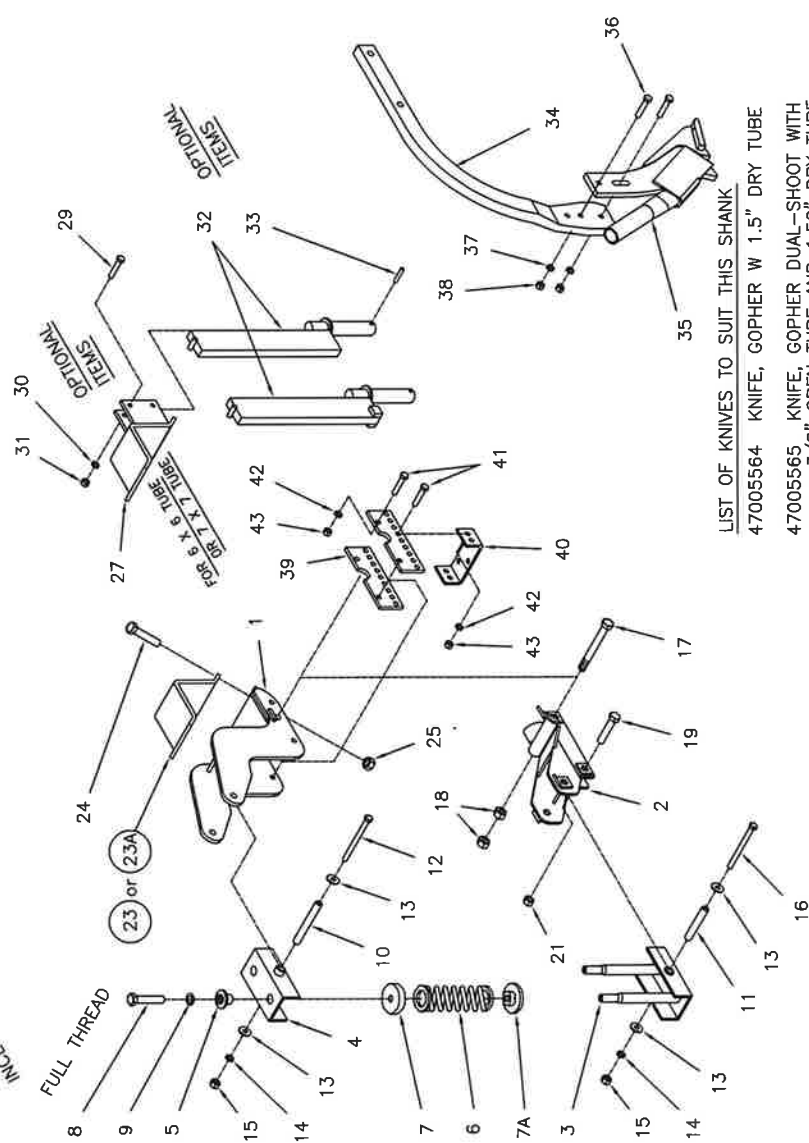
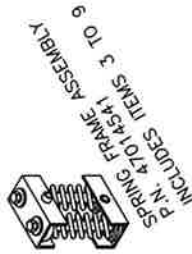
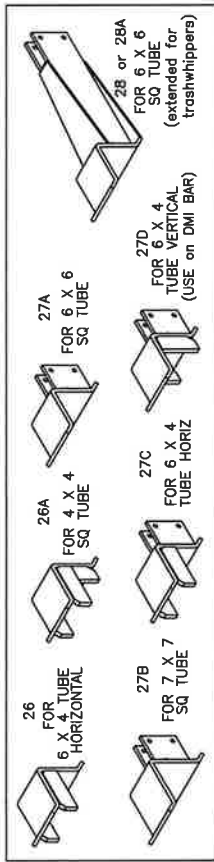
NOTE:
ITEM 7A IS NEW FOR FALL 2008, WHEN REPLACING SPRING FRAME ITEM 3, ALSO ORDER ITEM 7A OR DRILL OUT EXISTING SPRING CAPS ITEM 7 TO 1.260 DIA (BOTTOM (2) CAPS ONLY)

ITEM	PART NO.	DESCRIPTION	QTY
1	47014530	SPRING BUNDLE COMPLETE INCLUDES ITEMS 1 TO 19 (PREASSEMBLED)	1 OR
2	47004530	MAIN BRACKET, (STANDARD)	1
3	47015003	MAIN BRACKET, (7 X 7 BAR)	OR
4	47004533	SHANK PIVOT BRACKET	1
5	47014541	SPRING FRAME ASSEMBLY INCLUDES ITEMS 3 TO 9	
6	47004541	SPRING FRAME, BOTTOM	1
7	47004538	SPRING FRAME, TOP	1
8	47004544	SPRING RETAINER	1
9	47007565	COMPRESSION SPRING, 5/8 WIRE	2
10	47004549	SPRING CAP, TOP	2
11	47005330	SPRING CAP, BOTTOM	2
12	47004547	SEE NOTE RE ITEM 7A (ON ILLUSTRATION)	
13	18891600	BOLT, 5/8-11NC, X 3 3/4 (SPECIAL)	2
14	18891600	LOCK WASHER, 5/8	2
15	47004551	INNER BUSHING, (TOP) 5 13/16	1
16	47004550	INNER BUSHING, (BOTTOM) 5	1
17	18057464	BOLT, 1/2-13NC, X 7	1
18	18811400	FLAT WASHER, 1/2	4
19	18811400	LOCK WASHER, 1/2	4
20	18417400	HEX. NUT, 1/2-13NC	2
21	18057462	BOLT, 1/2-13NC, X 6	1
22	18058422	BOLT, 3/4-10NC, X 7 1/2 GR 5	1
23	18418400	HEX. NUT, 3/4-10NC	2
24	18057946	BOLT, 5/8-11NC, X 4 GR5 ZC	2
25	18891600	LOCK WASHER, 5/8	2
26	18417900	HEX. NUT, 5/8-11NC	2
27	47009671	SHANK CLAMP PLATE	1
28	47004532	SPRING BUNDLE CLAMP (6X6 BAR)	OR
29	47015004	SPRING BUNDLE CLAMP (7X7 BAR)	OR
30	18098453	BOLT, 5/8-11NC, X 3 GR 8	4
31	18458451	TOP LOCK NUT, 5/8-11NC	4
32	ITEMS 26 TO 45 ARE CONSIDERED "OPTIONAL"		
33	47004555	SPRING BUNDLE CLAMP (6X4 HORIZ)	1
34	47004555	SPRING BUNDLE CLAMP (4X4 BAR)	1
35	47004553	CLAMP W/CLTR MOUNT (6X6 BAR)	1
36	47004553	CLAMP W/CLTR MOUNT (6X6 BAR)	1
37	47015005	CLAMP W/CLTR MOUNT (7X7 BAR)	1
38	47004557	CLAMP W/CLTR MOUNT (6X4 BAR)	1
39	47004557	CLAMP W/CLTR MNT DMI (6X4 VERT)	1
40	18057434	BOLT, 1/2-13NC, X 2 1/2	2
41	18891400	LOCK WASHER, 1/2	2
42	18417400	HEX. NUT, 1/2-13NC	2
43	47303811	COULTER SWIVEL BAR (INCL ITEM 33)	1
44	18511032	SPRING PIN, 1/4 X 2 1/4 (STD)	1
45	OPTIONAL	COULTER BAR WITH RESTRICTED SWING TO DEG. AND 15 DEG. AVAILABLE. CALL AG SYSTEMS FOR INFO.	
46	SEE AG37 GENERATION THREE ILLUSTRATION		
47	47304522	COULTER SWIVEL BAR (SPECIAL)	1
48	200989	KNIFE SHANK, 1/4 THK (TO SPRING 2007)	1
49	201000	KNIFE SHANK, 1/2 THK (FALL 07 TO PRESENT)	1
50	18058501	BOLT, 7/8-9NC, X 4	1
51	18417800	LOCK WASHER, 7/8	1
52	18417800	HEX. NUT, 7/8-9NC	1
53	SEE LIST OF KNIVES AT LEFT		
54	THESE ARE HEAVY KNIVES WITH 9/16 X 3 BODY		
55	18037432	BOLT, 1/2-13NC, X 2 1/4 GR.2	1
56	18891400	LOCK WASHER, 1/2	1
57	18417400	HEX. NUT, 1/2-13NC	1
58	18057934	BOLT, 5/8-11NC, X 2 1/2	1
59	18891600	LOCK WASHER, 5/8	1
60	18417900	HEX. NUT, 5/8-11NC	1
61	47009960	KNIFE MOUNT BUSHING	OPT.

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]



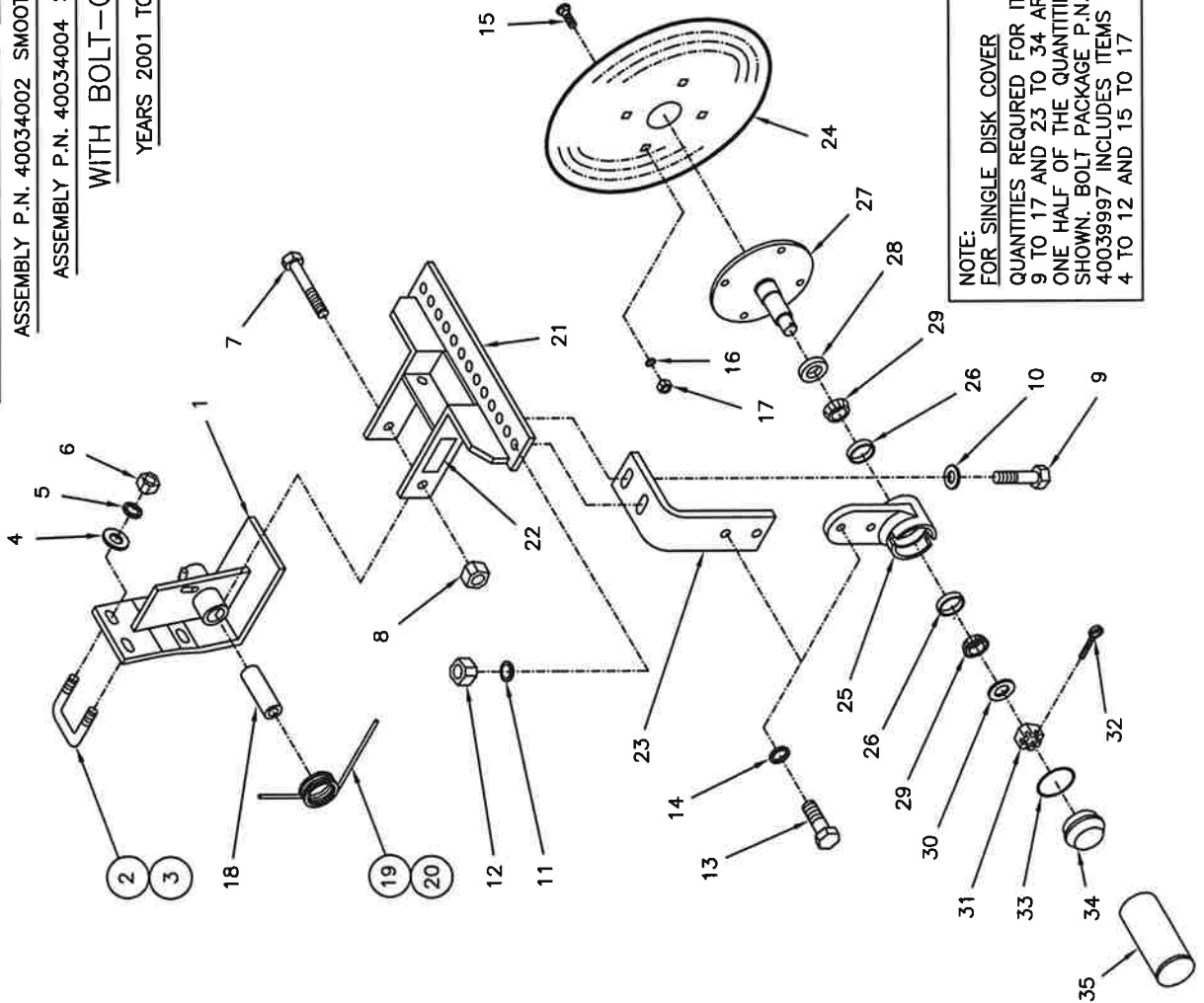
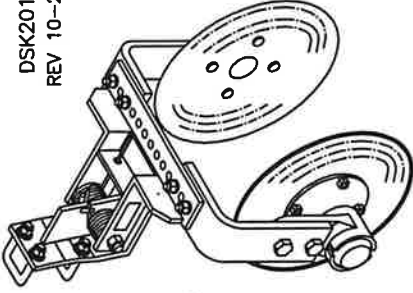
- LIST OF KNIVES TO SUIT THIS SHANK
- 47005564 KNIFE, GOPHER W 1.5" DRY TUBE
 - 47005565 KNIFE, GOPHER DUAL-SHOOT WITH 3/8" OPEN TUBE AND 1.50" DRY TUBE
 - 47005857 KNIFE, MAG 50 DUAL-SHOOT WITH 3/8" OPEN TUBE AND 1.50" DRY TUBE

ITEM PART NO.	DESCRIPTION	QTY
47013973	HI-TRIP SPRING BUNDLE COMPLETE	1
INCLUDES ITEMS 1 TO 18 (PREASSEMBLED)		
47004530	MAIN BRACKET, (6 X 6 BAR)	1
47015003	MAIN BRACKET, (7 X 7 BAR)	OR
47003973	SHANK PIVOT BRACKET (2014)	1
47014541	SPRING FRAME ASSEMBLY	1
INCLUDES ITEMS 3 TO 9		
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

10	47004551	INNER BUSHING, (TOP) 5 13/16	1
11	47004550	INNER BUSHING, (BOTTOM) 5	1
12	18057464	BOLT, 1/2-13NC. X 7	4
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	18058472	BOLT, 3/4-10NC. X 7 1/2 GR. 5	1
18	18418400	HEX. NUT, 3/4-10NC.	2
19	18058436	BOLT, HEX HD 3/4NC X 3 GR5 ZC	2
20	OMITTED	---	---
21	18458400	NUT, CENTER LOCK 3/4NC ZC	2
22	47004532	SPRING BUNDLE CLAMP (6X6 BAR)	2
23	47015004	SPRING BUNDLE CLAMP (7X7 BAR)	OR
23A	47015004	BOLT, 5/8-11NC. X 3 GR 8	4
24	18098453	TOP LOCK NUT, 5/8-11NC	4
25	18458451	ITEMS 26 TO 38 ARE CONSIDERED "OPTIONAL"	---
26	47004555	SPRING BUNDLE CLAMP (6X4 HORIZ)	1
26A	47004555	SPRING BUNDLE CLAMP (4X4 BAR)	1
27	47004553	CLAMP W/CLTR MOUNT (6X6 BAR)	1
27A	47015005	CLAMP W/CLTR MOUNT (7X7 BAR)	1
27B	47015005	CLAMP W/CLTR MOUNT (6X4 BAR)	1
27C	47004557	CLAMP W/CLTR MOUNT (6X4 BAR)	1
27D	47004557D	CLAMP W/CLTR MNT DMI (6X4 VERT)	1
28	47005894	CLAMP 20"CLTR MNT (trashwhipper)	1
28A	47007894	CLAMP 24"CLTR MNT (trashwhipper)	1
29	18057434	BOLT, 1/2-13NC. X 2 1/2 GR5	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	47304522	COULTER SWIVEL BAR (SPECIAL)	1
34	18511032	SPRING PIN, 1/4 X 2 1/4 (STD)	1
35	OPTIONAL	COULTER BAR WITH RESTRICTED SWING 10 DEG. AND 15 DEG. AVAILABLE.	---
PLEASE CALL AG SYSTEMS FOR INFO.			---
SEE AG37 GENERATION THREE COULTER ILLUSTRATION			---
34	47003977	KNIFE SHANK, 1 1/4 THK EDGE-BENT 1 (2014 AND NEWER)	1
35	KNIFE, SEE LIST OF KNIVES LISTED ON LEFT	---	---
36	18057434	BOLT, 1/2 -13NC. X 2 1/2 GR5	2
37	18891400	LOCK WASHER, 1/2	2
38	18417400	HEX. NUT, 1/2-13NC.	2
39	47995891	TRASHWHIPPER MOUNT KIT (ITEMS 39-43)	---
40	47005891	PLATE, TRASHWHIPPER MOUNTING	2
41	18057147	MOUNT CHANNEL, TRASHWHIPPER	1
42	18891300	LOCKWASHER, 7/16 ZC	8
43	18437100	NUT, HEX 7/16NC ZC	8
(with optional coulters order option item 28)			---

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	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	18057523	BOLT, 1/2-20NF. X 1 1/4	4
14	18891400	LOCKWASHER, 1/2	4
15	18176450	CARRIAGE BOLT, 3/8-16NC. X 1	8
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	2
24	44501310	DISC BLADE, 13 INCH DIA.	2
25	47009558	HUB ASSEMBLY COMPLETE	2
26	10658	INCLUDES ITEMS 13 & 14 & 25 TO 34	2
27	47009328	HUB WITH CUPS ITEM 26	2
28	40030325	BEARING CUP	4
29	10659	SPINDLE WITH FLANGE	2
30	18841800	GREASE SEAL	2
31	18488600	BEARING CONE	4
32	18560722	FLATWASHER, 3/4 SAE (1 1/2 O.D.)	2
33	47999558	SLOTTED NUT, 3/4-16NF.	2
34	47005911	COTTER PIN, 5/32 X 1	2
35	47005999	O-RING DUST SEAL	2
		DUST CAP	2
		BOLT PACKAGE INCLUDES ITEMS- 4 TO 6, 8 TO 12, AND 15 TO 17	1
		DUST CAP INSTALLATION TOOL (OPTIONAL)	1

