1925 Toolbar
Operator's Manual

125-009-02

Orthman®
AGRICULTURAL

INTRODUCTION

Farm Safety

Contrary to the popular image of fresh air and peaceful surroundings, a farm is not a hazard-free work setting. Every year, thousands of farm workers are injured and hundreds more die in farming accidents. According to the National Safety Council, agriculture is the most hazardous industry in the nation.

How You Can Improve Farm Safety

You can start by increasing your awareness of farming hazards and making a conscious effort to prepare for emergency situations including fires, vehicle accidents, electrical shocks from equipment and wires, and chemical exposures. Be especially alert to hazards that may affect children and the elderly. Minimize hazards by carefully selecting the products you buy to ensure that you provide good tools and equipment. Always use seat belts when operating tractors, and establish and maintain good housekeeping practices. Here are some other steps you can take to reduce illnesses and injuries on the farm:

- Read and follow instructions in equipment operator's manuals and on product labels.
- Inspect equipment routinely for problems that may cause accidents.
- Discuss safety hazards and emergency procedures with your workers.
- Install approved rollover protective structures, protective enclosures, or protective frames on tractors.
- Make sure that guards on farm equipment are replaced after maintenance.
- Review and follow instructions in material safety data sheets (MSDSs) and on labels that come with chemical products and communicate information on these hazards to your workers.

Health and Safety Hazards on Farms

Farm workers including farm families and migrant workers are exposed to hazards such as the following:

Danger	Potential Effect or Injury	Prevention
Chemicals/Pesticides	Skin and respiratory injury or death	MSDS and proper Personal Protective Equipment. Review Manufacturers data sheets
Cold	Illness, Frostbite or death	Dress properly for the day.
Dust	Respiratory injury or explosive combinations	Be aware of your surroundings and activity
Electricity	Shock, burns, fire, death	Use a qualified professional for wiring dangerous electrical devices. Never overload a circuit. Replace damaged electrical devices or cords. Electrical tape will not insulate you from injury.
Grain bins, Silos	Entrapment, Suffocation, Explosion from formation of dangerous gases and poisoning.	Make sure the bin is properly ventilated and maintained. Never walk the grain.
Hand tools	Injury including cuts abrasions, electrocution, strains, sprains and death	Make sure you hand tools are in good condition. Never leave a damaged tooling accessible for someone else to use.
Highway traffic	Collisions resulting in injury or death	Follow regulations, stay alert. Avoid alcohol and use of communication devices while driving
Lifting and lifting devices	Back injury, sprains, strains. Falling material resulting in being struck or crushed by heavy material	Use proper lifting technique. Get help when the load is too heavy. Inspect chains, straps or cables routinely to make sure they are in good condition.
Livestock handling	Serious injury or death resulting from being pinned struck or trampled.	Always make sure you have adequate room and an escape route
Machinery/Equipment	Cuts, abrasions, amputations, death.	Thoroughly read and understand your Owners Equipment Manual. Never operate the equipment without guards in place. Make sure the equipment can not be energized or otherwise put into operation while you are working on it.
Manure pits	Explosion from formation of dangerous gases. Suffocation. Poisoning	Proper maintenance.
Mud	Sprains, strains, entrapment and suffocation. Eye injury and skin irritation.	Proper Personal Protective Equipment. In some conditions a "Spotter" may be needed.
Noise	Hearing damage	Personal Protective Equipment.
Ponds	Drowning	Wear a life preserver and make sure help is readily available.
Slips/Trips/Falls	Sprains, strains, back and neck injury, bone breaks or death	Keep work area free from clutter and organized. If working on anything elevated make sure you have appropriate guarding and/or fall protection such as a harness and lanyard.
Sun/Heat	Sun burn, Heat Stroke, shock, death	Use common sense on excessively hot days, use sun screen, wear a hat and stay hydrated.
Toxic gases	Skin and respiratory injury or death. Explosion.	MSDS and proper Personal Protective Equipment. Review Manufacturers data sheets
Tractors	Cuts, abrasions, amputations, death.	Thoroughly read and understand your Owners Equipment Manual. Never operate the equipment without guards in place. Anti-roll over devices.
Wells	Electrocution, amputation, death	Avoid contact with water while working on an electrical device. Always be sure the equipment can/will not be energized during repair or maintenance. Make sure all guarding is in place.
Severe Weather	Electrocution, "struck by" injuries, death	Move to a safe place. Lightening, hail and tornadoes are unpredictable.

Orthman Manufacturing, Inc. does not limit the potential effects or injuries nor prevention measures to those listed above. They are provided solely as a guideline to making your farm life safer. Always consult your Owner/Operators Manual for specific tool and equipment safety requirements.

INTRODUCTION

High Risk Factors on Farms

The following factors may increase risk of injury or illness for farm workers:

• **Age** – Injury rates are highest among children age 15 and under and adults over 65.

• **Equipment and Machinery** – Most farm accidents and fatalities involve machinery. Proper machine guarding and doing equipment maintenance according to manufacturers' recommendations can help prevent accidents.

• **Protective Equipment** – Using protective equipment, such as seat belts on tractors, and personal protective equipment (such as safety gloves, coveralls, boots, hats, aprons, goggles, face shields) could significantly reduce farming injuries.

• Take precautions to prevent entrapment and suffocation caused by unstable surfaces of grain storage bins, silos, or hoppers. Never "walk the grain."

• Be aware that methane gas, carbon dioxide, ammonia, and hydrogen sulfide can form in unventilated grain silos and manure pits and can suffocate or poison workers or explode.

• Take advantage of safety equipment, such as bypass starter covers, power take-off master shields, and slow-moving vehicle emblems.

• **Medical Care** – Hospitals and emergency medical care are typically not readily accessible in rural areas near farms.

The Benefits of Improved Safety and Health Practices

Orthman Manufacturing Provides this document in the hope that everyone that has a job to do, does it SAFELY. Our goal and yours should be to end each day in the best possible health. Better safety and health practices reduce fatalities, injuries, and illnesses as well as associated costs such as workers' compensation insurance premiums, lost production, and medical expenses. A safer and more healthful workplace improves morale and productivity.

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WARRANTY

Orthman Mfg., Inc. warrants the whole goods products it manufactures to be free from defects in material or workmanship for a period of one (1) year from the date of sale of the product(s) to the original user. Products not manufactured, but supplied by Orthman Mfg., Inc. on Orthman products, are subject to, conform with, and are limited to the warranty of our suppliers.

Orthman Mfg., Inc. warrants the parts it manufactures to be free from defects in material or workmanship for a period of ninety (90) days from the date of delivery of the product(s) to the original user. Products not manufactured, but supplied by Orthman Mfg., Inc. on Orthman products, are subject to, conform with, and are limited to the warranty of our suppliers.

Warranty of Orthman whole goods and/or parts applies only to material and workmanship. Misuse, misapplication, neglect, alteration, accident, normal wear, or acts of God affecting Orthman products are not eligible for warranty.

Warranty of serial numbered goods will only be considered if the product has a completed Warranty Registration on file at Orthman. This Warranty Registration must be completed and returned to Orthman within thirty (30) days of the sale of the product(s) to the original user. *No serial numbered goods or related parts and/or labor will be warranted without a Warranty Registration on file.* Warranty issues falling within the first thirty days of a product's use will be handled at the discretion of Orthman. Warranty of parts will not require a Warranty Registration, but proof of date of delivery of the product to the original customer must be provided.

WARRANTY CLAIMS: **A warranty claim and request to return defective product(s) must be presented to the Orthman Service Department by the selling dealer describing the defect in material or workmanship of an Orthman product(s) within ten (10) days of its discovery. This claim may be made via phone, e-mail, fax, or written request. Claims for warranty of serial numbered goods must include the Orthman product serial number and model number. Claims for warranty of partswill not require a product serial number or model number, but must be identified by an Orthman part number. Claims for warranty of whole goods or parts must also include proof of date of sale of the product to the original customer by an Orthman dealer.**

The Orthman Service Department will proceed in making a preliminary decision as to the eligibility of the claim for warranty consideration. After the Orthman Service Department deems it necessary to proceed with warranty consideration, a Return Goods Authorization (RGA) will be completed by the Orthman Service Department in conjunction with the selling dealer. Upon completion of the RGA, the defective product(s) must be returned to Orthman to ensure warranty consideration. Defective product(s) must be returned to Orthman by either the selling dealer or the customer. Customer delivery of defective product(s) must be approved by Orthman and the selling dealer prior to delivery. The defective product(s) in question must be sent, freight prepaid, within sixty (60) days of the discovery of the product(s) failure and initial warranty claim. Replacement product(s) may be sent to the selling dealer, directly to the customer, or picked up at the Orthman facility. Replacement product(s), sent directly to the customer or picked up must be approved by Orthman and the selling dealer. At the discretion of the Orthman Service Department, replacement product(s) may be sent prior to, or after, the Orthman Service Department receives the defective product(s).

Any variation in the above procedure is at the sole discretion of the Orthman Service Department.
No products will be accepted at Orthman without all proper paperwork completed including Warranty Registration and RGA(s).
Parts returned to Orthman without proper authorization will be returned to the sender at the sender's expense.

Orthman agrees to handle all warranty claims in a timely manner and will inform dealers of any revisions or modifications to the Orthman Warranty Policy. Eligible warranty claims will be processed by Orthman within sixty (60) days of receiving failed product(s) or a valid service or repair labor claim. Eligible warranty claims regarding returned product(s) or service and/or repair labor will be paid through a credit memo issued to the appropriate dealer's account as determined by the Orthman Service Department.

If a warranty claim is found to be ineligible for warranty coverage, the Orthman Service Department will be responsible to inform the dealer in order to determine the course of action to be taken. Orthman reserves the right to make changes in specification and design without notice and without incurring any obligations to owners of products previously sold.

INTRODUCTION

PRODUCT DESCRIPTION

Take advantage of wide-working widths without sacrificing all of the benefits of compact, mounted machines. The Orthman 1925 Stacking Toolbar combines rear-lift wheels with a short tongue and semi-mount knuckle hitch in order to create the most maneuverable large stacking toolbar in the industry. The placement of the toolbar lift wheels significantly reduces the tractor hitch load and minimizes machine length. The pivoting knuckle hitch allows the toolbar a large range of motion while crossing field terrain or moving around the yard. The front-fold and stack wing design reduces the 1925 bar to a compact transport configuration. When in the field position, the toolbar flexes in three sections with the wings able to float 8° up and down. You can also mount a 500 gallon liquid tank on the tongue for extra carrying capacity. The 1925 Stacking Toolbar does not accommodate row markers. However, the toolbar is designed with attachment points for the GPS Tracker® IV or Shadow Tracker® Implement Guidance Systems.

PURPOSE OF THIS MANUAL

This manual is considered to be an integral component of the 1925 Series Toolbar and is designed to educate the owner and operators regarding safety, operation, maintenance, troubleshooting, and component identification.

All personnel involved in the operation of the 1925 Series Toolbar are responsible for reading and understanding the entire contents of this manual. This manual is designed to keep the operator safe and knowledgeable as well as prolong the life of the product, minimize downtime, and maximize field efficiency. This manual should accompany the product if it is ever sold.

We would like to thank you for placing your confidence in Orthman Mfg., Inc. Your 1925 Series Toolbar is manufactured to meet the highest standards and is built with Orthman precision and strength to increase your agricultural operation's dependability and profitability.

IMPORTANT SAFETY INFORMATION

SAFETY ALERT SYMBOL

The **SAFETY ALERT SYMBOL** warns of potential hazards to personal safety and that extra precautions must be taken. When you see this symbol, carefully read the message(s) that follow. Follow all recommended precautions and safe operating practices in this manual.

Hazard control and accident prevention are dependent upon the safety awareness and proper training of personnel involved in the operation of this implement.

BE AWARE OF SIGNAL WORDS

SIGNAL WORDS designate a degree or level of **HAZARD** seriousness.

These signal words include:

RED

DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury. Danger is limited to extreme situations, typically for machine components which for functional purposes, cannot be guarded.

ORANGE

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

YELLOW

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

SHUTDOWN AND STORAGE

AVOID CRUSHING. Make sure all personnel are clear of the implement. Lower the implement to the ground, place the tractor in park, turn off the engine, and remove the key.

USE BAR STANDS AND CYLINDER STOPS TO SUPPORT THE IMPLEMENT.
Store the implement on a clean, dry, and level surface. An uneven surface could cause the implement to shift or fall, resulting in injury or death, as well as implement damage. Securely support all implement components that must be raised. Store the implement away from human activity.

IMPORTANT SAFETY INFORMATION

FOR YOUR PROTECTION

CAUTION

READ AND UNDERSTAND THE ENTIRE CONTENTS OF THIS MANUAL BEFORE OPERATING OR SERVICING THE IMPLEMENT. Read and understand all operator manuals for the machinery used in conjunction with the 1925 Toolbar.

- Carefully **READ ALL SAFETY DECALS** in this manual as well as on the implement. Keep the implement clean so decals are easily visible. Keep all safety decals in good, clean, and legible condition. Immediately replace damaged and/or missing decals. Replacement decals are available from your Orthman dealer.

- Learn to operate the implement and all components properly. Do not let others operate the implement without proper instruction. Unauthorized implement modifications may impair function and safety. If you do not understand any content in this manual or need assistance, contact your Orthman dealer.

(Orthman Manufacturing Inc. - 75765 Rd. 435 - Lexington, NE 68850 - (308) 324-4654)

EQUIPMENT SAFETY GUIDELINES

Operator safety is the primary concern when designing an Orthman implement. Orthman integrates as many safety features into the implement as possible. You can avoid many hazards and possible accidents by observing precautions in this safety section.

- Insist that yourself and personnel working with and around you follow all safety precautions. Be cautious when working with or around the implement to avoid injury.

IMPORTANT SAFETY INFORMATION

SAFE TRANSPORT

- Engage transport locking devices and cylinder stops prior to transport. Plan your route to avoid traffic. Yield to traffic in all situations.
- Various conditions will require reduced speed. Travel at speeds that allow for adequate control of stopping and steering.

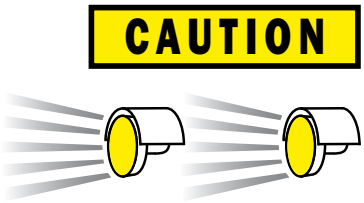
AVOID ELECTROCUTION. Be aware of overhead power lines. Contact or close proximity to power lines can result in injury or death. Use extreme care when operating the implement near power lines.

- Know the transport height and gross weight of the implement. Avoid overhead obstructions not allowing your transport height. Do not use bridges rated below the gross weight of the implement.

- Make sure a slow moving vehicle (SMV) placard is mounted to the implement and is easily visible to other motorists.
- Make allowances for implement size when transporting. Sudden braking can cause a towed load to swerve and/or rollover. Never use independent braking with the implement in tow as loss of control and/or rollover can result. Reduce speed if the towed implement is not equipped with brakes.

- Do not coast. Always keep the tractor or towing device in gear to provide engine braking when traveling downhill.
- Comply with state and local laws governing implement transport.

WARNING AND SAFETY LIGHTS



Oversized implements and slow moving vehicles create a hazard when transported on public roads.

- Make sure all warning, safety lights, and turning signals are working and clean. Use safety lighting when using public roads day and night. Replace missing or damaged lights immediately. Comply with state and local laws governing implement safety lighting.

IMPORTANT SAFETY INFORMATION

SAFE OPERATION

READ AND UNDERSTAND THE ENTIRE CONTENTS OF THIS MANUAL BEFORE OPERATING OR SERVICING THE IMPLEMENT. The implement is to be operated by qualified personnel only. Never let children operate the implement. A complete understanding of safety precautions, operation, and maintenance is mandatory before implement use.

AVOID ELECTROCUTION. Be aware of overhead power lines. Contact or close proximity to power lines can result in injury or death. Use extreme care when operating the implement near power lines.

- Know the transport height and gross weight of the implement. Avoid overhead obstructions not allowing your transport height. Do not use bridges rated below your gross weight.

AVOID ROLLOVER. Do not fold or unfold the implement and avoid sharp turns when on a hillside, as shift of weight could cause rollover. Operate the implement at a safe distance from terrain irregularities and other obstructions that could cause rollover.

AVOID CRUSHING. Make sure all personnel are clear of the implement at all times that the implement is in motion. Be aware of obstructions above, below, and around the implement when in operation or transport. Injury or death can result from being struck by the implement.

NO RIDERS

NEVER ALLOW RIDERS ON THE TRACTOR OR IMPLEMENT. Riders hinder operator visibility and can be thrown from the implement and/or be struck by foreign objects resulting in injury or death.

IMPORTANT SAFETY INFORMATION

PRACTICE SAFE MAINTENANCE

Proper maintenance is your responsibility. Maintenance neglect and/or poor maintenance practices can result in injury or death. Always use the proper tools to maintain the implement.

AVOID CRUSHING. Make sure all personnel are clear of the implement. Lower the implement to the ground, place the tractor in park, turn off the engine, and remove the key.

USE BAR STANDS AND CYLINDER STOPS TO SUPPORT THE IMPLEMENT. Store the implement on a clean, dry, and level surface. An uneven surface could cause the implement to shift or fall, resulting in injury or death, as well as implement damage. Securely support all implement components that must be raised. Store the implement away from human activity.

AVOID ENTANGLEMENT. Never lubricate or service the implement when in motion. Keep away from power driven parts when in motion. Disengage power sources prior to maintaining the implement. Injury or death can result from contact with power driven parts when in motion.

