

W. & A. MANUFACTURING CO.



SPECIALIZED FARM EQUIPMENT

PHONE 870/534-7420 • P.O. BOX 5238 • 1810 OHIO ST. • PINE BLUFF, ARKANSAS 71611



LEVEL BANDER OWNER'S MANUAL

Revised 08.21



This manual is applicable to: Level Bander

Record the model number and serial number of your Level Bander along with date purchased:

MODEL NUMBER _____

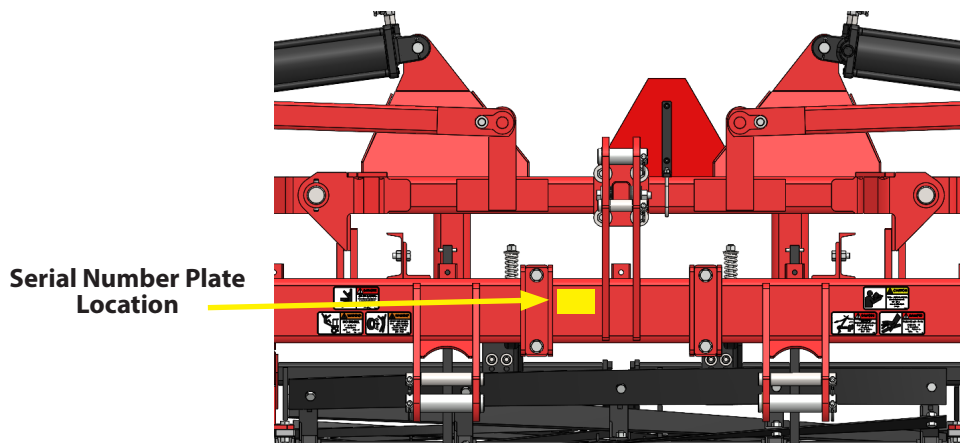
SERIAL NUMBER _____

DATE PURCHASED _____

SERIAL NUMBER

The serial number plate is located on the frame to be readily available. It is suggested that your serial number and purchase date also be recorded above.

The serial number provides important information about your Level Bander and may be required to obtain the correct replacement part. Always provide the model number and serial number to your W&A Manufacturing dealer when ordering parts or anytime correspondence is made with W&A Manufacturing.





TO THE DEALER

Factory to Farm™ service includes full factory assembly. Dealer is responsible for field readiness.

PRE-DELIVERY CHECKLIST

Use the following checklist after your Level Bander is completely assembled. Check off each item as it is found satisfactory or after proper adjustment is made.

- All working parts move freely, bolts are tight, and cotter pins are spread.
- Check for oil leaks and proper hydraulic operation.
- Hydraulic hoses correctly routed to prevent damage.
- Inflate tires to specified air pressure and torque wheel lug bolts and lug nuts as specified in the manual.
- All safety decals correctly located and legible. Replace if damaged.
- All reflective decals and SMV sign correctly located and visible when the machine is in transport position.
- Safety/warning lights correctly installed and working properly.
- Paint all parts scratched during shipment or assembly.
- All safety lockup devices on the Level Bander are correctly located.

The Level Bander has been thoroughly checked and to the best of my knowledge is ready for delivery to the customer.

(Signature Of Set-Up Person/Dealer Name/Date)

NAME _____ DELIVERY DATE _____

STREET ADDRESS _____ MODEL NO. _____ SERIAL NO. _____

CITY, STATE/PROVINCE _____ DEALER NAME _____

ZIP/POSTAL CODE _____ DEALER NO. _____



DELIVERY CHECKLIST

Use the following checklist after your Level Bander is delivered as a reminder of very important information which should be conveyed to retail customer/end user. Check off each item as it is fully explained.

- Life expectancy of this or any other machine is dependent on regular lubrication as directed in the Owner's Manual.
- All applicable safety precautions.
- Along with retail customer/end user, check reflective decals and SMV sign are clearly visible with Level Bander in transport position and attached to tractor. Check safety/warning lights are in working condition. Tell retail customer/end user to check federal, state/provincial, and local regulations before towing or transporting on a road or highway.
- Give Owner's Manual and all Instruction Sheets to retail customer/end user and explain all operating adjustments.
- Read warranty to retail customer/end user.
- Complete Warranty and Delivery Report form.

To the best of my knowledge, this machine has been delivered ready for field use and customer has been fully informed as to proper care and operation.

(Signature Of Set-Up Person/Dealer Name/Date)

AFTER DELIVERY CHECKLIST

The following is a list of items we suggest to check during the first season of use of the equipment.

- Check Level Bander performance with retail customer/end user.
- Review importance of proper maintenance and adherence to all safety precautions with retail customer/end user.
- Check for parts that may need to be adjusted or replaced.
- Check all safety decals, reflective decals, and SMV sign are correctly located as shown in the Parts Guide and that decals are legible. Replace if damaged or missing.
- Check that safety/warning lights are properly installed.

(Signature Of Set-Up Person/Dealer Name/Date)

All registrations must be submitted to W&A Manufacturing within 5 business days of delivery. Retain a copy of this form for auditing purposes.

All registrations must be submitted to:

W&A Manufacturing
PO Box 5238
Pine Bluff, AR 71611



OWNER'S MANUAL INDEX

GENERAL INFORMATION

- [HOW TO USE THIS MANUAL](#) 1
- [WARRANTY INFORMATION](#) 2
- [SAFETY](#) 3
- [SIGNAL WORDS](#) 3
- [EQUIPMENT SAFETY GUIDELINES](#) 4

SAFETY

- [SAFETY SIGN LOCATIONS](#) 5
- [SAFETY SIGN CARE](#) 10

PREPARATION & SET-UP

- [POST DELIVERY/SEASONAL/PRE-TILLAGE SET-UP](#) 11
- [CHECK/CHANGE HITCH CONFIGURATION](#) 12
- [HITCHING TRACTOR TO IMPLEMENT](#) 14
- [HYDRAULIC HOSE HOOK-UP](#) 15
- [LIGHT KIT GUIDE AND RELOCATION](#) 16
- [ELECTRICAL HOOK-UP](#) 17
- [LEVELING THE IMPLEMENT - STACKING](#) 18
- [LEVELING THE IMPLEMENT - RIGID/FOLDING](#) 20

OPERATION

- [BEFORE FIRST USE](#) 21
- [FOLDING/UNFOLDING FUNCTION](#) 23
- [TRANSPORT CHECKLIST](#) 25
- [GAUGE WHEEL ADJUSTMENT](#) 26
- [LEVELING THE MACHINE](#) 27
- [DEPTH SETTINGS](#) 28
- [DEPTH AND ANGLE ADJUSTMENT - ROOT ROOTERS](#) 30
- [DEPTH AND ANGLE ADJUSTMENT - BUSTER SHOVELS](#) 32
- [DEPTH AND ANGLE ADJUSTMENT - MIDDLE CLEANOUTS](#) 34
- [HEIGHT AND TENSION SETTINGS - ROLLING BASKETS](#) 36
- [TENSION SETTINGS - DRAGBOARD](#) 38
- [SPEED RECOMMENDATIONS](#) 39
- [PARKING/STORAGE](#) 40
- [LEVEL BANDER DO'S AND DON'TS](#) 42

TROUBLESHOOTING

- [TROUBLESHOOTING](#) 43

MAINTENANCE & LUBE

- [GENERAL MAINTENANCE](#) 45
- [MAINTENANCE SCHEDULE](#) 46
- [BLEEDING FOLD HYDRAULICS](#) 48
- [BOLT TORQUE CHART](#) 49
- [HYDRAULIC FITTING IDENTIFICATION](#) 50
- [CHECKING HYDRDRAULIC FITTINGS](#) 51

PARTS GUIDE

- [PARTS GUIDE INTRO](#) 53
- [HOW TO USE THIS PARTS GUIDE](#) 54
- [PARTS GUIDE MODEL INDEX NUMBER](#) 55

GENERAL INFORMATION



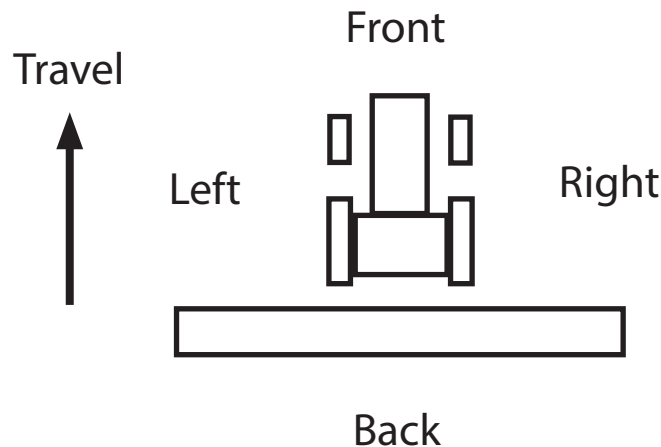
HOW TO USE THIS MANUAL

This manual is divided into sections. The first section contains a Table of Contents, General Information, and a Part Number Index. The remaining sections divide the machine into assemblies and sub-assemblies which illustrate and list all parts.

W&A Manufacturing parts in this manual are specially designed for this machine and should be replaced with W&A Manufacturing parts only.

Information in this manual was current at time of printing. However, due to W&A Manufacturing's ongoing product improvement, production changes may cause your machine to appear slightly different in detail. W&A Manufacturing reserves the right to change specifications or design without notice and without incurring obligation to install the same on machines previously manufactured.

Right-hand and left-hand as used in this manual are determined by facing the direction the machine will travel while in use.



MANUAL REPLACEMENT INFORMATION

Replacement manuals are available. Call the W&A Manufacturing Main Office at 308.708.8185, or download a printable PDF from our website, www.wamfgco.com.

MANUAL REVISIONS

When this manual is revised, the modification date is printed on the front cover and on the revised page(s).

TOUCH-UP PAINT

Repaint parts where paint is worn or scratched to prevent rust. Aerosol touch-up paint is available. To order, call W&A Manufacturing at 308.708.8185.



INTRODUCTION

Thank you for your purchase of a W&A Manufacturing Level Bander. Putting your trust in our equipment is something we don't take lightly and are humbled that you chose W&A Manufacturing. Having designed all of our equipment with farmers like you in mind, we hope you enjoy years of productive use from it. Please read and understand this manual before operation.

WARRANTY INFORMATION

AGROdeviate LLC (AGROdeviate) warrants each W&A Manufacturing product it manufactures to be free from defects in material and workmanship for a period not to exceed one (1) year from the date of sale to the original owner. The warranty is valid provided written notice of the alleged defect is received by AGROdeviate during said period and within ten (10) working days after its discovery.

In addition, AGROdeviate warrants each TOOLBAR FRAMEWORK to be free from defects in material and workmanship for a period not to exceed three (3) years from the date of sale to the original owner. The warranty is valid providing written notice of the alleged defect is received by AGROdeviate during said period and within ten (10) working days after its discovery.

This warranty is subject to completion of Product Registration and submission to AGROdeviate. Warranty applies only if product is installed, operated, and maintained according to product manual and instructions. Warranty will be void if the product has been subject to misuse, misapplication, neglect, collision with obstruction, or alteration.

For products, parts, and components NOT manufactured by AGROdeviate, the warranty obligations of AGROdeviate shall be limited to the Original Equipment Manufacturers' warranty. Tires on AGROdeviate equipment are warranted through the respective tire manufacturer and their network of dealers.

All returns must be pre-approved by AGROdeviate and authorization issued before return. All returns must include a copy of the original invoice in order to be processed. Any returns without a copy of the original invoice will not be eligible to receive credit.

If determined that the product is defective in material and/or workmanship, the necessary parts will be replaced and/or repaired. All warranty repair or labor is to be performed by an AGROdeviate authorized party. AGROdeviate obligation under this warranty shall be limited to repairing or replacing parts deemed defective. Warranty does not cover travel expenses. AGROdeviate will bear no other costs including loss, incurred labor, rental fees, nor other.

All returns shall be pre-paid. If warranty is approved by AGROdeviate, return freight will be credited.

This warranty by AGROdeviate LLC is expressly in lieu of all other warranties, expressed or implied, including warranty of merchantability and fitness for use. We neither assume, nor authorize, any other entity to accept for us any liability relating to the sale of our products.



SAFETY

TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



**THIS SYMBOL MEANS:
-ATTENTION!
-BECOME ALERT!
-YOUR SAFETY IS INVOLVED!**

SIGNAL WORDS:

Note the use of signal words DANGER, WARNING, and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines:



DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.



WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual, require additional copies, or the manual is damaged, please contact W&A Manufacturing, PO Box 5238, Pine Bluff, AR 71611, 308.708.8185, or visit our website: www.wamfgco.com.



SAFETY... YOU CAN LIVE WITH IT!



EQUIPMENT SAFETY GUIDELINES

Safety of the operator is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them.

In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

Replace any CAUTION, WARNING, DANGER or instruction safety decal that is not readable or is missing. Location of such decals is indicated in this booklet.

Do not attempt to operate this equipment under the influence of drugs or alcohol.

Review the safety instructions with all users annually.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. Do not allow persons to operate or assemble the unit until they have read this manual and have developed an understanding of the safety precautions and how it works.

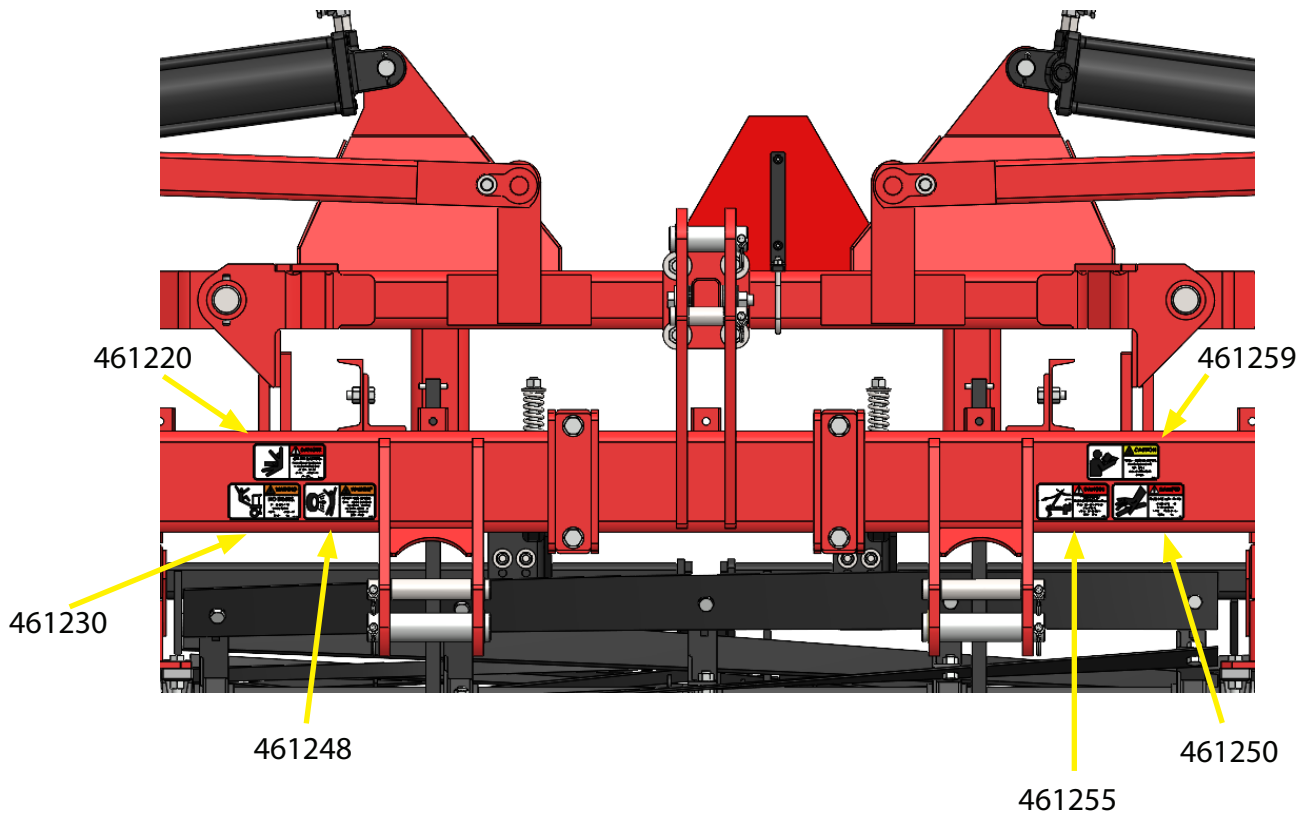
To prevent injury or death, use a tractor with a Rollover Protective Structure (ROPS). Do not paint over, remove or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - DON'T TRY IT.

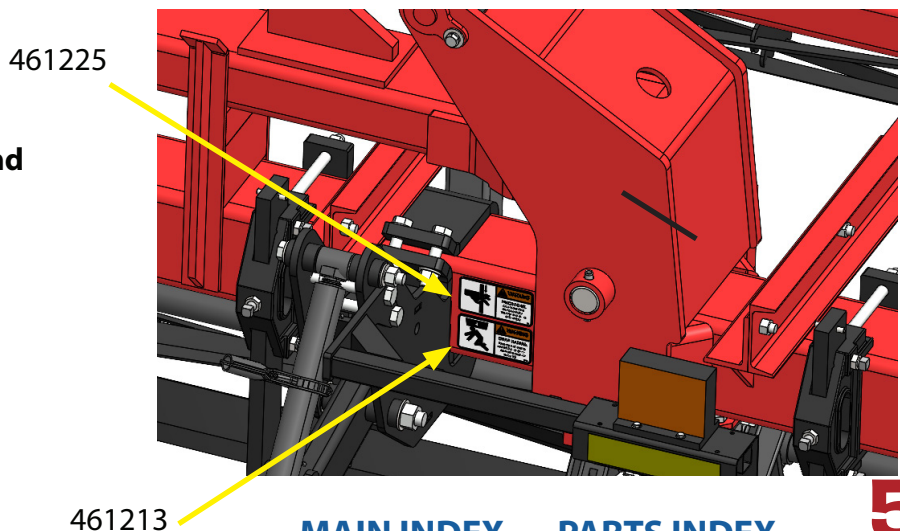


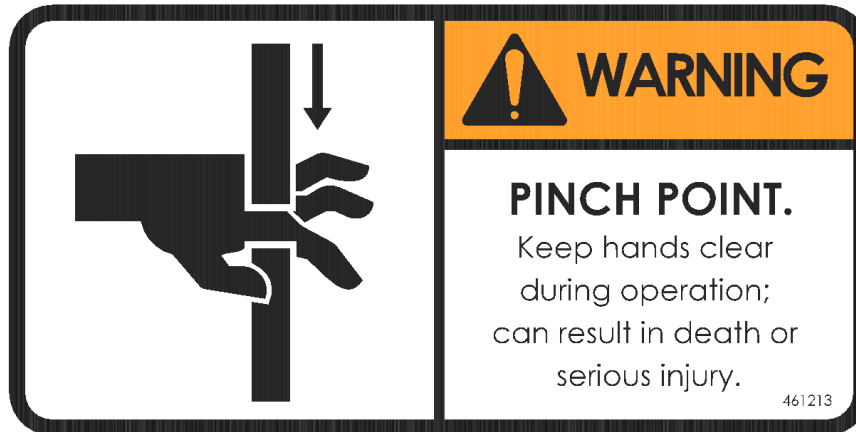
SAFETY SIGN LOCATIONS

These types of Safety Signs and locations on the equipment are shown in the illustrations below. Good safety requires that you familiarize yourself with the various Safety Signs, the type of warning and the area, or particular function related to that area, that require your SAFETY AWARENESS.



NOTE: LH/RH Safety Signs and locations are similar

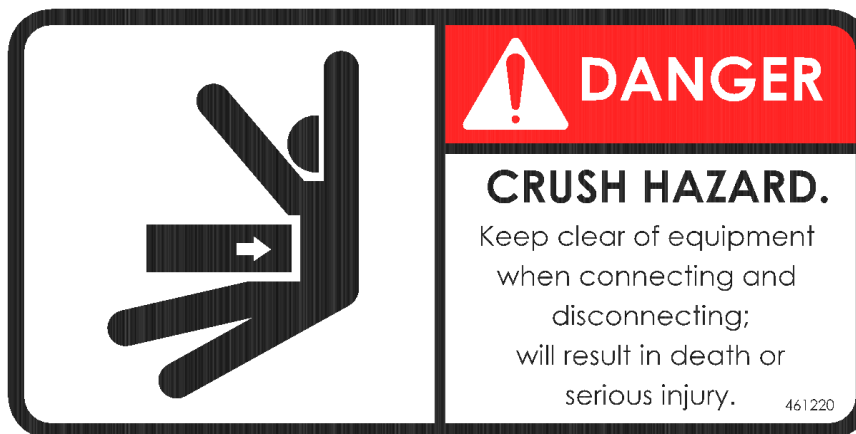




461213

PINCH POINT - WARNING

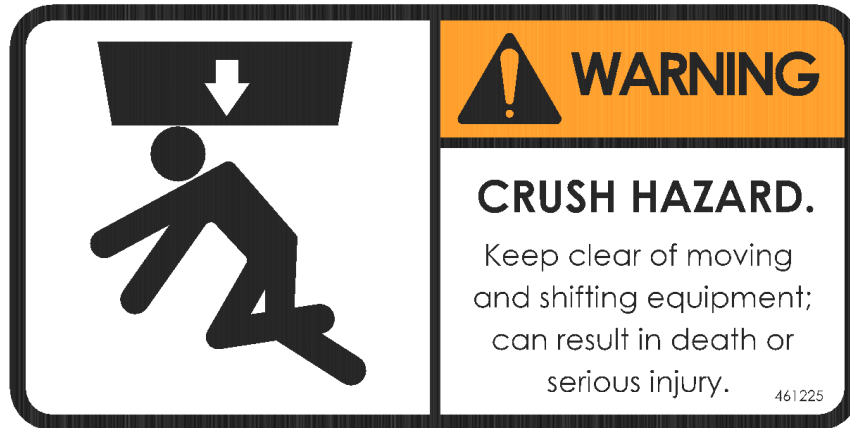
- Keep extremities clear of equipment. Object(s) can move or shift; can result in death or serious injury.
- Hazards may include, but are not limited to, hinge mechanism movement, pin movement, row unit movement and shifting, accessory movement and shifting, etc.



461220

CRUSH HAZARD - WARNING

- Keep clear of moving and shifting equipment. Equipment movement area; will result in death or serious injury.
- Hazards may include, but are not limited to, connection and disconnection of equipment, unexpected equipment shifting, etc.



461225

CRUSH HAZARD - WARNING

- Keep clear of moving and shifting equipment. Equipment can move or shift; can result in death or serious injury.
- Hazards may include, but are not limited to, folding wing movement, raised equipment movement and shifting, etc.



461230

NO RIDERS - WARNING

- Never allow riders on equipment; can result in death or serious injury.
- Hazards may include, but are not limited to, falling from equipment, falling into equipment, injury while on equipment, etc.



461248

CONTENTS UNDER PRESSURE - WARNING

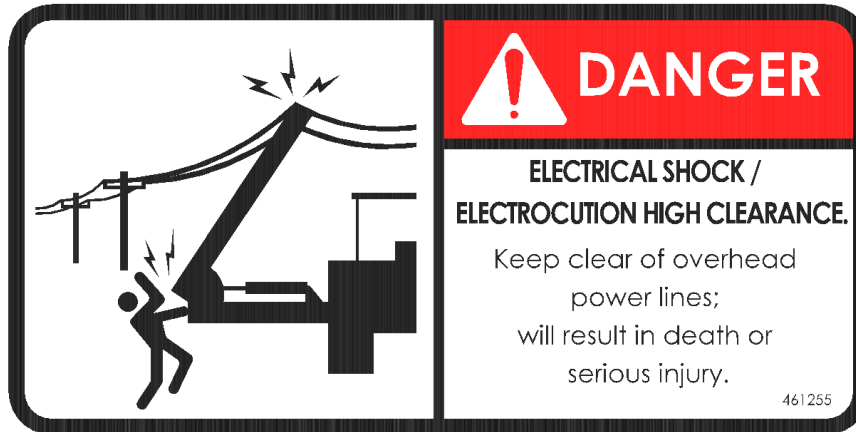
- Do not operate if damaged or improperly pressurized. Damaged or improperly pressurized components can discharge; can result in death or serious injury.
- Hazards may include, but are not limited to, damaged tire and/or rim, over pressurized tire, excessive tire wear, tire tears or punctures, ect.



461250

HIGH PRESSURE FLUID - DANGER

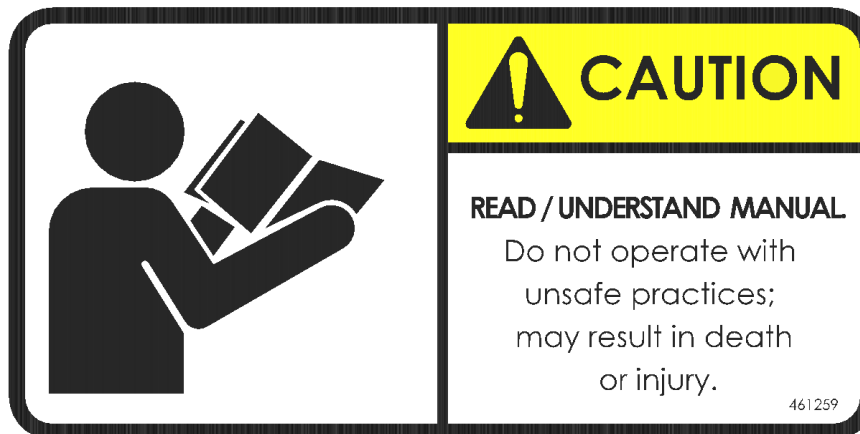
- Use safe practices. Fluid injection can occur; will result in death or serious injury.
- Hazards may include, but are not limited to, injury beyond the entry point, over pressurized components, damaged components, components with excessive wear, swollen components, ect.



461255

ELECTRICAL SHOCK/ELECTROCUTION HIGH-CLEARANCE DANGER

- Keep clear of overhead power lines, maintain 20-foot minimum distance. Electrical shock and/or electrocution can occur; will result in death or serious injury.
- Hazards may include, but are not limited to, high clearance equipment, low clearance power lines, lack of awareness of surroundings, etc.



461259

READ/UNDERSTAND MANUAL - CAUTION

- Do not operate without a complete understanding of the owner's manual. Do not operate with unsafe practices; may result in death or injury.
- Hazards may include, but are not limited to, compromising the safety of yourself and/or others, lack of awareness, damage to equipment, etc.



SAFETY SIGN CARE

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs are available from W&A Manufacturing.

HOW TO INSTALL SAFETY SIGNS

- Be sure that the installation area is clean and dry.
- Decide on the exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the decal over the specified area and carefully press the small portion with the exposed stick backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

REMEMBER: If Safety Signs have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from W&A Manufacturing.

**W&A Manufacturing
PO Box 5238
Pine Bluff, AR 71611**

**308.708.8185
www.wamfgco.com**

PREPARATION & SET-UP



This section helps you prepare your tractor and Level Bander for use. You must level the implement, hook up the implement hydraulics to the tractor, and check that the hydraulics have been bled.

POST-DELIVERY/SEASONAL SET-UP

On initial delivery, use with a new tractor, and seasonally check and as necessary, complete these items before continuing to the routine set-up items:

- Bleed hydraulic fold system (page 48)
- Check/Change Hitch Configuration
- Hitching Tractor to Implement
- Hydraulic Hose Hook-up
- Light Kit Guide and Relocation
- Electrical Hook-up
- Leveling the Implement

PRE-TILLAGE SET-UP

Complete this checklist before routine set-up:

- Read and understand important "Safety" information starting on page 3.
- Check that all working parts are moving freely, bolts are tight, and cotter pins are spread.
- Check that all grease fittings are in place and lubricated. See "Maintenance & Lube" on page 45.
- Check that all safety decals and reflectors are correctly located and legible. Replace if damaged. See "Safety Sign Locations" starting on page 3 and "Light Kit Guide and Relocation" on page 16.

PREPARATION & SET-UP



CHECK/CHANGE HITCH CONFIGURATION

On initial delivery, use with a new tractor, and seasonally check and as necessary, complete these items before continuing to the routine set-up items:

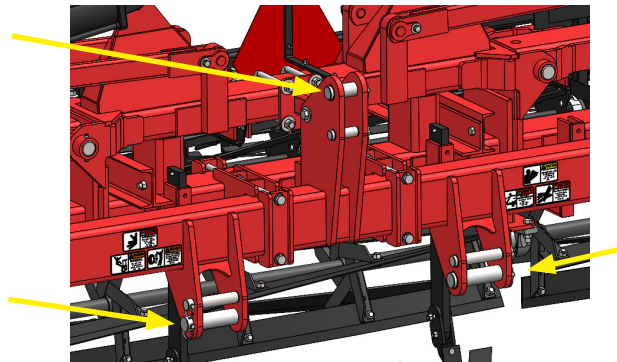
Choose a hitch option that is compatible with your tractor 3-point. The Level Bander has two hitch configurations:

- Category 3
- Category 4N

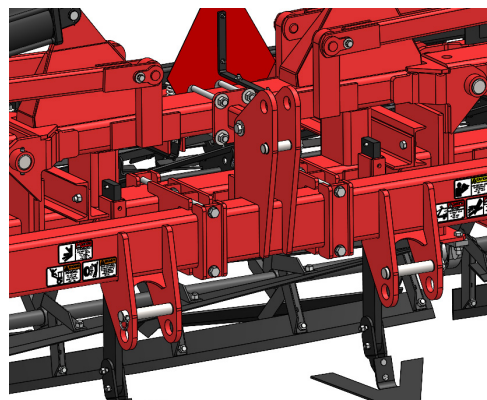
Changing between hitch categories requires removing pins at the implement hitch.

TO OPERATE AS CATEGORY 3

1. Remove and store the Category 4N pins shown.



2. Once removed, the remaining pins are set to run the implement with a Category 3 hitch.



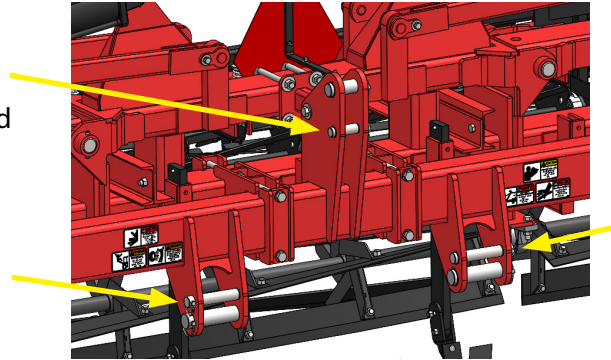
****SEE NEXT PAGE FOR CATEGORY 4N HITCH SET-UP****

PREPARATION & SET-UP

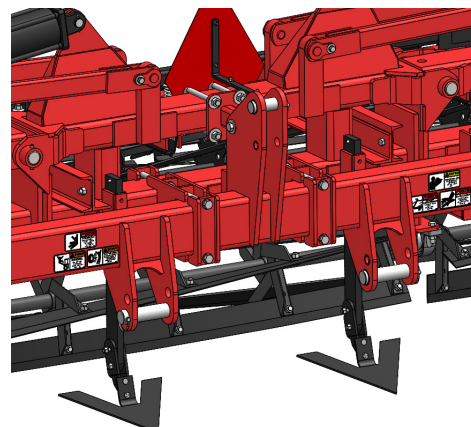


TO OPERATE AS CATEGORY 4N

1. Remove top and lower Category 3 pins shown and store them.



2. Once removed, the remaining pins are set to run the implement with a Category 4N hitch.



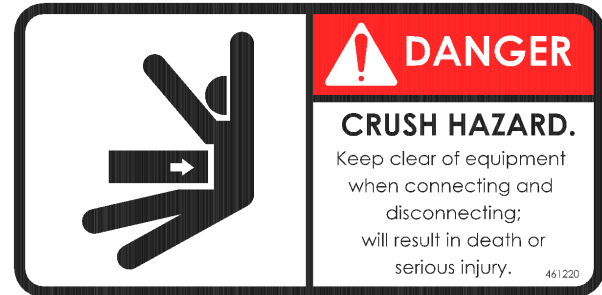
PREPARATION & SET-UP



HITCHING TRACTOR TO IMPLEMENT

On initial delivery, use with a new tractor, and seasonally check and as necessary, complete these items before continuing to the routine set-up items:

1. Connect the tractor 3-point lift arms to the lower hitch pins. If using a quick hitch, ensure that the pins lock securely.
2. Connect the top link to the upper hitch pin. Front-to-back leveling is performed in later steps.



461220

CRUSH HAZARD - WARNING

- Keep clear of moving and shifting equipment. Equipment movement area; will result in death or serious injury.
- Hazards may include, but are not limited to, connection and disconnection of equipment, unexpected equipment shifting, etc.

PREPARATION & SET-UP



HYDRAULIC HOSE HOOK-UP

Folding and Stacking Level Banders are equipped with independently controlled fold cylinders to individually fold the left and right wings. This section does not apply to Rigid toolbar models.

This requires the use of two remote valves. Hoses at base end of cylinder will unfold machine. Rod end hoses will fold machine up.

1. Connect fold hoses for left wing into remote valve of choice.
2. Connect fold hoses for right wing into remote valve of choice.
3. Check and make sure all hoses are tied up and secure before use.



461250

HIGH PRESSURE FLUID - DANGER

- Use safe practices. Fluid injection can occur; will result in death or serious injury.
- Hazards may include, but are not limited to, injury beyond the entry point, over pressurized components, damaged components, components with excessive wear, swollen components, ect.

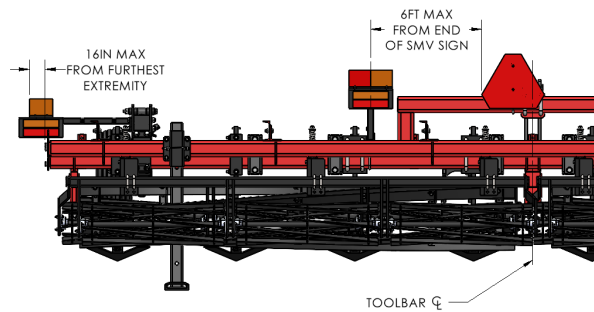
PREPARATION & SET-UP



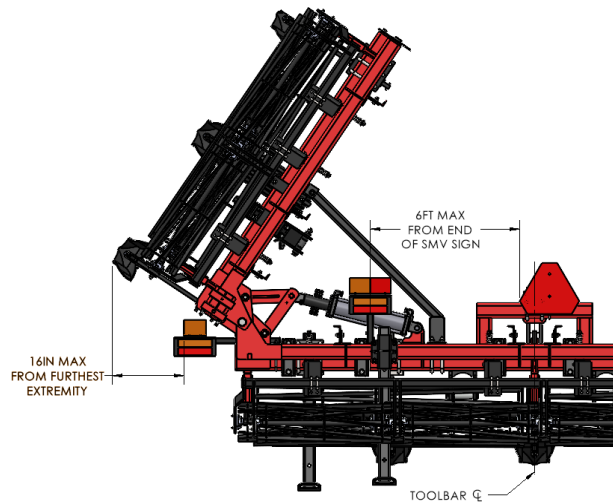
LIGHT KIT GUIDE AND RELOCATION

The light kit is installed at the factory. However, due to shipping requirements and other circumstances, some positions are altered and SMV sign or lights may need relocated before use. Typically, the SMV sign is the only component that needs relocated; please check all components. Check that all forward-facing reflectors and lights are visible from the front and all rear-facing reflectors and lights are visible from the rear. Please refer to the depiction below for component locations.

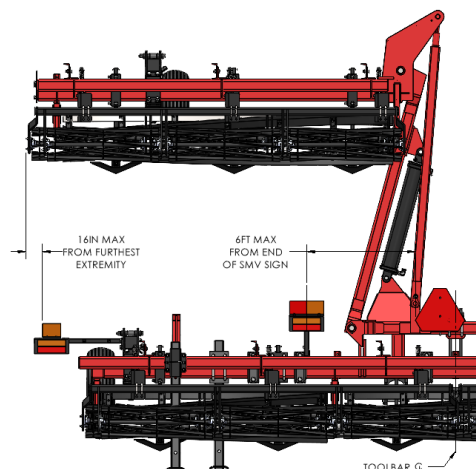
RIGID TOOLBAR



FOLDING TOOLBAR



STACKING TOOLBAR





ELECTRICAL HOOK-UP

Lights are connected using a standard 7-pin connector. To connect, simply lift receptacle cover, align plug and insert. To disconnect, lift receptacle cover and remove plug. Once connected, check to make sure all lights are working properly. If lights are not working properly, contact your dealer to fix before transporting on public roadways.

7-pin Connector



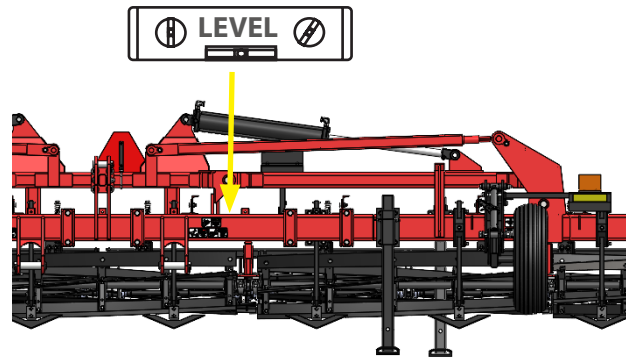


LEVELING THE IMPLEMENT - STACKING

Center Frame L/R Leveling (Figure 1)

1. Hitch the Level Bander to a tractor (page 12-15).
2. Raise the implement.
3. Adjust the tractor 2-point lift arms so that the center section tool bar is level.

Figure 1



Wing Leveling (Stacking - Figure 2 & 3)

4. Check wing for level at the top of the tool bar.
5. If wing is pitched up, remove washers (413120) from the center side and add them to the wing side. If wing is pitched down, remove washers from wing side and add them to the center side.
6. Repeat process until wing is level.

Figure 2

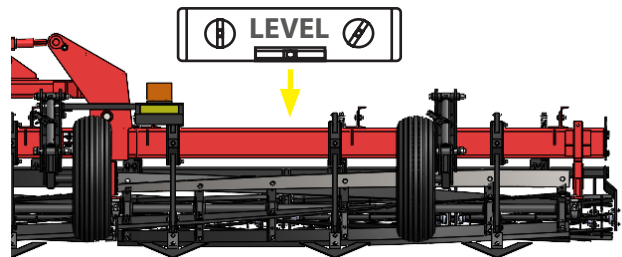
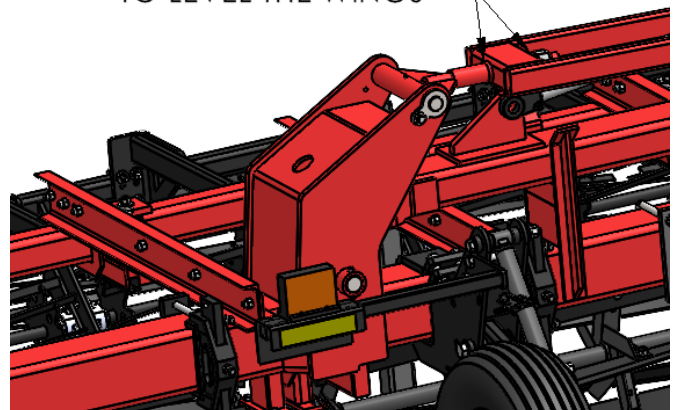


Figure 3

WASHERS (413120) CAN BE ADDED OR REMOVED FROM THESE LOCATIONS TO LEVEL THE WINGS



CRUSH HAZARD - WARNING

- Keep clear of moving and shifting equipment. Equipment can move or shift; can result in death or serious injury.
- Hazards may include, but are not limited to, folding wing movement, raised equipment movement and shifting, etc.

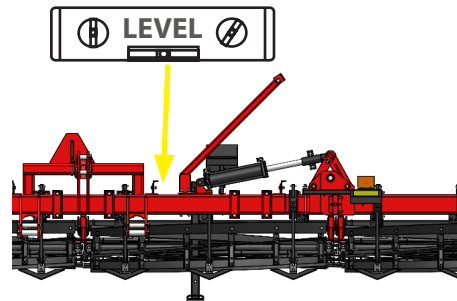


LEVELING THE IMPLEMENT - RIGID & FOLDING

Center Frame L/R Leveling (Figure 4)

1. Hitch the Level Bander to a tractor (page 12-15).
2. Raise the implement.
3. Adjust the tractor 2-point lift arms so that the center section tool bar is level.

Figure 4



Wing Leveling (Folding Machines - Figure 5 & 6)

4. Once implement is completely unfolded, place Wing Lock Pin through the hinge plates (Figure 5).
5. Check wing for level at the top of the tool bar.
6. If wing is pitched up, screw the Cylinder Clevis out a maximum of four turns. If wing is pitched down, screw the Cylinder Clevis in (Figure 5).