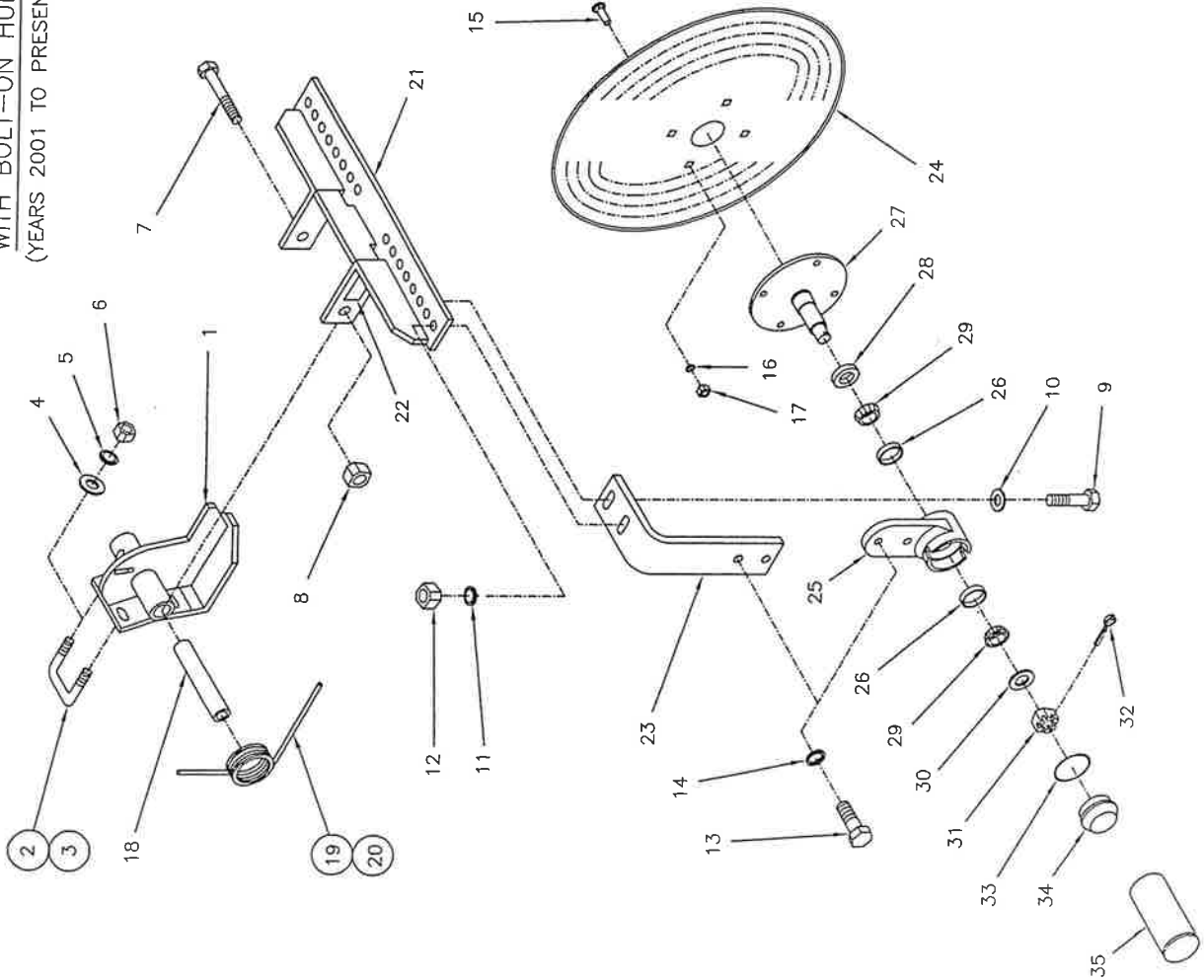
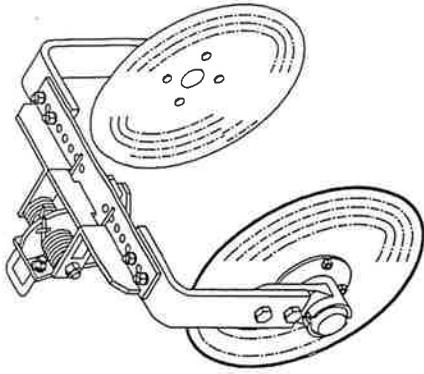
DOUBLE DISC COVER SEALER "SPRING LOADED"

ASSEMBLY P.N. 40034000 SMOOTH 18" DISC

40034001 NOTCHED 18" DISC

WITH BOLT-ON HUB
(YEARS 2001 TO PRESENT)

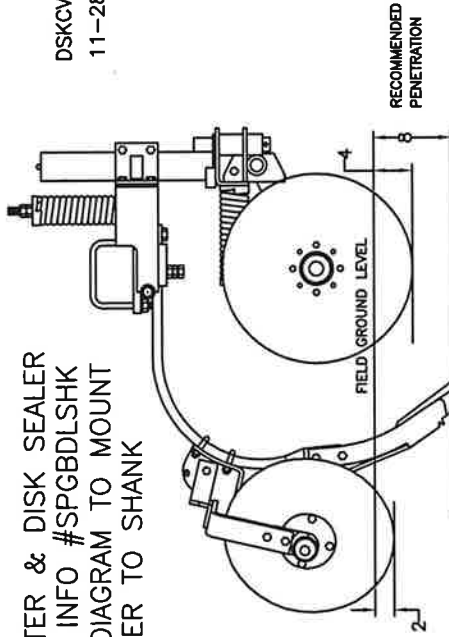
DSK201X18
REV 10-22-09



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	HEX. NUT, 1/2-13NC	4
7	18057972	BOLT, 5/8-11NC, X 7 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	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	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
35	40039999	DUST CAP	2
	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

DSKCVRMT1318
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 vise 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.

W
6

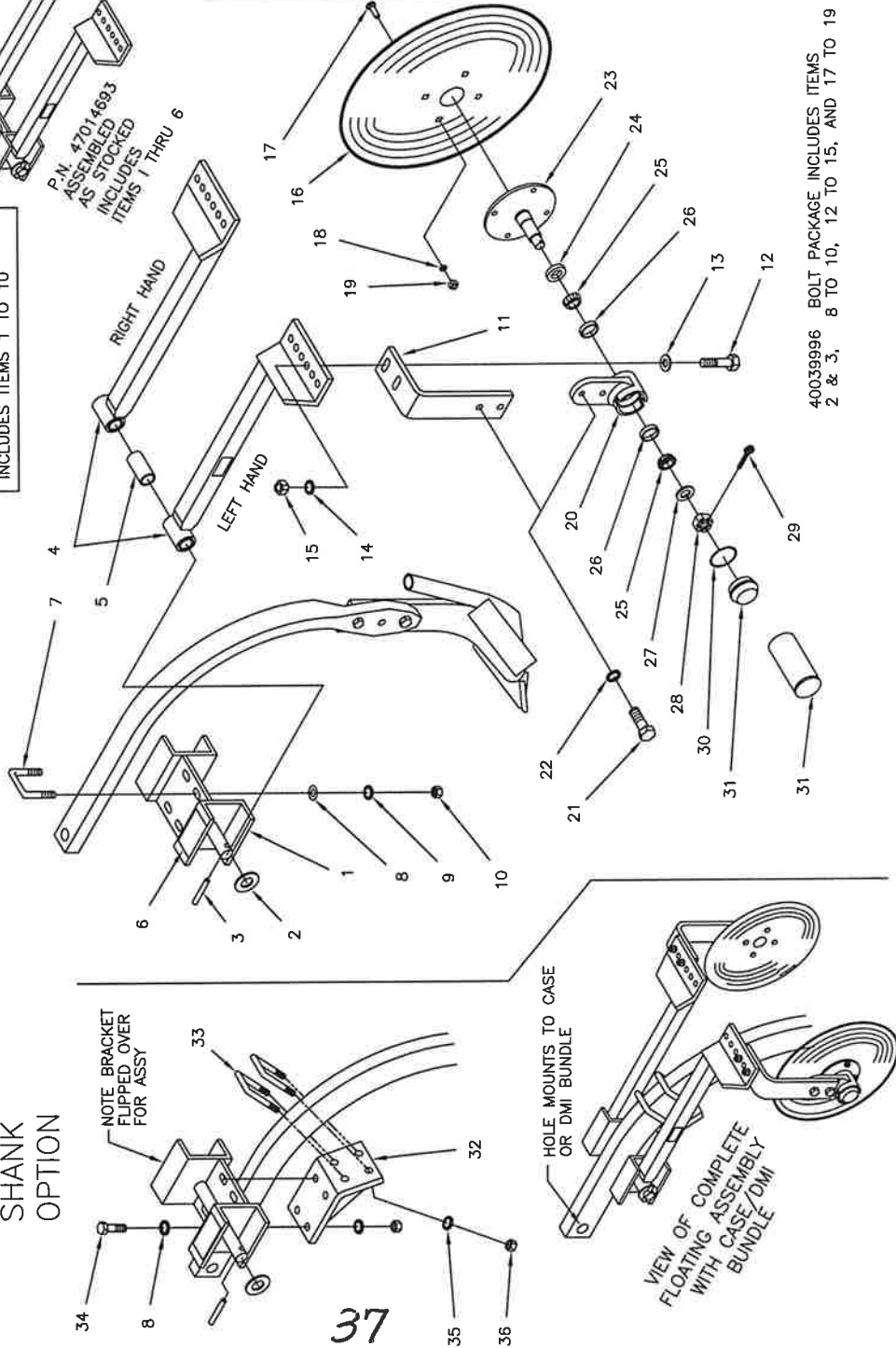
DOUBLE DISK SEALER ASSEMBLY WITH FLOATING ARMS

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



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	97445303	DECAL, "AG SYSTEMS" SMALL	2
8	47008396	U-BOLT, 1/2-13NC. (2" SHANK)	2
9	18811400	FLAT WASHER, 1/2	4
10	18891400	LOCK WASHER, 1/2	4
11	47009621	DISK ARM	2
12	18057430	BOLT, 1/2-13NC. X 2	4
13	18811400	FLAT WASHER, 1/2	4
14	18891400	LOCK WASHER, 1/2	4
15	18417400	HEX. NUT, 1/2-13NC.	4
OR	44501810	DISK BLADE, SMOOTH EDGE	2
16	18176450	DISK BLADE, NOTCHED 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	2
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	47009328	SPINDLE WITH FLANGE	2
25	40030325	GREASE SEAL	2
26	10659	BEARING CUP	4
27	18841800	FLAT WASHER, 3/4 SAE (1 1/2 O.D.)	4
28	18488600	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

ASSEMBLY INSTRUCTIONS

DISK COVER SEALER

18 INCH WITH WITH FLOATING ARMS

Your disc cover sealer assembly is partially assembled at the factory. The spindle (item 23) 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.

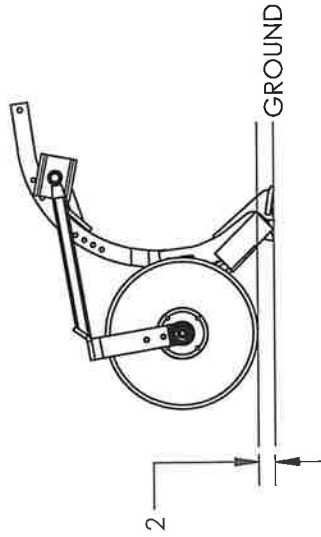
2. Position the pivot arm (item 4) left hand and right hand, to the mounting bracket (item 1) and assemble with the washers (item 2) and the expansion pins (item 3).

3. Secure the disk arm (item 11) in a vice and assemble the hub assembly to the arm with the bolts (item 21) and lock washers (item 22). Assemble the disk (item 16) to the spindle flange with the bolts (item 17) and hardware items (18 and 19) There is no difference between the left hand and right hand assemblies.

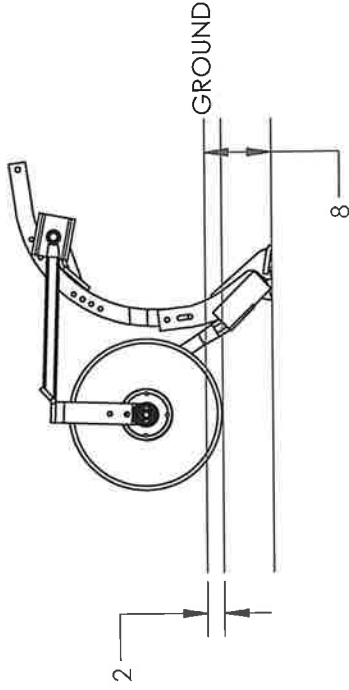
4. Mount the disk arm assemblies to the pivot arms with the bolts (item 12) and hardware (items 13, 14 and 15) as illustrated with the nut on top of the pivot arm plate. The suggested start-up position would be to mount the disk arm in the holes in the pivot arm plate that are farthest to the outside. 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.

DOUBLE DISK SEALER W/ FLOATING ARMS LAYOUT

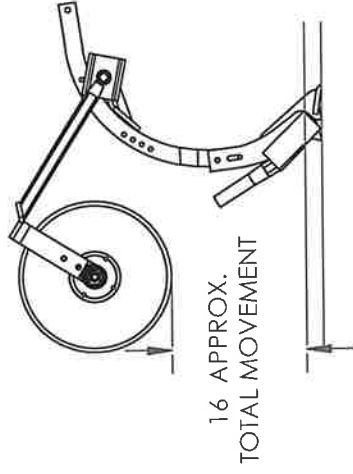
CASE/DMI SHANK
(ASSEMBLY DIAGRAM)



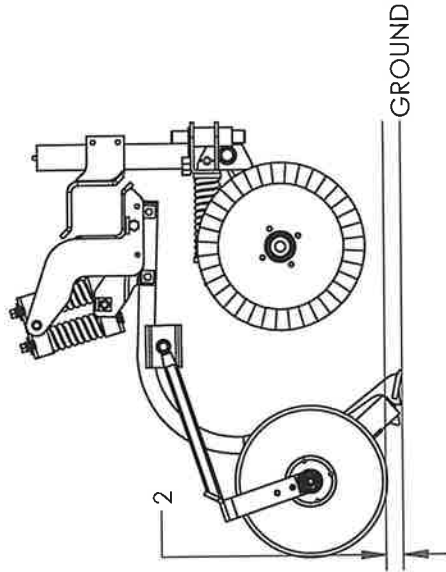
CASE/DMI SHANK
(RECOMMENDED PENETRATION DIAGRAM)



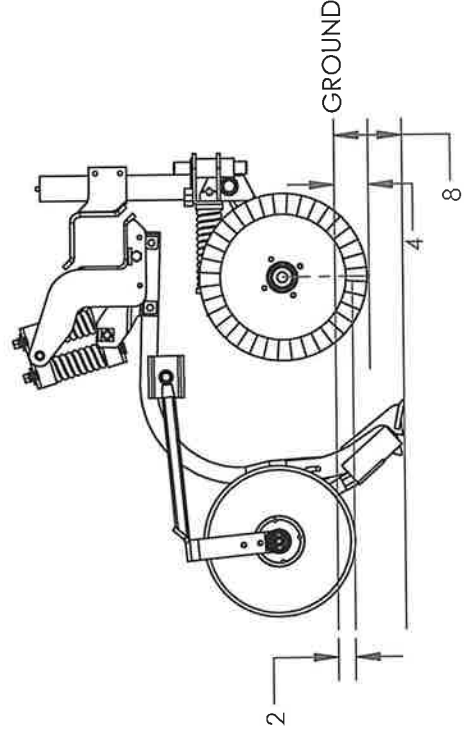
CASE/DMI SHANK
(TRANSPORT DIAGRAM)



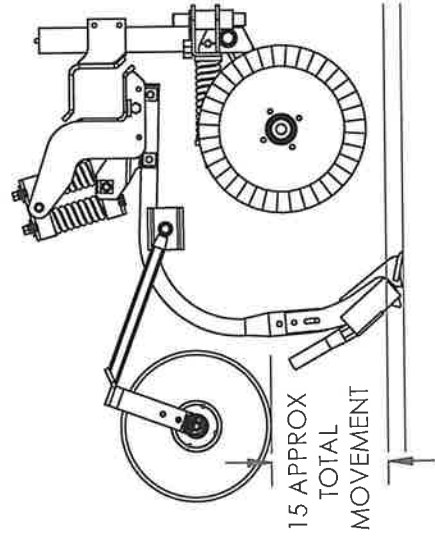
AG SYSTEMS HIGH TRIP EDGE BENT SHANK
(ASSEMBLY DIAGRAM)



AG SYSTEMS HIGH TRIP EDGE BENT SHANK
(RECOMMENDED PENETRATION DIAGRAM)