AVOID CRUSHING. Do not stand between the tractor and implement when connecting or disconnecting the implement. Injury or death can result from being trapped between the tractor and implement.

Escaping pressurized hydraulic fluid can penetrate the skin, resulting in injury or death. Relieve hydraulic system pressure before connecting or disconnecting the tractor. Use cardboard or wood, **NOT BODY PARTS**, to check for suspected hydraulic leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. If an accident occurs, see a doctor immediately for proper treatment.

IMPORTANT SAFETY INFORMATION

PRACTICE SAFE MAINTENANCE

- Never operate a combustion engine in an enclosed area. Make sure there is adequate ventilation. Exhaust fumes can cause asphyxiation.

- Service tires safely. Tire and rim separation can result in serious injury or death. Do not over inflate tires. Only mount or dismount tires if you possess the proper equipment, otherwise contact a trained professional. Always maintain correct tire pressure. Inspect tires and wheels daily. Do not operate tires with inadequate pressure, cuts, visible damage, or missing hardware.

- Be extremely careful working around unshielded sharp edges. Injury may result from contact with sharp edges.
- Keep all parts in good condition and properly installed. Replace damaged or missing parts immediately.
- Remove tools and unused parts prior to implement operation.

PREPARE FOR EMERGENCIES

- Be prepared for a fire. Keep a readily accessible fire extinguisher at all times.
- Keep a readily accessible stocked first aid kit and emergency phone numbers for your doctor, hospital, ambulance, and fire department.
- Wear protective clothing and equipment. Wear clothing appropriate for the situation. Protect your eyes, ears, hands, and feet with the use of protective goggles, ear plugs, gloves, boots, etc.

IMPORTANT SAFETY INFORMATION

ANHYDROUS AMMONIA

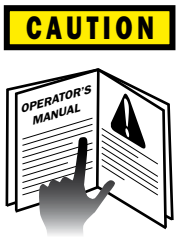
LIQUID FERTILIZER

ANHYDROUS AMMONIA (NH_3) AND LIQUID FERTILIZER APPEARS HARMLESS. DIRECT EXPOSURE TO NH_3 OR LIQUID FERTILIZER IS EXTREMELY DANGEROUS AND CAN RESULT IN INJURY AND/OR DEATH.

- Keep a clean supply of water readily accessible in case of exposure to NH_3 or liquid fertlizer.
- Wear protective goggles and gloves when working with NH_3 or liquid fertilizer. Be sure all persons involved in the operation are properly trained concerning the dangers and precautions involved in the application of NH_3 or liquid fertilizer.
- If you choose to apply NH_3 or liquid fertilizer, it is advisable to consult documented information regarding safe handling and application of NH_3 or liquid fertilizer. Information is available from the following recognized sources:

    1. American National Standards Institute - ANSI - www.ansi.org - (212) 642-4900
    2. Material Safety Data Sheets - MSDS - www.msdsonline.com
    3. National Safety Council - www.nsc.org/necas
    4. The Fertilizer Institute - www.tfi.org
    5. United States Department of Transportation - D.O.T. - www.dot.gov
    6. Compressed Gas Association - www.cganet.com

SAFETY NEVER HURTS



READ AND UNDERSTAND THE ENTIRE CONTENTS OF THIS MANUAL BEFORE OPERATING OR SERVICING THE IMPLEMENT.

- Understand all implement functions.
- Never stand between the tractor and implement when connecting or disconnecting the implement.
- Be aware of all surroundings before you move the implement.
- Operate the implement from operator's seat only.
- Never mount or dismount a moving tractor.
- Never leave the engine running when the implement is unattended.

IMPORTANT SAFETY INFORMATION

SAFETY DECALS

DANGER

WARNING

CAUTION

Safety decals promote awareness and knowledge concerning safe operation and maintenance of the implement.

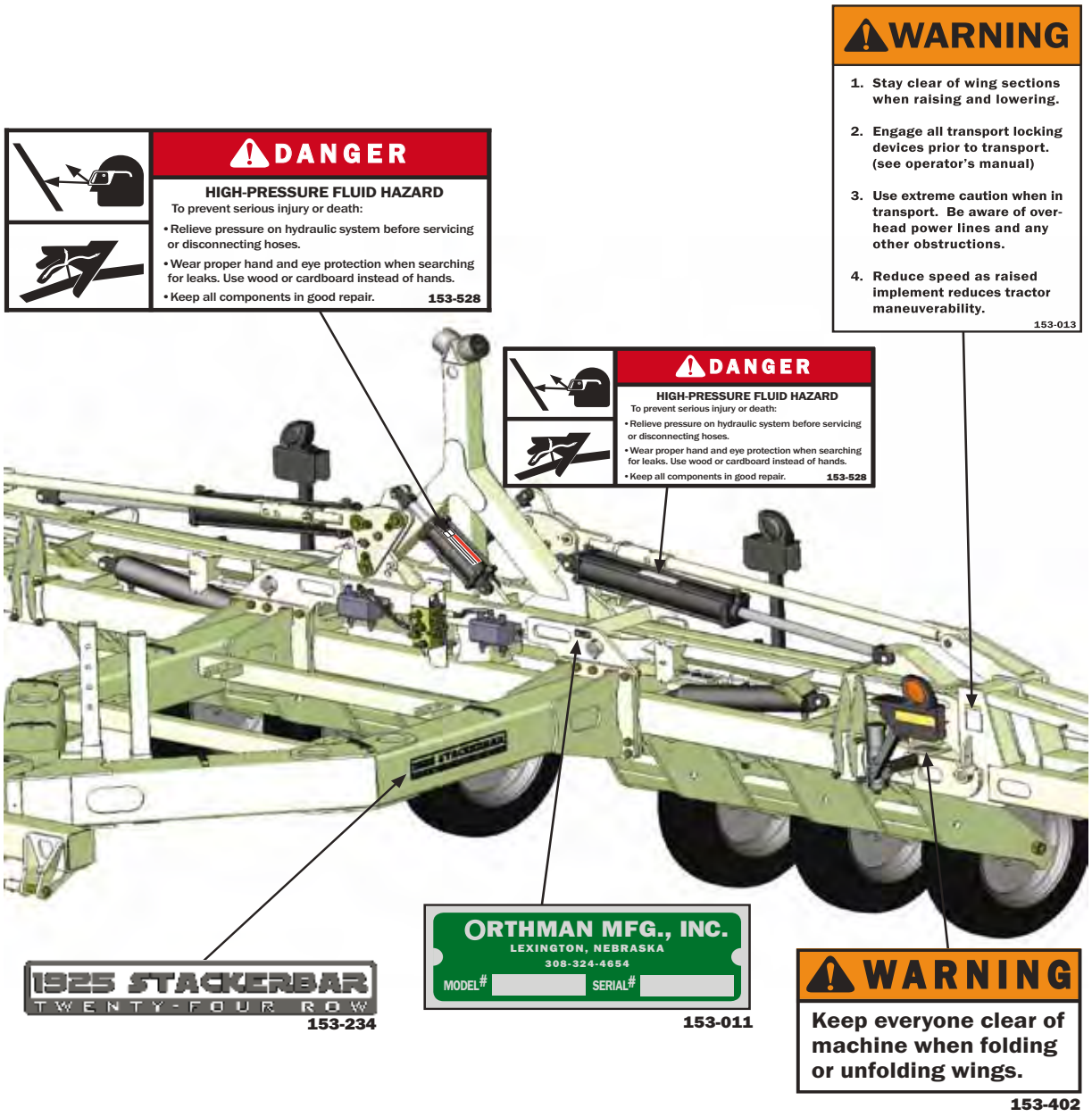
Carefully READ ALL SAFETY DECALS in this manual as well as on the implement. Keep the implement clean so decals are easily visible. Keep all decals in good and legible condition. Immediately replace damaged and/or missing decals. Replacement decals are available from your Orthman dealer.

To install decals: Thoroughly clean the area where the decal is to be placed and attach the decal void of bubbles. Refer to this safety information section for proper decal placement. Decal illustrations below pertain to the 1925 Stacker Bar.

IMPORTANT SAFETY INFORMATION

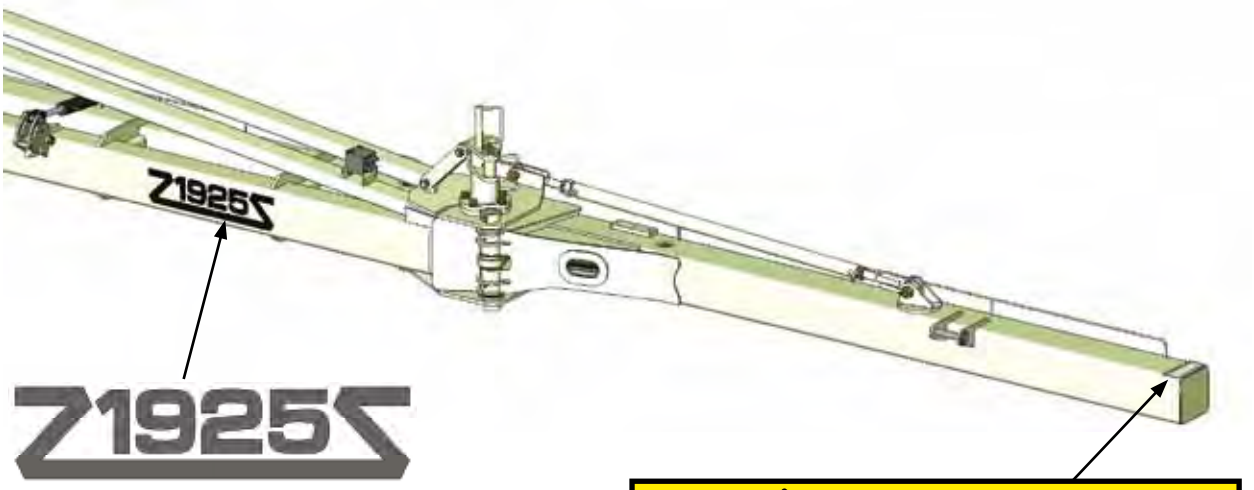
SAFETY - ORTHMAN DECALS

The Orthman serial tag contains valuable information. The model and serial numbers provide Orthman dealers and the Orthman Service Department with the exact specifications of your implement if any warranty or service issues need to be addressed.



IMPORTANT SAFETY INFORMATION

SAFETY DECALS ON FRONT FOLD OUTER WINGS



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⚠ CAUTION

1. Read and understand all operator manuals before implement use.
2. Follow all tractor or towing device operating procedures and safety guidelines.
3. Do not allow riders on implement.
4. Lower implement to the ground, place tractor in park, turn off engine, and remove key. Wait for all moving parts to come to a complete stop before working on implement.
5. Be extremely careful working around unshielded sharp edges.
6. Make sure all safety lighting and decals are clean. Use hazard lights when in transport.
7. Engage all safety devices before transporting or working beneath implement.
8. Contact or close proximity to power lines can result in electrocution.
9. Review all safety instructions with all operators on a frequent basis.

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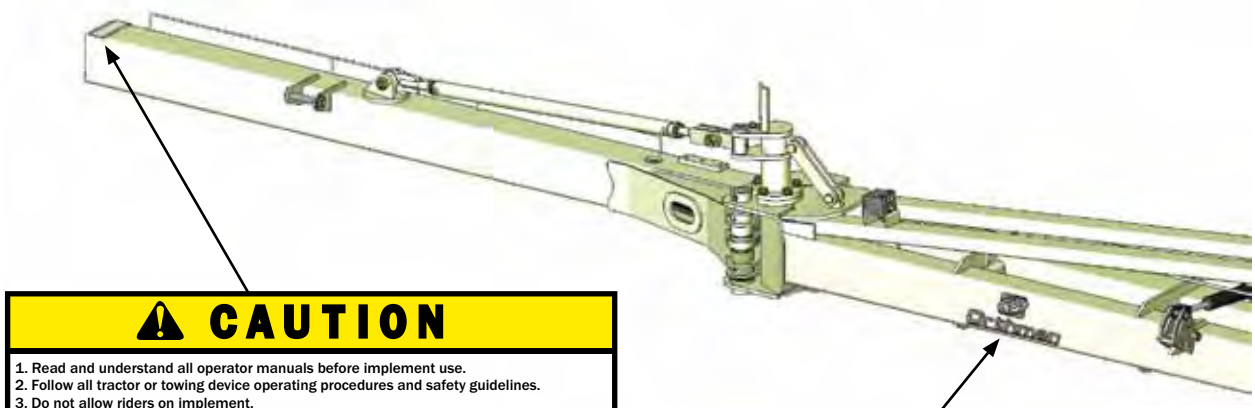

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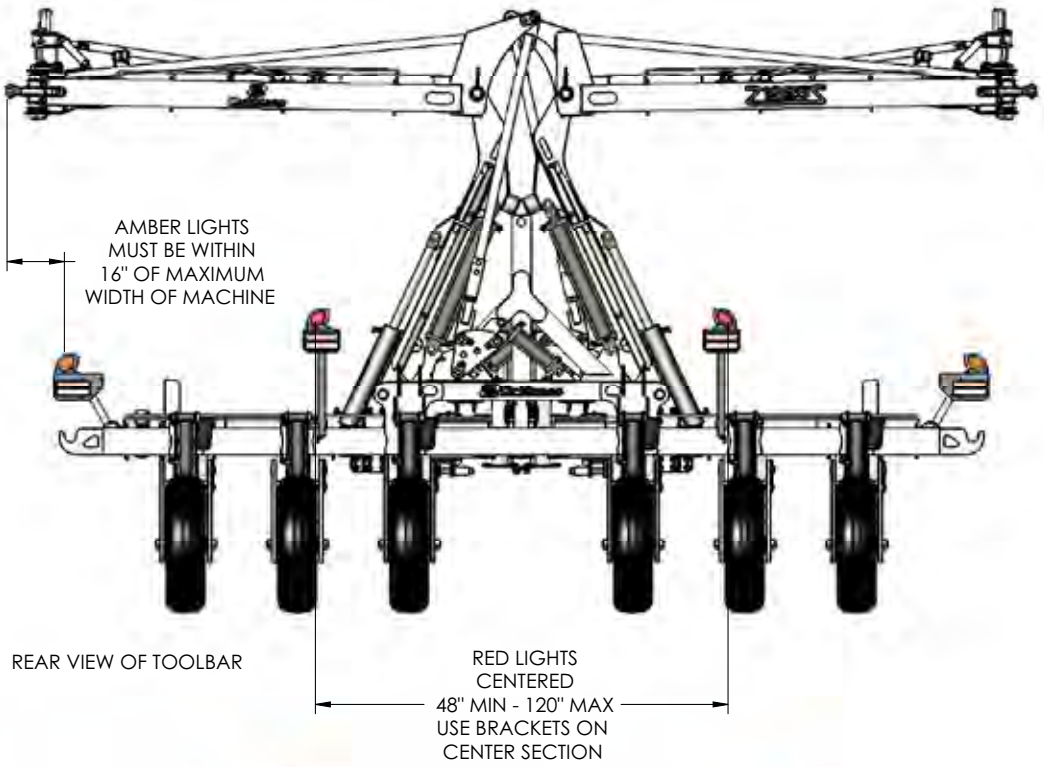
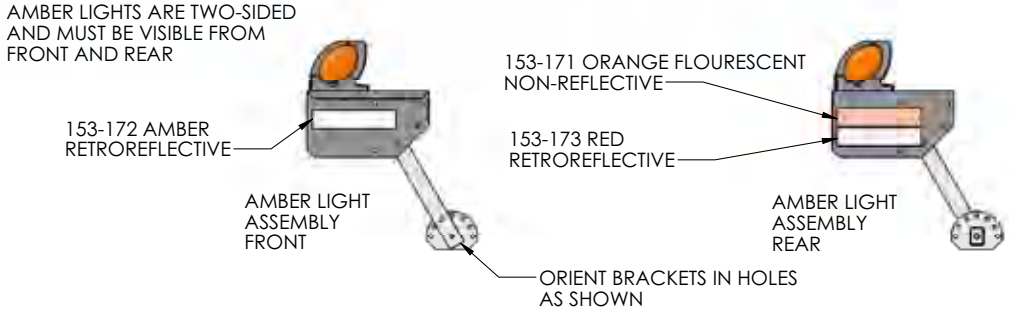
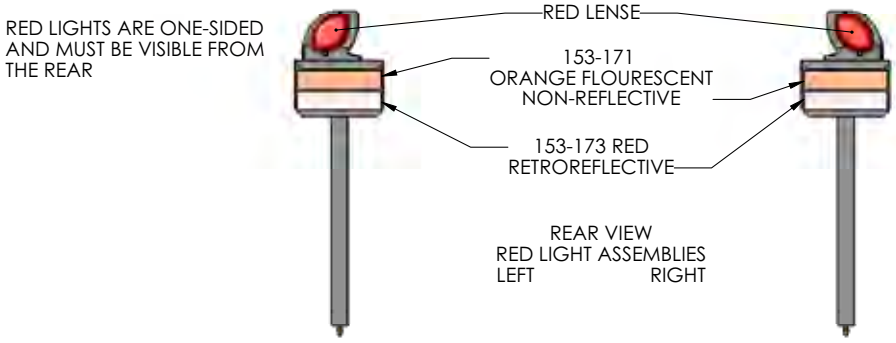
IMPORTANT SAFETY INFORMATION