Figure 5

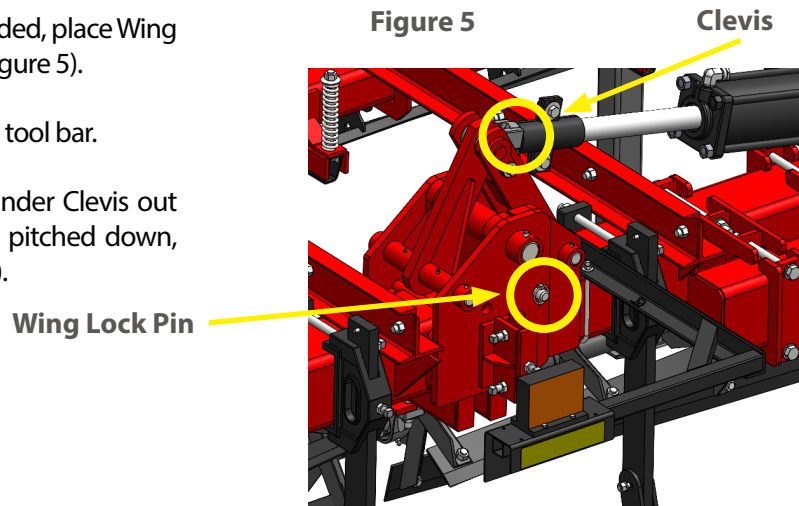
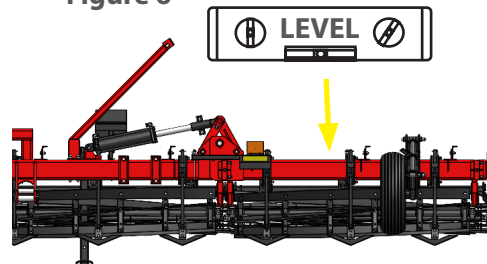


Figure 6



Front-to-Back Leveling

See "Leveling the Machine" on page 27. This adjustment needs to be completed in field conditions.



GAUGE WHEEL TIRE INFLATION

Gauge wheels inflated to the proper air pressure is an important factor in getting the best performance out of your Level Bander while increasing the longevity of the life of your gauge wheels.

Underinflation can damage the tire and decrease the life expectancy of your gauge wheel.

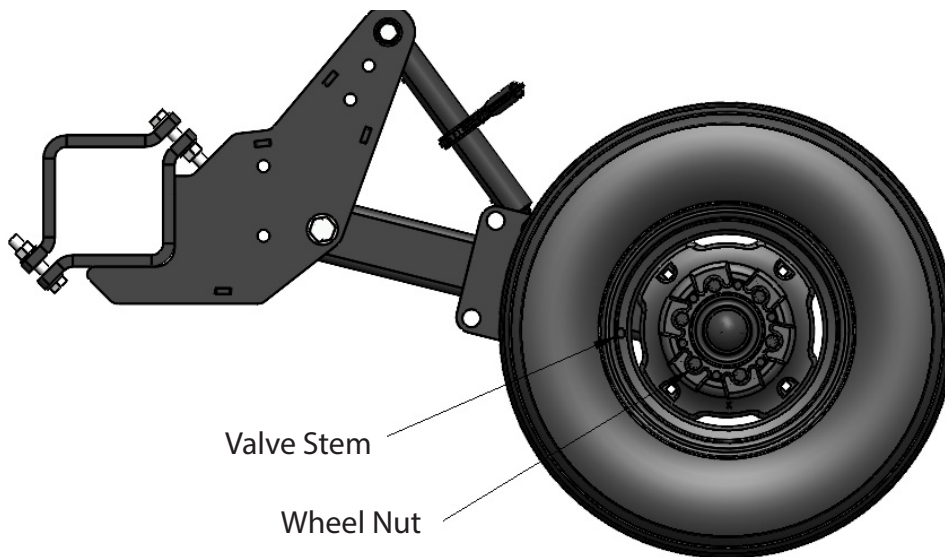
Initial tire pressure should be set at 30 PSI for your Level Bander gauge wheels.

If the tire buckles or wrinkles, the air pressure must be increased so the sidewalls remain smooth while operating.

NOTE: DO NOT OVERINFLATE TIRES

Check air pressure every two to three weeks and inflate when needed to prevent buckling or wrinkling of the tire.

It is recommended that all wheel nuts be checked for tightness after first day of use. Wheel nuts should be tightened to 90ft/lbs. Check periodically to be sure the wheel nuts are tight. Paint chipping or rust can cause the wheel to become loose.





REMEMBER

Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact W&A Manufacturing.



BEFORE OPERATION

- Carefully study and understand this manual.
- Do not wear loose-fitting clothing which may catch in moving parts.
- Always wear protective clothing and substantial shoes.
- It is recommended that suitable eye protection be worn.
- The operator may come in contact with certain materials which may require specific safety equipment (ie: extremely dusty, molds, fungus, bulk fertilizers).
- Keep bolts tightened to specific torque listed on **Bolt Torque Chart**.
- Give the unit a visual inspection for any loose bolts, worn parts or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual.
- Be sure that there are no tools lying on or near the equipment.
- Do not use the unit until you are sure that the area is clear, especially children and animals.
- Because it is possible that this equipment may be used in dry areas or in the presence of combustibles, special precautions should be taken to prevent fires and fire fighting equipment should be readily available.
- Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new equipment.
- Practice operation of your equipment and its attachments. Completely familiarize yourself and other operators with its operation before using.



DURING OPERATION

- Keep hands, feet, and clothing clear of moving parts.
- Do not clean, lubricate or adjust your equipment while it is moving.
- Be especially observant of the operating area and terrain - watch for holes, rocks or other hidden hazards. Always inspect the area prior to operation.
- Periodically clear the equipment of brush, twigs or other materials to prevent buildup of dry combustible materials.
- Do not walk or work under raised components or attachments unless securely positioned and blocked.
- Keep all bystanders, pets and livestock clear of the work area.
- Never stand alongside of unit with engine running or attempt to start engine and/or operate machine while standing alongside of unit.
- As a precaution, always recheck the hardware on equipment following every 100 hours of operation. Correct all problems. Follow the maintenance safety procedures.



This section covers general operating procedures. Experience, machine familiarity, and the following information will lead to efficient operation and good working habits. Always operate farm machinery with safety in mind.

PRE-START CHECKLIST

Perform the following steps before transporting the Level Bander to the field.

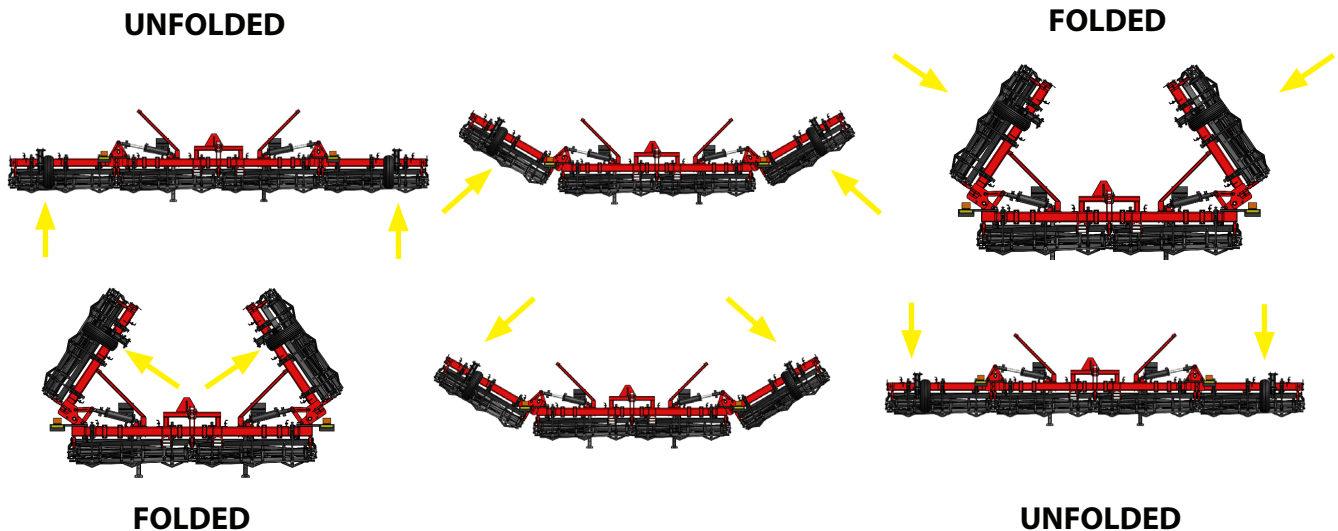
- Carefully read "Important Safety Information" on page 3.
- Lubricate implement as indicated under "Maintenance & Lube" on page 45.
- Check all tires for proper inflation.
- Check all bolts, pins, and fasteners. Torque as shown in "Bolt Torque Chart" on page 49.
- Check implement for worn or damaged parts. Repair or replace parts before going to the field.
- Check hydraulic hoses, fittings, and cylinders for leaks. Repair or replace before going to the field.
- Perform all beginning-of-season and daily service items under "Maintenance & Lube" on page 46-47.



FOLDING & UNFOLDING - FOLDING TOOLBAR

Fold the implement for movements on public roads and between fields and narrow clearances. Do not use the folded configuration for parking or storage.

1. Hitch to tractor (page 14).
2. Move to level ground. Be aware of vertical clearance needed to fold implement.
3. Put tractor in Park with parking brake engaged.
4. Clear all persons from on or near the implement.
5. Use the tractor 3-point hitch to raise the implement slightly (so that all tooling is off the ground).
6. Slowly move fold circuit lever(s) to retract cylinders. Observe the folding operation.
7. Slowly move fold circuit lever(s) to extend cylinders. Observe the unfolding operation.
8. Wait for both wings to reach the fully folded position. Set tractor remote(s) to Neutral to hold at folded or unfolded.



TIP OVER/CRUSHING HAZARD AND EQUIPMENT DAMAGE RISK:

Never unhitch a folded implement. A folded implement could topple backward or forward, causing serious injury or death and certain severe equipment damage. When unhitched, the implement is supported at the rear only by row unit tools and spring tension. Slopes, soft soils, and soils later softened by rain are particularly dangerous.



ELECTRICAL SHOCK/ELECTROCUTION HIGH-CLEARANCE DANGER:

- Keep clear of overhead power lines, maintain 20-foot minimum distance. Electrical shock and/or electrocution can occur; will result in death or serious injury.
- Hazards may include, but are not limited to, high clearance equipment, low clearance power lines, lack of awareness of surroundings, etc.



CRUSH HAZARD - WARNING:

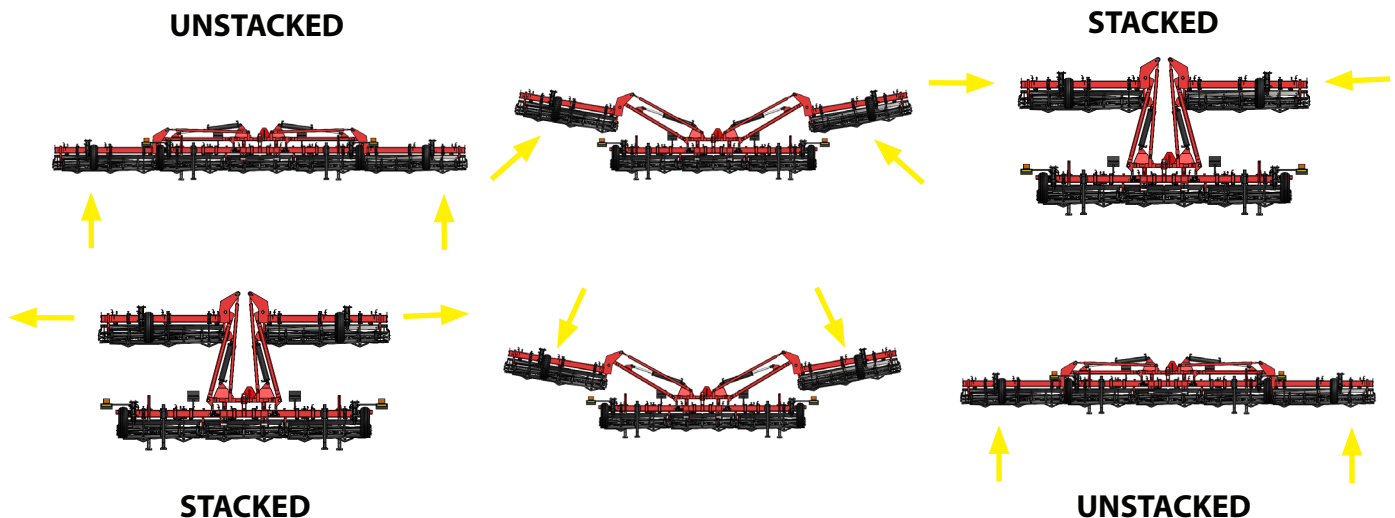
- Keep clear of moving and shifting equipment. Equipment can move or shift; can result in death or serious injury.
- Hazards may include, but are not limited to, folding wing movement, raised equipment movement and shifting, etc.



FOLDING & UNFOLDING - STACKING TOOLBAR

Fold the implement for movements on public roads and between fields and narrow clearances. Do not use the folded configuration for parking or storage.

1. Hitch to tractor (page 14).
2. Move to level ground. Be aware of vertical clearance needed to fold implement.
3. Put tractor in Park with parking brake engaged.
4. Clear all persons from on or near the implement.
5. Use the tractor 3-point hitch to raise the implement slightly (so that the row units are off the ground).
6. Slowly move fold circuit lever(s) to retract cylinders. Observe the folding operation.
7. Slowly move fold circuit lever(s) to extend cylinders. Observe the unfolding operation.
8. Wait for both wings to reach the fully stacked/unstacked position. Set tractor remote(s) to Neutral to hold at stack.



TIP OVER/CRUSHING HAZARD AND EQUIPMENT DAMAGE RISK:

Never unhitch a folded implement. A folded implement could topple backward or forward, causing serious injury or death and certain severe equipment damage. When unhitched, the implement is supported at the rear only by row unit tools and spring tension. Slopes, soft soils, and soils later softened by rain are particularly dangerous.



ELECTRICAL SHOCK/ELECTROCUTION HIGH-CLEARANCE DANGER:

- Keep clear of overhead power lines, maintain 20-foot minimum distance. Electrical shock and/or electrocution can occur; will result in death or serious injury.
- Hazards may include, but are not limited to, high clearance equipment, low clearance power lines, lack of awareness of surroundings, etc.



CRUSH HAZARD - WARNING:

- Keep clear of moving and shifting equipment. Equipment can move or shift; can result in death or serious injury.
- Hazards may include, but are not limited to, folding wing movement, raised equipment movement and shifting, etc.



TRANSPORT CHECKLIST

Before transporting the implement, check the following items.

- Transport only with a tractor of proper size and adequate ballast.
- Hitch implement securely to tractor. See “Hitching Tractor to Implement” on page 14.
- Plug implement safety lights into tractor seven-pin connector.
- Make sure implement is folded properly. See “Folding/Stacking” on page 23-24. Raise the implement for adequate ground clearance.
- Comply with all national, regional, and local safety laws when traveling on public roads.
- Travel with caution.



LOSS OF CONTROL HAZARD:

Ensure that the towing vehicle is adequate for the task. Using an inadequate tow vehicle is extremely unsafe, and can result in loss of control, serious injury and death. To reduce the hazard, use only a 3-point towing vehicle that is both rated for the implement load, and properly ballasted for the load.



ELECTRICAL SHOCK/ELECTROCUTION HIGH-CLEARANCE DANGER:

- Keep clear of overhead power lines, maintain 20-foot minimum distance. Electrical shock and/or electrocution can occur; will result in death or serious injury.
- Hazards may include, but are not limited to, high clearance equipment, low clearance power lines, lack of awareness of surroundings, etc.



BRAKING AND LOSS OF CONTROL HAZARD:

Do not exceed 20 mph (32km/h) when driving straight. Do not exceed 13 mph (21 km/h) in turns. The weight of the implement can cause under-steer, and the height of the implement is a tipping hazard.

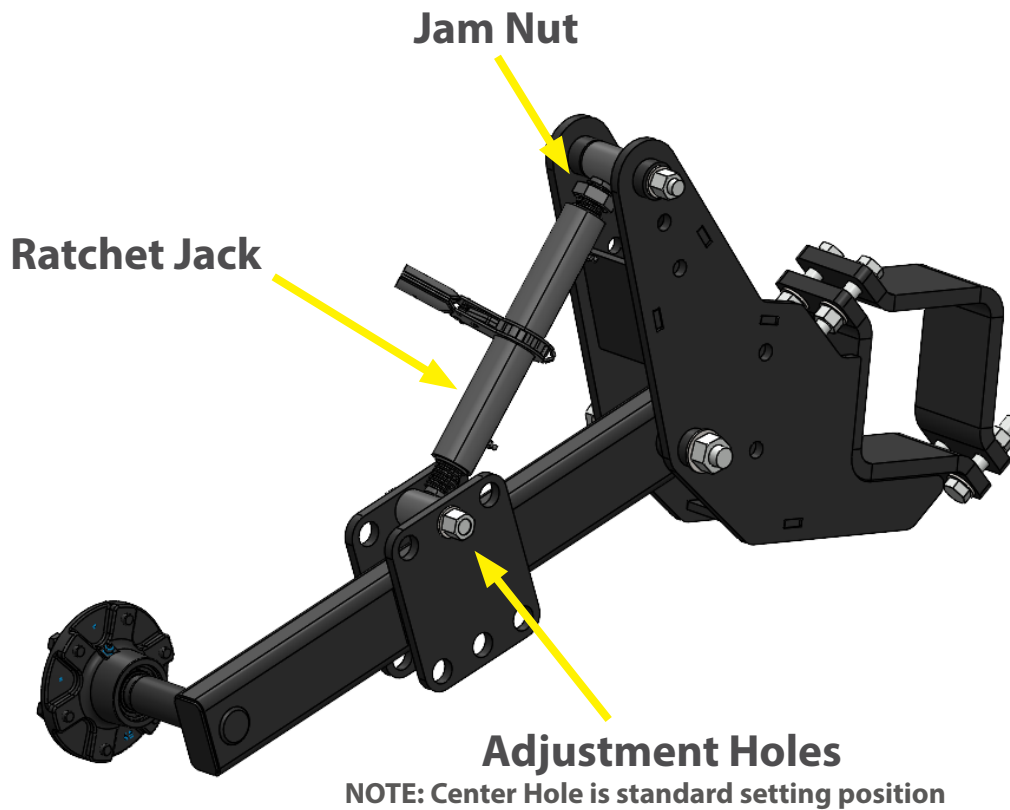


GAUGE WHEEL ADJUSTMENT

Gauge wheels are equipped with two different methods to adjust the depth of the gauge wheels. The first is to use the ratcheting turn buckle. To do this, loosen the jam nut with a combination wrench (1 ¾"). Then, turn the turn buckle to either lengthen or shorten the turn buckle. Then, re-tighten the jam nut.

The second method of adjustment is to change the lower position of the ratcheting turn buckle. The ratcheting turn buckle's standard location is in the center of the 3 holes on the lower arm and is the recommended setting for the Level Bander.

The gauge wheels are designed to help the tractor carry the machine through the field and hold proper depth.

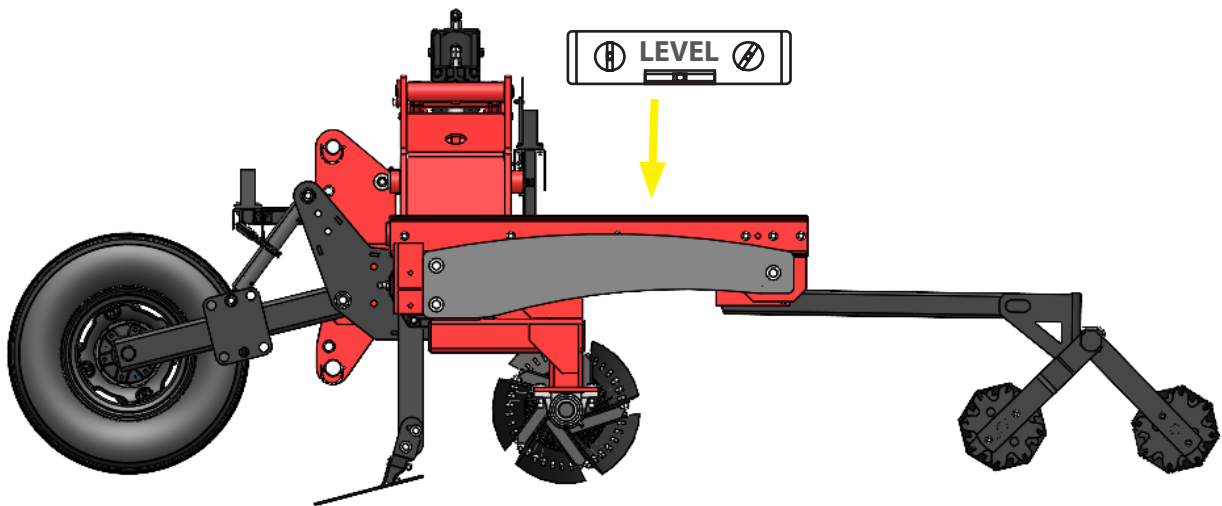




LEVELING THE MACHINE

When initially setting the Level Bander up to operate in the field the machine should be set level front to back and level left to right. To level center and wings refer to “Leveling the Implement” section on page 18.

Initial operating setting is level front to back. Adjust third-link on tractor until toolbar is level. If using hydraulic third link, make note of setting when machine is level.



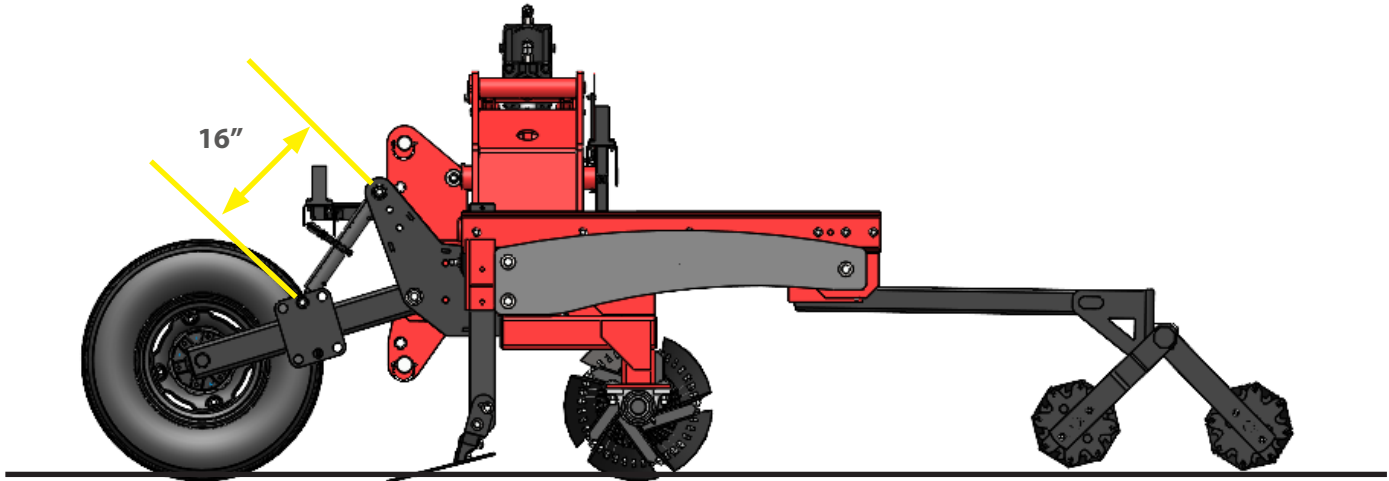
Tipping the machine front to back in operation can be used to change the shape of the beds, by increasing or decreasing depth of the rear tooling and basket pressure. Only minimal adjustment should be made using the third link on the tractor.

For greater adjustment, see rear cleanout depth adjustment and rear basket adjustment sections.



DEPTH SETTINGS

BASIC DEPTH SETTING FOR USE IN UNBEDDED FIELD CONDITIONS

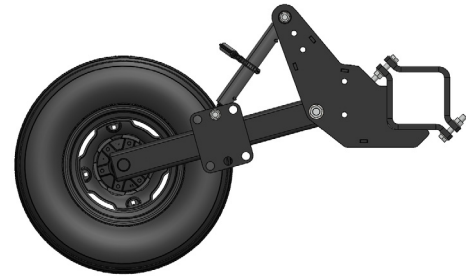


-Park the machine on a level surface.

-Use the tractor to level the implement front to rear.

GAUGE WHEELS

Adjust the gauge wheels so the measurement from the top bolt of the ratchet jack to the bottom bolt of the ratchet jack is 17".



ROOT ROOTERS

If needed, adjust plows so they contact the ground. In most cases, there is no need to use the Root Rooter plows in unbedded fields. If they are unnecessary, they may be raised fully and locked in place until needed.

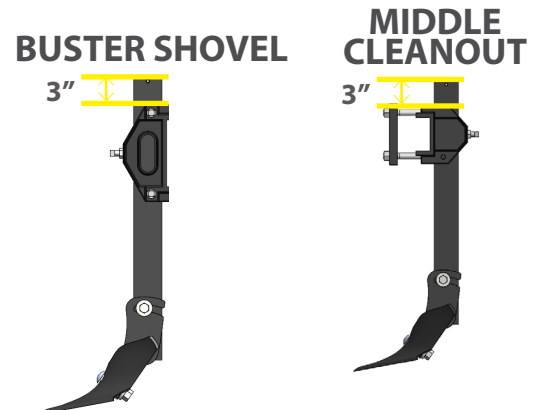
BUSTER SHOVELS

Adjust the front Buster Shovels so the shank extends approximately 3" above the shank holder.

MIDDLE CLEANOUTS

If equipped, adjust the middle cleanout shanks so that they extend approximately 3" above the shank holder. The middle cleanout shovels should never be adjusted deeper than the front buster shovels.

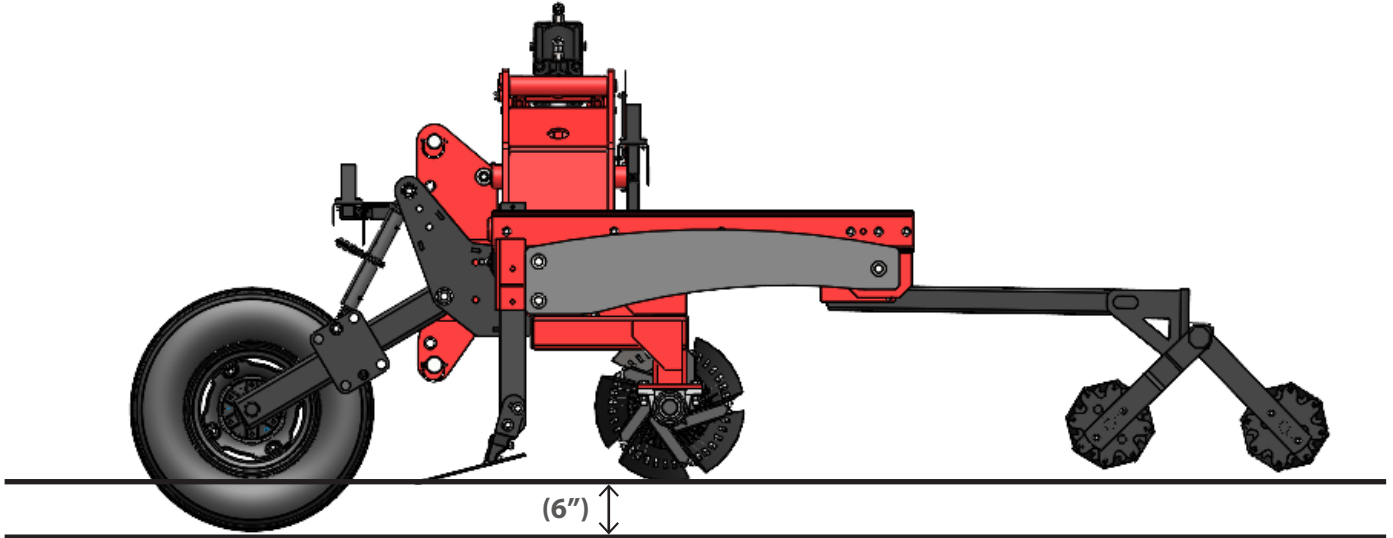
Depending on field conditions, which includes the firmness of the soil, the tooling may be adjusted to optimize furrow depth and bed shape



OPERATION



BASIC DEPTH SETTINGS FOR USE IN FIELDS WITH EXISTING RAISED BEDS



- Park the machine on a level surface.
- Use the tractor to level the implement front to rear.

GAUGE WHEELS

Adjust the gauge wheels so the measurement from the top bolt of the ratchet jack to the bottom bolt of the ratchet jack is 20".

ROOT ROOTERS

If equipped, adjust the Root Rooter plows so they are the same depth as the bottom of the Chopper reel.

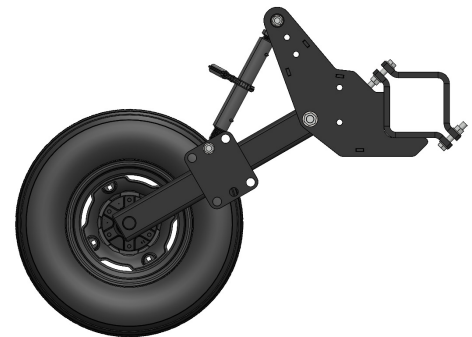
BUSTER SHOVELS

If equipped, adjust the front Buster Shovels so the shank extends approximately 1-3" above the shank holder.

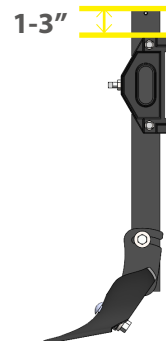
MIDDLE CLEANOUTS

If equipped, adjust the Middle Cleanout shanks so they extend approximately 1-3" above the shank holder. The Middle Cleanout shovels should never be adjusted deeper than the front Buster shovels.

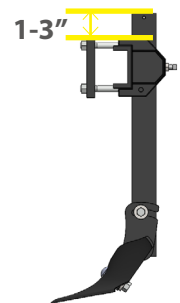
Depending on field conditions, which includes the firmness of the soil, the tooling may be adjusted to optimize furrow depth and bed shape



BUSTER SHOVEL



MIDDLE CLEANOUT

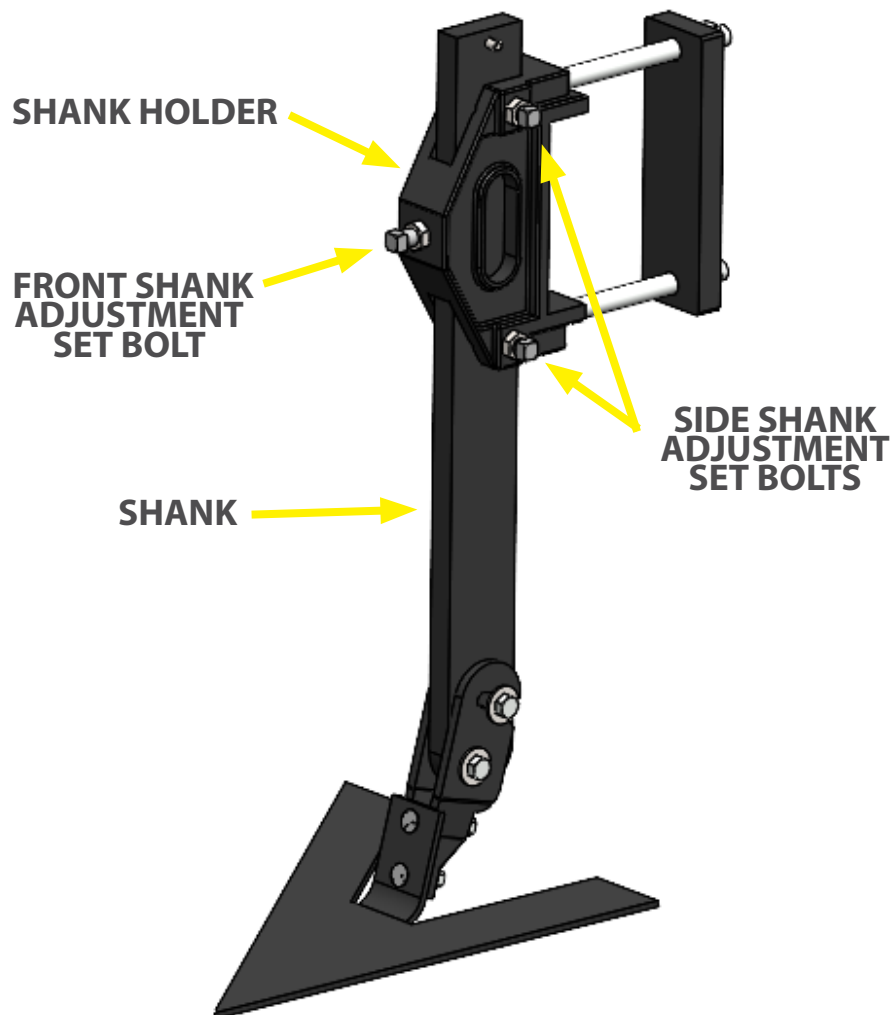




DEPTH ADJUSTMENT - ROOT ROOTER

To set the depth of the Root Rooters:

1. Locate the set bolts on the shank holder and loosen the jam nuts to allow the shank to move in the shank holder.
2. Once the shank is in the desired position, tighten the set bolts starting with the front bolt, then side bolts, then all jam nuts.
*This applies to all shank holder types.

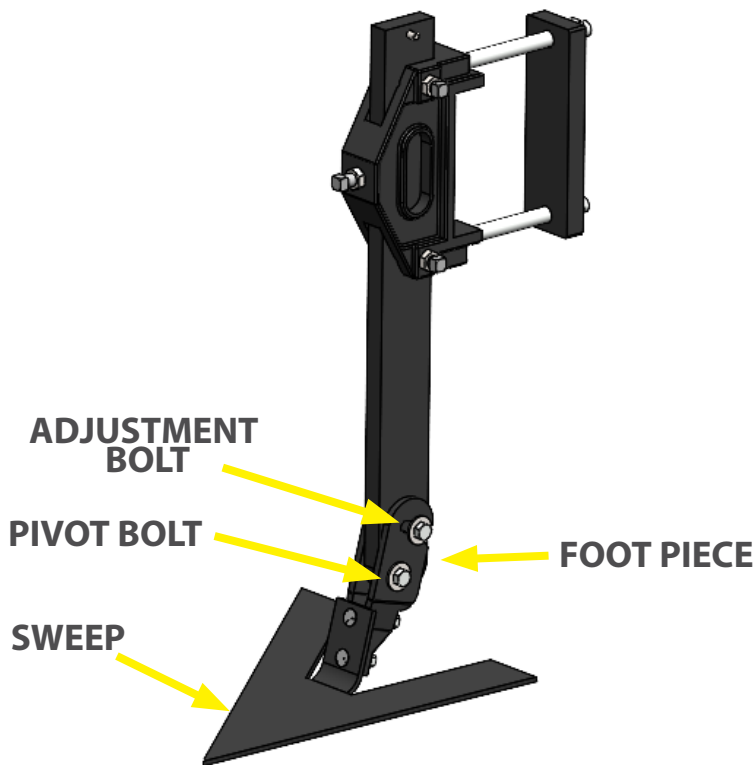




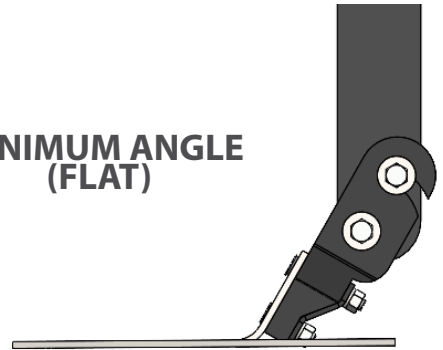
ANGLE ADJUSTMENT - ROOT ROOTER

To set the angle of the Root Rooters:

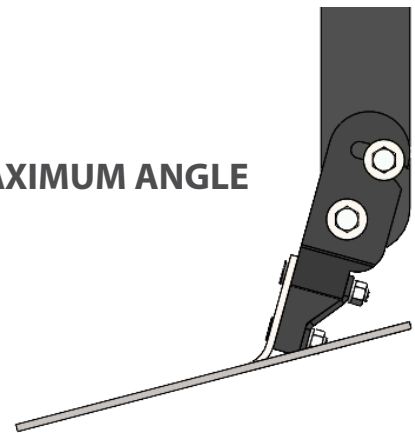
1. Using a pair of 3/4" wrenches, loosen the foot piece pivot bolt and the adjustment bolt.
2. Move the sweep to the desired angle, then tighten adjustment and pivot bolts.



MINIMUM ANGLE
(FLAT)



MAXIMUM ANGLE

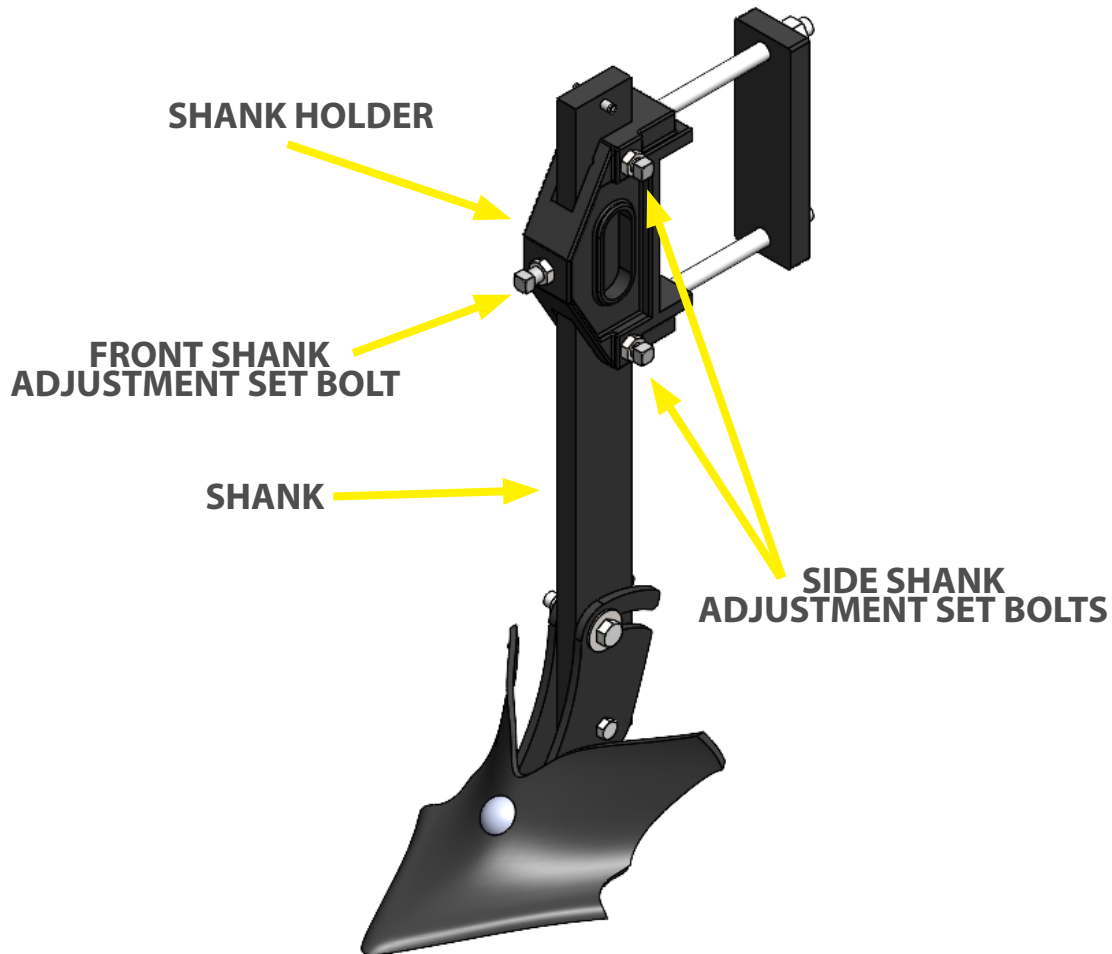




DEPTH ADJUSTMENT - BUSTER SHOVEL

To set the depth of the Buster Shovels:

1. Locate the set bolts on the shank holder and loosen the jam nuts.
2. Loosen the bolts to allow the shank to move in the holder.
3. Once the shank is in the desired position, tighten the set bolts starting with the front bolt, then side bolts, then all jam nuts.
*This applies to all shank holder types.