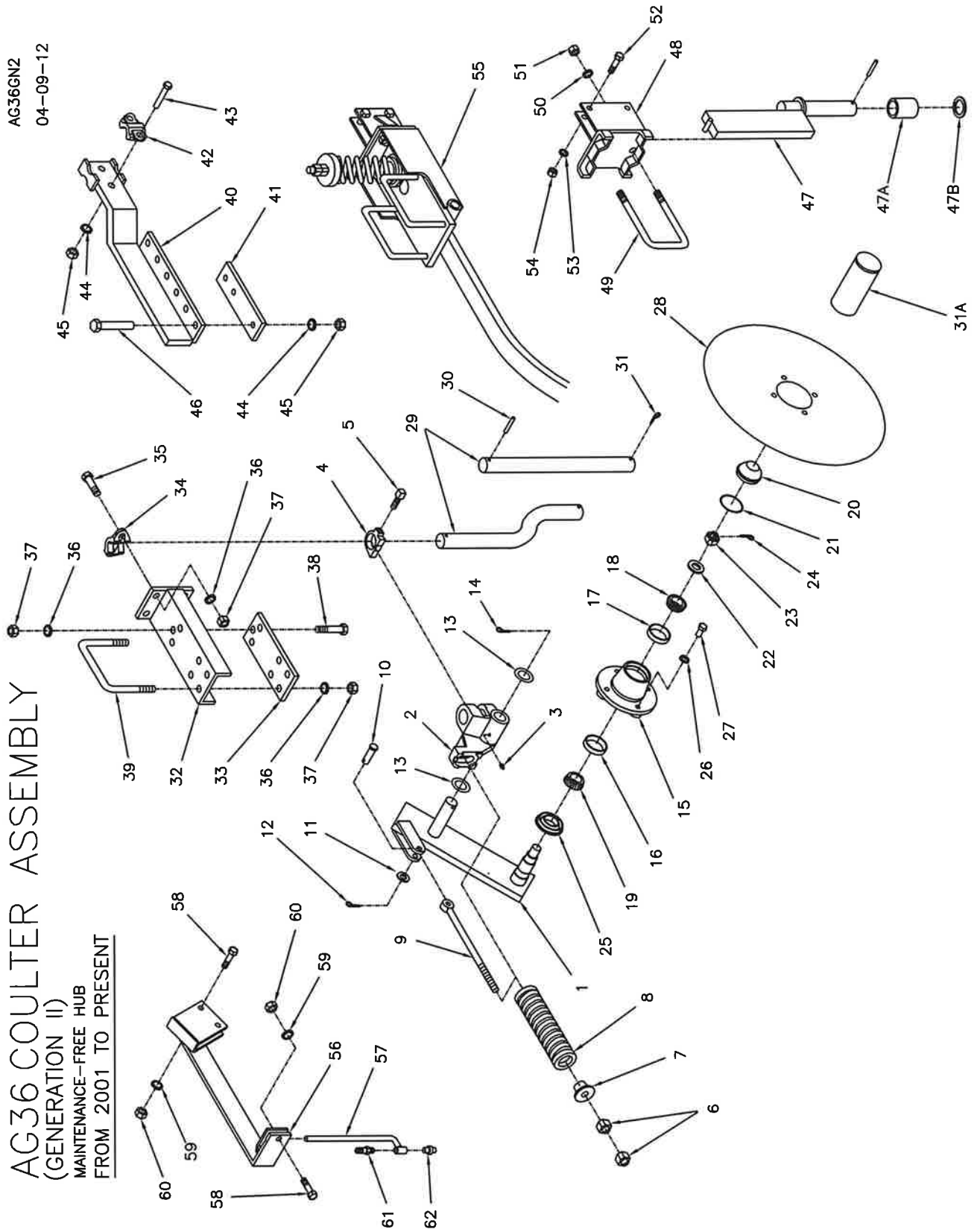
AG SYSTEMS HIGH TRIP EDGE BENT SHANK
(TRANSPORT DIAGRAM)



AG36 COULTER ASSEMBLY

(GENERATION II)
MAINTENANCE-FREE HUB
FROM 2001 TO PRESENT

AG36GN2
04-09-12

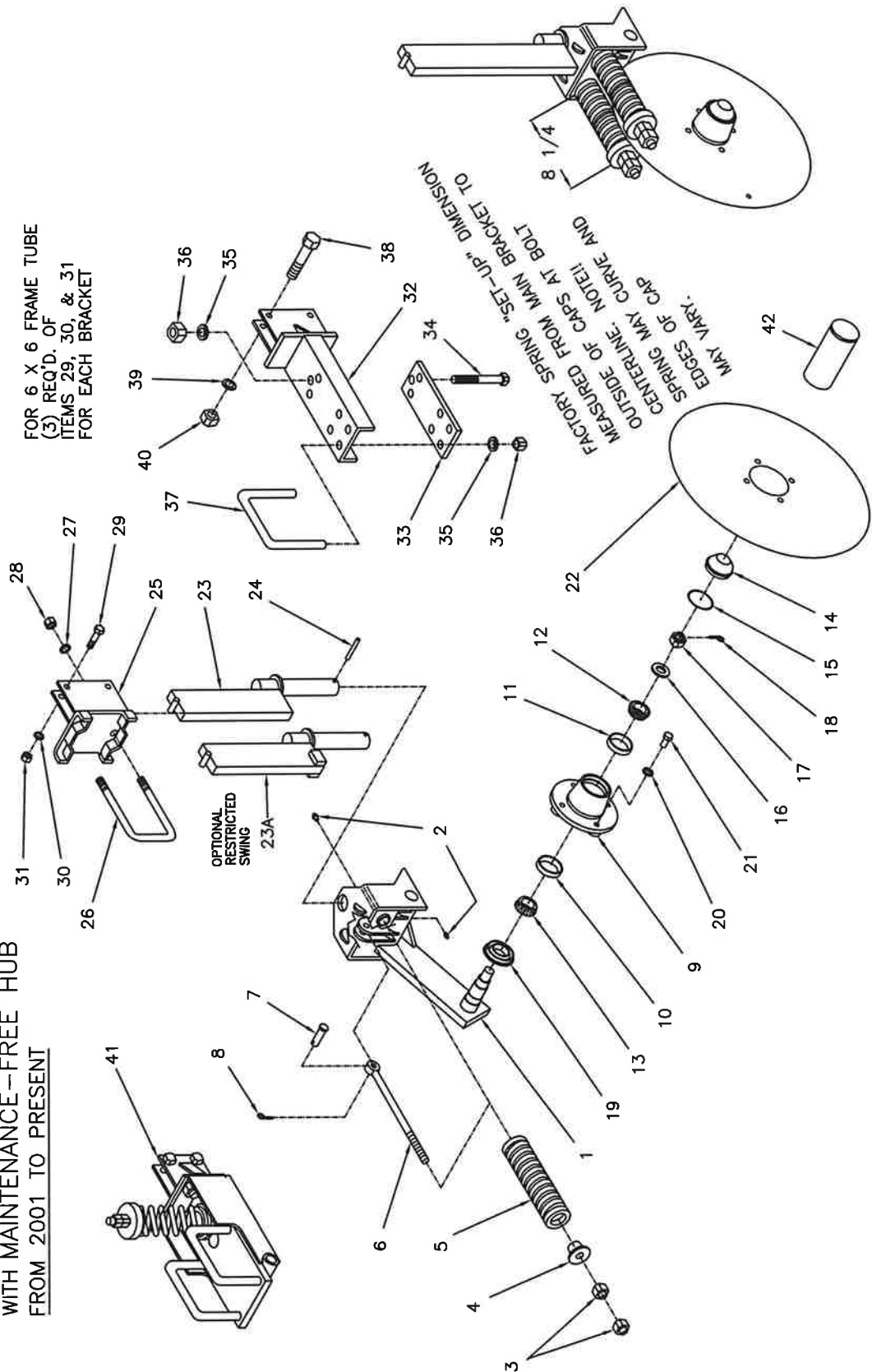


AG38 COULTER ASSEMBLY

GENERATION II
 WITH MAINTENANCE-FREE HUB
 FROM 2001 TO PRESENT

AG38GN2
 REV 10-22-09

FOR 6 X 6 FRAME TUBE
 (3) REQ'D. OF
 ITEMS 29, 30, & 31
 FOR EACH BRACKET



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

AG38GN2LS
REV.01/28/22

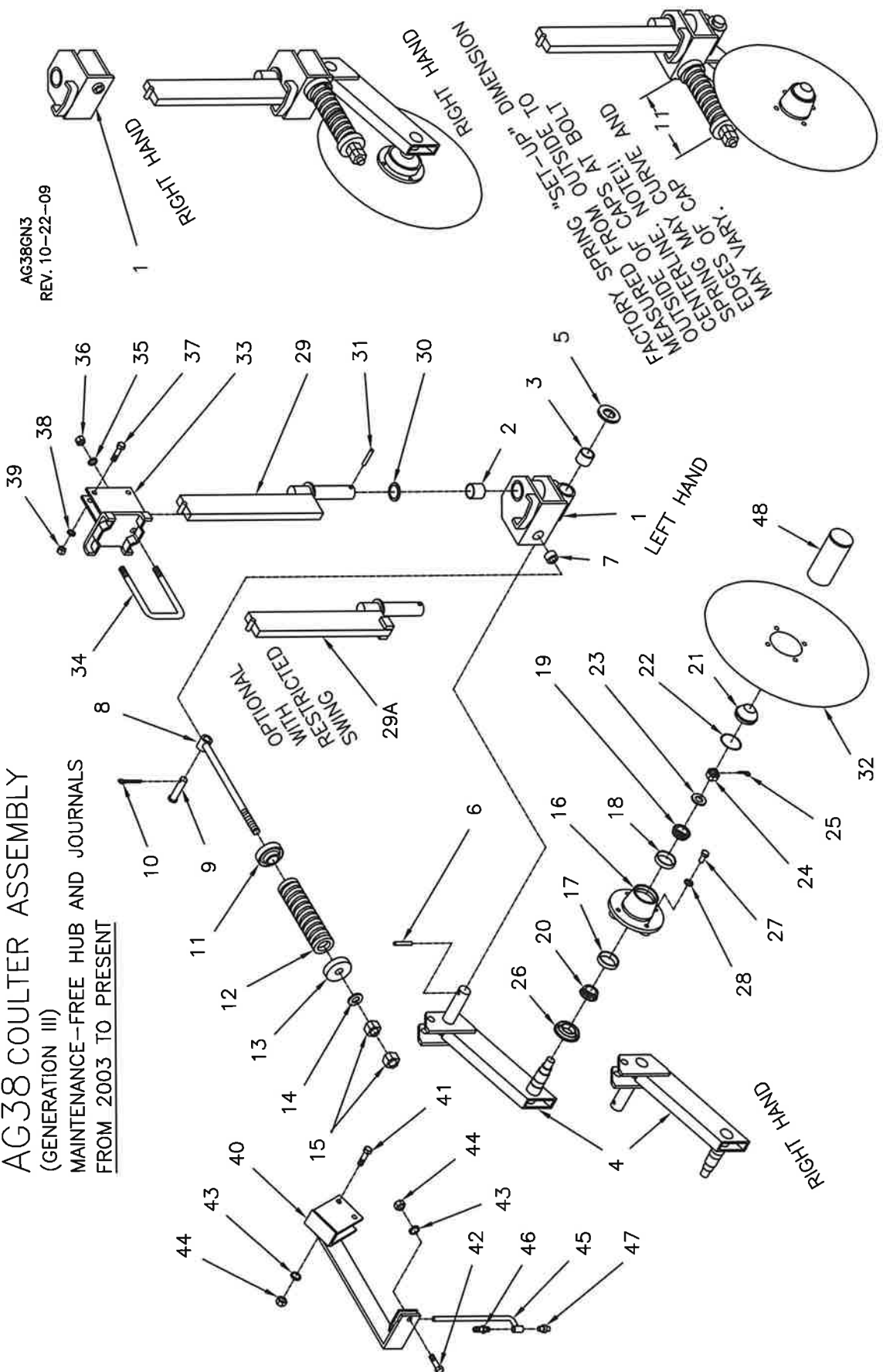
- Your AG38 main bracket and hub are pre-assembled at the factory, and the trip springs are pre-loaded to provide 525 pounds blade pressure. This should be adequate for normal field conditions. The coulters should trip up only when hitting a solid obstruction. During your field operation check to make 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.
- Assemble the blade (item 22) to the hub.
- 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).
- 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).
- Install the coulters 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.
- Adjust the coulters blade to the desired depth and tighten the hardware securely.
- Make sure "all" hardware is tightened securely.
- During field operation grease the swivel bar journals weekly. And grease for end-of-season storage. The coulters hub is greased-for-life and should need no regular maintenance. Check for damage to the dust cap and grease seal daily.

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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	32	47309370	SHANK HOLDER, (1 X 2 KNIFE SHANK)	1
2	47109572	INCLUDES ITEMS 1 TO 22	1	25	47308993	MOUNTING BRACKET, (4" VERTICAL)	1	33	47006832	CLAMP PLATE	1
3	47309572	MAIN BRKT W/HUB ASSEMBLY	1	26	47006951	U-BOLT, 5/8-11NC. (4" V X 6" H BAR)	1	34	18057938	BOLT, 5/8-11NC. X 3	1
4	47309572	INCLUDES ITEMS 1 TO 21 (W/O BLADE)	1	26	44001616	U-BOLT, 5/8-11NC. (4" V X 4" H BAR)	1	35	18891600	LOCKWASHER, 5/8	5
5	18901805	GREASE ZERK, STRAIGHT	2	25	47009887	MOUNTING BRACKET, (2 1/2" VERTICAL)	2	36	18417900	HEX. NUT, 5/8-11NC.	5
6	47301530	SPRING CAP	4	26	47008659	U-BOLT, 5/8-11NC. (2 1/2" V X 2 1/2" H BAR)	2	37	47006950	U-BOLT, 5/8-11NC.	2
7	47301524	COMPRESSION SPRING	2	25	47308997	MOUNTING BRACKET, (3" VERTICAL) STD.	2	38	47006951	U-BOLT, 5/8-11NC.	2
8	47301547	EYE BOLT, SPRING RETAINER	2	26	47308677	MOUNTING BRKT., (3" VERT., EXT.)	2	39	18891400	LOCKWASHER, 1/2	2
9	18541428	CLEVIS PIN, 1/2 X 1 3/4	2	25	47309888	MOUNTING BRACKET, (6" VERTICAL)	2	40	18417400	HEX. NUT, 1/2-13NC.	2
10	18560722	COTTER PIN, 5/32 X 1	2	26	47010154	U-BOLT, 5/8-11NC. (6" V X 4" H BAR)	2	41	47039413	SEE SEPARATE ILLUSTRATION FOR SPRING BUNDLE PARTS	2
11	47300350	HUB COMPLETE (W/O SEAL & BOLTS)	1	25	47309847	U-BOLT, 5/8-11NC. (6" V X 6" H BAR)	1	OR	47009661	SPRING BUNDLE COMPLETE (1 SPRING) OPT.	2
12	47300351	INCLUDES ITEMS 9 TO 15	1	26	47302730	U-BOLT, 1/2-13NC. (7" V X 7" H BAR)	2	WITH	47029417	SPRING BUNDLE COMPLETE (2 SPRINGS)	2
13	47005510	HUB WITH CUPS ITEMS 10 & 11	1	27	18891600	NOTE FOR 7" U-BOLT USE 1/2-13NC. HEX. NUTS	2	42	47005500	COULTER MOUNTING BRKT. COMPLETE	1
14	47005510	BEARING CUP, INNER	1	28	18891600	LOCKWASHER, 5/8	2			DUST CAP INSTALLATION TOOL (OPTIONAL)	1
15	47005048	BEARING CUP, OUTER	1	29	18417900	HEX. NUT, 5/8-11NC.	2				
16	47005548	BEARING CONE, OUTER	1	30	18057434	BOLT, 1/2-13NC. X 2 1/2	2				
17	47005513	BEARING CONE, INNER	1		18891400	LOCKWASHER, 1/2	2				
18	47990351	DUST CAP	1								
19	47300352	O-RING DUST SEAL	1								
20	47300353	SPINDLE WASHER	1								
21	18560724	SLOTTED NUT, 7/8-14UNF.	1								
22	40030326	GREASE SEAL	1								
23	18891400	LOCKWASHER, 1/2	1								
24	18057522	WHEEL BOLT, 1/2-20NF. X 1	4								
25	47305027	COULTER BLADE, 20" RIPPLED	1								
26	47303811	COULTER SWIVEL BAR, 18" (INCL ITEM 24)	1								
27	47309811	COULTER SWIVEL BAR, 12" (INCL ITEM 24) OPT	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
1	40350001	MAIN BRKT. & BLADE, L.H. (STANDARD)	1	37	18057434	BOLT, 1/2-13NC. X 2 1/2	2
2	40351011	MAIN BRKT. & BLADE, RIGHT HAND	OPT	38	18891400	LOCKWASHER, 1/2	2
3	47004508	INCLUDES ITEMS 1 TO 32	1	39	18417400	HEX. NUT, 1/2-13NC.	2
4	47314508	INCLUDES ITEMS 1 TO 32 (STANDARD)	OPT	ITEMS 37, 38, & 39, (3)	REQ'D. WITH (6" BAR, VERT.)		
5	47004500	MAIN BRKT. W/HUB, L.H. (STANDARD)	1	47995062	HI-PRESSURE NOZZLE BRKT. COMPLETE	1	
6	47009953	MAIN BRKT. W/HUB, RIGHT HAND	1		INCLUDES ITEMS 40 TO 45		
7	47009954	INCLUDES ITEMS 1 TO 31 (W/O BLADE)	1	40	47015062	MOUNTING BRACKET	1
8	47004508	HOUSING W/BUSHINGS, L.H. (STD.)	1	41	18057434	BOLT, 1/2-13NC. X 2 1/2	2
9	47014508	HOUSING W/BUSHINGS, RIGHT HAND	1	42	18057430	BOLT, 1/2-13NC. X 2	2
10	18300326	PIVOT BUSHING, 1 1/2 I.D.	2	43	18891400	LOCK WASHER, 1/2	3
11	18511035	PIVOT BUSHING, 1 3/8 I.D.	2	44	18417400	HEX. NUT, 1/2-13NC.	3
12	2-6668	PIVOT ARM, L.H. STANDARD	1	45	47008501	NOZZLE BAR	1
13	18541835	PIVOT ARM, RIGHT HAND	1	46	100859	HOSEBARB 1/4P X 1/2T	1
14	47004521	RETAINING WASHER, 1 3/8 I.D.	1	47	504017	NOZZLE BODY ASSEMBLY	1
15	47007565	EXPANSION PIN, 3/8 X 2	1		(ORIFICE DISK VARIES) SEE AG 37 ILLUSTRATION		
16	47007085	EYE BOLT GUIDE	1	48	47005500	DUST CAP INSTALLATION TOOL (OPTIONAL)	1
17	18446890	EYE BOLT, SPRING RETAINER	1				
18	18541835	CLEVIS PIN, 3/4 X 2 1/2	1				
19	47004521	SPRING CAP, WITH COUNTER-BORE	1				
20	47007565	COMPRESSION SPRING	1				
21	18651800	SPRING CAP, STANDARD CASTING	1				
22	18446890	FLAT WASHER, 3/4	2				
23	47300350	HUB COMPLETE (W/O SEAL & BOLTS)	1				
24	47300351	HUB WITH CUPS	1				
25	47005010	BEARING CUP, INNER	1				
26	47005048	BEARING CUP, OUTER	1				
27	47005548	BEARING CONE, OUTER	1				
28	47005548	BEARING CONE, INNER	1				
29	47005513	DUST CAP	1				
30	47990351	O-RING DUST SEAL	1				
31	47300352	SLOTTED NUT, 7/8-14UNF	1				
32	47300353	SPINDLE WASHER	1				
33	18580726	COULTER PIN, 5/32 X 1 1/2	1				
34	40030326	GREASE SEAL	1				
35	18057522	WHEEL BOLT, 1/2-20NF. X 1	4				
36	18891400	LOCK WASHER, 1/2	4				
37	47304522	COULTER SWIVEL BAR, 18"	4				
38	OPTIONAL	COULTER BARS W/RESTRICTED SWING	1				
39	47005144	18" BAR 10" RESTR. SWING BOTH WAYS	1				
40	47005144	18" BAR 10" RESTR. SWING LH ONLY	1				
41	47005144	18" BAR 10" RESTR. SWING RH ONLY	1				
42	47005145	18" BAR 15" RESTR. SWING BOTH WAYS	1				
43	47005145L	18" BAR 15" RESTR. SWING LH ONLY	1				
44	47005145R	18" BAR 15" RESTR. SWING RH ONLY	1				
45	47005145R	CALL AG SYSTEMS FOR INFO.	1				
46	18300323	RETAINING WASHER, 1 1/2 I.D.	1				
47	18511036	EXPANSION PIN, 3/8 X 2 1/4	1				
48	47305027	COULTER BLADE, 20" RIPPLED	1				
49	47309893	MOUNTING BRACKET, (4" VERTICAL) STD.	1				
50	47006981	U-BOLT, 5/8-11NC. (4" V X 6" HORIZ BAR)	1				
51	44001616	U-BOLT, 5/8-11NC. (4" V X 4" HORIZ BAR)	2				
52	47309888	MOUNTING BRACKET, (6" VERTICAL)	1				
53	47101054	U-BOLT, 5/8-11NC. (6" V X 4" HORIZ BAR)	1				
54	47009847	U-BOLT, 5/8-11NC. (6" V X 6" HORIZ BAR)	2				
55	18891600	LOCKWASHER, 5/8	2				
56	18417900	HEX. NUT, 5/8-11NC.	2				