SAFETY LIGHTS - REAR VIEW OF TOOLBAR

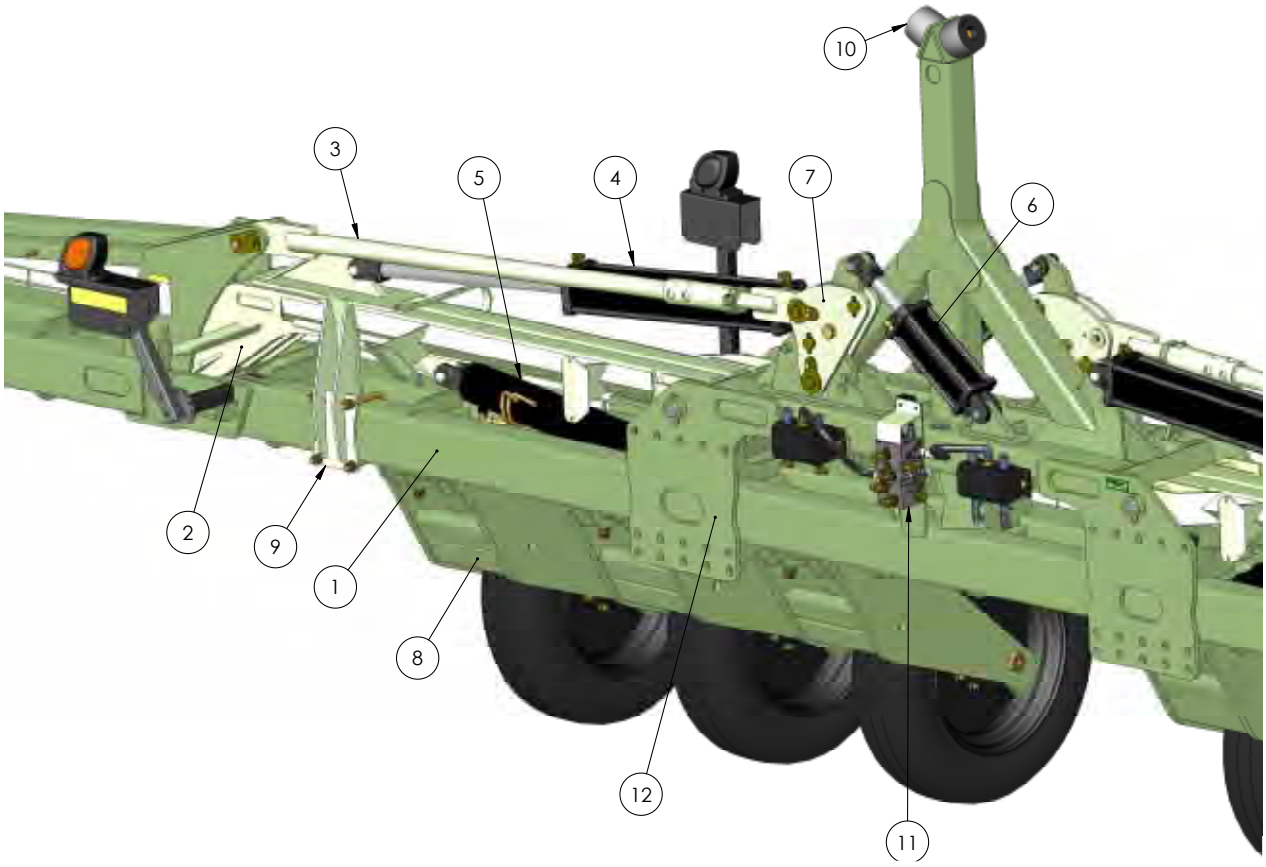






MAJOR COMPONENTS

MAJOR COMPONENTS 1 - CENTER

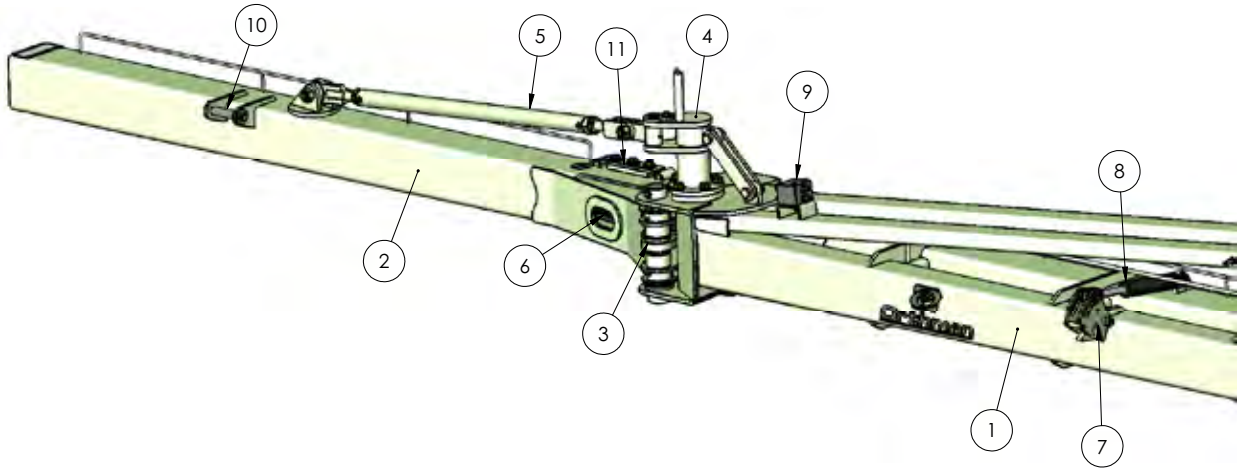


Key	Description
1	Center Section
2	Swing Truss
3	Strut
4	Stack Cylinder (Main)
5	Stack Cylinder (Secondary)
6	Gullwing / Float Cylinder

Key	Description
7	Gullwing Assembly
8	Lift Wheel Assembly
9	Swing Truss Guide
10	Transport Rest Bumper
11	Fold Control Manifold
12	Tongue Connection Plate

MAJOR COMPONENTS

MAJOR COMPONENTS 2 - WING

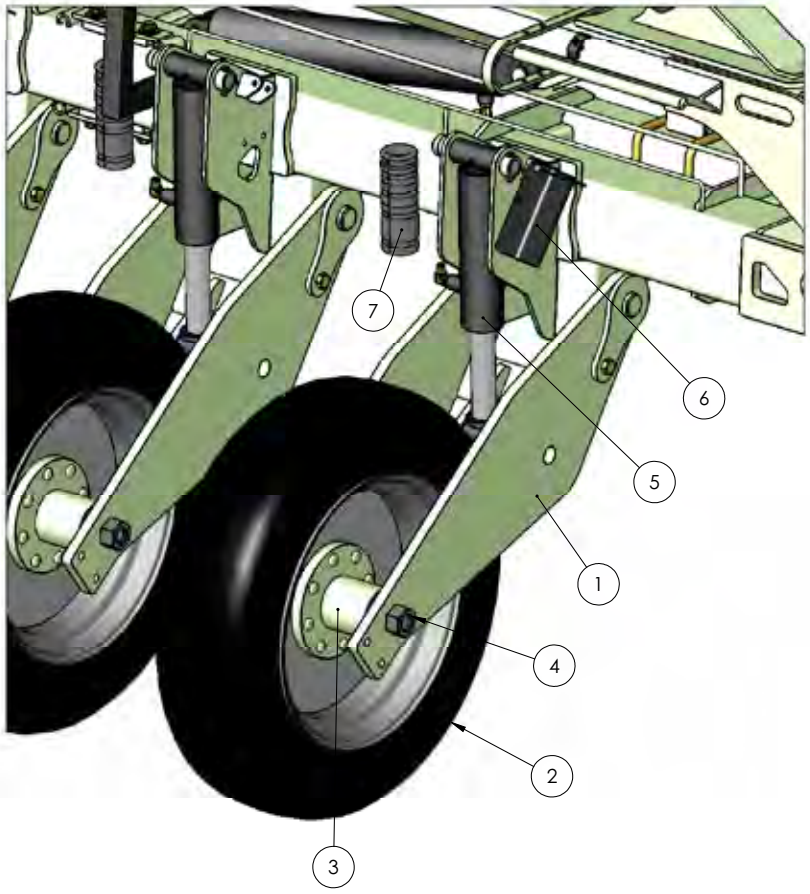


Key	Description
1	Midwing
2	Outer Wing
3	Intermediate Hinge
4	Outer Wing Brace Tower (If equipped)
5	Outer Wing Brace Strut (If equipped)
6	Outer Wing Fold Cylinders (2)

Key	Description
7	Outer Wing Latch Assembly
8	Outer Wing Latch Cylinder
9	Outer Fold Manifold
10	Outer Wing Latch Pin
11	Row Unit Mounts (4)

MAJOR COMPONENTS

MAJOR COMPONENTS 3 - LIFT WHEEL

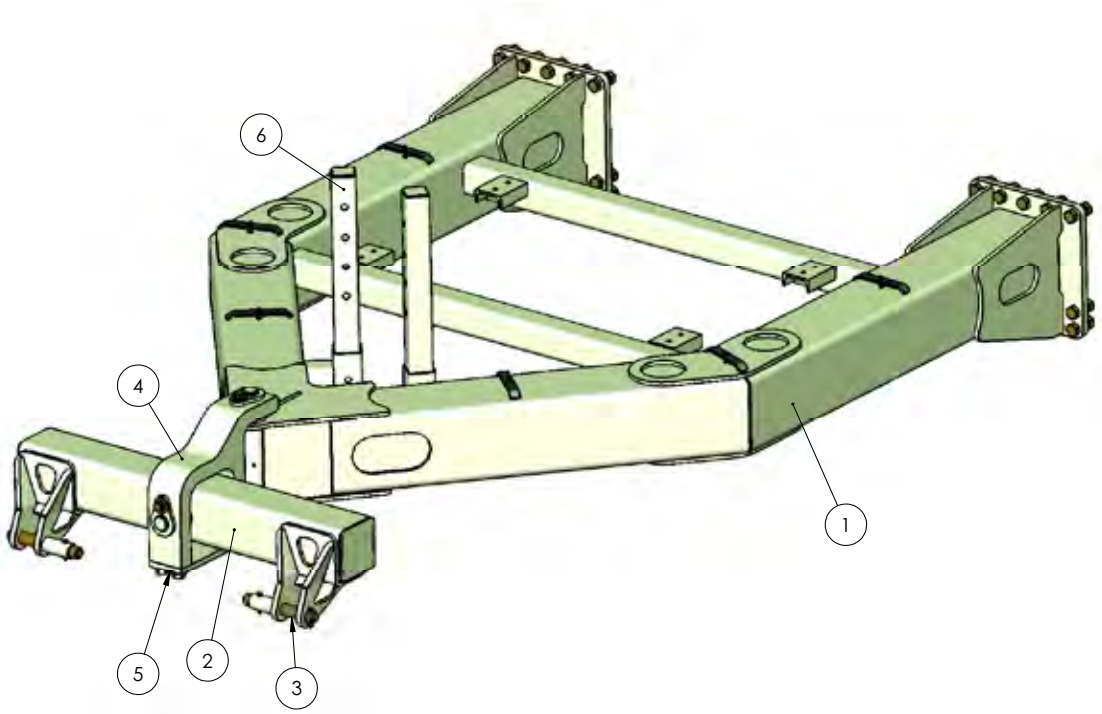


Key	Description
1	Lift Wheel Yoke
2	Lift Wheel Tire
3	Lift Wheel Hub
4	Axle Bolt

Key	Description
5	Lift Wheel Cylinder
6	Transport Lock
7	Cylinder Stop Pack

MAJOR COMPONENTS

MAJOR COMPONENTS 4 - TONGUE AND HITCH

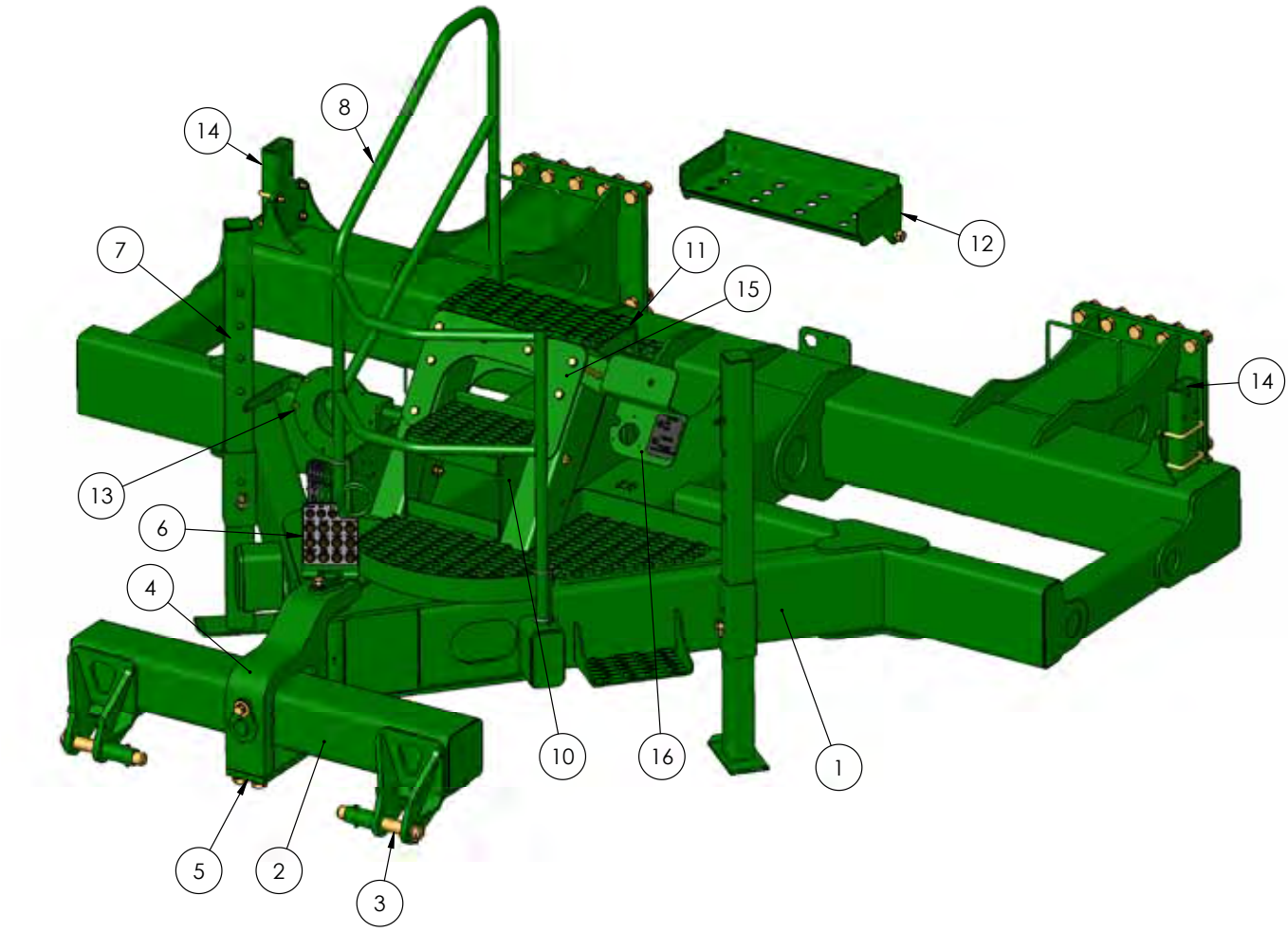


Key	Description
1	Tongue
2	Hitch
3	Hitch Pins (2)

Key	Description
4	Hitch Knuckle
5	Hitch Knuckle Bottom Plate
6	Bar Stands (2)

MAJOR COMPONENTS

MAJOR COMPONENTS 5 - CCS PLANTER TONGUE AND HITCH



Key	Description
1	CCS Tongue
2	Hitch
3	Hitch Pins (2)
4	Hitch Knuckle
5	Hitch Knuckle Bottom Plate
6	Hose / Harness Guide
7	Bar Stands (2)
8	Front Hand Rail

Key	Description
9	Rear Hand Rail
10	Front Step
11	Middle Step
12	Rear Platform
13	CCS Fan Bracket
14	CCS Cradle Support Tubes (2)
15	CCS Cradle Bolt Plates (2)
16	Gage And Switch Plate

PREPARATION AND SETUP

⚠ WARNING

1. Stay clear of stacking sections during raising and lowering.

2. Before transporting, insert pins in safety transport braces when wings are in upright position.

3. During transport, use extreme caution. Watch for low overhead objects and electrical wires. Drive carefully and slowly. Implement weight will make tractor less maneuverable.

⚠ **DO NOT ATTEMPT TO FOLD THE TOOLBAR UNTIL YOU HAVE READ THE FOLLOWING PAGES.**

PREPARING THE TOOLBAR

- Make sure that all decals are in good, clean, and legible condition. Make sure each decal is correctly placed according to the safety section of this operator's manual. See "SAFETY - ORTHMAN DECALS" on page 11 for more information.
- Make sure that the hydraulic system of the tractor is in working order. Orthman 1925 Series Toolbar Hydraulic Systems are designed for a 3000 psi system.
- Make sure that the hydraulic tips and outlets are free of foreign material. Foreign material can ruin hydraulic components, which results in adverse toolbar operation.

CAUTION! It is not recommended to stack the toolbar without folding the outer wing. If the toolbar is not folding in the proper sequence, see "Adjusting the Fold Control Manifold" on page 31.

CAUTION! Stacking one wing at a time causes the center of gravity to shift. This results in rocking and unbalanced equipment. Use extreme caution when you move unbalanced equipment, as the tractor and implement are more likely to tip.

