Heartland
AG SYSTEMS
Heartland Agriculture, LLC

6400
APPLICATOR

LIQUID FERTILIZER

OWNERS MANUAL
ASSEMBLY INSTRUCTIONS
AND PARTS LIST
OM-6400L

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

ISSUE
JANUARY 2024

Heartland AG SYSTEMS
Heartland Agriculture, LLC

WARRANTY REGISTRATION

Heartland AG SYSTEMS EQUIPMENT

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

PRE -DELIVERY CHECKLIST

_____1. All hardware properly tightened.

_____2. Lubrication of grease fittings.

_____3. All decals properly located and readable.

_____4. Other adjustments, "level operation", "drawbar height", etc.

_____5. Proper tongue weight after all options are mounted. Adjustments made if required.

_____6. Overall condition. Touch-up paint any scratches. Clean and polish

_____7. Operator's manual.

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

_____1. Safe operation and service

_____2. Correct machine installation and operation.

_____3. Correct and periodic lubrication and maintenance.

_____4. Daily and periodic inspection.

_____5. Troubleshooting.

_____6. Storing machine.

_____7. Heartland AG Systems parts and service

_____8. Have the customer write the machine model and serial number in the space provided in the manual introduction

_____9. Give the customer the operator's manual and encourage the customer to read the manual carefully.

Seller Information

Date set-up_____

Signature _____

Dealer name _____

Address _____

City, state, zip _____

Phone _____

Customer Information

Date delivered _____

Customer name _____

Customer address _____

Signature _____

Model number _____

Serial number _____

PLEASE FILL OUT THIS SHEET AND RETURN TO HEARTLAND AG SYSTEMS
1180 State Highway 7 East Hutchinson, MN 55350
www.heartlandag.com | Heartland Agriculture, LLC dba Heartland AG Systems

CONTENTS

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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.

Heartland
AG SYSTEMS
Heartland Agriculture, LLC

Heartland
AG SYSTEMS
EQUIPMENT

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.

Heartland AG SYSTEMS
Heartland Agriculture, LLC

Heartland AG SYSTEMS EQUIPMENT

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 cutomers 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 infor–mation to give you prompt, efficient service when you order parts.

MODEL NUMBER _____

SERIAL NUMBER _____

DATE PURCHASED _____

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 the controls properly. Do not let anyone operate without instructions.

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

PROTECT CHILDEREN 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

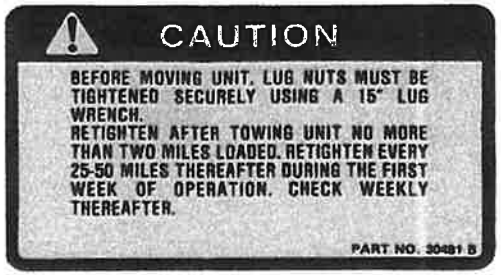
-- Use hydraulic cylinder transport lock-up during road transportation.

-- Maximum recommended road speed is 25 MPH

-- Clear machine of personnel and obstructions

PART NUMBER: 699102

PART NUMBER: 30481

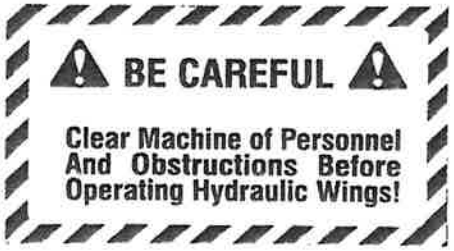


PART NUMBER: 699107

PART NUMBER: 699101

PART NUMBER: USA

PART NUMBER: 699104



6400 APPLICATOR ASSEMBLY PROCEDURE
WITH LIQUID PUMP DRIVE

Your 6400 applicator is shipped with the small parts and hardware packed in boxes marked for the different sections of the machine. If there are any items missing, contact Ag Systems Inc immediately.

ASSEMBLE THE CADDY AND TOOL BAR

Step 1. Select a smooth level surface for the assembly of your equipment.

Step 2. Refer to the illustration on page 13. Place the caddy frame (item 1) upon four steel sawhorses. One at each corner of the frame.

Step 3. Install the axle assemblies (item 12). The hubs are pre-assembled to the axles. The left hand and right hand axles are identical. Position the axles at the track width preferred and secure with the bolts (item 14) and appropriate hardware. The narrow setting will give you a 120 inch track width. The wide setting will be a 144 inch track width. Tighten the hardware securely.

Step 4. Mount the tire (item 89) on the rim (item 87) and mount the wheels on the hubs.

Step 5. Install the bottom linkage arms (item 3) in the bottom set of holes in the brackets at the front of the caddy. Mount the arms with the linkage pins (item 8) and secure with the bolts (item 9) and appropriate hardware.

Step 6. Unbolt the saddle assembly from the caddy frame. This needs to be done before you can install the torsion frame assembly. Install the torsion frame (item 2) in the top set of holes in the brackets at the front of the caddy Mount the torsion frame with the pivot pins (item 4) and secure with the bolts (item 5) and appropriate hardware. Pins are installed from the inside facing out so the pin grease zerks are easily accessible. Next slide the saddle ass'y forward on the caddy frame. Be sure to use the holes that place the saddle in the farthest forward position for tank weight transfer. ***Caution, failure to mount the tank forward may cause a filled caddy hitch pole to tip upward when unhitched from the tractor.*** Bolt down using items 10, 11 and 9 or item 20 as shown on the saddle assembly page. See page 22 of this manual.

Step 7. Install the hydraulic cylinders (item 75) with the body on the caddy and the shaft on the torsion frame. Note, the butt end ports should be to the top of the cylinder and the rod end ports should be on the side.

Step 8. Place the tool bar center section (item 1, page 11) in two sawhorses, one at each end and have on hand a hoist or jacks or other lifting device. Attach the linkage arms (item 3, page 13) to the bottom set of holes in the brackets on the tool bar. Mount with the linkage pins (item 8) and appropriate hardware. Attach the torsion frame to the top set of holes in the brackets on the tool bar with the pivot pins (item 4) and appropriate hardware.

Step 9. Assemble the poles (item 2, page 11) left hand, and (item 3) right hand to the front of the tool bar with the bolts (item 5) and appropriate hardware. Assemble the hitch mount (item 8) to the front of the poles with the bolts (item 9) and appropriate hardware. Install the jack (item 18) and lower it to the ground. You may now remove the supports from the tool bar and caddy.

Step 10. Mount the Perfect Hitch (item 17) to the poles and other attachments as supplied. See (item 22,and item 23 or item 30.

Step 11. **Continue assembling the caddy.**
Refer to the illustration on page 13. Mount the accessories brackets (item 83) on each end of the torsion frame cross member. Slip the depth control rings (item 82) and the transport locks (item 79) over the accessories bracket for storage.

Step 12. Position the ground wheel drive bracket (item 18) on the left hand rear corner of the caddy frame.

Assemble with the U-bolts (item 19 and 20) and appropriate hardware. The U-bolt item 19 would straddle the rear crossmember and item 20 would straddle the side tube. Mount the hinge bracket (item 26) on the tube of the GWD bracket (item 18) with the U-bolts (item 23) and appropriate hardware. For a 120 inch wheel track, the center of this bracket should be located 51 1/2 inches from the center of the caddy.

Step 13. **ASSEMBLE THE GROUND WHEEL DRIVE (GWD.)**

A. Assemble the bearings (item 62) to the inside of the pump drive bracket (item 47) with the appropriate hardware.

B. Assemble the shaft (item 60) with the sprocket (item 51) the square key (item 52) the hub (item 49) and the square key (item 61) and secure with the setscrews in the hub and the sprocket.

C: Assemble the idler sprocket (item 55) to the pump drive bracket with the bolt (item 56) and one washer (item 57) on each side of the sprocket and fasten with the lock washer (item 58) and the nut (item 59).

D. . Install the shaft assembly in the bearings in the pump drive bracket and secure with the set screws in the bearings. Mount the wheel (item 48) on the hub (item 49) Mount this assembly on the hinge bracket (item 26) with the shaft (item 27) and appropriate hardware.

A. Mount the pivot anchor (item 40) on the tube of the GWD bracket (item 18) and attach it to the pump drive bracket (item 47) with the clevis pin (item 42) and hairpin (item 43).

F. Position the eye bolt (item 66) thru the slotted hole in the pump drive bracket and attach it to the hinge bracket (item 26) with the clevis pin (item 73) and the cotter pin (item 74).

G. Position the transport lock pin (item 70) thru the guide tube on the pump mount bracket and install the expansion pin (item 72) in the end hole of the lock pin. Insert the hairpin (item (71) in the hole in the guide tube and thru the hole nearest the handle in the lock pin.

H. Assemble the spring (item 67) and the spring cap (item 68) to the eyebolt and secure with two nuts (item 69). Turn the nuts onto the eyebolt to a point so that at least 3/4 inch of thread is protruding from the nuts.

I. Mount the pump (NOT SHOWN) and install the drive chain (item 53) and the link (item 54). Adjust the idler and drive sprocket positions so that all three sprockets line up and the drive wheel (item 48) is centered on the caddy wheel. You may have to move the sprocket on the shaft or reposition the shaft in the bearings and/or add washers to the idler sprocket.

Step 14. Install the push rod assembly (items 30 to 39) with one end on the torsion frame and the other end clamped to the square tube on the pump drive bracket (item 47).

Step 15. Adjust the push rod assembly. Position any temporary shim (approximately 1/4" thick) at the end of the transport lock pin (item 70). On the push rod assembly, extend the adjustable clevis (item 32) far enough so that all play is removed from the assembly. Remove the temporary shim from the transport lock pin. You should now be able to push in the transport lock pin and freely insert the hairpin (item 71). If you cannot insert the hairpin, repeat the above procedure using a thicker shim. When this assembly is adjusted satisfactorily, secure it in place with the nut (item 31) on the adjustable clevis.

ASSEMBLE THE WINGS OF THE TOOL BAR

Step 16. Refer to the illustration on page 11. Assemble the primary wings (item 45) to the center section. Place the primary wings on steel sawhorses and assemble to the center section with the hinge pins (item 37). Position the hose guide (item 67) to the pivot pin and secure all with the bolt (item 38) etc.

Step 17. Assemble the primary wing cylinders (item 40 or 40A) size 3 x 24 onto the center section with the body on the center section and the shaft towards the wings. Secure the butt end with the pin (item 41). Do not secure the shaft until the hydraulic system has been purged of air.

Step 18 Assemble the secondary wings (item 61) to the primary wings with the hinge pins (item 64). Position the hose guide (item 67) to the pivot pin and secure all with the bolt (item 65) etc.

Assemble the cylinder link (item 57) to the primary wing with the linkage pin (item 58) and hardware as shown. Assemble the cylinder link (item 63) to the secondary wing with the linkage pin (item 68) and hardware shown. Mount the hydraulic cylinder (item 40) size 3 x 24 onto the primary wing with the body on the primary wing and the shaft towards the secondary wing. Secure the butt end with the pin (item 41). Do not secure the shaft end until the hydraulic system has been purged of air.

Step 20. Mount the wing hook block (item 71) on the secondary wing so that the latch pin is located 24 inches from the wing hinge pin. Assemble the latch assembly (item 51) with the swing stop bushing (item 52) and when used, the locking strap (item 80) as shown in the enlarged view on page 11. Assemble all to the primary wing with the hardware shown.

MOUNTING THE GAUGE WHEELS

Step 21 If your tool bar is equipped with mechanical gauge wheels refer to the illustration on page 15 & the shank location illustration page.The gauge wheel assembly should be located as far to end of the secondary wing as is practical, considering coulter locations and other obstructions. The pivot arm with the wheel hub should be located as indicated on these illustrations. To ensurethe 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 wheels.

Step 22 Refer to page 22. Mount the saddle and tank as indicated. The fitting and hose arrangement may be found on page 23.

Step 23. Install the hydraulic fittings and hoses as indicated on the hydraulic schematic illustration on page 18.

Step 24. **Purge the air from the hydraulic system**

A. Firmly anchor the pole to a heavy stationary object or attach it to a tractor.
B. Pressurize the hydraulic system. Fully extend all cylinders. Make sure the shafts of the cylinders do not hit any obstructions as they are extending. With the cylinders in the extended position, circulate the oil for approximately one minute. Retract the cylinders.
C. Refer to step 20 and 21. Attach the shaft end of the cylinders to the primary wings and the secondary wings with the pins and hardware indicated.
D. Partially lift the wings and stop. Observe if the wings will sag. This would indicate there is air in the system.
E. Repeat steps B and C until the system operates satisfactorily.
F. Secure the hydraulic hoses as needed.

Step 25. Mount the coulter brackets and coulters at the desired spacing. And assemble the desired knives to the coulters.

Step 26. Install the chemical application hoses and secure safely.

Step 27. Fold the wings and raise the machine to full transport height. Secure the transport locks at the caddy cylinders and the ground wheel control. Release the hydraulic pressure so that the supported items are resting on their transport locks.

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

Step 38. . With the machine in transport position, check to see that all hoses are in a safe and secure position. Check that all hardware in tightened securely.
Your new applicator is now ready to go to work.

Caution;; Check all fasteners daily to make sure they continue to be secure.
WARNING;; Operating the unit with loosened fasteners may cause damage and result in voiding the equipment warranty.

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.

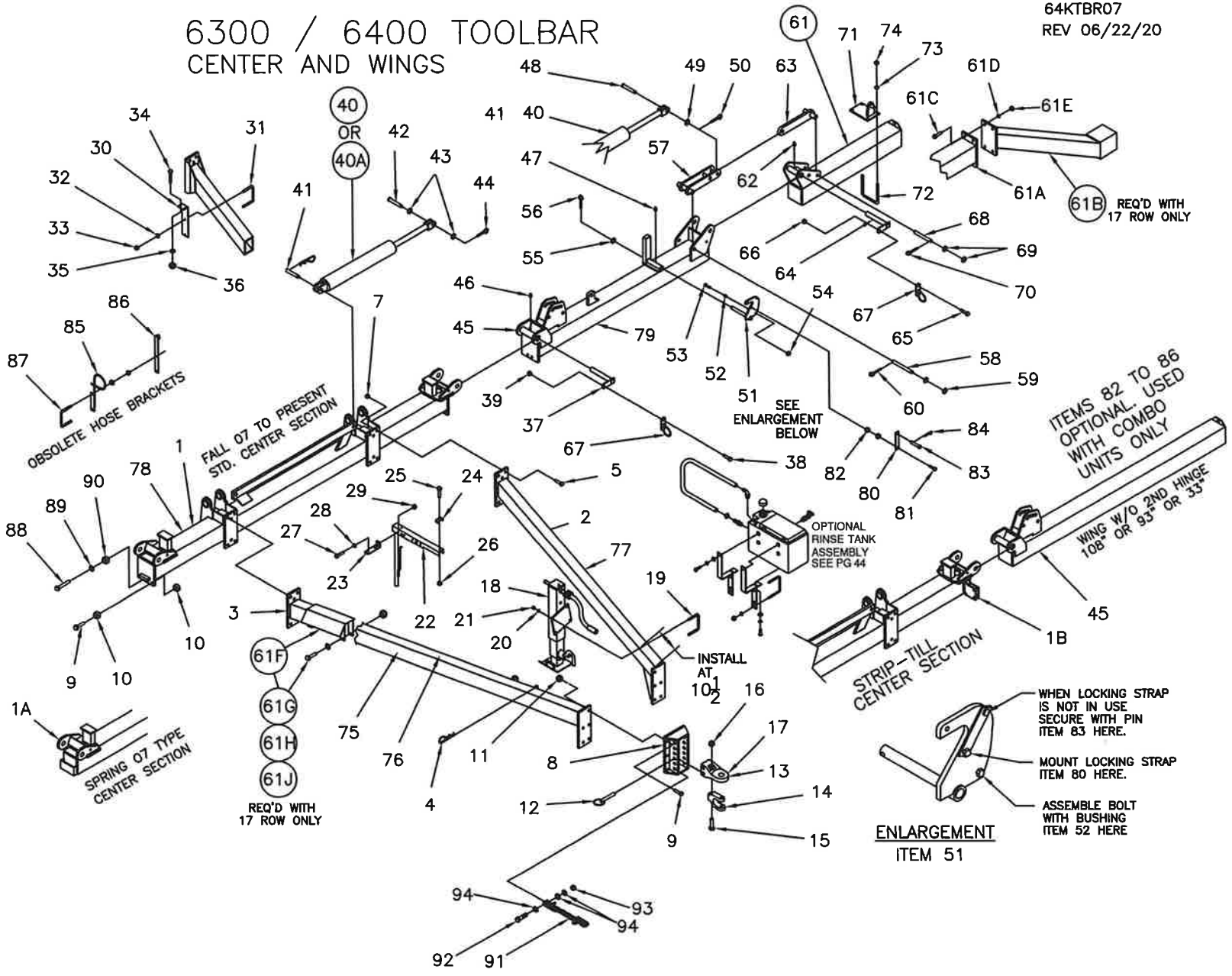
To set the equipment to the proper depth for your field conditions, place the toolbar in the field to the desired tillage depth. Use the cylinder spacers provided with your equipment. If two cylinders are used, place an equal number of spacers of equal size on each of the cylinders. It is very important 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.

6300 / 6400 TOOLBAR
CENTER AND WINGS

64KTBR07
REV 06/22/20



6300/6400 TOOLBAR

64KTBRLST07
07/18/23

CENTER SECTION AND WINGS

LIQUID AND DRY APPLICATORS

ITEM	PART NO.	DESCRIPTION	QTY.
1	47003730	STD CTR SECTION,fall 07 to present	1
1A	47003730*	STD CENTER SECTION, (to spring 07)	1
1B	47015023	CENTER SECTION, STRIP-TILL APLCTR.	1
2	47003749*	POLE, LEFT HAND(OBSOLETE SPRING 2007)	1
	47005128*	POLE, LEFT HAND (FALL 2006 TO PRESENT)	1
3	47003750*	POLE, RIGHT HAND(OBSOLETE SPRING 2007)	1
	47015129*	POLE, RIGHT HAND(FALL 2006 TO PRESENT)	1
4	18590094	HAIRPIN BRIDGE, (#8) 3/16 DIA.	1
5	18098435	BOLT, 3/4-10NC. X 2 1/2 GR. 8	12
6	--	-- 3/4	-
7	18458452	LOCK NUT, 3/4-10NC.	12
8	47008355	HITCH MOUNT	1
9	18098435	BOLT, 3/4-10NC. X 2 1/2 GR. 8	14
10	--	-- 3/4	-
11	18458452	LOCK NUT, 3/4-10NC.	18
12	600182	HITCH PIN, 1 X 6	2
	Pi-301V3C	PERFECT HITCH ASSEMBLY	1
		INCLUDES ITEMS 13 TO 16	
13	PPi-301V3	PERFECT HITCH, (1 1/2" DRAWPIN)	1
14	PPi-208VR	PERFECT HITCH CLEVIS	1
		WITH 1 1/4 OBROUND HOLE	
		5400 LBS. VERTICAL CAPACITY	
15	18058452	BOLT, 3/4-10NC. X 5 GR. 8	1
16	18458452	LOCKNUT, 3/4-10NC. GR. 8	1
17	PPi-421ADi	PERFECT HITCH, (2" DRAWPIN)	1
		8410 LBS. VERTICAL CAPACITY	1
18	70926	JACK,	1
	FOR REPAIR PARTS SEE SEPARATE JACK ILLUSTRATION		
19	47010154	U-BOLT,	2
20	18911600	LOCK WASHER,	4
21	18449100	HEX. NUT,	4
22	47005087	PIVOTING HOSE BRACKET	1
23	47005092	GAUGE BRACKET	1
24	47005091	HYD HOSE CLAMP	4
25	18056832	BOLT, 3/8-16NC. X 2 1/4	2
26	18459200	LOCKNUT "NYLOK" 3/8-16NC.	1
27	18056830	BOLT, 3/8-16NC. X 2	2
28	18811200	FLAT WASHER, 3/8	1
29	18496800	FLANGE NUT, 3/8-16NC	1
		ITEMS 30 TO 36 ARE OPTIONAL	
30	47010171	BRACKET, SELECTOR VALVE	1
31	47001028	U-BOLT, 3/8-16NC.	1
32	18891200	LOCKWASHER, 3/8	2
33	18436800	HEX. NUT, 3/8-16NC.	2
34	18056469	BOLT, 5/16-18NC. X 3 1/4	2
35	18811100	LOCKWASHER, 5/16	2
36	18406400	HEX. NUT, 5/16-18NC.	2
37	47003762	HINGE PIN, CENTER/PRIMARY	2
38	18057428	BOLT, 1/2-13NC. X 1 3/4	2
39	18497400	FLANGED NUT, 1/2-13NC.	2
40	47300093	HYDRAULIC CYLINDER 3 X 24	4
OR FOR TRACTORS WITH LESS THAN 2500 PSI USE (2) 40 & (2) 40A AND THE SAME FOR 17 ROW UNITS @ 30 INCH SPACINGS			
40A	47300094	HYDRAULIC CYLINDER 3 1/2 X 24	2
41	47003514	CYLINDER PIN KIT (1 X 4) (2 PINS)	2
42	18549054	CLEVIS PIN, (1 X 5)	2
43	18852200	1" FLATWASHER SAE	4
44	18560826	COTTER PIN, 3/16 X 1 1/2	2
45	47003753	PRIMARY WING, WITH 2ND HINGE	2
	47015046	PRIMARY WING, NO-HINGE (33" WING)	2
	47015030	PRIMARY WING, NO-HINGE (93" WING)	2
	47005726	PRIMARY WING, NO-HINGE (108" WING)	2

* DATE OF MANUFACTURE IS REQUIRED TO INSURE CORRECT SERVICE PARTS

ITEM	PART NO.	DESCRIPTION	QTY.
46	18901805	GREASE ZERK, STRAIGHT	2
47	18901807	GREASE ZERK, 45 DEGREE	2
48	18549054	CLEVIS PIN, (1 X 5)	2
49	18852200	FLATWASHER, 1"	2
50	18560826	COTTER PIN, (3/16 X 1 1/2)	2
51	47003821	LATCH WELDMENT	2
52	47003834	SWING STOP BUSHING	2
53	18051628	BOLT, 3/8-16NC. X 1 3/4	2
54	18496800	FLANGE NUT, 3/8-16NC.	2
55	18852200	FLATWASHER, 1"	2
56	18560826	COTTER PIN, (3/16 X 1 1/2)	2
57	47003787	CYLINDER LINK, PRIMARY WING	2
58	47003767	LINKAGE PIN, PRIMARY	2
59	18852200	1" FLATWASHER SAE	4
60	18560826	COTTER PIN, 3/16 X 1 1/2	4
61	47003780	SECONDARY WING, (LIQ ONLY) 50.5"	2
	47003927	SECONDARY WING, (LIQ ONLY) 28.5"	2
61A	47003933	2NDARY WING, 50.5" W BOLT-ON PLT	2
61B	47003929	BOLT-ON FORWARD ANGLED OFFSET	2
61C	18058434	BOLT, HX 3/4 NC X 2 1/2 GR5ZP	8
61D	18891800	LOCKWASHER, 3/4" ZP	8
61E	18418400	NUT, HEX 3/4" NC ZP	8
61F	47003939	COULTER REST WELDMENT	2
61G	18057454	BOLT, HEX 1/2-13 NC X 5 GR5 ZC	4
61H	18891400	LOCKWASHER 1/2 ZC	4
61J	18417400	NUT, HEX 1/2-13 NC ZC	4
62	18901807	GREASE ZERK, 45 DEGREE	2
63	47003791	CYLINDER LINK, SECONDARY WING	2
64	47003765	HINGE PIN, PRIMARY/SECONDARY	2
65	18057428	BOLT, 1/2-13NC. X 1 3/4	2
66	18497400	FLANGED NUT, 1/2-13NC.	2
67	47003843	HOSE GUIDE, WINGS	4
68	47003786	LINKAGE PIN, SECONDARY	2
69	18852200	1" FLATWASHER SAE	4
70	18560826	COTTER PIN, 3/16 X 1 1/2	4
71	47003829	HOOK BLOCK	2
72	47302730	U-BOLT, 1/2-13NC. (7 X 8 1/2)	4
73	18891400	LOCKWASHER, 1/2 ZC	8
74	18417400	HEX. NUT, 1/2-13NC. ZC	8
75		DECAL, 6400 (MODEL NUMBER)	2
76	699100	DECAL, WARNING-CLEAR TONGUE	1
77	699104	DECAL, CAREFUL-CLEAR MACHINE	1
78	699107	DECAL, AG-SYSTEMS INC.	2
79	699101	DECAL, DANGER-FALLING WINGS	2
	ITEM 80 TO 84 USED ON COMBO UNITS ONLY		
80	47009848	WING LOCK STRAP	2
81	18051628	BOLT, 3/8-16NC. X 1 3/4	2
82	18436800	HEX. NUT, 3/8-16NC.	4
83	18541655	CLEVIS PIN, 3/8 X 1 3/4	2
84	18590091	HAIRPIN BRIDGE, .091 X 2 3/8	2
85	47010165	HOSE BRACKET (OBSOLETE 2007)	
86	47010168	BRACKET, PRESS. GAUGE (OBS. 2007)	
87	47001028	U-BOLT, 3/8-16NC. (OBSOLETE 2007)	
88	18058443	BOLT, 3/4-10 NC X 4 (OPTIONAL)	4
89	18891800	LOCKWASHER, 3/4 ZC (OPTIONAL)	4
90	18418400	HEXNUT, 3/4-10NC ZC (OPTIONAL)	4

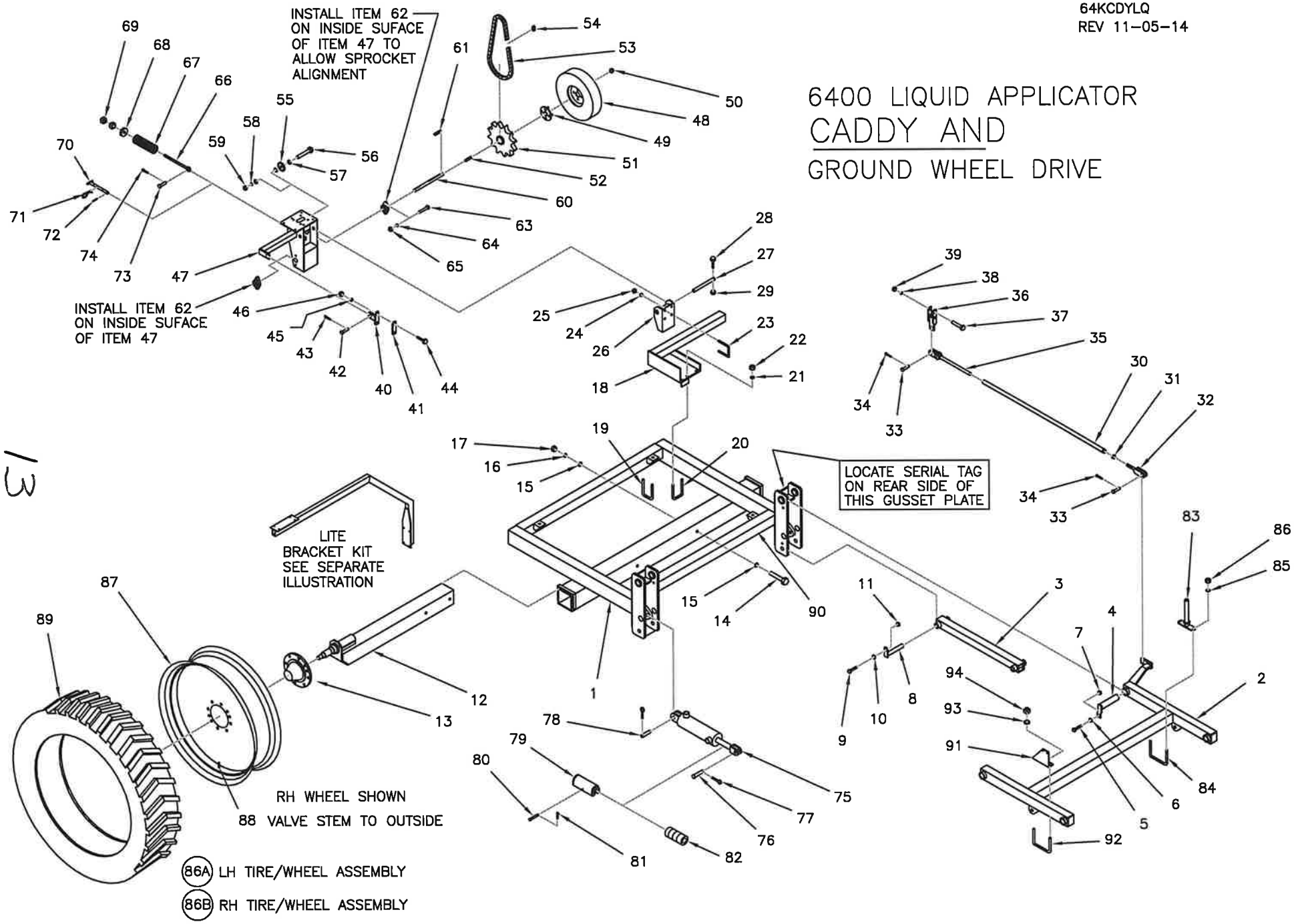
NOTE: FOR OPTIONAL RINSE TANK KIT SEE PAGE 44 OF THIS MANUAL

91	PPSC4156BS	CHAIN, SAFETY 1/2" X 56" LG	1
92	18059061	BOLT HX CAP GR5 NC ZC 1 X 4	1
93	18459002	NUT NYLOCK 1 GR 5	1
94	18852200	WASHER FLAT 1" SAE ZC	3