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.

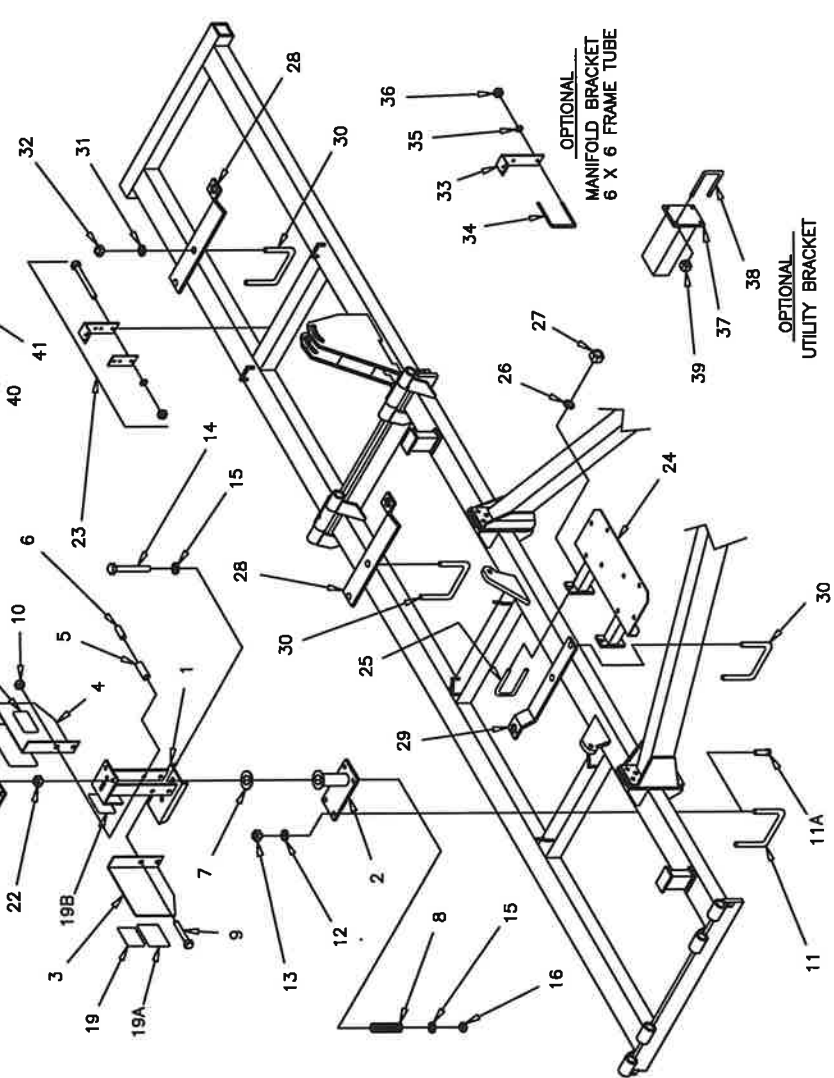
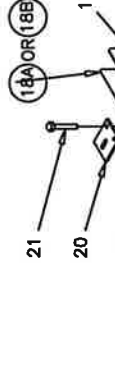
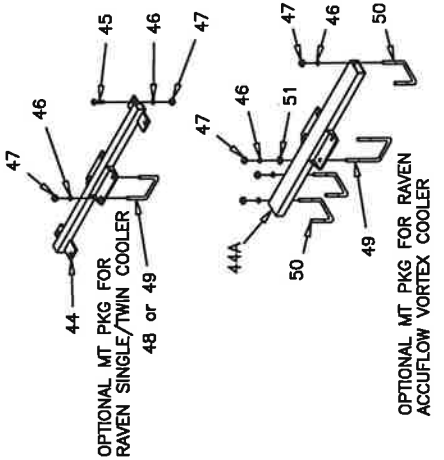
ASSEMBLE THE COULTER HUB AS FOLLOWS.

- 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 without 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

NH3 DISTRIBUTION
STANDS AND BRACKETS

ITEM NO.	PART NO.	DESCRIPTION	QTY.
44	47025077	OPTIONAL MT PKG FOR RAVEN COOLER (8000)	2
45	47005077	BRACKET	2
46	18057926	BOLT, HEX HD 5/8 X 1 1/2 GR5 ZC	8
47	18891600	LOCKWASHER, 5/8 ZC	16
48	18417900	NUT, 5/8 NC ZC	16
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	2
46	18057926	BOLT, HEX HD 5/8 X 1 1/2 GR5 ZC	8
47	18891600	LOCKWASHER, 5/8 ZC	16
48	18417900	NUT, 5/8 NC ZC	16
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
49	18417900	NUT, 5/8-11 NC ZC	10
50	47006950	U-BOLT 5/8 (fits 6 x 6 tube)	2
51	47015639	U-BOLT 5/8 (fits 2 x 4 tube)	3
51	18811600	FLATWASHER, 5/8 ZC	4



NH3 APPLICATION OPTIONS
PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	47010175	CENTER MANIFOLD STAND ASSEMBLY COMPLETE	1
2	47010124	CONSISTS OF ITEMS 1 TO 19	1
3	47010172	UPPER STAND	1
4	47010129	DECAL WING - LEFT	1
5	47010130	DECAL WING - RIGHT	1
6	47010128	BUSHING	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
11A	WHEN MOUNTING THE LOWER STAND (ITEM 2) ON A FIELD HITCH WITH THE MOUNTING PLATE P.N. 47009865 USE (4) BOLTS, 3/8-16NC, X 1 1/4, P.N. 18056824		OR 4
12	18891200	LOCKWASHER, 3/8	4
13	18436800	HEX NUT, 3/8-16NC	4
14	18057425	BOLT, 1/2-13NC, X 5 1/4	1
15	18611400	WASHER, FLAT, USS 1/2 ZC	1
16	18457650	HEX. NUT, CTR LOCK 1/2-13 ZC	1
17	97445303	DECAL - AG SYSTEMS (SMALL)	1
18A	FM125-2000	DECAL - DANGER (FLOMAX)	1
18B	9070034	DECAL - DANGER (PIONEER)	1
19	699103	DECAL - OPERATION & MAINT. INSTRUCTIONS	1
19A	699102	DECAL - DANGER	1
19B	699105	DECAL - SAFETY INSTRUCTIONS	1
20	47010155	CLAMP PLATE	1
21	18056458	BOLT, 5/16-18NC, X 3	3
22	18496400	FLANGE NUT, 5/16-18NC	3
23	70245	MANIFOLD STAND ASSEMBLY	1
		CONSISTS OF THE FOLLOWING	
	2-2524	MANIFOLD SUPPORT	1 EACH
	2-6321	CLAMP PLATE	1 EACH
	18057456	BOLT, 1/2-13NC, X 5 1/2	2 EACH
	18891400	LOCKWASHER, 1/2	2 EACH
	18417400	HEX. NUT, 1/2-13NC	2 EACH
		OPTIONAL	
24	47010236	NH3 CONTROL BRACKET	1
25	47006951	U-BOLT, 5/8-11NC, (6 X 4 TUBE)	2
26	18891600	LOCKWASHER, 5/8	4
27	18417900	HEX. NUT, 5/8-11NC	4
		OPTIONAL	
28	47010381	MANIFOLD SUPPORT (3" OFFSET)	4
29	47010382	MANIFOLD SUPPORT (2" OFFSET)	1
30	47001028	U-BOLT, 3/8-13NC	5
31	18891200	LOCKWASHER, 3/8	10
32	18436800	HEX. NUT, 3/8-16NC	10
		OPTIONAL	
33	47019993	MANIFOLD SUPPORT, (6 X 6 TUBE)	2
34	47009986	LOCKWASHER, 3/8	2
35	18891200	HEX. NUT, 3/8-16NC	4
36	18436800	HEX. NUT, 3/8-16NC	4
		OPTIONAL	
37	47004592	UTILITY BRACKET (6 X 6 TUBE)	1
		UTILITY BRACKET (UNIV) (6 X 4 TUBE)	2
38	47006950	U-BOLT, 5/8-11NC, (6 X 4 TUBE)	OR 2
		U-BOLT, 5/8-11NC, (4 X 4 TUBE)	OR 2
39	47006951	U-BOLT, 5/8-11NC, (6 X 4 TUBE)	4
		HEX. LOCKNUT, 5/8-11NC	4
40	47004625	STAND MOUNT BRACKET	1
41	47009986	U-BOLT, 3/8-16NC	2
42	18891200	LOCKWASHER, 3/8	4
43	18436800	HEX NUT, 3/8-16NC	4

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

NH3STNDKITZ
REV 08-29-12

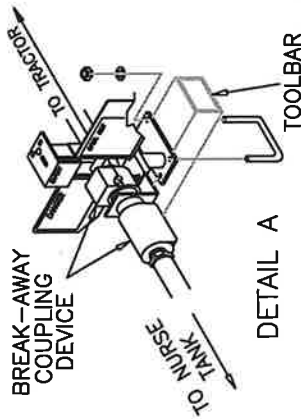
BREAK-AWAY COUPLING DEVICE & NH3 STAND

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.

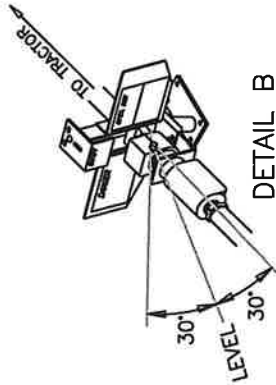
THE NH3 STAND MOUNTS THE BREAK-AWAY COUPLING DEVICE TO THE TOOLBAR SECURELY BUT ALLOWS THE COUPLING DEVICE TO SWIVEL FREELY AND ALLOWS IT TO SAFELY DISCONNECT DURING AN INCIDENT WITHOUT CAUSING DAMAGE TO THE BREAK-AWAY COUPLING DEVICE. THE HOSE OR FITTINGS ATTACHED TO THE COUPLER AT THE SWIVEL BRACKET 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.



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

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.

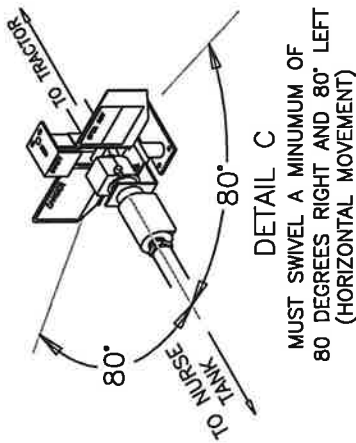
MAINTENANCE

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

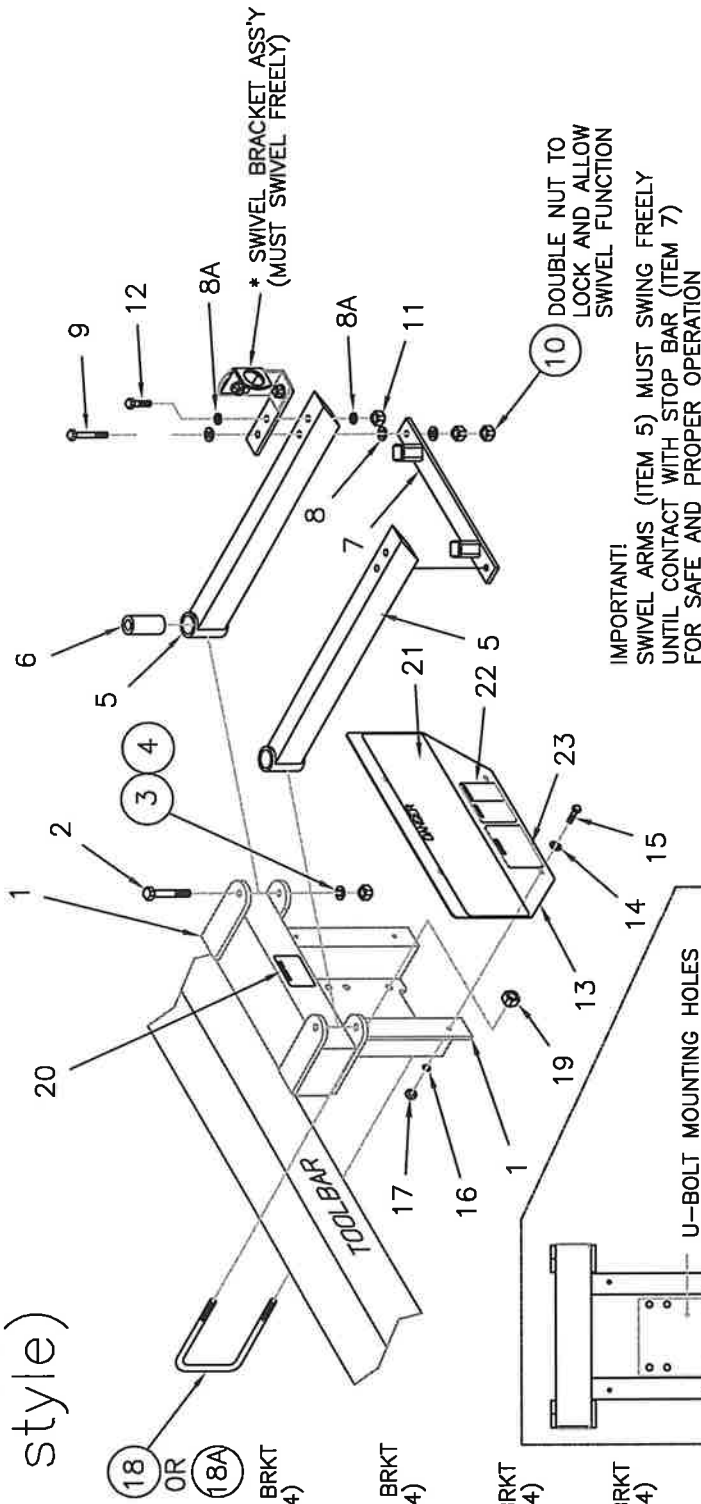
READ AND UNDERSTAND THE BREAK-AWAY COUPLING DEVICE MANUFACTURERS INSTRUCTIONS, WARNINGS AND SPECIFICATIONS BEFORE ATTEMPTING TO MANUALLY DISCONNECT OR RECONNECT THE COUPLING. FOLLOW THE BREAK -AWAY COUPLING DEVICE MANUFACTURERS BLEEDING THE SYSTEM PROCEDURES LISTED IN THEIR OWNERS MANUAL OR ON THEIR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



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

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.