- Attach hydraulic hoses to the tractor according to the operator preferences.
- Make sure the lift wheel tire pressure is 65-70 psi.
- Before field operation remove gull wing lock pin. See gull wing kit section.

Before each use, check all hardware for wear and the proper torque. Replace damaged or missing hardware with hardware of an identical grade in order to restore the implement to original specifications.

IMPLEMENT-TO-TRACTOR CONNECTION

The 1925 Stacker Bar has a Category 3 two-point hitch. Category 3N, 4, or 4N hitches are available. Contact the Orthman service department for details.

⚠ **AVOID CRUSHING.** Do not stand between the tractor and implement when you connect or disconnect the implement. Injury or death can result from being trapped between the tractor and implement.

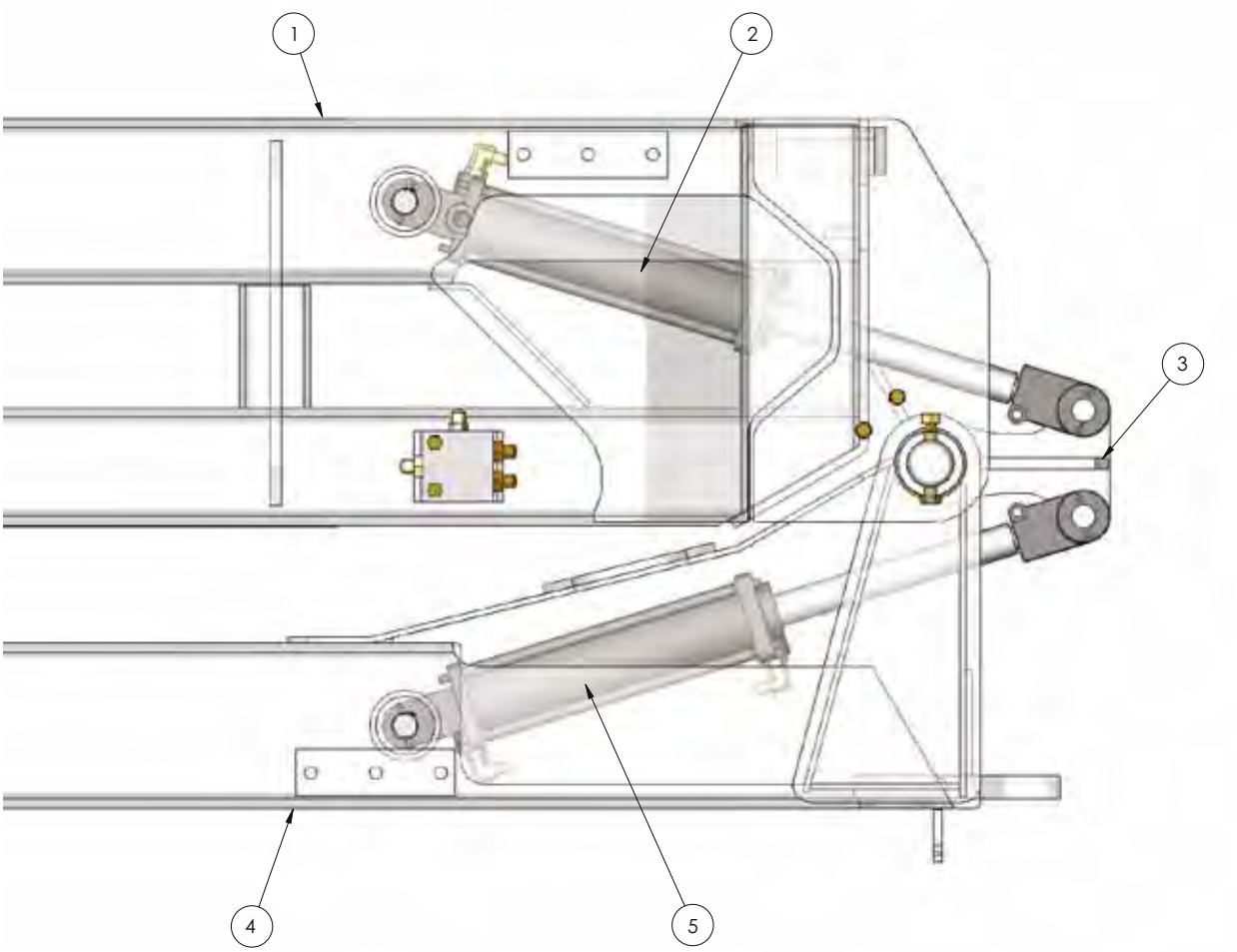
AVOID CRUSHING. Make sure all personnel are clear of the implement. Lower the implement to the ground, place the tractor in park, turn off the engine, and remove the key.

USE BAR STANDS TO SUPPORT THE IMPLEMENT. Store the implement on a clean, dry, and level surface. An uneven surface could cause the implement to shift or fall, resulting in injury or death, as well as implement damage. Securely support all implement components that must be raised. Store the implement away from human activity.

PREPARATION AND SETUP

OUTER WING FOLD

The outer wing fold mechanism is comprised of two cylinders and an intermediate hinge. The cylinders are mounted internally in the mid and outer wings. Each cylinder is connected to the intermediate hinge which shares a pivot point with the outer wing. The two cylinders are plumbed in parallel and work together to fold and unfold the outer wings.



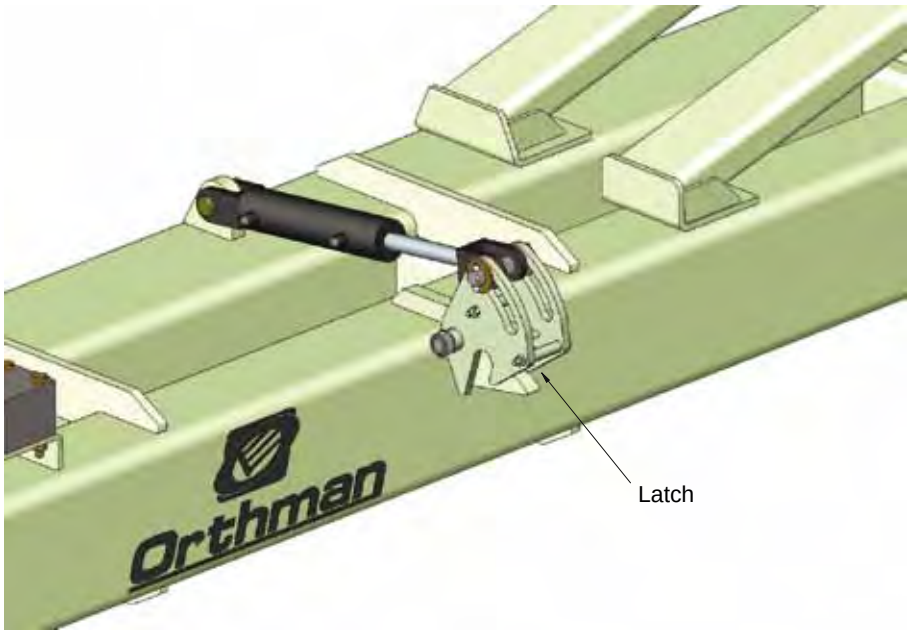
Key	Description
1	Midwing
2	Midwing Cylinder
3	Intermediate Hinge

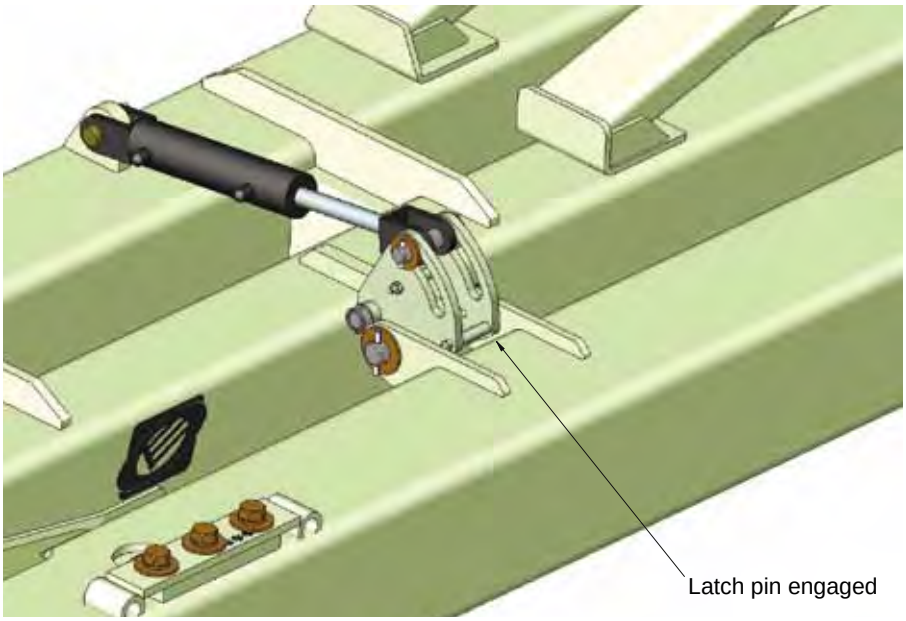
Key	Description
4	Outer Wing
5	Outer Wing Cylinder

PREPARATION AND SETUP

OUTER WING LATCH

In the folded position a latch holds the outer wing. The latch will prevent the wing from swinging freely if hydraulic pressure is lost while transporting the toolbar. The small cylinder that controls the latch assembly is connected to the outer wing cylinders and works at the same time. The latch assembly works automatically. When the outer wing is folded, the latch cylinder extends and the latch assembly is in the down position. The profile of the latch plate is such that when the latch pin meets it, the latch plate rotates open and then closes on the latch pin when the wing is fully folded. When the wing is unfolded, the latch cylinder retracts and rotates the latch assembly open before the wing unfolds.

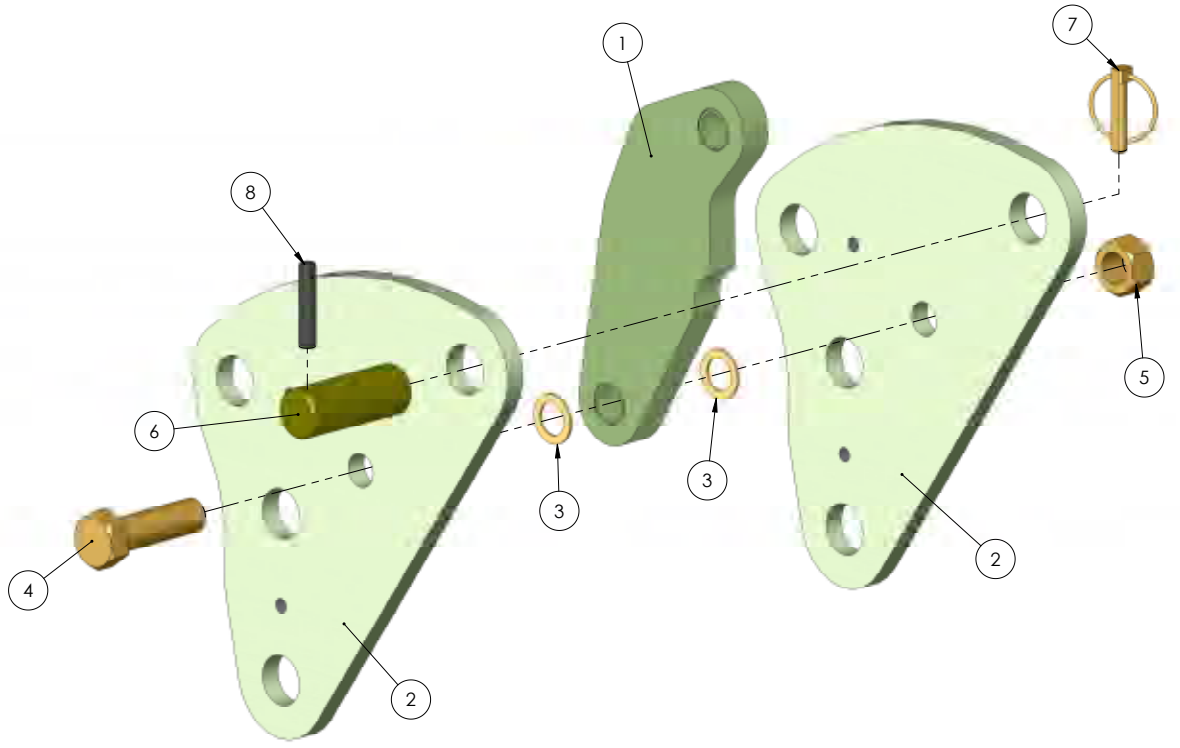




PREPARATION AND SETUP

GULLWING KIT

A gullwing kit is standard equipment on the 1925 Stacker Bar. The gullwing kit allows the toolbar wings to flex up and down over varying field conditions and to be tipped up for added clearance during end-row turns.



ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	321-977	1" T-1A PLATE
2	2	321-976	5/8 ASTM A572(50) PLATE
3	2	134-013	BUSHING
4	1	100-303	HEX HEAD BOLT
5	1	102-162	LOCK NUT
6	1	321-277	1 1/2 1045 CRR
7	1	104-036	7/16 X 2" LINCH PIN
8	1	104-005	PIN,ROLL (SPRL)1/2 X 2 1/2

PREPARATION AND SETUP

PLUMBING THE GULLWING KIT

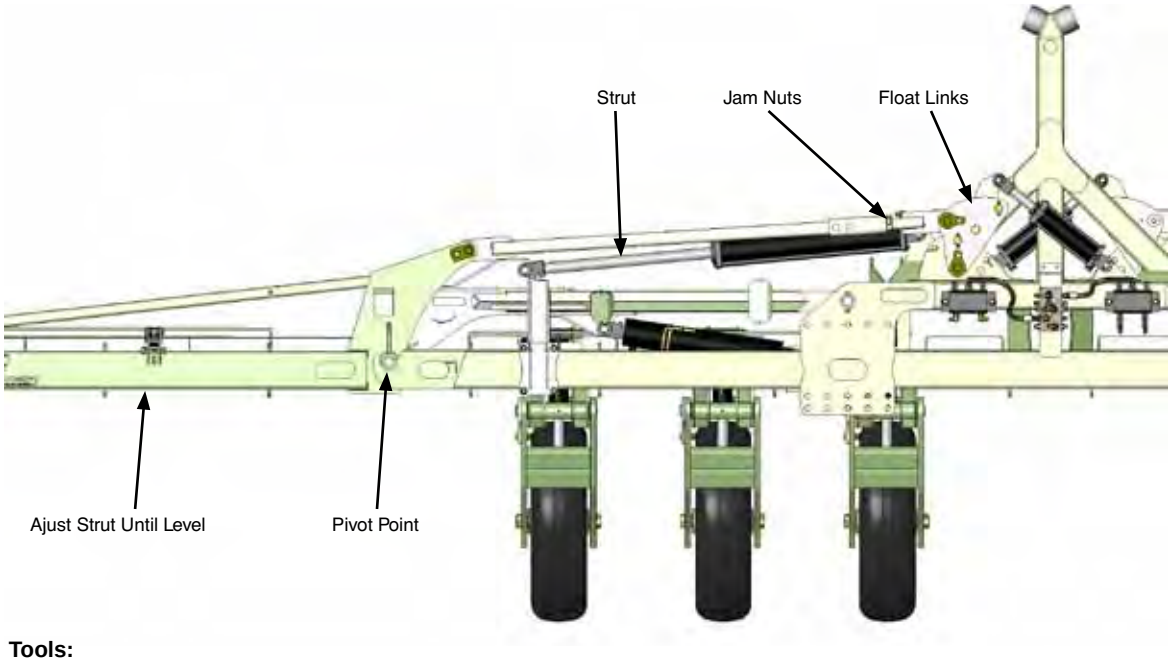
The gullwing cylinders are plumbed single-acting. The hoses are connected to the rod ends of the cylinders and the base ends are fitted with filtered breathers. The cylinders must not be plumbed double-acting as this creates a possibility of significant damage to the toolbar in the transport position.The gullwing cylinders are connected to the lift wheel cylinders for simultaneous operation. Because of this, you must place the lift wheel and gullwing hydraulics in float during field operation. This ensures the proper performance of the toolbar.

AVOID CRUSHING. Make sure all personnel are clear of the implement at all times that the implement is in motion. Be aware of obstructions above, below, and around the implement when in operation or transport. Injury or death can result from being struck by the implement.

PREPARATION AND SETUP

LEVELING THE WINGS

When row units are added to the mid and outer wings, the additional weight may cause the wings to no longer be level with the center section. Check the levelness of the wings over the life of the toolbar to ensure proper performance.



Tools:

- 3-1/8 in. wrench
- 9/16 in. wrenches (2)
- 3/4 in. wrench
- Level or angle finder

Procedure:

1. Begin with the float links pinned rigid. Park the toolbar on a level surface in the raised position and check the levelness of the rear toolbar of the center section. This will be the reference point for leveling the wings. For the greatest accuracy the wing row units should have all attachments and be fully loaded during leveling.
2. Place the level or angle-finder on the top of the rear tube on the midwing and note how its levelness compares to the reference taken from the center section. The wing must be from 0° to +2° of level with the center section for proper toolbar function. If the wing angle is lower than the center section, then adjust it using the following steps.
3. The strut has one fixed end connected to the wing, and one adjustable end connected to the float links. The pitch of the wing is adjusted by screwing the threaded end into or out of the strut, which changes the length of the strut. You must disconnect the strut from the float links in order to make this adjustment.
4. Lower the machine and place supports under the wing.