(ITEMS 91-4 CAN BE ORDERED AS A KIT P/N:47090314)

64KCDYLQ
REV 11-05-14

6400 LIQUID APPLICATOR
CADDY AND
GROUND WHEEL DRIVE



6400 LIQUID APPLICATOR

64KCDYLQLS
11-05-14

CADDY AND GROUND WHEEL DRIVE

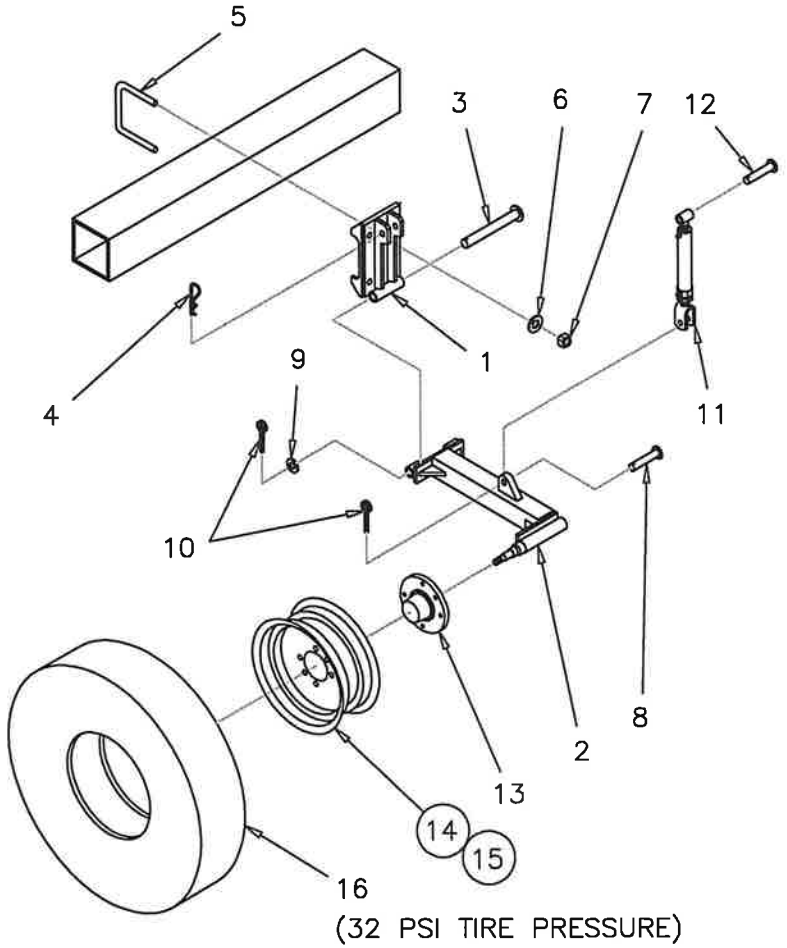
ITEM	PART NO.	DESCRIPTION	QTY.
1	47003802	CADDY FRAME(OBSOLETE SPRING 2006)	1
	47015131	CADDY FRAME(FALL 2006 TO PRESENT)	1
2	47003794	TORSION FRAME	1
3	47003800	BOTTOM LINKAGE ARM	2
4	47003338	PIVOT PIN	4
5	18057428	BOLT, 1/2-13NC. X 1 3/4	4
6	18811400	FLATWASHER, 1/2	4
7	18457650	LOCKNUT, 1/2-13NC.	4
8	47003341	LINKAGE PIN	4
9	18057428	BOLT, 1/2-13NC. X 1 3/4	4
10	18811400	FLATWASHER, 1/2	4
11	18457650	LOCKNUT, 1/2-13NC.	4
	47993345	AXLE COMPLETE, INCL. ITEMS 12 & 13	
12	47003345	AXLE WELDMENT	2
13	47001010	HUB COMPLETE (10 BOLT)	2
14	18058476	BOLT, 3/4-10NC. X 8 1/2	2
15	18811800	FLATWASHER, 3/4	4
16	18891800	LOCKWASHER, 3/4	2
17	18418400	HEX. NUT, 3/4-10NC.	2
18	47003839	GWD BRACKET(OBSOLETE FALL 2005)	1
	47015124	GWD BRACKET(SPRING 2006 TO PRESENT)	1
19	44001616	U-BOLT, 5/8-11NC. (4 X 5 1/2)	1
20	47006951	U-BOLT, 5/8-11NC. (4 X 7 1/4)	1
21	18891600	LOCKWASHER, 5/8	4
22	18417900	HEX. NUT, 5/8-11NC.	4
23	47306677	U-BOLT, 5/8-11NC. (3 X 4 1/2)	2
24	18891600	LOCKWASHER, 5/8	4
25	18417900	HEX. NUT, 5/8-11NC.	4
26	47003266	HINGE BRACKET	1
27	47003344	PIVOT SHAFT, HINGE BRACKET	1
28	18056830	BOLT, 3/8-16NC. X 2	1
29	18457800	LOCKNUT, 3/8-16NC	1
	47993329	PUSH ROD ASS'Y (OBSOLETE SPRING 2007)	1
	47995126	PUSH ROD ASSEMBLY(2006 TO PRESENT) INCLUDES ITEMS 30, 31 AND 32	1
30	47003329	PUSH ROD WELD'T. (OBSOLETE SPRING 2007)	1
	47005126	PUSH ROD WELD'T(FALL 2006 TO PRESENT)	1
31	18449003	HEX. JAM NUT, 3/4-10NC.	1
32	47003320	CLEVIS END	1
33	18541835	CLEVIS PIN, 3/4 X 2 1/2	2
34	18590148	HAIRPIN BRIDGE, NO 9, .148 DIA.)	2
35	47003322	LINKAGE, SWIVEL BAR	1
36	47003326	PIVOT ARM	1
37	18057442	BOLT, 1/2-13NC. X 3 1/2	2
38	18891400	LOCKWASHER, 1/2	2
39	18417400	HEX. NUT, 1/2-13NC.	2
40	47003385	PIVOT ANCHOR	1
41	47003386	CLAMP PLATE, PIVOT ANCHOR	1
42	18541830	CLEVIS PIN, 3/4 X 2	1
43	18590148	HAIRPIN BRIDGE, NO 9, .148 DIA.)	1
44	18057454	BOLT, 1/2-13NC. X 5	2
45	18891400	LOCKWASHER, 1/2	2
46	18417400	HEX. NUT, 1/2-13NC.	2
47	47003260	PUMP DRIVE BRACKET	1

ITEM	PART NO.	DESCRIPTION	QTY.
48	44105519	DRIVE WHEEL ASSEMBLY (40 PSI)	1
49	47007068	HUB, PUMP DRIVE WHEEL	1
50	47005011	WHEEL NUT, 1/2-20NF (16.5 X 6.5-8)	4
51	10342	DRIVE SPROCKET (50B40)	1
52	47006519	SQUARE DRIVE KEY, 1/4 X 1 1/2	1
53	47005604	ROLLER CHAIN, #50 X 63 3/4"	1
54	31212	CONNECTING LINK	1
55	34318	IDLER SPROCKET	1
56	18057934	BOLT, 5/8-11NC. X 2 1/2	1
57	18811600	FLATWASHER, 5/8	3
58	18891600	LOCKWASHER, 5/8	1
59	18417900	HEX. NUT, 5/8-11NC.	1
60	47003357	SHAFT, GROUND WHEEL DRIVE	1
61	47006519	SQUARE DRIVE KEY, 1/4 X 1 1/2	1
62	47008462	BEARING ASSEMBLY, 1 INCH	2
63	18057426	BOLT, 1/2-13NC. X 1 1/2	4
64	18891400	LOCKWASHER, 1/2	4
65	18417400	HEX. NUT, 1/2-13NC.	4
66	47301547	EYE BOLT	1
67	47301524	COMPRESSION SPRING	1
68	47301530	SPRING CAP	1
69	18417900	HEX. NUT, 5/8-11NC.	2
70	47007197	TRANSPORT LOCK PIN	1
71	18590094	HAIRPIN BRIDGE, (.177 DIA.)	1
72	18511033	EXPANSION PIN 1/4 X 1 1/2	1
73	18541428	CLEVIS PIN, 1/2 X 1 3/4	1
74	18560722	COTTER PIN, 5/32 X 1	1
75	47300091	HYDRAULIC CYLINDER, 3 1/2 X 8	2
76	18541651	CLEVIS PIN, 1 X 4 1/2	2
77	18560826	COTTER PIN, 3/16 X 1 1/2	2
78	47003514	CYL. PIN KIT (1 X 4) (2 PINS)	1
79	47003314	TRANSPORT LOCK	2
80	18541254	CLEVIS PIN, TRANSPORT LOCK	2
81	18590916	HAIRPIN BRIDGE, (1/8 DIA.)	2
82	47005455	"SET" DEPTH CONTROLS	2
83	47003331	ACCESSORIES BRACKET	2
84	47001028	U-BOLT,	2
85	18891200	LOCKWASHER,	4
86	18436800	HEX. NUT,	4
86A	40031	TIRE AND RIM ASSEMBLED, L.H.	1
86B	40031R	TIRE AND RIM ASSEMBLED, R.H. INCLUDES ITEMS 87, 88, AND 89 (INFLATE TO 49 PSI)	1
87	47000200	RIM, 46 X W12A (10 HOLE)	2
88	20120022	VALVE STEM	2
89	20100380	TIRE, 380/90R46 (49 PSI)	2
90	30481	DECAL, TIGHTEN LUG NUTS	1
91	47008049	MANUFOLD BRACKET	1
92	47001028	U-BOLT, 3/8-16NC.	1
93	18891200	LOCK WASHER, 3/8	2
94	18436800	HEX. NUT, 3/8-16NC.	2

MECHANICAL GAUGE WHEEL ASSEMBLY

64KMCHGW
REV 06-10-14

FOR 7 X 7 TOOLBAR



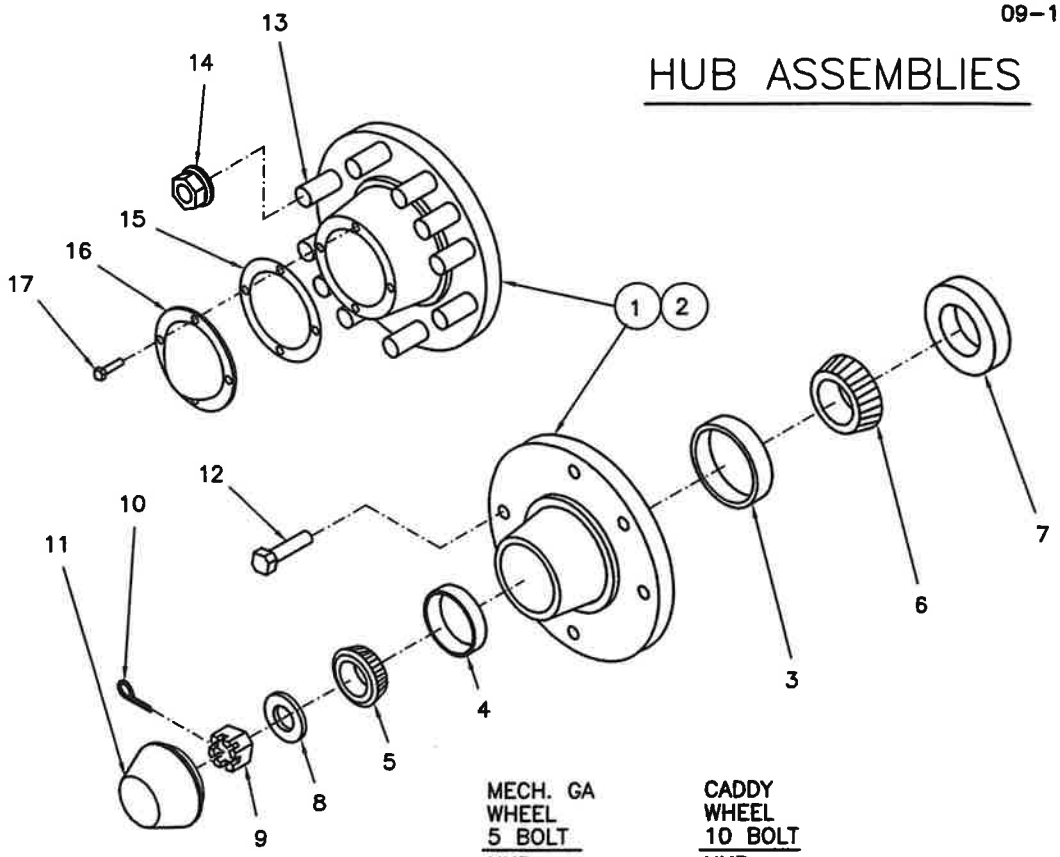
(32 PSI TIRE PRESSURE)

FOR A 6400 TOOLBAR (LIQUID OR DRY FERTILIZER) WITH THE SHANKS AT 30 INCH SPACING, MOUNT THE PIVOT ARM WITH THE HUB ORIENTED TOWARD THE END OF THE TOOLBAR.
FOR 38 INCH SPACING (LQUID APPLICATION) THE HUB IS ORIENTED TOWARD THE CENTER OF THE TOOLBAR.

"SET" OF (2) GAUGE WHEEL ASSEMBLIES P.N. 47648001

ITEM	PART NO.	DESCRIPTION	QTY
1	47004742	MOUNTING BRACKET	2
	47000413	PIVOT ARM COMPLETE, INCLUDES ITEMS 2 AND 13	2
2	47010413	PIVOT ARM	2
3	47010425	PIVOT PIN	2
4	18560866	COTTER PIN, 3/16 X 1 1/2	2
5	47305002	U-BOLT, 5/8-11NC. (FOR 7 X 7 BAR)	4
6	18891600	LOCK WASHER, 5/8 ZC	8
7	18417900	HEX. NUT, 5/8-11NC. ZC	8
8	18541835	CLEVIS PIN, 3/4 X 2 1/2	2
9	18852200	FLATWASHER, 1" SAE ZC	2
10	18560726	COTTER PIN, 5/32 X 1 1/2	4
11	690063	JACK, TURNBUCKLE TYPE	2
12	18541566	CLEVIS PIN, 3/4 X 3 1/2	2
13	47005348	HUB ASSEMBLY COMPLETE, (5) BOLT	2
14	47005590	WHEEL, 15" X 5 BOLT	2
15	20120012	VALVE STEM	2
16	20067015	TIRE, 670 X 15 (INFLATE TO 32 PSI)	2
	40015	TIRE & WHEEL ASS'Y (ITEMS 14 - 16)	2

HUB ASSEMBLIES

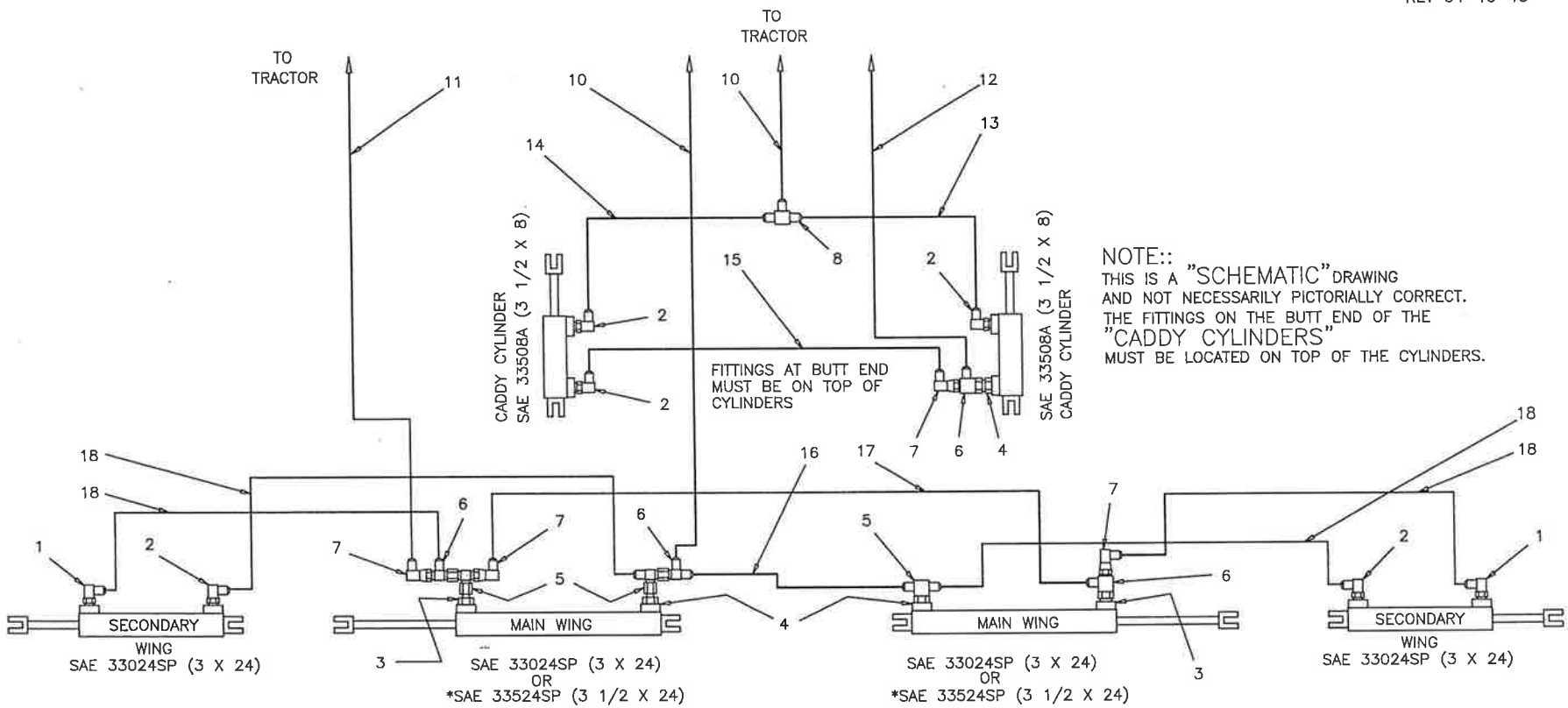


ITEM	DESCRIPTION	MECH. GA WHEEL 5 BOLT HUB PART NO.	CADDY WHEEL 10 BOLT HUB PART NO.	QTY.
1	HUB COMPLETE	47005348	47001010	1
	MFGR. PART NUMBER	HA511	H1010-1	
	HUB COMPLETE INCLUDES ITEMS 2 THRU 7 AND ITEMS 11 THRU 17 ONLY			
2	HUB WITH RACES	47006348	47002010	1
3	INNER BEARING CUP	47005010	47039520	1
4	OUTER BEARING CUP	44501910	47000453	1
5	OUTER BEARING CONE	44501949	47000460	1
6	INNER BEARING CONE	47005048	47039585	1
7	GREASE SEAL	47006011	47000048	1
8	SPINDLE WASHER	———	47000023	1
9	SPINDLE NUT	18488600	47000038	1
10	COTTER PIN	18560826	18560828	1
11	DUST CAP	47005297	———	1
12	LUG BOLT	———	———	6
12	LUG BOLT	47005014	———	5
13	WHEEL STUD (PRESSED IN)	———	4700WB51	10
14	WHEEL NUT, FLANGED	———	4700WB52	10
15	GASKET, DUST CAP	———	47000049	1
16	DUST CAP	———	47000027	1
17	CAP BOLT	———	47000053	4
13	WHEEL STUD (PRESSED IN)	———	———	8
14	LUG NUT	———	———	8

HYDRAULIC PLUMBING SCHEMATIC

6300/6400 SERIES APPLICATOR (WITH MECHANICAL GAUGE WHEELS)

64KTBRPLG
REV 04-15-13



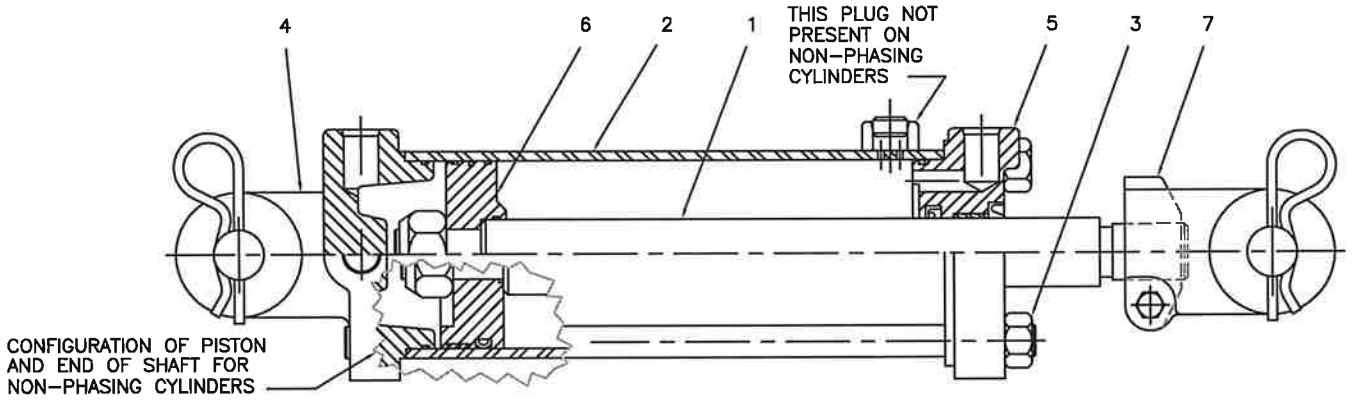
*REQUIRED ONLY WITH TRACTORS WITH LESS THAN 2500 PSI HYD SYSTEMS

HOSE LIST CONSISTS OF P.N. 640001 (COMPLETE BASE PKG.)

ITEM	PART NO.	DESCRIPTION	QTY	640001S (WING PACKAGE) ADD QTY
10	604180	HOSE, 1/4 X 180" – 1/2 MPT X #6 JICFS	2	0
11	604204	HOSE, 1/4 X 204" – 1/2 MPT X #6 JICFS	1	0
12	604216	HOSE, 1/4 X 216" – 1/2 MPT X #6 JICFS	1	0
13	604031	HOSE, 1/4 X 29" – #6 JICFS BOTH ENDS	1	0
14	604097	HOSE, 1/4 X 97" – #6 JICFS BOTH ENDS	1	0
15	604151	HOSE, 1/4 X 151" – #6 JICFS BOTH ENDS	1	0
16	604065	HOSE, 1/4 X 65" – #6 JICFS BOTH ENDS	1	0
17	604120	HOSE, 1/4 X 120" – #6 JICFS BOTH ENDS	1	0
18	604086	HOSE, 1/4 X 86" – #6 JICFS BOTH ENDS	0	4

FITTING LIST CONSISTS OF

ITEM	PART NO.	DESCRIPTION	650103 (BASE PKG) QTY	PLUS	608211 WING PKG. QTY
1	6801-6-8R	ADAPTER ELBOW #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	1		1
2	6801-6-8	ADAPTER ELBOW #6 MJIC X #8 M O-RING	4		1
3	6400-6-8R	CONNECTOR, #6 MJIC X #8 M O-RING WITH .045 ORIFICE (BLACK FINISH)	1		1
4	6400-6-8	CONNECTOR, #6 MJIC X #8 M O-RING	2		1
5	6600-6	BRANCH TEE, #6 MJIC X #6 FJIC SWIVEL	1		2
6	6602-6	RUN TEE, #6 MJIC X #6 FJIC SWIVEL	2		2
7	6500-6	ELBOW, #6 MJIC X #6 FJIC SWIVEL	3		1
8	2603-6	UNION TEE, #6 MJIC	1		–



6400CYL06
rev 05/16/18

ITEM NO.	DESCRIPTION	WING CYL. 3 x 24 47300093 B300240BBAAA07F	WING CYL. 3 1/2 X 24 47300094 B350240BBAAA07A	2ndry.WING 3 x 24 47300093 B300240BBAAA07F	CADDY CYL. 3 1/2 X 8 47300091 A350080BBAAA07A	CONTROL CYL. 1 1/2 X 4 47005437 (AK–284)	QTY. REQ'D.
1	SHAFT	010729750A	010729750B	010729750A	010700682	010300124	1
2	TUBE	051526063A	051526063A	051626063A	051710063A	060800136	1
3	TIE ROD ASSM.	170201282	170201283	170201282	170201123	--------	4
4	BUTT	1415005SF	1417005SF	1415005SF	1417005SF	--------	1
5	GLAND ASSM.	0815BBGSF	0815BBGSF	0815BBGSF	0817BBGSF	080800083	1
6	PISTON	071500244	071700174	071500244	071700174	070800071	1
7	CLEVIS ASSM.	100000423	100000577	100000423	100000577	100000444	1
	REPAIR KIT	47033000	47033500	47033000	47033500	470AK284 (PRE 2018) (CAST CLEVIS) 20214 (POST 2018) (WELDED CLEVIS)	

Repair kit items not available individually.