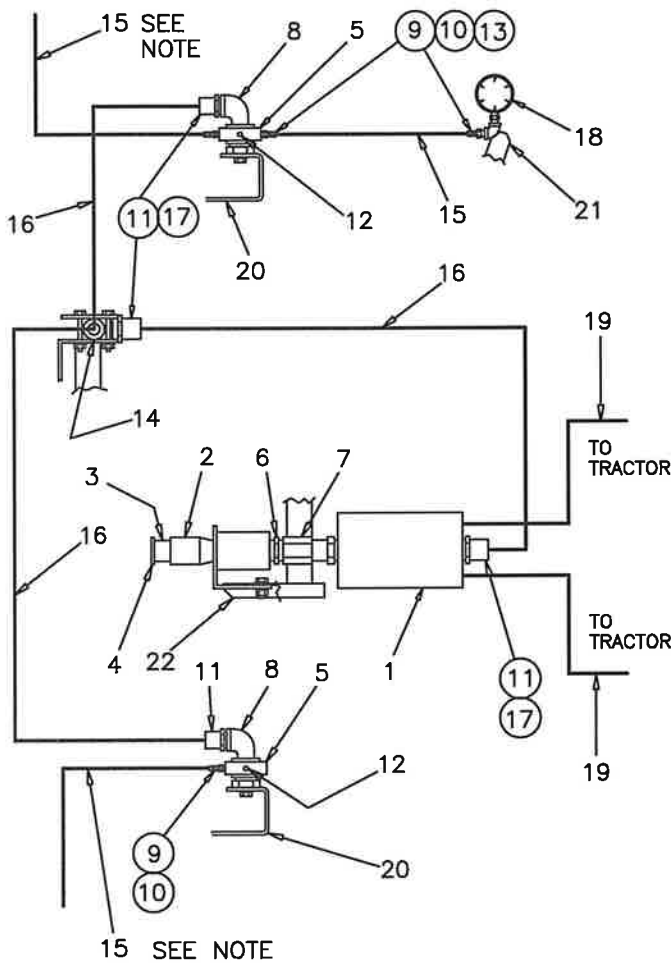
NH3 QUICK COUPLER STAND KIT (2015) for NH3 TOOLBARS (swing arm style)



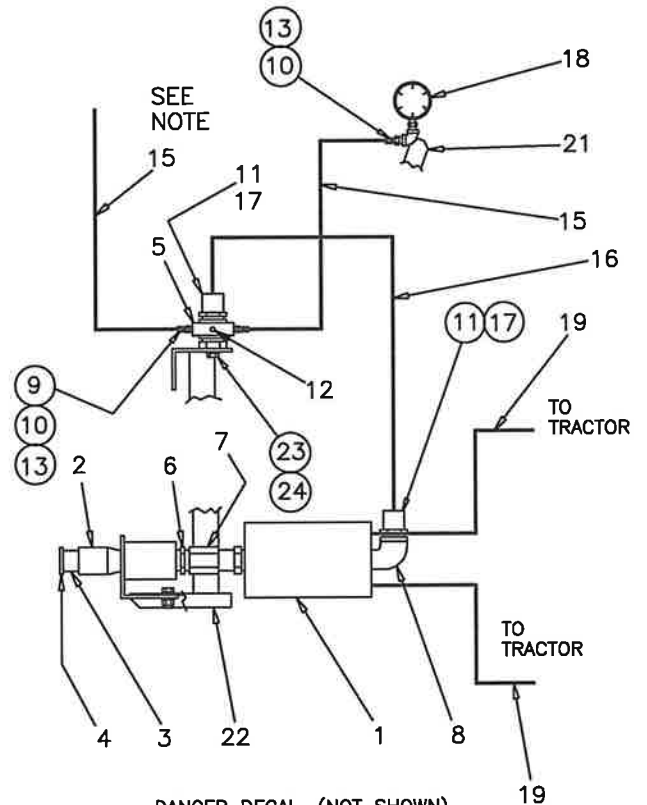
- 47015908 COMPLETE SINGLE QUICK DISCONNECT BRKT ASSEMBLY (INCLUDES ITEMS 1 THRU 24) (FITS 4 X 6 TOOLBAR FRAME ONLY)
- 47025908 COMPLETE SINGLE QUICK DISCONNECT BRKT ASSEMBLY (INCLUDES ITEMS 1 THRU 24) (FITS 6 X 6 TOOLBAR FRAME ONLY)
- 47035908 COMPLETE DUAL QUICK DISCONNECT BRKT ASSEMBLY (INCLUDES ITEMS 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		DUAL		PART NO.	DESCRIPTION
	QTY	QTY	QTY	QTY		
1	1	1	1	1	47005908	HINGE MOUNT WELDMENT
2	1	2	1	2	18058458	BOLT, HEX 3/4 NC X 6 GR5 ZC
3	1	2	1	2	18811800	FLATWASHER, 3/4 ZC
4	1	2	1	2	18458400	NUT, CENTER LOCK 3/4 NC ZC
5	1	2	1	2	47005901	SWING ARM WELDMENT
6	1	2	1	2	47005904	SWIVEL BUSHING
7	1	1	1	1	47005914	TIE BAR WELDMENT
8	3	6	3	6	18811400	FLATWASHER, 1/2 USS ZC
8A	2	4	2	4	18851400	FLATWASHER, 1/2 SAE ZC
9	-	2	-	2	18057454	BOLT, 1/2 NC X 5 LONG GR5 ZC
10	-	4	-	4	18417400	NUT, HEX 1/2 NC ZC
11	2	4	2	4	18457650	LOCKNUT, HEX 1/2 NC ZC
12	2	2	2	2	18057424	BOLT, 1/2 NC X 1 1/4 LG GR5 ZC
13	1	1	1	1	47005900	DECAL PANEL
14	4	4	4	4	18811100	FLATWASHER, USS 5/16 ZC
15	4	4	4	4	18056424	BOLT, HEX 5/16NC X 1 1/4 ZC
16	4	4	4	4	18891110	LOCKWASHER, 5/16 ZC
17	4	4	4	4	18406400	NUT, HEX 5/16 NC ZC
18	2	2	2	2	47009847	U-BOLT, 5/8 (fits 6 x 6 tube)
OR						
18A	2	2	2	2	47006951	U-BOLT, 5/8 (fits 4 x 6 tube)
19	4	4	4	4	18417900	NUT, HEX 5/8 NC ZC
20	1	1	1	1	699105	DECAL, SAFETY INSTRUCTIONS
21	1	1	1	1	FM125-2000	DECAL, DANGER,(Flomax coupler safety)
22	1	1	1	1	699103	DECAL, OPER & MAINT. INSTRUCTIONS
23	1	1	1	1	699102	DECAL, DANGER, (hazard, don't breathe)

NH3 APPLICATION SCHEMATIC WITH 2 MANIFOLDS



NH3 APPLICATION SCHEMATIC WITH ONE MANIFOLD



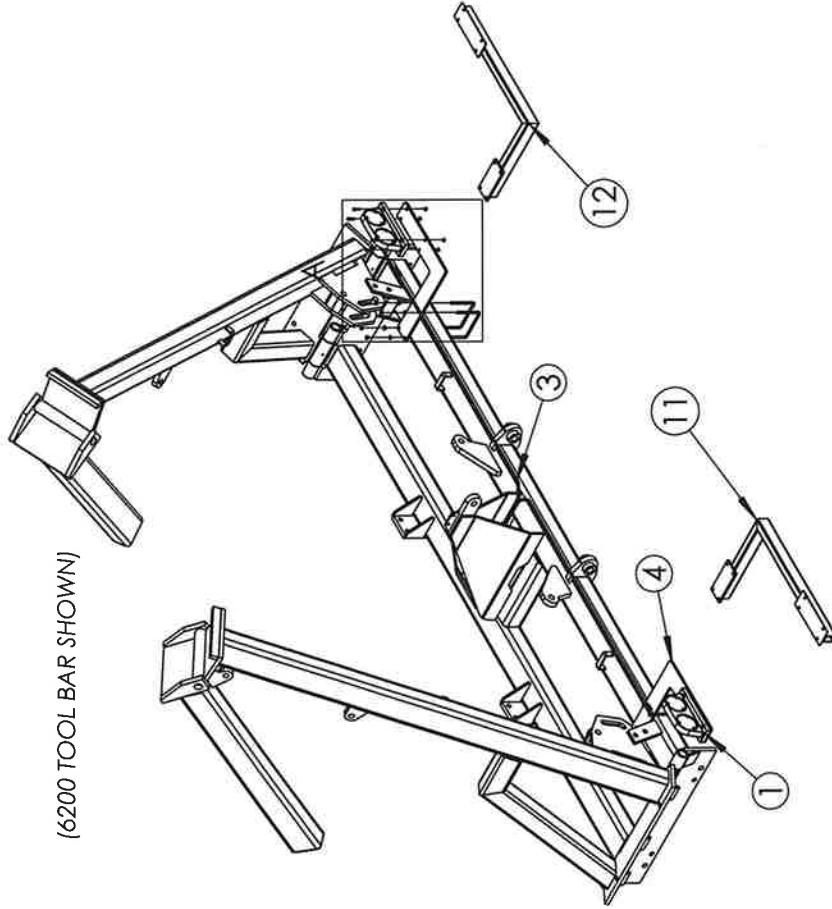
DANGER DECAL, (NOT SHOWN) WHICH IS SUPPLIED WITH ITEM 2, (QUICK COUPLER) ATTACH TO FIELD HITCH

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									
19	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								

SAFETY LIGHT KIT FOR TOOLBARS

P/N: 47999316

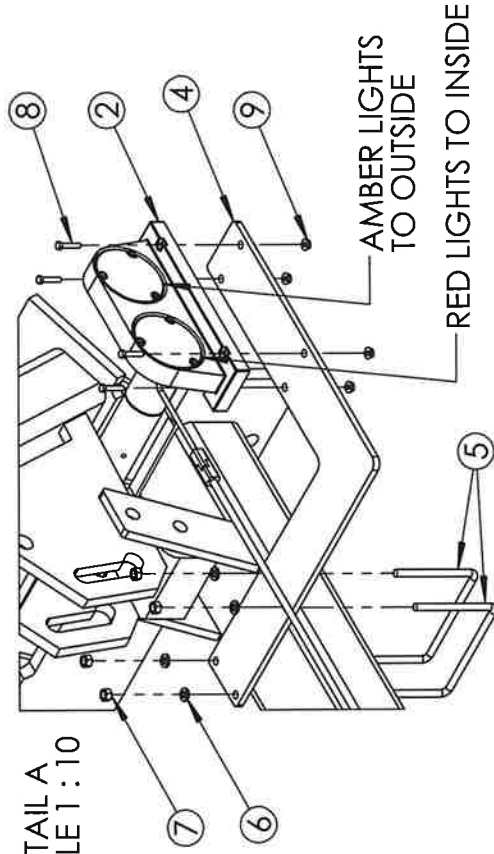


ITEMS 11 AND 12 ARE OPTIONAL

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



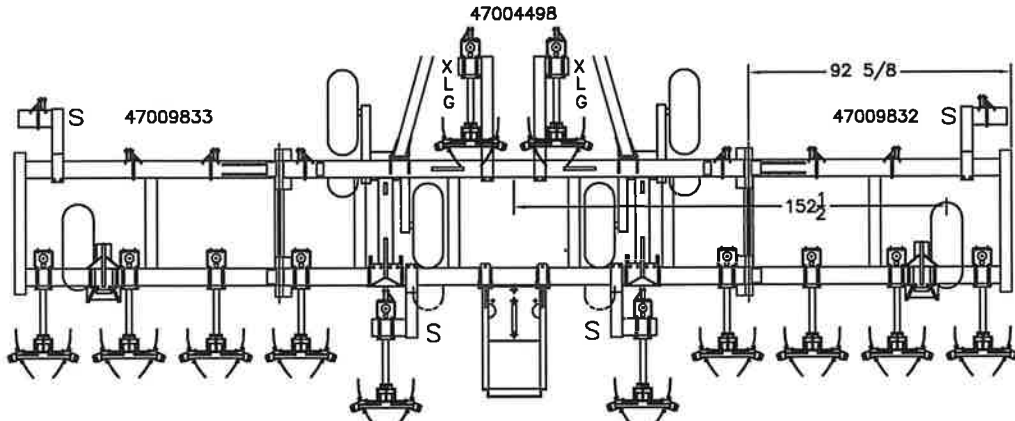
AMBER REPLACEMENT LENS PN 802650
RED REPLACEMENT LENS PN 802651

7200 SERIES TOOLBAR

IN MANUAL

12/16 SHANK COMBINATION

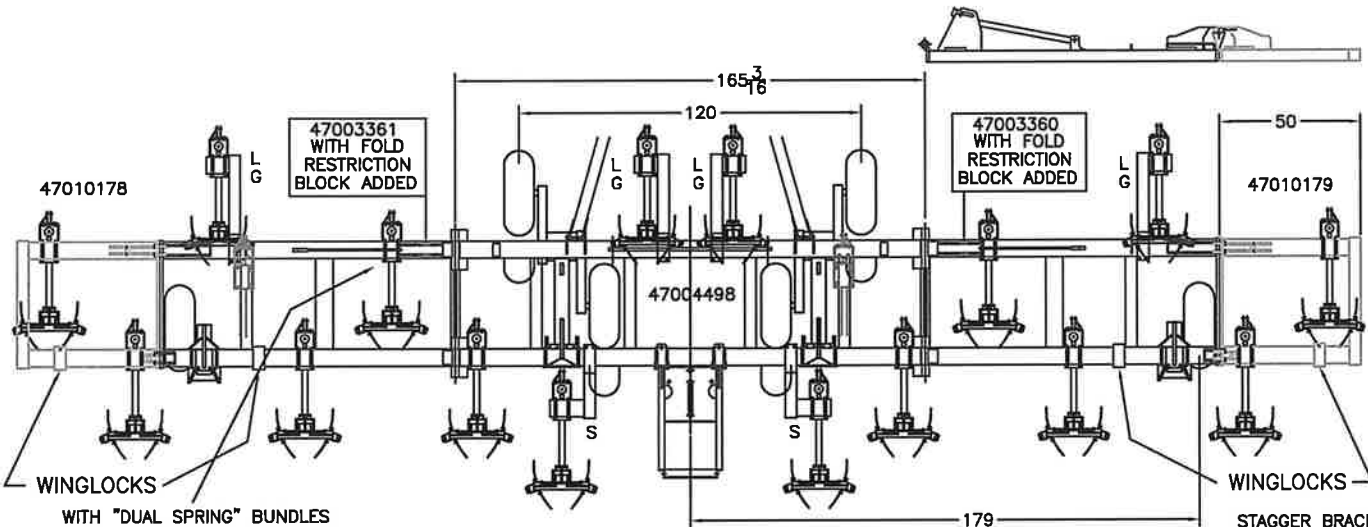
72K1216STD
 PROPOSED 07/22/03
 REVISED 09-10-13



STAGGER BRACKETS
 QTY 4 SHORTS
 QTY 2 XTRA-LONGS

7200 12 ROW STRIP-TILL (29 1/2 FT TOOLBAR)

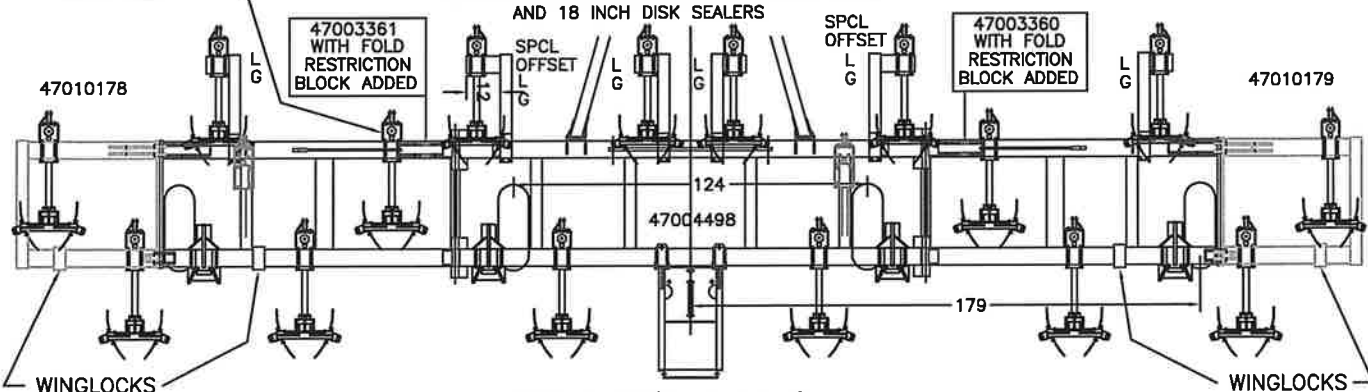
30" SPACINGS WITH COULTERS AND SHANKS SEPARATED
 WALKING WHEELS ON CENTER, HYD. GA. WHEEL ON WINGS
 AND 18 INCH DISK SEALERS



STAGGER BRACKETS
 QTY 2 SHORTS
 QTY 4 LONGS

7200 16 ROW (40 FT TOOLBAR)