⚠ **CAUTION!** It is essential that the weight of the wing be adequately supported before you continue.

5. Loosen the bolt and nut that tighten the split jam nut.
6. Loosen the jam nut.

7. Remove retaining hardware from the strut pin and the centering pin and remove both pins from the float links. The gullwing cylinder can be manipulated to reduce the tension on the pins and make it easier to remove them.
8. With the strut disconnected from the float links, screw the threaded end into or out of the strut based on the levelness measurements taken previously. Each full turn of the strut end results in approximately a 0.5° change to the wing. You can screw the end one turn clockwise in order to raise the wing 0.5° and one turn counterclockwise in order to lower the wing 0.5°.
9. Reconnect the strut to the float links and re-install the centering pin and retaining hardware. Manipulate the gullwing cylinder to aid assembly.
10. Raise the machine and check the levelness of the wing compared to the center section.
11. If the wing is in the levelness range described in step 2, tighten the split jam nut and retighten the bolt across the split jam nut. If the wing is still not level, repeat this procedure.

LEVEL THE OUTER WING

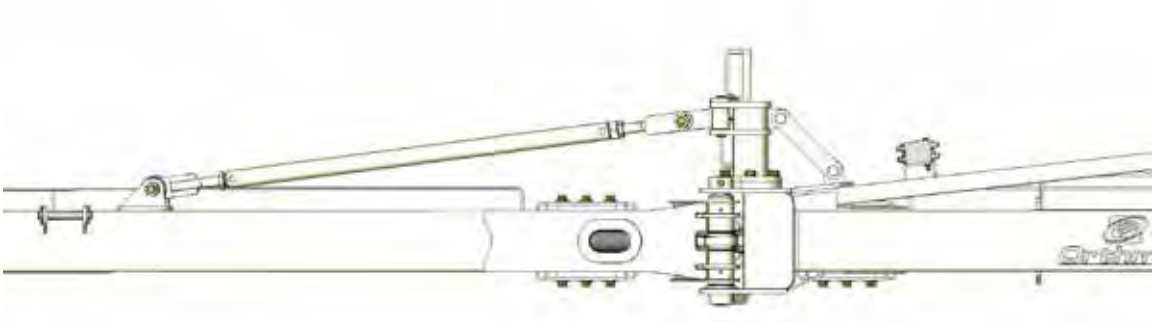
Some 1925 Stacker Bars are equipped with an additional strut that braces the outer wing. You can adjust this strut in order to make sure that the outer wing is level after the addition of row units. Proper adjustment of the outer wing strut also ensures that the latch aligns correctly in the transport position. Check the levelness of the outer wings over the life of the toolbar in order to ensure proper performance.

Tools:

- 1-13/16 in. wrench
- 2 in. wrench
- Level or angle finder

Procedure:

1. Before you adjust the outer wing strut, check the levelness of the wings according to the steps in “Leveling the Wings” on page 26.
2. Make sure that the hardware that connects the outer wing brace tower to the midwing is tightened to the specifications in “Maintenance” on page 43.
3. Park the toolbar on a level surface and check the levelness of the rear toolbar of the midwing. This will be the reference point for leveling the outer wing. For the best accuracy, the outer wing row units need to have all attachments and be fully loaded during leveling.
4. Loosen the jam nuts on each end of the strut and turn the center portion of the strut in order to adjust the outer wing.
5. Place the level on the top of the outer wing at a point away from the outer hinge and adjust the strut until the levelness of the outer wing matches the reference taken from the midwing.
6. When the outer wing is level, re-tighten the jam nuts on each end of the strut.
7. Repeat this procedure for both outer wings.



PREPARATION AND SETUP

STRAIGHTENING THE FRONT-FOLD OUTER WINGS

The front-folding outer wings can be adjusted in order to make sure that they are parallel with the toolbar. When the outer wings unfold, the alignment peg on the outer wing meets an adjustable stop on the midwing. You can alter the position of this stop in order to align the outer wings correctly.

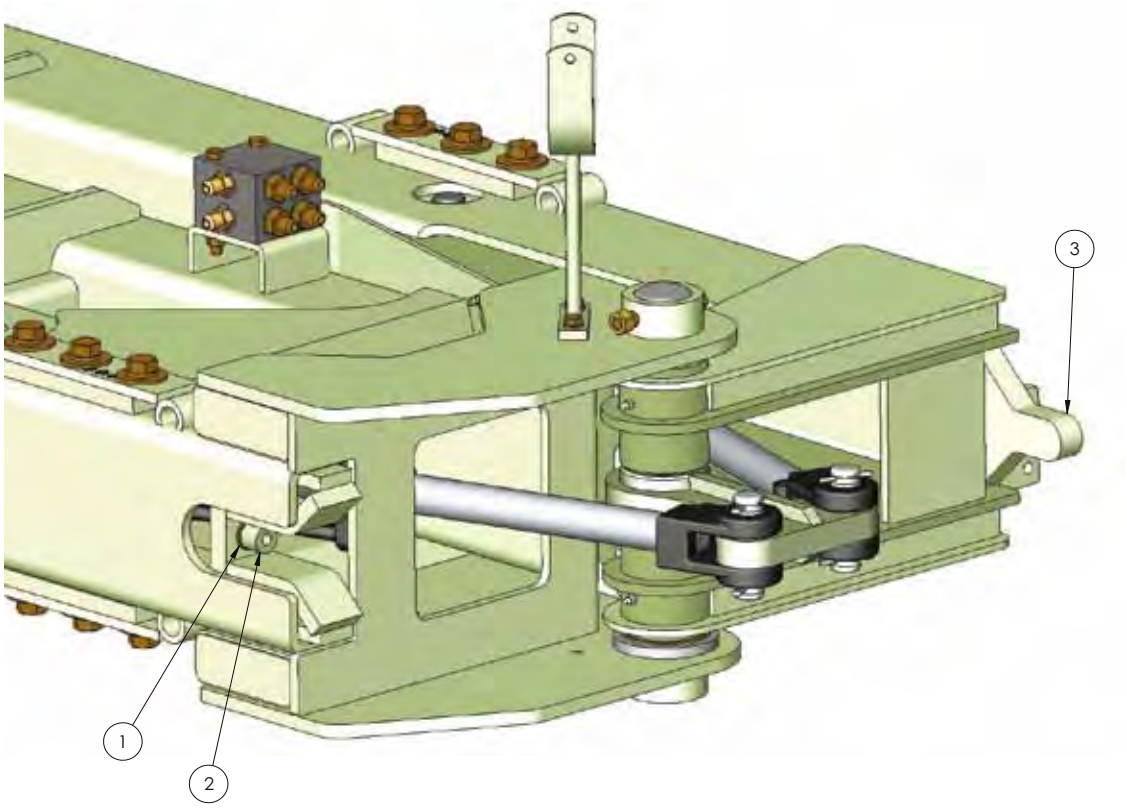
Tools:

- 3/4 in. wrench
- Level

Procedure:

1. Unfold the outer wing as far as it will go.
2. Lay the level on the back face of the midwing across the outer wing hinge.
3. Use the back face of the midwing as a reference and determine if the outer wing is correctly aligned.

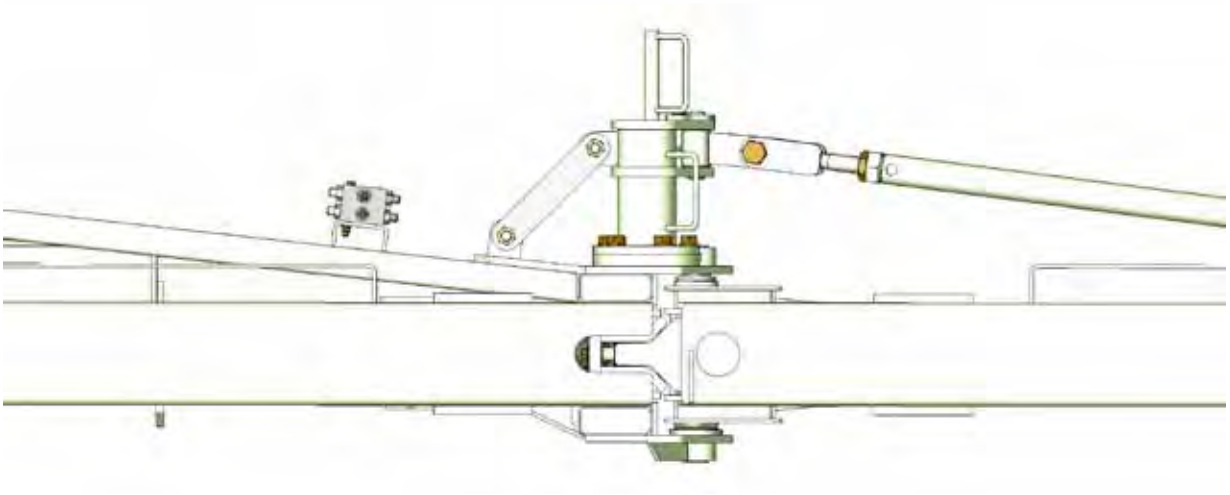
View of the Outer Wing



Key	Description
1	Washers
2	Adjustable Stop
3	Alignment Peg

PREPARATION AND SETUP

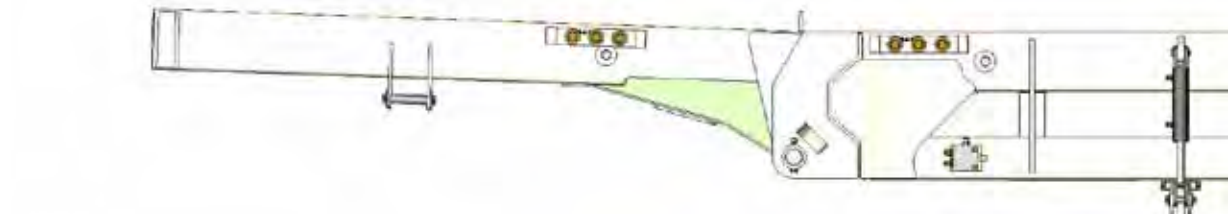
Rear View of the Outer Wing



The adjustable stop is comprised of a tapped stop and a series of spacer washers.

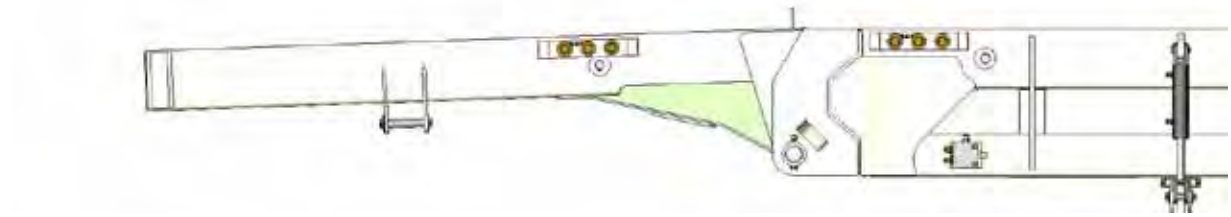
If the outer wing unfolds too far, add additional washers behind the stop in order to reduce the unfolded angle.

View of Outer Wing Top



If the outer wing does not unfold far enough, remove the stop and washers in order to increase the fold angle. Repeat the alignment procedure for both outer wings.

View of Outer Wing Top



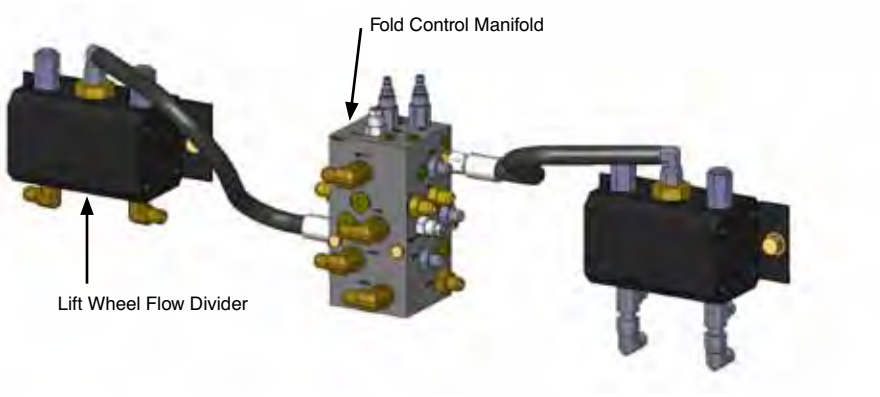
If the adjustments cannot adequately align the outer wings, contact the Orthman service department.

FOLD CONTROL MANIFOLD

The 1925 Stacker Bar is equipped with a manifold for controlling the toolbar fold from 1 SCV. The manifold automatically sequences the outer wings and stack fold. A flow divider keeps the stacking wings balanced when folding.

The fold control manifold contains components that regulate oil flow in order to control the toolbar. Two counter balance valves regulate the motion of the wings when they fold over center. Two sequence valves control the timing of the outer wings and stack fold. You can adjust the valves in order to change the fold performance of the toolbar. See “Adjusting the Fold Control Manifold” on page 31.

The lift wheels and gullwing cylinders are also connected through the fold control manifold. A flow divider balances the right and left lift wheels. The gullwing cylinders are plumbed in parallel with the lift wheels for simultaneous operation.



MANIFOLD CONNECTIONS

Connect the ports on the manifold with the hoses as this list shows:

1. FOLD: Fold supply hose from the tractor
2. UNFOLD: Unfold supply hose from the tractor
3. OWR: Outer wing return hose on both the right and left
4. OWP: Outer wing pressure hose on both the right and left
5. ST DIV: Short hose that connects the manifold to the gear divider input
6. P1: Right main stack cylinder base end
7. R3: Right secondary stack cylinder rod end (or plug)
8. P2: Left main stack cylinder base end
9. R4: Left secondary stack cylinder rod end (or plug)
10. GEAR DIVIDER RIGHT TEE: Right main stack cylinder rod and right secondary cylinder base
11. GEAR DIVIDER LEFT TEE: Left main stack cylinder rod and left secondary cylinder base
12. LAW P (FRONT): Lift wheel supply hose
13. LAW R (FRONT): Lift wheel return hose
14. LAW P (RIGHT): Short hose that connects to the flow divider input
15. LAW P (LEFT): Plugged
16. LAW R: Return hoses from the lift wheel cylinders
17. GW R: Gullwing cylinder rod ends

PREPARATION AND SETUP

ADJUSTING THE FOLD CONTROL MANIFOLD

For the best results, make sure that the wing row units have all attachments and are fully loaded when you adjust the valves.

It is recommended that you adjust the counter balance valves first. The counter balance valves restrain the motion of the wings by regulating the flow of oil out of the cylinders. Positive-pressure oil inflow is required in order for the wings to move.

Adjust the Counter Balance Valves

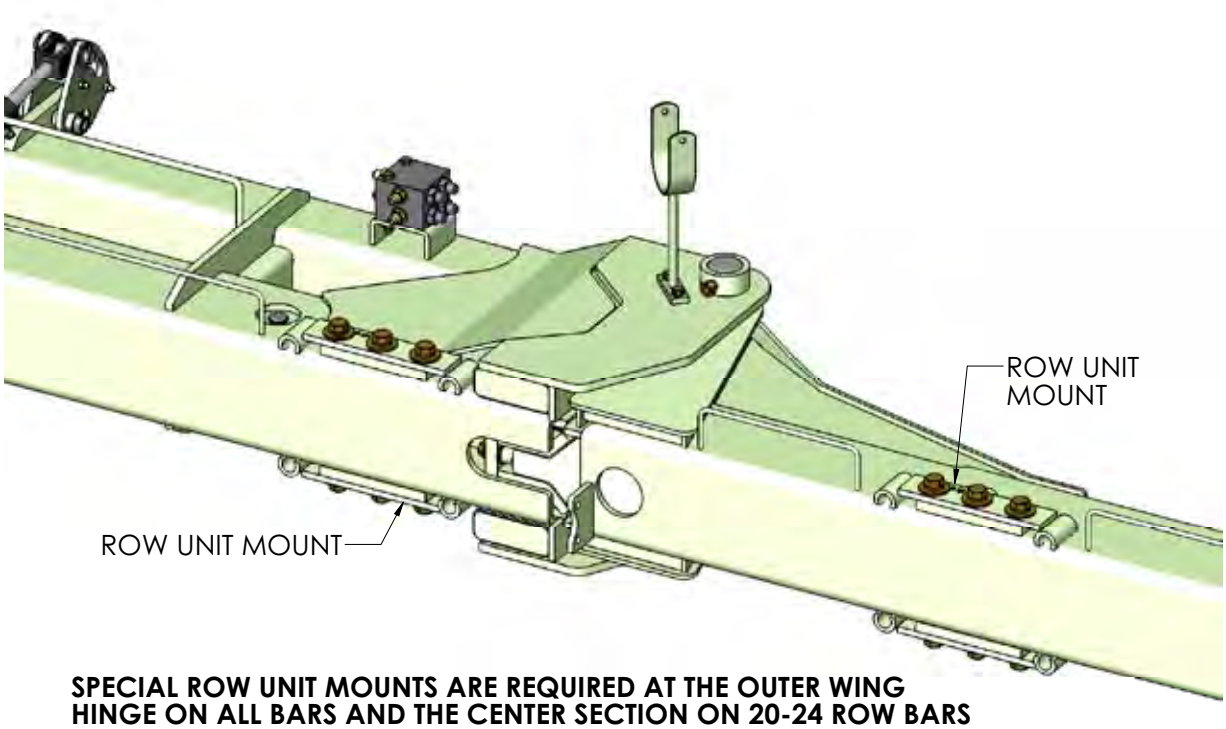
1. Loosen the jam nut on the top of the cartridge.
2. Adjust the set screw with a hex-head wrench. Be very careful adjusting the cartridges as the full adjustment range is three full turns of the set screw. Counterclockwise adjustment of the counter balance valve increases the pressure required for oil flow; clockwise adjustment reduces the required pressure. The counter balance valve labeled “CBV – F” controls the fold sequence.
   - If the outer wings move too quickly when you fold past the center or the stacking wings fall on to the rests too rapidly, adjust the “CBV – F” counterclockwise in one-quarter turn increments until you reach satisfactory fold motion.
   - The counter balance valve labeled “CBV – UF” controls the unfold sequence. If the un-stacking wings move down too quickly, adjust the “CBV – UF” counterclockwise in one-quarter turn increments until you achieve satisfactory fold motion.