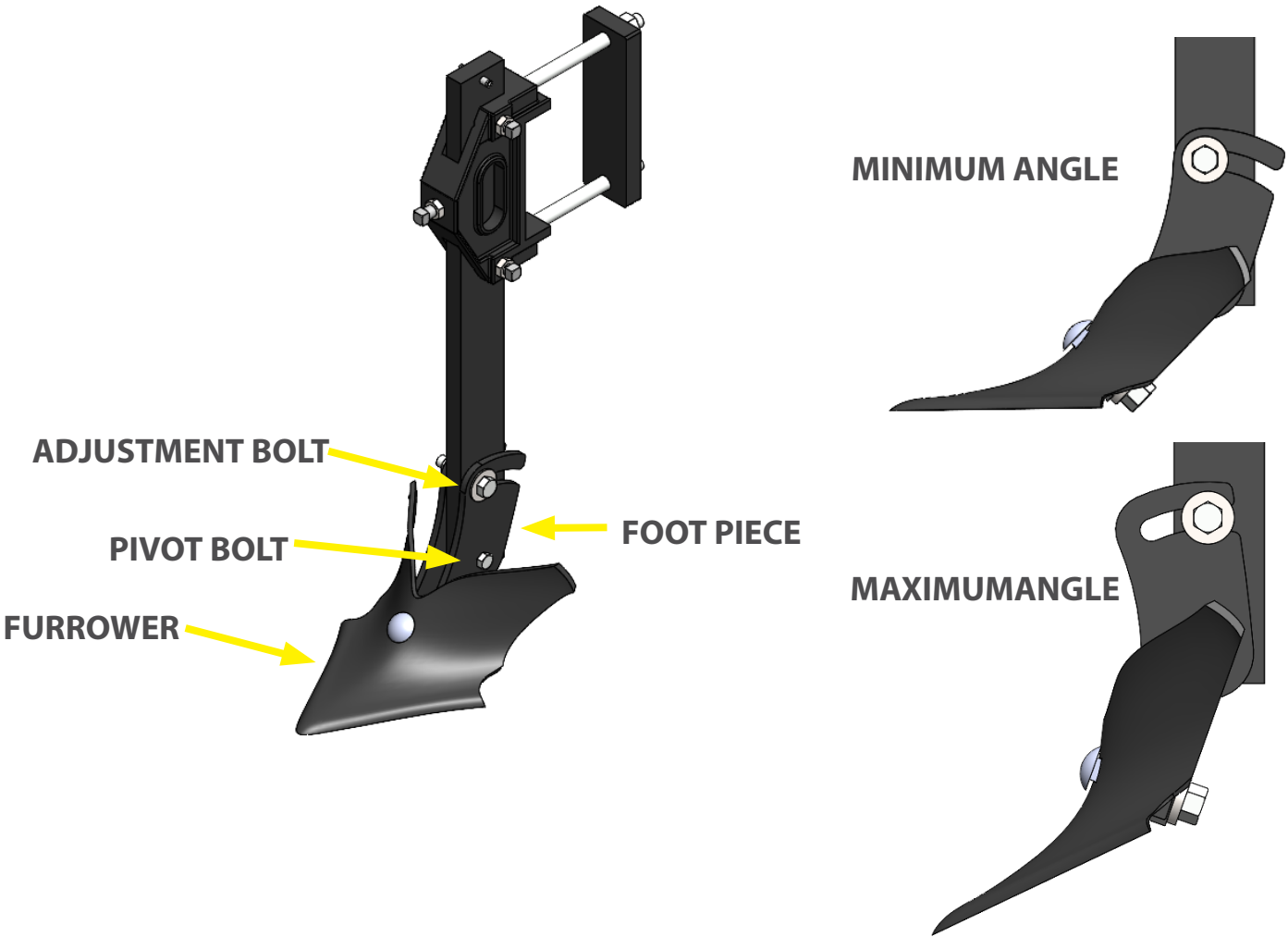


OPERATION

ANGLE ADJUSTMENT - BUSTER SHOVEL

To set the angle of the Buster Shovels:

1. Loosen the foot piece pivot bolt with a pair of 3/4" wrenches. Adjust the adjustment bolt using a pair of 15/16" wrenches.
2. Move the shovel to the desired angle, then tighten adjustment and pivot bolts.



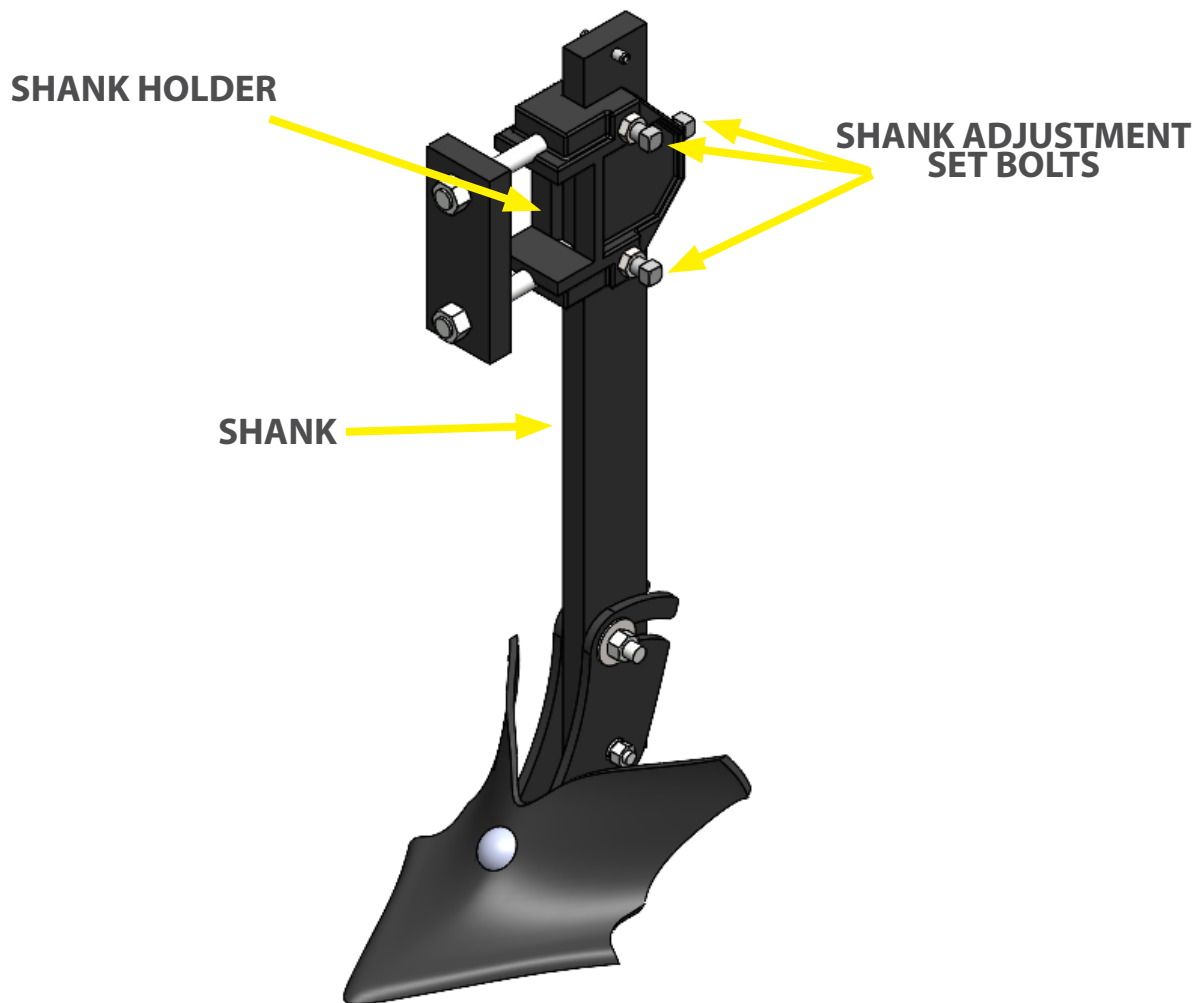


DEPTH ADJUSTMENT - MIDDLE CLEAN-OUT

To set the depth of the Middle Clean-Out:

1. Locate the set bolts on the shank holder and loosen the jam nuts.
2. Loosen the bolts to allow the shank to move in the holder.
3. Once the shank is in the desired position, tighten the set bolts starting with the center bolt, then side bolts, then all jam nuts.

NOTE: Middle Clean-Outs are not meant to run deeper than front Buster Shovel.

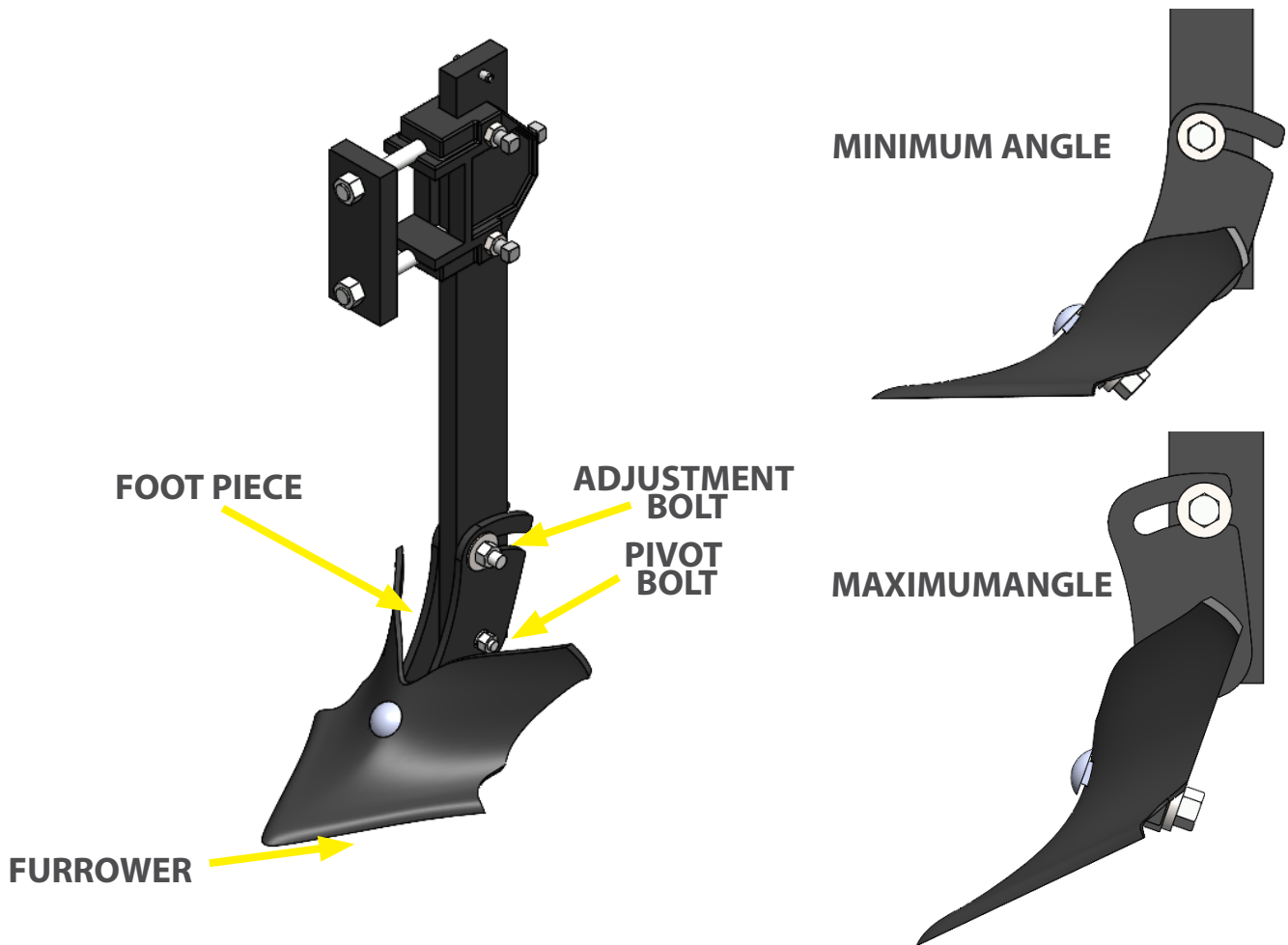




ANGLE ADJUSTMENT - MIDDLE CLEAN-OUT

To set the angle of the Buster Shovels:

1. Loosen the foot piece pivot bolt with a pair of 3/4" wrenches. Adjust the adjustment bolt using a pair of 15/16" wrenches.
2. Move the shovel to the desired angle, then tighten adjustment and pivot bolts.





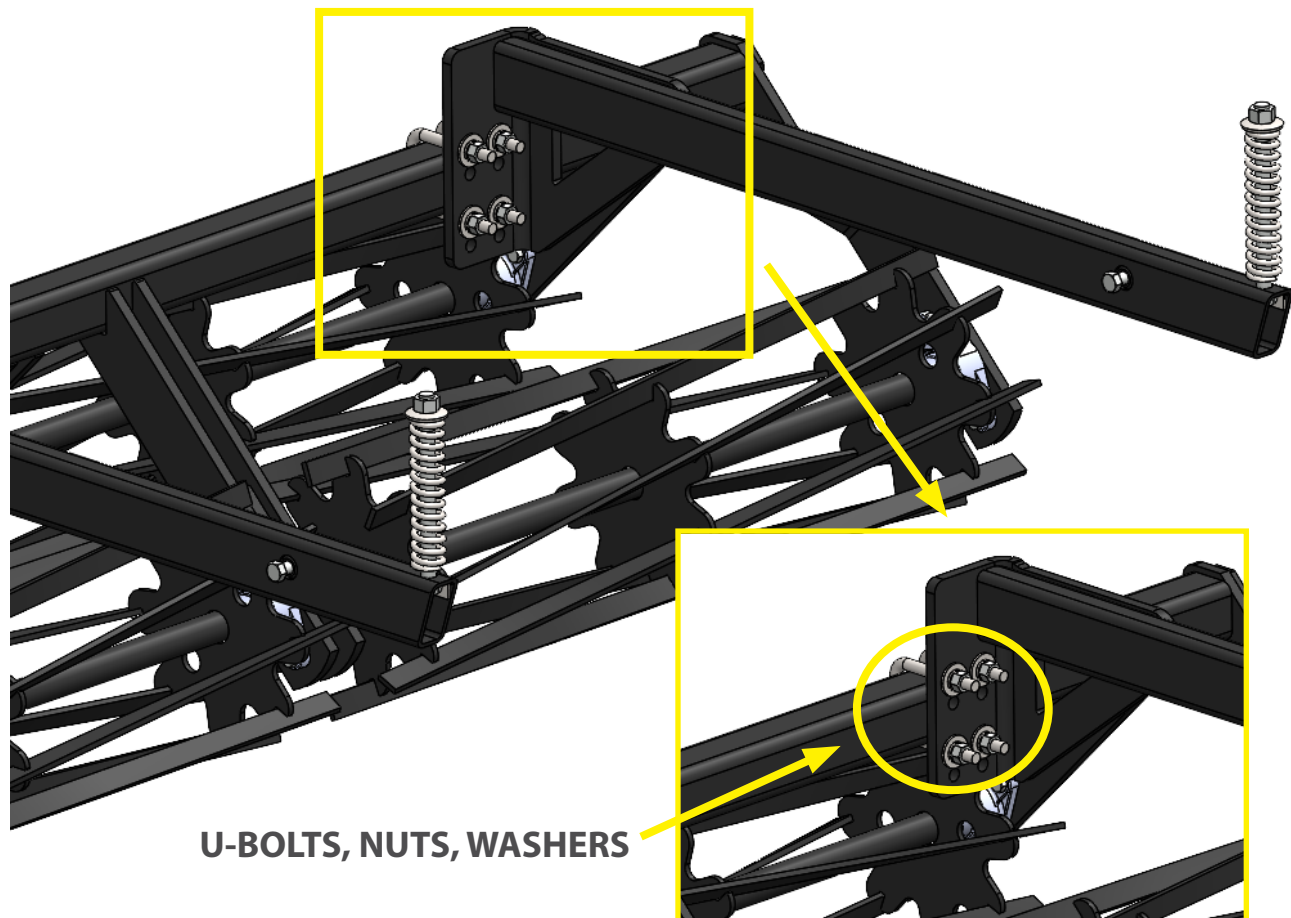
HEIGHT SETTING - ROLLING BASKETS

Factory setting is in top holes, and typically does not need adjusted. If your baskets are not contacting the ground, first, check the machine front to back leveling. If determined that machine is operating at correct levelness, adjusting the Rolling Baskets may be necessary following the below steps.

To set the height of the Rolling Baskets:

1. Properly support entire Rolling Basket from section before adjusting.
2. Remove the nuts and washers from the U-bolts that hold the basket frame to the rear arms.
3. Reposition the basket frame and reinstall the U-bolts in the new position.

NOTE: You will need to remove U-bolts from all arms that hold each section of basket frame in place to avoid damaging the arms while changing positions.



U-BOLTS, NUTS, WASHERS



CRUSH HAZARD - WARNING:

- Keep clear of moving and shifting equipment. Equipment can move or shift; can result in death or serious injury.
- Hazards may include, but are not limited to, folding wing movement, raised equipment movement and shifting, etc.

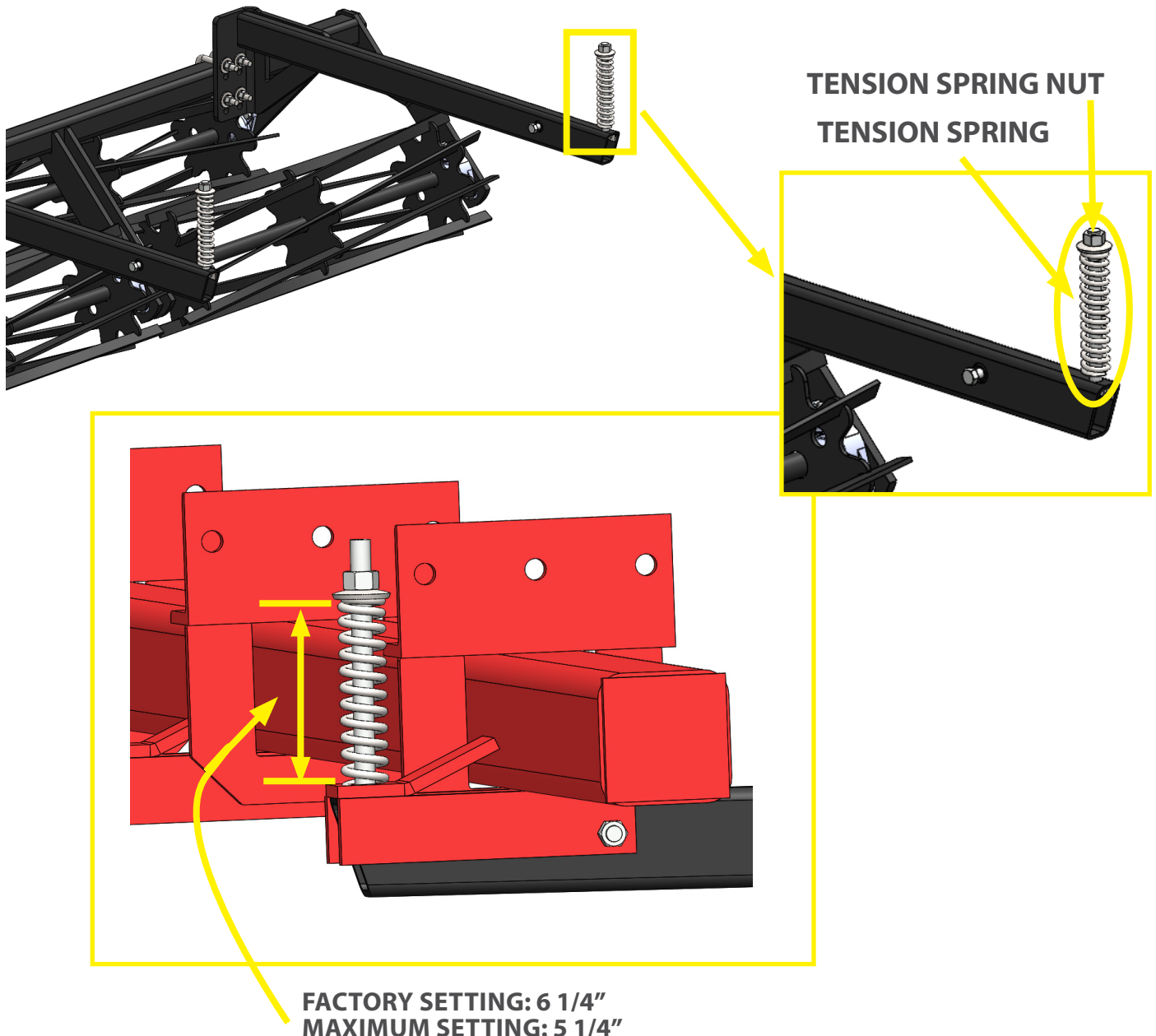


TENSION SETTING - ROLLING BASKETS

To set the tension of the Rolling Baskets:

1. Locate the spring nuts and either tighten or loosen the spring preload evenly across the machine to set the tension.

NOTE: If your Rolling Baskets are bouncing too much, tighten the Tension Spring Nut for increased pressure on the Rolling Baskets. If the Rolling Baskets pressure needs to be decreased, loosen the Tension Spring Nut.



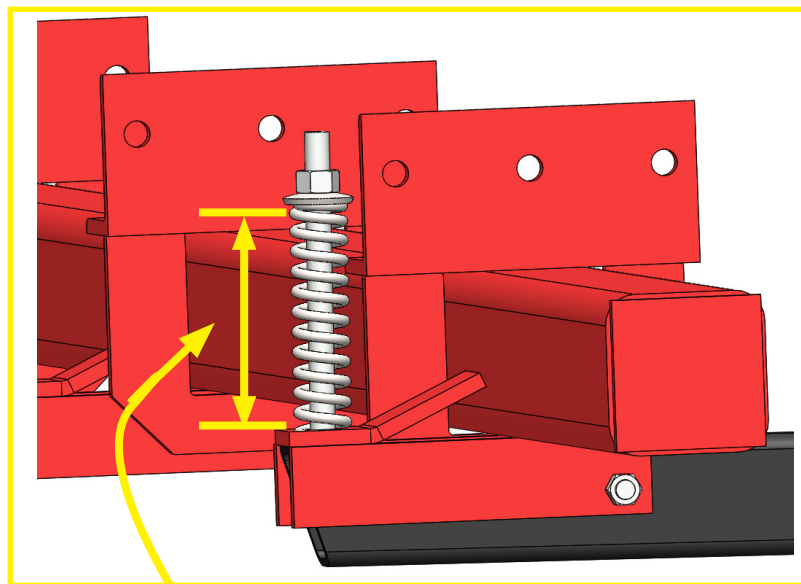
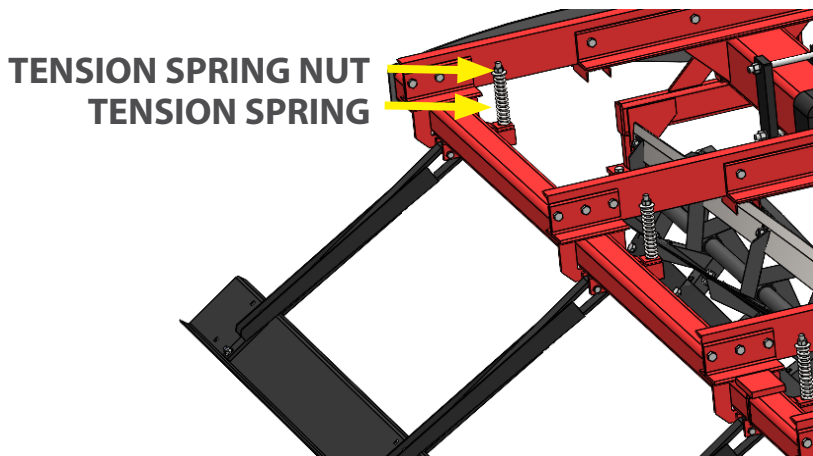


TENSION ADJUSTMENT - DRAGBOARD

To set the tension of the Dragboard:

1. Locate the spring nuts and either tighten or loosen the spring preload evenly across the machine to set the tension.

NOTE: If your Dragboards are bouncing too much, tighten the Tension Spring Nut for increased pressure on the Dragboards. If the Dragboard pressure needs to be decreased, loosen the Tension Spring Nut.



FACTORY SETTING: 6 1/4"
MAXIMUM SETTING: 5 1/4"



SPEED RECOMMENDATIONS

The ideal operating speed for the Level Bander is 4.5-6.5 mph. Field conditions can change the effectiveness of the Level Bander and need to be taken into consideration by the operator.

- Ideal operating speed: 4.5-6.5 mph
- Minimum operating speed: 4 mph
- Maximum operating speed: 8 mph

SPEED EFFECTS

- When running at the correct speed, soil kicked up by the Rear Rolling Baskets should create a rooster tail that falls into a smooth, flat bed.
- In most conditions, speeding up will cause the soil to move further and peak beds higher.
- In most conditions, slowing down will cause the soil to move less, creating shorter, wider beds. Lack of sufficient speed may cause a dip in the center of the bed, especially on row spacings wider than 30". There will also be less chopping and mixing of soil and residue.
- See troubleshooting section for more information on performance issues related to speed.



PARKING

For long-term parking, see also “**Storage**” below.

1. Choose a parking location that has room for unfolding, is level, has firm soil and is unlikely to develop soft soil in rain. With the implement still hitched, maneuver it to the parking location.

If the implement must be parked folded, leave it hitched to the tractor. Skip steps 2, 4, and 7.

2. Unfold the implement. Set the fold circuit(s) to Float.
3. Lower the implement to just above ground level at the rear of the row units. Set the tractor remotes to Neutral to hold at slight lift. Shut off the tractor and remove the key.
4. Lower all parking stands to the bottom hole.
5. Unplug implement hydraulic hoses and electrical lines from tractor.
6. Start the tractor. Lower the 3-point hitch until the implement is supported by the parking stands.
7. Disconnect the hitch arms and link.

STORAGE

Store the Level Bander where children do not play. If possible, store the implement inside for longer life.

1. Thoroughly clean implement.
2. Park the implement at the storage location as per “Parking” above.
3. Lubricate areas noted under “Maintenance & Lube” on pages 46-47. Apply heavy grease to exposed cylinder rods.
4. Inspect implement for worn or damaged parts. Make repairs and service during the off-season.
5. Use spray paint to cover scratches, chips, and worn areas on the implement to protect the metal.
6. Cover with a tarp if stored outside.



TIP OVER/CRUSHING HAZARD AND EQUIPMENT DAMAGE RISK:

Never unhitch, park, or store a partially folded implement. A partially folded implement could topple backward or forward immediately or at a later time, causing serious injury or death and certain severe equipment damage. When unhitched, the implement is supported at the rear only by row unit tools and spring tension. Slopes, soft soils, and soils later softened by rain are particularly dangerous.



FOLLOWING OPERATION

- Store the unit in an area away from human activity.
- Do not park equipment where it will be exposed to livestock for long periods of time. Damage and livestock injury could result.
- Do not permit children to play on or around the stored unit.
- Make sure all parked machines are on a hard, level surface.



PERFORMING MAINTENANCE

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Before working on this machine, stop the towing vehicle, set the brakes, shut off the engine and remove the ignition keys.
- Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.
- Always use the proper tools or equipment for the job at hand.
- Use extreme caution when making adjustments.
- Follow the torque chart in this manual when tightening bolts.
- Replace all shields and guards after servicing and before moving.
- After servicing, be sure all tools, parts and service equipment are removed.
- Never replace hex bolts with less than Grade 5 bolts unless otherwise specified. Refer to **Bolt Torque Chart** for head identification marking.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.
- If equipment has been altered in any way from the original design, the manufacturer does not accept any liability for injury or warranty.
- A first aid kit should be kept readily accessible while performing maintenance on this equipment.



LEVEL BANDER DO'S AND DON'TS

- DO follow all safety precautions in this manual.
- DO locate and familiarize yourself with the various Safety Signs and instructional decals prior to operation.
- DO inspect equipment for damage and wear before use; repair as needed.
- DO use caution when connecting pressurized systems, such as hydraulics and pneumatics.
- DO follow recommend maintenance.
- DO level the toolbar for optimum performance.
- DO lift implements completely out of the soil before turning the unit.
- DO use caution when moving large equipment. Using a spotter is recommended when working around obstacles on the ground and/or overhead.
- DON'T fold the toolbar with locking pins in the locked position.
- DON'T over-pressurize the hydraulic system; Level Bander hydraulics are designed for 3,000 PSI MAX working pressure.
- DON'T exceed the limits of a piece of machinery.
- DON'T modify equipment from factory build; modification may compromise equipment safety and integrity and will void product warranty.

TROUBLESHOOTING



Troubleshooting		
Problem	Possible Cause	Solution
Chopper reel is not turning.	Chopper reel not making contact with the ground.	Make sure the machine is making contact with the ground.
	Residue build-up is preventing the reel from turning.	Remove residue build-up from the Chopper blades.
	The bearing has failed.	Replace bearing.
Beds are uneven.	Machine is not running level.	Adjust machine, or tractor hitch, to be level side to side. (See pages 18-19)
		Adjust the level from front to back to change shape of beds. (See page 27)
		Check gauge tire pressure to make sure all tires are equal. (See page 20)
	Shanks are not set properly.	Make sure shanks are all set to same depth.
	Baskets are not set correctly.	Adjust basket pressure or height setting
Wings are floating up	Toolbar is not level.	Level toolbar.
	Plows are not taking the ground.	Adjust the plow tips down to take the ground.
		Plows are worn and should be replaced.

TROUBLESHOOTING



Troubleshooting		
Problem	Possible Cause	Solution
Chopper reel or rolling baskets are plugging with mud.	Ground conditions too wet.	Allow soil to dry further before tilling.
Machine is throwing large clods.	Chopper reel is too shallow.	Adjust gauge wheels to lower chopper reel.
	Middle Cleanouts running deeper than Buster Shovels.	Lower Buster shovels or raise Middle Cleanouts.
	Operating too slow.	Increase operating speed until problem alleviated. (See page 39)
Furrow depth too shallow or bed height too low.	Operating machine too shallow.	Increase operating depth by adjusting gauge wheels. (See pages 26)
		Adjust shank depth on Buster shovels or Middle Cleanout Shovels (if equipped).
Furrow depth too deep or bed height too tall.	Operating machine too deep.	Decrease operating depth by adjusting gauge wheel. (See pages 26)
		Adjust shank depth on Buster shovels or Middle Cleanout Shovels (if equipped).



MAINTENANCE

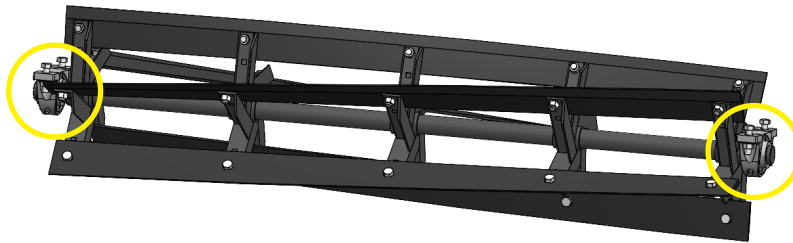
- Proper maintenance will ensure longevity and optimum performance of your W&A equipment.
- Visual inspection is recommended before each use. Check for loose bolts, worn parts, cracked welds and other damage. Replace and repair as needed.
- In addition to a visual inspection before each use, carefully inspect hydraulic components every 100 hours for leaks, excessive wear, swelling and damage. Leaks should be corrected by tightening the fittings according to the **Hydraulic Fitting Torque Chart** or replacing components. Replace any components showing signs of excessive wear, swelling or damage.
- Always replace bolts with the same grade, refer to **Bolt Torque Chart** for grade identification. Tighten bolts according to **Bolt Torque Chart**.
- Always replace parts with W&A parts only.
- We recommend greasing each grease zerk on the toolbar hinge weekly. Grease all attachment grease zerks weekly, or according to specified lubrication schedule.
- Before long-term storage (3 months or more) clean debris from equipment and touch-up paint to prevent corrosion.
- Store in a flat dry place away from human activity and livestock.
- After long-term storage (3 months or more) visually inspect equipment and carefully inspect all components. Especially parts more easily affected by weather damage, such as hydraulic hoses and wiring. Repair and replace as needed before use.



DAILY MAINTENANCE

1. Inspect machine for any loose or missing hardware.
2. Inspect hydraulic lines and connections for wear, bulging hoses, or leakage.
3. Grease the Chopper/Crumbler Reel and Rear Basket bearings sparingly.

CHOPPER REEL



CRUMBLER REEL



REAR ROLLING BASKETS



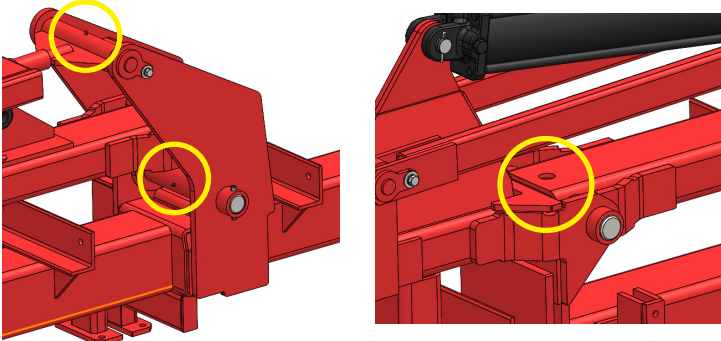
MAINTENANCE & LUBE



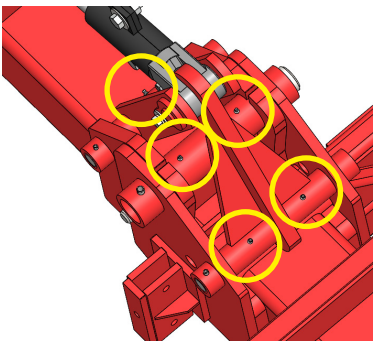
WEEKLY MAINTENANCE

1. Grease the Toolbar hinges.

STACKING TOOLBAR

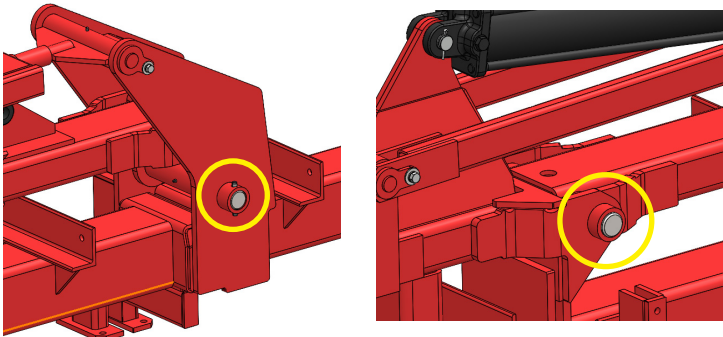


FOLDING TOOLBAR

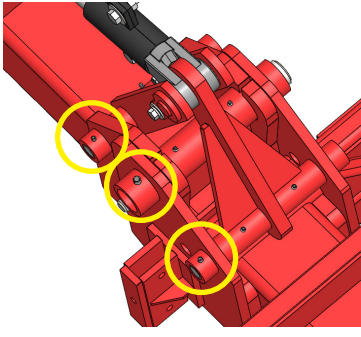


2. Inspect Roll Pins.

STACKING TOOLBAR

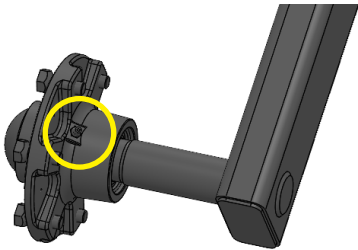


FOLDING TOOLBAR

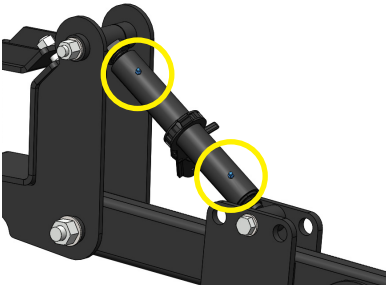


3. Grease Gauge Wheel bearings and turnbuckles and check air pressure.

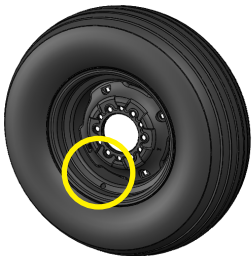
GAUGE WHEEL HUB



GAUGE WHEEL TURNBUCKLE



GAUGE WHEEL VALVE STEM



YEARLY MAINTENANCE

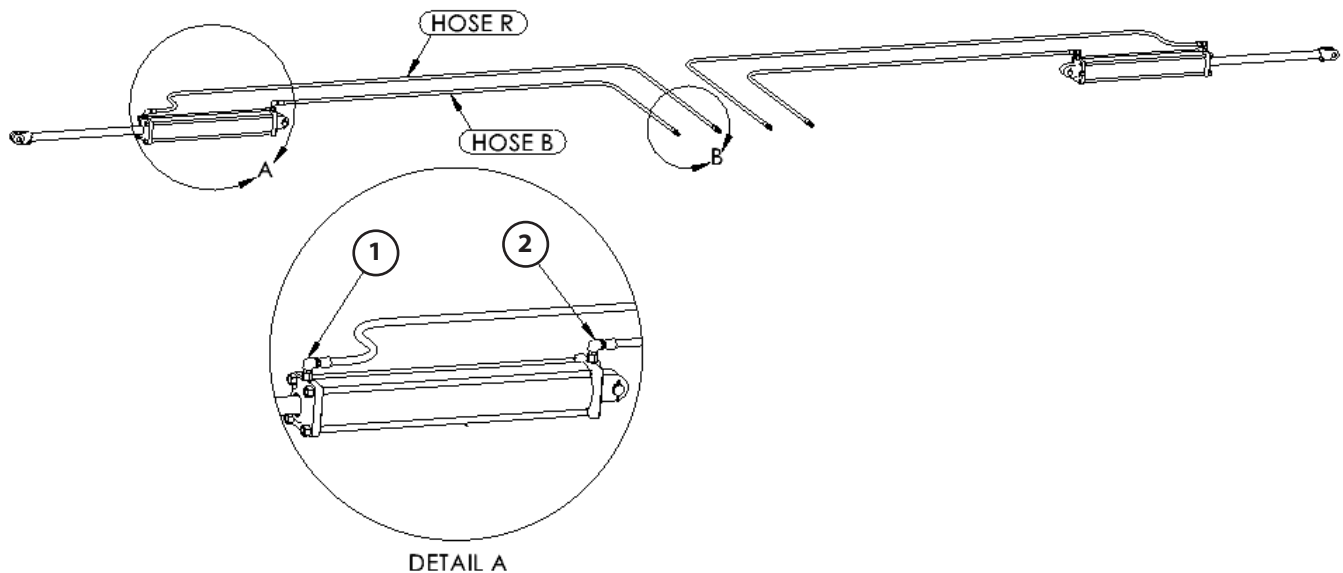
1. Clean machine off.
2. Grease all grease zerks.
3. Replace all parts as necessary.
4. Check Bolt Torque on Hubs.



BLEEDING FOLD HYDRAULICS

To function properly, the hydraulics must be free of air. If hydraulics have not been bled, they will operate with jerky, uneven motions and could cause wings to drop rapidly during folding or unfolding. If hydraulics were not bled during initial implement setup or if you replace a part in the hydraulic system during the life of the implement, complete the following procedures:

1. Check hydraulic fluid level in tractor reservoir and fill to proper level. Add fluid to system as needed.
2. With implement unfolded and fold cylinders completely extended, disconnect rod end pins and swing the cylinders so they will not contact anything when extended.
3. Loosen rod end hose fittings (1) at the NPTF connection.
4. Slowly supply oil to rod end of fold cylinders until oil appears at loosened hose fitting. Tighten fitting and completely retract fold cylinders.
5. With cylinders completely retracted, loosen base end hose fittings (2) at the NPTF connection.
6. Slowly supply oil to base end of fold cylinders until oil appears at loosened hose fitting. Tighten base end hose fitting and cycle fold cylinders in and out several times.
7. Re-pin cylinder rod clevises.



HIGH PRESSURE FLUID - DANGER

- Use safe practices. Fluid injection can occur; will result in death or serious injury.
- Hazards may include, but are not limited to, injury beyond the entry point, over pressurized components, damaged components, components with excessive wear, swollen components, ect.



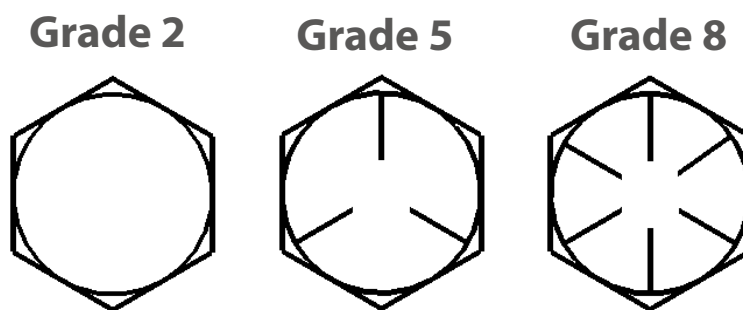
CHECKING BOLT TORQUE

The table shown below gives correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same grade bolt.