FLAT SHANKS. AG36 COULTERS, 30" SPACING
 WALKERS ON CENTER HYD. GA. WHLS. ON WINGS
 AND 18 INCH DISK SEALERS



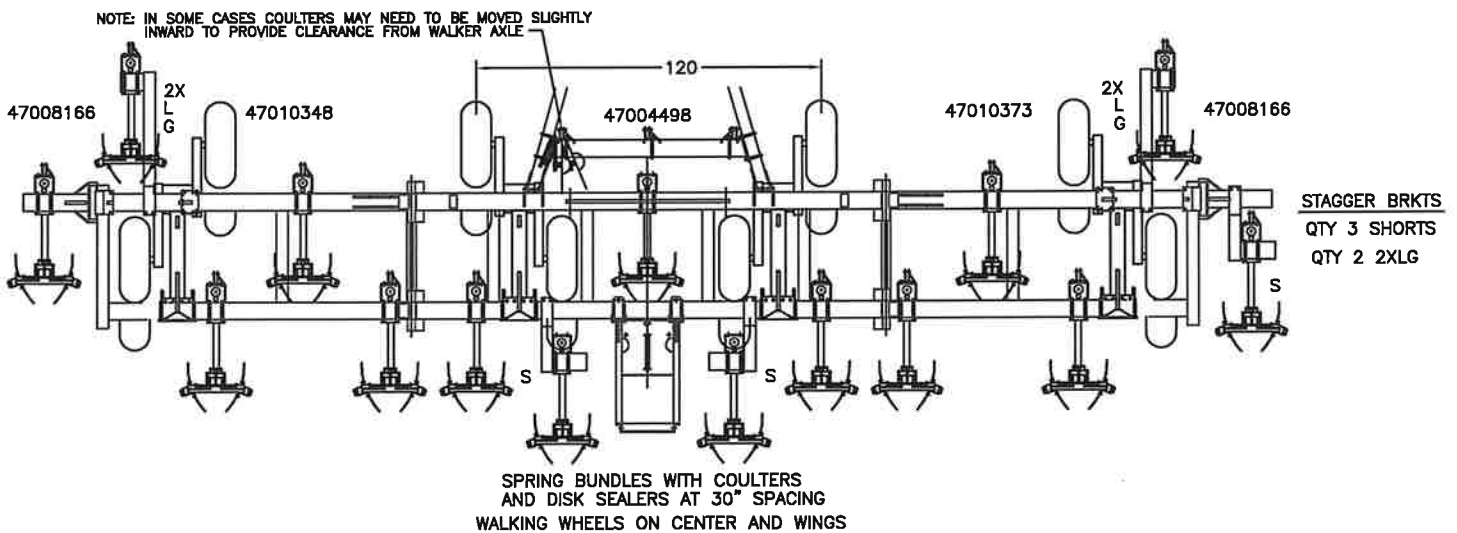
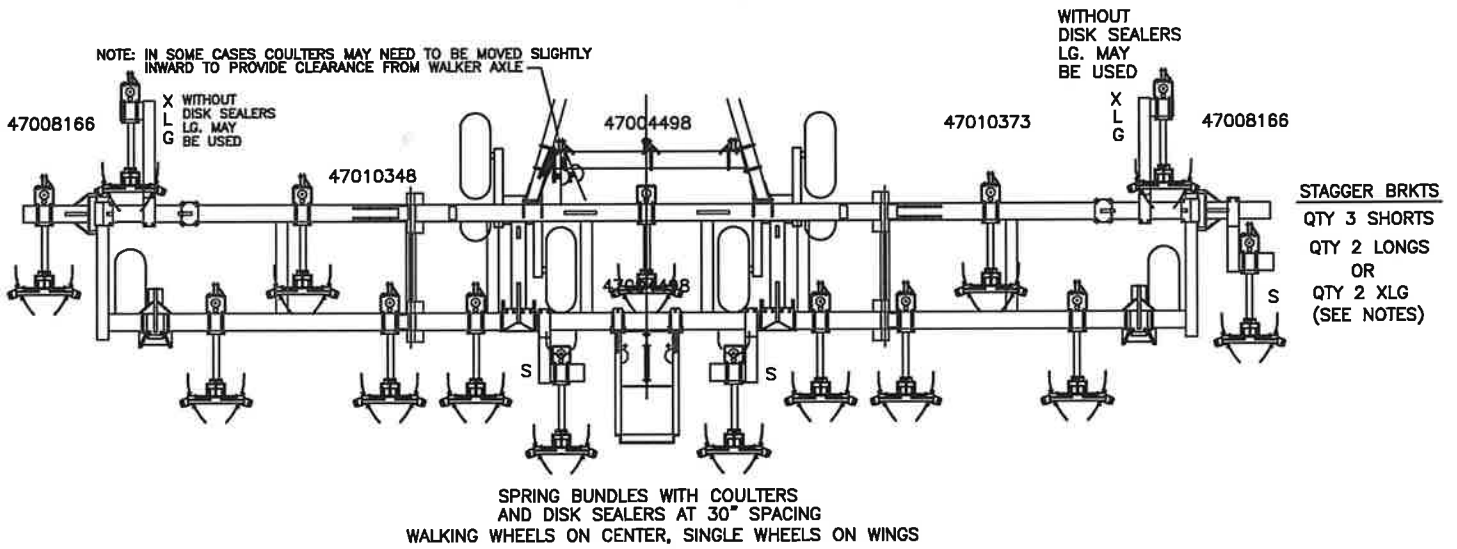
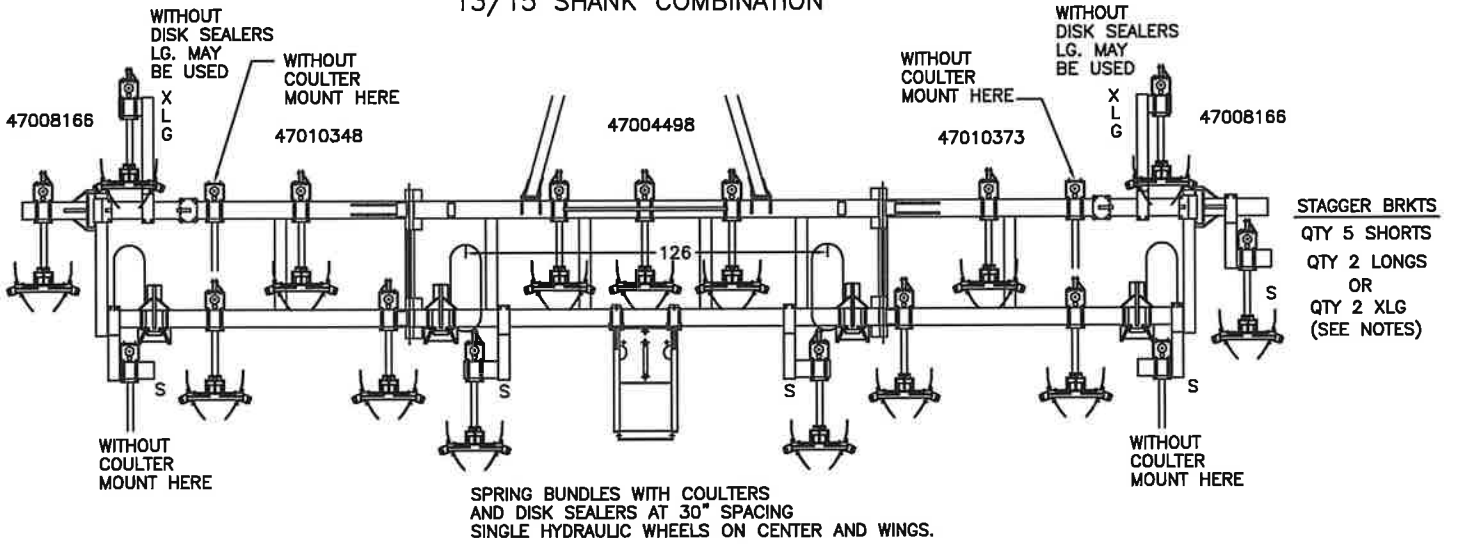
STAGGER BRACKETS
 QTY 6 LONGS

7200 16 ROW (40 FT TOOLBAR)

FLAT SHANKS. AG36 COULTERS, 30" SPACING
 SINGLE WHEELS ON CENTER AND HYD. GA. WHEELS
 AND 18 INCH DISK SEALERS

7200 SERIES TOOLBAR 13/15 SHANK COMBINATION

72K1315STD
REV/12/20/06
ASBLT 04/13/06 IN MANUAL



7200 SERIES TOOLBAR

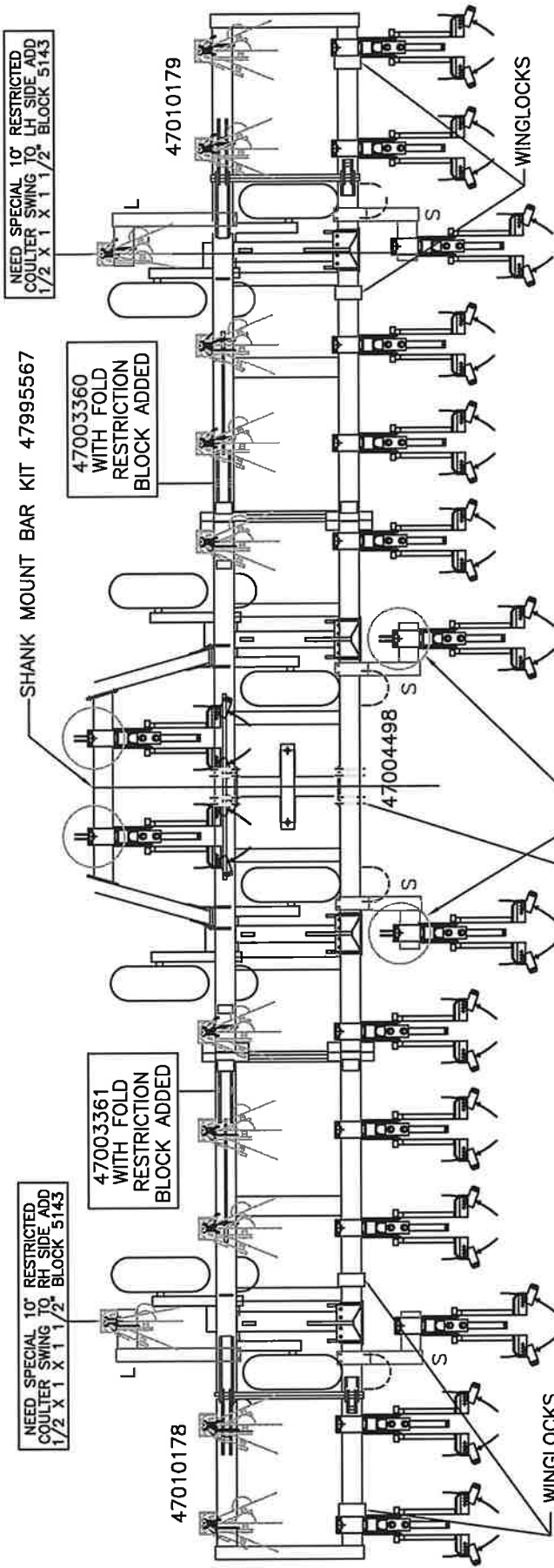
40 FT TOOLBAR

16 ROWS @ 30" APART

HIGHTRIPS WITH SHANKS AND COULTERS SEPARATED
WALKING WHEELS THROUGHOUT
AND OPTIONAL MONTAG HITCH

72K1630WWSEPNFH
PRO/08-01-13
REV 09-06-13

IN MANUAL



- 4 SHORT OFFSETS
- 2 LONG OFFSETS
- 1 SHANK MOUNT BAR

OPTIONAL MONTAG CART HITCHBALL MOUNT 5298W

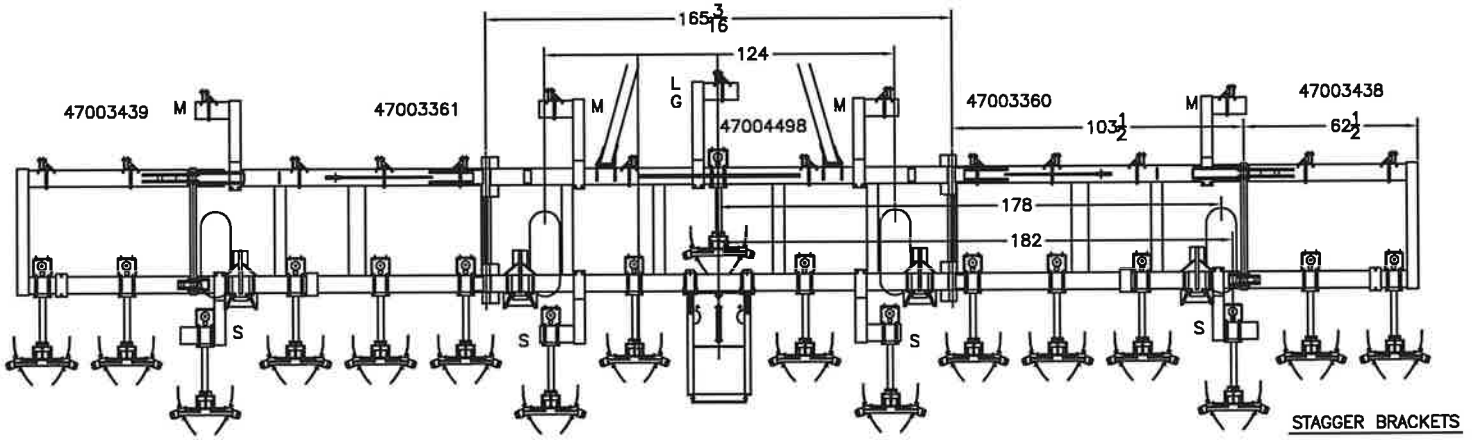
SHOWN WITH FLOATING ARM DISC SEALERS

7200 SERIES (42 FT) TOOLBAR

72K1317A IN MANUAL
PRO/07/22/05

13/17 SHANK COMBINATION WITH COULTERS AND SHANKS SEPARATED

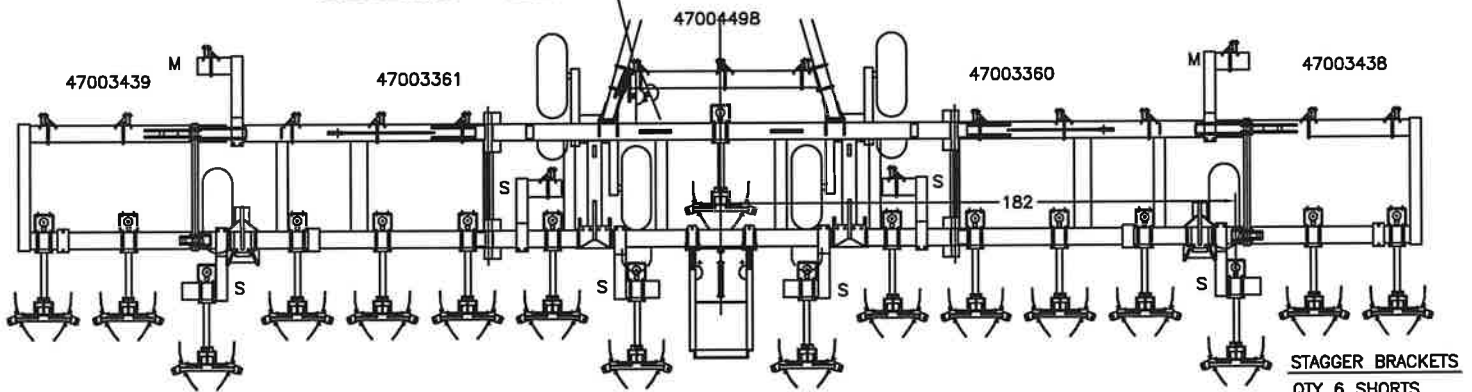
IN MANUAL



SPRING SHANKS AT 30" SPACING WITH COULTERS
AND 18 INCH DISK SEALERS
SINGLE HYDRAULIC WHEELS ON CENTER AND WINGS

STAGGER BRACKETS
QTY 4 SHORTS
QTY 4 MEDIUMS
QTY 1 LONG

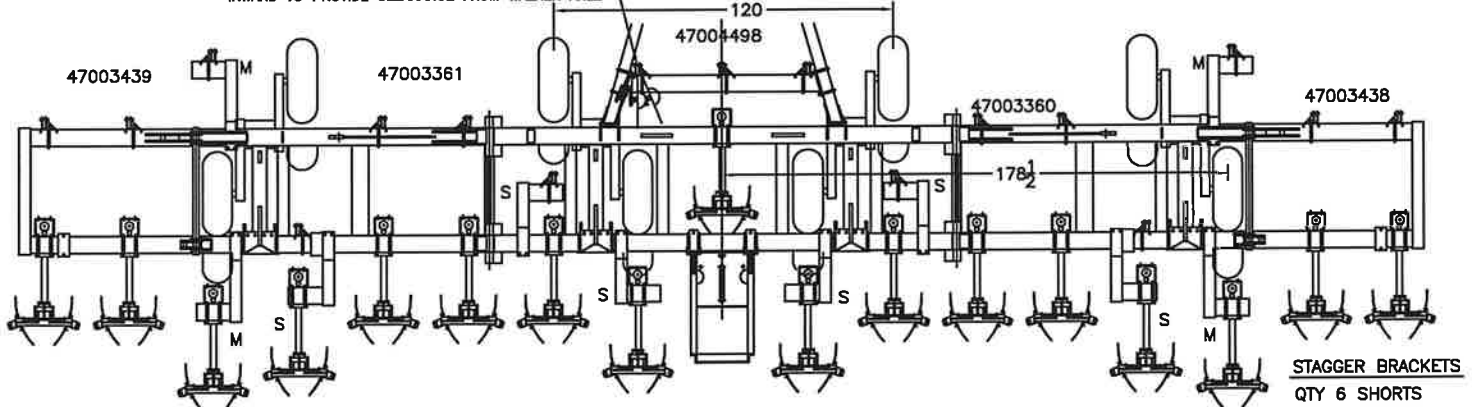
NOTE: IN SOME CASES COULTERS MAY NEED TO BE MOVED SLIGHTLY
INWARD TO PROVIDE CLEARANCE FROM WALKER AXLE