Alter the Fold Timing

To alter the fold timing, you need to adjust the sequence valves:

1. Loosen the jam nut on the top of the cartridge.
2. Adjust the set screw with a hex-head wrench. Use caution when you adjust the cartridges as a small turn can have a significant affect. Clockwise adjustment of the sequence valve increases the delay between fold functions; counterclockwise adjustment reduces the delay.
   - The sequence valve labeled “SEQ – F” controls the fold sequence. If the wings start to stack before the outer wings are fully folded, then adjust “SEQ – F” clockwise in one-quarter turn increments in order to increase the delay between functions.
   - The sequence valve labeled “SEQ – UF” controls the unfold sequence. If the outer wings start to unfold before the stacking wings are fully down, then adjust “SEQ – UF” clockwise in one-quarter turn increments in order to increase the delay.

PREPARATION AND SETUP



SPECIAL ROW UNIT MOUNTS ARE REQUIRED AT THE OUTER WING HINGE ON ALL BARS AND THE CENTER SECTION ON 20-24 ROW BARS
THE MOUNTS ARE SPECIFIC TO ROW UNIT TYPE
THEY ARE BOLTED DOWN TO TAPPED PADS ON THE TOP
AND BOTTOM OF THE TOOLBAR
MOUNTS ARE DESIGNED FOR A SPECIAL JOHN DEERE BOLT, SHOWN BELOW

ROW UNIT MOUNTS ARE SPECIFIC TO ROW UNIT TYPE
EACH PACKAGE CONTAINS MOUNTS AND HARDWARE FOR
A COMPLETE TOOLBAR. THE "DOGHOUSE" BOLTS ARE NOT INCLUDED

EACH MOUNT HAS A STAMP SIGNIFYING ITS INTENDED ROW UNIT

ROWS	ROW UNIT	PACKAGE	STAMP
16-18	JOHN DEERE STANDARD	321-545	JD
16-18	JOHN DEERE NARROW	321-546	JDN
16-18	CASE/NEW HOLLAND	321-547	CNH
20-24	JOHN DEERE STANDARD	321-847	JD
20-24	JOHN DEERE NARROW	321-848	JDN
20-24	CASE/NEW HOLLAND	321-849	CNH

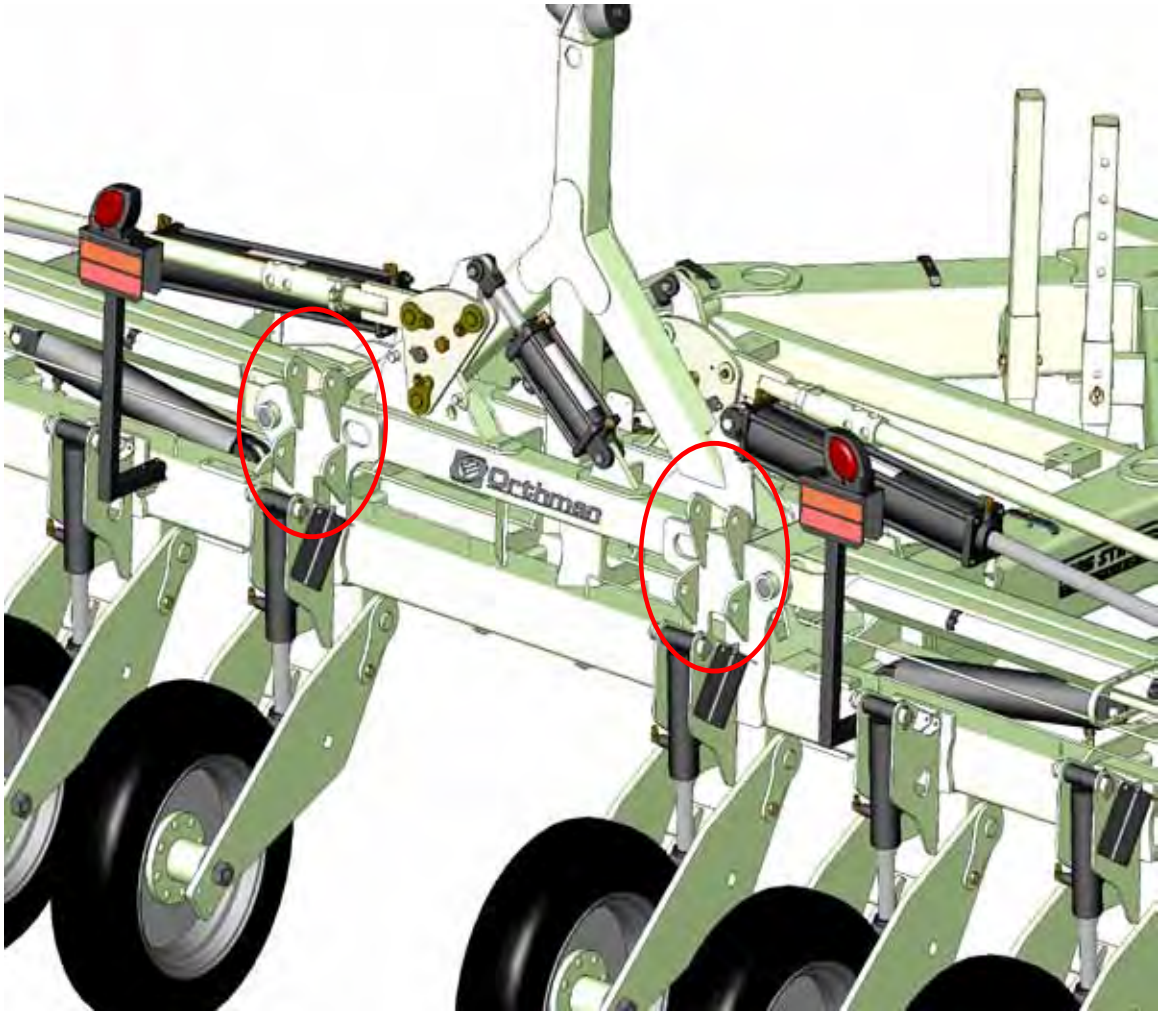
IF YOUR ROW UNIT IS NOT SHOWN CONTACT ORTHMAN MANUFACTURING FOR ADDITIONAL PACKAGE NUMBERS

"DOGHOUSE BOLT"
ORTHMAN # 100-467
JOHN DEERE # A48215
FOUR BOLTS PER ROW

PREPARATION AND SETUP

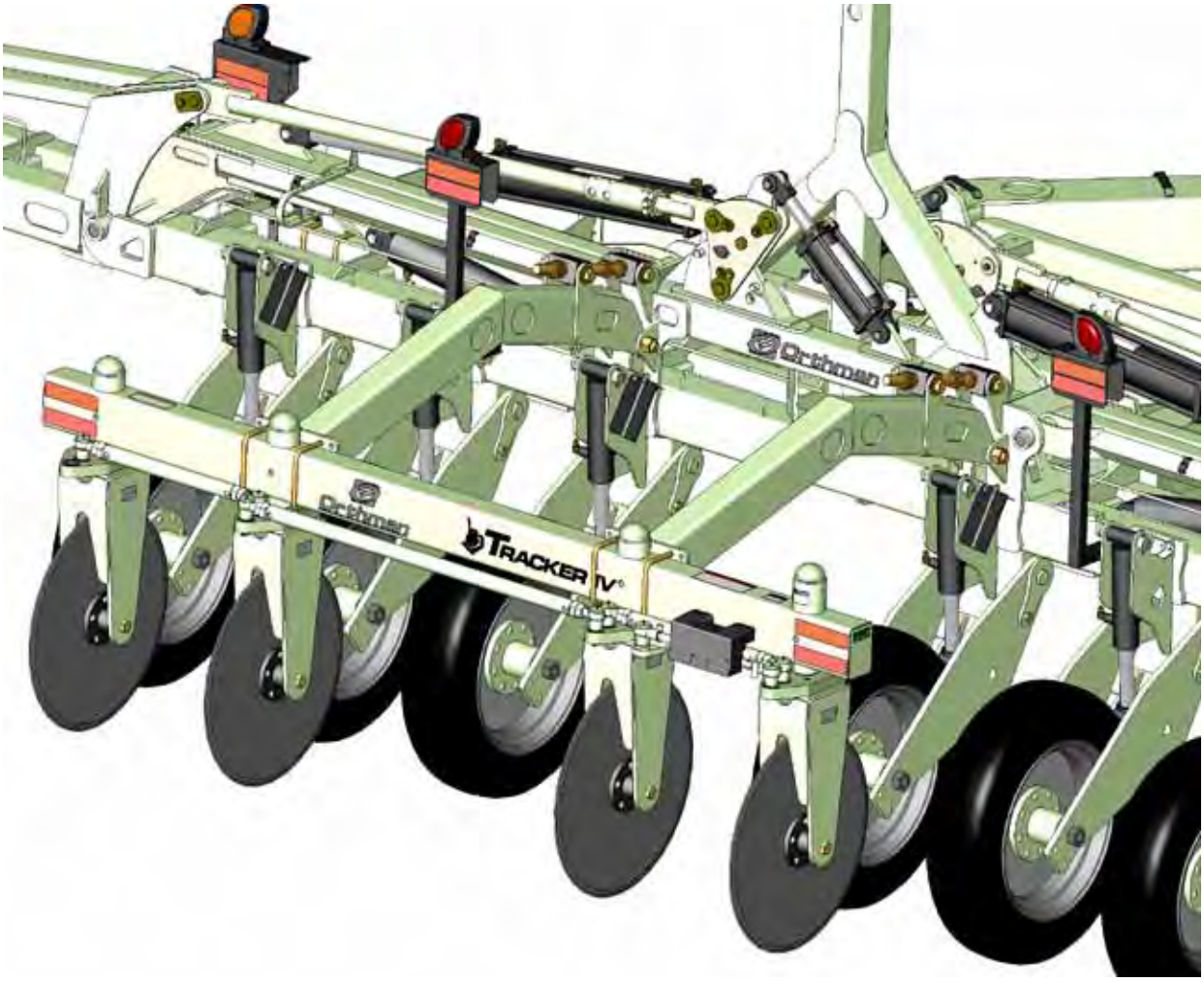
IMPLEMENT GUIDANCE

The 1925 Stacker Bar does not accommodate mechanical row markers. The toolbar is equipped with hardpoints on the center section for mounting the Orthman Tracker 4 Implement Guidance system.



The Mount Arm package number is 399-160. The arms are designed to bridge over the lift wheels and provide depth adjustment for the Tracker 4.

PREPARATION AND SETUP



Consult the Orthman Tracker 4 manual for details on mounting and operating the Tracker 4.

Contact the Orthman Sales department for information on ordering and setting up Tracker 4 Implement Guidance on the 1925 Stacker Bar.

FIELD SETTINGS

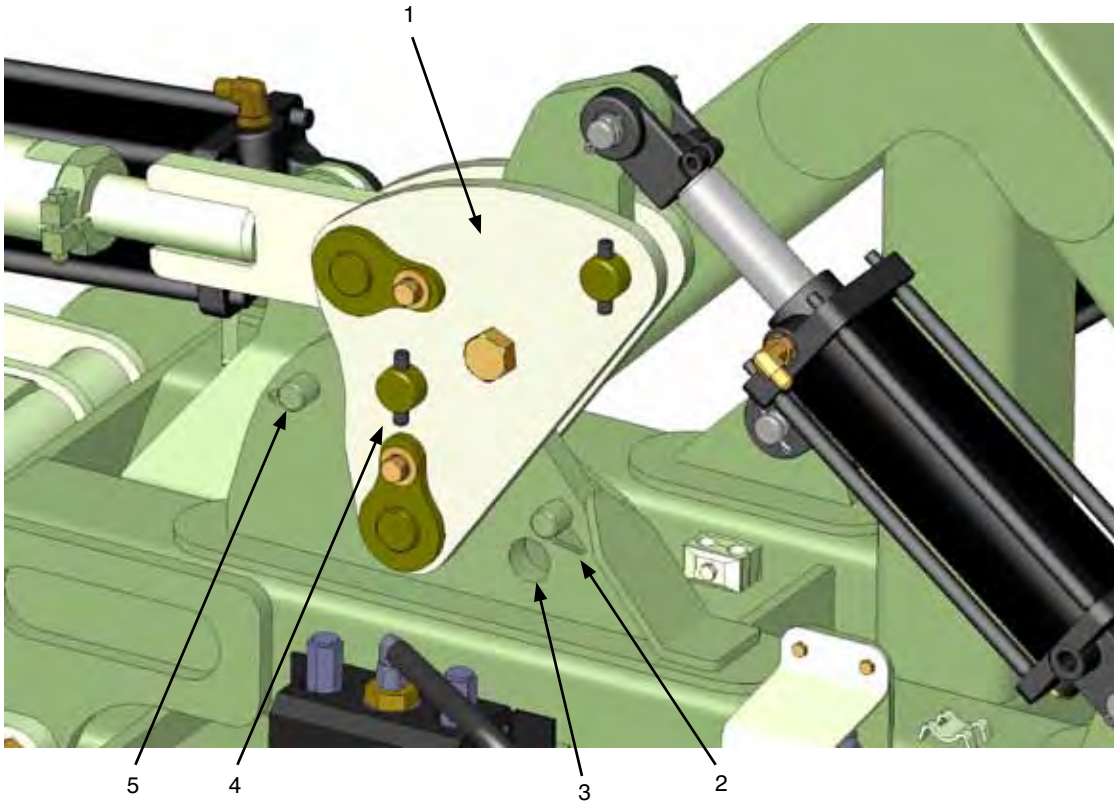
GULLWING KIT

The 1925 gullwing kit provides flexibility to the wings of the toolbar for covering uneven field terrain. The toolbar flexes in three sections: a rigid center section, right and left wings.

The 1925 Stacker Bar ships with the wings pinned in the fixed position. Before field operation in order to utilize the gull wing kit remove the float link pin and place it in the storage position. FAILURE TO REMOVE THE FLOAT LINK PIN MAY RESULT IN DAMAGE TO THE TOOLBAR.

The gullwing cylinders are connected with the toolbar lift wheels. During field operation, make sure that the SCV connected to the lift wheels and gullwing are in the float position in order for the wings to flex. Fixed stops on the center section limit the up and down travel of the float links and protect the gullwing cylinders from undue loading.

During an end-turn when the lift wheels raise the toolbar, the gullwing cylinders will also retract. This tips the wings up for additional clearance.