BOLT TORQUE CHART

Torque Specifications						
Bolt Diameter	Bolt Torque*					
	SAE Grade 2		SAE Grade 5		SAE Grade 8	
INCH	lbft	(Nm)	lbft	(Nm)	lbft	(Nm)
1/4	6	(8)	9	(12)	12	(17)
5/16	10	(13)	19	(25)	27	(36)
3/8	20	(27)	33	(45)	45	(63)
7/16	30	(41)	53	(72)	75	(100)
1/2	45	(61)	80	(110)	115	(155)
9/16	70	(95)	115	(155)	165	(220)
5/8	95	(128)	160	(215)	220	(305)
3/4	165	(225)	290	(390)	400	(540)
7/8	170	(230)	420	(570)	650	(880)
1	226	(345)	630	(850)	970	(1320)

BOLT HEAD IDENTIFICATION





HYDRAULIC FITTING IDENTIFICATION

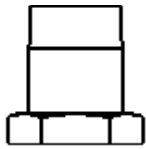
Hydraulic fitting styles, types and sizes are numerous and at times easily confused. The chart below shows the most common types and sizes of hydraulic fittings for the industry, male ends depicted. This chart is printed at 1 to 1 for ease of identification.

NPTF (National Pipe Taper Fuel) uses tapered threads to create a seal.

ORB (O-Ring Boss) uses an O-ring to seal after threads.

JIC (Joint Industry Council) 37-degree flare sealing surface before threads.

ORFS (O-Ring Face Seal) uses an O-ring to seal before threads.



-4 NPTF



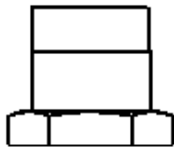
-4 ORB



-4 JIC



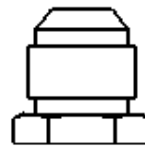
-4 ORFS



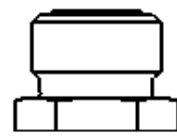
-6 NPTF



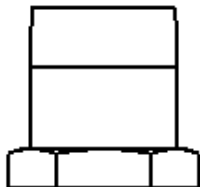
-6 ORB



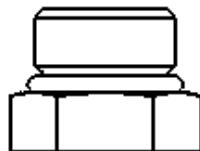
-6 JIC



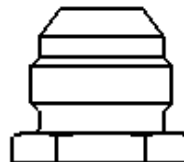
-6 ORFS



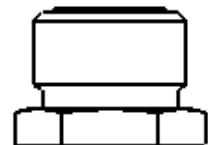
-8 NPTF



-8 ORB



-8 JIC

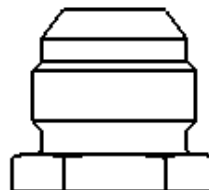


-8 ORFS

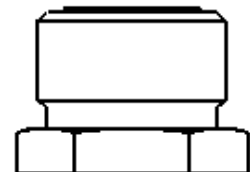
N/A



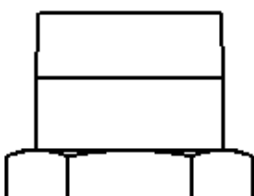
-10 ORB



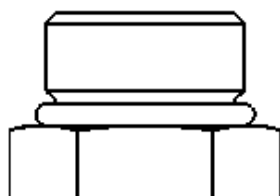
-10 JIC



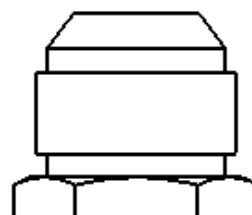
-10 ORFS



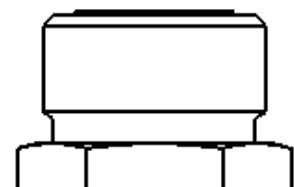
-12 NPTF



-12 ORB



-12 JIC

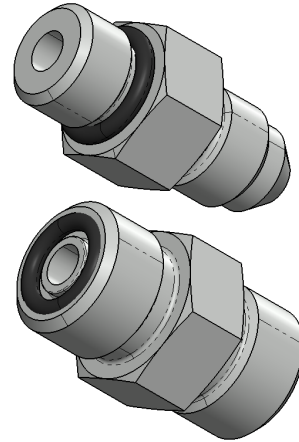


-12 ORFS



CHECKING HYDRAULIC FITTINGS

- Before connecting hydraulic fittings, check that fittings are clean and undamaged. Replacement fittings and hoses are available from W&A Manufacturing.
- Ensure O-ring(s) are installed properly as shown in the image. (ORB fitting above, ORFS fitting below)
- “Wet Torque” fittings according to the chart below. Wet Torque is the process of lubricating all threads, O-rings and sealing surfaces with the hydraulic fluid used in the system. Then tightening to a specified torque.
- Do not force fittings together. Ensure male and female are of the same type and size, align sealing surfaces and threads properly.
- Do not apply force to a connection or use the connection as support. Doing so may damage components and/or cause the connection to leak.



HYDRAULIC FITTING TORQUE CHART

Torque lbft (Nm)				
Dash Size	NPTF	ORB	JIC	ORFS
-4	12-16 (16-22)	10-15 (14-20)	11-13 (15-18)	10-12 (14-16)
-6	14-32 (19-43)	17-21 (23-28)	20-22 (27-30)	18-20 (24-27)
-8	32-40 (43-54)	30-35 (41-47)	43-47 (58-64)	32-35 (43-47)
-10	-	30-35 (41-47)	55-65 (75-88)	45-50 (61-68)
-12	40-48 (54-65)	30-35 (41-47)	80-90 (108-122)	65-70 (88-95)



PARTS GUIDE



This Parts Guide applies to:

Serial Number: Starting with L or newer (Level Banders manufactured between June 2020-June 2021). Starting June 2021, Serial Numbers will change to a 9-digit number (ex. 26XXXXX0721).

For parts for models prior to serial numbers beginning with L (K or older), or manufactured before July 2020, please refer to the Legacy section of manuals under Level Bander on the Support page at WAMFGCO.com.

USE ONLY GENUINE, W&A REPLACEMENT PARTS

We will not claim responsibility for use of non-approved parts and/or accessories and other damages as a result of their use.



HOW TO USE THIS PARTS GUIDE

1. Determine your Level Bander Model by referring to the Model No. on your Serial Number plate on the hitch of your Level Bander.



2. Using your Model Number (eg. 3658 for a 6 Row 38"/40" Level Bander - Rigid Toolbar) find the Parts Guide Reference section that covers your specific model (See page 55 for Model Number Index).
3. Once you find the correct Parts Guide Reference section, look through each table to find the parts assembly you need to review. Each assembly will have the page number of a parts breakdown for that assembly. When you find the page of the assembly you need to review, turn to that page.
4. Within each parts breakdown, you'll find: Item Number, Part Number, Description, and Quantity for each part in each assembly.

PARTS GUIDE REFERENCE

MODEL 3658 - 6R38/40 RIGID

TOOLBAR	
Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	89
Bar Stands - Rear	91
Rear Frame	92
Bearding Panel	100

REAR FINISHING TOOLS	
Section	Page
Baskets	119
Basket Arms	121

LIGHT KITS	
Section	Page
Whole	125

GAUGE WHEELS	
Section	Page
Whole	127

PLOWS AND SHANKS	
Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105

REELS	
Section	Page
Chopper	111

*Please see next page for Toolbar Assembly breakdown and reference guide for 3658.

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105

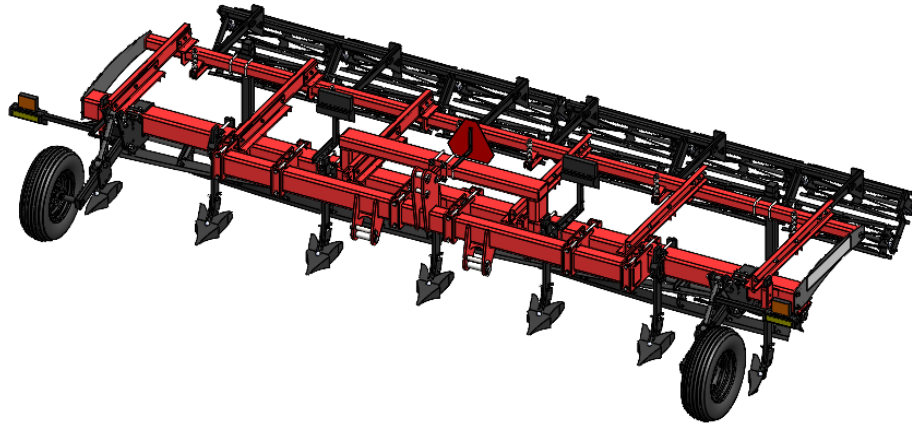


Parts Guide Model Number Index

<u>3658 - 6 Row 38/40 RIGID</u>	56
<u>3660 - 8 Row 30 RIGID</u>	58
<u>3661 - 8 Row 38/40 RIGID</u>	60
<u>3659 - 8 Row 36 FOLDING</u>	62
<u>3629/3662/3682 - 8 ROW 38/40 FOLDING</u>	65
<u>3674/3694 - 12 ROW 30 FOLDING</u>	68
<u>3667 - 12 ROW 36 STACKING</u>	71
<u>3640/3668/3688 - 12 ROW 38 STACKING</u>	73
<u>3669 - 12 ROW 40 STACKING</u>	75
<u>3642/3670/3690 - 16 ROW 30 STACKING</u>	77



MODEL 3658 - 6R38/40 RIGID



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	89
Bar Stands - Rear	91
Rear Frame	92
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper	111

REAR FINISHING TOOLS

Section	Page
Baskets	119
Basket Arms	121

LIGHT KITS

Section	Page
Whole	125

GAUGE WHEELS

Section	Page
Whole	127

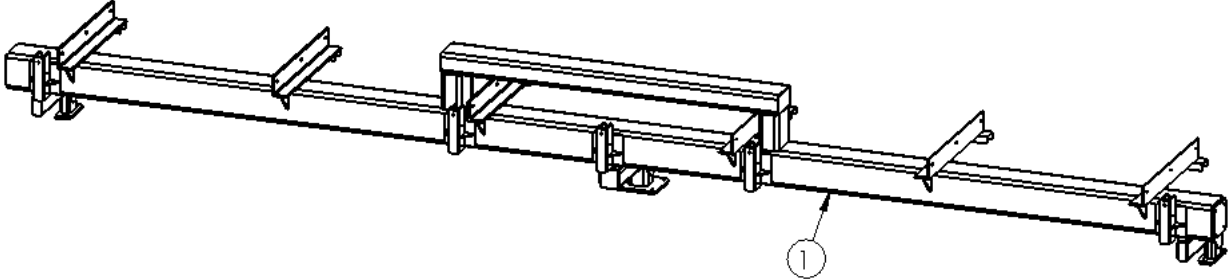


*Please see next page for Toolbar Assembly breakdown and reference guide for 3658.

PARTS GUIDE REFERENCE



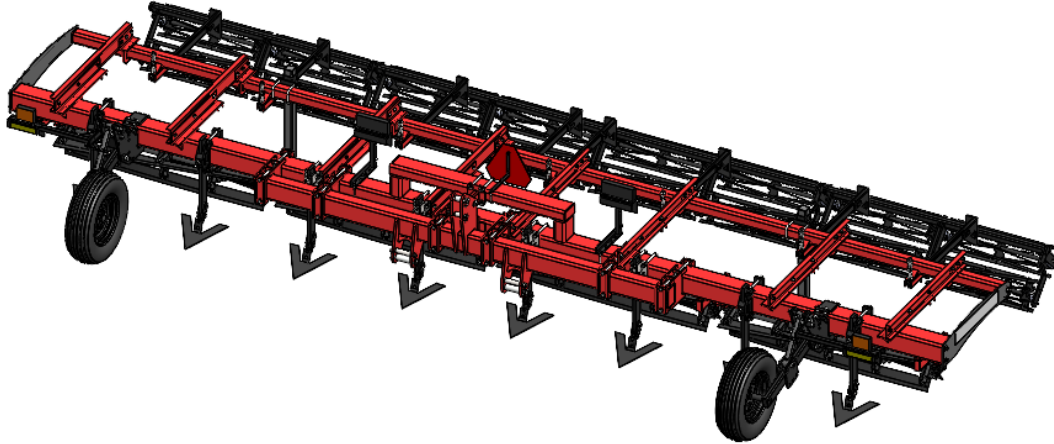
MODEL 3658 - 6R38/40 RIGID



Item Number	Part #	Description	Page
1	603028	TOOLBAR	SEE ABOVE



MODEL 3660 - 8R30 RIGID



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	89
Bar Stands - Rear	91
Rear Frame	92
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper	111

REAR FINISHING TOOLS

Section	Page
Baskets	119
Basket Arms	120

LIGHT KITS

Section	Page
Whole	125

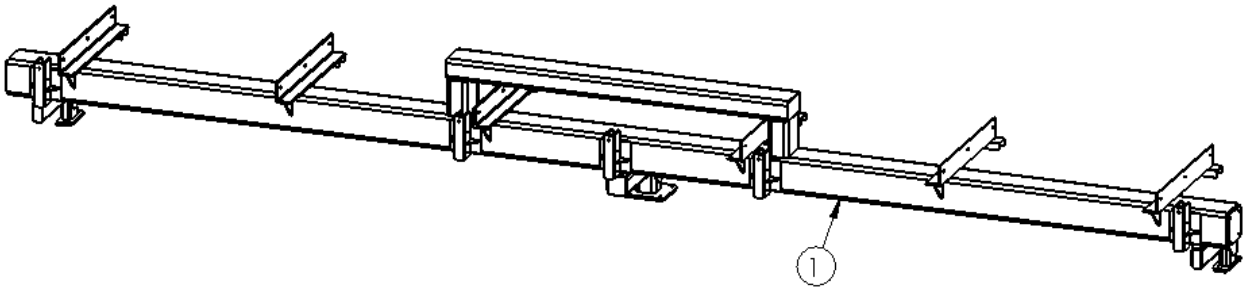
GAUGE WHEELS

Section	Page
Whole	127

*Please see next page for Toolbar Assembly breakdown and reference guide for 3660.



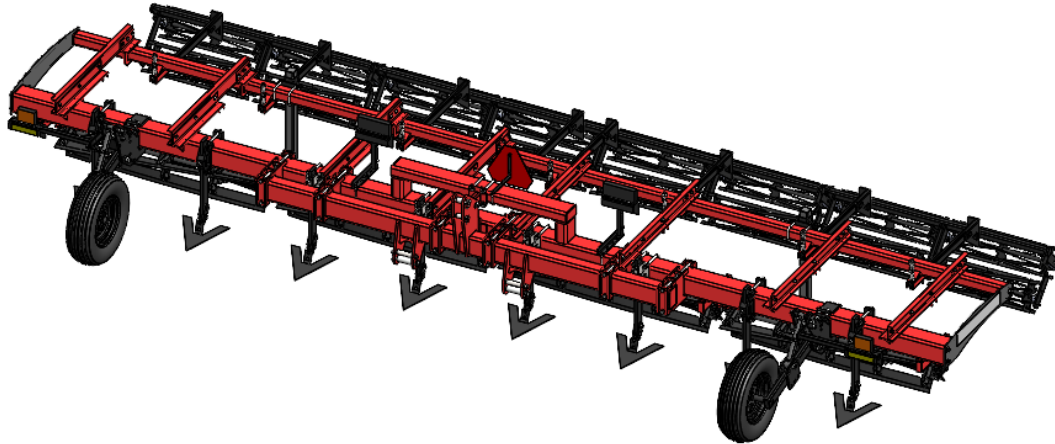
MODEL 3660 - 8R30 RIGID



Item Number	Part #	Description	Page
1	603028	TOOLBAR	SEE ABOVE



MODEL 3661 - 8R38/40 RIGID



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	89
Bar Stands - Rear	91
Rear Frame	93
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper	107

REAR FINISHING TOOLS

Section	Page
Baskets Center	120
Outer Baskets	117
Basket Arms	121

LIGHT KITS

Section	Page
Whole	125

GAUGE WHEELS

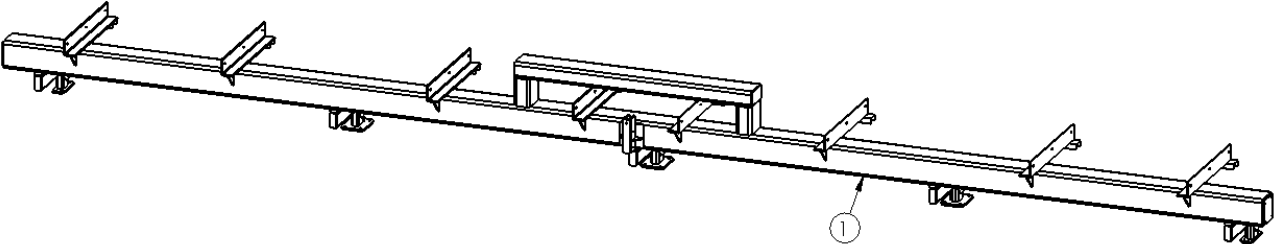
Section	Page
Whole	127

*Please see next page for Toolbar Assembly breakdown and reference guide for 3661.

PARTS GUIDE REFERENCE



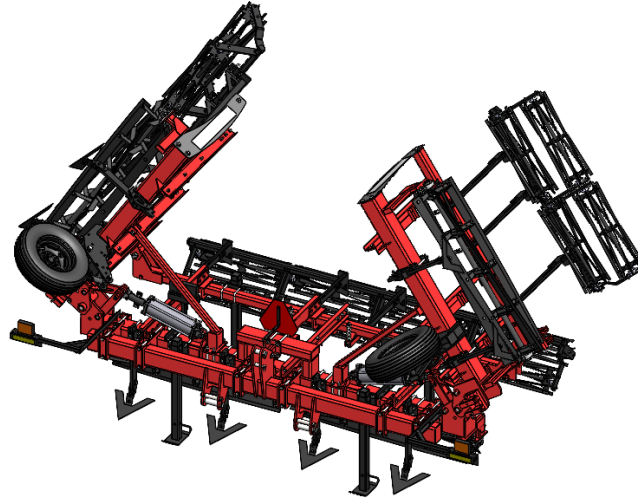
MODEL 3661 - 8R38/40 RIGID



Item Number	Part #	Description	Page
1	603030	TOOLBAR	SEE ABOVE



MODEL 3659 - 8R36 FOLDING



TOOLBAR

Section	Page
Hitch & Pins	Contact Us
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	90
Bar Stands - Rear	91
Rear Frame	94
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper Center	107
Chopper Wings	107

REAR FINISHING TOOLS

Section	Page
Basket Center	120
Basket Wings	117
Basket Arms	121

LIGHT KITS

Section	Page
Whole	125

GAUGE WHEELS

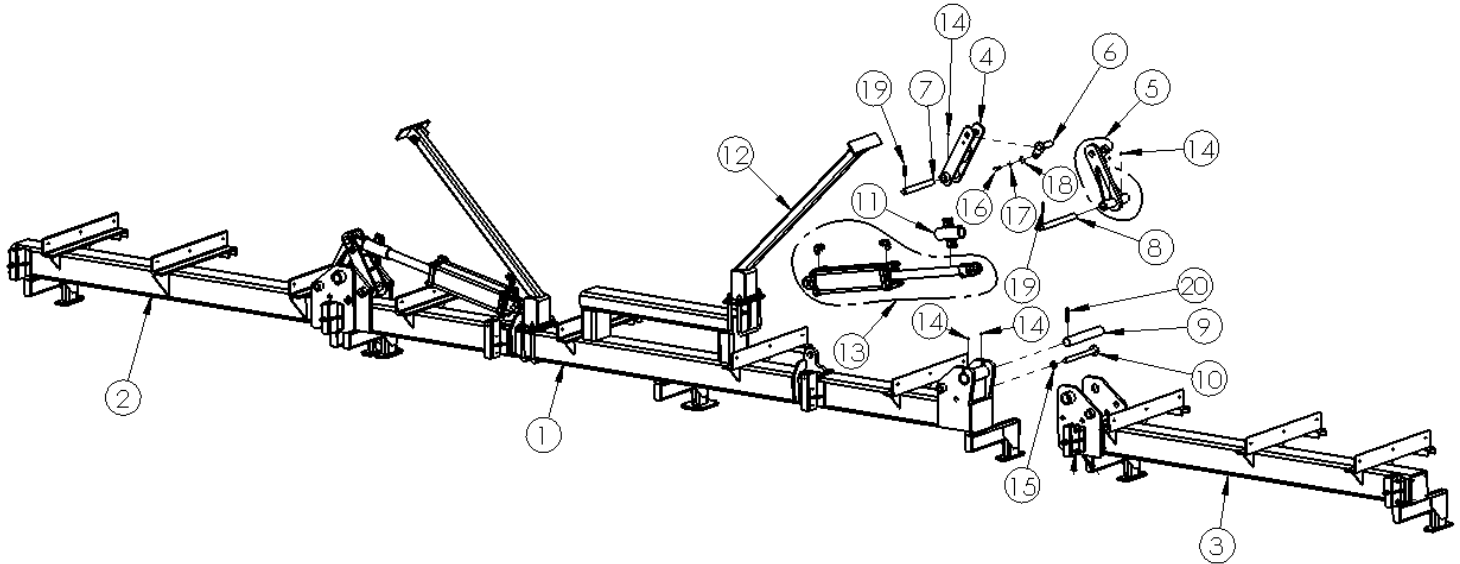
Section	Page
Whole	127

*Please see next page for Toolbar Assembly breakdown and reference guide for 3659.

PARTS GUIDE REFERENCE



MODEL 3659 - 8R36 FOLDING



Item Number	Part #	Description	Quantity
1	350076	8 ROW 36 CENTER SECTION	1
2	350077	8 ROW 36 RH WING	1
3	350078	8 ROW 36 LH WING	1
4	302085	FOLLOW ARM WELDMENT	2
5	302084	FOLDING ARM WELDMENT	2
6	302086	WING CYLINDER PIN	2
7	204389	FOLLOW ARM PIN	2
8	204390	FOLDING ARM PIN	2
9	204388	HINGE PIN	2
10	302087	LOCK PIN	2
11	350012	CYLINDER STOP ASSEMBLY	2
12	SEE PAGE 88	WING REST ASSEMBLY	2
13	SEE PAGE 83	FOLDING TOOLBAR HYDRAULICS	1
14	450004	1/4 DRIVE IN GREASE FITTING	10
15	416204	LYNCH PIN 1/4" X 1 1/4"	2

****CONTINUED ON NEXT PAGE****

PARTS GUIDE REFERENCE



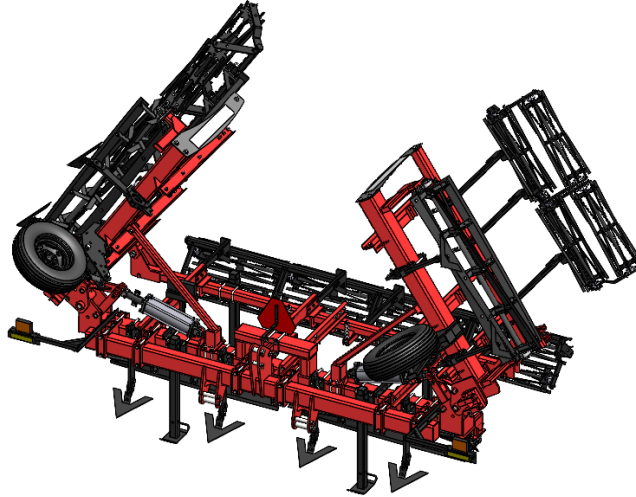
MODEL 3659 - 8R36 FOLDING

Item Number	Part #	Description	Quantity
16	411545	1/2-13 X 1 1/2 HEX BOLT GR5	2
17	413508	1/2 LOCK WASHER	2
18	413008	1/2 FLAT WASHER USS	2
19	416109	ROLL PIN 5/16 X 2 1/2	4
20	416133	ROLL PIN 1/2 X 3 1/2	2

PARTS GUIDE REFERENCE



MODELS 3629/3662/3682 - 8R38/40 FOLDING



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	90
Bar Stands - Rear	91
Rear Frame	95
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper Center	107
Chopper Wings	107
Diamond Crumbler Center	112
Diamond Crumbler Wings	112

REAR FINISHING TOOLS

Section	Page
Baskets Center	120
Baskets Wings	117
Basket Arms	121

LIGHT KITS

Section	Page
Whole	125

GAUGE WHEELS

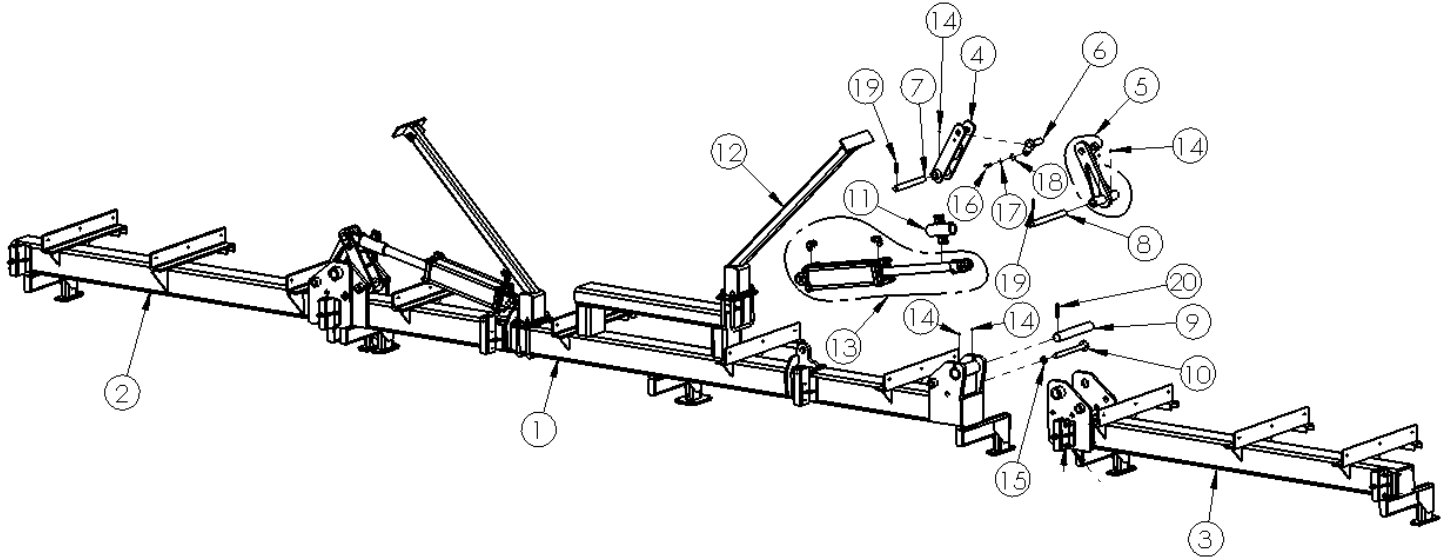
Section	Page
Whole	127

*Please see next page for Toolbar Assembly breakdown and reference guide for 3629/3663/3682.

PARTS GUIDE REFERENCE



MODELS 3629/3662/3682 - 8R38/40 FOLDING



Item Number	Part #	Description	Quantity
1	315459	8 ROW 38/40 CENTER SECTION	1
2	315458	8 ROW 38/40 RH WING	1
3	315457	8 ROW 38/40 LH WING	1
4	302085	FOLLOW ARM WELDMENT	2
5	302084	FOLDING ARM WELDMENT	2
6	302086	WING CYLINDER PIN	2
7	204389	FOLLOW ARM PIN	2
8	204390	FOLDING ARM PIN	2
9	204388	HINGE PIN	2
10	302087	LOCK PIN	2
11	350012	CYLINDER STOP ASSEMBLY	2
12	SEE PAGE 88	WING REST ASSEMBLY	2
13	SEE PAGE 83	FOLDING TOOLBAR HYDRAULICS	1
14	450004	1/4 DRIVE IN GREASE FITTING	10
15	416204	LYNCH PIN 1/4" X 1 1/4"	2

****CONTINUED ON NEXT PAGE****

PARTS GUIDE REFERENCE

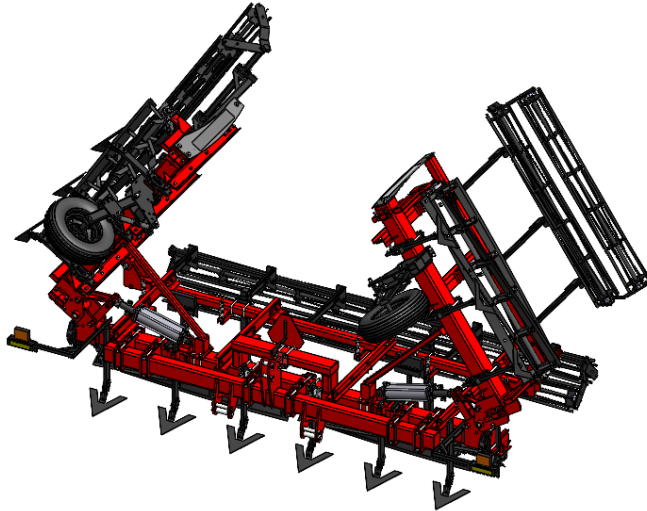


MODELS 3629/3662/3682 - 8R38/40 FOLDING

Item Number	Part #	Description	Quantity
16	411545	1/2-13 X 1 1/2 HEX BOLT GR5	2
17	413508	1/2 LOCK WASHER	2
18	413008	1/2 FLAT WASHER USS	2
19	416109	ROLL PIN 5/16 X 2 1/2	4
20	416133	ROLL PIN 1/2 X 3 1/2	2



MODEL 3674/3694 - 12R30 FOLDING



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	89
Bar Stands - Rear	91
Rear Frame	96
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper Center	108
Chopper Wings	108
Diamond Crumbler Center	113
Diamond Crumbler Wings	113

REAR FINISHING TOOLS

Section	Page
Baskets Center	116
Baskets Wings	116
Basket Arms	121

LIGHT KITS

Section	Page
Whole	125

GAUGE WHEELS

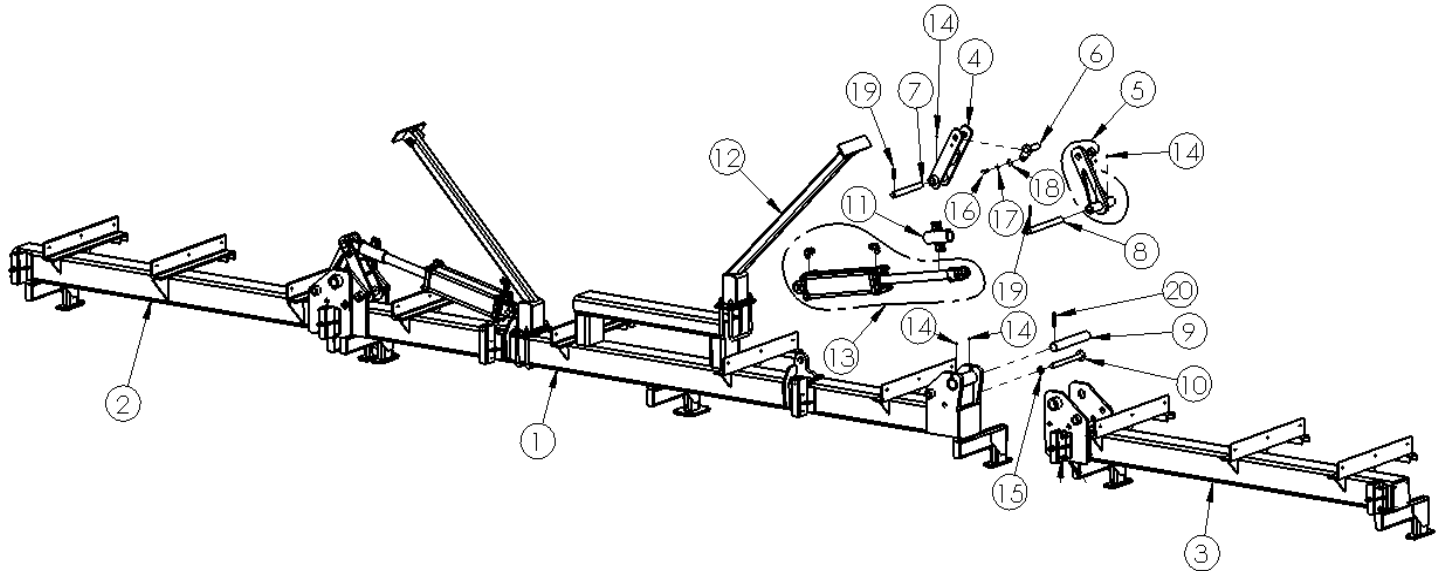
Section	Page
Whole	127

*Please see next page for Toolbar Assembly breakdown and reference guide for 3674/3694.

PARTS GUIDE REFERENCE



MODEL 3674/3694 - 12R30 FOLDING



Item Number	Part #	Description	Quantity
1	350070	12 ROW 30 CENTER SECTION	1
2	350071	12 ROW 30 RH WING	1
3	350072	12 ROW 30 LH WING	1
4	302085	FOLLOW ARM WELDMENT	2
5	302084	FOLDING ARM WELDMENT	2
6	302086	WING CYLINDER PIN	2
7	204389	FOLLOW ARM PIN	2
8	204390	FOLDING ARM PIN	2
9	204388	HINGE PIN	2
10	302087	LOCK PIN	2
11	350012	CYLINDER STOP ASSEMBLY	2
12	SEE PAGE 88	WING REST ASSEMBLY	2
13	SEE PAGE 83	FOLDING TOOLBAR HYDRAULICS	1
14	450004	1/4 DRIVE IN GREASE FITTING	10
15	416204	LYNCH PIN 1/4" X 1 1/4"	2

****CONTINUED ON NEXT PAGE****

PARTS GUIDE REFERENCE

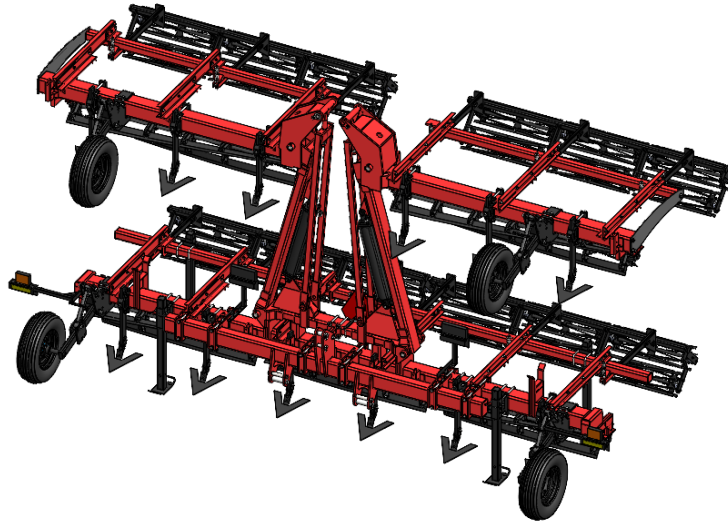


MODEL 3674/3694 - I2R30 FOLDING

Item Number	Part #	Description	Quantity
16	411545	1/2-13 X 1 1/2 HEX BOLT GR5	2
17	413508	1/2 LOCK WASHER	2
18	413008	1/2 FLAT WASHER USS	2
19	416109	ROLL PIN 5/16 X 2 1/2	4
20	416133	ROLL PIN 1/2 X 3 1/2	2



MODEL 3667 - I2R36 STACKING



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
BarStands - Front	89
BarStands - Rear	91
Rear Frame	97
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper Center	110
Chopper Wings	110

REAR FINISHING TOOLS

Section	Page
Baskets Center	118
Baskets Wings	118
Basket Arms	121

LIGHT KITS

Section	Page
Whole	123

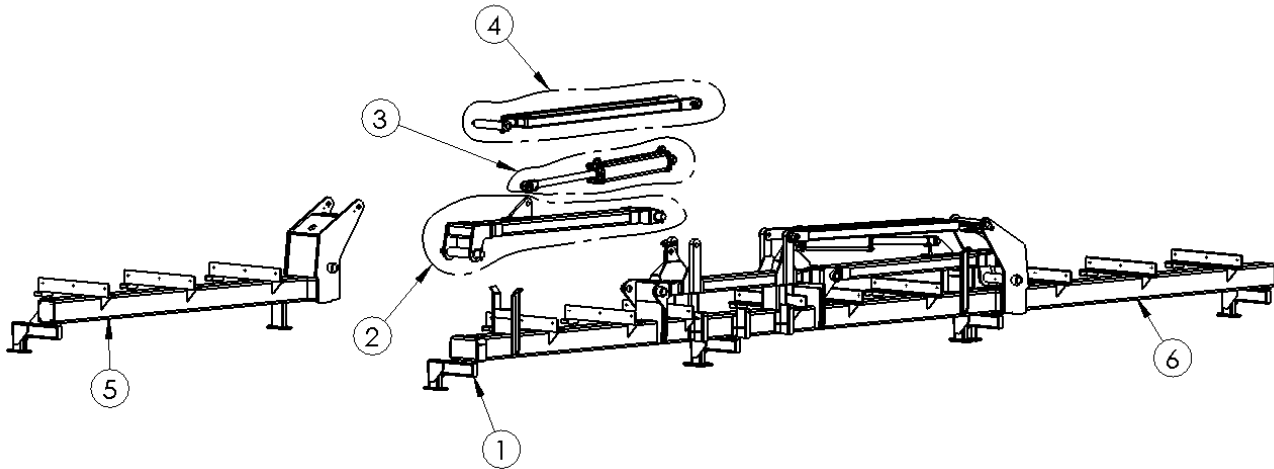
GAUGE WHEELS

Section	Page
Whole	127

*Please see next page for Toolbar Assembly breakdown and reference guide for 3667.



MODEL 3667 - 12R36 STACKING

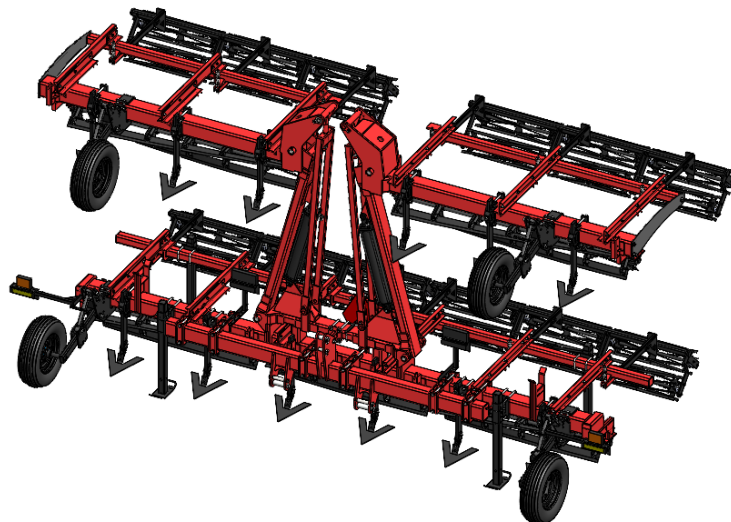


Item Number	Part #	Description	Quantity
1	350013	12 ROW 36 CENTER	1
2	SEE PAGE 86	MEDIUM POWER ARM	2
3	SEE PAGE 82	SHORT STACKING TOOLBAR HYDRAULICS	1
4	SEE PAGE 84	MEDIUM LEVELING ARM	2
5	350014	12 ROW 36 RH WING	1
6	350015	12 ROW 36 LH WING	1

PARTS GUIDE REFERENCE



MODELS 3640/3668/3688 - 12R38 STACKING



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	89
Bar Stands - Rear	91
Rear Frame	98
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper Center	107
Chopper Wings	110
Diamond Crumbler Center	112
Diamond Crumbler Wings	114

REAR FINISHING TOOLS

Section	Page
Baskets Center	119
Baskets Wings	119
Basket Arms	121
Leveling Board	122

LIGHT KITS

Section	Page
Whole	123

GAUGE WHEELS

Section	Page
Whole	127

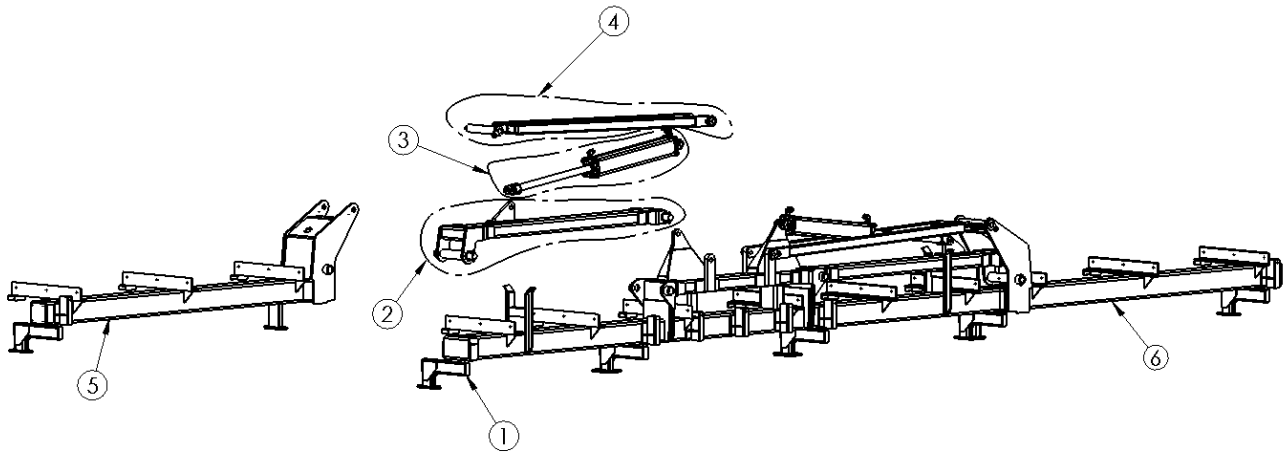


*Please see next page for Toolbar Assembly breakdown and reference guide for 3640/3668/3688.