SPRING SHANKS AT 30" SPACING WITH COULTERS
AND 18 INCH DISK SEALERS
WALKING WHEELS ON CENTER, HYD. GA. WHEEL ON WINGS
REV. 07/22/05

STAGGER BRACKETS
QTY 6 SHORTS
QTY 2 MEDIUMS

NOTE: IN SOME CASES COULTERS MAY NEED TO BE MOVED SLIGHTLY
INWARD TO PROVIDE CLEARANCE FROM WALKER AXLE



SPRING SHANKS AT 30" SPACING WITH COULTERS
AND 18 INCH DISK SEALERS
WALKING WHEELS ON CENTER AND ON WINGS
REV. 07/22/05

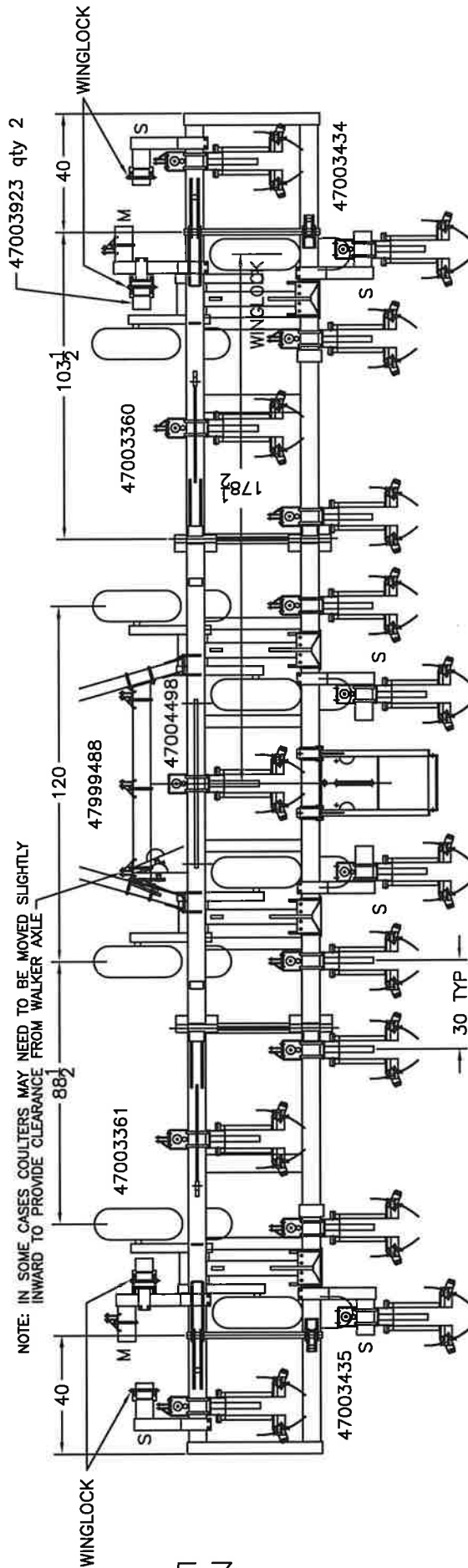
STAGGER BRACKETS
QTY 6 SHORTS
QTY 4 MEDIUMS

7200 SERIES TOOLBAR (37.5 FT)

72K1315WWFASPL
 PRO 07-10-12
 REV 10-04-12

IN MANUAL

15 ROWS AT 30" SPACING W FLAT FOLD WINGS
 AND OPTIONAL AUXILIARY TOOLBAR
 SPRING BUNDLES WITH COULTERS AT 30" SPACING
 SECONDARY BAR ,FLAT SHANKS W/18" FLOATING ARM DISK SEALERS
 WITH WALKERS THROUGHOUT AND SINGLE NURSE TANK HITCH



NOTE: IN SOME CASES COULTERS MAY NEED TO BE MOVED SLIGHTLY INWARD TO PROVIDE CLEARANCE FROM WALKER AXLE

STAGGER BRACKETS

- QTY 6 SHORTS
- QTY 2 MEDIUMS
- QTY 1 COULTER BAR

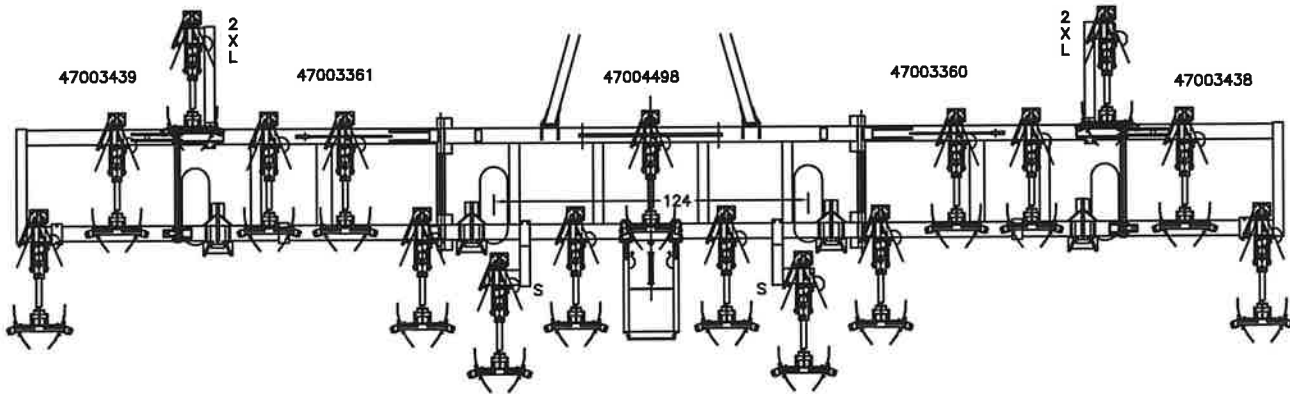
OPTIONAL SINGLE NURSE TANK HITCH
 OR
 OPTIONAL SELF LEVELING NURSE TANK HITCH

7200 SERIES (42 FT TOOLBAR)

13/17 SHANK COMBINATION
W/HI-TRIP SPRING BUNDLES

IN MANUAL

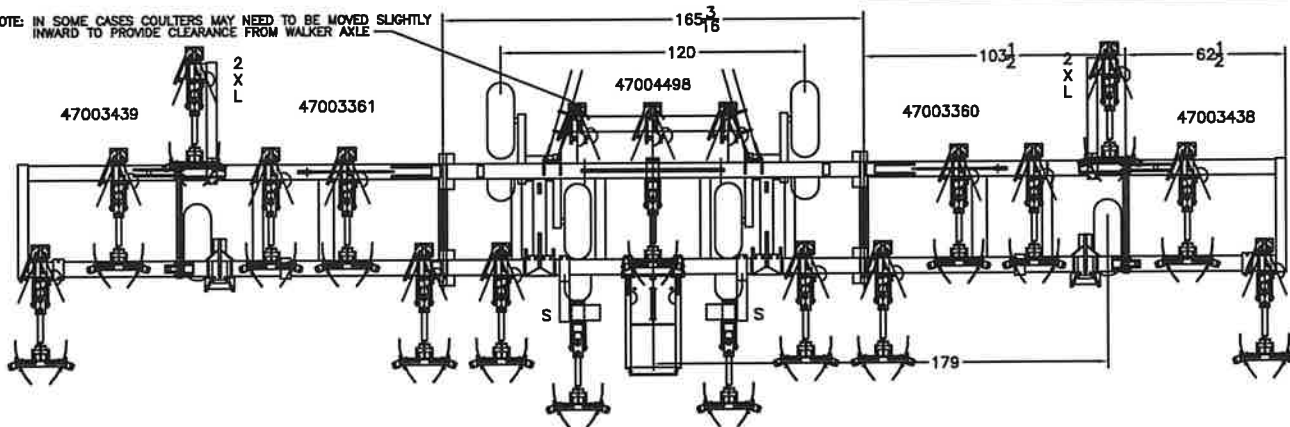
72K17HTRP
PRO/11/11/04



STAGGER BRACKETS
QTY 2 SHORTS
QTY 2 2XLG

HI-TRIP BUNDLES WITH COULTERS
AND DISK SEALERS AT 30" SPACING
SINGLE HYDRAULIC WHEELS ON
CENTER AND WINGS

NOTE: IN SOME CASES COULTERS MAY NEED TO BE MOVED SLIGHTLY
INWARD TO PROVIDE CLEARANCE FROM WALKER AXLE

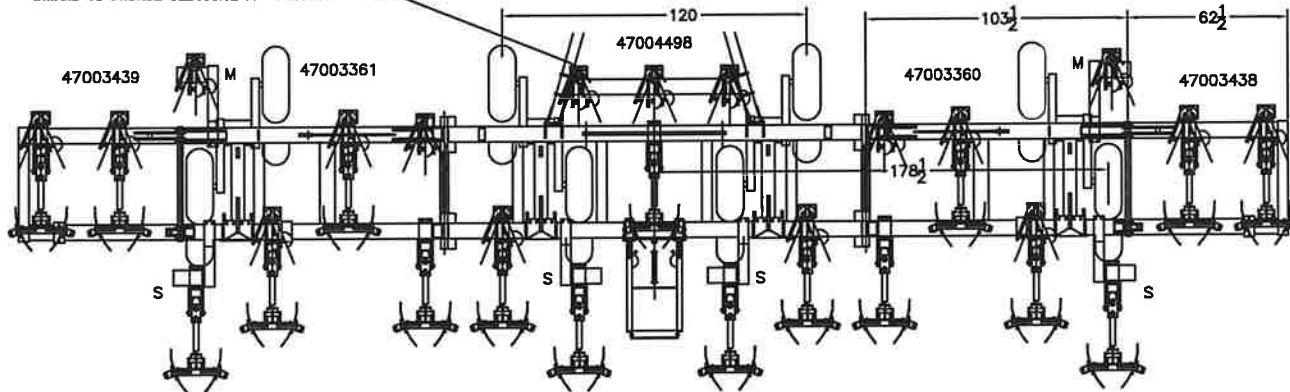


STAGGER BRACKETS
QTY 2 SHORTS
QTY 2 2XLG
QTY 1 COULTER BAR

HI-TRIP BUNDLES WITH COULTERS
AND DISK SEALERS AT 30" SPACING
WALKING WHEELS ON CENTER AND
HYDRAULIC GA. WHEELS ON WINGS

PRO/11/24/04

NOTE: IN SOME CASES COULTERS MAY NEED TO BE MOVED SLIGHTLY
INWARD TO PROVIDE CLEARANCE FROM WALKER AXLE



STAGGER BRACKETS
QTY 4 SHORTS
QTY 1 COULTER BAR

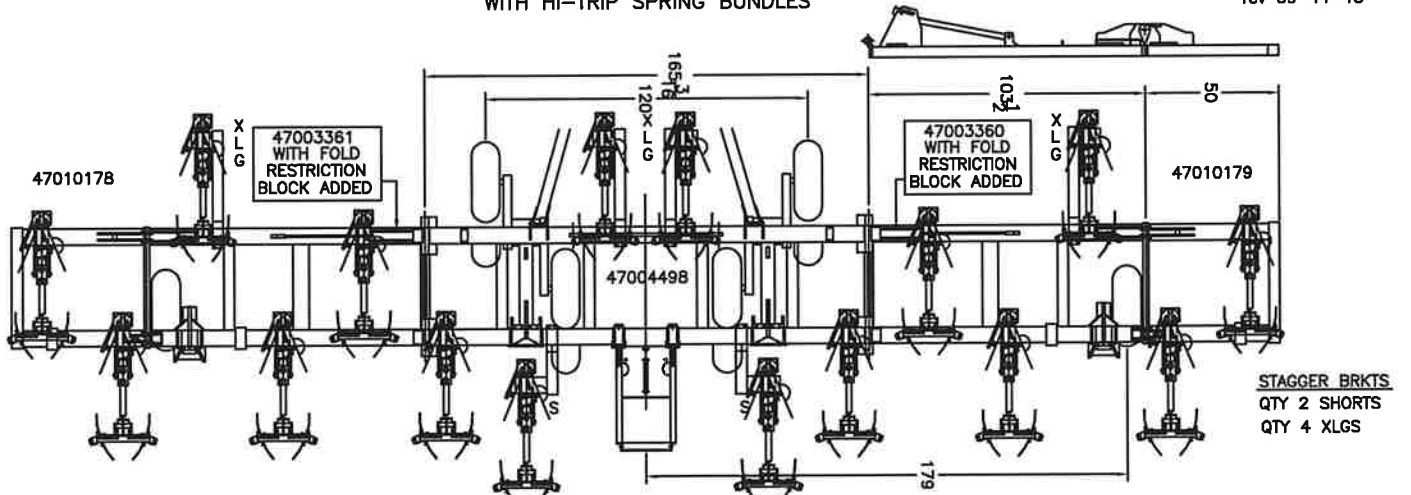
HI-TRIP BUNDLES WITH COULTERS
AND DISK SEALERS AT 30" SPACING
WALKING WHEELS ON CENTER AND WINGS

7200 SERIES (40 FT) TOOLBAR

IN MANUAL

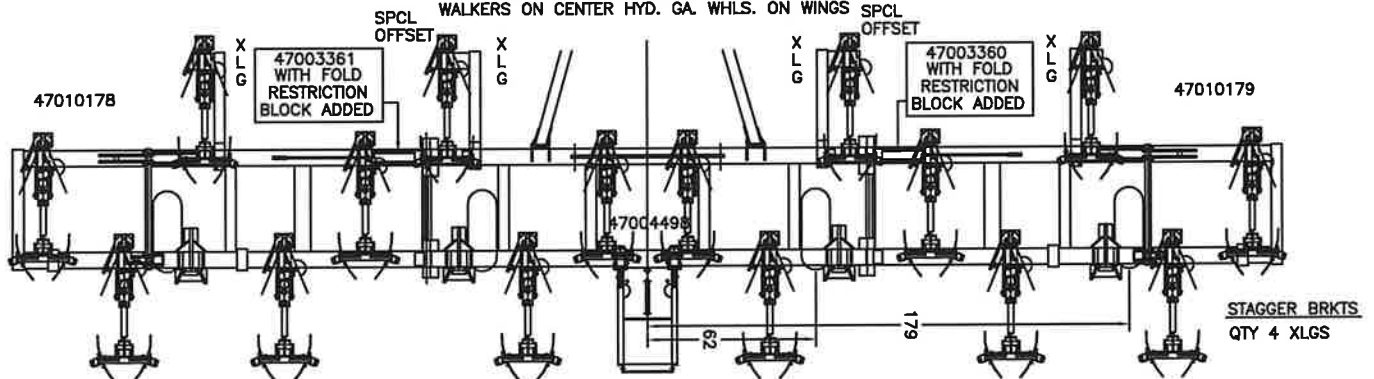
12/16 SHANK COMBINATION
WITH HI-TRIP SPRING BUNDLES