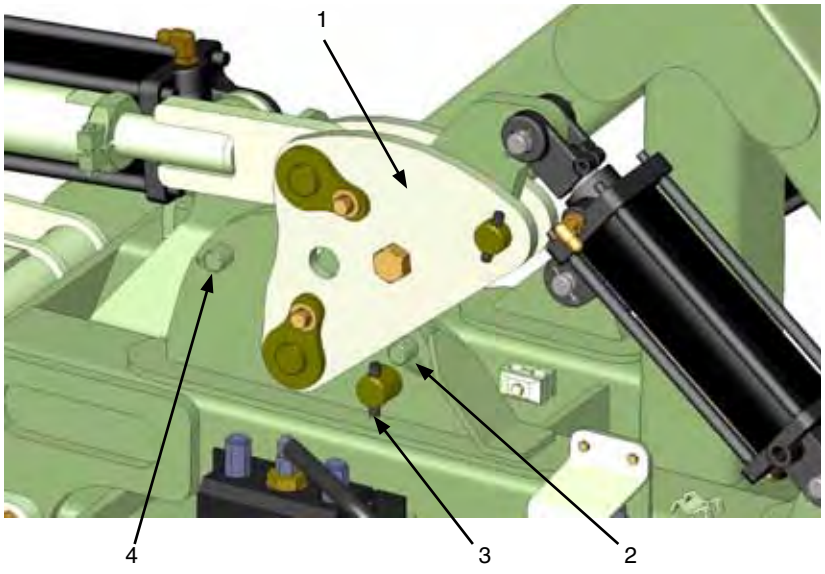


Key	Description
1	Flexible Wing Float Links
2	Up Stop
3	Float Link Pin Storage

Key	Description
4	Float Link Pin
5	Down Stop

FIELD SETTINGS

GULLWING - RAISED

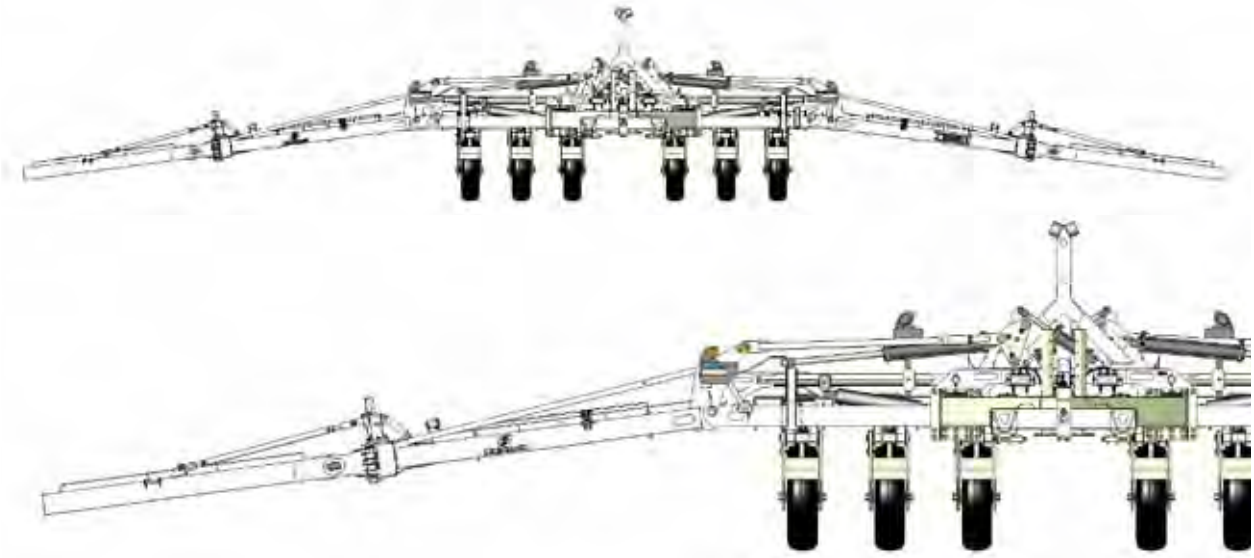


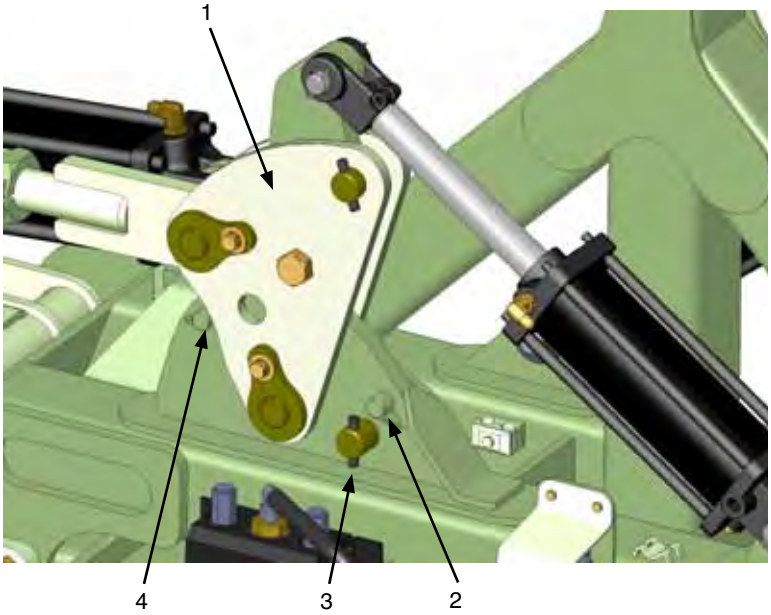
Key	Description
1	Flexible Wing Float Links
2	Up Stop

Key	Description
3	Float Link Pin in Storage
4	Down Stop

FIELD SETTINGS

GULLWING - FLOAT DOWN





Key	Description
1	Flexible Wing Float Links
2	Up Stop

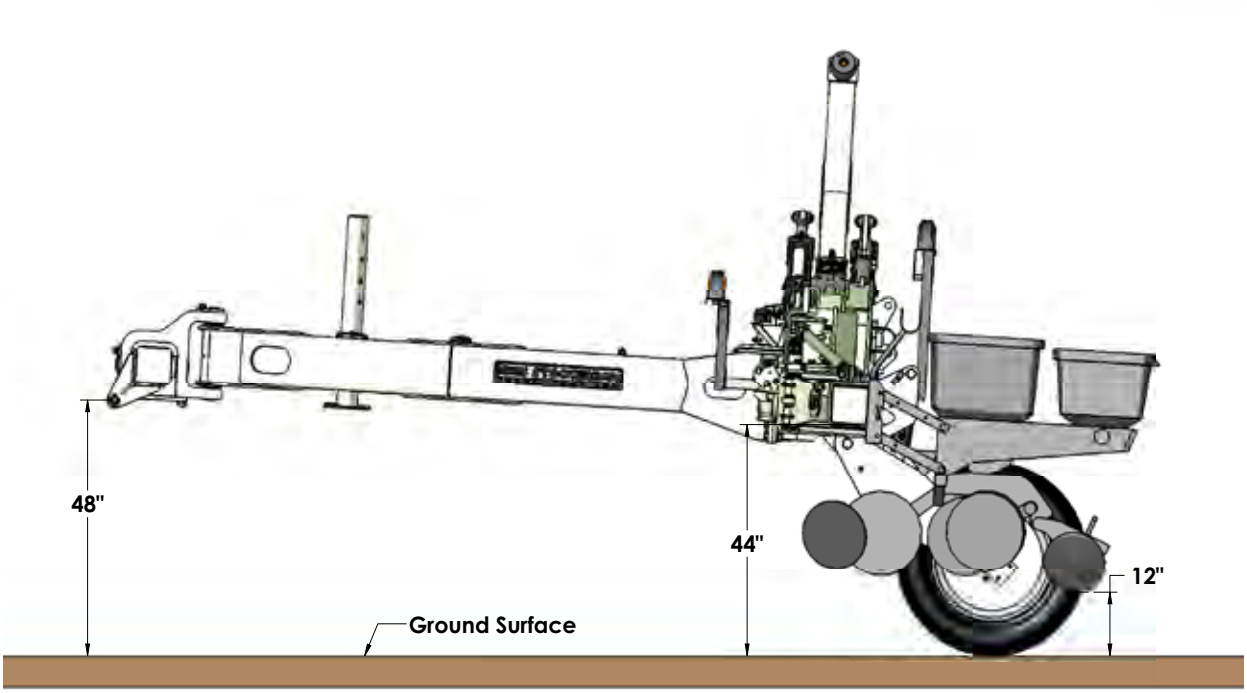
Key	Description
3	Float Link Pin in Storage
4	Down Stop

FIELD SETTINGS

RAISED POSITION

The 1925 Stacker Bar is semi-mounted with a two-point hitch and lifting gauge wheels. To reach the fully-raised position, you must raise the tractor hitch all the way up and fully extend the lift wheel cylinders.

The lift wheels and gullwing operate from 1 SCV. Consult the operator manual for your tractor for information on linking hitch operation and SCV activation.



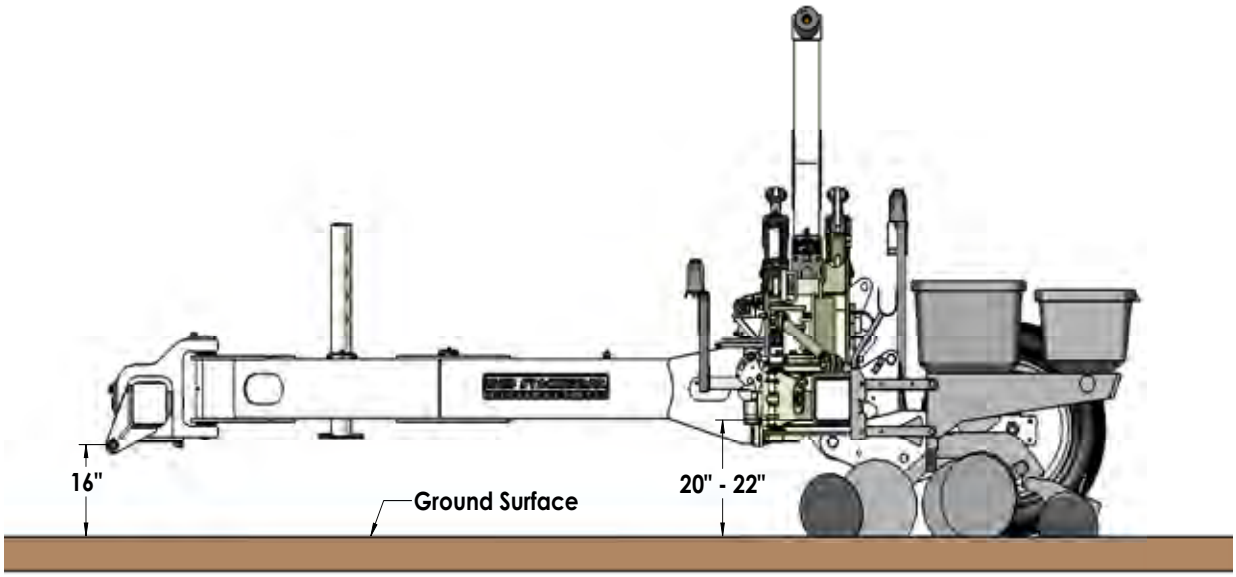
Once hydraulic tips are connected to the tractor to operator preferences, lift the tractor hitch and lift wheels. The dimensions illustrated are approximate. Be sure your implement reflects similar dimensions in the fully-raised position.

When in the raised position, you can install safety locks (4) on the lift wheels. Two transport locks should be installed on each side of the machine during road transport or servicing of the toolbar.

FIELD SETTINGS

FIELD POSITION

The lift wheels on the center section of the 1925 Stacker Bar also serve as the center section gauge wheels. Clamp-on cylinder stops are included in order to adjust the operating height of the toolbar. You must adjust the tractor hitch height and center section gauge wheels for correct operating height. During operation, the lift wheel cylinders should be powered down or placed in float to retract onto the cylinder stops and ensure consistent operating depth. Adjust additional gauge wheels on the wings after the hitch and center section wheels are set.



A 1925 Stacker Bar operating on level ground at 20 inches above the planting surface is shown. For this setup the lift cylinders are fully retracted with no stops. For the 22 inch operating height, a 1 inch stop is required on each lift wheel. If you are planting on beds or ridges, more stops are necessary in order to achieve the correct operating height.

Depending on your particular planter and field conditions it may be necessary, through a process of trial and error, to manipulate tractor hitch settings, cylinder stops, and toolbar gauge wheels in order to achieve optimum planter operating height. If such adjustments do not provide the correct operating height, contact the Orthman service department for assistance.

TROUBLESHOOTING

AVOID CRUSHING. Make sure all personnel are clear of the implement. Lower the implement to the ground, place the tractor in park, turn off the engine, and remove the key.

USE BAR STANDS TO SUPPORT THE IMPLEMENT. Park the implement on a clean, dry, and level surface. An uneven surface could cause the implement to shift or fall, resulting in injury or death, as well as implement damage. Securely support all implement components that must be raised. Remove buildup of grease, oil, or debris before you adjust the implement.

PROBLEM: THE TOOLBAR DOES NOT OPERATE AT THE PROPER HEIGHT

SOLUTION:

See "Field Position" on page 39 in the Field Settings chapter.

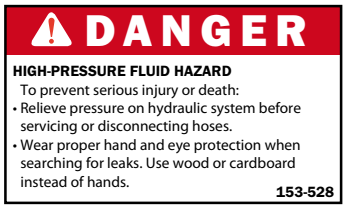
PROBLEM: THE TOOLBAR DOES NOT OPERATE LEVEL WITH THE GROUND

SOLUTION:

The levelness of the toolbar is governed by the settings of the lifting gauge wheels and the tractor hitch.

First make sure that the lifting gauge wheels are set for the correct height following procedures in "Field Position" on page 39. Then adjust the lower stops on the tractor hitch until the toolbar is level.

Consult the tractor operator's manual for information on setting the hitch.



PROBLEM: THE TOOLBAR DOES NOT FOLD CORRECTLY

SOLUTION:

1. Check to see if the hydraulic tips are installed incorrectly in the tractor SCV.
2. Check to see if the fold control manifold is adjusted correctly. See "Fold Control Manifold" on page 30.
3. Check to make sure that the wings are level. See "Leveling the Wings" on page 26 for more information.
4. The wings may be overloaded. Try reducing the seed load or row unit weight.
5. Check to see if the cylinder seals are bad.
6. Check to see if there is not enough tractor hydraulic pressure.

TROUBLESHOOTING

PROBLEM: THE TOOLBAR WINGS ARE NOT LEVEL OR STRAIGHT

SOLUTION:

See “Leveling the Wings” in the Field Settings section of this manual.

MAINTENANCE

PRACTICE SAFE MAINTENANCE

Proper maintenance is your responsibility. Maintenance neglect and/or poor maintenance practices can result in injury or death. Always use the proper tools to maintain the implement.

AVOID CRUSHING. Make sure all personnel are clear of the implement. Lower the implement to the ground, place the tractor in park, turn off the engine, and remove key.

USE BAR STANDS AND CYLINDER STOPS TO SUPPORT THE IMPLEMENT. Store the implement on a clean, dry, and level surface. An uneven surface could cause the implement to shift or fall, resulting in injury or death, as well as implement damage. Securely support all implement components that must be raised. Store the implement away from human activity.

AVOID ENTANGLEMENT. Never lubricate or service an implement in motion. Keep away from power driven parts when in motion. Disengage power sources prior to maintaining the implement. Injury or death can result from contact with power driven parts when in motion.

AVOID CRUSHING. Do not stand between the tractor and implement when connecting or disconnecting the implement. Injury or death can result from being trapped between the tractor and implement.

Escaping pressurized hydraulic fluid can penetrate the skin, resulting in injury or death. Relieve hydraulic system pressure before connecting or disconnecting the tractor. Use cardboard or wood, **NOT BODY PARTS**, to check for suspected hydraulic leaks. Wear protective gloves and safety glasses or goggles when working with hydraulic systems. If an accident occurs, see a doctor immediately for proper treatment.

Never operate a combustion engine in an enclosed area. Make sure there is adequate ventilation. Exhaust fumes can cause asphyxiation.

Be extremely careful working around unshielded sharp edges. Injury may result from contact with sharp edges.

Keep all parts in good condition and properly installed. Replace damaged or missing parts immediately.

Remove tools and unused parts prior to implement operation.

MAINTENANCE

LUBRICATION

Grease all zerks on the 1925 toolbar:

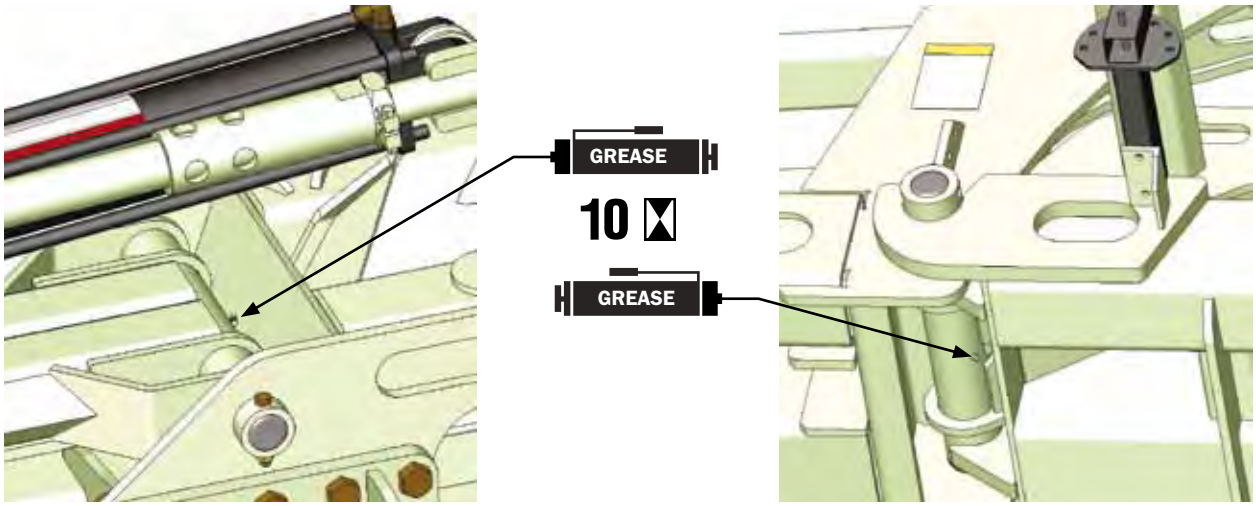
- Hitch - 2 zerks
- Swing truss - 2 zerks
- Outer wing - 2 zerks
- Outer wing brace - 1 zerk
- Lift wheel - 3 zerks

GREASE INTERVALS

Use a high quality multi-purpose grease. Follow the recommended hourly service interval illustrated here. Grease more frequently dependent upon the frequency of folding.