PARTS GUIDE REFERENCE



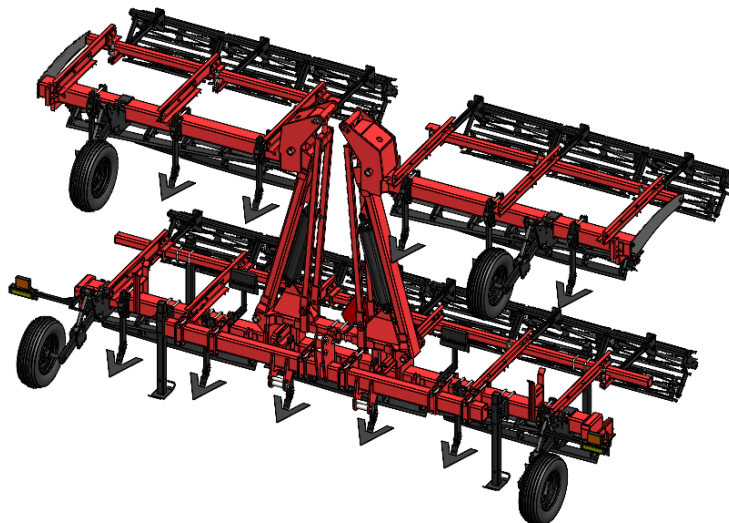
MODELS 3640/3668/3688 - 12R38 Stacking



Item Number	Part #	Description	Page #
1	301870	12 ROW 38 CENTER	1
2	SEE PAGE 87	LONG POWER ARM	2
3	SEE PAGE 81	LONG STACKING TOOLBAR HYDRAULICS	1
4	SEE PAGE 85	LONG LEVELING ARM	2
5	301871	12 ROW 38 RH WING	1
6	301872	12 ROW 38 LH WING	1



MODELS 3669- 12R40 STACKING



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	89
Bar Stands - Rear	91
Rear Frame	99
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper Center	111
Chopper Wings	111
Diamond Crumbler Center	115
Diamond Crumbler Wings	115

REAR FINISHING TOOLS

Section	Page
Baskets Center	119
Baskets Wings	119
Basket Arms	121
Leveling Board	122

LIGHT KITS

Section	Page
Whole	123

GAUGE WHEELS

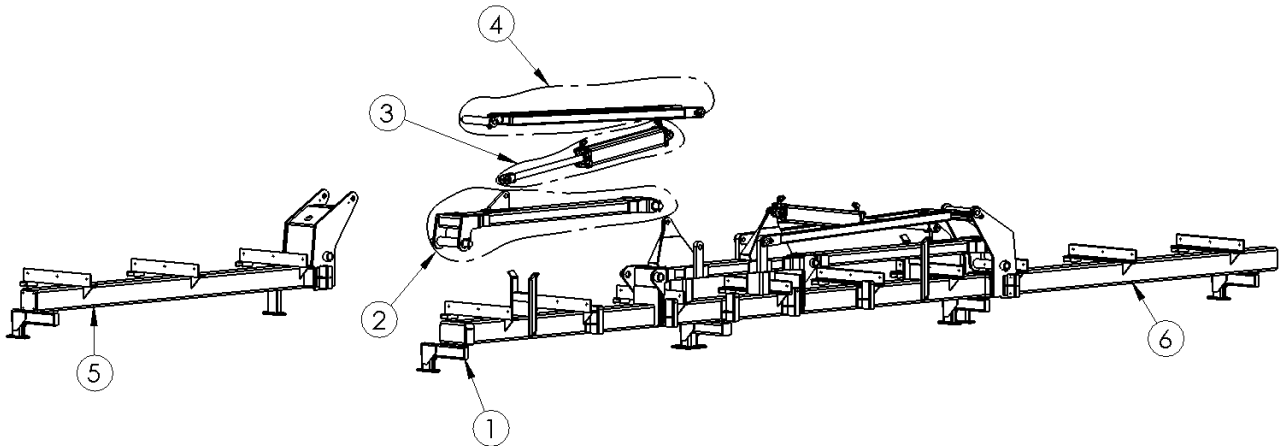
Section	Page
Whole	127



*Please see next page for Toolbar Assembly breakdown and reference guide for 3669.



MODELS 3669- 12R40 STACKING

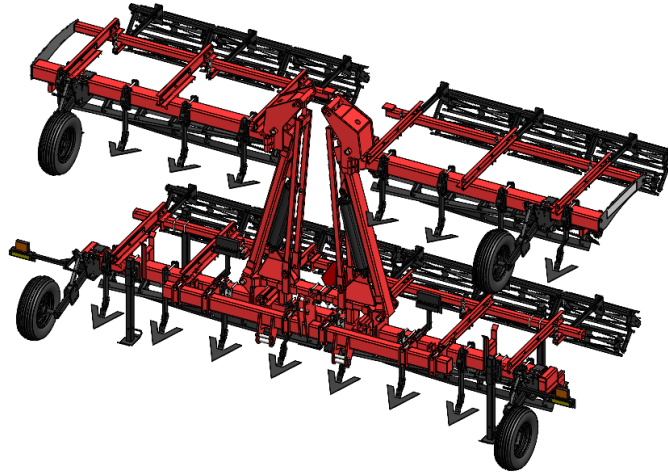


Item Number	Part #	Description	Quantity
1	301910	12 ROW 40 16 ROW 30 CENTER SECTION	1
2	SEE PAGE 87	LONG POWER ARM	2
3	SEE PAGE 81	LONG STACKING TOOLBAR HYDRAULICS	1
4	SEE PAGE 85	LONG LEVELING ARM	2
5	301911	12 ROW 40 & 16 ROW 30 RH WING	1
6	301912	12 ROW 40 & 16 ROW 30 LH WING	1

PARTS GUIDE REFERENCE



MODELS 3642/3670/3690 - 16R30 STACKING



TOOLBAR

Section	Page
Hitch & Pins	79
Toolbar Sub Assemblies*	See Next Page
Bar Stands - Front	89
Bar Stands - Rear	91
Rear Frame	99
Branding Panel	100

PLOWS AND SHANKS

Section	Page
Root Rooters	101
Buster Shovels	103
Middle Cleanouts	105
Clamps	129

REELS

Section	Page
Chopper Center	111
Chopper Wings	111
Diamond Crumbler Center	115
Diamond Crumbler Wings	115

REAR FINISHING TOOLS

Section	Page
Baskets Center	119
Baskets Wings	119
Basket Arms	121
Leveling Board	122

LIGHT KITS

Section	Page
Whole	123

GAUGE WHEELS

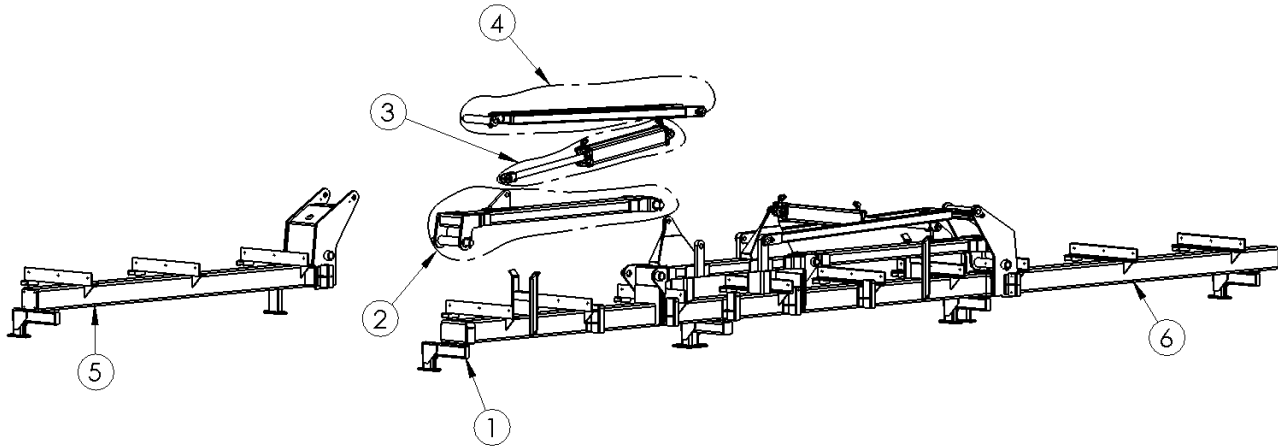
Section	Page
Whole	127

*Please see next page for Toolbar Assembly breakdown and reference guide for 3642/3670/3690.

PARTS GUIDE REFERENCE



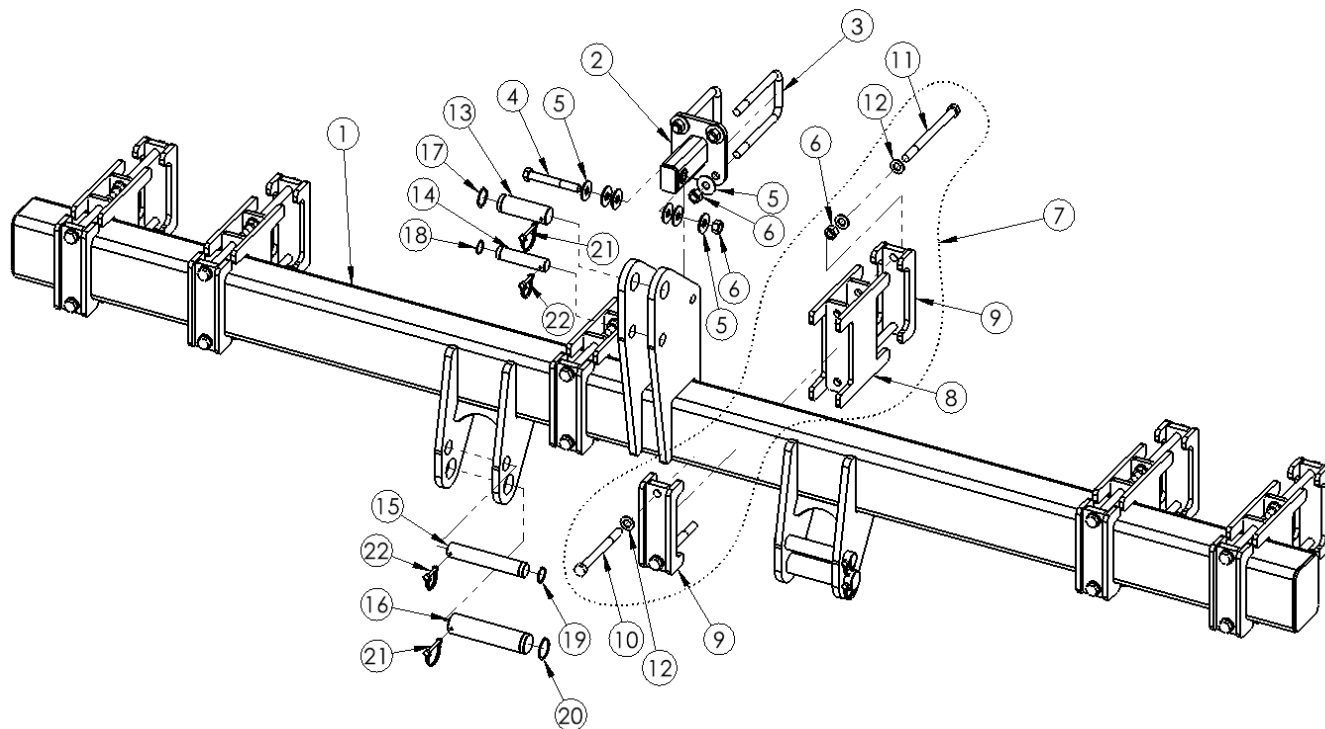
MODELS 3642/3670/3690 - 16R30 STACKING



Item Number	Part #	Description	Quantity
1	301910	12 ROW 40/16 ROW 30 CENTER SECTION	1
2	SEE PAGE 87	LONG POWER ARM	2
3	SEE PAGE 81	LONG STACKING TOOLBAR HYDRAULICS	1
4	SEE PAGE 85	LONG LEVELING ARM	2
5	301912	12 ROW 40 & 16 ROW 30 LH WING	1
6	301911	12 ROW 40 & 16 ROW 30 RH WING	1



HITCH & PINS



Item Number	Part #	Description	Quantity
1	315072	BOLT ON HITCH CAT 3/4N 5X7 TUBE	1
2	315098	STACKER BAR HITCH TIE BACK WELD	1
3	415006	U-BOLT 3/4-10 4W X 8 1/2H GR5	2
4	411595	3/4-10 X 5 1/2 HEX BOLT GR5	1
5	413012	3/4 FLAT WASHER USS	10
6	410012	3/4-10 HEX NUT CENTER LOCK GR5	29
7	602012	TOOLBAR CLAMP WITH CAPS FOR 7X7 TOOLBAR 5 X 7 HITCH	6
8	302014	HITCH CLAMP H WELDMENT 5" SPACER BLOCK	6
9	322009	TOOLBAR CLAMP CAP FOR 7IN TUBE	12
10	411600	3/4-10 X 8 HEX BOLT GR5	12

****CONTINUED ON NEXT PAGE****

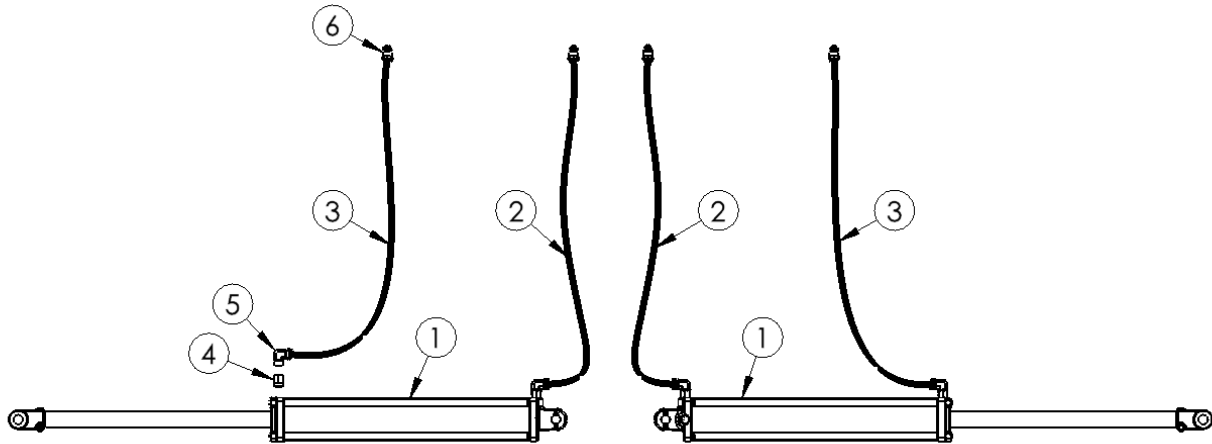


HITCH & PINS

Item Number	Part #	Description	Quantity
11	411604	3/4-10 X 10 HEX BOLT GR5	12
12	413072	3/4 FLAT WASHER SAE	48
13	315151	HITCH PIN (315001) TOP PIN 4N	1
14	315152	HITCH PIN (315001) TOP PIN 3	1
15	315154	HITCH PIN (315001) LOWER PIN 3	2
16	315153	HITCH PIN (315001) LOWER PIN 4N	2
17	315155	EXTERNAL RETAINING RING #175 1 3/4 SHAFT	1
18	315156	EXTERNAL RETAINING RING #125 1 1/4 SHAFT	1
19	315158	EXTERNAL RETAINING RING #143 1 7/16 SHAFT	2
20	315157	EXTERNAL RETAINING RING #200 2 SHAFT	2
21	315161	WIRE LOCKING PIN 1/4 X 2 1/8 USEABLE LENGTH ROUND	3
22	315162	WIRE LOCKING PIN 1/4 X 1 3/8 USEABLE LENGTH ROUND	3



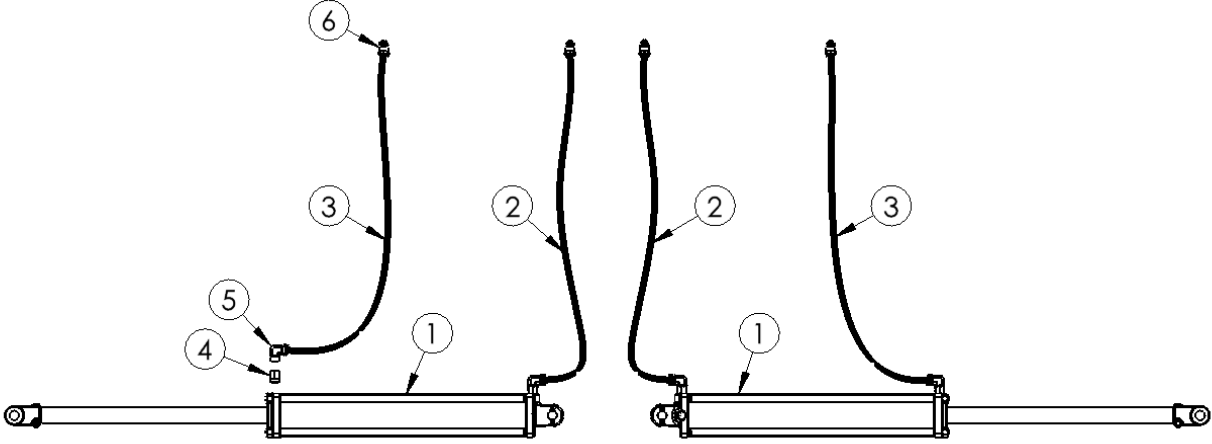
TOOLBAR - LONG STACKING HYDRAULICS



Item Number	Part #	Description	Quantity
1	315950	5 X 30 TIE ROD HYDRAULIC CYLINDER	2
2	785103	3/8" X 103" HYDRAULIC HOSE ASSEMBLY	2
3	785120	3/8" X 120" HYDRAULIC HOSE ASSEMBLY	2
4	457244	1/2 FEMALE PIP STRAIGHT TO -10 MORB HYD. FITTING	4
5	446188	1/2 X 1/2 X .062 ORIFICE SWIVEL ELBOW	4
6	457230	1/2 MALE AGTIP Q. COUPLER-1/2FEM NPTF STRAIGHT FITTING	4



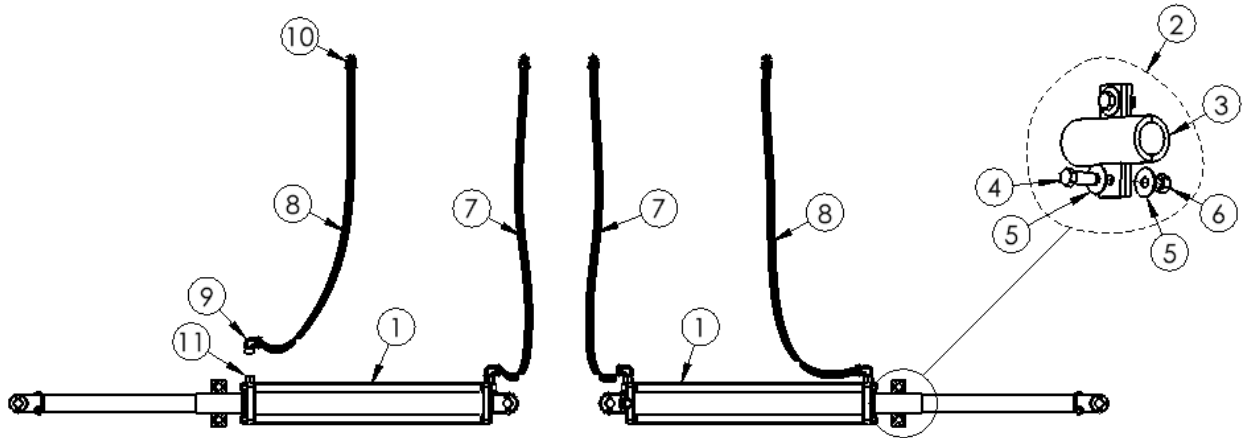
TOOLBAR - SHORT STACKING HYDRAULICS



Item Number	Part #	Description	Quantity
1	476524	5 X 24 TIE ROD HYDRAULIC CYLINDER	2
2	785103	3/8" X 103" HYDRAULIC HOSE ASSEMBLY	2
3	785120	3/8" X 120" HYDRAULIC HOSE ASSEMBLY	2
4	457244	1/2 FEMALE PIP STRAIGHT TO -10 MORB HYD. FITTING	4
5	446188	1/2 X 1/2 X .062 ORIFICE SWIVEL ELBOW	4
6	457230	1/2 MALE AGTIP Q. COUPLER-1/2FEM NPTF STRAIGHT FITTING	4



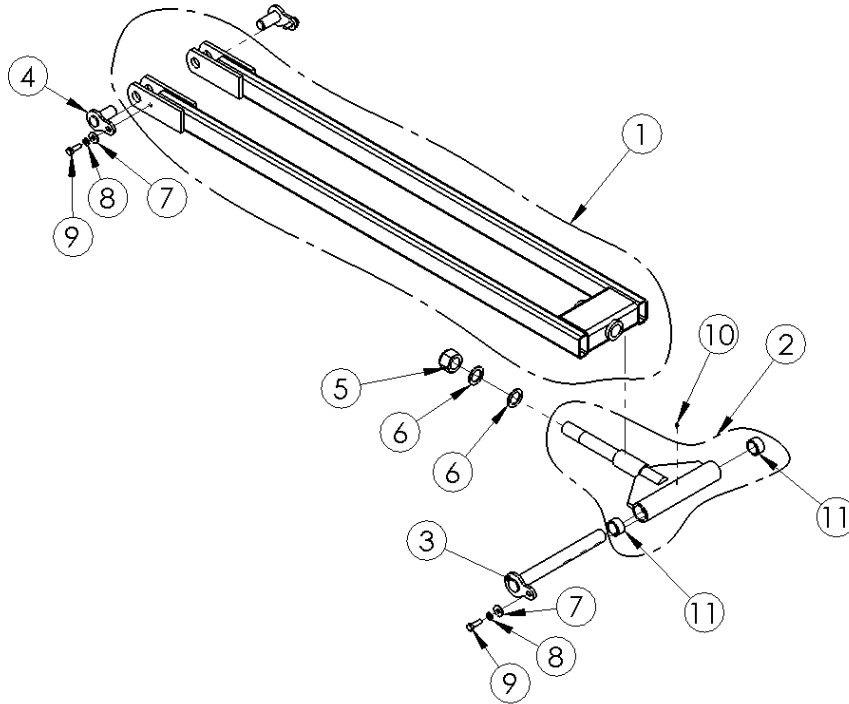
TOOLBAR - FOLDING HYDRAULICS



Item Number	Part #	Description	Quantity
1	476026	5 X 16 HYDRAULIC CYLINDER	2
2	350012	CYLINDER STOP ASSEMBLY	2
3	350011	CYLINDER STOP BRACKET	4
4	305111	5/8-11 X 1 3/4 BOLT GR5	4
5	413010	5/8 USS FLAT WASHER	8
6	412060	5/8-11 NUT	4
7	785103	3/8" X 103" HYDRAULIC HOSE ASSEMBLY	2
8	785120	3/8" X 120" HYDRAULIC HOSE ASSEMBLY	2
9	446188	1/2 X 1/2 X .062 ORIFICE SWIVEL ELBOW	4
10	457230	1/2 MALE AGTIP Q. COUPLER-1/2FEM NPTF STRAIGHT FITTING	4
11	457244	1/2 FEMALE PIP STRAIGHT TO -10 MORB HYD. FITTING	4



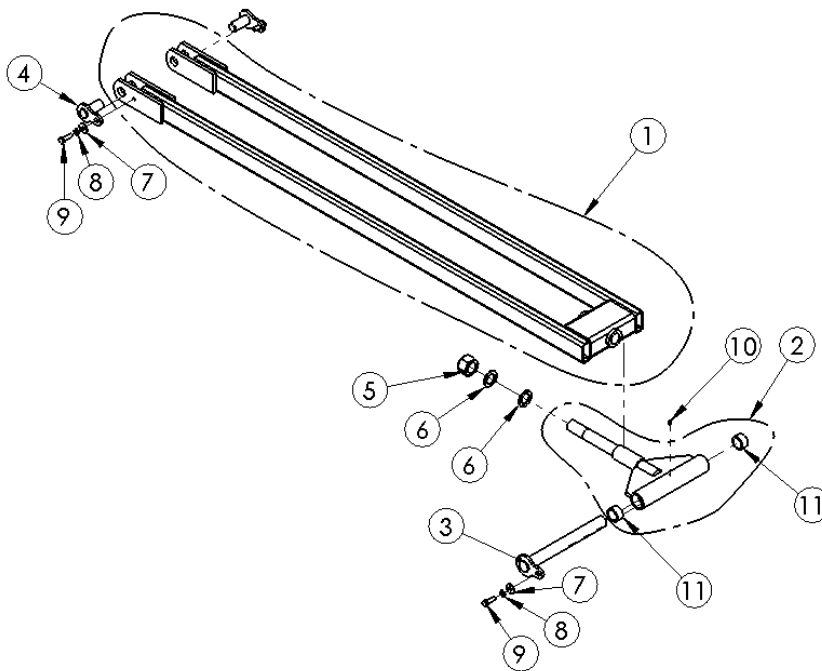
TOOLBAR - MEDIUM LEVELING ARM



Item Number	Part #	Description	Quantity
1	301919	MEDIUM LEVELING ARM	1
2	301819	LEVELING ARM END	1
3	301825	TOP PIN - TOP LEVELING STACKER	1
4	301824	SMALL PIN STACKER BAR	2
5	410032	1 1/2-12 HEX NUT NYLON LOCK GR5	1
6	413120	1 1/2 X 2 1/4 X 14GA MACHINE WASHER	2
7	413008	1/2 FLAT WASHER USS	3
8	413508	1/2 LOCK WASHER	3
9	411545	1/2-13 X 1 1/2 HEX BOLT GR5	3
10	450004	ZERK FITTING STRAIGHT 1/4 DRIVE-IN	1
11	401095	BUSHING 1 1/2 ID X 1"	2



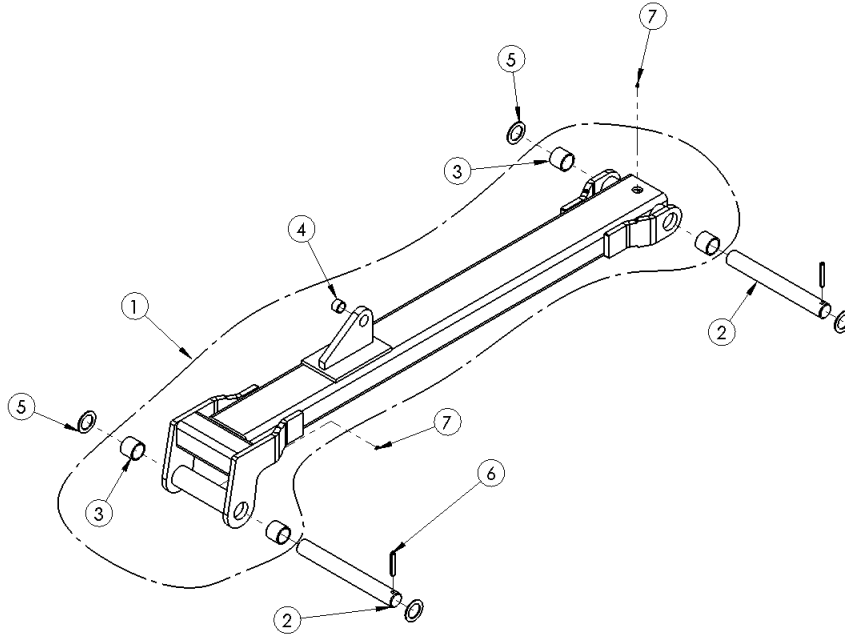
TOOLBAR - LONG LEVELING ARM



Item Number	Part #	Description	Quantity
1	301820	LONG LEVELING ARM	1
2	301819	LEVELING ARM END	1
3	301825	TOP PIN - TOP LEVELING STACKER	1
4	301824	SMALL PIN STACKER BAR	2
5	410032	1 1/2-12 HEX NUT NYLON LOCK GR5	1
6	413120	1 1/2 X 2 1/4 X 14GA MACHINE WASHER	2
7	413008	1/2 FLAT WASHER USS	3
8	413508	1/2 LOCK WASHER	3
9	411545	1/2-13 X 1 1/2 HEX BOLT GR5	3
10	450004	ZERK FITTING STRAIGHT 1/4 DRIVE-IN	1
11	401095	BUSHING 1 1/2 ID X 1"	2



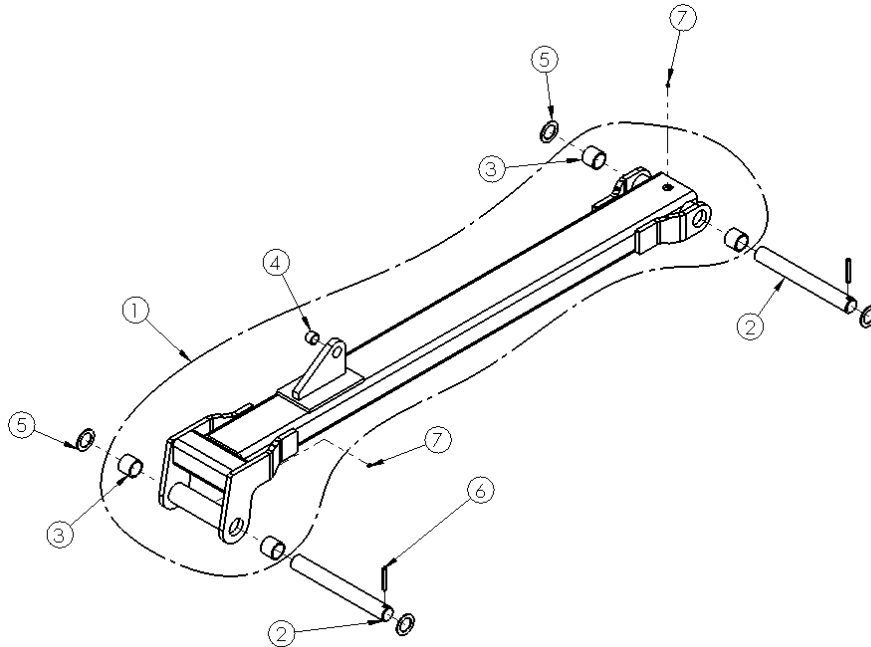
TOOLBAR - MEDIUM POWER ARM



Item Number	Part #	Description	Quantity
1	301916	MEDIUM POWER ARM ASSEMBLY	1
2	203948	STACKER BAR MAIN PIVOT PIN	2
3	401118	2 3/8"OD X 2" ID X 2" LONG BUSHING	4
4	401080	1 1/2" OD X 1 1/4" ID X 1" LONG BUSHING	1
5	413124	2 X 3 X 10GA MACHINE BUSHING	4
6	416133	ROLL PIN 1/2 X 3 1/2 PLATED	2
7	450004	ZERK FITTING STRAIGHT 1/4 DRIVE-IN	2



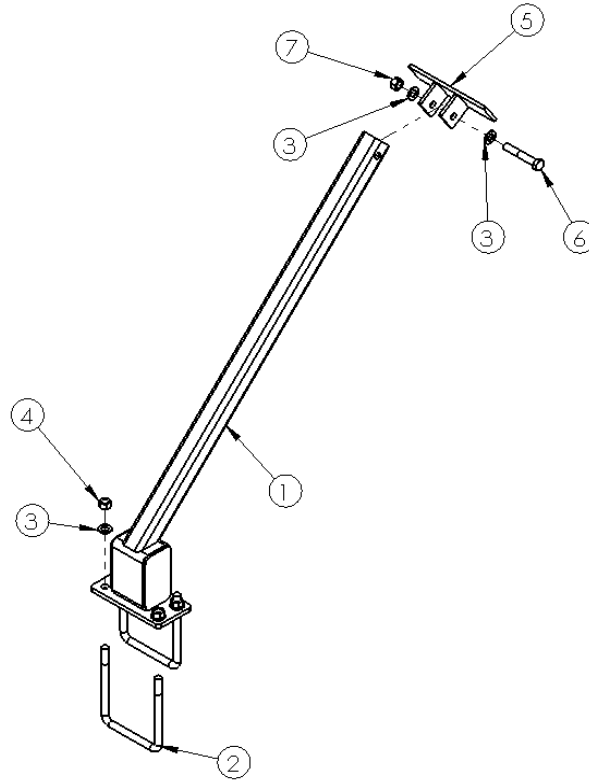
TOOLBAR - LONG POWER ARM



Item Number	Part #	Description	Quantity
1	301802	LONG POWER ARM ASSEMBLY	1
2	203948	STACKER BAR MAIN PIVOT PIN	2
3	401118	2 3/8"OD X 2" ID X 2" LONG BUSHING	4
4	401080	1 1/2" OD X 1 1/4" ID X 1" LONG BUSHING	1
5	413124	2 X 3 X 10GA MACHINE BUSHING	4
6	416133	ROLL PIN 1/2 X 3 1/2 PLATED	2
7	450004	ZERK FITTING STRAIGHT 1/4 DRIVE-IN	2



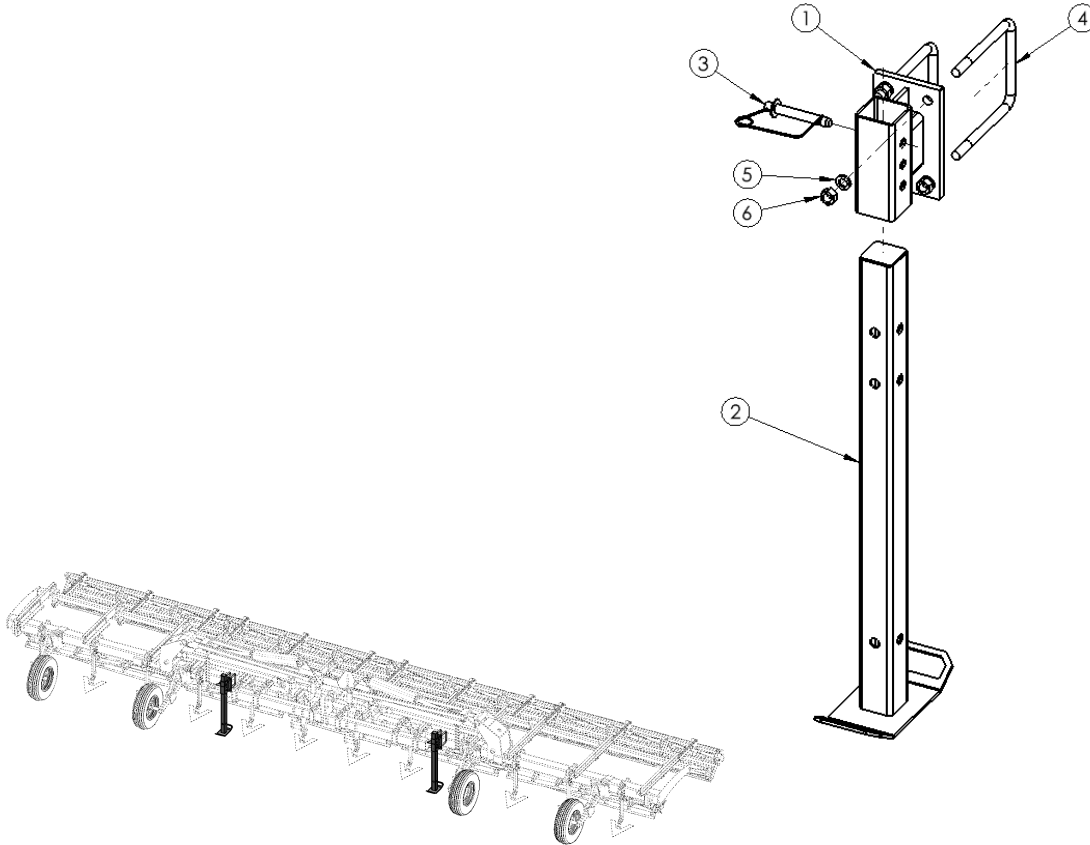
FOLDING TOOLBAR - WING REST



Item Number	Part #	Description	Quantity
1	350006	WING REST LOWER HALF	1
2	415004	3/4 U-BOLT 7W X 9H	2
3	413072	3/4 SAE FLAT WASHER	6
4	412012	3/4-10 NUT	4
5	350175	WING REST TOP STOP	1
6	411592	3/4-10 X 4 1/2 GR5 BOLT	1
7	410012	3/4-10 NUT CENTER LOCK	1



BAR STAND - FRONT

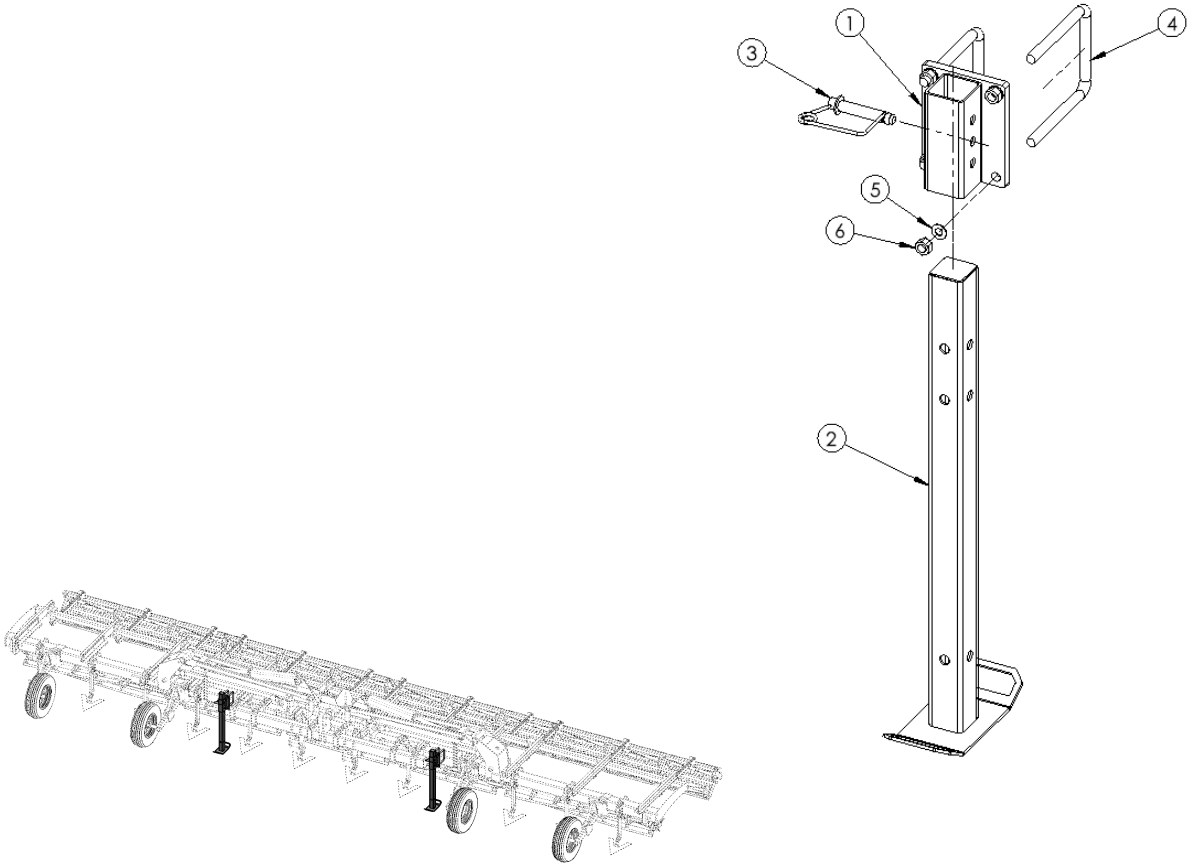


Item Number	Part #	Description	Quantity
1	302222	BAR STAND MOUNT FOR 7X7	1
2	315203	BAR STAND LONG LEG	1
3	416230	SNAP LOCK PIN 3/4 X 4 EFFECTIVE LENGTH	1
4	415004	U-BOLT 3/4-10 7W X 9H TL-2" GR5	2
5	413512	3/4 LOCK WASHER	4
6	412012	3/4-10 HEX NUT GR2	4