72K1216HTRP
11/12/04
rev 09-11-13



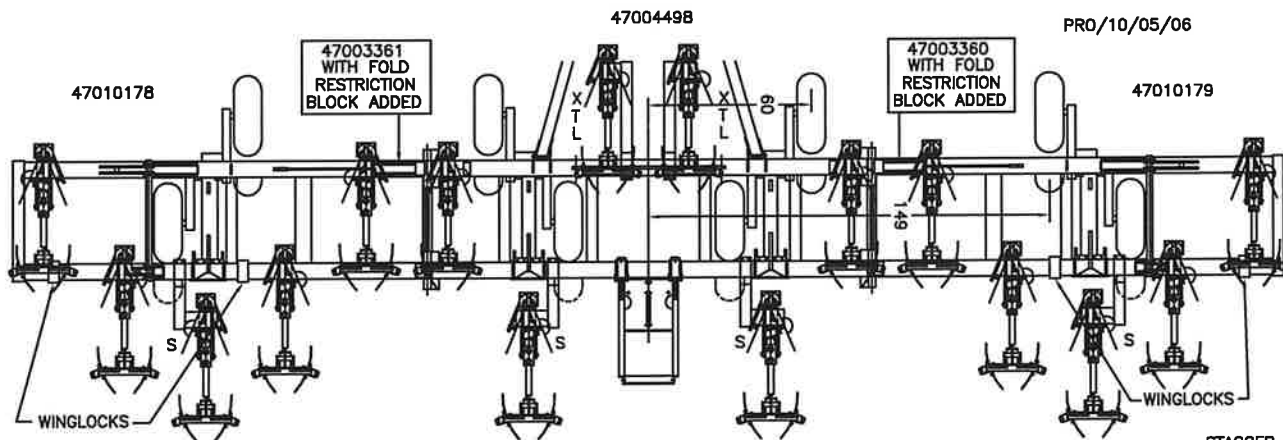
HI-TRIP BUNDLES WITH COULTERS AT 30" SPACING
AND 18 INCH DISK SEALERS

STAGGER BRKTS
QTY 2 SHORTS
QTY 4 XLGS



HI-TRIP BUNDLES WITH COULTERS AT 30" SPACING
AND 18 INCH DISK SEALERS
SINGLE WHEELS ON CENTER AND HYD GA. WHEELS

STAGGER BRKTS
QTY 4 XLGS



HI-TRIP BUNDLES WITH COULTERS AT 30" SPACING
AND 18 INCH DISK SEALERS
WALKING WHEELS ON CENTER AND WINGS

STAGGER BRKTS
QTY 4 SHORTS
QTY 2 XLGS

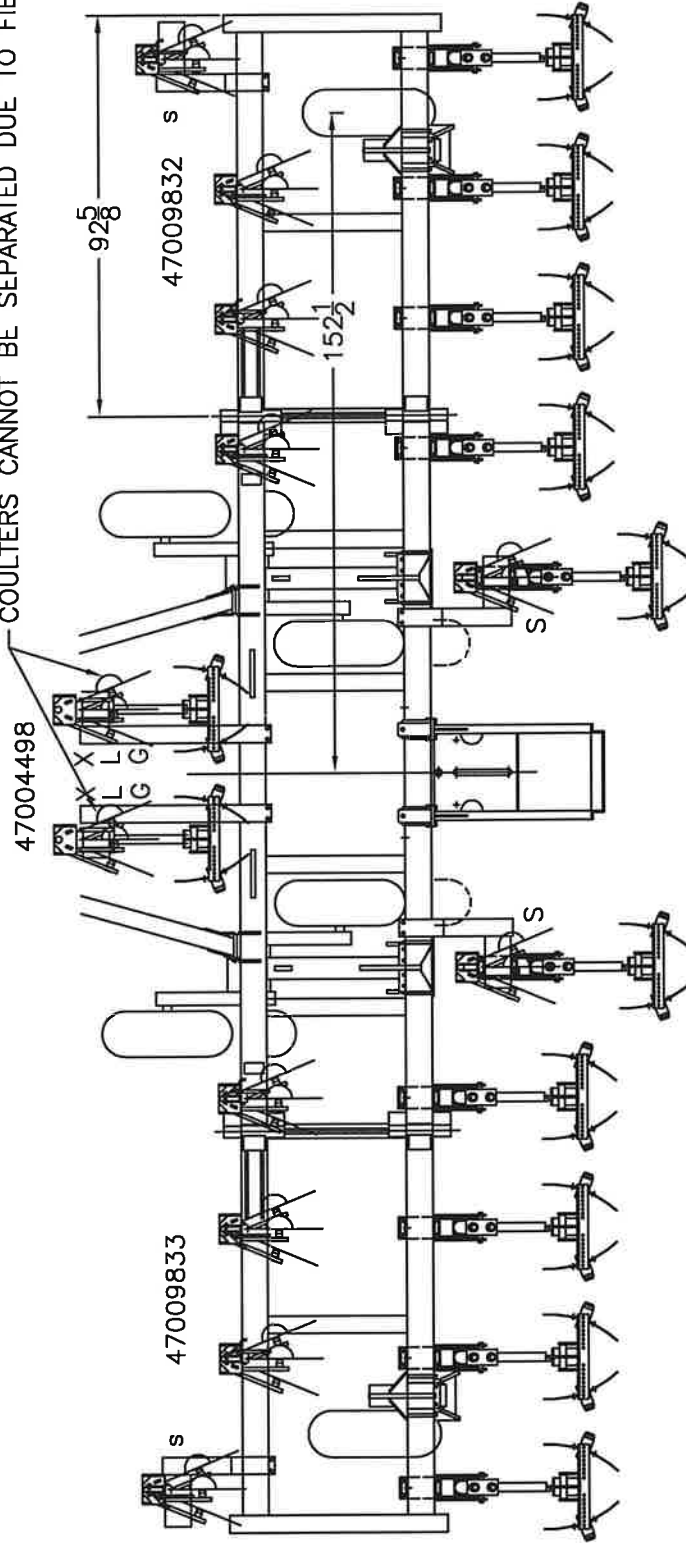
7200 SERIES (29.5 FT) TOOLBAR

IN MANUAL

72K12HTRP
 PRO/06-08-07
 REV 10-26-07

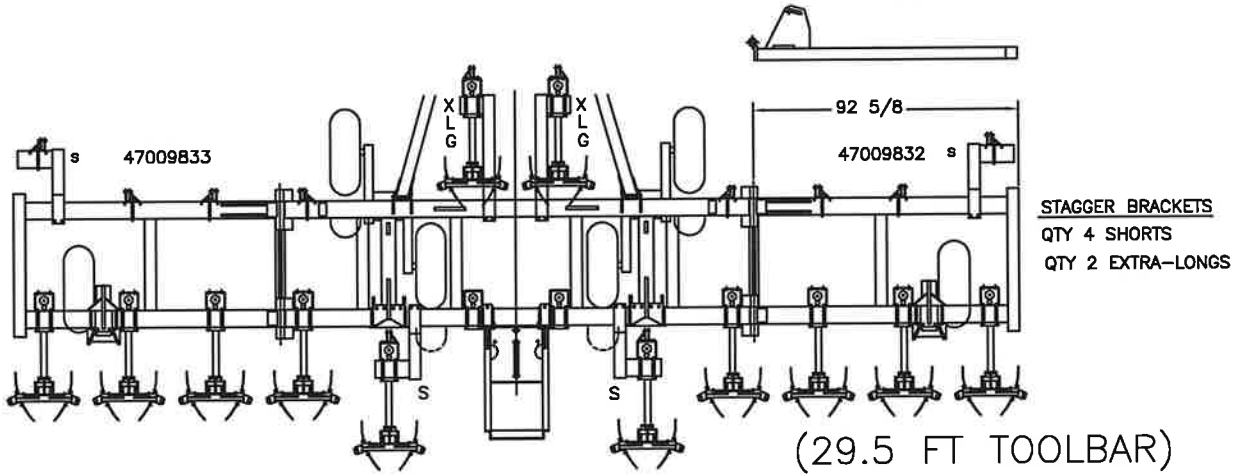
12 ROW STRIP-TILL (30 INCH SPACING)
 WITH HI-TRIP SPRING BUNDLES

COULTERS CANNOT BE SEPARATED DUE TO FIELD HITCH

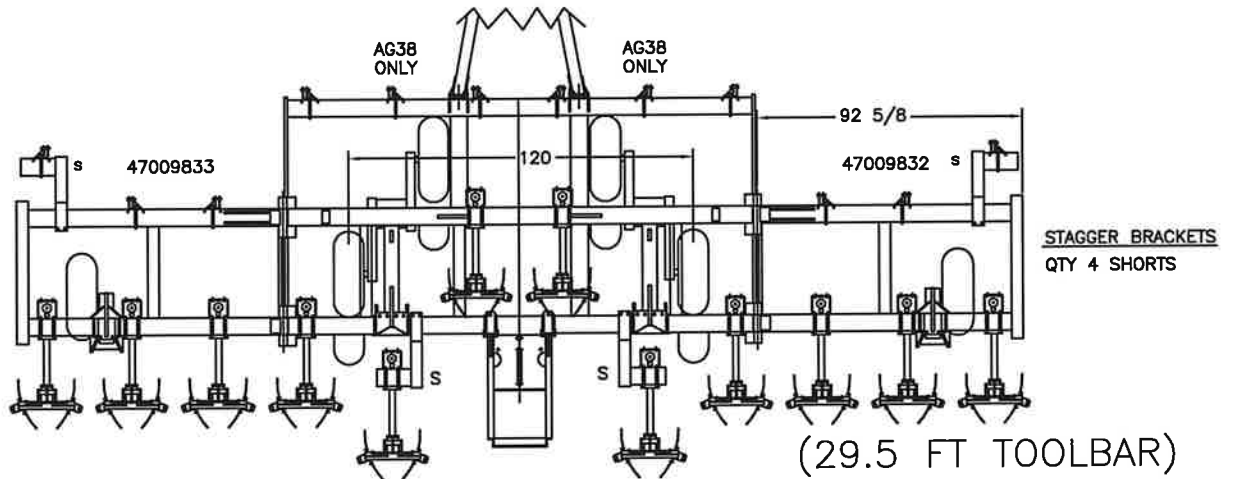


STAGGER BRKTS
 QTY 4 SHORTS
 QTY 2 XTRA-LONGS

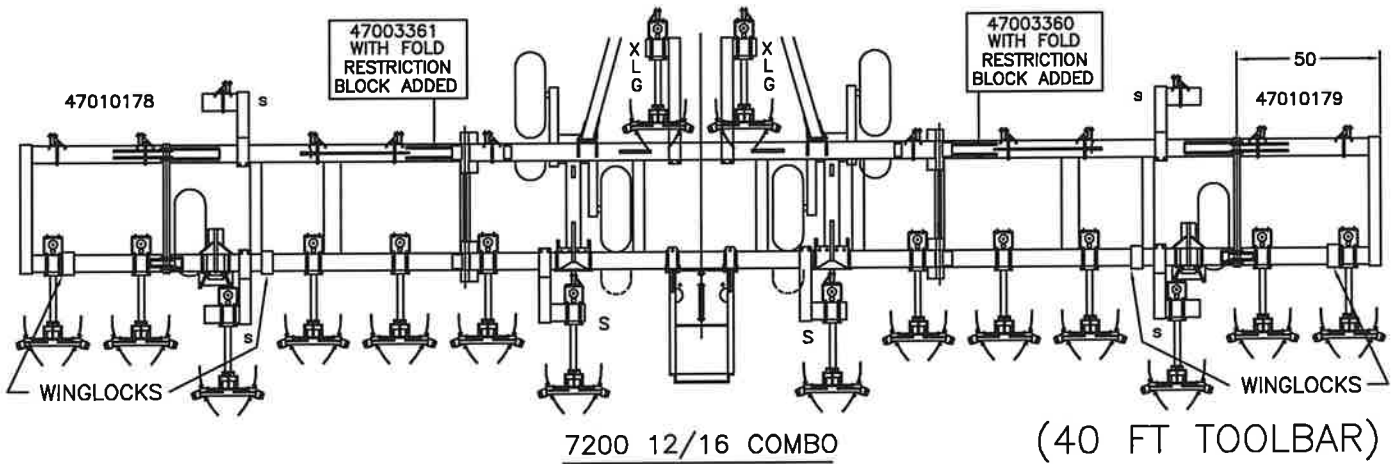
WITH COULTERS AND SHANKS SEPARATED AS MUCH AS POSSIBLE
 AND 18 INCH DISK SEALERS
 WALKING WHEELS ON CENTER, HYD. GA. WHEEL ON WINGS



7200 12 ROW STRIP-TILL
 COULTERS SEPARATED FROM SHANK
 WITH 18 INCH DISK COVERS
 WALKING WHEELS ON CENTER, HYD. GA. WHEEL ON WINGS



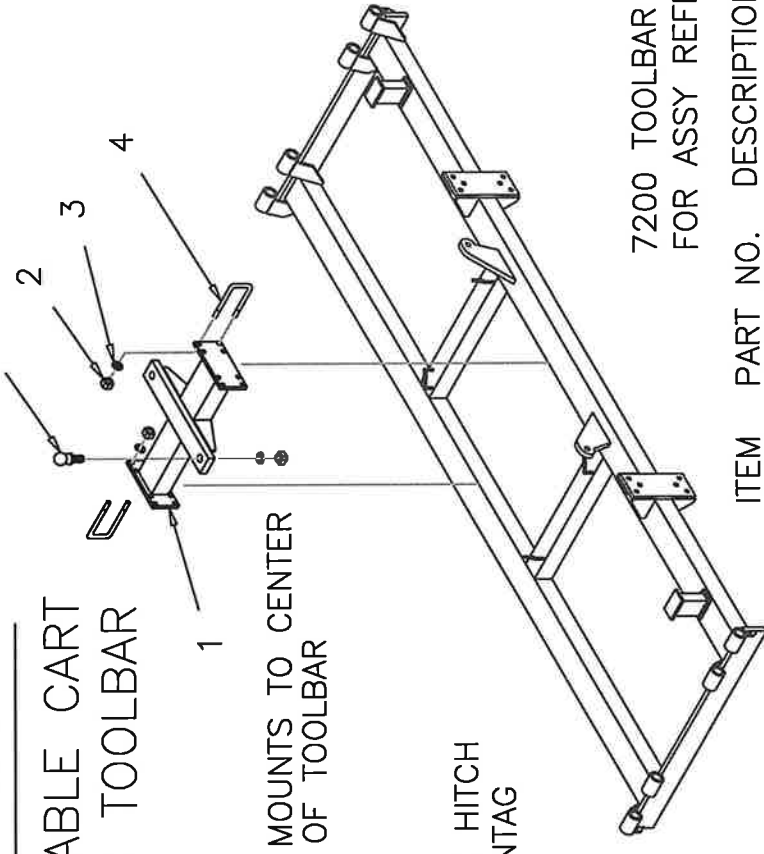
7300 12 ROW STRIP-TILL
 COULTERS SEPARATED FROM SHANK
 WITH 18 INCH DISK COVERS
 WALKING WHEELS ON CENTER, HYD. GA. WHEEL ON WINGS



7200 12/16 COMBO
 COULTERS SEPARATED FROM SHANK (CTRS CANT BE DUE TO HITCH)
 WITH 18 INCH DISK COVERS
 WALKING WHEELS ON CENTER, HYD. GA. WHEEL ON WINGS

STAGGER BRACKETS
 QTY 6 SHORTS
 QTY 2 EXTRA-LONGS

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



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

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
6		FIELD HITCH (separate item)	

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

BREAK-AWAY COUPLING DEVICE (BACD) SWING ARM ASSEMBLY FOR NH3 TOOLBARS

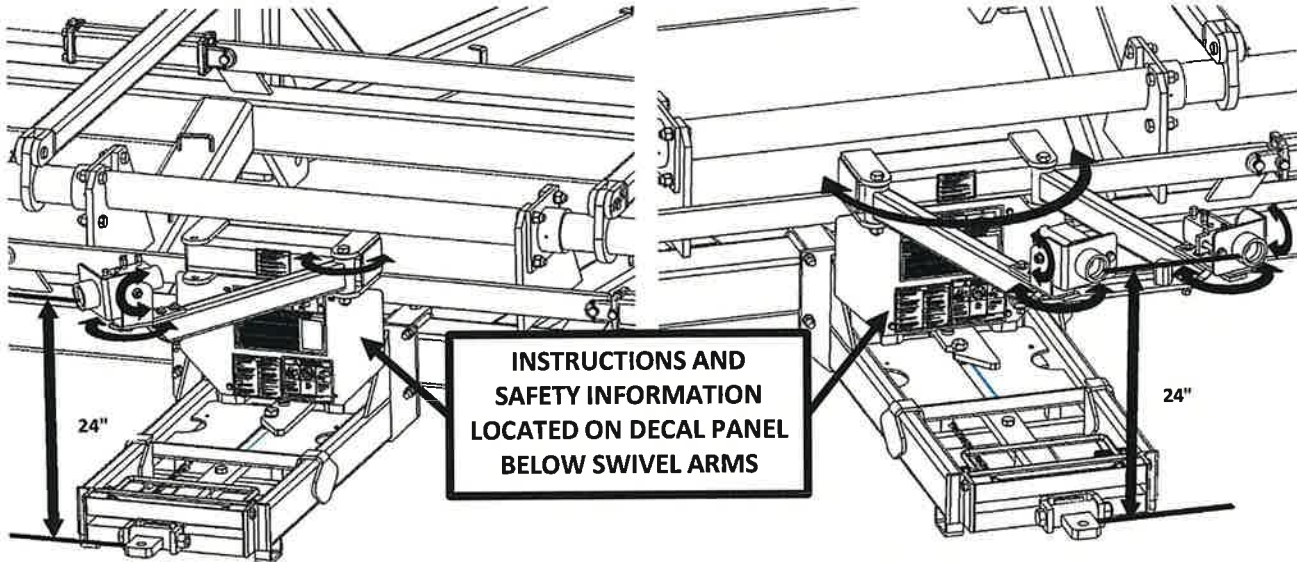


Figure 1: Single Swing Arm

Figure 2: Dual Swing Arms

The purpose of the break-away coupling device (BACD) is to provide an automatic valve closure to limit the potential hazard of NH₃ released to the atmosphere in the event of a trailing nurse tank becoming inadvertently unhitched and disconnected from the toolbar.

The Heartland Ag Systems Equipment swing arm style NH₃ stand securely mounts the BACD to the toolbar while allowing it to freely swivel over 80° left to right (horizontally) and 30° up and down (vertically) in each direction as well as positions the coupler 24" above the nurse tank hitch connection point as shown above in figures 1 and 2. "Super Shooter" style NH₃ stands were discontinued in 2015 and should be updated to the swing arm style NH₃ stands.

Follow the BACD manufacturer's installation, maintenance, and operation recommendations. Refer to your specific toolbar model owners manual for NH₃ stand assembly detail and parts requirements. Before each use visually inspect the BACD for leaks, damage, or loose components. Also check that the NH₃ stand operates properly and all decals are in place and can be easily read. Be sure to follow all manufacturer's safety precautions - **FAILURE TO READ AND UNDERSTAND THE SAFETY INSTRUCTIONS COULD LEAD TO PROPERTY DAMAGE, SERIOUS INJURY, OR DEATH.** The BACD must be fully inspected annually and repaired or replaced as required.

When working with NH₃ connections wear protective clothing, goggles, and gloves and have emergency water available. Always stand on the upwind side and avoid breathing in chemical vapors. **DO NOT DISCONNECT OR RECONNECT UNDER PRESSURE.**

The links and QR Codes below direct you to the MN Department of Agriculture BACD parts and installation videos.

NH₃ Break-Away Coupling Device Installation
(<https://www.youtube.com/watch?v=0EPNeZwvCE>)



NH₃ Break-Away Coupling Device Parts
(<https://www.youtube.com/watch?v=Rn1Ro8jWh3M>)



The links and QR codes below direct you to the Continental and Squibb Taylor BACD operating/installation instructions.

Continental B-SWV-125 & B-SWV-150-G Couplers
(<http://www.continentalnh3.com/pdfs/B-SWV-125%20150%20G.pdf>)



Squibb Taylor Flo-Max Couplers
([http://www.squibbtaylor.com/uploaded/FM1.25-1000%20\(2008\).pdf](http://www.squibbtaylor.com/uploaded/FM1.25-1000%20(2008).pdf))