19

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,

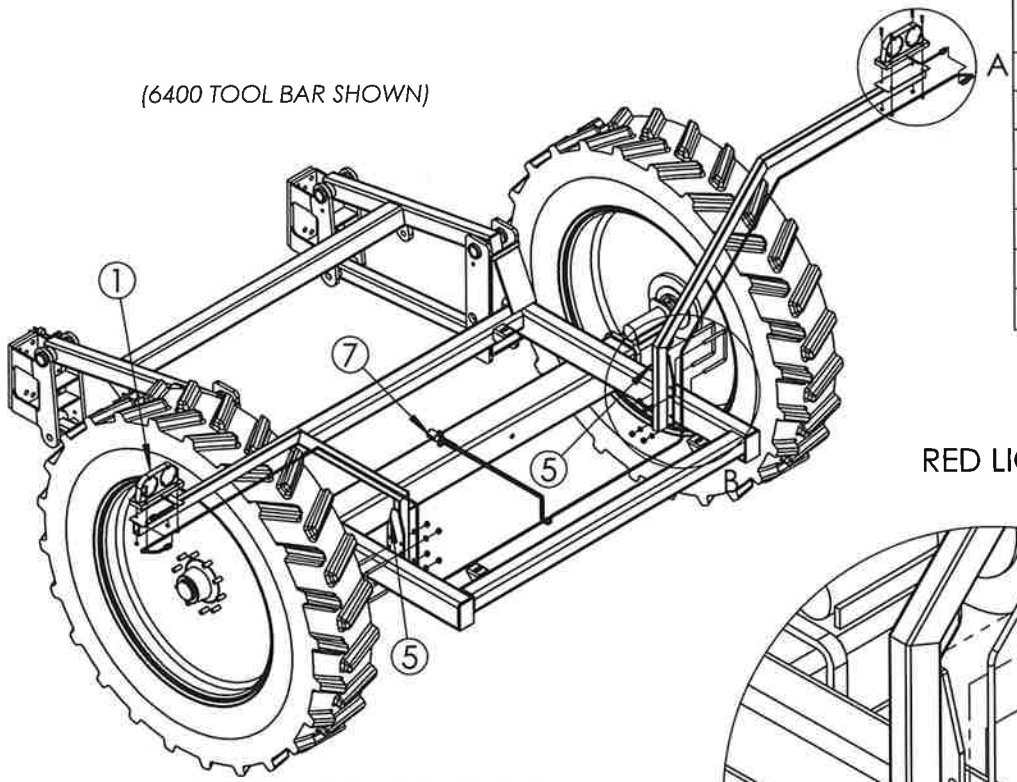
1. Replace all the seals on items (4), (5), and (6) except, for non–phasing cylinders do not replace the small o–ring on the ID of the piston item (6) until you are ready to attach the shaft item (1).
2. For non–phasing cylinders, place the small o–ring seal for the piston over the shaft turndown. Apply 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 carefull not to damage the seals. Slip the entire assembly into the lightly oiled tube, item (2) with the piston first making sure the tube slips over the OD seals of the gland.
5. Take the entire assembly from step 4 and slip the tube over the OD seal on the butt item (4). Align the ports in the butt and the gland and assemble the nuts to the tie rods and torque uniformly.
6. Torque shaft locknut to 265 +/– 10 ft/lbs.. Torque tie rods to 60 +/– ft/lbs.. Set retract and torque clevis bolt to 28 +/– 2 ft/lbs..
7. Test the reassembled cylinder for leaks and install in your machine. If you have any problems please contact Prince Engineering (712–277–4061)

SAFETY LIGHT KIT FOR TOOLBARS

P/N: 47999697

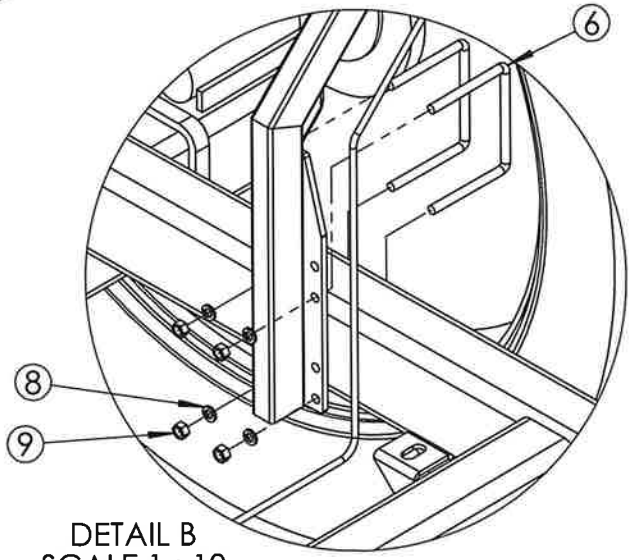
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	54209-008	DUAL LAMP ASSY, LH	1
2	54209-022	DUAL LAMP ASSY, RH	1
3	18055724	BOLT HX CAP G5 NCZC 1/4 X 1 1/4	8
4	18495700	NUT HX SER FLG 1/4 NC ZC	8
5	47009697	LITE KIT BRACKET	2
6	47006545	U-BOLT, 1/2-13 UNC.	4
7	71675	35' HD CABLE WITH 7 PIN PLUG	1
8	18891400	WASHER, 1/2 LOCK ZC	8
9	18417400	NUT, HX 1/2 NC ZC	8
10	504560	NYLON TIE STRAP	5

(6400 TOOL BAR SHOWN)



ROUTE LIGHT HARNESSS THROUGH TUBE OF ITEM#5 ON BOTH SIDES

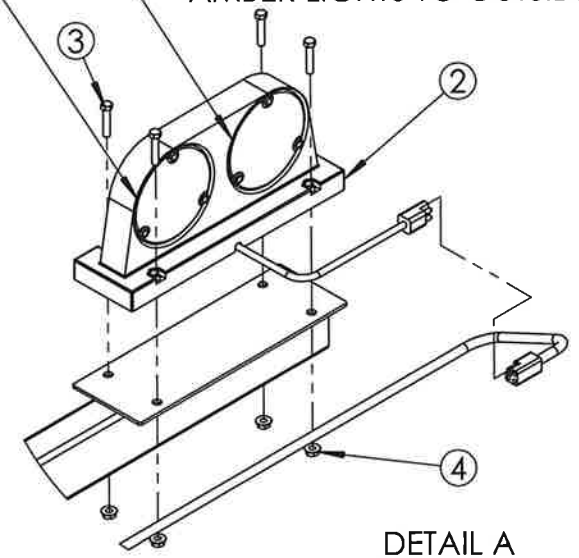
AMBER REPLACEMENT LENS PN 802650
RED REPLACEMENT LENS PN 802651



DETAIL B
SCALE 1 : 10

RED LIGHTS TO INSIDE

AMBER LIGHTS TO OUTSIDE

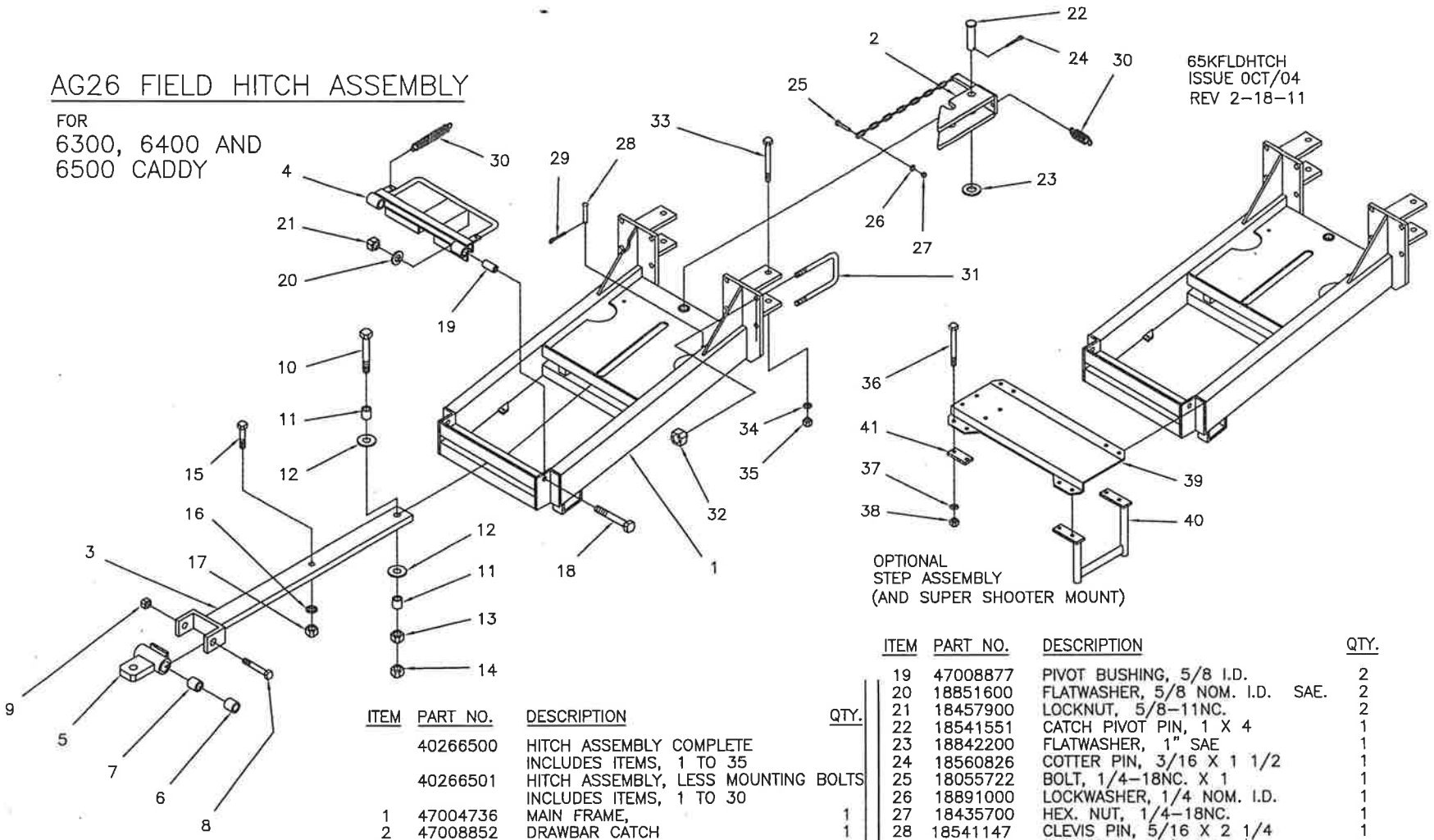


DETAIL A
SCALE 1 : 7

AG26 FIELD HITCH ASSEMBLY

FOR
6300, 6400 AND
6500 CADDY

65KFLDHTCH
ISSUE OCT/04
REV 2-18-11



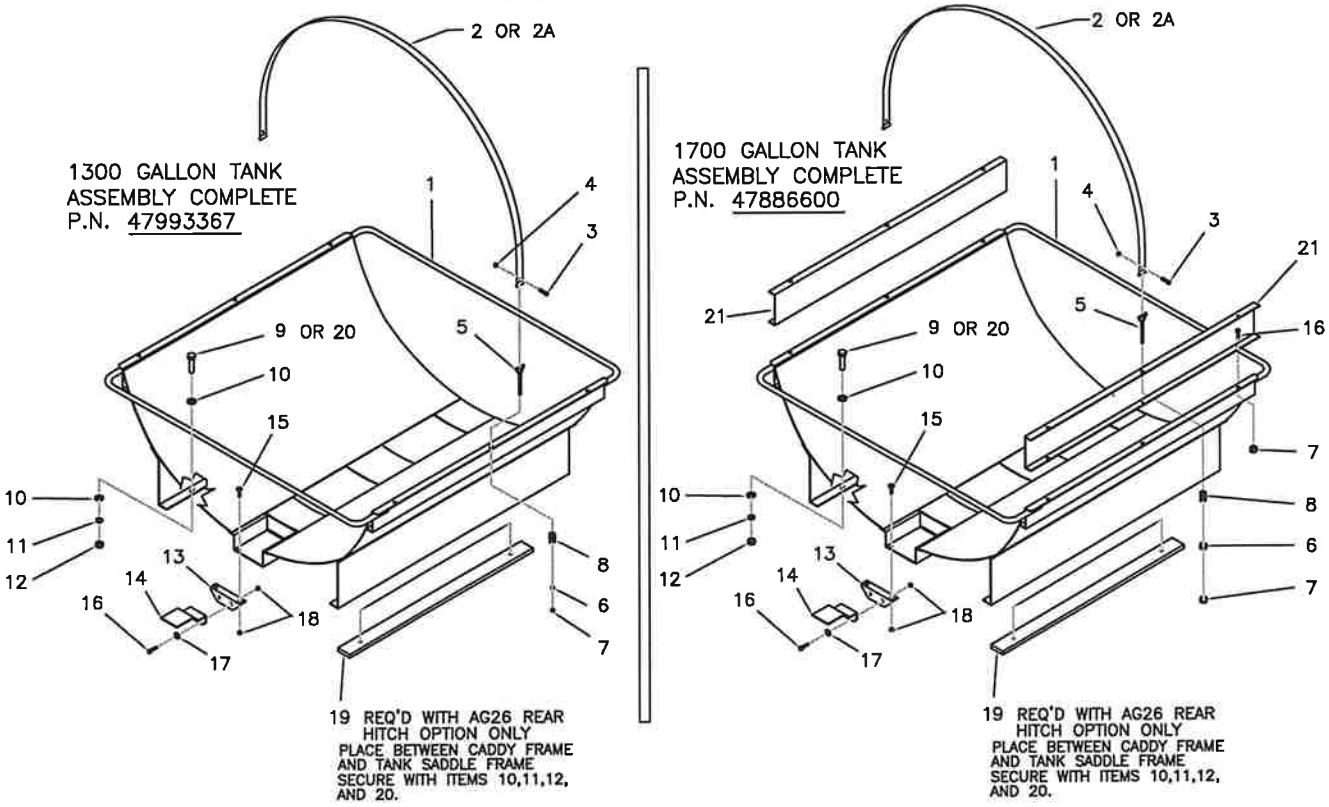
ITEM	PART NO.	DESCRIPTION	QTY.
	40266500	HITCH ASSEMBLY COMPLETE INCLUDES ITEMS, 1 TO 35	
	40266501	HITCH ASSEMBLY, LESS MOUNTING BOLTS INCLUDES ITEMS, 1 TO 30	
1	47004736	MAIN FRAME,	1
2	47008852	DRAWBAR CATCH	1
3	47008853	DRAWBAR	1
4	47008854	DRAWBAR LOCK	1
5	47008914	DRAWBAR HITCH, INCLUDES ITEMS, 6 AND 7	1
6	47008918	FIBER BUSHING	2
7	47008919	SPACER BUSHING	1
8	47008920	SPECIAL BOLT, 1-8NC. X 6 7/8	1
9	18459000	HEX. LOCKNUT, 1-8NC.	1
10	18098539	BOLT, 7/8-9NC. X 5 1/2	1
11	47009459	CATCH BUSHING, 7/8 I.D.	2
12	18852400	FLATWASHER, 1 1/4 NOM. I.D. (SAE)	2
13	18417800	HEX. NUT, 7/8-9NC.	1
14	18458000	LOCKNUT, 7/8-9NC.	1
15	18058430	BOLT, 3/4-10 NC. X 2	1
16	18891800	LOCKWASHER, 3/4	1
17	18418400	HEX. NUT, 3/4-10NC.	1
18	18057940	BOLT, 5/8-11NC. X 3 1/2	2

ITEM	PART NO.	DESCRIPTION	QTY.
19	47008877	PIVOT BUSHING, 5/8 I.D.	2
20	18851600	FLATWASHER, 5/8 NOM. I.D. SAE.	2
21	18457900	LOCKNUT, 5/8-11NC.	2
22	18541551	CATCH PIVOT PIN, 1 X 4	1
23	18842200	FLATWASHER, 1" SAE	1
24	18560826	COTTER PIN, 3/16 X 1 1/2	1
25	18055722	BOLT, 1/4-18NC. X 1	1
26	18891000	LOCKWASHER, 1/4 NOM. I.D.	1
27	18435700	HEX. NUT, 1/4-18NC.	1
28	18541147	CLEVIS PIN, 5/16 X 2 1/4	1
29	18560622	COTTER PIN, 1/8 X 1	1
30	000018	EXTENSION SPRING	3
31	44001616	U-BOLT, 5/8-11NC.	4
32	18457900	LOCK NUT, 5/8-11NC	8
33	18058460	BOLT, 3/4-10NC. X 6 1/2	2
34	18891800	LOCK WASHER, 3/4	2
35	18418400	HEX. NUT, 3/4-10NC.	2
	47999865	OPTIONAL STEP ASSEMBLY INCLUDES ITEMS, 36 TO 41	
36	18056863	BOLT, 3/8-16NC. X 6 1/2	8
37	18891200	LOCKWASHER, 3/8	8
38	18436800	HEX. NUT, 3/8-16NC.	8
39	47009865	SUPER SHOOTER MOUNT	1
40	47009874	STEP WELDMENT	1
41	47019875	MOUNTING PAD	2

SADDLE ASSEMBLY
1300 GALLON TANK & 1700 GALLON TANK
FOR TWO WHEEL CADDIES

6500SADL
REV 05-23-18

See saddle mounting instructions below for 6400 or 6500 units



ITEM 19 REQUIRES 2-ø7/8 HOLES
50" APART CENTER TO CENTER

ITEM	PART NO.	DESCRIPTION	1300 GALLON TANK PART #47993367 QTY	1700 GALLON TANK PART #47886600 QTY
1	47003367	SADDLE WELDMENT	1	1
	47409095	STRAP ASSY (SEPT 2011 & OLDER) INCLUDES ITEMS 2 THRU 7	3	3
	47419095	STRAP ASSY (OCT 2011 TO PRESENT) INCLUDED ITEMS 2A THRU 7	3	3
2	47006353	STRAP, 120.19 LG (SEPT 2011 & OLDER)	3	3
2A	47005744	STRAP, 115.19 LG (OCT 2011 TO PRESENT)	3	3
3	18706420	SCREW, PAN HD, 5/16-18NC X 1/2	6	6
4	18496400	FLANGE NUT, 5/16-18NC	6	6
5	47409090	EYE BOLT, STRAP END	6	6
6	18496800	FLANGE NUT, 3/8-16NC.	6	6
7	18436800	HEX NUT, 3/8-16NC.	6	12
8	47000550	SPRING, STRAP TENSION	3	3
9	18058430	BOLT, 3/4-10 NC. X 2 GR5 ZC	4	4
10	18851800	FLATWASHER, 3/4	8	8
11	18891800	LOCKWASHER, 3/4	4	4
12	18418400	HEX NUT, 3/4-10 NC	4	4
13	47003403	MOUNT BRACKET, VALVE SUPPORT	1	1
14	47003404	VALVE SUPPORT PLATE	1	1
15	18706622	BOLT, 3/8-16NC. X 1 TRUSS HD S.S.	2	2
16	18056822	BOLT, 3/8-16NC. X 1	2	8
17	18811200	FLATWASHER, 3/8	2	2
18	18987900	FLANGE NUT, 3/8-16NC. S.S.	4	4
*19		1 X 4 WOOD X 60" LONG SPACER BOARD	2	2
*20	18058436	BOLT, 3/4-10NC. X 2 1/2	4	4
21	47005740	SADDLE TANK EXTENSION	0	2

* ITEMS REQ'D WITH AG26 REAR HITCH OPTION ONLY

NOTE: SADDLE MOUNTING INSTRUCTIONS:
Use rear holes (by sump) for 6400 so tank is mounted further forward on the caddy for the required weight balance.

Use forward holes (by sump) for 6500 so tank is mounted rearward on the caddy to allow proper shank clearance from tank when folded.

LIQUID PLUMBING
6300, 6400, 6500 SERIES APPLICATORS ONLY

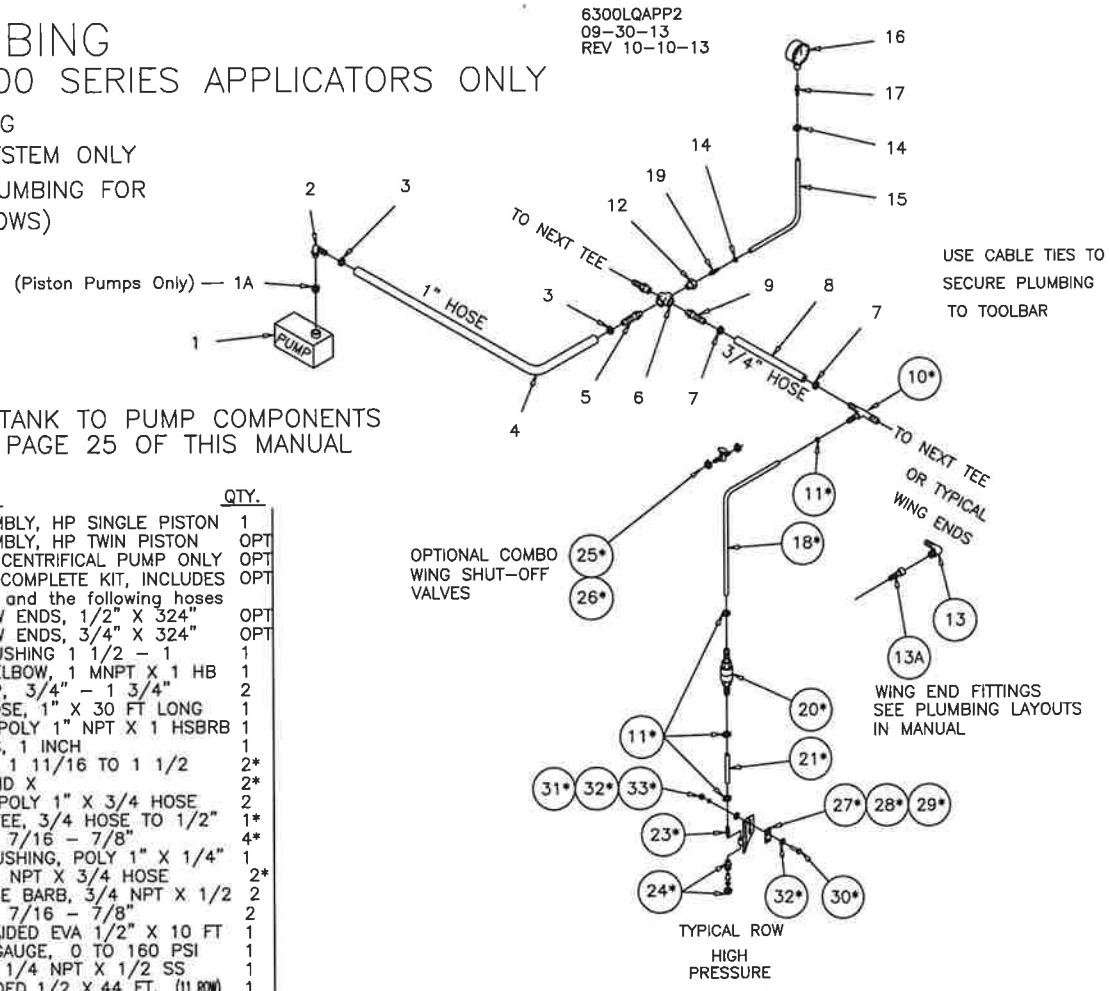
NON–MANIFOLD PLUMBING
STANDARD PRESSURE SYSTEM ONLY
(SPRAY BOOM STYLE PLUMBING FOR UNITS LESS THAN 11 ROWS)

6300LQAPP2
09–30–13
REV 10–10–13

APPLICATION RATE
THIS METHOD IS USED FOR UP TO MAX 30 GAL/ ACRE

QUANTITIES MARKED * ARE FOR EACH ROW ONLY.

REFER TO THE ASSEMBLY ILLUSTRATIONS TO DETERMINE ACTUAL QUANTITIES FOR YOUR TOOLBAR DEPENDING ON THE NUMBER OF ROWS.



FOR TANK TO PUMP COMPONENTS
SEE PAGE 25 OF THIS MANUAL

ITEM	PART NO.	DESCRIPTION	QTY.
1	NGP–7055	PUMP ASSEMBLY, HP SINGLE PISTON	1
	NGP–9055	PUMP ASSEMBLY, HP TWIN PISTON	OPT
	501603	9303C HYD CENTRIFICAL PUMP ONLY	OPT
	501603OPEN	HYD PUMP COMPLETE KIT, INCLUDES HYD PUMP, and the following hoses	OPT
	604324	HYD HOSE W ENDS, 1/2" X 324"	OPT
	605324	HYD HOSE W ENDS, 3/4" X 324"	OPT
1A	2150100	REDUCER BUSHING 1 1/2 – 1	1
2	200380	HOSEBARB ELBOW, 1 MNPT X 1 HB	1
3	200250	HOSE CLAMP, 3/4" – 1 3/4"	2
4	10040000	SPRAYER HOSE, 1" X 30 FT LONG	1
5	200328	HOSEBARB, POLY 1" NPT X 1 HSBRB	1
6	250100	POLY CROSS, 1 INCH	1
7	200248	HOSECLAMP, 1 11/16 TO 1 1/2	2*
8	200228	HOSE, 3/4 ID X	2*
9	HB100–075	HOSEBARB, POLY 1" X 3/4 HOSE	2
10	HBT075–050	HOSEBARB TEE, 3/4 HOSE TO 1/2"	1*
11	200244	HOSECLAMP, 7/16 – 7/8"	4*
12	210025	REDUCER BUSHING, POLY 1" X 1/4"	1
13	200376	ELBOW, 3/4 NPT X 3/4 HOSE	2*
13A	200449	FEMALE HOSE BARB, 3/4 NPT X 1/2	2
14	200244	HOSECLAMP, 7/16 – 7/8"	2
15	100804	TUBING, BRAIDED EVA 1/2" X 10 FT	1
16	100347	PRESSURE GAUGE, 0 TO 160 PSI	1
17	100859	HOSEBARB,, 1/4 NPT X 1/2 SS	1
18	100804	HOSE, BRAIDED 1/2 X 44 FT. (11 ROW)	1
		HOSE, BRAIDED 1/2 X 48 FT. (12 ROW)	1
		HOSE, BRAIDED 1/2 X 52 FT. (13 ROW)	1
		HOSE, BRAIDED 1/2 X 60 FT. (15 ROW)	1
		HOSE, BRAIDED 1/2 X 68 FT. (17 ROW)	1
19	200294	HOSEBARB, 1/4 NPT X 1/2" HOSE	1
20	115286–01	CHECKVALVE, POLY	1*
21	100804	HOSE, BRAIDED 1/2" X 1 FT	1*
22	47309038	NOZZLE BRACKET	1*
23	100859	HOSEBARB, 1/4 NPT X 1/2 SS	1*
24	504017	NOZZLE BODY ASSY, INCLUDES (1) EACH OF	1*
	500192	NOZZLE BODY	
	504015	STREAM STABILIZER	
	502338	OR (SELECT FROM ORIFICE CHART)	
	503127	CAP	
	609643	CABLE TIES (28 inches) (not shown)	1*
	4455	CHART, SLIDE RULE INJECTION	1
25	500553	COMBO WING SHUTOFF VALVE (per row)	1* optional
26	200244	HOSE CLAMP, 7/16 – 1 " (per row)	2* optional

NOTE: QTYS* OF SOME ITEMS VARY DEPENDING ON THE NUMBER OF ROWS REQUIRED

SEE PAGE 24 FOR PLUMBING REFERENCE GUIDE

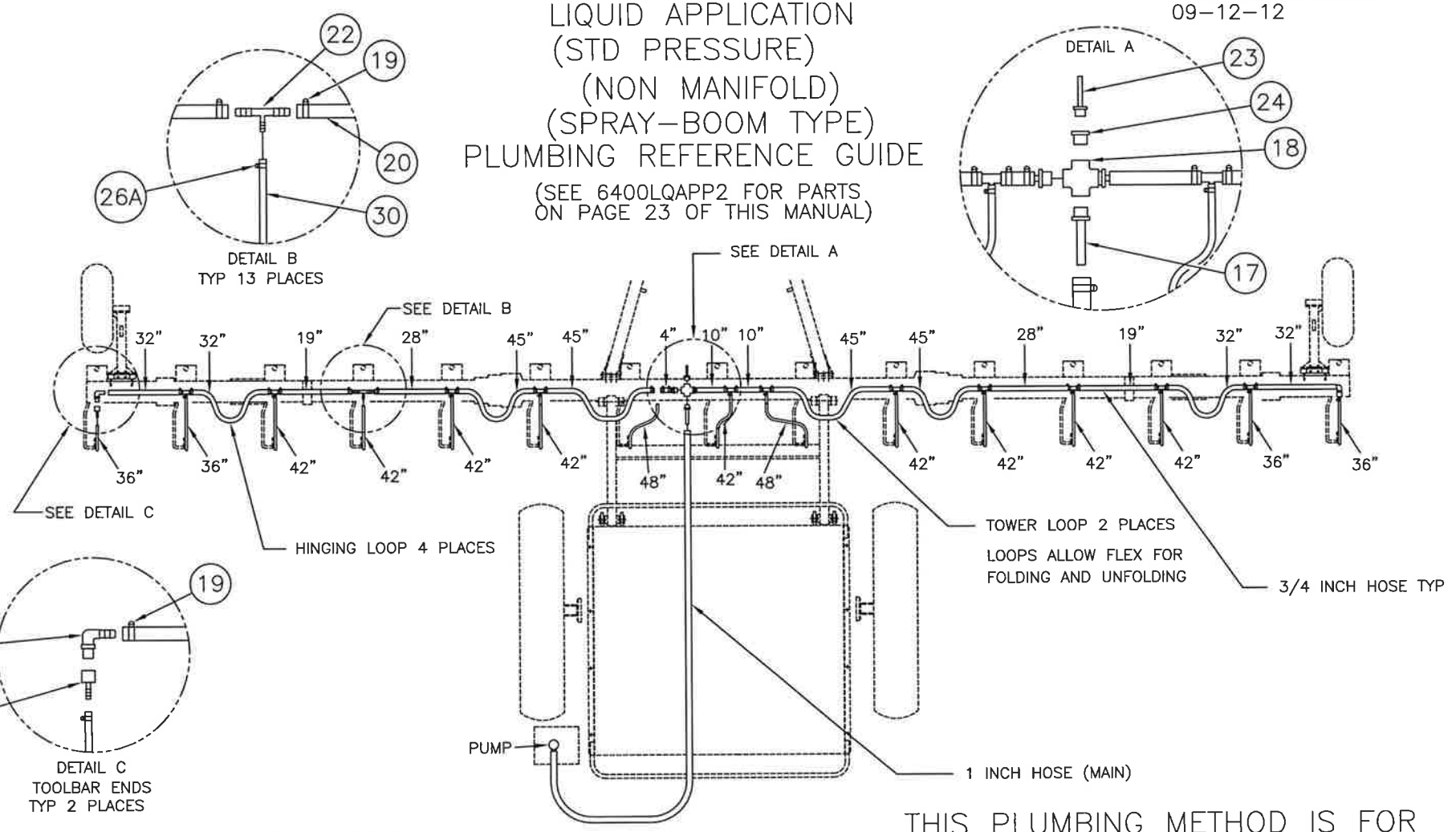
ITEM	PART NO.	DESCRIPTION	QTY.
27	47306661	SHIM, 1/4 X 2 X 4 1/2	1*
28	47306662	SHIM, 1/8 X 2 X 4 1/2	1*
29	47306663	SHIM, 14GA X 2 X 4 1/2	1*
30	18057434	BOLT, HX HD 1/2 X 2 1/2 GR 5	1*
31	18417400	NUT, HEX, 1/2NC ZC	1*
32	18811400	FLATWASHER, USS ZC 1/2	1*
33	18891400	WASHER, LOCK 1/2 ZC	1*