PARTS GUIDE



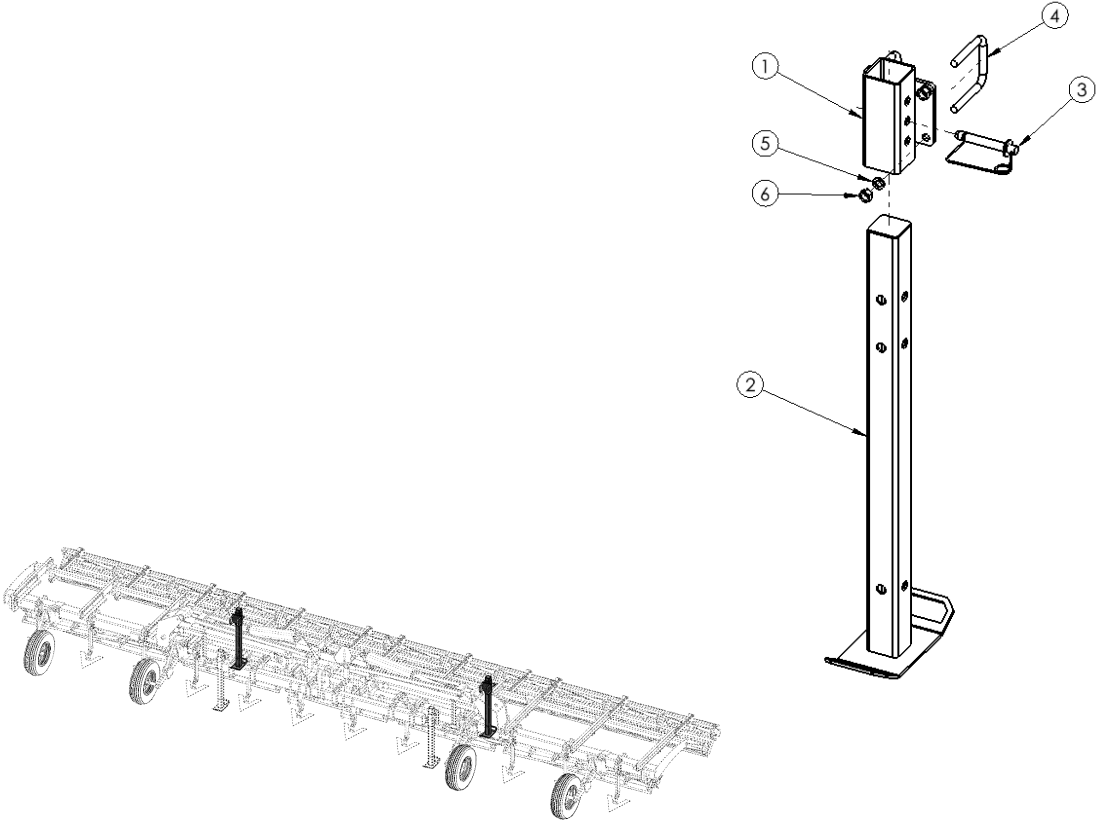
BAR STAND - FRONT (3629/3659/3662/3682)



Item Number	Part #	Description	Quantity
1	315201	BAR STAND MOUNT	1
2	315203	BAR STAND LONG LEG WELDMENT	1
3	416230	SNAP LOCK PIN 3/4 X 4 EFFECTIVE LENGTH	1
4	415004	U-BOLT 3/4-10 7W X 9H TL-2" GR5	2
5	413512	3/4 LOCK WASHER	4
6	412012	3/4-10 HEX NUT GR2	4



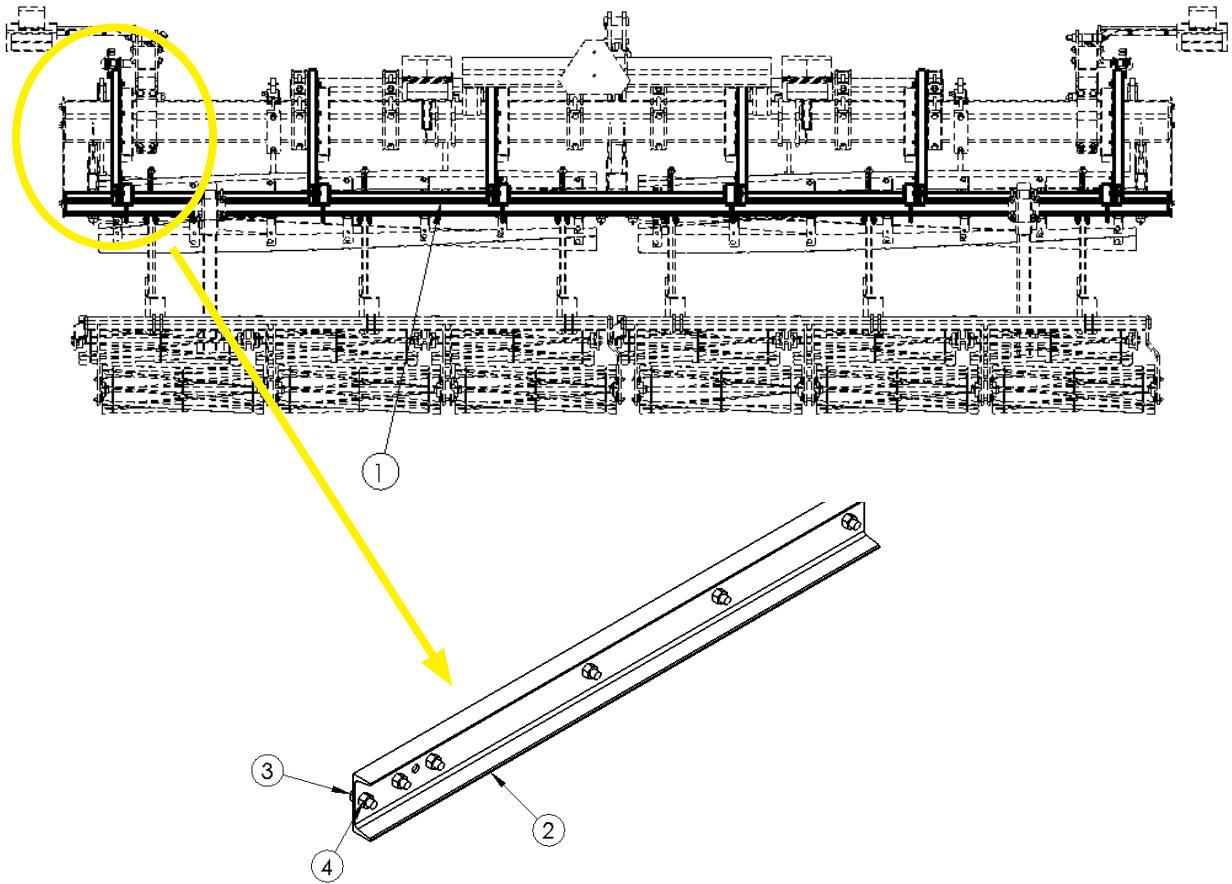
BAR STANDS - REAR



Item Number	Part #	Description	Quantity
1	350026	BAR STAND MOUNT FOR 4X4	2
2	315203	BAR STAND LONG LEG	2
3	416230	SNAP LOCK PIN 3/4 X 4 EFFECTIVE LENGTH	2
4	415010	U-BOLT 5/8-11 4W X 5 1/4H GR5	4
5	413510	5/8 LOCK WASHER	8
6	412010	5/8 LOCK WASHER	8



REAR FRAME - 3658/3660

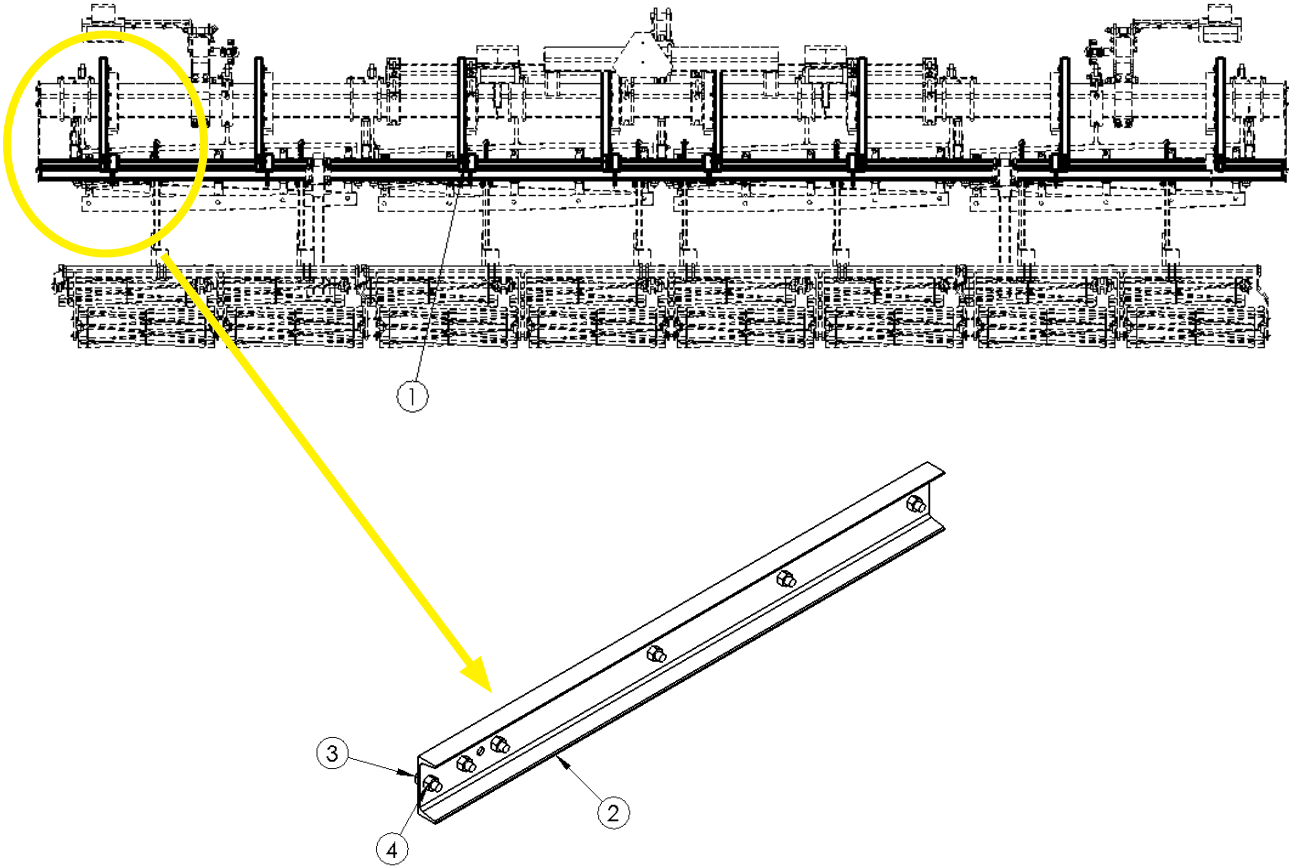


Item Number	Part #	Description	Quantity
1	350018	6 ROW 38/40 8 ROW 30 REAR FRAME	1
2	204023	REAR FRAME CHANNEL	1
3	411560	5/8-11 X 1 1/2 HEX BOLT GR5	6
4	410009	5/8-11 CENTER LOCK NUT	6



PARTS GUIDE

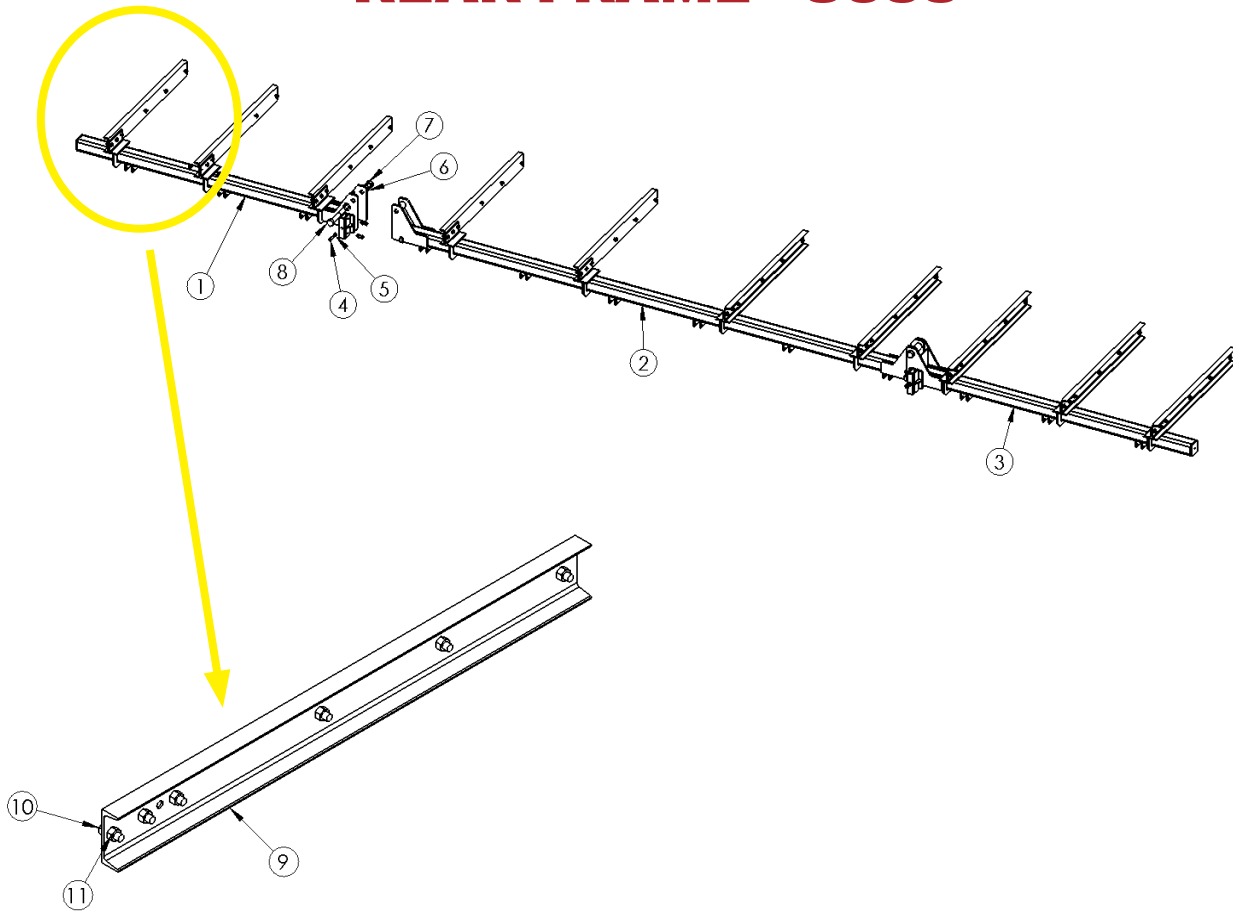
REAR FRAME - 3661



Item Number	Part #	Description	Quantity
1	350055	8 ROW 38/40 REAR FRAME	1
2	204023	REAR FRAME CHANNEL	1
3	411560	5/8-11 X 1 1/2 HEX BOLT GR5	6
4	410009	5/8-11 CENTER LOCK NUT	6



REAR FRAME - 3659

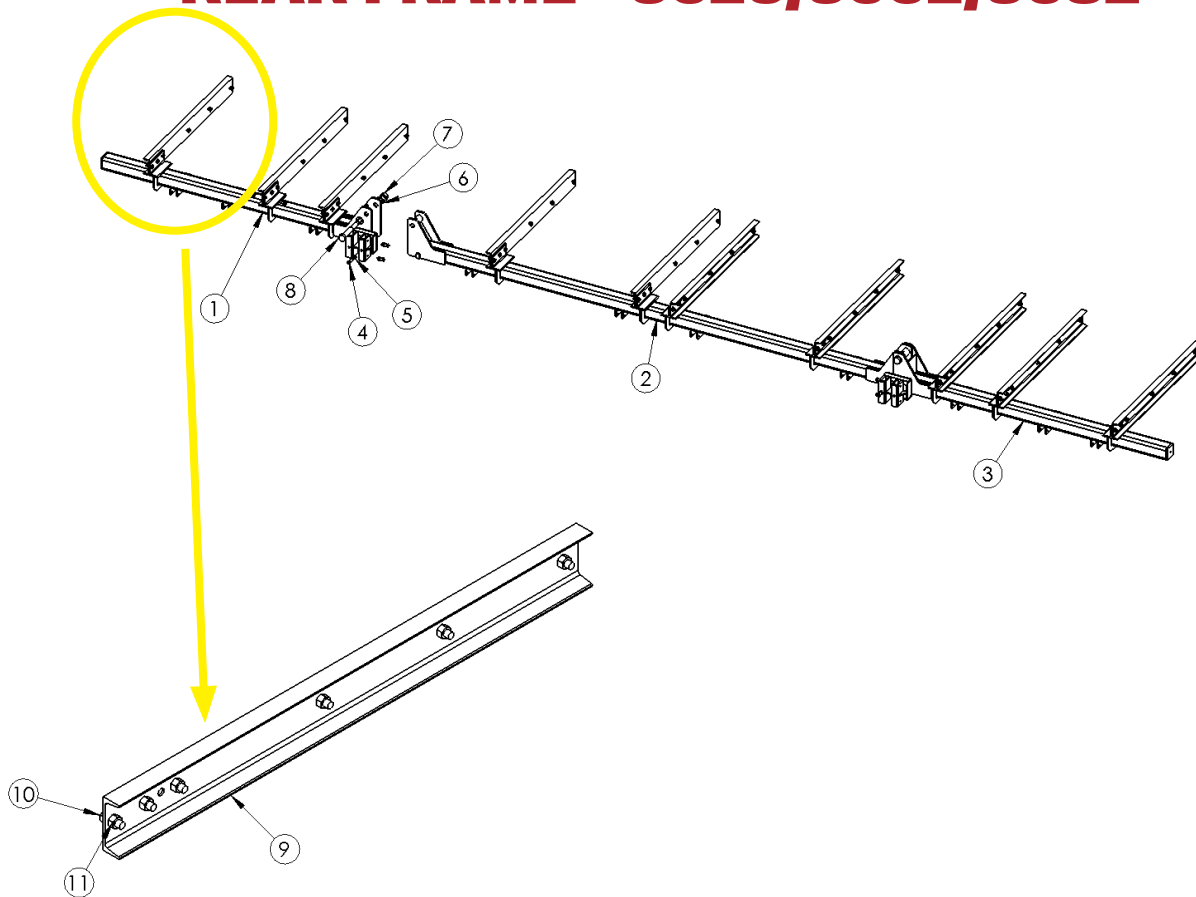


Item Number	Part #	Description	Quantity
1	350081	8 ROW 36 LH REAR FRAME	1
2	350079	8 ROW 36 CENTER REAR FRAME	1
3	350080	8 ROW 36 RH REAR FRAME	1
4	414828	5/8" X 1-3/4" SQUARE HEAD SET SCREW	6
5	412410	5/8-11 HEX NUT JAM GR2	6
6	413117	1 1/4 X 2 1/4 X 14GA MACHINE BUSHING	4
7	412020	1 1/4-7 HEX NUT GR2	2
8	411671	1 1/4-7 X 8 HEX BOLT GR5	2
9	204023	REAR FRAME CHANNEL	1
10	411560	5/8-11 X 1 1/2 HEX BOLT GR. 5	6
11	410009	5/8-11 CENTER LOCK NUT	6

PARTS GUIDE



REAR FRAME - 3629/3662/3682

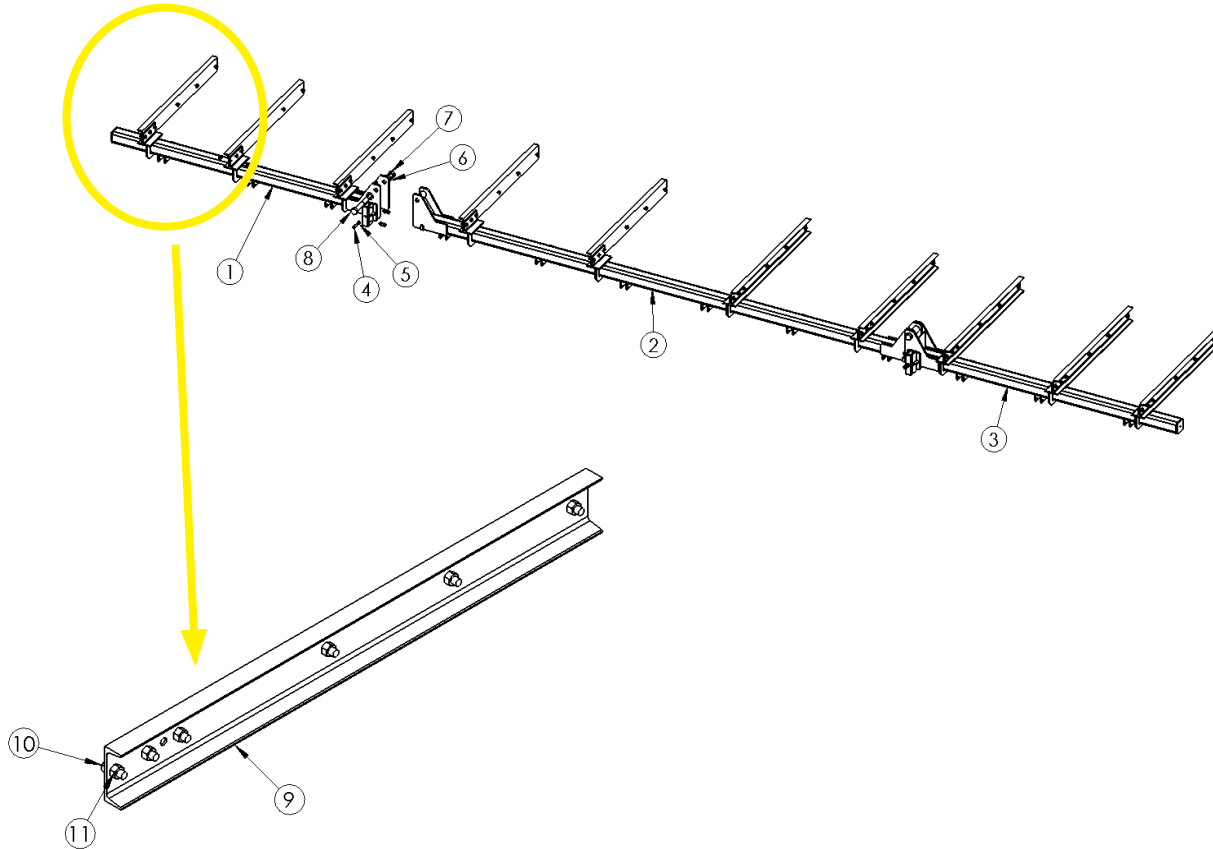


Item Number	Part #	Description	Quantity
1	350062	8 ROW 38 40 LH REAR FRAME	1
2	350060	8 ROW 38 40 CENTER REAR FRAME	1
3	350061	8 ROW 38 40 RH REAR FRAME	1
4	414828	5/8" X 1-3/4" SQUARE HEAD SET SCREW	6
5	412410	5/8-11 HEX NUT JAM GR2	6
6	413117	1 1/4 X 2 1/4 X 14GA MACHINE BUSHING	4
7	412020	1 1/4-7 HEX NUT GR2	2
8	411671	1 1/4-7 X 8 HEX BOLT GR5	2
9	204023	REAR FRAME CHANNEL	1
10	411560	5/8-11 X 1 1/2 HEX BOLT GR5	6
11	410009	5/8-11 CENTER LOCK NUT	6

PARTS GUIDE



REAR FRAME - 3674/3694

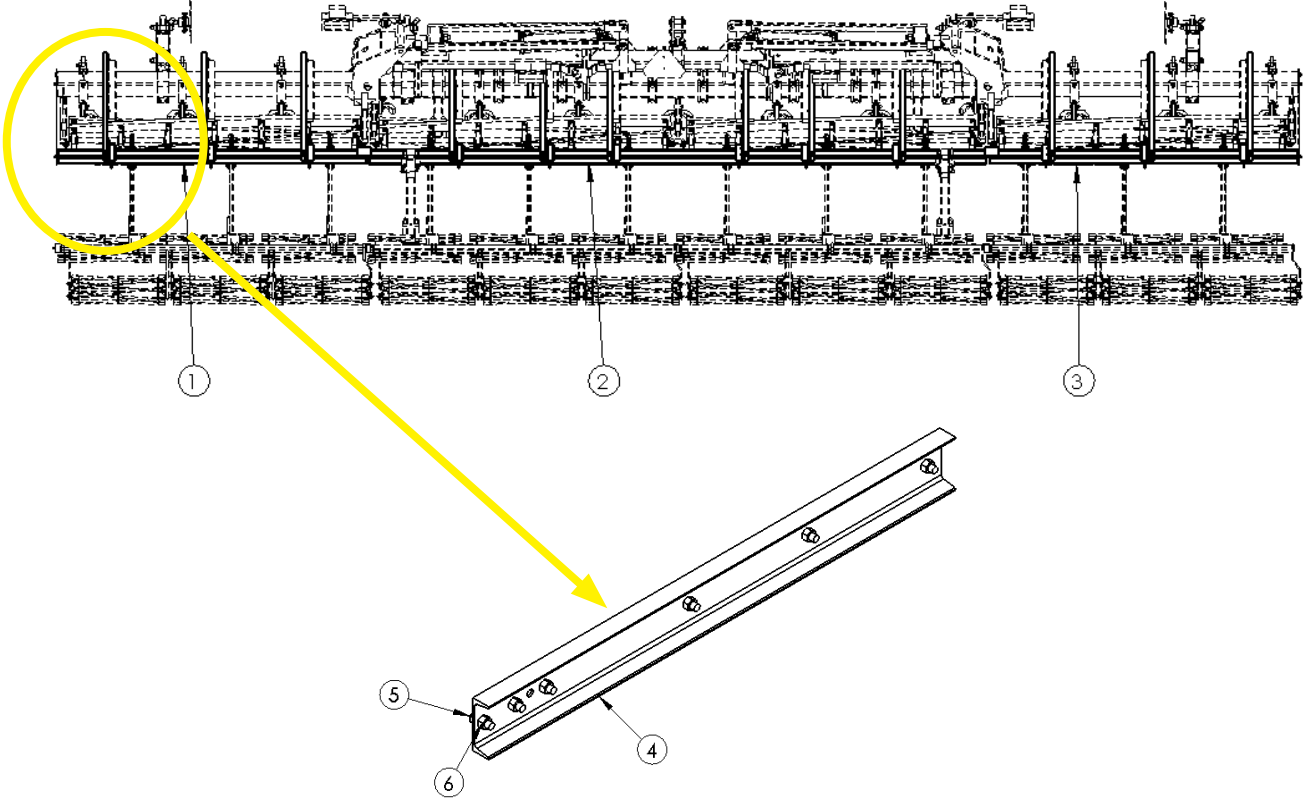


Item Number	Part #	Description	Quantity
1	350075	12 ROW 30 LH REAR FRAME	1
2	350073	12 ROW 30 CENTER REAR FRAME	1
3	350074	12 ROW 30 RH REAR FRAME	1
4	414828	5/8" X 1-3/4" SQUARE HEAD SET SCREW	6
5	412410	5/8-11 HEX NUT JAM GR2	6
6	413117	1 1/4 X 2 1/4 X 14GA MACHINE BUSHING	4
7	412020	1 1/4-7 HEX NUT GR2	2
8	411671	1 1/4-7 X 8 HEX BOLT GR5	2
9	204023	REAR FRAME CHANNEL	1
10	411560	5/8-11 X 1 1/2 HEX BOLT GR5	6
11	410009	5/8-11 CENTER LOCK NUT	6



PARTS GUIDE

REAR FRAME - 3667

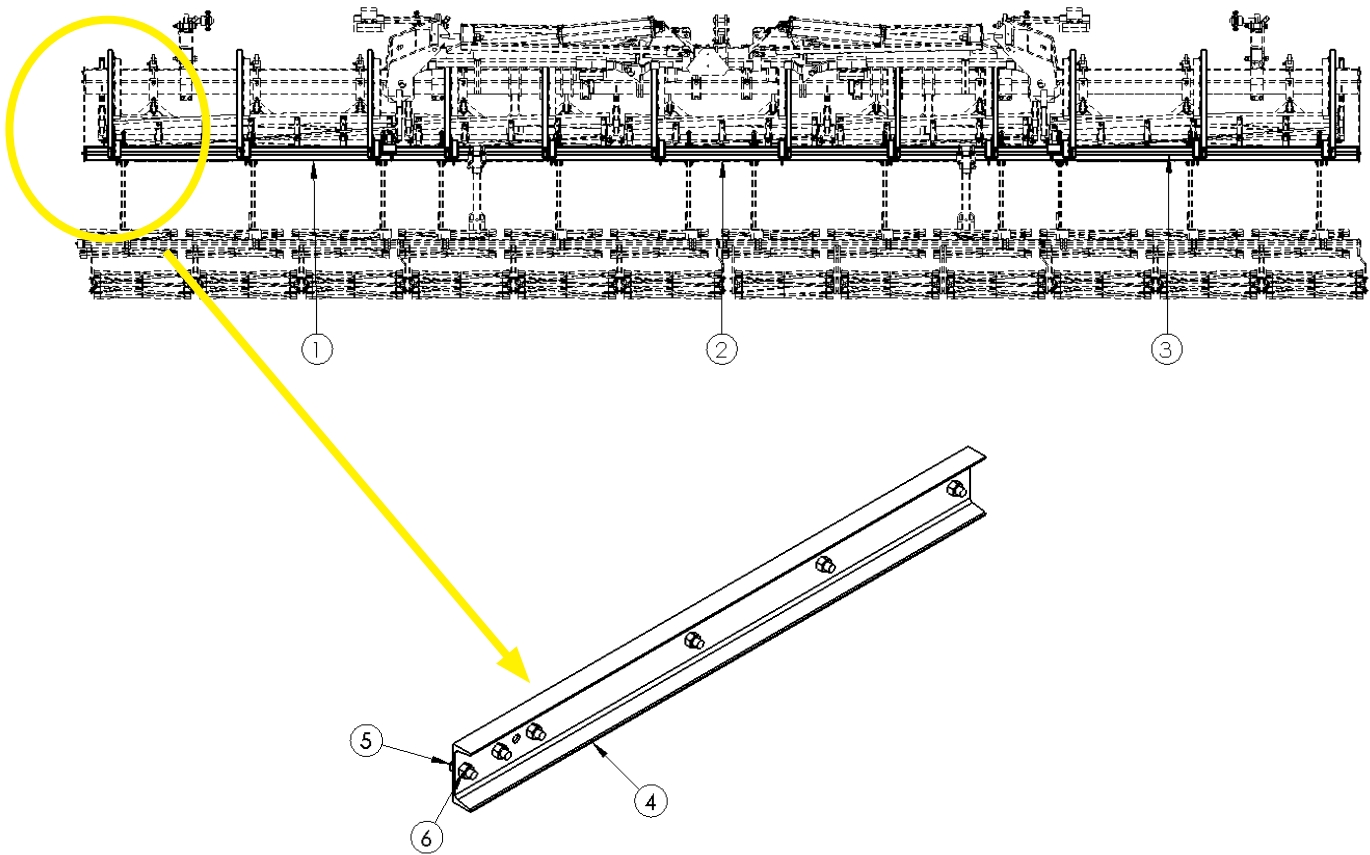


Item Number	Part #	Description	Quantity
1	350084	12 ROW 36 LH REAR FRAME	1
2	350082	12 ROW 36 CENTER REAR FRAME	1
3	350083	12 ROW 36 RH REAR FRAME	1
4	204023	REAR FRAME CHANNEL	1
5	411560	5/8-11 X 1 1/2 HEX BOLT GR5	6
6	410009	5/8-11 CENTER LOCK NUT	6

PARTS GUIDE



REAR FRAME - 3640/3668/3688

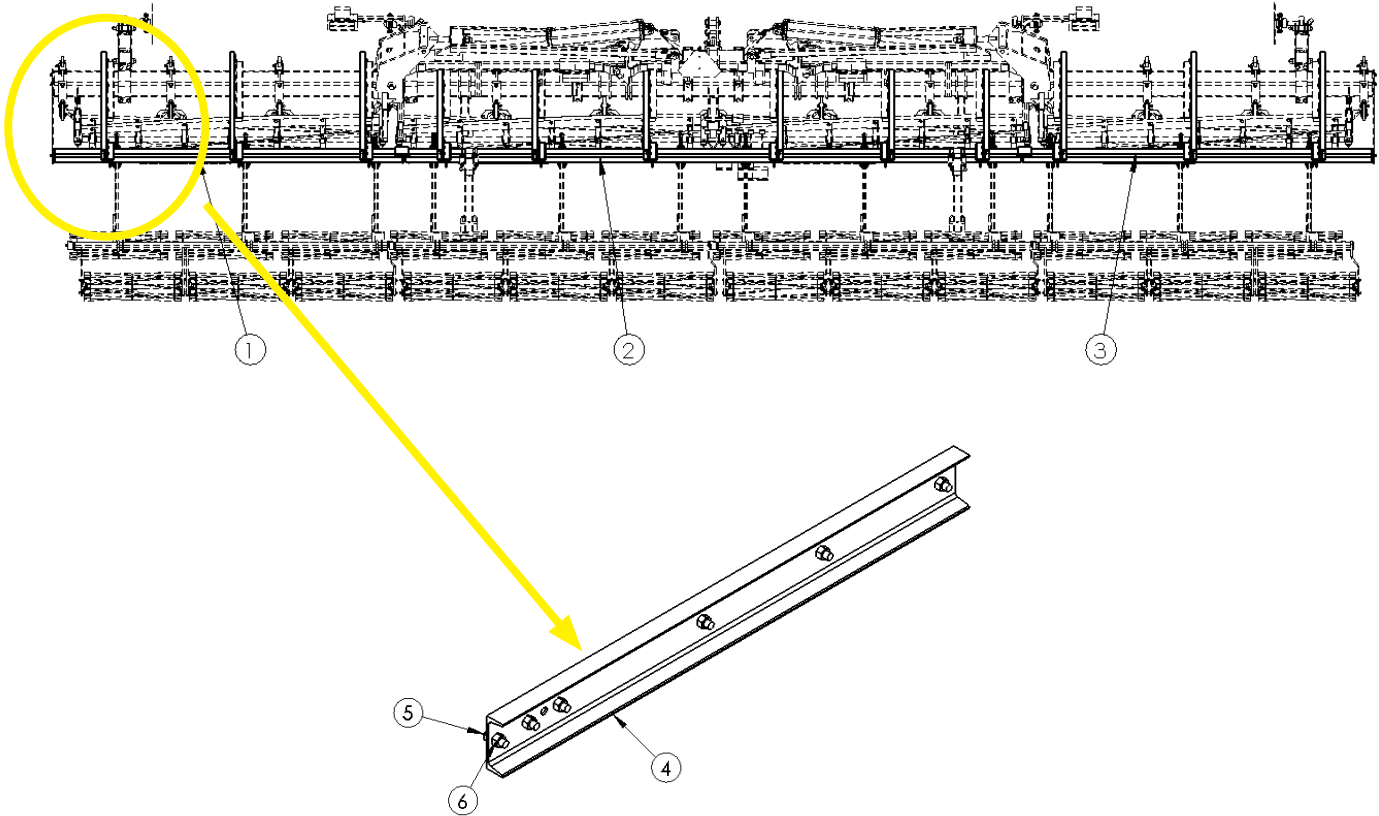


Item Number	Part #	Description	Quantity
1	350066	12R38 LEFT REAR FRAME	1
2	302210	12R38 CENTER REAR FRAME	1
3	350065	12R38 RIGHT REAR FRAME	1
4	204023	REAR FRAME CHANNEL	1
5	411560	5/8-11 X 1 1/2 HEX BOLT GR5	6
6	410009	5/8-11 CENTER LOCK NUT	6



PARTS GUIDE

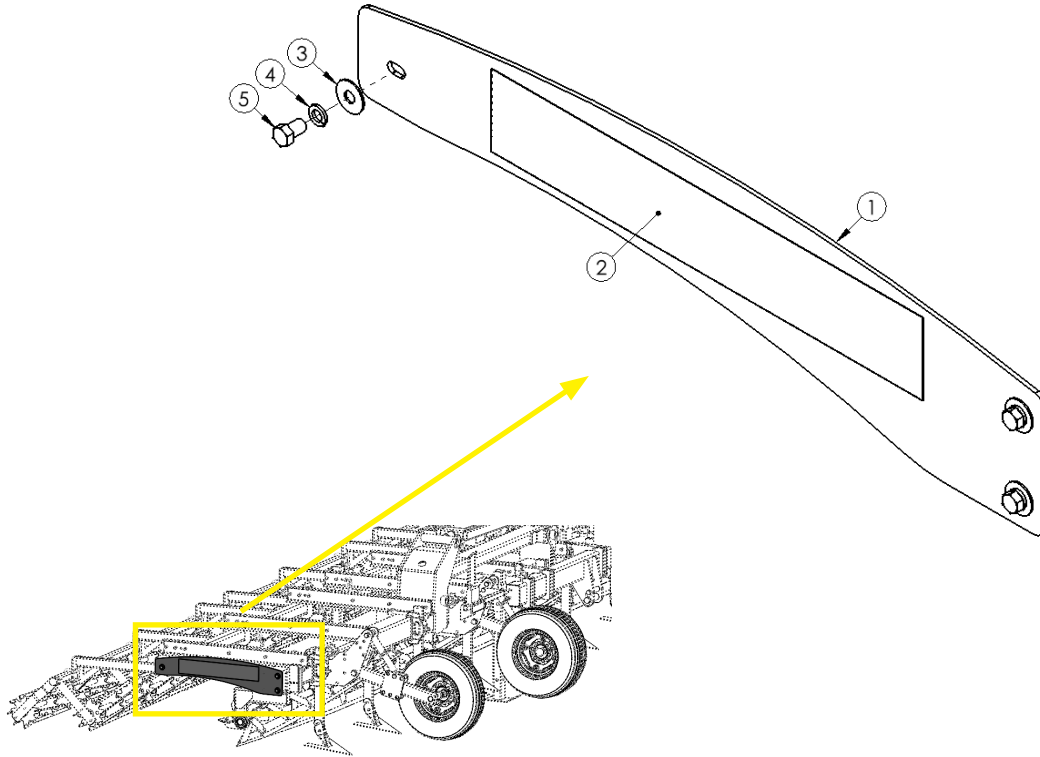
REAR FRAME - 3669/3642/3670/3690



Item Number	Part #	Description	Quantity
1	302215	12 ROW 40 AND 16 ROW 30 LH REAR FRAME	1
2	302216	12 ROW 40 AND 16 ROW 30 CENTER REAR FRAME	1
3	302214	12 ROW 40 AND 16 ROW 30 RH REAR FRAME	1
4	204023	REAR FRAME CHANNEL	1
5	411560	5/8-11 X 1 1/2 HEX BOLT GR5	6
6	410009	5/8-11 CENTER LOCK NUT	6



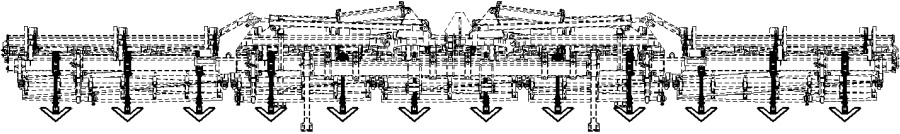
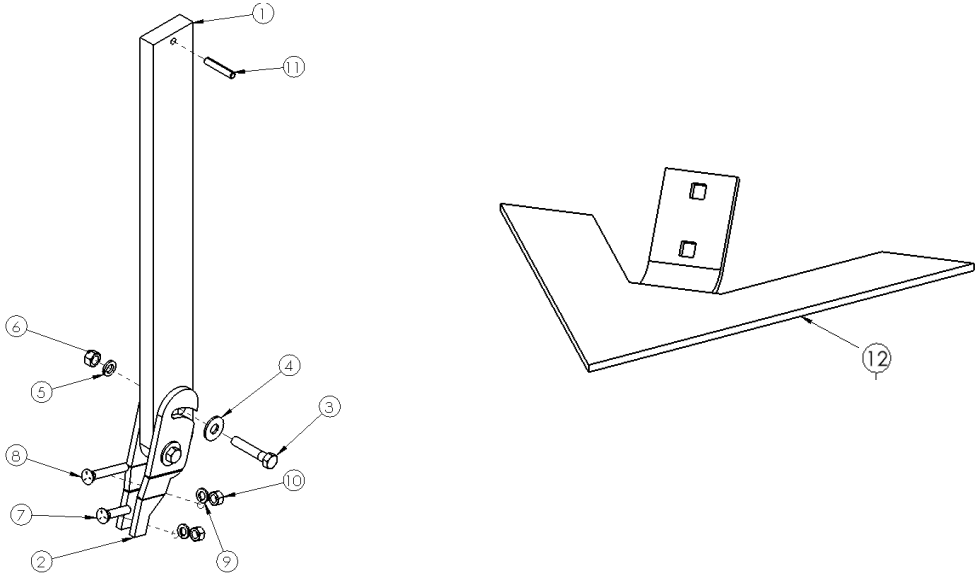
BRANDING PANEL