6400 SERIES TOOLBAR

WITH COULTERS FOR LIQUID APPLICATION (STD PRESSURE) (NON MANIFOLD) (SPRAY–BOOM TYPE) PLUMBING REFERENCE GUIDE

(SEE 6400LQAPP2 FOR PARTS ON PAGE 23 OF THIS MANUAL)

64KTOOLBARPLBG2
09–12–12



AG37 COULTERS
15 ROWS
AT 30 INCH SPACING

THIS PLUMBING METHOD IS FOR 35 GAL PER ACRE MAX CAPACITY

FOR HIGH PRESSURE PLUMBING
SEE PAGES 25 AND 26

LIQUID PLUMBING

6400 AND 6500 SERIES APPLICATORS 11 TO 15 ROW COMBOS AND ALL 11 ROW AND LARGER UNITS

SPRAY–BOOM STYLE NON–MANIFOLD PLUMBING (BRANCH LINE METHOD) HIGH PRESSURE SYSTEM REPLACEMENT PARTS ILLUSTRATION

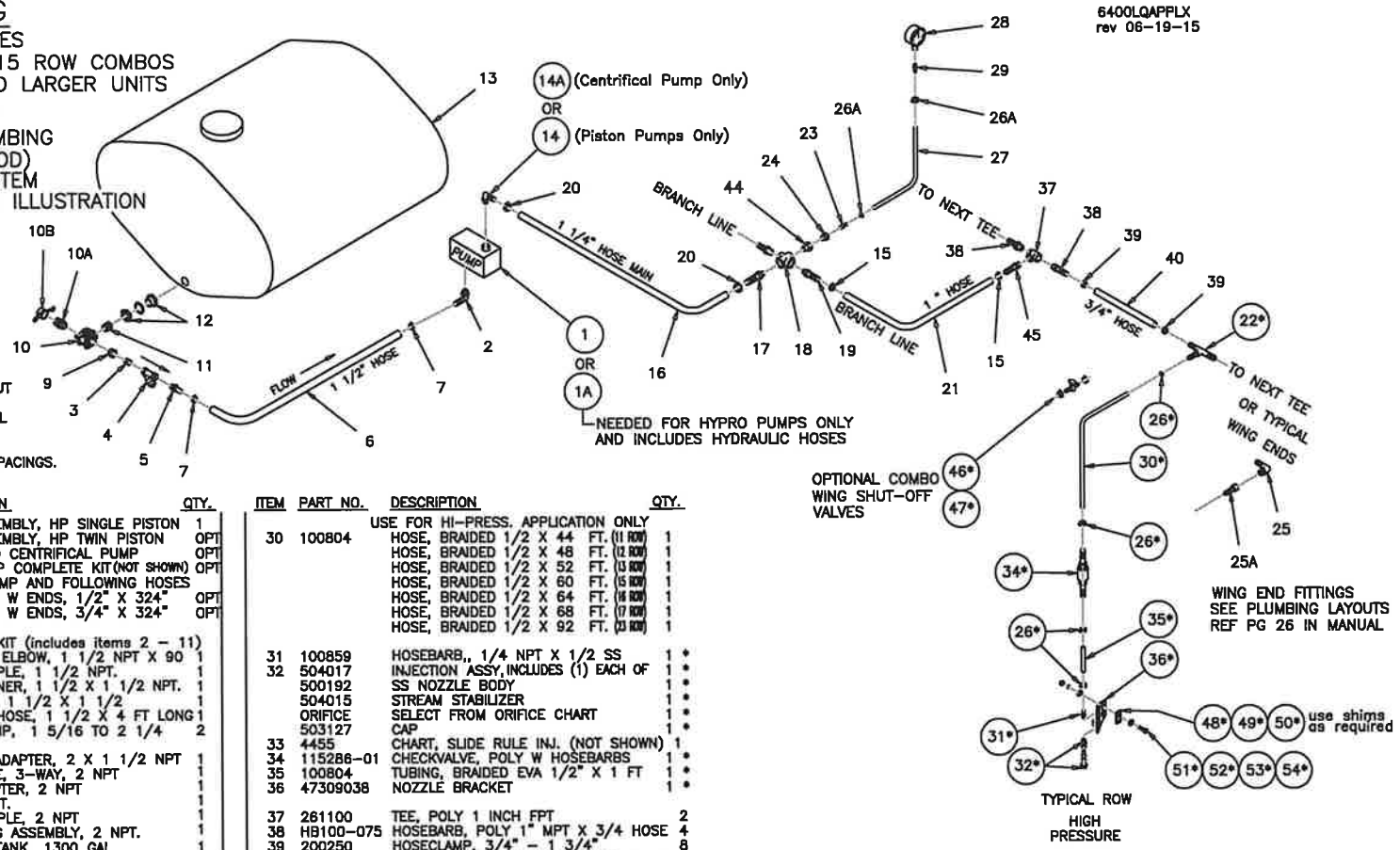
6400LQAPPLX
rev 06–19–15

APPLICATION RATE
THIS METHOD IS USED FOR UP TO MAX 70 GAL/ ACRE

WITH RAVEN SYSTEM
20 GAL at 40 PSI
40 GAL at 80 PSI

QUANTITIES MARKED * ARE FOR ONE ROW ONLY.

REFER TO THE PLUMBING LAYOUT AND PLUMBING KIT BILL MATERIAL TO DETERMINE ACTUAL QUANTITIES REQ'D FOR YOUR TOOLBAR DEPENDING ON THE NUMBER OF ROWS AND SPACINGS.



ITEM	PART NO.	DESCRIPTION	QTY.
1	NGP–7055	PUMP ASSEMBLY, HP SINGLE PISTON	1
	NGP–9055	PUMP ASSEMBLY, HP TWIN PISTON	OPT
	501603	9303C HYD CENTRIFICAL PUMP	OPT
1A	501603OPEN	HYD. PUMP COMPLETE KIT (NOT SHOWN) INCLUDES PUMP AND FOLLOWING HOSES	OPT
	604324	HYD HOSE W ENDS, 1/2" X 324"	OPT
	605324	HYD HOSE W ENDS, 3/4" X 324"	OPT
	213600	TANK TO PUMP KIT (includes items 2 – 11)	
2	200386	HOSEBARB ELBOW, 1 1/2 NPT X 90	1
3	200556	CLOSE NIPPLE, 1 1/2 NPT.	1
4	200056	LINE STRAINER, 1 1/2 X 1 1/2 NPT.	1
5	200334	HOSEBARB, 1 1/2 X 1 1/2	1
6	12012705	SOLUTION HOSE, 1 1/2 X 4 FT LONG	1
7	200256	HOSE CLAMP, 1 5/16 TO 2 1/4	2
8	omitted		
9	2200150	REDUCER ADAPTER, 2 X 1 1/2 NPT	1
10	200013	BALL VALVE, 3–WAY, 2 NPT	1
10A	200170	MALE ADAPTER, 2 NPT	1
10B	200172	CAP, 2 NPT.	1
11	200557	CLOSE NIPPLE, 2 NPT	1
12	20020019	TANK BUNG ASSEMBLY, 2 NPT.	1
13	700028	ELIPTICAL TANK, 1300 GAL.	1
	OR	OR	
	700029	ELIPTICAL TANK, 1700 GAL.	OPT
14	HB150/125–90	HOSEBRB ELBOW, 1.50"MPT X 1.25"HS	1
14A	HB125–90	HOSEBRB ELBOW, 1.25"MPT X 1.25"HOSE	1
15	200250	HOSE CLAMP, 3/4" – 1 3/4"	4
16	200235	SPRAYER HOSE, 1 1/4 x 12 FT	1
17	200330	HOSEBARB, POLY 1 1/4 x 1 1/4	1
18	250125	POLY CROSS, 1 1/4 INCH	1
19	200327	HOSEBARB, POLY 1 1/4" X 1" HOSE	2
20	200256	HOSE CLAMP, 1 5/16 TO 2 1/4	2
21	10040000	SPRAYER HOSE 1 INCH X VARIES	2
22	HBT075–050	HOSEBARB TEE	1 *
23	200294	HOSEBARB, POLY .25 X .5	1
24	2100025	REDUCER BUSHING, POLY 1" X 1/4"	1
25	200376	ELBOW, 3/4 NPT X 3/4 HOSE	4
25A	200449	3/4 FM HOSEBARB X 3/4 NPT	2
26	200244	HOSE CLAMP, 7/16 – 1 "	4 *
26A	200244	HOSE CLAMP, 7/16 – 1 "	2
27	100804	TUBING, BRAIDED EVA 1/2" X 10 FT	1
28	100347	PRESSURE GAUGE, 0 TO 160 PSI	1
29	100859	HOSEBARB, 1/4 NPT X 1/2 SS	1

ITEM	PART NO.	DESCRIPTION	QTY.
		USE FOR HI–PRESS. APPLICATION ONLY	
30	100804	HOSE, BRAIDED 1/2 X 44 FT. (11 ROW)	1
		HOSE, BRAIDED 1/2 X 48 FT. (12 ROW)	1
		HOSE, BRAIDED 1/2 X 52 FT. (13 ROW)	1
		HOSE, BRAIDED 1/2 X 60 FT. (15 ROW)	1
		HOSE, BRAIDED 1/2 X 64 FT. (16 ROW)	1
		HOSE, BRAIDED 1/2 X 68 FT. (17 ROW)	1
		HOSE, BRAIDED 1/2 X 92 FT. (23 ROW)	1
31	100859	HOSEBARB,, 1/4 NPT X 1/2 SS	1 *
32	504017	INJECTION ASSY, INCLUDES (1) EACH OF	1 *
	500192	SS NOZZLE BODY	1 *
	504015	STREAM STABILIZER	1 *
	ORIFICE	SELECT FROM ORIFICE CHART	1 *
	503127	CAP	1 *
33	4455	CHART, SLIDE RULE INJ. (NOT SHOWN)	1
34	115286–01	CHECKVALVE, POLY W HOSEBARBS	1 *
35	100804	TUBING, BRAIDED EVA 1/2" X 1 FT	1 *
36	47309038	NOZZLE BRACKET	1 *
37	261100	TEE, POLY 1 INCH FPT	2
38	HB100–075	HOSEBARB, POLY 1" MPT X 3/4 HOSE	4
39	200250	HOSECLAMP, 3/4" – 1 3/4"	8
40	200228	SPRAYER HOSE, 3/4 X (VARIES W KIT)	
41	609643	CABLE TIE, 28" (NOT SHOWN)	2*
42	omitted		
43	omitted		
44	2125100	REDUCER BUSHING 1 1/4 X 1	1
45	200328	HOSEBARB 1" MPT x 1" Hose	2
46	500553	COMBO WING SHUTOFF VALVE (per row)	1* OPT
47	200244	HOSE CLAMP, 7/16 – 1 " (per row)	2* OPT
48	47306661	SHIM, 1/4 X 2 X 4 1/2	1 *
49	47306662	SHIM, 1/8 X 2 X 4 1/2	1 *
50	47306663	SHIM, 14GA X 2 X 4 1/2	1 *
51	18057434	BOLT, HX HD 1/2 X 2 1/2 GR 5	2*
52	18417400	NUT, HEX, 1/2NC ZC	2*
53	18811400	FLATWASHER, USS ZC 1/2	3*
54	18891400	WASHER, LOCK 1/2 ZC	2*

NOTE: QTYS OF SOME ITEMS VARY DEPENDING ON THE NUMBER OF ROWS REQUIRED

AVAILABLE PUMP PACKAGE

NGP–7055 HI–PRESS. JBLUE SGL PISTON
NGP–9055 HI–PRESS. JBLUE TWN PISTON
501603 PUMP ASSY, 9303C CENTRIFICAL

501603OPEN 9303C HYD CNT PUMP PKG WHICH INCLUDES HYD HOSES AND FITTINGS

AVAILABLE TANK TO PLUMBING PACKAGE

213600 TANK TO PUMP PLUMBING PKG
INCLUDES 2" FORCE FILL

AVAILABLE PUMP PLUMBING PACKAGE

20026001 JBLUE PUMP PLUMBING PKG
20026003 CENTRIFICAL PUMP SGL BALL VALVE
20026002 CENTRIFICAL PUMP TWO BALL VALVES

AVAILABLE HIGH PRESSURE PLUMBING KITS

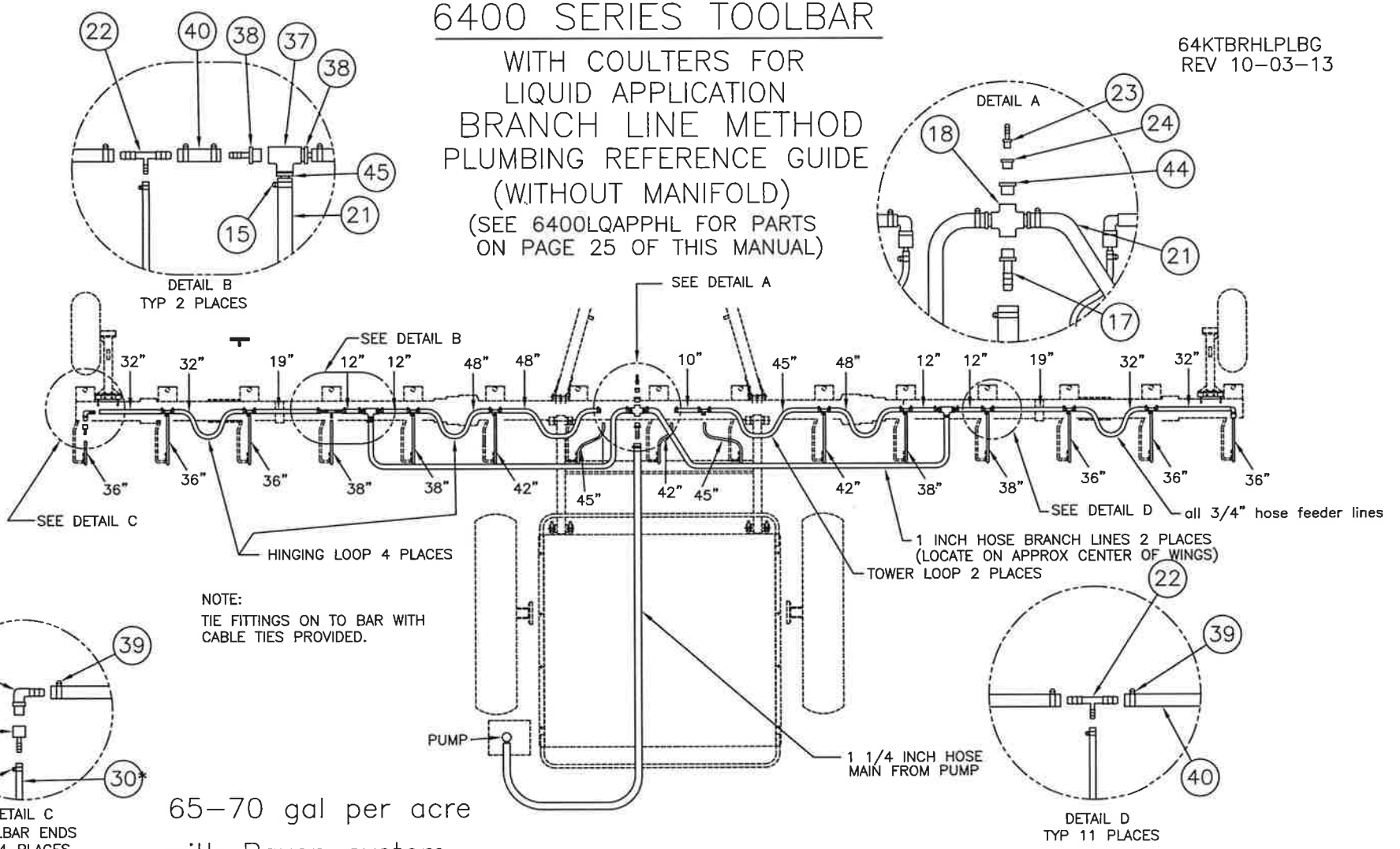
11 ROW X 30' SP KIT NUMBER 601515
12 ROW X 30" SP KIT NUMBER 601518
13 ROW X 30" SP KIT NUMBER 601524
15 ROW X 30" SP KIT NUMBER 601533
17 ROW X 22" SP KIT NUMBER 601542
17 ROW X 30" SP KIT NUMBER 601545

6400 SERIES TOOLBAR

WITH COULTERS FOR LIQUID APPLICATION
BRANCH LINE METHOD
PLUMBING REFERENCE GUIDE
(WITHOUT MANIFOLD)

(SEE 6400LQAPPHL FOR PARTS ON PAGE 25 OF THIS MANUAL)

64KTBRHLPLBG
REV 10-03-13



65-70 gal per acre

with Raven system
20 gal @ 40 psi
40 gal @ 80 psi

AG37 COULTERS
15 ROWS SHOWN
AT 30 INCH SPACING

LIQUID PLUMBING

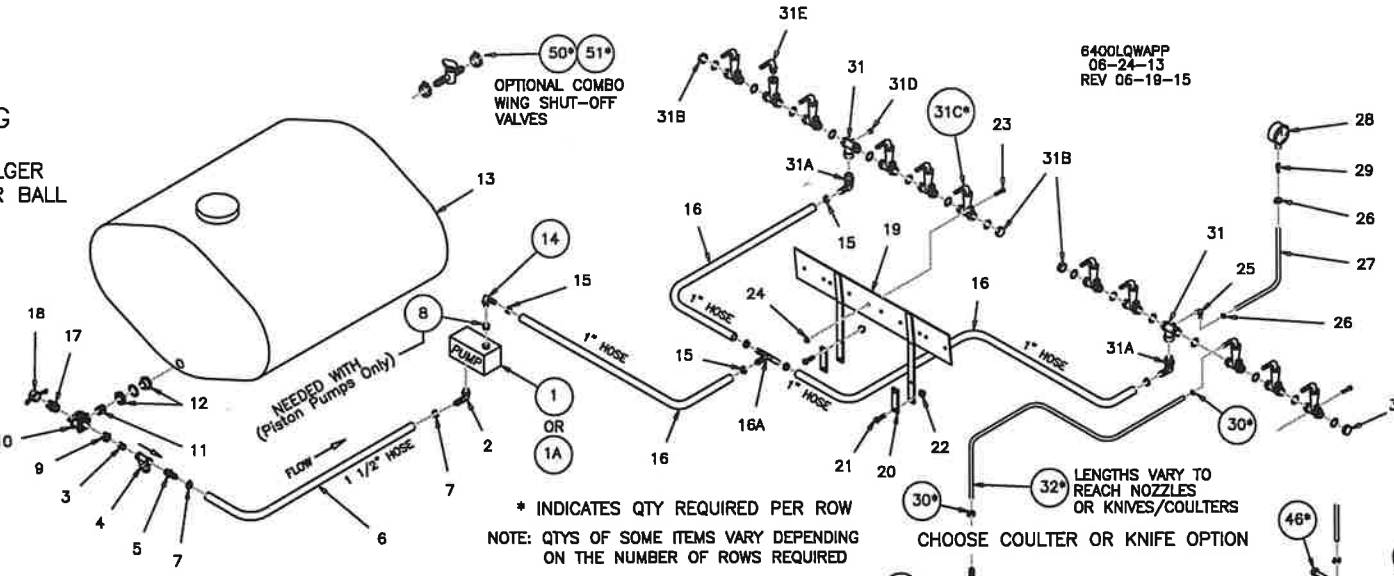
6400, 6500, SERIES APPLICATORS with WILGER "FLOW VIEW" MODULAR BALL MONITORING SYSTEM

(11 TO 23 ROWS)

THIS DIAGRAM IS INTENDED FOR REPLACEMENT PARTS AND GENERAL ASSEMBLY. OTHER SPECIAL OPTIONS MAY NOT BE SHOWN

QUANTITIES MARKED * ARE FOR EACH ROW ONLY.

REFER TO THE COULTER/ SHANK MOUNT ILLUSTRATIONS TO DETERMINE THE ASSEMBLY LAYOUT REQUIRED FOR YOUR SPECIFIC TOOLBAR DEPENDING ON THE NUMBER OF ROWS.



ITEM	PART NO.	DESCRIPTION	QTY.
1	NGP-7055	PUMP ASSEMBLY, HP SINGLE PISTON	1
	NGP-9055	PUMP ASSEMBLY, TWIN PISTON	OPT
	501603	9303C HYD CENTRIFICAL PUMP	OPT
1A	5016030PEN	HYD PUMP COMPLETE KIT (NOT SHOWN) INCLUDES PUMP, AND FOLLOWING HOSES	OPT
	604324	HYD HOSE, 1/2" X 324" WITH ENDS	OPT
	605324	HYD HOSE, 3/4" X 324" WITH ENDS	OPT
2	HB150-90	POLY ELBOW, 90° 1.5" NPT X 1.5" HBRB	1
3	200556	CLOSE NIPPLE, 1 1/2 NPT.	1
4	200056	LINE STRAINER, 1 1/2 X 1 1/2 NPT.	1
5	200334	HOSEBARB, 1 1/2 X 1 1/2	1
6	12012705	SOLUTION HOSE, 1 1/2 X 5 FT LONG	1
7	200256	HOSE CLAMP, 1 5/16 TO 2 1/4	2
8	2150100	REDUCER BUSHING, 1.50" to 1.00"	1
9	2200150	REDUCER ADAPTER, 2 X 1 1/2 NPT	1
10	200013	BALL VALVE, 3-WAY, 2 NPT	1
11	200557	CLOSE NIPPLE, 2 NPT	1
12	20020019	TANK BUNG ASSEMBLY, 2 NPT.	1
13	700028	ELIPTICAL TANK, 1300 GAL.	1
OR	700029	ELIPTICAL TANK, 1700 GAL.	OPT
14	200380	HOSEBARB ELBOW, 1" NPT X 1" HOSE	1
15	200250	HOSE CLAMP, 3/4" - 1 3/4"	6
16	10040000	SPRAYER HOSE,1" X (varies with rows)	1
16A	200452	HOSEBARB TEE, 1.00"	1
17	200170	MALE ADAPTER, 2" NPT	1
18	200172	CAP, 2" NPT	1
	47003909	BALL FLOWMETER MOUNT ASSEMBLY (CONSISTS OF ITEMS 19 - 24)	
19	47003908	BALL FLOWMETER MOUNT WELDMENT	1
20	47003907	BALL FLOWMETER CLAMP BAR	2
21	18056830	BOLT, HEX 3/8-16 X 2 ZC	4
22	18496800	FLANGENUT, 3/8-16 ZC	4
23	18055730	BOLT, HEX 1/4-20 X 2 ZC	10
24	18495700	FLANGENUT, 1/4-20 ZC	10
25	200294	ELBOW, 1/4 NPT X 1/2" HOSE	1
26	200244	HOSE CLAMP, 7/16 - 1 "	2
27	100804	HOSE, BRAIDED 1/2" X 10 FT.	1
28	100347	PRESSURE GAUGE, 0 TO 160 PSI	1
29	100859	HOSEBARB, 1/4 NPT X 1/2 SS	1
30	200244	HOSE CLAMP, 7/16 - 1 "	4*

ITEM	PART NO.	DESCRIPTION	QTY.
31	20525-00	WILGER GUAGE TEE	2
31A	200380	ELBOW, 1" NPT X 1" HOSE	2
31B	20521-00	ENDCAP, WILGER	4
31C	20460-00	WILGER FLOW INDICATOR ASSEMBLY	1*
31D	200480	POLY PIPE PLUG 1/4 MNPT	1
31E	20512-00	ELBOW, ORS X 1/2" BARB 90°	1*
		USE FOR HI-PRESS. APPLICATION ONLY	
32	100804	HOSE, BRAIDED 1/2 X 91 FT. (11 ROW)	1
		HOSE, BRAIDED 1/2 X 92 FT. (12 ROW)	1
		HOSE, BRAIDED 1/2 X 108 FT. (13 ROW)	1
		HOSE, BRAIDED 1/2 X 120 FT. (15 ROW)	1
		HOSE, BRAIDED 1/2 X 135 FT. (17 ROW)	1
		HOSE, BRAIDED 1/2 X 203 FT. (23 ROW)	1
32A	609643	TIE STRAP, 28" (NOT SHOWN)	4*
32B	609639	TIE STRAP, 17.5" (NOT SHOWN)	15
34	115286-01	CHECKVALVE, POLY	1*
35	100804	HOSE, BRAIDED 1/2" X 12"	1*
36	47309038	NOZZLE BRACKET	1*
37	504017	NOZZLE BODY ASSY, INCLUDES 38-42	1*
38	100859	HOSEBARB, 1/4 MPT SS X 1/2" HOSE	1*
39	500192	NOZZLE BODY	1*
40	504015	STREAM SATABILIZER	1*
41	ORIFICE	SELECT FROM ORIFICE CHART	1*
42	503127	CAP, SS	1*
43	47306661	SHIM, 1/4 X 2 X 4 1/2	1*
44	47306662	SHIM, 1/8 X 2 X 4 1/2	1*
45	47306663	SHIM, 14GA X 2 X 4 1/2	1*
	4455	CHART, SLIDE RULE INJECTION (not shown)	1
46	18057434	BOLT, HX HD 1/2 X 2 1/2 GR5	2*
47	18417400	NUT, HEX, 1/2NC ZC	2
48	18811400	FLATWASHER, USS ZC 1/2	4*
49	18891400	WASHER, LOCK 1/2 ZC	2*
50	KNIFE	SEE SALES FOR KNIFE OPTIONS	1*

QUANTITIES MARKED * ARE FOR EACH ROW ONLY.

ITEM	PART NO.	DESCRIPTION	QTY.
		OTHER OPTIONS	
50	500553	COMBO WING SHUTOFF VALVE (per row)	1*
51	200244	HOSE CLAMP, 7/16 - 1 " (per row)	2*

20026001 NGP-9055 HI-PRES.PLBG PKG

WILGER FLOW INDICATOR PACKAGES

11 ROW KIT NUMBER 601514
12 ROW KIT NUMBER 601517
13 ROW KIT NUMBER 601523
15 ROW KIT NUMBER 601532
17 ROW KIT NUMBER 601541

OPTIONAL KNIFE PACKAGES

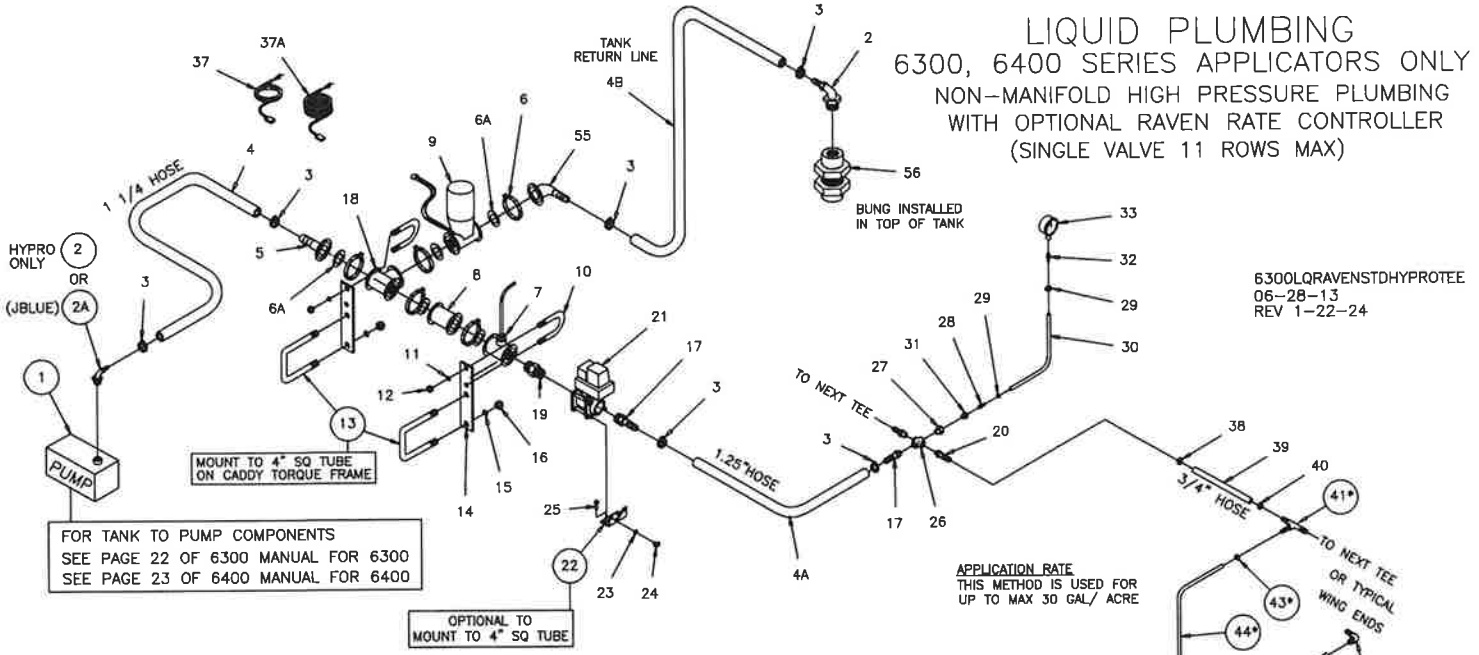
FOR KNIFE OPTIONS SEE PARTS OR SALES FOR INFO

NGP-7055 PLMBG PKG for WILGER MONITORS contains items 8, 14-16, 25-29, and 4455

NGP-9055 PLMBG PKG for WILGER MONITORS contains items 8, 14-16, 25-29, and 4455

213600 TANK TO PIMP KIT includes items 2 thru 7, 9 thru 11, 17, 18,

LIQUID PLUMBING
6300, 6400 SERIES APPLICATORS ONLY
NON-MANIFOLD HIGH PRESSURE PLUMBING
WITH OPTIONAL RAVEN RATE CONTROLLER
(SINGLE VALVE 11 ROWS MAX)



ITEM	PART NO.	DESCRIPTION	QTY.
1	NGP-7055	PUMP ASSEMBLY, SINGLE PISTON	1
	NGP-9055	PUMP ASSEMBLY, TWIN PISTON	1
	501603	HYDRAULIC CENTRIFICAL PUMP ONLY	OPT
	501603OPEN	HYD. PUMP COMPLETE KIT (NOT SHOWN)	
	INCLUDES	PUMP, AND THE FOLLOWING HOSES	OPT
	604324	HYD HOSE W ENDS, 1/2" X 324"	OPT
	605324	HYD HOSE W ENDS, 3/4" X 324"	OPT
1A	4455	CHART, SLIDE RULE (NOT SHOWN)	1
2	HB125-90	HOSEBARB ELBOW, 1.25MT X 1.25 HS	1
2A	HB150/125-90	HBRB ELBOW, 1.50 MPT X 1.25HS	1
3	200256	HOSE CLAMP, 1 1/2 - 2" ID	6
4	200235	SPRAYER HOSE, 1.25" X 20 FT LONG	1
4A	200235	SPRAYER HOSE, 1.25" X 5 FT LONG	1
4B	200235	SPRAYER HOSE, 1.25" X 7 FT LONG	1
5	290417	HOSEBARB, 1.25" HOSE X 2 FLANGE	1
6	303199	HOSECLAMP, 2" FLANGE	5
6A	200229	GASKET, 2" FLANGE EPDM	5
7	1-063-0171-793	FLOWMETER, RAVEN	1
8	290411	COUPLING, FLANGE 2 X 2	1
9	1-063-0171-894	VALVE, SERVO RAVEN	1
10	47005791	U-CLAMP, NAPA (733-5364)	2
11	18891200	LOCKWASHER, 3/8 ZC	4
12	18436800	NUT, HEX 3/8-16 ZC	4
13	47006487	U-BOLT, 1/2 NC	2
14	47003911	BRACKET, RAVEN HYPRO KIT	2
15	18891400	WASHER, LOCK 1/2 NC ZC	4
16	18417400	NUT, HEX 1/2-13 NC ZC	4
17	HB125	HOSEBARB 1 1/4 MPT X 1 1/4 HOSE	2
18	303196	TEE, 2 " FLANGED, POLY	1
19	21150125	REDUCER COUPLING 2" TO 1 1/4"	1
20	HB125-075	HOSEBARB 1 1/4 MPT X 3/4 HOSE	2
21	VE125	VALVE, ELECTRIC, ON/OFF	1
22	210271	VALVE BRACKET	1
23	18891200	LOCKWASHER, 3/8 ZC	2
24	18436800	NUT, HEX 3/8-16NC ZC	2
25	18721019	SCREW, SELF TAPPING, 1/4 x 1/2	2
26	250125	POLY CROSS, 1 1/4	1
27	2125100	REDUCER BUSHING 1 1/4 X 1	1
28	200294	HOSEBARB, 1/4 MPT X 1/2" HOSE	1
29	290463	HOSECLAMP, MINI 6	2
30	100804	TUBING, BRAIDED 1/2" X 13 FT LONG	1
31	2100025	REDUCER BUSHING 1 X 1/4	1
32	100859	HOSEBARB, 1/4 MPT X 1/2" SS	1
33	100347	PRESSURE GAUGE, 0-160 PSI	1

ITEM	PART NO.	DESCRIPTION	QTY.
34	609639	SHORT WIRE TIE, 17.5" (NOT SHOWN)	5
35	609643	LONG WIRE TIE, 28" (NOT SHOWN)	59
36	1201579	FM PACKARD CONNECTER (NOT SHOWN)	1
36A	12010717	M PACKARD CONNECTER (NOT SHOWN)	2
36B	15324985	REPLACED BY 12089679 (NOT SHOWN)	3
36C	12010300	CAVITY PLUG (NOT SHOWN)	9
36D	12089040	MALE TERMINAL PIN (NOT SHOWN)	1
37	115-0171-085	CONSOLE CABLE	1
37A	115-0171-055	12 FT CONTROL CABLE	1
38	200250	HOSE CLAMP, 3/4" - 1 3/4"	8
39	200228	HOSE, EPDM 3/4" X	1*
40	200250	HOSE CLAMP, 3/4" - 1 3/4"	1*
41	HBT075-050	HOSEBARB TEE	1*
41A	200376	ELBOW, 3/4 NPT X 3/4 HOSE	4
41B	200449	FEMALE HOSEBARB 3/4 NPT X 1/2	4
42	OMITTED		
43	200244	HOSECLAMP, 7/16-1.00"	4*
44	100804	TUBING, BRAIDED EVA 1/2" X 4 FT	1*
45	100859	HOSEBARB 1/4 NPT X 1/2" SS	1*
46	47309038	NOZZLE BRACKET	1*
47	504017	NOZZLE ASSY INCLUDES (1) EACH OF THE FOLLOWING PARTS LISTED BELOW	1*
	500192	NOZZLE BODY	1*
	504015	STREAM STABILIZER	1*
	ORIFICE	(SELECT FROM ORIFICE CHART)	1*
	503127	NOZZLE CAP, STD STAINLESS	1*
48	18057434	BOLT, HEX 1/2NC X 2 1/2 GR5 ZC	2*
49	18811400	FLATWASHER, 1/2 INCH ZC	3*
50	18891400	LOCKWASHER, 1/2 INCH ZC	2*
51	18817400	NUT, HEX 1/2 NC ZC	2*
52	47306661	SHIM, 1/4"	1*
	47306662	SHIM, 1/8"	1*
	47306663	SHIM, 1/16"	1*
53	115286-01	CHECKVALVE, POLY W HOSEBARBS	1*
54	100804	TUBING, BRAIDED EVA 1/2" X 1 FT	1*
55	290430	2" FLANGED ELBOW, 90°	1
56	290307	TOP TANK BUNG, 1 1/4 "	1

QUANTITIES MARKED * ARE FOR ONE ROW ONLY. MULTIPLY X NUMBER OF ROWS

REFER TO THE COULTER MOUNT ARRANGEMENTS TO DETERMINE ACTUAL QUANTITIES FOR YOUR TOOLBAR DEPENDING ON THE NUMBER OF ROWS.

ITEMS #10 THRU 16 ARE AVAILABLE AS KIT P/N: 71963

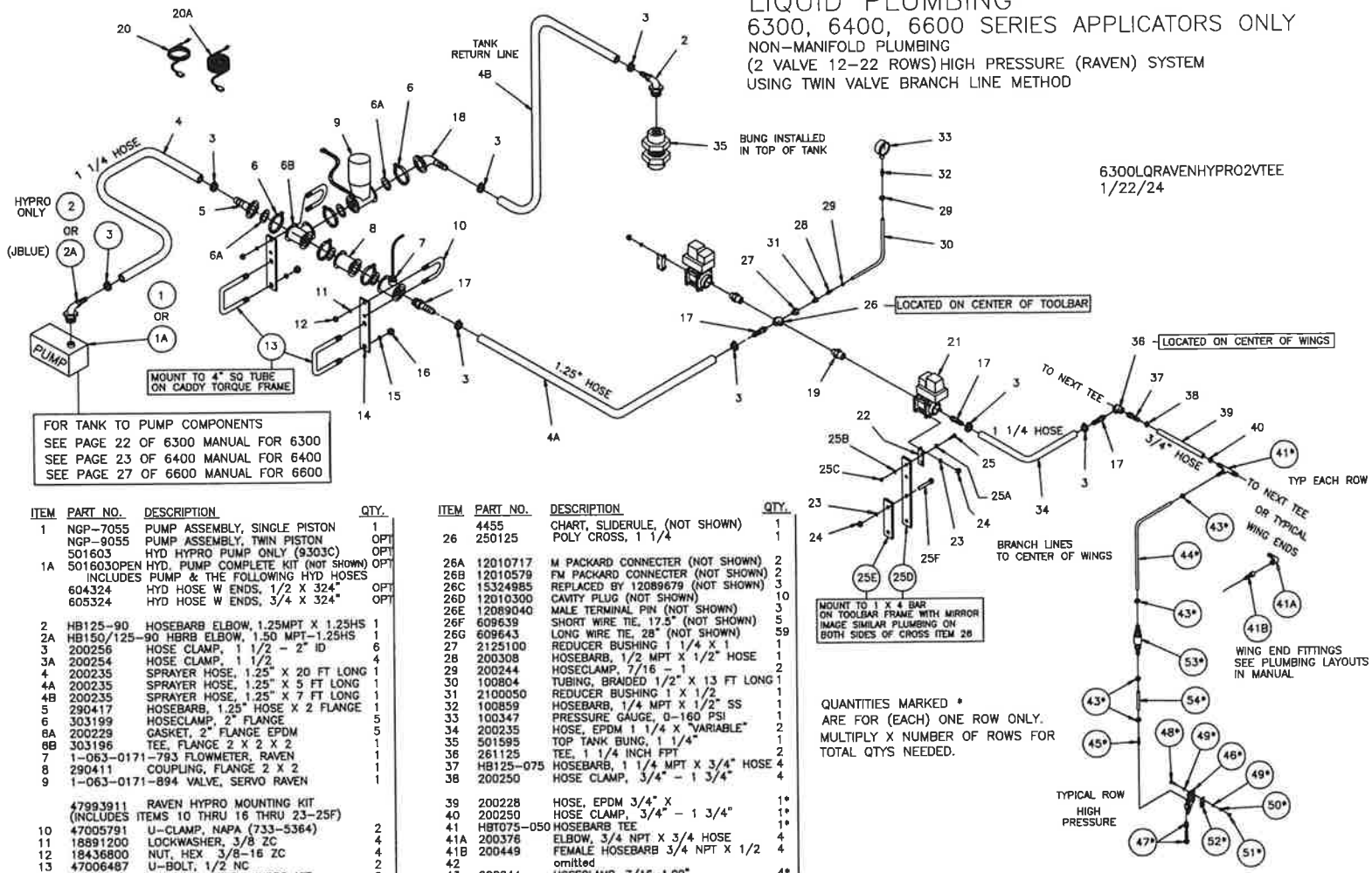
SEE TOOLBAR PLUMBING REFERENCE GUIDE FOR GENERAL TOOLBAR PLUMBING

LIQUID PLUMBING

6300, 6400, 6600 SERIES APPLICATORS ONLY

NON–MANIFOLD PLUMBING
(2 VALVE 12–22 ROWS) HIGH PRESSURE (RAVEN) SYSTEM
USING TWIN VALVE BRANCH LINE METHOD

6300LQRAVENHYPRO2VTEE
1/22/24



FOR TANK TO PUMP COMPONENTS
SEE PAGE 22 OF 6300 MANUAL FOR 6300
SEE PAGE 23 OF 6400 MANUAL FOR 6400
SEE PAGE 27 OF 6600 MANUAL FOR 6600

ITEM	PART NO.	DESCRIPTION	QTY.
1	NGP–7055	PUMP ASSEMBLY, SINGLE PISTON	1
	NGP–9055	PUMP ASSEMBLY, TWIN PISTON	OPT
	501603	HYD HYPRO PUMP ONLY (9303C)	OPT
1A	501603OPEN	HYD. PUMP COMPLETE KIT (NOT SHOWN) INCLUDES PUMP & THE FOLLOWING HYD HOSES	OPT
	604324	HYD HOSE W ENDS, 1/2 X 324"	OPT
	605324	HYD HOSE W ENDS, 3/4 X 324"	OPT
2	HB125–90	HOSEBARB ELBOW, 1.25MPT X 1.25HS	1
2A	HB150/125–90	HBRB ELBOW, 1.50 MPT–1.25HS	1
3	200256	HOSE CLAMP, 1 1/2 – 2" ID	6
3A	200254	HOSE CLAMP, 1 1/2	4
4	200235	SPRAYER HOSE, 1.25" X 20 FT LONG	1
4A	200235	SPRAYER HOSE, 1.25" X 5 FT LONG	1
4B	200235	SPRAYER HOSE, 1.25" X 7 FT LONG	1
5	290417	HOSEBARB, 1.25" HOSE X 2 FLANGE	1
6	303199	HOSECLAMP, 2" FLANGE	5
6A	200229	GASKET, 2" FLANGE EPDM	5
6B	303196	TEE, FLANGE 2 X 2 X 2	1
7	1–063–0171–793	FLOWMETER, RAVEN	1
8	290411	COUPLING, FLANGE 2 X 2	1
9	1–063–0171–894	VALVE, SERVO RAVEN	1
	47993911	RAVEN HYPRO MOUNTING KIT (INCLUDES ITEMS 10 THRU 16 THRU 23–25F)	
10	47005791	U–CLAMP, NAPA (733–5364)	2
11	18891200	LOCKWASHER, 3/8 ZC	4
12	18436800	NUT, HEX 3/8–16 ZC	4
13	47006487	U–BOLT, 1/2 NC	2
14	47003911	BRACKET, RAVEN HYPRO KIT	2
15	18891400	WASHER, LOCK 1/2" ZC	4
16	18417400	NUT, HEX 1/2–13 NC ZC	4
17	HB125	HOSEBARB 1 1/4 MPT X 1 1/4 HOSE	6
18	290430	2" FLANGED ELBOW 90° (1.25 HOSEB)	1
19	200555	CLOSENIPPLE, POLY 1 1/4 X 1 1/4	2
20	115–0171–085	CONSOLE CABLE	1
20A	115–0171–055	12 FT CONTROL CABLE	1
20B	63–0171–183	440 CONSOLE (NOT SHOWN)	1
21	VE125	VALVE, ELECTRIC, ON/OFF	2
22	210271	VALVE BRACKET, CHROME	2
23	18891200	LOCKWASHER, 3/8 ZC	8
24	18436800	NUT, HEX 3/8–16NC ZC	8
25	18055722	BOLT, HEX 1/4–20 X 1 ZC	4
25A	18811000	FLATWASHER, 1/4 ZC	4
25B	18891000	LOCKWASHER, 1/4 ZC	4
25C	18435700	HEXNUT, 1/4–20 ZC	4
25D	47003940	BRACKET, ELEC. VALVE MOUNT	2
25E	47003941	CLAMP BRACKET, ELEC. VALVE MNT	2
25F	18056830	BOLT, HEX HEAD 3/8–16 X 2 ZC	4

ITEM	PART NO.	DESCRIPTION	QTY.
	4455	CHART, SLIDERULE, (NOT SHOWN)	1
26	250125	POLY CROSS, 1 1/4	1
26A	12010717	M PACKARD CONNECTER (NOT SHOWN)	2
26B	12010579	FM PACKARD CONNECTER (NOT SHOWN)	2
26C	15324985	REPLACED BY 12089679 (NOT SHOWN)	3
26D	12010300	CAVITY PLUG (NOT SHOWN)	10
26E	12089040	MALE TERMINAL PIN (NOT SHOWN)	3
26F	609639	SHORT WIRE TIE, 17.5" (NOT SHOWN)	5
26G	609643	LONG WIRE TIE, 28" (NOT SHOWN)	59
27	2125100	REDUCER BUSHING 1 1/4 X 1	1
28	200308	HOSEBARB, 1/2 MPT X 1/2" HOSE	1
29	200244	HOSECLAMP, 7/16 – 1	2
30	100804	TUBING, BRAIDED 1/2" X 13 FT LONG	1
31	2100050	REDUCER BUSHING 1 X 1/2	1
32	100859	HOSEBARB, 1/4 MPT X 1/2" SS	1
33	100347	PRESSURE GAUGE, 0–160 PSI	1
34	200235	HOSE, EPDM 1 1/4 X "VARIABLE"	2
35	501595	TOP TANK BUNG, 1 1/4"	1
36	2611125	TEE, 1 1/4 INCH FPT	2
37	HB125–075	HOSEBARB, 1 1/4 MPT X 3/4" HOSE	4
38	200250	HOSE CLAMP, 3/4" – 1 3/4"	4
39	200228	HOSE, EPDM 3/4" X	1*
40	200250	HOSE CLAMP, 3/4" – 1 3/4"	1*
41	HBT075–050	HOSEBARB TEE	1*
41A	200376	ELBOW, 3/4 NPT X 3/4 HOSE	4
41B	200449	FEMALE HOSEBARB 3/4 NPT X 1/2	4
42		omitted	
43	200244	HOSECLAMP, 7/16–1.00"	4*
44	100804	TUBING, BRAIDED EVA 1/2" X 4 FT	1*
45	100859	HOSEBARB 1/4 NPT X 1/2" SS	1*
46	47309038	NOZZLE BRACKET	1*
47	504017	NOZZLE ASSY INCLUDES (1) EACH OF THE FOLLOWING PARTS LISTED BELOW	1*
	500192	NOZZLE BODY	1*
	504015	STREAM STABILIZER	1*
	ORIFICE	(SELECT FROM ORIFICE CHART)	1*
	503127	NOZZLE CAP, STD STAINLESS	1*
48	18057434	BOLT, HEX 1/2NC X 2 1/2 GR5 ZC	2*
49	18811400	FLATWASHER, 1/2 INCH ZC	3*
50	18891400	LOCKWASHER, 1/2 INCH ZC	2*
51	18817400	NUT, HEX 1/2 NC ZC	2*
52	47306661	SHIM, 1/4"	1*
	47306662	SHIM, 1/8"	1*
	47306663	SHIM, 1/16"	1*
53	115286–01	CHECKVALVE, POLY	1*
54	100804	TUBING, BRAIDED EVA 1/2" X 1 FT	1*

QUANTITIES MARKED * ARE FOR (EACH) ONE ROW ONLY. MULTIPLY X NUMBER OF ROWS FOR TOTAL QTYS NEEDED.

REFER TO THE COULTER MOUNT ARRANGEMENTS TO DETERMINE ACTUAL QUANTITIES FOR YOUR TOOLBAR DEPENDING ON THE NUMBER OF ROWS.

SEE THE TOOLBAR PLUMBING REFERENCE GUIDE TO PLUMB THE TOOLBAR, BEGINNING WITH CROSS (ITEM 26) ON THIS PAGE, PLUM EACH ROW* OUTWARD TO THE ENDS OF THE WINGS.

SEE 606200R FOR RAVEN CONTROLLER PKG

LIQUID PLUMBING

6400 AND 6500 SERIES APPLICATORS MANIFOLD SYSTEM

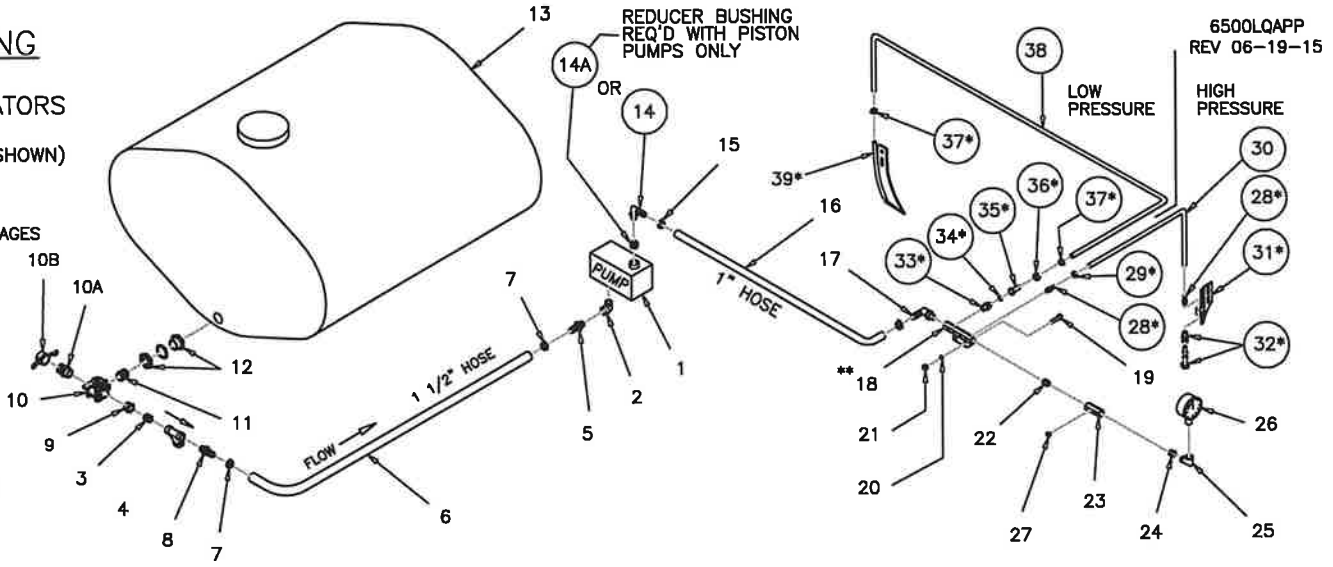
(HIGH AND LOW PRESSURE SHOWN)

FOR ALTERNATE GAUGE MOUNTINGS, REFER TO THE "MANIFOLD ASSEMBLY" ILLUSTRATIONS ON FOLLOWING PAGES

QUANTITIES MARKED * ARE FOR EACH ROW ONLY.

COMPONENTS FOR LOW AND HIGH PRESSURE UNITS ARE SHOWN.

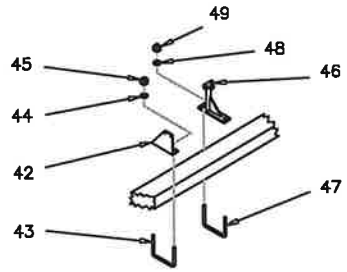
REFER TO THE "MANIFOLD ASSEMBLY ILLUSTRATIONS" TO HELP DETERMINE THE COMPONENT QUANTITIES NEEDED FOR YOUR SPECIFIC TOOLBAR.



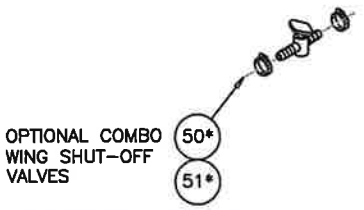
ITEM	PART NO.	DESCRIPTION	QTY.
1	NGP-7055	PUMP ASSEMBLY, HP SINGLE PISTION	1
	NGP-9055	PUMP ASSEMBLY, TWIN PISTON	OPT.
	501603	9303C HYD CENTRIFICAL PUMP	OPT.
1A	501630PEN	9303C HYD CENTRIFICAL PUMP PKG INCLUDES PUMP & THE FOLLOWING HOSES	OPT.
	604324	HYD HOSE W ENDS, 1/2" X 324"	OPT.
	605324	HYD HOSE W ENDS, 3/4" X 324"	OPT.
	213600	TANK TO PUMP PKG,(ITEMS 2 thru11)	
2	200888	STREET ELBOW, 1 1/2 NPT X 90	1
3	200556	CLOSE NIPPLE, 1 1/2 NPT.	1
4	200056	LINE STRAINER, 1 1/2 X 1 1/2 NPT.	1
5	200334	HOSEBARB, 1 1/2 X 1 1/2	1
6	12012705	SOLUTION HOSE, 1 1/2 X 10 FT	1
7	200256	HOSE CLAMP, 1 5/16 TO 2 1/4	2
8	200334	HOSEBARB, 1 1/2 X 1 1/2	1
9	2200150	REDUCER ADAPTER, 2 X 1 1/2 NPT	1
10	200013	BALL VALVE, 3-WAY, 2 NPT	1
10A	200170	MALE ADAPTER, 2 NPT	1
10B	200172	CAP, 2 NPT.	1
11	200557	CLOSE NIPPLE, 2 NPT	1
12	20020019	TANK BUNG ASSEMBLY, 2 NPT.	1
13	700028	ELIPTICAL TANK, 1300 GAL.	1
OR	700029	ELIPTICAL TANK, 1700 GAL.	OPT
14	HB150/125-90	HOSEBRB ELBOW, 1.50MPT X 1.25" HS	1
14A	HB125-90	HOSEBRB ELBOW, 1.25MPT X 1.25" HS	1
15	200248	HOSE CLAMP, 11/16 TO 1 1/2	2
16	10040000	SPRAYER HOSE, 1" X 14 FT	1
17	200367	HOSEBARB ELBOW, 1/2 NPT. X 1	1
18	47008033	MANIFOLD, (8) PORT, S.S.	1
19	18996832	3/8-16 NC. X 1 1/4 BOLT, S.S.	2
20	18881201	3/8 LOCKWASHER, S.S.	2
21	18476800	3/8-16 NC. HEX. NUT, S.S.	2
22	200714	CLOSE NIPPLE, 1/2 NPT. S.S.	OPT.
23	47008035	MANIFOLD, (4) PORT, S.S.	OPT.
24	200810	REDUCING BUSHING, 1/2 X 1/4 NPT.	1
25	200771	STREET ELBOW, 1/4 NPT. X 90	1
26	100347	PRESSURE GAUGE, 0 TO 160 PSI	1
27	200826	PLUG, 1/4 NPT. S.S. AS REQ'D.	*
		ITEMS 28 TO 32 USE FOR HI-PRESS. APPLICATION ONLY	
28	100859	HOSEBARB, 1/4 NPT. X 1/2 S.S.	2*
28A	100859	HOSEBARB, 1/4 NPT. X 1/2 S.S.	1
29	200244	HOSE CLAMP, 5/16 TO 7/8	2*
30	100804	HOSE, BRAIDED 1/2 X 44 FT. (11 ROW)	1

ITEM	PART NO.	DESCRIPTION	QTY.
		HOSE, BRAIDED 1/2 X 48 FT. (12 ROW)	1
		HOSE, BRAIDED 1/2 X 52 FT. (13 ROW)	1
		HOSE, BRAIDED 1/2 X 56 FT. (14 ROW)	1
		HOSE, BRAIDED 1/2 X 60 FT. (15 ROW)	1
	100804	HOSE, BRAIDED 1/2 X 64 FT. (16 ROW)	1 *
		HOSE, BRAIDED 1/2 X 68 FT. (17 ROW)	1 *
31	47309038	NOZZLE BRACKET	1 *
32	504017	NOZZLE BODY, INCLUDES (1) EACH OF	1 *
	500192	NOZZLE BODY, SS	
	504015	STREAM STABALIZER	1 *
	ORIFICE	SELECT FROM ORIFICE CHART	1 *
	503127	CAP	1 *
		ITEMS 33 TO 39 USE FOR LOW-PRESS. APPLICATION ONLY	
33	500192	NOZZLE BODY, SS	1 *
34	ORIFICE	SELECT FROM ORIFICE CHART	1 *
35	500643	HOSEBARB INSERT	1 *
36	503127	CAP, HOSEBARB	1 *
37	200244	HOSE CLAMP, 7/16 TO 7/8	2 *
38	15017007	TUBING, EVA 1/2 X 44 FT. (11 ROW)	1
		TUBING, EVA 1/2 X 48 FT. (12 ROW)	1
		TUBING, EVA 1/2 X 52 FT. (13 ROW)	1
		TUBING, EVA 1/2 X 56 FT. (14 ROW)	1
		TUBING, EVA 1/2 X 60 FT. (15 ROW)	1
		TUBING, EVA 1/2 X 64 FT. (16 ROW)	1
		TUBING, EVA 1/2 X 68 FT. (17 ROW)	1
39	KNIFE	AS SPECIFIED	1 *
40			
41			
		DISTRIBUTION MANIFOLD OPTIONS	
42	47008049	MANIFOLD BRACKET, FORMED STL.	1
43	47001028	U-BOLT, 3/8-16NC.	1
44	18891200	LOCKWASHER, 3/8	2
45	18436800	HEX. NUT, 3/8-16NC	2
46	47008060	MANIFOLD BRACKET, S.S. TEE	OR
	47002631	MANIFOLD BRACKET, BLK STL. TEE	OPT.
47	47006545	U-BOLT, 1/2-13NC.	1
48	18891400	LOCKWASHER, 1/2	2
49	18417400	HEX. NUT, 1/2-13NC.	2
		OTHER OPTIONS	
50	500553	COMBO WING SHUTOFF VALVE (per row)	1*
51	200244	HOSE CLAMP 7/16 - 1" (per row)	2*

213600 OPTIONAL FORCE FILL PACKAGE
INCLUDES ITEMS 8 THRU 11 AND 40 & 41



MANIFOLD STAND OPTIONS
U-BOLTS WILL FIT A 6 X 4 TUBE
(6 HORIZ. X 4 VERT.)