Item Number	Part #	Description	Quantity
1	350064	LEVEL BANDER BRANDING PANEL	1
2	DCL00302	LEVEL BANDER BRANDING PANEL DECAL	1
3	305077	5/8-11 X 1 BOLT GR5	3
4	413510	5/8 LOCK WASHER	3
5	413010	5/8 USS FLAT WASHER	3



ROOT ROOTERS



Item Number	Part #	Description	Quantity
1	201557	28" ROOT ROOTER SHANK 28"	1
2	300244	FRICITION TRIP FOOT ROOT ROOTERS	1
3	411549	1/2-13 X 2 1/2 HEX BOLT GR5	2
4	413008	1/2 FLAT WASHER USS	2
5	413508	1/2 LOCK WASHER	2
6	412058	1/2-13 HEX NUT GR5	2
7	411834	7/16-14 X 2 PLOW BOLT GR5	1
8	411836	7/16-14 X 3 PLOW BOLT GR5	1
9	413507	7/16 LOCK WASHER	2

****CONTINUED ON NEXT PAGE****

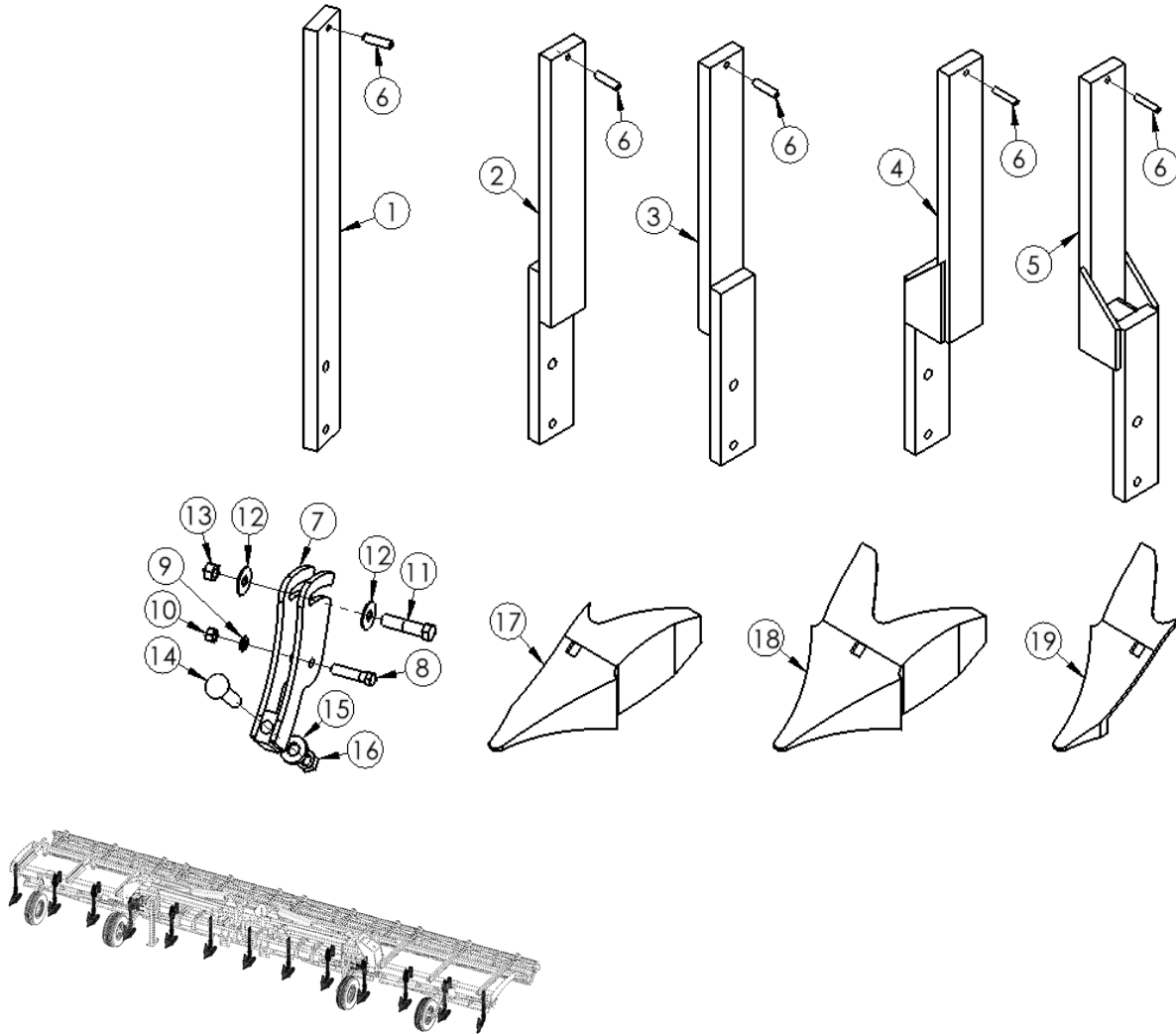


ROOT ROOTERS

Item Number	Part #	Description	Quantity
10	412007	7/16-14 HEX NUT GR2	2
11	416120	3/8 X 2 ROLL PIN	1
12	474016	ROOT ROOTER SHOVEL	1



BUSTER SHOVELS



Item Number	Part #	Description	Quantity
1	204210	VERTICAL BUSTER SHANK	1
2	302034	RH 1" OFFSET BUSTER SHANK	1
3	302035	LH 1" OFFSET BUSTER SHANK	1
4	302002	RH 3" OFFSET BUSTER SHANK	1
5	302003	LH 3" OFFSET BUSTER SHANK	1
6	416120	3/8 X 2 ROLL PIN	1
7	479075	BUSTER SHOVEL TRIP FOOT	1
8	411549	1/2-13 X 2 1/2 BOLT GR5	1
9	413508	1/2 LOCK WASHER	1

****CONTINUED ON NEXT PAGE****

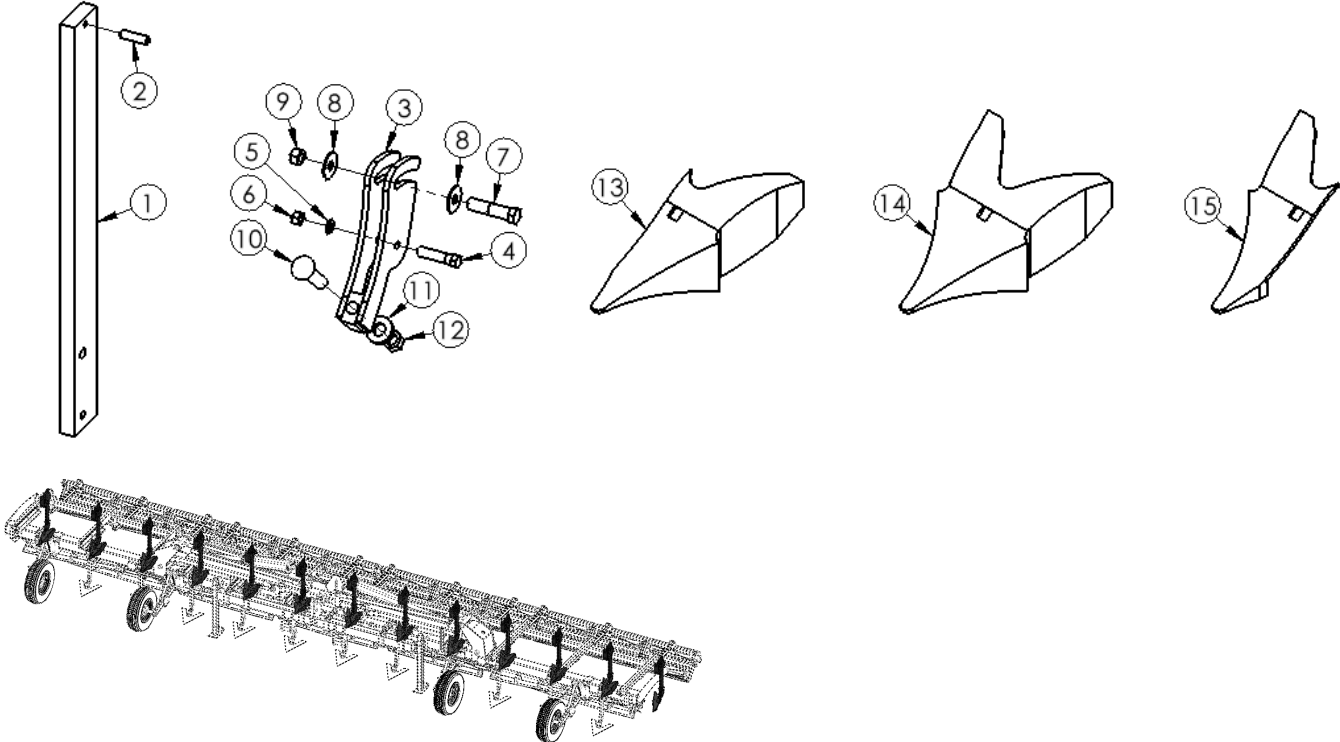


BUSTER SHOVELS

Item Number	Part #	Description	Quantity
10	412058	1/2-13 NUT	1
11	411563	5/8-11 X 3 BOLT GR5	1
12	413010	5/8 USS FLAT WASHER	2
13	410009	5/8-11 CENTER LOCK NUT	1
14	411794	3/4-10 X 3 1/2 CARRIAGE BOLT GR5	1
15	413058	3/4 USS FLAT WASHER	1
16	410012	3/4-10 CENTER LOCK NUT	1
17	204215	#11N FURROW RH FURROW SHOVEL	1
18	474031	#11N FURROW CENTER FURROW SHOVEL	1
19	204216	#11N FURROW LH FURROW SHOVEL	1



MIDDLE CLEANOUTS



Item Number	Part #	Description	Quantity
1	204210	VERTICAL BUSTER SHANK	1
2	416120	3/8 X 2 ROLL PIN	1
3	479075	BUSTER SHOVEL TRIP FOOT	1
4	411549	1/2-13 X 2 1/2 BOLT GR5	1
5	413508	1/2 LOCK WASHER	1
6	412058	1/2-13 NUT	1
7	411563	5/8-11 X 3 BOLT GR5	1
8	413010	5/8 USS FLAT WASHER	2
9	410009	5/8-11 CENTER LOCK NUT	1
10	411794	3/4-10 X 3 1/2 CARRIAGE BOLT GR5	1

****CONTINUED ON NEXT PAGE****

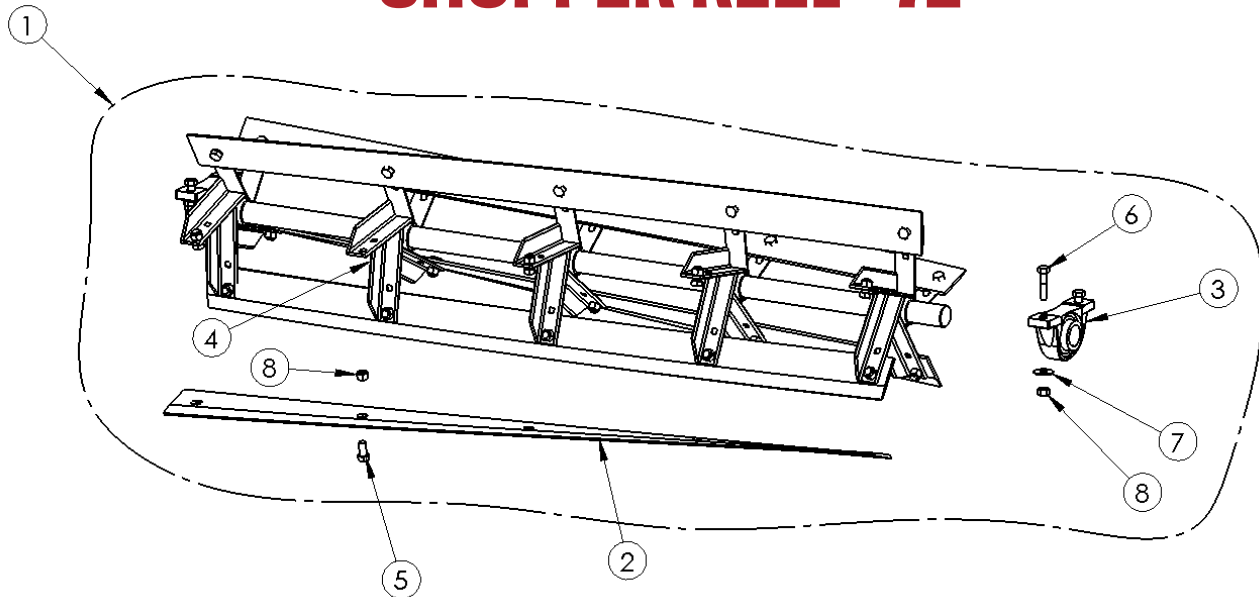


MIDDLE CLEANOUTS

Item Number	Part #	Description	Quantity
11	413058	3/4 USS FLAT WASHER	1
12	410012	3/4-10 CENTER LOCK NUT	1
13	204215	#11N FURROW RH FURROW SHOVEL	1
14	474031	#11N FURROW CENTER FURROW SHOVEL	1
15	204216	#11N FURROW LH FURROW SHOVEL	1



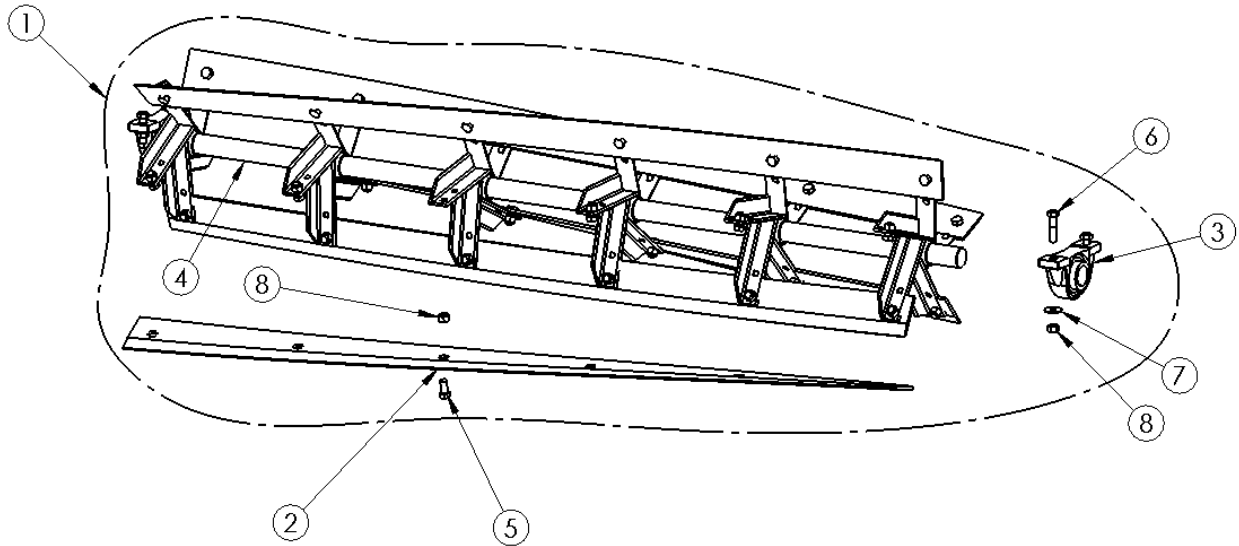
CHOPPER REEL - 72"



Item Number	Part #	Description	Quantity
1	770020	72" SPIRAL REEL ASSEMBLY	1
2	200539	72" SPIRAL REEL BLADE	5
3	482101	REEL BEARING	2
4	300451	SPIRAL REEL FOR 72" BLADES 5 SUPPORTS	1
5	411558	5/8-11 X 1 1/4 BOLT GR5	25
6	411562	5/8-11 X 2 1/2 BOLT GR5	4
7	413010	5/8 USS WASHER	4
8	410009	5/8-11 NUT CENTER LOCK GR2	29



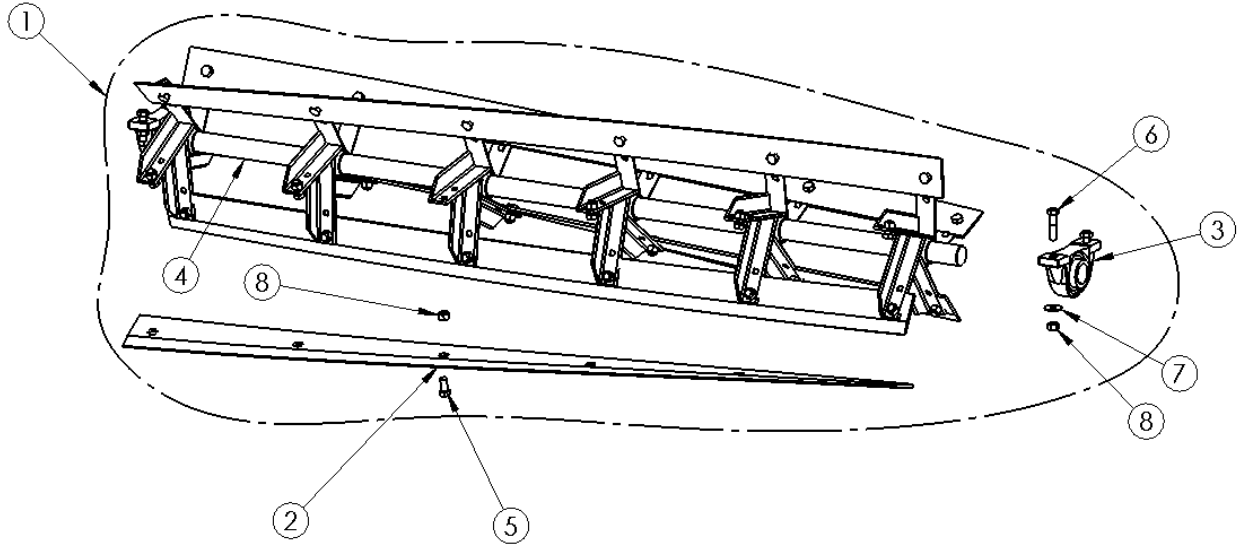
CHOPPER REEL - 84"



Item Number	Part #	Description	Quantity
1	770031	84" SPIRAL REEL ASSEMBLY	1
2	204482	84" SPIRAL REEL BLADE	5
3	482101	REEL BEARING	2
4	302149	SPIRAL REEL FOR 84" BLADES 6 SUPPORTS	1
5	411558	5/8-11 X 1 1/4 BOLT GR5	30
6	411562	5/8-11 X 2 1/2 BOLT GR5	4
7	413010	5/8 USS WASHER	4
8	410009	5/8-11 NUT CENTER LOCK GR2	34



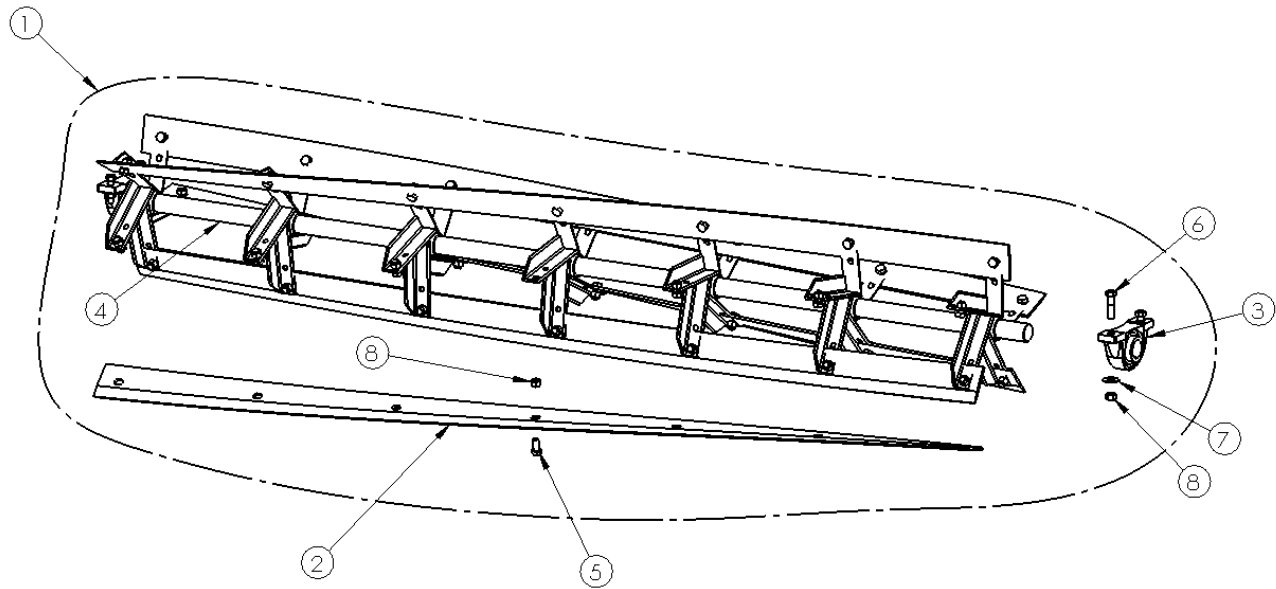
CHOPPER REEL - 89"



Item Number	Part #	Description	Quantity
1	770032	89" SPIRAL REEL ASSEMBLY	1
2	202335	89" SPIRAL REEL BLADE	5
3	482101	REEL BEARING	2
4	301127	SPIRAL REEL FOR 89" BLADES 6 SUPPORTS	1
5	411558	5/8-11 X 1 1/4 BOLT GR5	30
6	411562	5/8-11 X 2 1/2 BOLT GR5	4
7	413010	5/8 USS WASHER	4
8	410009	5/8-11 NUT CENTER LOCK GR2	34



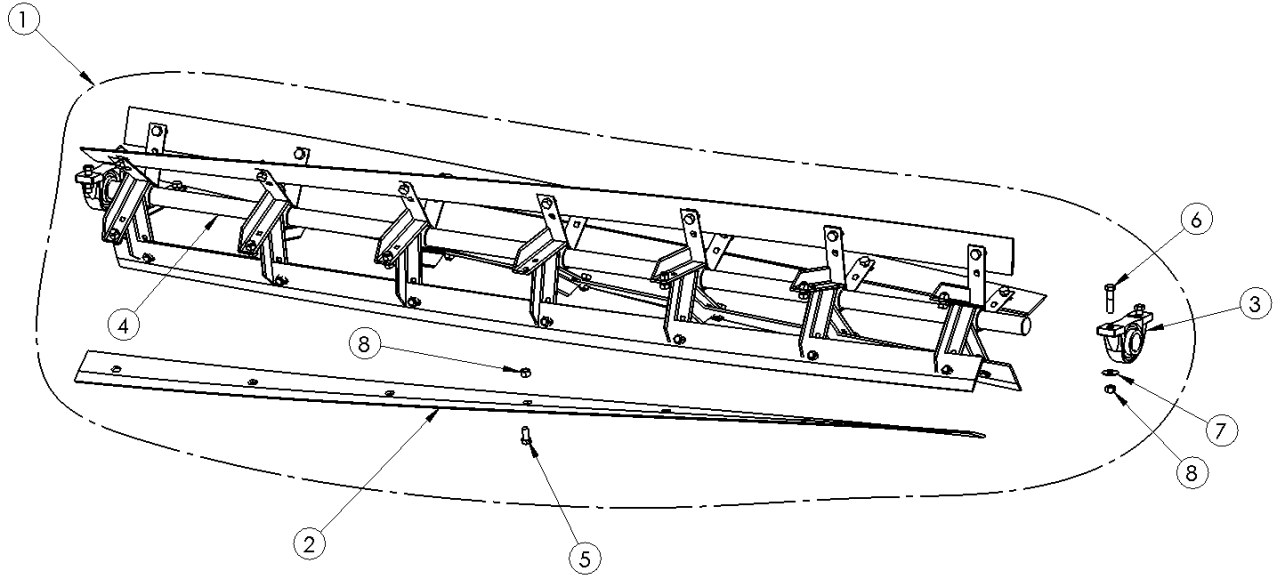
CHOPPER REEL - 106"



Item Number	Part #	Description	Quantity
1	770021	106" SPIRAL REEL ASSEMBLY	1
2	202168	106" SPIRAL REEL BLADE	5
3	482101	REEL BEARING	2
4	301067	SPIRAL REEL FOR 106" BLADES 7 SUPPORTS	1
5	411558	5/8-11 X 1 1/4 BOLT GR5	35
6	411562	5/8-11 X 2 1/2 BOLT GR5	4
7	413010	5/8 USS WASHER	4
8	410009	5/8-11 NUT CENTER LOCK GR2	39



CHOPPER REEL - 110"

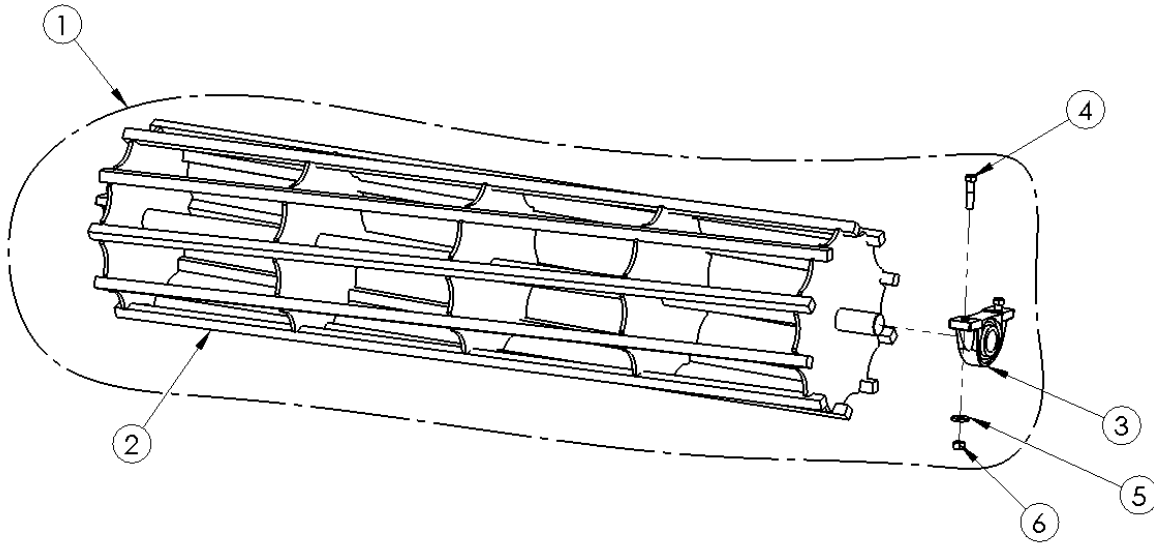


Item Number	Part #	Description	Quantity
1	770022	110" SPIRAL REEL ASSEMBLY	1
2	202180	110" SPIRAL REEL BLADE	5
3	482101	REEL BEARING	2
4	301068	SPIRAL REEL FOR 110" BLADES 7 SUPPORTS	1
5	411558	5/8-11 X 1 1/4 BOLT GR5	35
6	411562	5/8-11 X 2 1/2 BOLT GR5	4
7	413010	5/8 USS WASHER	4
8	410009	5/8-11 NUT CENTER LOCK GR2	39





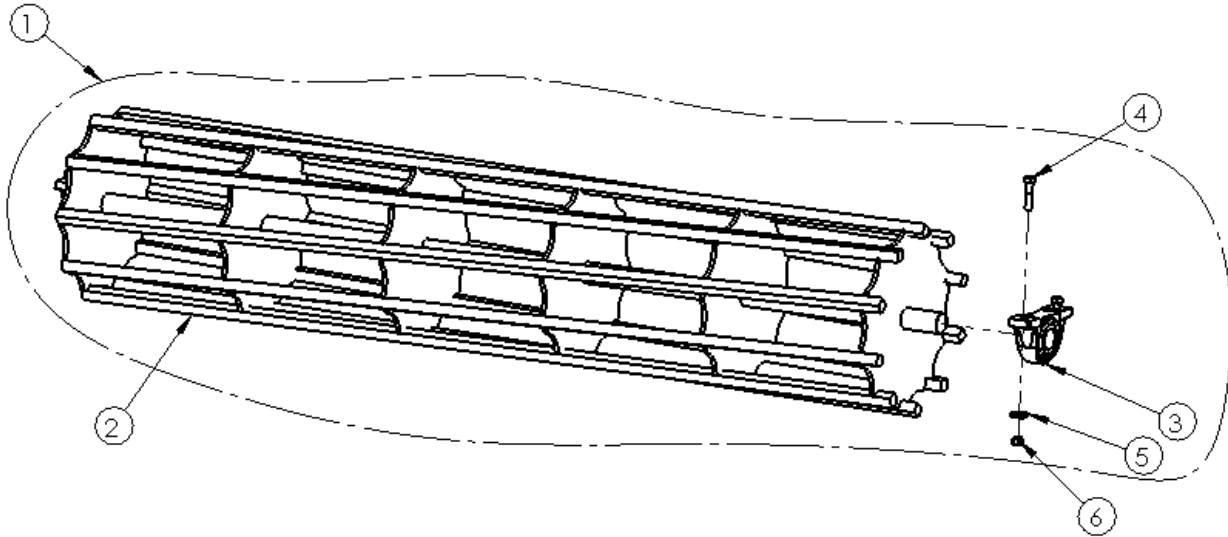
DIAMOND CRUMBLER REEL - 72"



Item Number	Part #	Description	Quantity
1	770080	72" DIAMOND CRUMBLER ASSEMBLY	1
2	302302	72" DIAMOND CRUMBLER	1
3	482101	REEL BEARING	2
4	411562	5/8-11 X 2 1/2 BOLT GR5	4
5	413010	5/8 USS WASHER	4
6	410009	5/8-11 NUT CENTER LOCK GR2	4



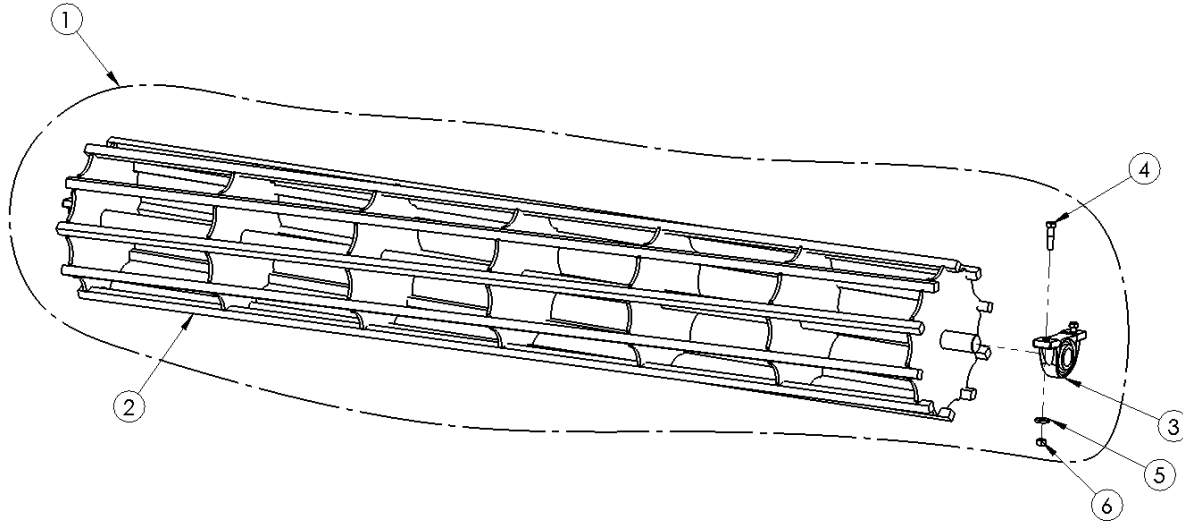
DIAMOND CRUMBLER REEL - 84"



Item Number	Part #	Description	Quantity
1	770082	84" DIAMOND CRUMBLER ASSEMBLY	1
2	302303	84" DIAMOND CRUMBLER	1
3	482101	REEL BEARING	2
4	411562	5/8-11 X 2 1/2 BOLT GR5	4
5	413010	5/8 USS WASHER	4
6	410009	5/8-11 NUT CENTER LOCK GR2	4



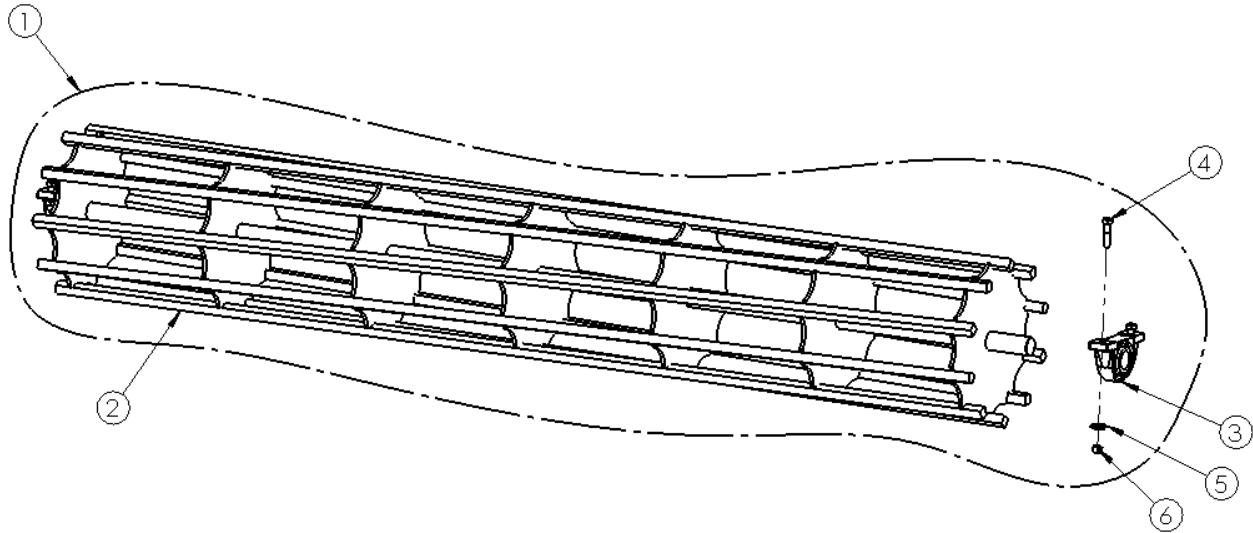
DIAMOND CRUMBLER REEL - 106"



Item Number	Part #	Description	Quantity
1	770086	106" DIAMOND CRUMBLER ASSEMBLY	1
2	302304	106" DIAMOND CRUMBLER	1
3	482101	REEL BEARING	2
4	411562	5/8-11 X 2 1/2 BOLT GR5	4
5	413010	5/8 USS WASHER	4
6	410009	5/8-11 NUT CENTER LOCK GR2	4



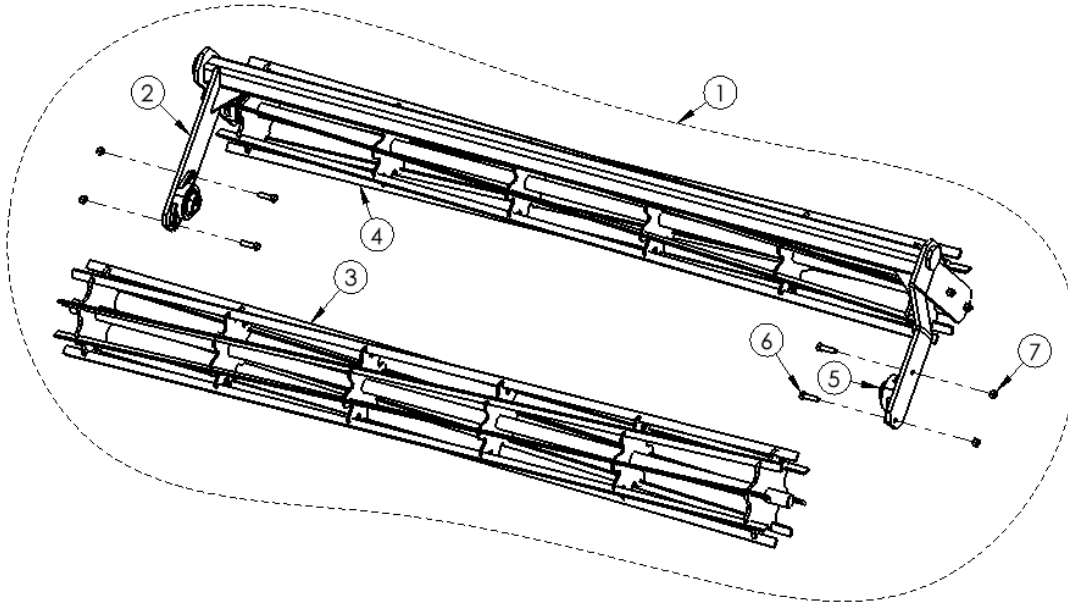
DIAMOND CRUMBLER REEL - 110"



Item Number	Part #	Description	Quantity
1	770088	110" DIAMOND CRUMBLER ASSEMBLY	1
2	302305	110" DIAMOND CRUMBLER	1
3	482101	REEL BEARING	2
4	411562	5/8-11 X 2 1/2 BOLT GR5	4
5	413010	5/8 USS WASHER	4
6	410009	5/8-11 NUT CENTER LOCK GR2	4



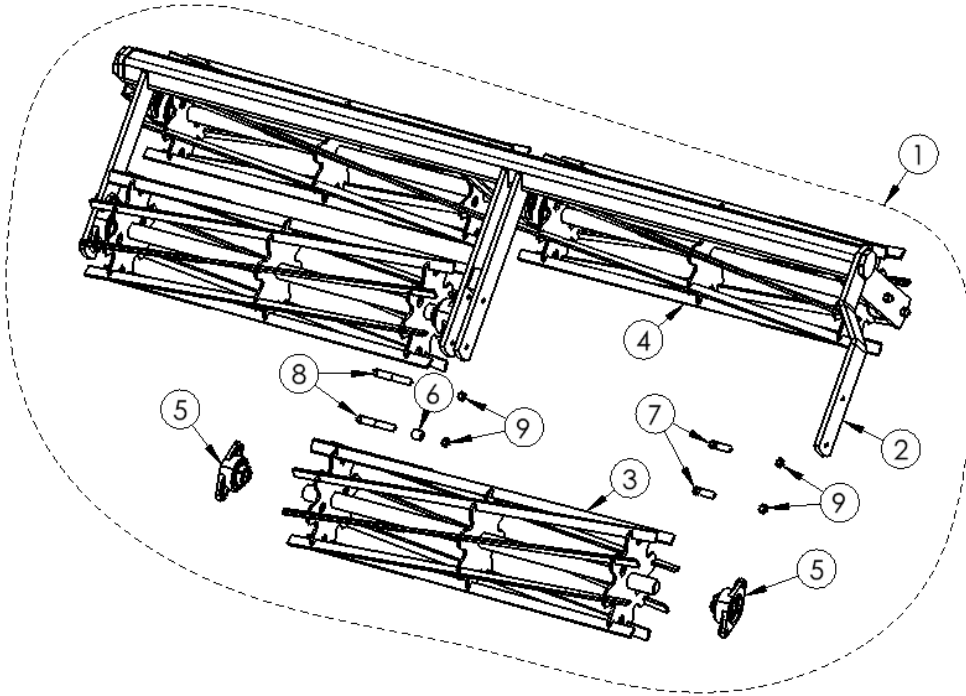
REAR BASKETS - SINGLE SECTION



Item Number	Part #	Description	Quantity
1	782554	1 1/2 SHAFT REAR BASKET & FRAME ASSEMBLY	1
2	301968	SINGLE BASKET 1 1/2 SHAFT FRAME	1
3	301966	FRONT ROLLING BASKET	1
4	301967	REAR ROLLING BASKET	1
5	507081	1 1/2 CAST FLANGE BEARING	4
6	411546	1/2-13 X 1 3/4 BOLT GR5	8
7	410008	1/2-13 CENTER LOCK NUT	8