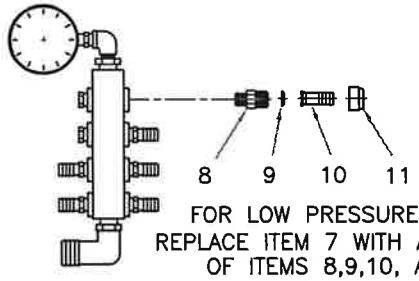


INSTALL AS NEEDED IN ITEM 30 OR 38

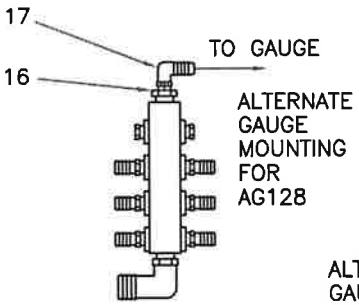
MNFLDSTNLS
ISSUE JUNE/2008

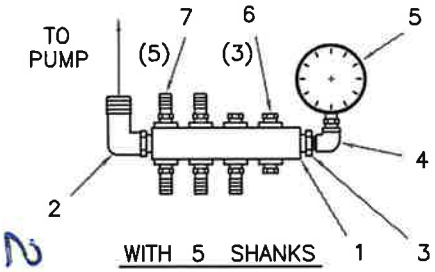
MANIFOLD ASSEMBLY ILLUSTRATION

WITH STAINLESS STEEL MANIFOLD

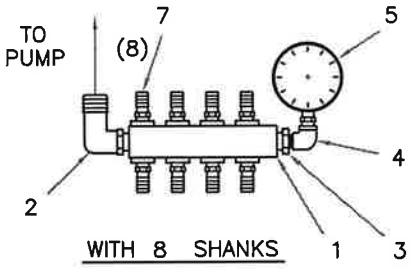


FOR LOW PRESSURE SYSTEM
REPLACE ITEM 7 WITH AN ASSEMBLY
OF ITEMS 8,9,10, AND 11

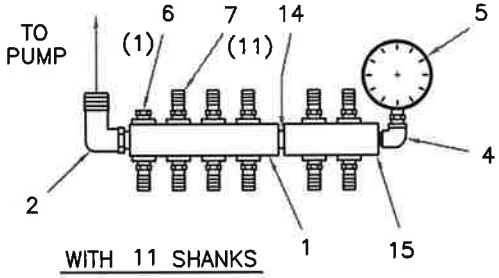




WITH 5 SHANKS

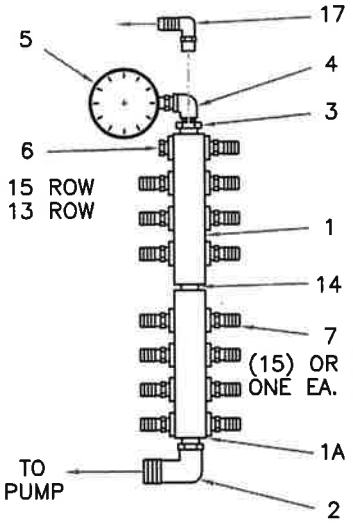


WITH 8 SHANKS

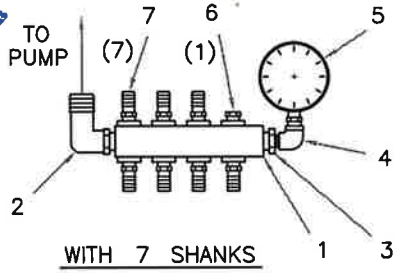


WITH 11 SHANKS

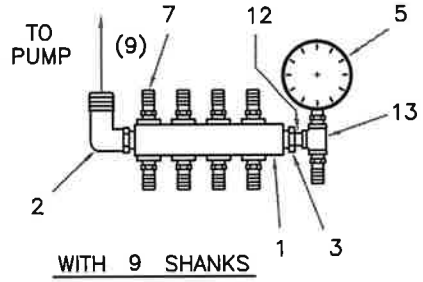
ALTERNATE
GAUGE
MOUNTING



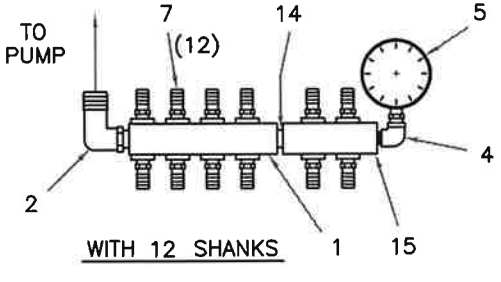
WITH 15 SHANKS
(OR) 13 SHANKS



WITH 7 SHANKS



WITH 9 SHANKS



WITH 12 SHANKS

ITEM	PART NO.	DESCRIPTION	QTY
1	47008033	MANIFOLD, 8 OUTLET–W/ MTG. BRKT.	1
1A	47007490	MANIFOLD, 8 OUTLET–W/O MTG. BRKT.	1
2	200367	HOSEBARB ELBOW, 1/2 NPT. X 1	1
3	200810	RED. BUSHING, 1/2 X 1/4 NPT.	*
4	200771	STREET ELBOW, 1/4 NPT. X 90	*
5	500160	PRESSURE GAUGE, 0 TO 160	1
6	200826	PLUG, 1/4 NPT.	*
7	100859	HOSEBARB, 1/4 NPT. X 1/2	*

FOR QUANTITIES ON ITEMS MARKED *
REFER TO THE ILLUSTRATION THAT
SHOWS YOUR MANIFOLD ARRANGEMENT

ITEM	PART NO.	DESCRIPTION	QTY
8	500192	ADAPTER, NOZZLE BODY {LO–PRESSURE}	*
9	ORIFICE	REFER TO ORIFICE CHART { ONLY }	*
10	500643	HOSEBARB INSERT, 1/2" {LO–PRESSURE}	*
11	503127	CAP, HOSEBARB INSERT { ONLY }	*
12	200712	CLOSE NIPPLE, 1/4 NPT	1
13	200786	TEE, 1/4 NPT.	1
14	200714	CLOSE NIPPLE, 1/2 NPT.	1
15	47008035	MANIFOLD, (4) PORT	1
16	200810	RED. BUSHING, 1/2 X 1/4 NPT.	1
17	200348	HOSEBARB ELBOW, 1/4 NPT, X 1/2 (POLY)	1

Application Information Using 4916 Orifice Plates
(Table based on spraying 28% Nitrogen on 22 inch spacings)
****see conversion tables below for other weight solutions**

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 22 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-37	60	0.18	16.6	12.5	10.0	8.3
	80	0.21	18.9	14.2	11.3	9.5
	90	0.23	21	15.5	12.4	10.4
	100	0.24	22	16.2	13.0	10.8
	120	0.26	23	17.6	14.0	11.7
4916-40	60	0.22	19.8	14.9	11.9	9.9
	80	0.25	23	16.9	13.5	11.3
	90	0.27	24	18.2	14.6	12.2
	100	0.28	25	18.9	15.1	12.6
	120	0.31	28	21	16.7	14.0
4916-43	60	0.25	22	16.8	13.4	11.2
	80	0.29	26	20	15.7	13.1
	90	0.30	27	20	16.2	13.5
	100	0.32	29	22	17.3	14.4
	120	0.35	32	24	18.9	15.8
4916-47	60	0.30	27	20	16.0	13.3
	80	0.34	31	23	18.4	15.3
	90	0.36	32	24	19.4	16.2
	100	0.38	34	26	21	17.1
	120	0.42	38	28	23	18.9
4916-49	60	0.32	29	21	17.2	14.3
	80	0.37	33	25	20	16.7
	90	0.39	35	26	21	17.6
	100	0.41	37	28	22	18.5
	120	0.45	41	30	24	20
4916-52	60	0.36	32	24	19.5	16.2
	80	0.42	38	28	23	18.9
	90	0.44	40	30	24	20
	100	0.47	42	32	25	21
	120	0.51	46	34	28	23
4916-55	60	0.41	37	27	22	18.3
	80	0.47	42	32	25	21
	90	0.50	45	34	27	23
	100	0.52	47	35	28	23
	120	0.57	51	38	31	26
4916-56	60	0.43	39	29	23	19.4
	80	0.50	45	34	27	23
	90	0.53	48	36	29	24
	100	0.56	50	38	30	25
	120	0.61	55	41	33	27
4916-59	60	0.47	42	31	25	21
	80	0.54	49	36	29	24
	90	0.57	51	38	31	26
	100	0.60	54	41	32	27
	120	0.66	59	45	36	30
4916-61	60	0.50	45	34	27	23
	80	0.58	52	39	31	26
	90	0.61	55	41	33	27
	100	0.65	59	44	35	29
	120	0.71	64	48	38	32

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 22 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-65	60	0.56	51	38	30	25
	80	0.65	59	44	35	29
	90	0.69	62	47	37	31
	100	0.73	66	49	39	33
	120	0.80	72	54	43	36
4916-68	60	0.62	55	42	33	28
	80	0.71	64	48	38	32
	90	0.75	68	51	41	34
	100	0.80	72	54	43	36
	120	0.87	78	59	47	39
4916-70	60	0.66	59	44	36	30
	80	0.76	68	51	41	34
	90	0.81	73	55	44	36
	100	0.85	77	57	46	38
	120	0.93	84	63	50	42
4916-75	60	0.75	67	50	40	34
	80	0.86	77	58	46	39
	90	0.92	83	62	50	41
	100	0.97	87	65	52	44
	120	1.06	95	72	57	48
4916-80	60	0.85	77	58	46	38
	80	0.99	89	67	53	45
	90	1.05	95	71	57	47
	100	1.10	99	74	59	50
	120	1.21	109	82	65	54
4916-83	60	0.97	87	65	52	44
	80	1.12	101	76	60	50
	90	1.19	107	80	64	54
	100	1.25	113	84	68	56
	120	1.37	123	92	74	62
4916-89	60	1.06	95	71	57	48
	80	1.22	110	82	66	55
	90	1.29	116	87	70	58
	100	1.36	122	92	73	61
	120	1.49	134	101	80	67
4916-93	60	1.18	106	80	64	53
	80	1.36	122	92	73	61
	90	1.44	130	97	78	65
	100	1.52	137	103	82	68
	120	1.67	150	113	90	75
4916-95	60	1.23	111	83	67	55
	80	1.42	128	96	77	64
	90	1.51	136	102	82	68
	100	1.59	143	107	86	72
	120	1.74	157	117	94	78
4916-98	60	1.35	121	91	73	61
	80	1.55	140	105	84	70
	90	1.65	149	111	89	74
	100	1.74	157	117	94	78
	120	1.90	171	128	103	86

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 22 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-103	60	1.41	127	95	76	63
	80	1.63	147	110	88	73
	90	1.72	155	116	93	77
	100	1.82	164	123	98	82
	120	1.99	179	134	107	90
4916-107	60	1.58	143	107	86	71
	80	1.83	165	124	99	82
	90	1.94	175	131	105	87
	100	2.04	184	138	110	92
	120	2.24	202	151	121	101
4916-110	60	1.32	119	89	71	59
	80	1.52	137	103	82	68
	90	1.62	146	109	87	73
	100	1.70	153	115	92	77
	120	1.87	168	126	101	84
4916-115	60	1.85	166	125	100	83
	80	2.13	192	144	115	96
	90	2.26	203	153	122	102
	100	2.39	215	161	129	108
	120	2.61	235	176	141	117
4916-125	60	2.11	190	143	114	95
	80	2.44	220	165	132	110
	90	2.59	223	175	140	117
	100	2.73	246	184	147	123
	120	2.99	269	202	161	135
4916-132	60	2.36	212	159	127	106
	80	2.72	245	184	147	122
	90	2.89	260	195	156	130
	100	3.04	274	205	164	137
	120	3.34	301	225	180	150
4916-140	60	2.73	246	184	147	123
	80	3.15	284	213	170	142
	90	3.34	301	225	180	150
	100	3.52	317	238	190	158
	120	3.86	347	261	208	174
4916-147	60	2.97	268	201	161	134
	80	3.43	309	232	185	154
	90	3.64	328	246	197	164
	100	3.84	346	259	207	173
	120	4.21	379	284	227	189
4916-156	60	3.34	301	226	181	150
	80	3.86	347	261	208	174
	90	4.10	369	277	221	185
	100	4.32	389	292	233	194
	120	4.73	426	319	255	213
4916-166	60	3.70	333	249	200	166
	80	4.27	384	288	231	192
	90	4.53	408	306	245	204
	100	4.77	429	322	258	215
	120	5.23	471	353	282	235

30

****Conversion Factors for Spraying Solutions other than 28% Nitrogen for use only with the Above GPA tables**

Weight of Solution	Conversion Factor
7.0 lbs./gal.	0.81
8.0 lbs./gal.	0.87
8.34 lbs./gal. – Water	0.88
9.0 lbs./gal.	0.92
10.0 lbs./gal.	0.97

Weight of Solution	Conversion Factor
10.65 lbs./gal. – 28% N	1.00
11.00 lbs./gal.	1.01
12.0 lbs./gal.	1.06
14.0 lbs./gal.	1.14

Application Information Using 4916 Orifice Plates
(Table based on spraying 28% Nitrogen on 30 inch spacings)
****see conversion tables below for other weight solutions**

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 30 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-37	60	0.18	12.2	9.1	7.3	6.1
	80	0.21	13.9	10.4	8.3	6.9
	90	0.23	15.2	11.4	9.1	7.6
	100	0.24	15.8	11.9	9.5	7.9
	120	0.26	17.2	12.9	10.3	8.6
4916-40	60	0.22	14.5	10.9	8.7	7.3
	80	0.25	16.5	12.4	8.9	8.3
	90	0.27	17.8	13.4	10.7	8.9
	100	0.28	18.5	13.9	11.1	9.2
	120	0.31	20	15.3	12.3	10.2
4916-43	60	0.25	16.4	12.3	9.8	8.2
	80	0.29	19.1	14.4	11.5	9.6
	90	0.30	20	14.9	11.9	9.9
	100	0.32	21	15.8	12.7	10.6
	120	0.35	23	17.3	13.9	11.6
4916-47	60	0.30	20	14.6	11.7	9.8
	80	0.34	22	16.8	13.5	11.2
	90	0.36	24	17.8	14.3	11.9
	100	0.38	25	18.8	15.0	12.5
	120	0.42	28	21	16.6	13.9
4916-49	60	0.32	21	15.7	12.6	10.5
	80	0.37	24	18.3	14.7	12.2
	90	0.39	26	19.3	15.4	12.9
	100	0.41	27	20	16.2	13.5
	120	0.45	30	22	17.8	14.9
4916-52	60	0.36	24	17.9	14.3	11.9
	80	0.42	28	21	16.6	13.9
	90	0.44	29	22	17.4	14.5
	100	0.47	31	23	18.6	15.5
	120	0.51	34	25	20	16.8
4916-55	60	0.41	27	20	16.1	13.4
	80	0.47	31	23	18.6	15.5
	90	0.50	33	25	20	16.5
	100	0.52	34	26	21	17.2
	120	0.57	38	28	23	18.8
4916-56	60	0.43	28	21	17.1	14.2
	80	0.50	33	25	20	16.5
	90	0.53	35	26	21	17.5
	100	0.56	37	28	22	18.5
	120	0.61	40	30	24	20
4916-59	60	0.47	31	23	18.5	15.4
	80	0.54	36	27	21	17.8
	90	0.57	38	28	23	18.8
	100	0.60	40	30	24	20
	120	0.66	44	33	26	22
4916-61	60	0.502	33	25	20	16.6
	80	0.58	38	29	23	19.1
	90	0.61	40	30	24	20
	100	0.65	43	32	26	21
	120	0.71	47	35	28	23

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 30 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-65	60	0.56	37	28	22	19
	80	0.65	43	32	26	21
	90	0.69	46	34	27	23
	100	0.73	48	36	29	24
	120	0.80	53	40	32	26
4916-68	60	0.62	41	30	24	20
	80	0.71	47	35	28	23
	90	0.75	50	37	30	25
	100	0.80	53	40	32	26
	120	0.87	57	43	34	29
4916-70	60	0.66	44	33	26	22
	80	0.76	50	38	30	25
	90	0.81	53	40	32	27
	100	0.85	56	42	34	28
	120	0.93	61	46	37	31
4916-75	60	0.75	49	37	30	25
	80	0.86	57	43	34	28
	90	0.92	61	46	36	30
	100	0.97	64	48	38	32
	120	1.06	70	52	42	35
4916-80	60	0.85	56	42	34	28
	80	0.99	65	49	39	33
	90	1.05	69	52	42	35
	100	1.10	73	54	44	36
	120	1.21	80	60	48	40
4916-83	60	0.97	64	48	38	32
	80	1.12	74	55	44	37
	90	1.19	79	59	47	39
	100	1.25	83	62	50	41
	120	1.37	90	68	54	45
4916-89	60	1.06	70	52	42	35
	80	1.22	81	60	48	40
	90	1.29	85	64	51	43
	100	1.36	90	67	54	45
	120	1.49	98	74	59	49
4916-93	60	1.18	78	58	47	39
	80	1.36	90	67	54	45
	90	1.44	95	71	57	48
	100	1.52	100	75	60	50
	120	1.67	110	83	66	55
4916-95	60	1.23	81	61	49	41
	80	1.42	94	70	56	47
	90	1.51	100	75	60	50
	100	1.59	105	79	63	52
	120	1.74	115	86	69	57
4916-98	60	1.35	89	67	53	44
	80	1.55	102	77	61	51
	90	1.65	109	82	65	54
	100	1.74	115	86	69	57
	120	1.90	125	94	75	63

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 30 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-103	60	1.41	93	70	56	46
	80	1.63	108	81	65	54
	90	1.72	114	85	68	57
	100	1.82	120	90	72	60
	120	1.99	131	99	79	66
4916-107	60	1.58	105	78	63	52
	80	1.83	121	91	72	60
	90	1.94	128	96	77	64
	100	2.04	135	101	81	67
	120	2.24	148	111	89	74
4916-110	60	1.32	87	65	52	44
	80	1.52	100	75	60	50
	90	1.62	107	80	64	53
	100	1.70	112	84	67	56
	120	1.87	123	93	74	62
4916-115	60	1.85	122	91	73	61
	80	2.13	141	105	84	70
	90	2.26	149	112	89	75
	100	2.36	158	118	95	79
	120	2.61	172	129	103	86
4916-125	60	2.11	139	105	84	70
	80	2.44	161	121	97	81
	90	2.59	171	128	103	85
	100	2.73	180	135	108	90
	120	2.99	197	148	118	99
4916-132	60	2.36	156	117	93	78
	80	2.72	180	135	108	90
	90	2.89	191	143	114	95
	100	3.04	201	150	120	100
	120	3.34	220	165	132	110
4916-140	60	2.73	180	135	106	90
	80	3.15	208	156	125	104
	90	3.34	220	165	132	110
	100	3.52	232	174	139	116
	120	3.86	255	191	153	127
4916-147	60	2.97	196	147	118	98
	80	3.43	226	170	136	113
	90	3.64	240	180	144	120
	100	3.84	253	190	152	127
	120	4.21	278	208	167	139
4916-156	60	3.34	221	166	132	110
	80	3.86	255	191	153	127
	90	4.10	271	203	162	135
	100	4.32	285	214	171	143
	120	4.73	312	234	187	156
4916-166	60	3.70	244	183	146	122
	80	4.27	282	211	169	141
	90	4.53	299	224	179	149
	100	4.77	315	236	189	157
	120	5.23	345	259	207	173

****Conversion Factors for Spraying Solutions other than 28% Nitrogen for use only with the Above GPA tables**

Weight of Solution	Conversion Factor
7.0 lbs./gal.	0.81
8.0 lbs./gal.	0.87
8.34 lbs./gal. – Water	0.88
9.0 lbs./gal.	0.92
10.0 lbs./gal.	0.97

Weight of Solution	Conversion Factor
10.65 lbs./gal. – 28% N	1.00
11.00 lbs./gal.	1.01
12.0 lbs./gal.	1.06
14.0 lbs./gal.	1.14

Application Information Using 4916 Orifice Plates
(Table based on spraying 28% Nitrogen on 38 inch spacings)
****see conversion tables below for other weight solutions**

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 38 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-37	60	0.18	9.6	7.2	5.8	4.8
	80	0.21	10.9	8.2	5.6	5.5
	90	0.23	12.0	9.0	7.2	8.0
	100	0.24	12.5	9.4	7.5	6.3
	120	0.26	13.5	10.2	8.1	6.8
4916-40	60	0.22	11.5	8.6	6.9	5.7
	80	0.25	13.0	9.8	7.8	6.5
	90	0.27	14.1	10.6	8.4	7.0
	100	0.28	14.6	10.9	8.8	7.3
	120	0.31	16.2	12.1	9.7	8.1
4916-43	60	0.25	12.9	9.7	7.8	6.5
	80	0.29	15.1	11.3	9.1	7.6
	90	0.30	15.6	11.7	9.4	7.8
	100	0.32	18.7	12.5	10.0	8.3
	120	0.35	18.2	13.7	10.9	9.1
4916-47	60	0.30	16.4	11.6	9.2	7.7
	80	0.34	17.7	13.3	10.6	8.9
	90	0.36	18.8	14.1	11.3	9.4
	100	0.38	20	14.9	11.9	9.9
	120	0.42	22	16.4	13.1	10.9
4916-49	60	0.32	16.8	12.4	9.9	8.3
	80	0.37	19.3	14.5	11.6	9.6
	90	0.39	20	15.2	12.2	10.2
	100	0.41	21	16.0	12.8	10.7
	120	0.45	23	17.6	14.1	11.7
4916-52	60	0.36	18.8	14.1	11.3	9.4
	80	0.42	22	16.4	13.1	10.9
	90	0.44	23	17.2	13.8	11.5
	100	0.47	24	18.4	14.7	12.2
	120	0.51	27	20	15.9	13.3
4916-55	60	0.41	21	15.9	12.7	10.6
	80	0.47	24	18.4	14.7	12.2
	90	0.50	28	20	15.6	13.0
	100	0.52	27	20	16.3	13.5
	120	0.57	30	22	17.8	14.9
4916-56	60	0.43	22	16.9	13.5	11.2
	80	0.50	26	20	15.6	13.0
	90	0.53	28	21	16.6	13.8
	100	0.58	29	22	17.5	14.6
	120	0.61	32	24	19.1	15.9
4916-59	60	0.47	24	18.2	14.6	12.2
	80	0.54	28	21	16.9	14.1
	90	0.57	30	22	17.8	14.9
	100	0.60	31	23	18.8	15.6
	120	0.66	34	26	21	17.2
4916-61	60	0.502	26	20	15.7	13.1
	80	0.58	30	23	18.1	15.1
	90	0.61	32	24	19.1	15.9
	100	0.65	34	25	20	16.9
	120	0.71	37	28	22	18.5

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 38 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-65	60	0.56	29	22	17.6	14.6
	80	0.65	34	25	20	16.9
	90	0.69	36	27	22	18.0
	100	0.73	38	29	23	19.0
	120	0.80	42	31	25	21
4916-68	60	0.62	32	24	19.3	16.0
	80	0.71	37	28	22	18.5
	90	0.75	39	29	23	19.5
	100	0.80	42	31	25	21
	120	0.87	45	34	27	23
4916-70	60	0.66	34	26	21	17.2
	80	0.76	40	30	24	19.8
	90	0.81	42	32	25	21
	100	0.85	44	33	27	22
	120	0.93	48	36	29	24
4916-75	60	0.75	39	29	23	19.5
	80	0.86	45	34	27	22
	90	0.92	48	36	29	24
	100	0.97	51	38	30	25
	120	1.06	55	41	33	28
4916-80	60	0.85	44	33	27	22
	80	0.99	52	39	31	26
	90	1.05	55	41	33	27
	100	1.10	57	43	34	29
	120	1.21	83	47	38	32
4916-83	60	0.97	50	38	30	25
	80	1.12	58	44	35	29
	90	1.19	62	47	37	31
	100	1.25	65	49	39	33
	120	1.37	71	54	43	36
4916-89	60	1.06	55	41	33	28
	80	1.22	64	48	38	32
	90	1.29	67	50	40	34
	100	1.36	71	53	43	35
	120	1.49	78	58	47	39
4916-93	60	1.18	61	46	37	31
	80	1.38	71	53	43	35
	90	1.44	75	55	45	38
	100	1.52	79	59	48	40
	120	1.67	87	65	52	44
4916-95	60	1.23	64	48	39	32
	80	1.42	74	55	44	37
	90	1.51	79	59	47	39
	100	1.59	83	62	50	41
	120	1.74	91	68	54	45
4916-98	60	1.35	70	53	42	35
	80	1.55	81	81	48	40
	90	1.65	86	64	52	43
	100	1.74	91	68	54	45
	120	1.90	99	74	59	50

Orifice Plate No.	Pressure (psi)	Capacity Spraying 28% Nitrogen (GPM)	GPA Spraying 28% Nitrogen on 38 inch spacing			
			3 mph	4 mph	5 mph	6 mph
4916-103	60	1.41	75	56	44	37
	80	1.63	85	64	51	42
	90	1.72	90	67	54	45
	100	1.82	95	71	57	47
	120	1.99	104	78	62	52
4916-107	60	1.68	83	62	50	41
	80	1.83	95	72	57	48
	90	1.94	101	76	61	51
	100	2.04	105	80	64	53
	120	2.24	117	88	70	58
4916-110	60	1.32	69	52	41	34
	80	1.62	79	59	48	40
	90	1.62	84	63	51	42
	100	1.70	89	66	63	44
	120	1.87	97	75	68	49
4916-115	60	1.85	96	72	58	48
	80	2.13	111	83	87	55
	90	2.28	118	88	71	59
	100	2.39	125	93	75	62
	120	2.51	136	102	82	68
4916-125	60	2.11	110	83	88	55
	80	2.44	127	95	76	64
	90	2.59	195	101	81	87
	100	2.73	142	107	85	71
	120	2.99	156	117	93	78
4916-132	60	2.36	123	92	74	61
	80	2.72	142	106	85	71
	90	2.89	151	113	90	75
	100	3.04	158	119	95	79
	120	3.34	174	131	104	87
4916-140	60	2.73	142	107	85	71
	80	3.15	184	123	98	82
	90	3.34	174	131	104	87
	100	3.52	183	138	110	92
	120	3.86	201	151	121	101
4916-147	60	2.97	155	116	93	77
	80	3.43	179	134	107	89
	90	3.64	190	142	114	85
	100	3.84	200	150	120	100
	120	4.21	219	165	132	110
4916-156	60	3.34	174	131	105	87
	80	3.86	201	151	121	101
	90	4.10	214	160	128	107
	100	4.32	225	169	135	113
	120	4.73	248	185	148	123
4916-166	60	3.70	193	144	116	96
	80	4.27	222	167	133	111
	90	4.63	236	177	142	118
	100	4.77	249	186	149	124
	120	5.23	273	204	164	136

****Conversion Factors for Spraying Solutions other than 28% Nitrogen for use only with the Above GPA tables**

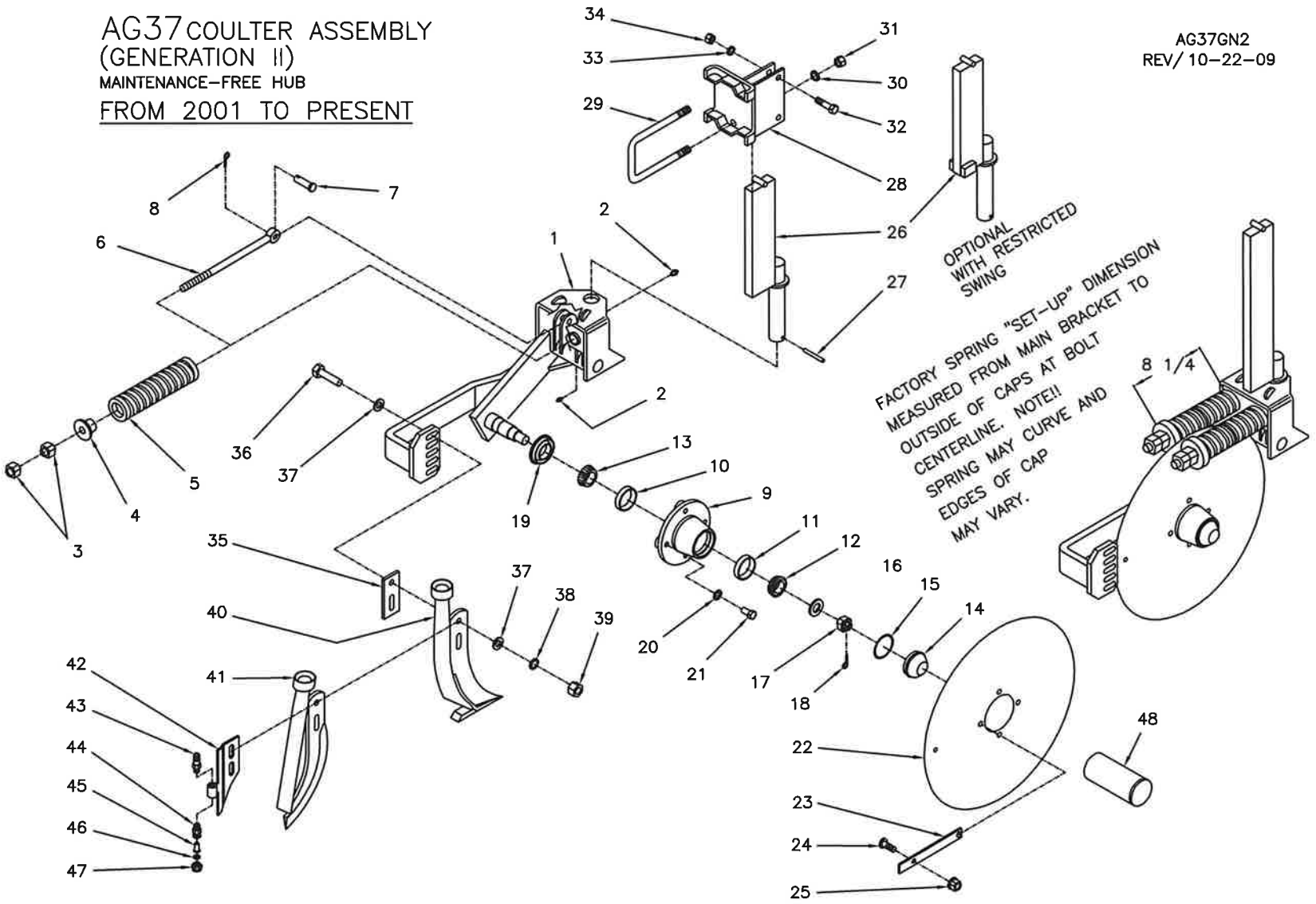
Weight of Solution	Conversion Factor
7.0 lbs./gal.	0.81
8.0 lbs./gal.	0.87
8.34 lbs./gal. – Water	0.88
9.0 lbs./gal.	0.92
10.0 lbs./gal.	0.97

Weight of Solution	Conversion Factor
10.65 lbs./gal. – 28% N	1.00
11.00 lbs./gal.	1.01
12.0 lbs./gal.	1.06
14.0 lbs./gal.	1.14

AG37 COULTER ASSEMBLY
(GENERATION II)
MAINTENANCE–FREE HUB

FROM 2001 TO PRESENT

AG37GN2
REV/ 10–22–09



AG37 COULTER ASSEMBLY (GENERATION II)

with MAINTENANCE–FREE HUB

MOUNTING INSTRUCTIONS AND PARTS LIST

AG37GN2LS
REV. 01/28/22

1. Your AG37 main bracket and hub are pre–assemble 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 coulter arm should trip up only when hitting a solid obstruction. During your field operation check to make sure the coulter arm is staying rigid most of the time. Excessive flexing will cause premature spring failure. If repeated tripping is ocurring, tighten the spring tension till rigid normal operation is achieved.
2. Assemble the blade (item 22) to the hub, and (if used) the scraper (item 23) to the blade with the hardware (item 24 and item 25).
3. Assemble the swivel bar (item 26) to the main bracket (item 1). Be sure the 1 x 3 bar is positioned between the half moon stops on top of the main bracket. Install the roll pin (item 27).
4. Position the mounting brackets (item 28) at the desired spacing and fasten with the U–bolts (item 29) and hardware (items 30 and 31).
5. Install the coulter assemblies to the mounting brackets (item 28) and fasten with the bolts (item 32) and hardware (items 33 and 34). Assemble the hardware snug only.
6. Adjust the coulter blade to the desired depth and tighten the hardware securely.
7. Assemble the knife (item 40 or 41) to the coulter assembly with the shims (item 35), bolts (item 36) and hardware (items 37, 38 and 39). Select and install the shims in a manner so that as you rotate the blade a complete revolution you observe that the point of the knife and the lower area of the knife is behind the blade at all times. The knife should also be set at zero clearance (see step 7). This will maintain the blade's trash cutting ability. The top of the knife should be away from the blade far enough so that the scraper can pass the top, thick part of the knife without rubbing the knife. NOTE: The bolt head should be located next to the bracket (see illustration) and any shims not needed should be placed between the backside of the bracket and the flatwasher next to the head of the bolt.
8. Adjust the knife position relative to the blade edge. The backswept knife (item 41) should be positioned to obtain maximum backsweep. Locate the upper bolt to the front of the slot and the lower bolt to the back of the slot. The forward swept knife (item 40) should be positioned as close to the blade edge as possible. Rotate the coulter blade to determine the point of maximum eccentric runout of the circumference and adjust the knife to zero clearance at this point. NOTE: The knife will have to be re–adjusted regularly.
9. Make sure all hardware is tightened securely.
10. During field operation grease the swivel bar journals weekly. And grease for end–of–season storage. Inspect the coulter blade and knife clearance daily. Adjust per step 8 if required. The coulter hub is greased–for–life and should need no regular maintenance. Check for damage to the dust cap and grease seal daily.

ITEM	PART NO.	DESCRIPTION	QTY
	47309905	MAIN BRKT. & BLADE ASSEMBLY, L.H.	1
	47307705	MAIN BRKT. & BLADE ASSEMBLY, R.H.	OPT.
		INCLUDES ITEMS 1 TO 22	
	47109570	MAIN BRKT W/HUB ASSEMBLY, L.H.	
	47109568	MAIN BRKT W/HUB ASSEMBLY, R.H.	OPT.
		INCLUDES ITEMS 1 TO 21 (W/O BLADE)	
1	47309570	MAIN BRACKET, L.H. (W/O HUB OR BLADE)	1
	47309568	MAIN BRACKET, R.H. (W/O HUB OR BLADE)	OPT.
2	18901805	GREASE ZERK, STRAIGHT	2
3	18407900	HEX. NUT, 5/8–11NC.	4
4	47301530	SPRING CAP	2
5	47301524	COMPRESSION SPRING	2
6	47301547	EYE BOLT, SPRING RETAINER	2
7	18541428	CLEVIS PIN, 1/2 X 1 3/4	2
8	18560722	COTTER PIN, 5/32 X 1	2
	47300350	HUB COMPLETE (W/O SEAL & BOLTS)	
		INCLUDES ITEMS 9 TO 15	
9	47300351	HUB WITH CUPS ITEMS 10 & 11	1
10	47005510	BEARING CUP, INNER	1
11	47005010	BEARING CUP, OUTER	1
12	47005048	BEARING CONE, OUTER	1
13	47005548	BEARING CONE, INNER	1
14	47005513	DUST CAP	1
15	47990351	O–RING DUST SEAL	1
16	47300352	SPINDLE WASHER	1
17	47300353	SLOTTED NUT, 7/8–14UNF	1
18	18560726	COTTER PIN, 5/32 X 1 1/2	1
19	40030326	GREASE SEAL	1
20	18891400	LOCK WASHER, 1/2 I.D.	4
21	18057522	WHEEL BOLT, 1/2–20NF X 1	4
22	47305027	COULTER BLADE, 20" RIPPLED	1

ITEM	PART NO.	DESCRIPTION	QTY
23	47306921	SCRAPER	1
24	18033810	BOLT, 3/8–16NC. X 1, TRUSS HEAD	1
25	18496800	HEX. NUT, 3/8–16NC. FLANGED	1
26	47303811	COULTER SWIVEL BAR, 18" (INCL ITEM 27)	1
	47309811	COULTER SWIVEL BAR, 12" (INCL ITEM 27)	OPT.
	OPTIONAL	COULTER BAR W/RESTRICTED SWING	
		10 DEG. AND 15 DEG. AVAILABLE	
	47005147	18" BAR 10° RESTR. SWING (BOTH WAYS)	
	47005147L	18" BAR 10° RESTR. SWING (LH ONLY)	
	47005147R	18" BAR 10° RESTR. SWING (RH ONLY)	
	47005149	18" BAR 15° RESTR. SWING (BOTH WAYS)	
	47005149L	18" BAR 15° RESTR. SWING (LH ONLY)	
	47005149R	18" BAR 15° RESTR. SWING (RH ONLY)	
		CALL AG SYSTEMS FOR INFO.	
27	18511032	ROLL PIN, 1/4 X 2 1/4	1
28	47309893	MOUNTING BRACKET, (4" VERTICAL) STD.	1
29	47006951	U–BOLT, 5/8–11NC. (4"V X 6"H BAR)	1
	44001616	U–BOLT, 5/8–11NC. (4"V X 4"H BAR)	
		OTHER MOUNTING BRACKET OPTIONS	
28	47309887	MOUNTING BRKT., (2 1/2" VERTICAL)	
29	47006659	U–BOLT, 5/8–11NC. (2 1/2"V X 2 1/2"H BAR)	
28	47309732	MOUNTING BRACKET, (3" VERTICAL)	
	47309907	MOUNTING BRKT., (3" VERT., EXT.)	
29	47306677	U–BOLT, 5/8–11NC. (3"V X 3"H BAR)	
28	47309888	MOUNTING BRKT., (6" VERTICAL)	
29	47010154	U–BOLT, 5/8–11NC. (6"V X 4"H BAR)	
	47009847	U–BOLT, 5/8–11NC. (6"V X 6"H BAR)	
28	47309736	MOUNTING BRKT., (7" VERTICAL)	
29	47302730	U–BOLT, 1/2–13NC. (7"V X 7"H BAR)	
		NOTE for 7" U–BOLT USE 1/2–13NC. HEX. NUTS	

ITEM	PART NO.	DESCRIPTION	QTY
30	18891600	LOCKWASHER, 5/8	2
31	18417900	HEX. NUT, 5/8–11NC.	2
32	18057434	BOLT, 1/2–13NC. X 2 1/2	2
33	18891400	LOCKWASHER, 1/2	2
34	18417400	HEX. NUT, 1/2–13NC.	2
35	47306661	SHIM, 1/4	1
	47306662	SHIM, 1/8	1
	47306663	SHIM, 1/16	1
36	18057432	BOLT, 1/2–13NC. X 2 1/4	2
37	18811400	FLATWASHER, 1/2	2
38	18891400	LOCKWASHER, 1/2	2
39	18417400	HEX. NUT, 1/2–13NC	2
40	47309735	DRY KNIFE. W/BUSHING, (FORWARD)	1
	47309734	DRY KNIFE, W/O BUSHING, (FORWARD)	OPT.
	47309742	LIQUID KNIFE, (FORWARD)	OPT.
	47007468	LIQUID KNIFE, (FORWARD) S.S. TUBE	OPT.
41	47309748	DRY KNIFE, W/BUSHING, (BACKSWEPT)	OPT.
	47309759	DRY KNIFE, W/O BUSHING, (BACKSWEPT)	OPT.
	47309750	LIQUID KNIFE, (BACKSWEPT)	OPT.
42	47309038	NOZZLE BRACKET	1
43	100859	HOSEBARB, S.S. 1/4 NPT. X 1/2 TUBE	1
44	500192	ADAPTER	1
45	504015	STREAM STABALIZER	1
46	ORIFICE	SELECT FROM ORIFICE CHART	1
47	503127	CAP	1
48	47005500	DUST CAP INSTALLATION TOOL (OPTIONAL)	1

REF 47300300 SPINDLE ONLY

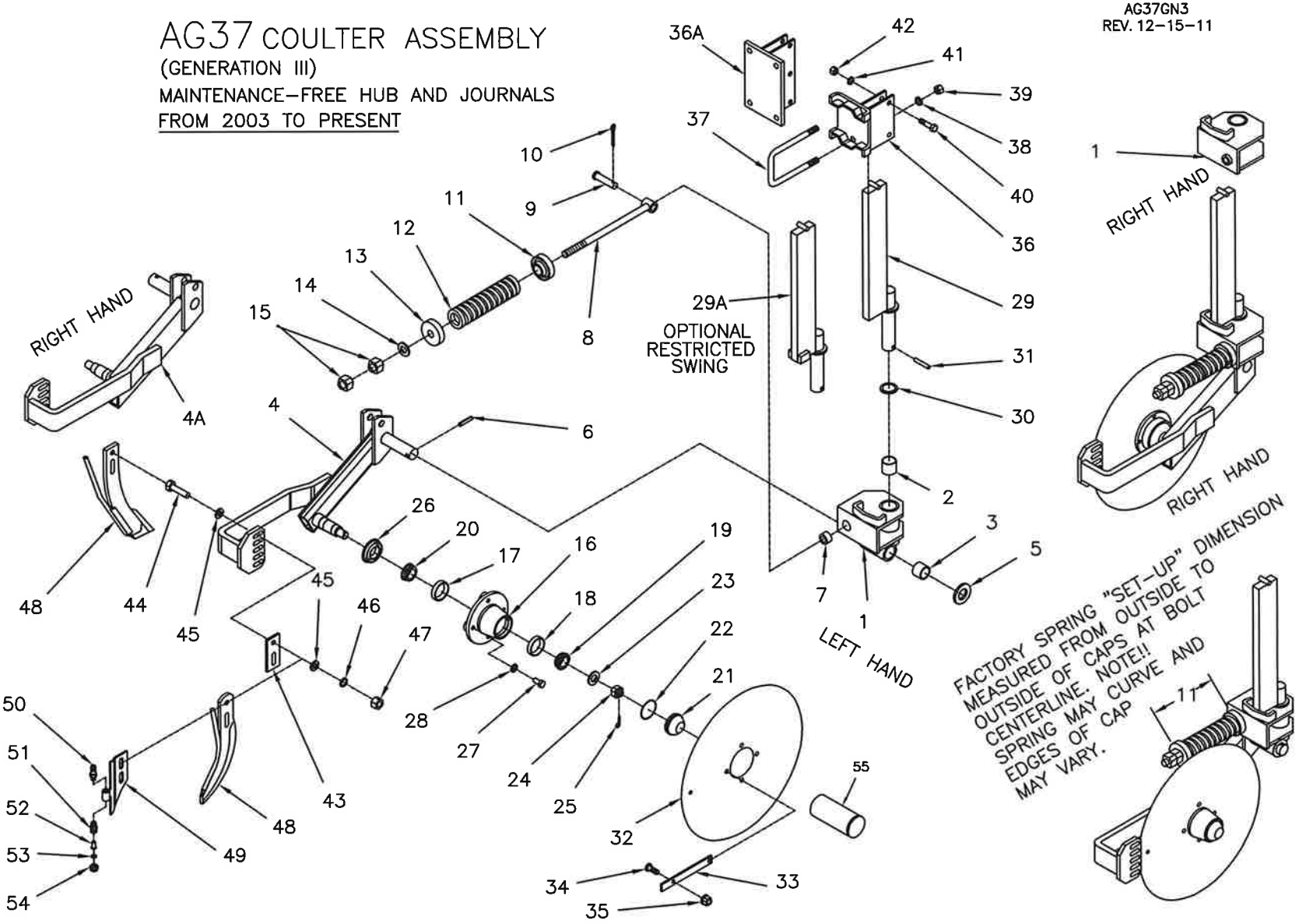
AG37 COULTER ASSEMBLY

(GENERATION III)

MAINTENANCE–FREE HUB AND JOURNALS

FROM 2003 TO PRESENT

AG37GN3
REV. 12–15–11



AG37 COULTER ASSEMBLY (GENERATION III)

AG37GN3LS
REV. 01/28/22

MAINTENANCE–FREE HUB AND JOURNALS

MOUNTING INSTRUCTIONS AND PARTS LIST

1. Your AG37 Gen III main bracket and hub are pre–assembled at the factory and the trip spring is preloaded to provide 600 pounds blade pressure. This should be adequate for normal field conditions. The coulter arm should trip up only when hitting a solid obstruction. During your field operation check to make sure the coulter arm is staying rigid most of the time. Excessive flexing will cause premature spring failure. If repeated tripping is ocurring, tighten the spring tension till rigid normal operation is achieved.

2. Assemble the blade (item 32) to the hub, and (if used) the scraper (item 33) to the blade with the hardware (items 34 & 35).

3. Assemble the swivel bar (item 29) to the bracket assembly. Be sure the swivel bar is positioned between the swivel control lugs on top of the main bracket. Install the washer (item 30) and pin (item 31).

4. Position the mounting bracket (item 36) at the desired spacing and fasten with the u–bolt (item 37) and hardware (items 38 and 39).

5. Install the coulter assemblies in the mounting brackets (item 36) and fasten with the bolts (item 40) and hardware (items 41 and 42). Assemble the hardware snug only.

6. Adjust the coulter blade to the desired depth and tighten the hardware securely.

7. Assemble the knife (item 48) to the coulter assembly with the shims (item 43), bolts (item 44) and hardware (items 45, 46 and 47). Select and install the shims in a manner so that as you rotate the blade a complete revolution you see that the point of the knife and the lower area of the knife is behind the blade at all times. The backsept knife should be positioned to obtain maximum backsweep. Locate the upper bolt to the front of the slot and the lower bolt to the back of the slot. Note, the bolt head should be located next to the bracket (see illustration) and any shims not needed should be placed between the back side of the bracket and the flat washer next to the head of the bolt.

8 The front swept knife should be positioned as close to the blade edge as possible. Zero clearance. This will maintain the blade's trash cutting ability. Rotate the coulter blade to determine the point of maximum eccentric runout of the circumference and adjust the knife to zero clearance at this point. The top of the knife should be away from the blade far enough so that the scraper can pass the top, thick part, of the knife without rubbing the knife. NOTE, The knife position should be inspected frequently and re–adjusted regularly.

REF 47300300 SPINDLE ONLY

9 Make sure all hardware is tightened securely.

10 No field operation lubricating 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
	40350000	MAIN BRKT. & BLADE, L.H. (STANDARD)	1
	40351000	MAIN BRKT. & BLADE, RIGHT HAND	OPT.
		INCLUDES ITEMS 1 TO 32	
	47304500	MAIN BRKT. W/HUB, L.H. (STANDARD)	1
	47314500	MAIN BRKT. W/HUB, RIGHT HAND	OPT.
		INCLUDES ITEMS 1 TO 31 (W/O BLADE)	
1	47004500	HOUSING W/BUSHINGS, L.H. (STD)	1
	47014500	HOUSING W/BUSHINGS, RIGHT HAND	OPT.
2	47009954	SWIVEL BUSHING, 1 1/2 I.D.	2
3	47009953	PIVOT BUSHING, 1 3/8 I.D.	2
4	47004507	PIVOT ARM, L.H. FRONT SWEPT KNIFE	1
4A	47014507	PIVOT ARM, R.H. FRONT SWEPT KNIFE	OPT.
5	18300326	RETAINING WASHER, 1 3/8 I.D.	1
6	18511035	EXPANSION PIN, 3/8 X 2	1
7	2–6668	EYE BOLT GUIDE	1
8	47004518	EYE BOLT, SPRING RETAINER	1
9	18541835	CLEVIS PIN, 3/4 X 2 1/2	1
10	18560726	COTTER PIN, 5/32 X 1 1/2	1
11	47004521	SPRING CAP, WITH COUNTER–BORE	1
12	47007565	COMPRESSION SPRING	1
13	47007085	SPRING CAP, STANDARD CASTING	1
14	18851800	FLAT WASHER, 3/4	1
15	18446890	HEX. NUT, 3/4–10NC	2
	47300350	HUB COMPLETE (W/O SEAL & BOLTS)	
		INCLUDES ITEMS 16 TO 22	
16	47300351	HUB WITH CUPS ITEMS 17 & 18	1
17	47005510	BEARING CUP, INNER	1
18	47005010	BEARING CUP, OUTER	1
19	47005048	BEARING CONE, OUTER	1
20	47005548	BEARING CONE, INNER	1
21	47005513	DUST CAP	1
22	47990351	O–RING DUST SEAL	1
23	47300352	SPINDLE WASHER	1
24	47300353	SLOTTED NUT, 7/8–14UNF	1
25	18560726	COTTER PIN, 5/32 X 1 1/2	1
26	40030326	GREASE SEAL	1
27	18057522	WHEEL BOLT, 1/2–20NF X 1	4
28	18891400	LOCK WASHER, 1/2 I.D.	4
29	47304522	COULTER SWIVEL BAR, 18" STANDARD	1
	OPTIONAL	COULTER BAR W/RESTRICTED SWING	
		10 DEG. AND 15 DEG. AVAILABLE	
29A	47005144	18" BAR 10° RESTR. SWING (BOTH WAYS)	
	47005144L	18" BAR 10° RESTR. SWING LH ONLY	
	47005144R	18" BAR 10° RESTR. SWING RH ONLY	
	47005145	18" BAR 15° RESTR. SWING (BOTH WAYS)	
	47005145L	18" BAR 15° RESTR. SWING LH ONLY	
	47005145R	18" BAR 15° RESTR. SWING RH ONLY	
		CALL AG SYSTEMS FOR INFO.	
30	18300323	RETAINING WASHER, 1 1/2 I.D.	1
31	18511036	EXPANSION PIN, 3/8 X 2 1/4	1
32	47305027	COULTER BLADE, 20" RIPPLED	1
ITEMS	33 TO 35	OPT. USE W/FRONT SWEPT KNIFE ONLY	
33	47306921	SCRAPER	1
34	18033810	BOLT, 3/8–16NC. X 1, TRUSS HEAD	1
35	18496800	HEX. NUT, 3/8–16NC. FLANGED	1
36	47309893	MOUNTING BRACKET, (4" VERTICAL) STD.	1
37	47006951	U–BOLT, 5/8–11NC. (4"V X 6"H BAR)	1
	44001616	U–BOLT, 5/8–11NC. (4"V X 4"H BAR)	
36	47309888	MOUNTING BRACKET, (6" VERTICAL)	OPT.
37	47010154	U–BOLT, 5/8–11NC. (6"V X 4"H BAR)	
	47009847	U–BOLT, 5/8–11NC. (6"V X 6"H BAR)	
36A	47309736	MOUNTING BRACKET, (7" VERTICAL)	1
37	47302730	U–BOLT, 1/2–13NC. (7"V X 7"H BAR)	2
38	18891400	LOCKWASHER, 1/2	4
39	18417400	HEX. NUT, 1/2–13NC	4
38	18891600	LOCKWASHER, 5/8	2
39	18417900	HEX. NUT, 5/8–11NC.	2
40	18057434	BOLT, 1/2–13NC. X 2 1/2	2
41	18891400	LOCKWASHER, 1/2	2
42	18417400	HEX. NUT, 1/2–13NC.	2
ITEMS	40, 41 &	42 (3) REQ'D. W 6 X 6 OR 7 X 7 TUBE	
43	47306661	SHIM, 1/4	1
	47306662	SHIM, 1/8	1
	47306663	SHIM, 1/16	1
44	18057432	BOLT, 1/2–13NC. X 2 1/4	2
45	18811400	FLATWASHER, 1/2	2
46	18891400	LOCKWASHER, 1/2	2
47	18417400	HEX. NUT, 1/2–13NC	2
48	47309756	LIQUID KNIFE, (BACKSWEPT)	OPT.
	47309742	LIQUID KNIFE, (FRONTSWEPT)	OPT.
	47307468	LIQUID KNIFE, (FRONTSWEPT) S.S. TUBE	OPT.
49	47309038	NOZZLE BRACKET (L.H) (STANDARD)	OPT.
49A	47997038	NOZZLE BRACKET (R.H.)	OPT.
50	100859	HOSEBARB, S.S. 1/4 NPT. X 1/2 TUBE	1
51	500192	ADAPTER	1
52	504015	STREAM STABALIZER	1
53	ORIFICE	SELECT FROM ORIFICE CHART	1
54	503127	CAP	1
55	47005500	DUST CAP INSTALLATION TOOL (OPTIONAL)	1

SRVCLTHBMF

PROCEDURE TO SERVICE A COULTER HUB "MAINTENANCE-FREE" HUB

The factory procedure to assemble the coulter 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 coulter hub. If possible, obtain an illustration of the coulter before proceeding.

ASSEMBLE THE COULTER HUB AS FOLLOWS.

1: Pre-pack the inner bearing cone with grease and insert it into the back of the hub.

2: Add grease to cover the back of the bearing and cup. CAUTION – CAUTION : Do not "fill" the back of the hub with grease. Do not get any grease on the sealing seat for the grease seal. The seal is treated with a sealing agent and grease or oil on the sealing surface will destroy the effectiveness of the seal. If there is any grease on the sealing surface in the hub wipe it with a degreasing agent.

3: Carefully insert the grease seal. Do not get any grease on the outer sealing surface of the seal. Tap or press the seal in place. Make sure the seal is entering and seating squarely.

4: Turn the hub over and fill the center cavity with grease. Pre-pack the outer bearing with grease and insert it into the hub.

5: Position the hub on the spindle and install the spindle washer and the slotted nut.

6: Rotate the hub by hand while tightening the slotted nut until the hub locks-up. This will align and seat the bearing rollers. Back off the nut until you can freely rotate the hub by hand and install the cotter pin. Bend the ends of the cotter pin "down" only. Not one half up and one half down.

7: Completely fill the front cavity of the hub with grease.

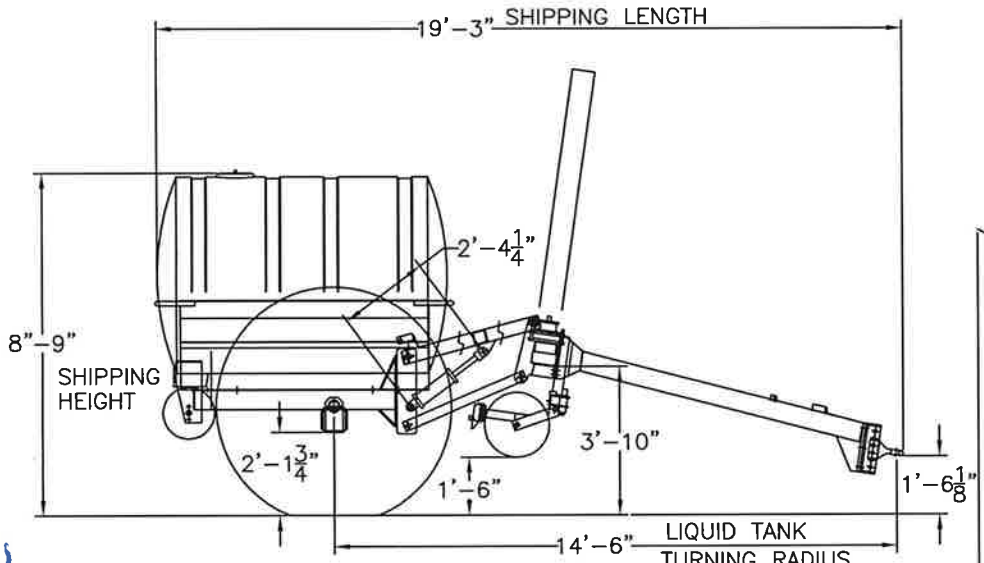
8: Inspect the hub to make sure it is properly assembled and then install the dust cap.
CAUTION: Once the dust cap is installed it cannot be removed with out destroying it. Take care to be sure the dust cap is square to the bore when starting and seating it. An old dust cap or a piece of tubing with the right I. D. and O. D. may be helpful.