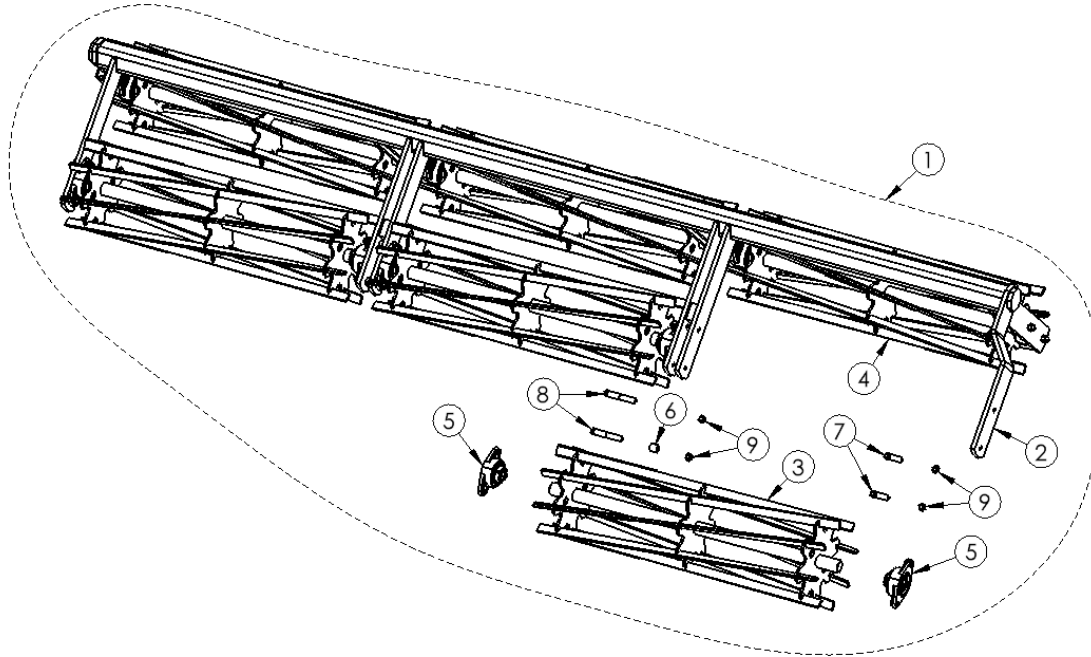
REAR BASKETS - 2 SECTIONS



Item Number	Part #	Description	Quantity
1	782512	2 ROW REAR BASKET & FRAME ASSEMBLY	1
2	301954	1 1/4 SHAFT 4 BASKET FRAME	1
3	301948	FRONT ROLLING BASKET	2
4	301949	REAR ROLLING BASKET	2
5	482024	1 1/4 CAST FLANGE BEARING	8
6	204145	ROLLNG BASKER 1 1/4 SHAFT BEARING SPACER	4
7	411535	7/16-14 X 1 3/4 BOLT GR5	8
8	411539	7/16-14 X 3 1/2 BOLT GR5	4
9	410007	7/16-14 CENTER LOCK NUT	12



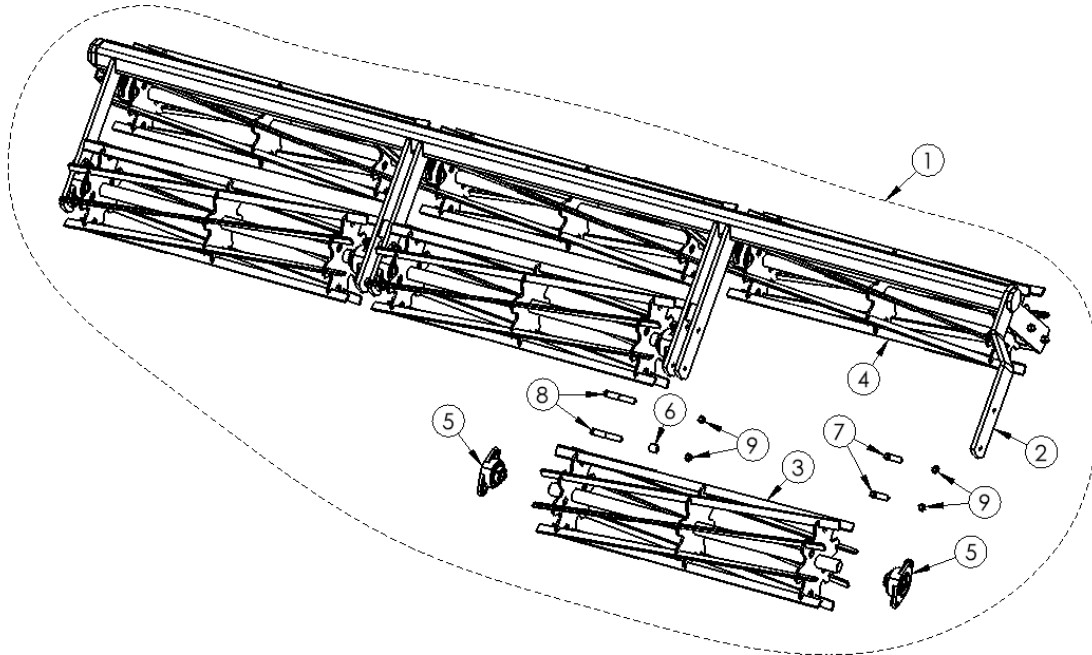
REAR BASKETS - 3 SECTIONS FOR 36" ROWS



Item Number	Part #	Description	Quantity
1	782525	3 ROW REAR BASKET & FRAME ASSEMBLY FOR 36" ROWS	1
2	301957	1 1/4 SHAFT 6 BASKET FRAME FOR 36" ROWS	1
3	350085	FRONT ROLLING BASKET FOR 36" ROWS	3
4	350086	REAR ROLLING BASKET FOR 36" ROWS	3
5	482024	1 1/4 CAST FLANGE BEARING	12
6	204145	ROLLNG BASKER 1 1/4 SHAFT BEARING SPACER	4
7	411535	7/16-14 X 1 3/4 BOLT GR5	8
8	411539	7/16-14 X 3 1/2 BOLT GR5	8
9	410007	7/16-14 CENTER LOCK NUT	16



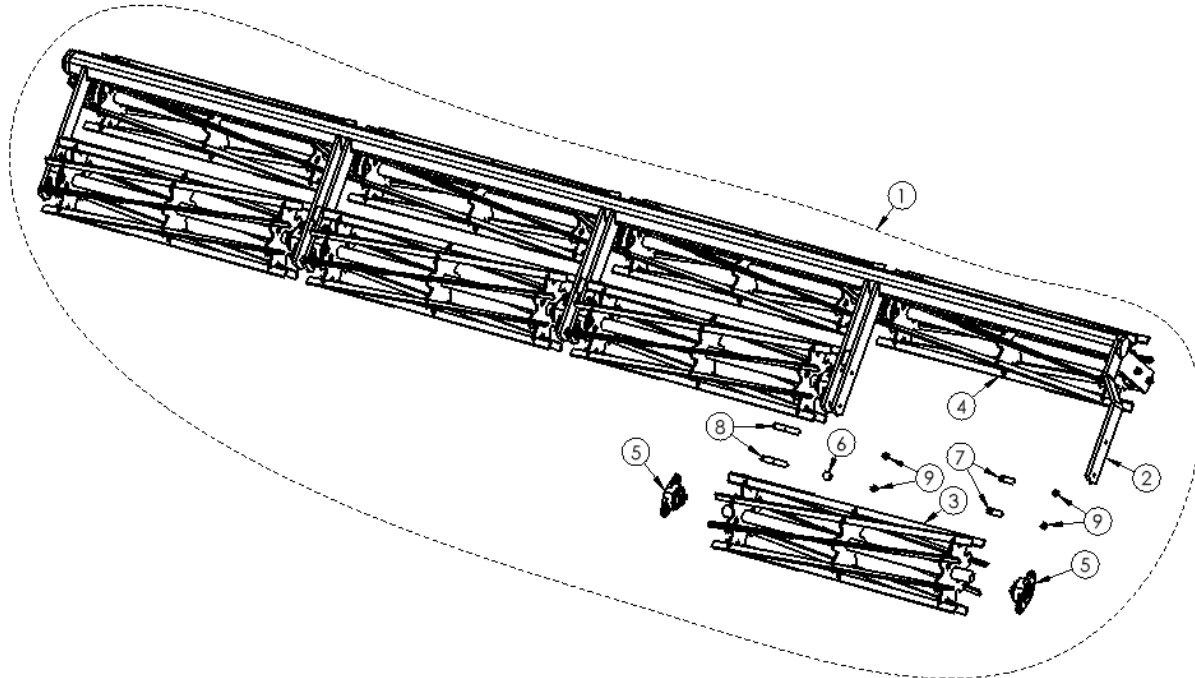
REAR BASKETS - 3 SECTIONS



Item Number	Part #	Description	Quantity
1	782522	3 ROW REAR BASKET & FRAME ASSEMBLY	1
2	301955	1 1/4 SHAFT 6 BASKET FRAME	1
3	301948	FRONT ROLLING BASKET	3
4	301949	REAR ROLLING BASKET	3
5	482024	1 1/4 CAST FLANGE BEARING	12
6	204145	ROLLNG BASKER 1 1/4 SHAFT BEARING SPACER	4
7	411535	7/16-14 X 1 3/4 BOLT GR5	8
8	411539	7/16-14 X 3 1/2 BOLT GR5	8
9	410007	7/16-14 CENTER LOCK NUT	16



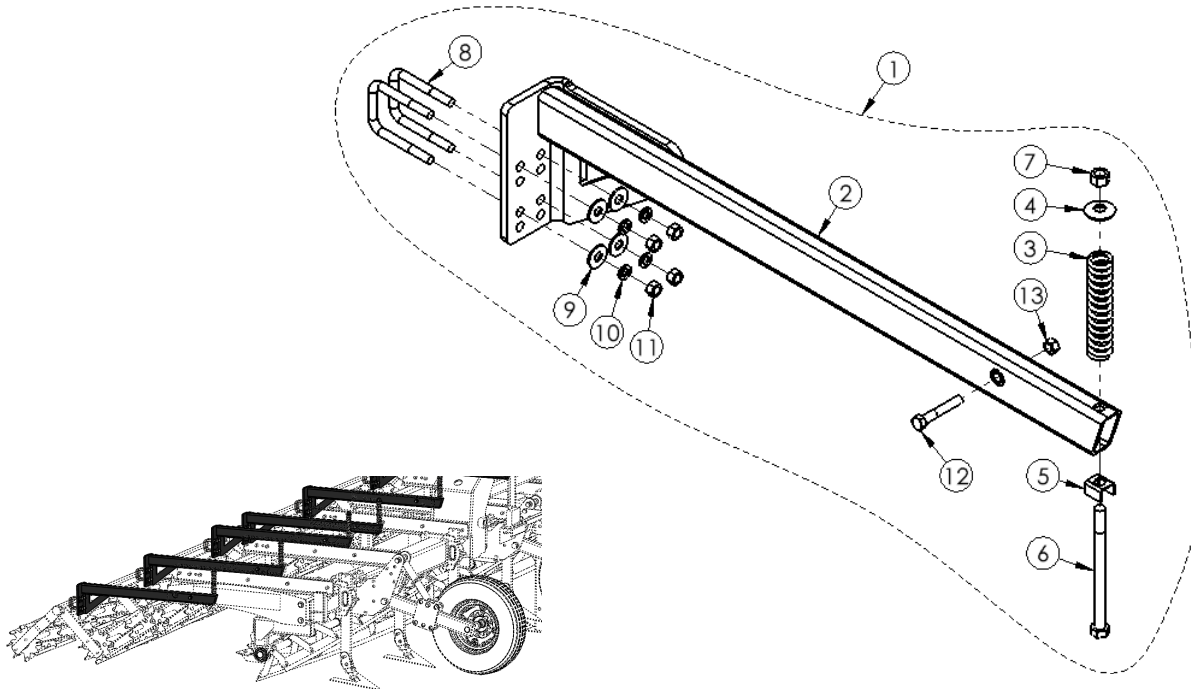
REAR BASKETS - 4 SECTIONS



Item Number	Part #	Description	Quantity
1	782514	4 ROW REAR BASKET & FRAME ASSEMBLY	1
2	301956	1 1/4 SHAFT 8 BASKET FRAME	1
3	301948	FRONT ROLLING BASKET	4
4	301949	REAR ROLLING BASKET	4
5	482024	1 1/4 CAST FLANGE BEARING	16
6	204145	ROLLNG BASKET 1 1/4 SHAFT BEARING SPACER	6
7	411535	7/16-14 X 1 3/4 BOLT GR5	8
8	411539	7/16-14 X 3 1/2 BOLT GR5	12
9	410007	7/16-14 CENTER LOCK NUT	20



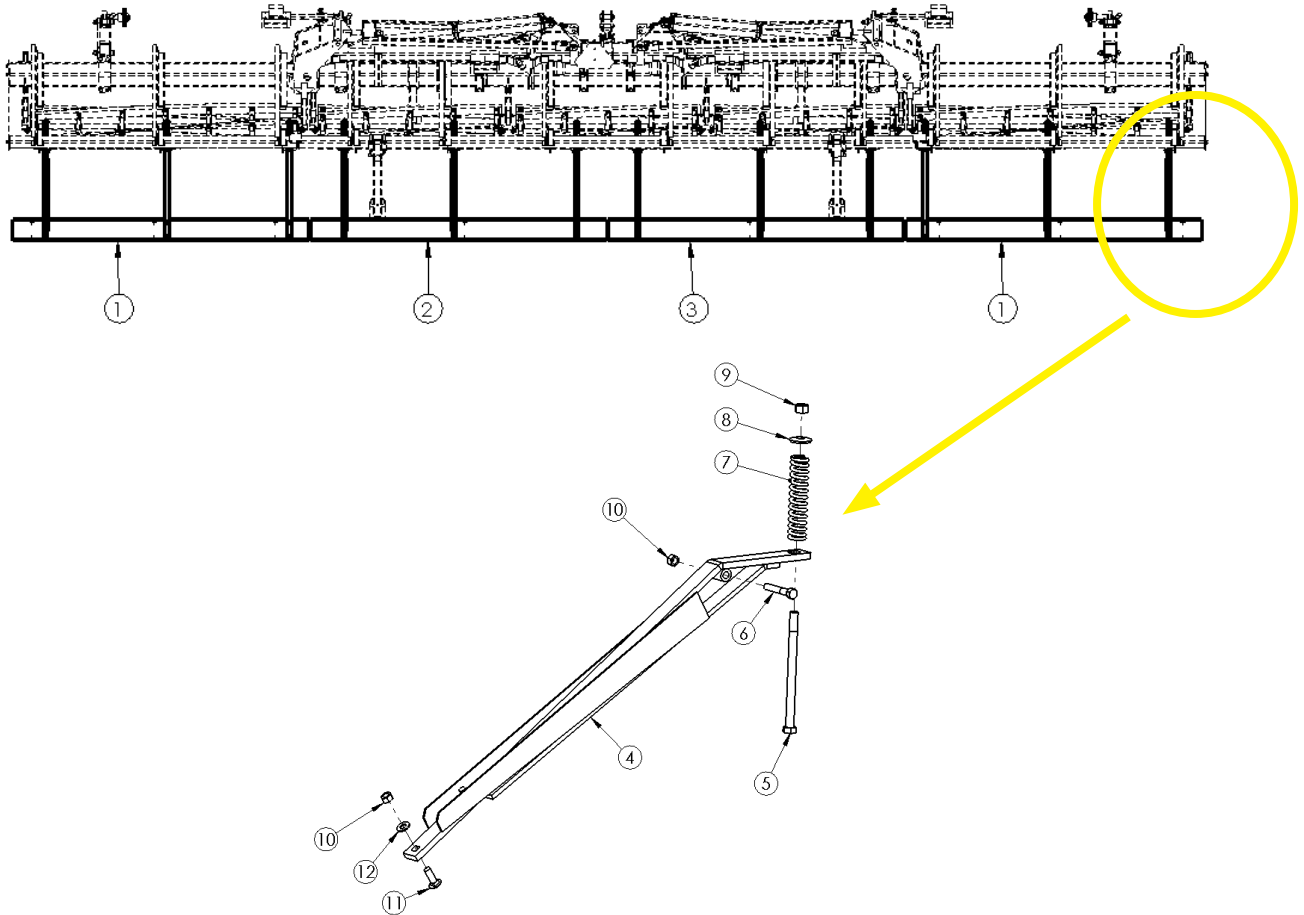
BASKET ARMS



Item Number	Part #	Description	Quantity
1	350022	ROLLING BASKET ARM ASSEMBLY	1
2	350021	ROLLING BASKET ARM	1
3	471006	ROLLNG BASKET SPRING	1
4	202350	5/8 SPRING RETAINING WASHER	1
5	200412	5/8 BOLT HEAD HOLDER	1
6	411237	5/8-11 X 8 BOLT GR5	1
7	410009	5/8-11 CENTER LOCK NUT	1
8	415108	1/2-13 X 2 9/16W X 4H U-BOLT	2
9	413008	1/2 USS FLAT WASHER	4
10	413508	1/2 LOCK WASHER	4
11	412058	1/2-13 NUT	4
12	411551	1/2-13 X 3 BOLT GR5	1
13	410008	1/2-13 CENTER LOCK NUT	1



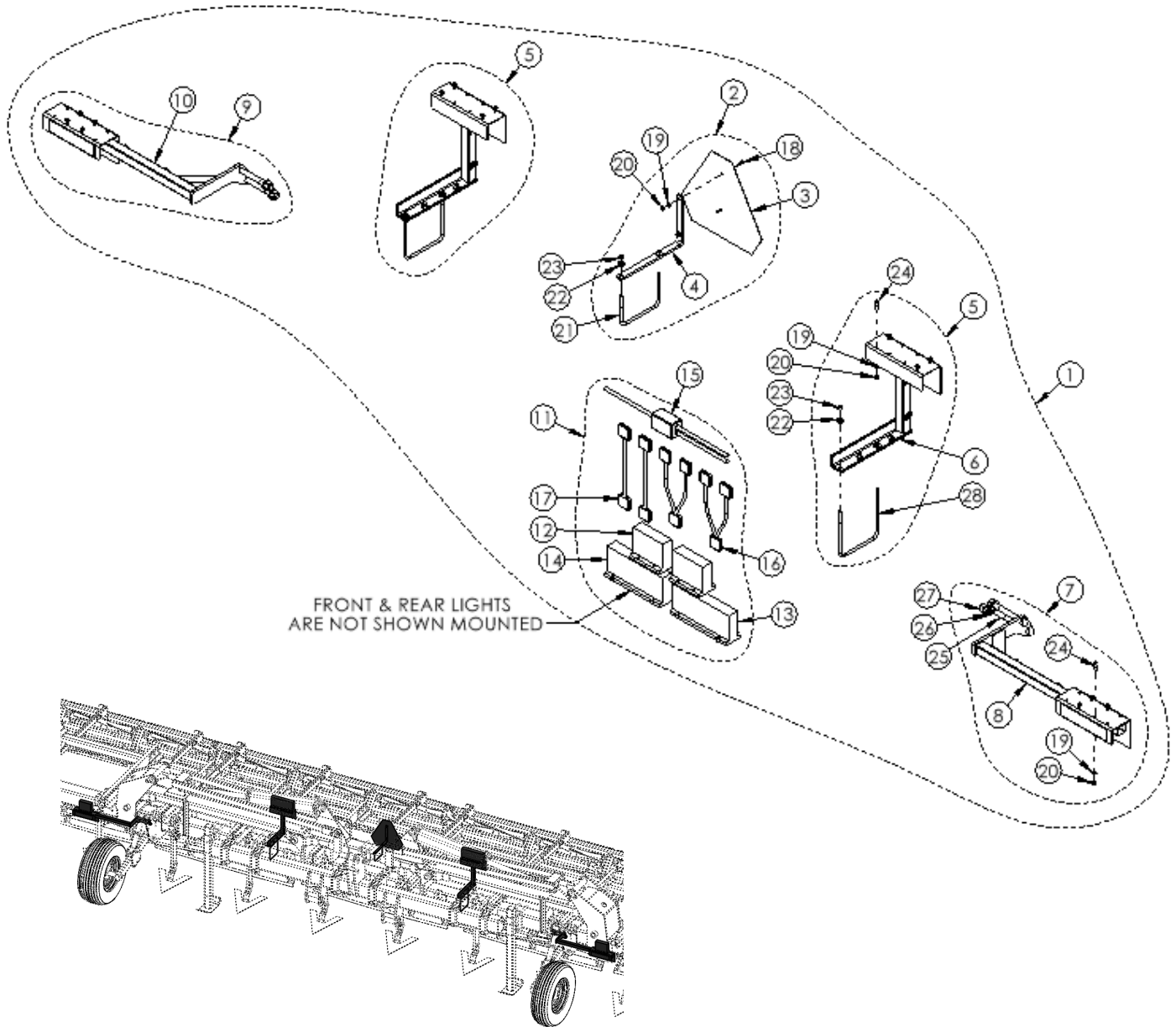
LEVELING BOARD



Item Number	Part #	Description	Quantity
1	204676	WING DRAG BOARD	2
2	204674	CENTER DRAG BOARD LEFT HAND	1
3	204675	CENTER DRAG BOARD RIGHT HAND	1
4	300388	DRAG BOARD LEG	1
5	411239	5/8-11 X 9 HEX BOLT GR5	1
6	411551	1/2-13 X 3 HEX BOLT GR5	1
7	471005	COMPRESSION SPRING	1
8	202350	SPRING RETAINING WASHER	1
9	410009	5/8-11 HEX NUT CENTER	1
10	410008	1/2-13 HEX NUT CENTER LOCK	3
11	411785	1/2-13 X 1 1/2 CARRIAGE BOLT GR5	2
12	413007	1/2 FLAT WASHER SAE	2



LIGHT KIT - STACKING TOOLBAR



Item Number	Part #	Description	Quantity
1	302870	STACKING TOOLBAR LEVEL BANDER LIGHT KIT ASSEMBLY	1
2	302847	SMV SIGN AND 90° BENT BRACKET ASSEMBLY	1
3	204836	SMV SIGN WITH GALVANIZED BACKING	1
4	204841	SMV SIGN 90° SHORT BENT BRACKET	1

****CONTINUED ON NEXT PAGE****

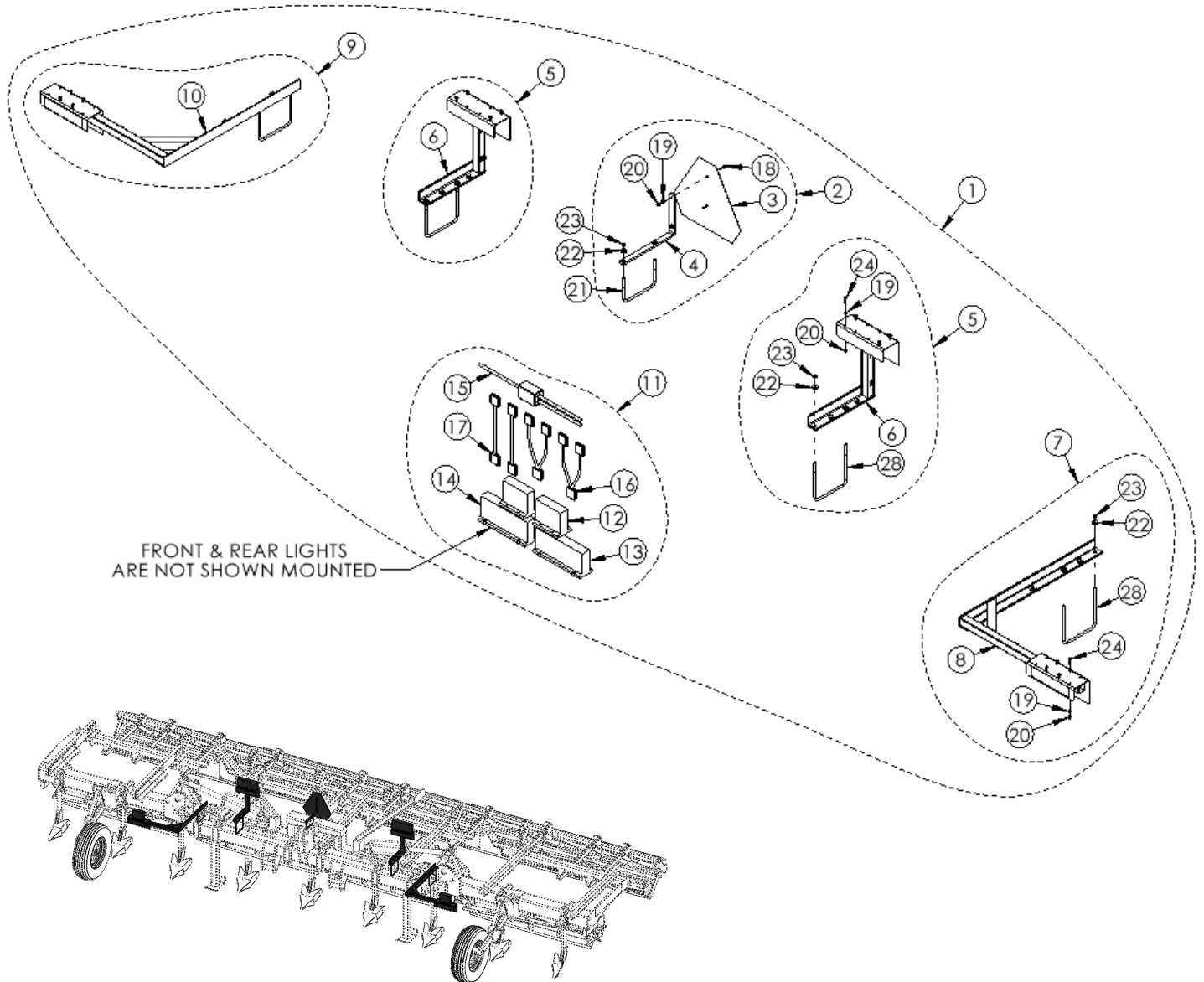


LIGHT KIT - STACKING TOOLBAR

Item Number	Part #	Description	Quantity
5	302818	LH & RH REAR LIGHT BRACKET ASSEMBLY	1
6	302810	LH & RH REAR LIGHT BRACKET	1
7	302891	LH FRONT LIGHT BRACKET ASSEMBLY	1
8	204856	LH FRONT LIGHT BRACKET	1
9	302890	RH FRONT LIGHT BRACKET ASSEMBLY	1
10	204855	RH FRONT LIGHT BRACKET	1
11	302836	LIGHT AND HARNESS KIT ASSEMBLY	1
12	204825	FRONT LIGHT	1
13	204824	LH REAR LIGHT	1
14	204823	RH REAR LIGHT	1
15	204826	LIGHT KIT MODULE	1
16	204827	LIGHT KIT "Y" CABLE	2
17	204828	LIGHT KIT EXTENSION CABLE	2
18	411471	1/4-20 X 1 BOLT GR5	2
19	413004	1/4 SAE FLAT WASHER	18
20	305144	1/4-20 NYLOC NUT	18
21	415125	3/8-16 X 7W X 5H U-BOLT	1
22	413006	3/8 USS FLAT WASHER	2
23	410006	3/8-16 CENTER LOCK NUT	2
24	411472	1/4-20 X 1 1/4 BOLT GR5	16
25	411598	3/4-10 X 6 1/2 BOLT GR5	4
26	413072	3/4 SAE FLAT WASHER	4
27	410012	3/4-10 CENTER LOCK NUT	4
28	415126	3/8-16 X 7W X 8H U-BOLT	2



LIGHT KIT - RIGID & FOLDING TOOLBAR



Item Number	Part #	Description	Quantity
1	302849	RIGID TOOLBAR LEVEL BANDER LIGHT KIT ASSEMBLY	1
2	302847	SMV SIGN AND 90° BENT BRACKET ASSEMBLY	1
3	204836	SMV SIGN WITH GALVANIZED BACKING	1
4	204841	SMV SIGN 90° SHORT BENT BRACKET	1

****CONTINUED ON NEXT PAGE****

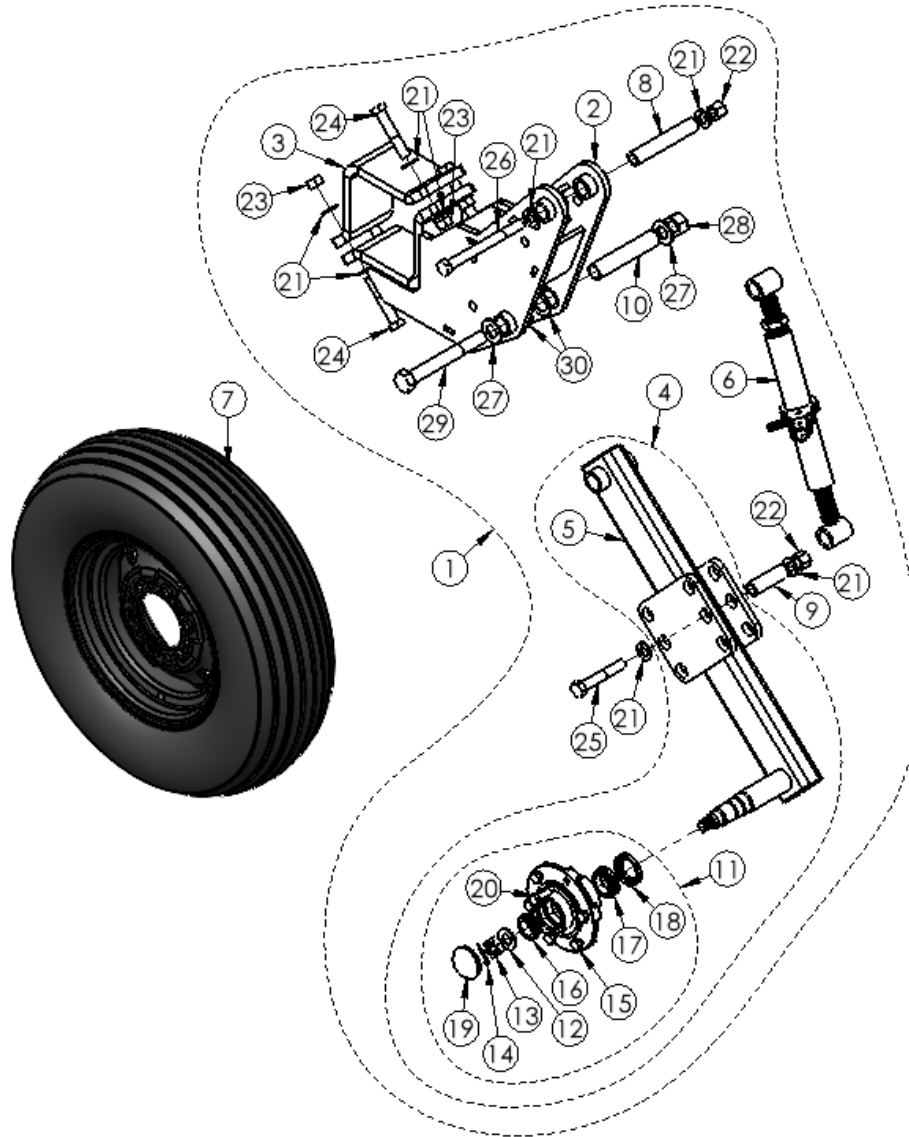


LIGHT KIT - RIGID & FOLDING TOOLBAR

Item Number	Part #	Description	Quantity
5	302818	LH & RH REAR LIGHT BRACKET ASSEMBLY	1
6	302810	LH & RH REAR LIGHT BRACKET	1
7	302817	LH FRONT LIGHT BRACKET ASSEMBLY	1
8	302809	LH FRONT LIGHT BRACKET	1
9	302816	RH FRONT LIGHT BRACKET ASSEMBLY	1
10	302808	RH FRONT LIGHT BRACKET	1
11	302836	LIGHT AND HARNESS KIT ASSEMBLY	1
12	204825	FRONT LIGHT	1
13	204824	LH REAR LIGHT	1
14	204823	RH REAR LIGHT	1
15	204826	LIGHT KIT MODULE	1
16	204827	LIGHT KIT "Y" CABLE	2
17	204828	LIGHT KIT EXTENSION CABLE	2
18	411471	1/4-20 X 1 BOLT GR5	2
19	413004	1/4 SAE FLAT WASHER	18
20	305144	1/4-20 NYLOC NUT	18
21	415125	3/8-16 X 7W X 5H U-BOLT	1
22	413006	3/8 USS FLAT WASHER	2
23	410006	3/8-16 CENTER LOCK NUT	2
24	411472	1/4-20 X 1 1/4 BOLT GR5	16
25	415126	3/8-16 X 7W X 8H U-BOLT	2



GAUGE WHEELS



Item Number	Part #	Description	Quantity
1	602107	GAUGE WHEEL HOUSING ASSEMBLY	1
2	350046	GAUGE WHEEL HOUSING MAIN BODY	1
3	350030	GAUGE WHEEL HOUSING CLAMP	1
4	350045	GAUGE WHEEL ARM & HUB ASSEMBLY	1
5	350096	GAUGE WHEEL ARM	1

****CONTINUED ON NEXT PAGE****

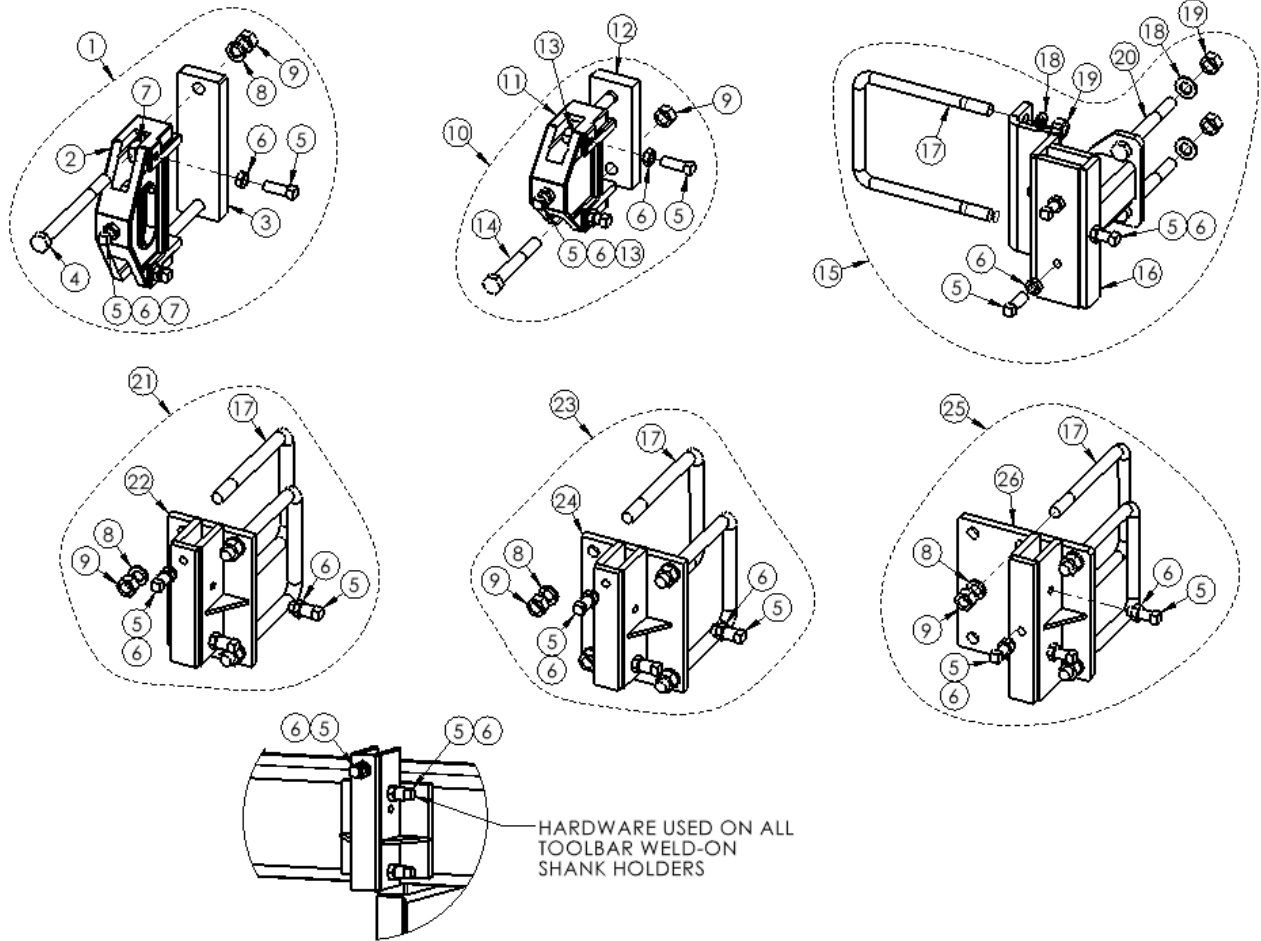


GAUGE WHEELS

Item Number	Part #	Description	Quantity
6	350041	GAUGE WHEEL RATCHET JACK	1
7	GWX00098	MOUNTED TIRE 9.5L - 15SL 15X6 WHEEL 6-6.0 BOLT	1
8	350036	TOP RATCHET CRUSH SLEEVE	1
9	350038	BOTTOM RATCHET CRUSH SLEEVE	1
10	350034	PIVOT TUBE CRUSH SLEEVE	1
11	GWX20005	GAUGE WHEEL HUB ASSEMBLY	1
12	GWX20013	SPINDLE WASHER .955 ID X 1.769 OD X .136 THICK	1
13	GWX20014	SPINDLE NUT 7/-14 STYLE A	1
14	CLT21011	SPINDLE COTTER PIN	1
15	GWX20009	HUB WITH CUPS N888	1
16	GWX20007	INNER CONE TAPERED ROLLER BEARING	1
17	GWX20011	OUTER CONE TAPERED ROLLER BEARING	1
18	GWX20006	SEAL TYPE B	1
19	GWX20016	HUB CAP TYPE A	1
20	GWX20012	1/2-20 X 1 1/4 LUG BOLT SAE HEX GR5	6
21	413072	3/4 SAE FLAT WASHER	10
22	305101	3/4-10 NYLOC NUT	2
23	410012	3/4-10 CENTER LOCK NUT	4
24	411591	3/4-10 X 4 BOLT GR5	4
25	411592	3/4-10 X 4 1/2 BOLT GR5	1
26	411600	3/4-10 X 8 BOLT GR5	1
27	413019	1 SAE FLAT WASHER	2
28	410016	1-8 CENTER LOCK NUT	1
29	411650	1-8 X 8 BOLT GR5	1
30	413118	1 3/8 ID X 2 1/8 OD X 18GA THICK MACHINE BUSHING	2



CLAMPS



Item Number	Part #	Description
1	728116	SHANK HOLDER ASSEMBLY FOR 7" SQUARE TUBING
2	479069	SHANK HOLDER FOR 7" SQUARE TUBING
3	204274	BACKING PLATE FOR 7" SQUARE TUBING
4	411601	3/4-10 X 8 1/2 BOLT GR5
5	414828	5/8-11 X 1 3/4 SQUARE HEAD SET SCREW
6	412410	5/8-11 JAM NUT
7	412310	5/8-11 SQUARE NUT
8	413512	3/4 LOCK WASHER

****CONTINUED ON NEXT PAGE****



CLAMPS

Item Number	Part #	Description
9	412012	3/4-10 NUT
10	728114	SHANK HOLDER ASSEMBLY FOR 4" SQUARE TUBING
11	479065	SHANK HOLDER FOR 4" SQUARE TUBING
12	204275	BACKING PLATE FOR 4" SQUARE TUBING
13	412010	5/8-11 NUT
14	411595	3/4-10 X 5 1/2 BOLT GR5
15	350053	GAUGE WHEEL SHANK HOLDER ASSEMBLY
16	350052	GAUGE WHEEL SHANK HOLDER
17	415004	3/4-10 X 7W X 9H X 2 TL GR5
18	413072	3/4 SAE FLAT WASHER
19	410012	3/4-10 CENTER LOCK NUT
20	411598	3/4-10 X 6 1/2 BOLT GR5
21	728117	CENTER SHANK HOLDER ASSEMBLY
22	302036	CENTER SHANK HOLDER - 6" WIDE
23	728118	CENTER SHANK HOLDER EXTENDED WIDTH ASSEMBLY
24	302037	CENTER SHANK HOLDER EXTENDED WIDTH - 7 1/4" WIDE
25	350059	OFFSET SHANK HOLDER ASSEMBLY
26	350058	OFFSET SHANK HOLDER



870.5347420 | WAMFGCO.com
PO BOX 5238, Pine Bluff, AR 71611