9: You may now assemble the coulter blade. During field operation check the coulter 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.

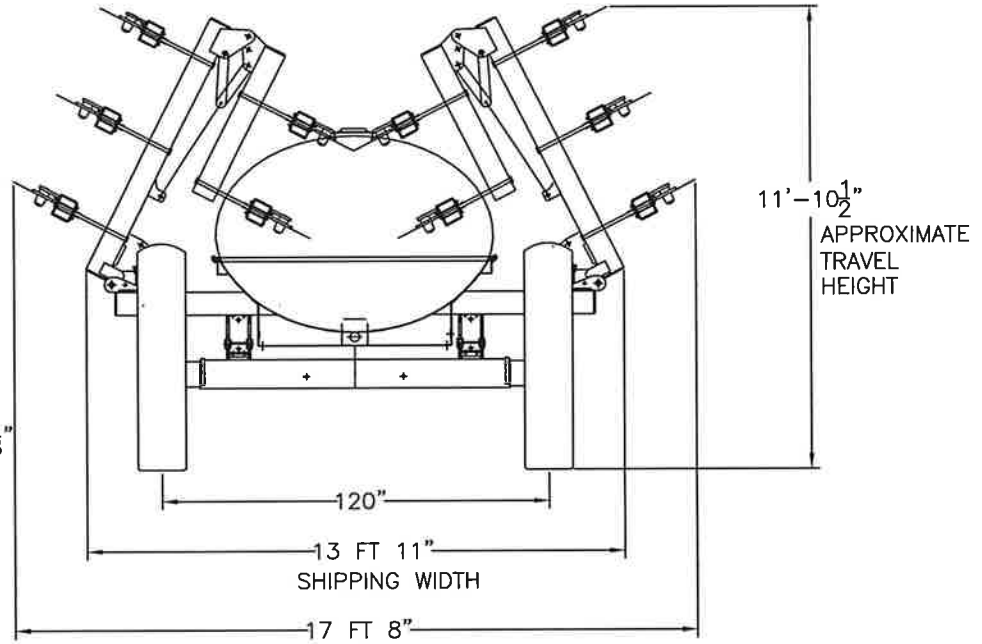
6400 SERIES TOOLBAR AND CADDY SPECIFICATIONS 2007 AND NEWER

64KSPECSLQ07
REV 02-24-11

(AS REVISED FOR 2007)
(SHORTER TURNING RADIUS THAN 2006 VERSION)

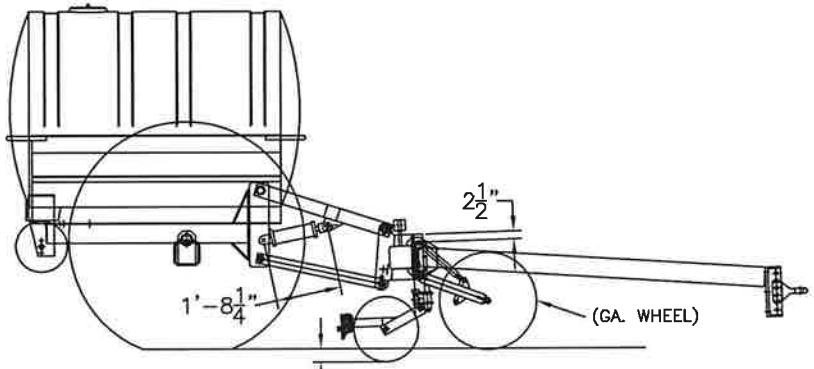


(UP IN TRANSPORT POSITION)
(HYD CYLINDER EXTENDED)



APPROXIMATE TRAVEL WIDTH

rear view

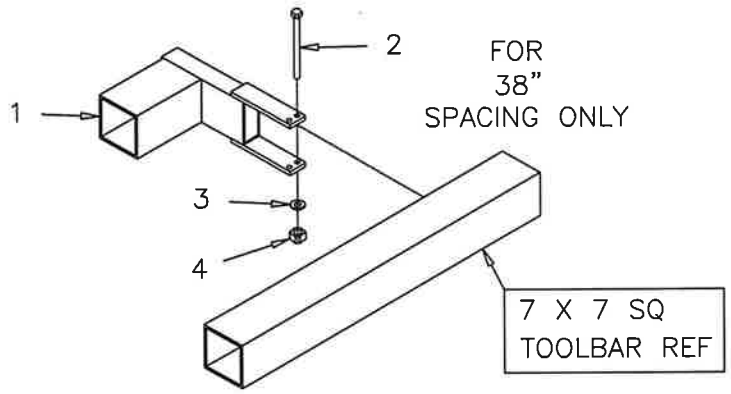


(DOWN IN GROUND POSITION)
(HYDRAULIC CYLINDER CONTRACTED)

MISC STAGGER BRACKETS

64KSTAGBRKT
05-30-12

FOR 6400 TOOLBARS ONLY



SEE THE APPROPRIATE TOOLBAR LAYOUT FOR THE ROW SPACING DESIRED TO DETERMINE PROPER LOCATION OF BRACKETS

ITEM	PART NO.	DESCRIPTION (30" SPACING)	QTY
1	47015001	STD STAGGER BRACKET	2
2	18058479	BOLT, HEX 3/4-10 NC X 9.50 LG GR5 ZC	4
3	18891800	LOCKWASHER, 3/4 ZC	4
4	18418400	NUT, HEX 3/4-10 NC ZC	4

ITEM	PART NO.	DESCRIPTION (12 ROW 38" SP)	QTY
1	47015001	STD STAGGER BRACKET	2
2	18058479	BOLT, HEX 3/4-10 NC X 9.50 LG GR5 ZC	4
3	18891800	LOCKWASHER, 3/4 ZC	4
4	18418400	NUT, HEX 3/4-10 NC ZC	4
2	47305140	SPECIAL COULTER MOUNT BRKT	2

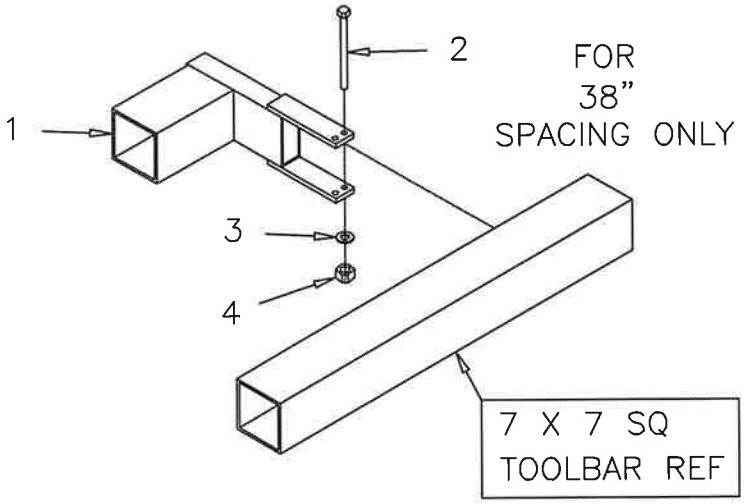
ITEM	PART NO.	DESCRIPTION (17 ROW 22" SP)	QTY
1	47015001	STD STAGGER BRACKET	6
2	18058479	BOLT, HEX 3/4-10 NC X 9.50 LG GR5 ZC	12
3	18891800	LOCKWASHER, 3/4 ZC	12
4	18418400	NUT, HEX 3/4-10 NC ZC	12

ITEM	PART NO.	DESCRIPTION (22 ROW 20" SP)	QTY
1	47015001	STD STAGGER BRACKET	10
2	18058479	BOLT, HEX 3/4-10 NC X 9.50 LG GR5 ZC	20
3	18891800	LOCKWASHER, 3/4 ZC	20
4	18418400	NUT, HEX 3/4-10 NC ZC	20

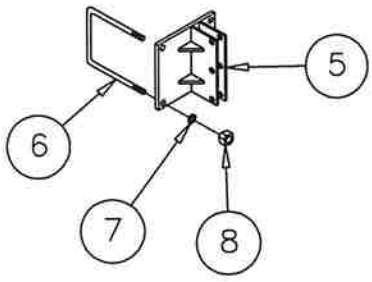
MISC STAGGER BRACKETS

63KSTAGBRKT
REV 06-08-12

FOR 6300 & 6400 TOOLBARS ONLY



* SPECIAL COULTER MOUNT BRACKET



SEE THE APPROPRIATE TOOLBAR LAYOUT FOR THE ROW SPACING DESIRED TO DETERMINE PROPER LOCATION OF BRACKETS

ITEM	PART NO.	DESCRIPTION (12 ROW 30" SP)	QTY
1	47015001	STD STAGGER BRACKET	2
2	18058479	BOLT, HEX 3/4-10 NC X 9.50 LG GR5 ZC	4
3	18891800	LOCKWASHER, 3/4 ZC	4
4	18418400	NUT, HEX 3/4-10 NC ZC	4

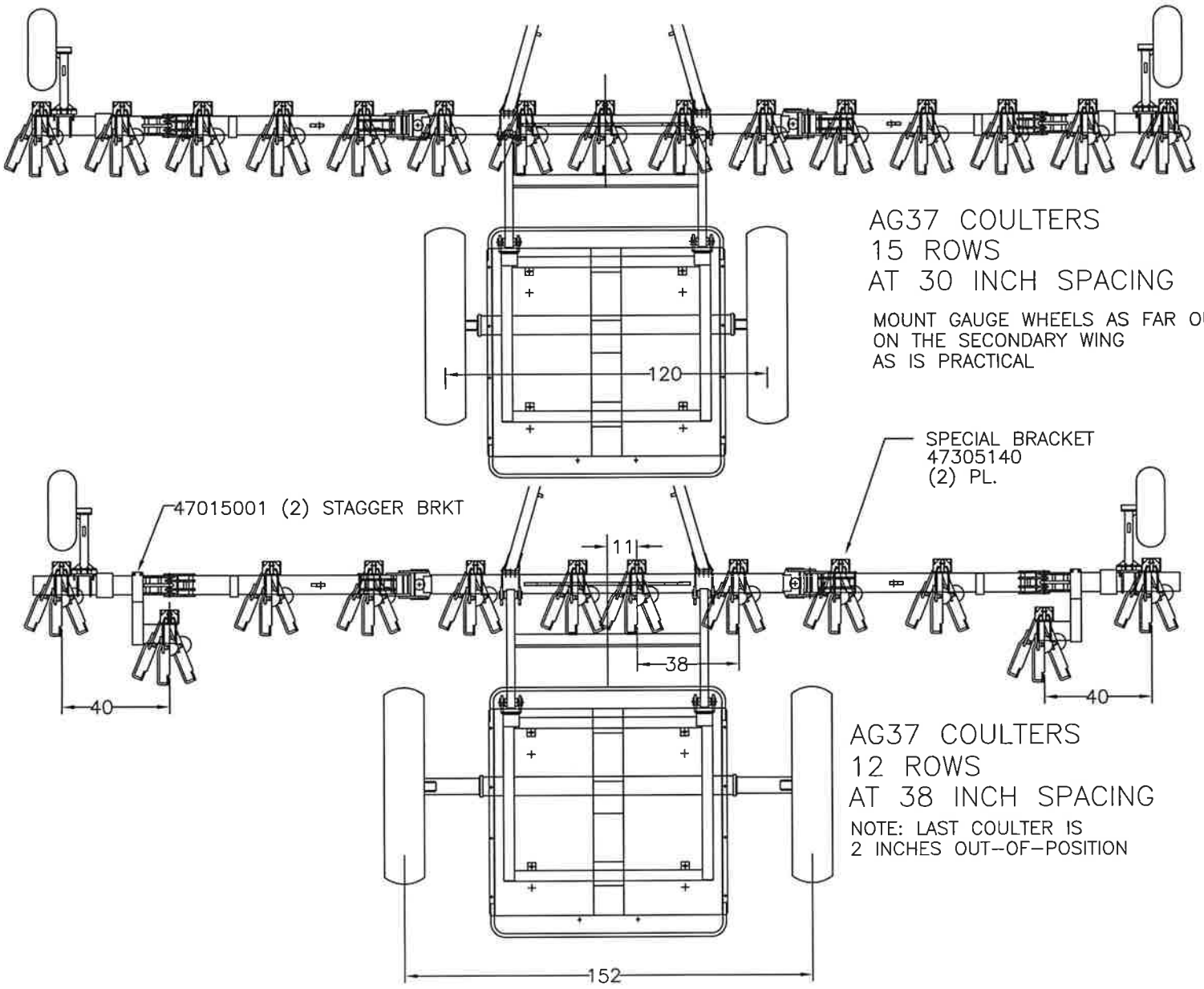
ITEM	PART NO.	DESCRIPTION (12 ROW 38" SP)	QTY
1	47015001	STD STAGGER BRACKET	2
2	18058479	BOLT, HEX 3/4-10 NC X 9.50 LG GR5 ZC	4
3	18891800	LOCKWASHER, 3/4 ZC	4
4	18418400	NUT, HEX 3/4-10 NC ZC	4
5*	47305140	SPECIAL COULTER MOUNT BRACKET	2
6	47302730	U-BOLT, 1/2-13	4
7	18891400	LOCKWASHER, 1/2 ZC	8
8	18417400	NUT, HEX 1/2-13 ZC	8

* SEE SHANK LAYOUTS FOR AN EXAMPLE HOW 47305140 (SPECIAL COULTER MOUNT BRACKET) IS USED NEAR HINGE IN THE SHANK LAYOUT SECTION OF THIS MANUAL.

6400 SERIES TOOLBAR

WITH COULTERS FOR LIQUID APPLICATION

64KSHNKLQ
REV/04-28-10

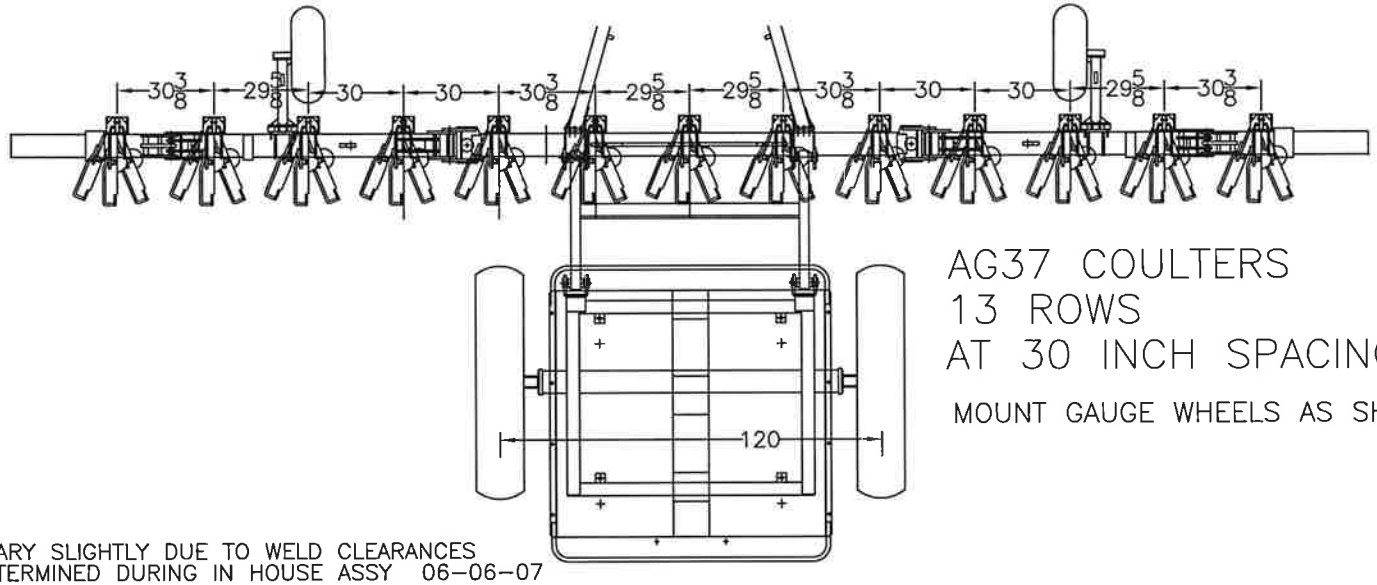


6400 SERIES TOOLBAR

WITH COULTERS FOR LIQUID APPLICATION

64K13ROWARR
REV/06-08-07

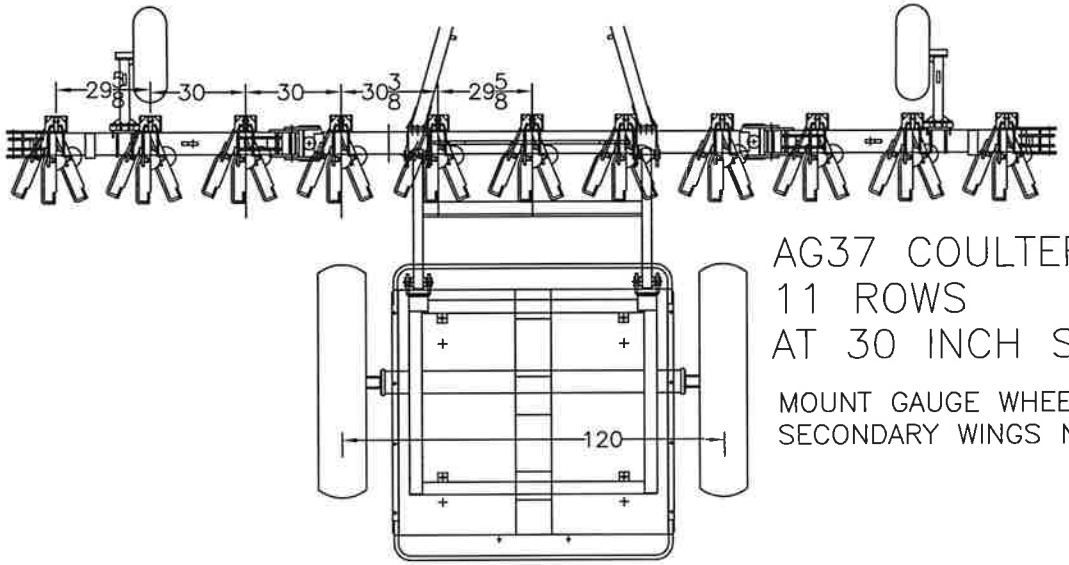
* DIM MAY VARY SLIGHTLY DUE TO WELD CLEARANCES
THIS WAS DETERMINED DURING IN HOUSE ASSY 06-06-07



AG37 COULTERS
13 ROWS
AT 30 INCH SPACING

MOUNT GAUGE WHEELS AS SHOWN

* DIM MAY VARY SLIGHTLY DUE TO WELD CLEARANCES
THIS WAS DETERMINED DURING IN HOUSE ASSY 06-06-07



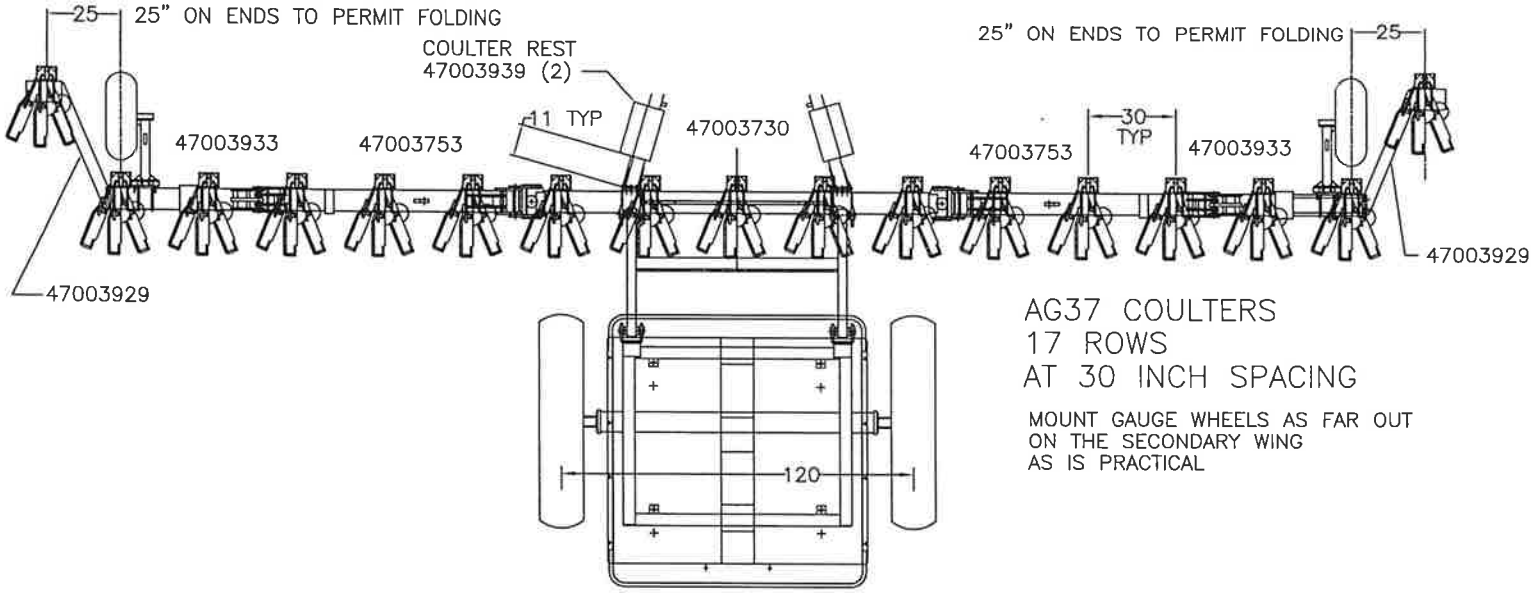
AG37 COULTERS
11 ROWS
AT 30 INCH SPACING

MOUNT GAUGE WHEELS AS SHOWN
SECONDARY WINGS NOT REQUIRED

6400 SERIES TOOLBAR

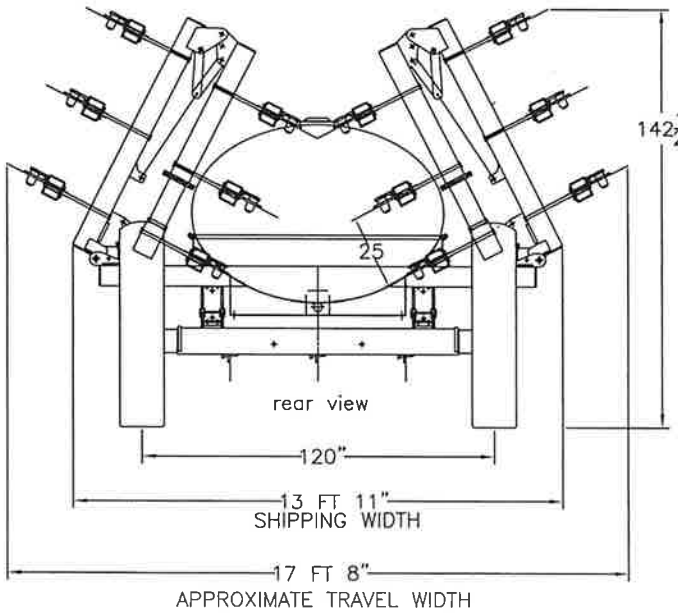
WITH COULTERS FOR LIQUID APPLICATION

64K17X30
PRO 04-05-13
REV 06-18-13

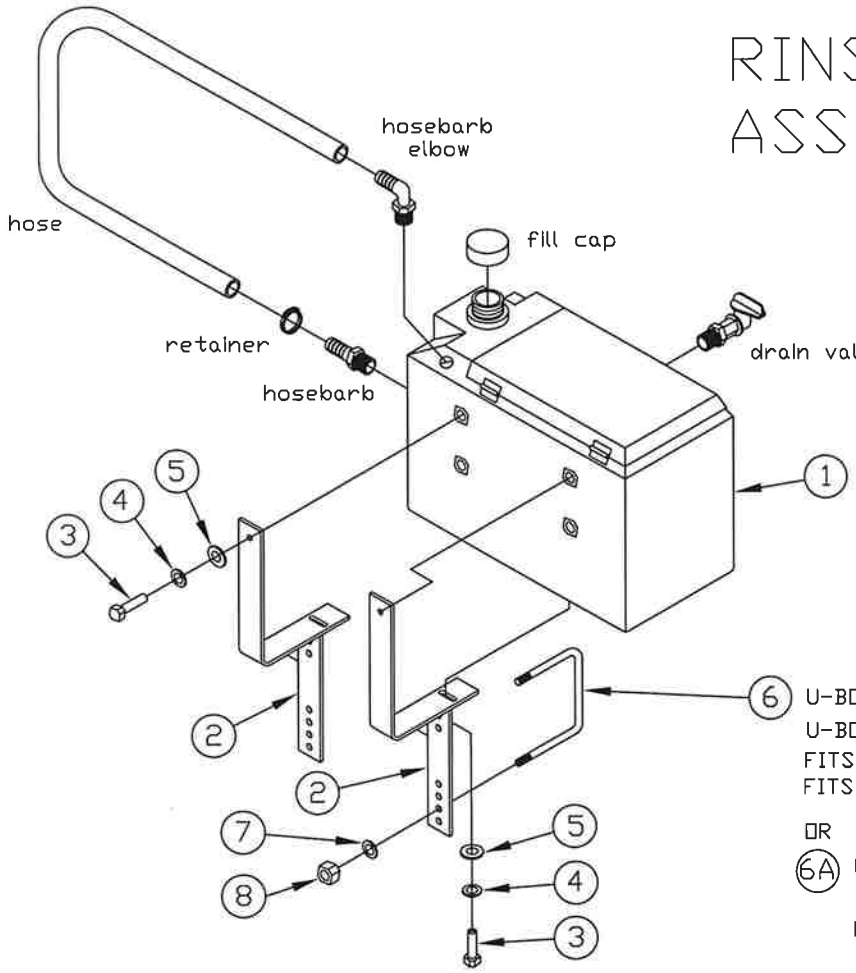


AG37 COULTERS
17 ROWS
AT 30 INCH SPACING

MOUNT GAUGE WHEELS AS FAR OUT ON THE SECONDARY WING AS IS PRACTICAL



RINSE TANK ASSEMBLY



6 U-BOLT, FITS 4 X 6 TUBE
U-BOLT (4 X 6 TUBE)
FITS 6000, 6300, 6400, 6500, 6600
FITS 7000, 7200, 7300, 8000, 8500

OR

6A U-BOLT, FITS 3 X 5 TUBE
U-BOLT (3 X 5 TUBE)
FITS 6200 ONLY

ITEM	QTY	PARTNUMBER	DESCRIPTION
		601547	COMPLETE RINSE TANK KIT KIT INCLUDES ALL ITEMS 1 THRU 8
		47005781	RINSE TANK MOUNTING KIT INCLUDES ITEMS 2 THRU 8 ONLY
1	1	CRM6000-30	RINSE TANK ASSEMBLY INCLUDES HOSE, VALVE, CAP, AND FITTINGS
2	2	47005780	RINSE TANK BRACKET
3	4	18026422	BOLT, HEX 5/16 X 1/2SS
4	4	18991110	LOCKWASHER, 5/16 SS
5	4	18991100	FLATWASHER, 5/16 SS
6	2	47006545	U-BOLT (4 X 6 TUBE)
6A	2		U-BOLT (4 X 5 TUBE)
7	4	18891400	LOCKWASHER, 1/2 ZP
8	4	18417400	NUT, HEX, 1/2-13 ZP

MOUNTING INSTRUCTIONS

MOUNT TO THE LH HITCH POLE WITH BRACKETS ON THE INSIDE OF THE HITCH POLE. DRAIN VALVE ON TANK TO THE OUTSIDE. MOUNT FOR MAXIMUM DRAINAGE THRU SPIGOT USING ADJUSTMENT HOLES.

5781-MANUAL
12-03-12

Heartland AG SYSTEMS
Heartland Agriculture, LLC

WARRANTY CLAIM FORM

Heartland AG SYSTEMS EQUIPMENT

Dist. Acct. No.	Shop Order No.		Part Number	Qty	Description	Distributor Total	Approved Total
Customer Name							
City	State						
Country	Postal Code						
Model No.	P.I.N.						
Warranty Start Date	Failure Date	Date of Repair					
Describe Problem(s)							
			Outside Expenses		Invoice No		
Describe Work Performed	Itemize Labor						
			Total Parts Cost Including Outside Expenses:				
			Labor	HRS	X Hourly Rate		
						Warranty Claim Total:	
			Distributer Signature				
			Authorized Signature		Status	Date	

November 4, 2020

Warranty claims must be submitted within 30 days of repair | Remit to address: 1180 Hwy 7 W Hutchinson MN 55350

Heartland Agriculture LLC, dba Heartland AG Systems