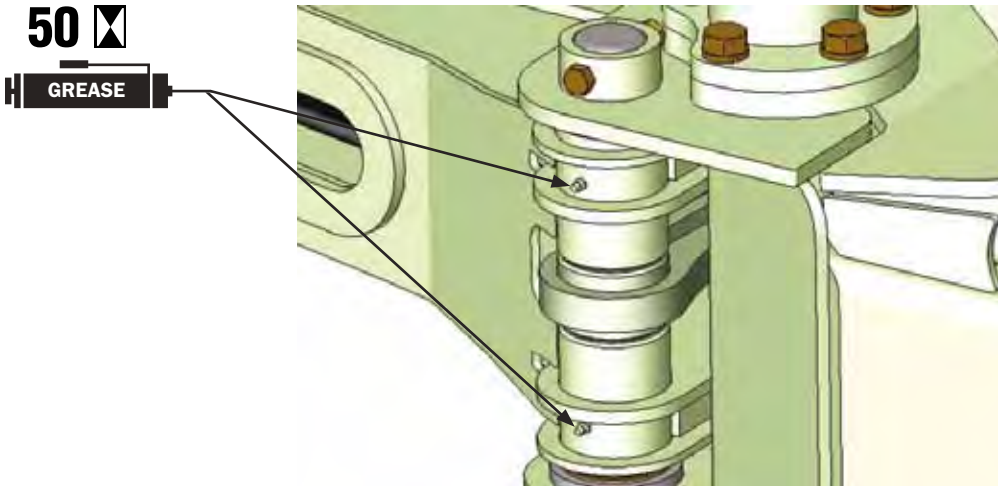
- Hitch and lift wheels - 10 hour grease intervals
- Swing truss - 10 hour grease intervals
- All other zerks - 50 hour grease intervals

SWING TRUSS GREASE LOCATIONS

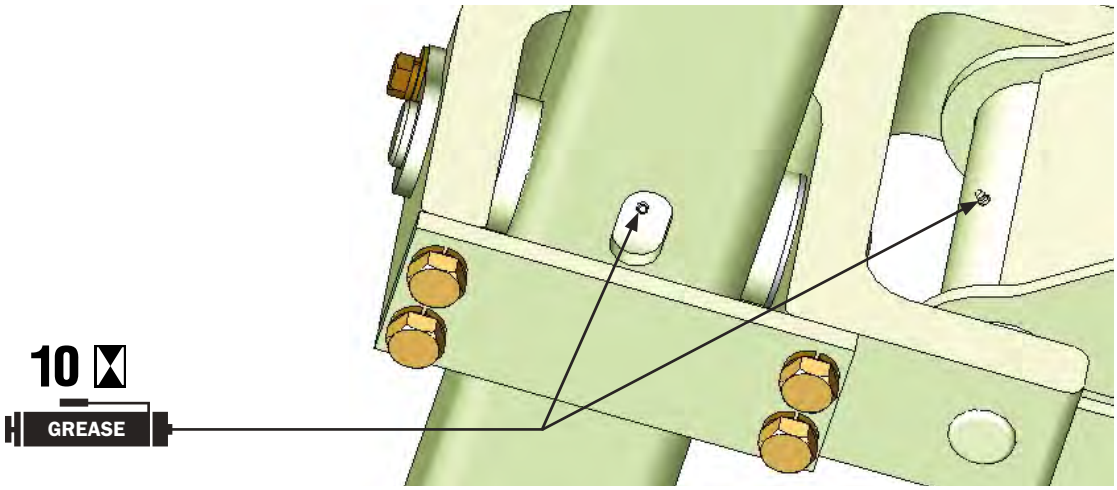


MAINTENANCE

OUTER WING GREASE LOCATIONS

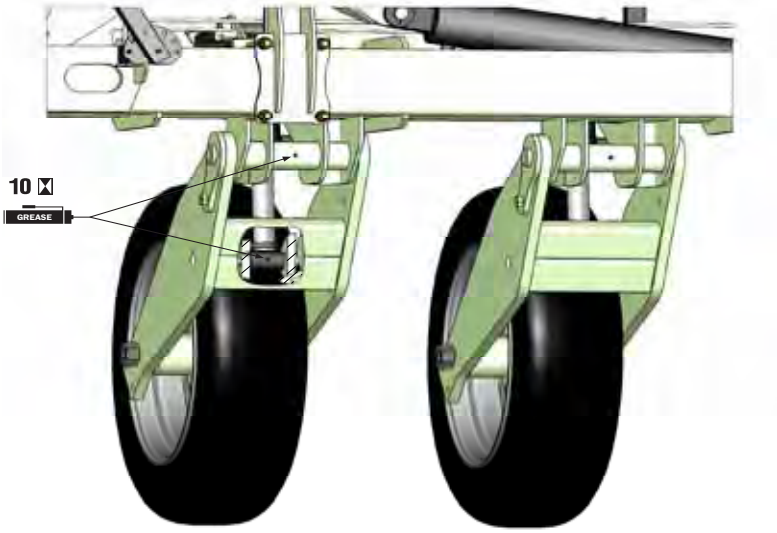


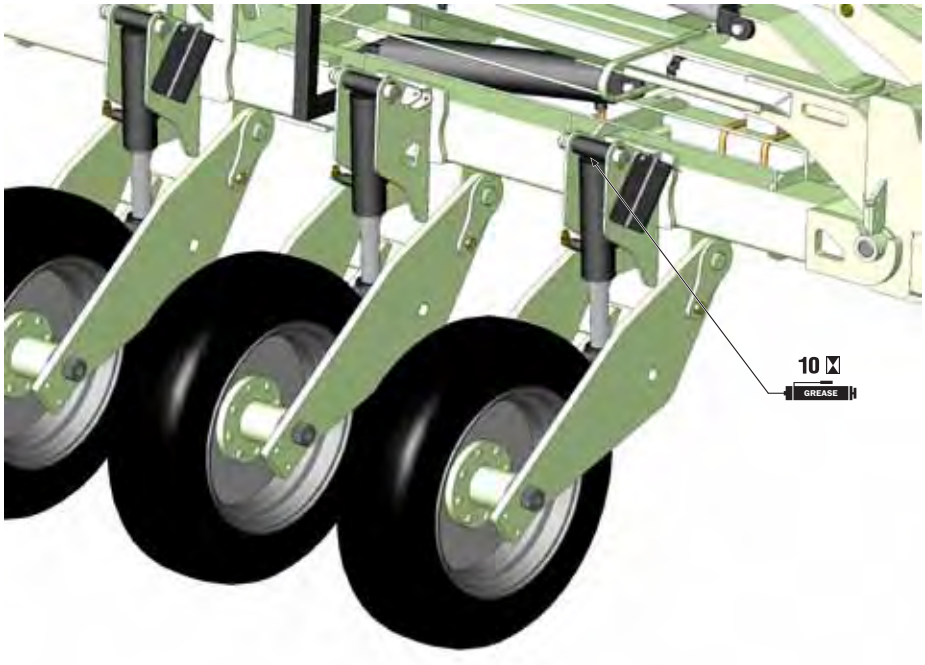
HITCH GREASE LOCATIONS



MAINTENANCE

LAW GREASE LOCATIONS





MAINTENANCE

IMPLEMENT INSPECTION

When replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used in order to restore the implement to original specifications. Replace broken or worn parts immediately. Contact your Orthman dealer for replacement parts.

During break-in (40 hours) frequently (10 hours) check hardware for the proper torque. See See “Torque Specifications” on page 49.

Before each use, check hardware for wear and proper torque. Replace damaged or missing hardware with hardware of an identical grade to restore the implement to original specifications.

Do not allow debris to build up on any surface of the implement.

Replace all shields and guards. Be sure all tools, parts, and service equipment are removed prior before you operate the implement.

IMPLEMENT STORAGE

Clean and touch up paint seasonally to avoid corrosion and rust. Contact your Orthman dealer for touch up paint.

Inspect all safety and Orthman decals and replace if missing or damaged. Contact your Orthman dealer for replacement decals. See See “SAFETY DECALS” on page 10.

Grease all zerks regardless of hourly interval prior to storage.

Check all hardware according to torque specifications prior to storage.

Replace all worn or damaged parts prior to storage.

Store inside if possible. Storing the implement inside will prolong the life of the 1925 Stacker Bar components.

AVOID CRUSHING. Make sure all personnel are clear of the implement. Lower the implement to the ground, place the tractor in park, turn off the engine, and remove the key.

USE BAR STANDS TO SUPPORT THE IMPLEMENT. Store implement on a clean, dry, and level surface. An uneven surface could cause implement to shift or fall, resulting in injury or death, as well as implement damage. Securely support all implement components that must be raised. Store implement away from human activity.

MAINTENANCE

TORQUE SPECIFICATIONS

Recommended dry bolt torque

SAE GRADE 5

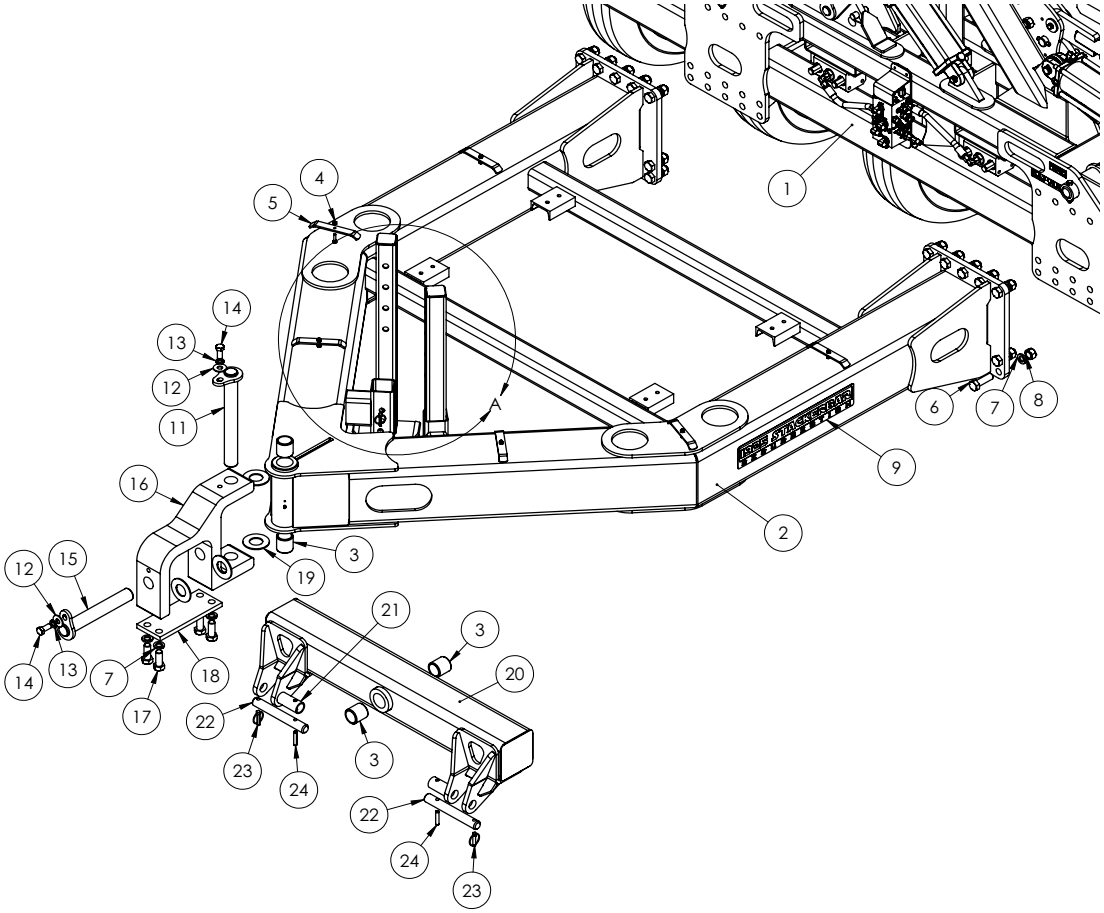
Bolt Size (inches)	ft. - lb.
3/8	32
7/16	52
1/2	80
9/16	115
5/8	160
3/4	280
7/8	455
1	680
1-1/8	850
1-1/4	1200

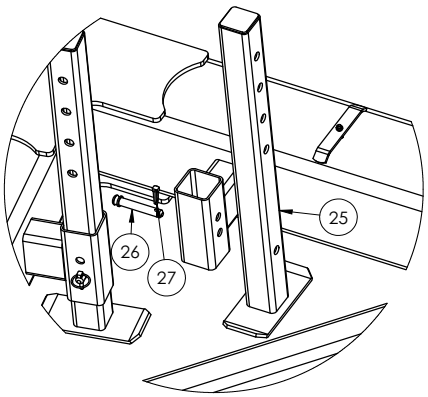
SAE GRADE 8

Bolt Size (inches)	ft. - lb.
3/8	36
7/16	59
1/2	88
9/16	130
5/8	175
3/4	315
7/8	510
1	760
1-1/8	1075
1-1/4	1500

PARTS LIST IDENTIFICATION

HITCH





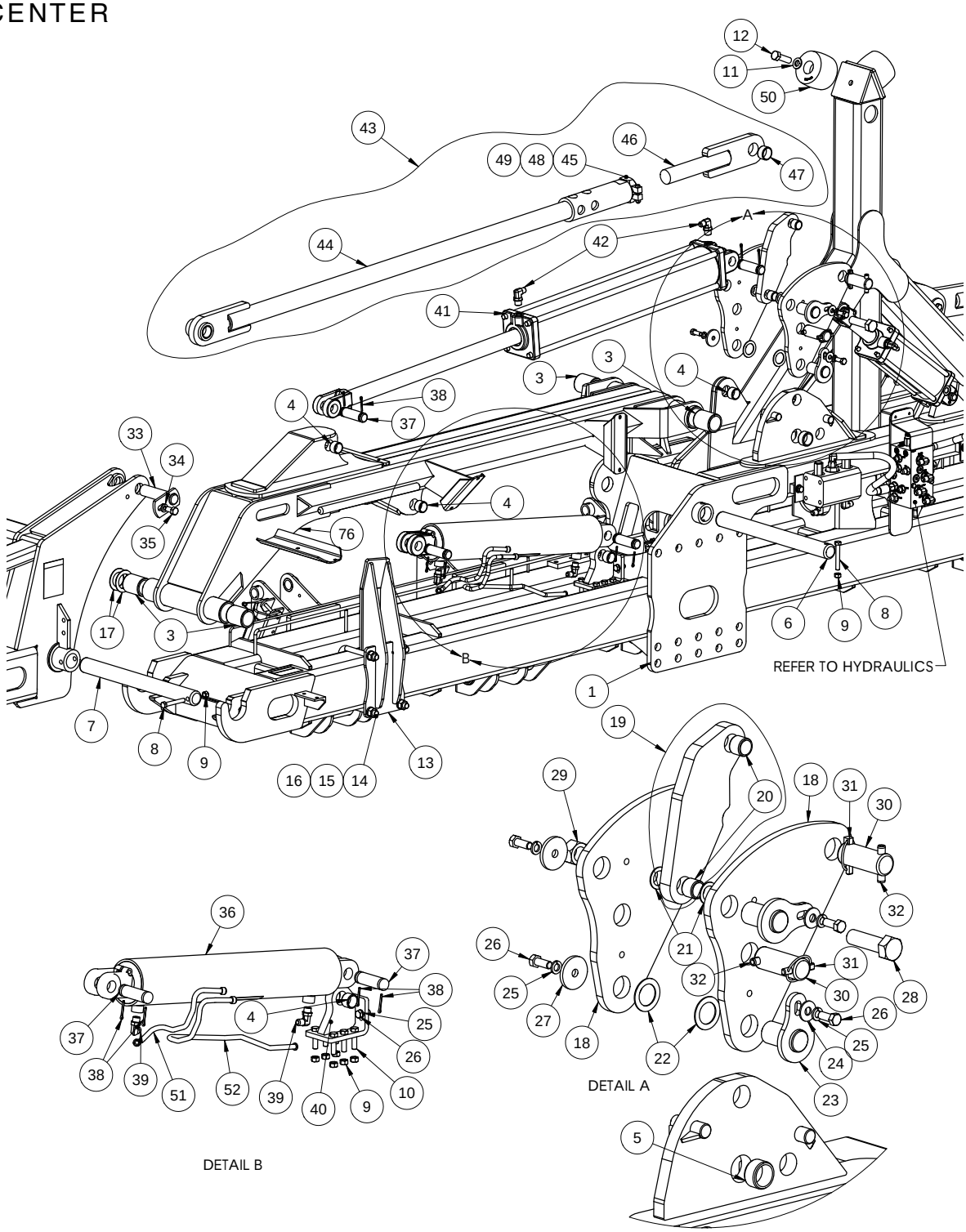
PARTS

HITCH PARTS LIST

Key	Part Number	Description	Quantity	Comments
1		Center		Call Orthman dealer for replacement
2	321-851	Tongue	1	Includes #3 and #10
3	134-066	Split Bushing	4	2-1/2” x 2” x 2-1/2”
4	102-025	Lock Nut	6	5/16”-18, Grade 2
5	321-872	Strap	6	Hydraulic Mount Strap
6	100-195	Bolt	30	1”-8 x 3-1/4”, Grade 8
7	108-025	Lock Washer	34	1”
8	102-111	Nut	30	1”-8, Grade 5
9	153-234	Decal	2	1925 Stacker Bar
10	110-001	Grease Zerk	2	1/4”-28, Straight
11	321-870	Pin	1	2” x 17-5/8”
12	108-011	Flat Washer	2	3/4”
13	108-022	Lock Washer	2	3/4”
14	100-155	Bolt	2	3/4”-10 x 1-3/4”, Grade 5
15	321-868	Pin	1	2” x 14-1/8”
16	321-864	Knuckle	1	
17	100-246	Bolt	4	1”-8 x 2-1/2”, Grade 5
18	321-865	Plate	1	Knuckle Bottom
19	343-123	Bushing	4	Knuckle Pivot
20	321-866	Hitch	1	Includes #3
21	343-087	Hitch Sleeve	2	Category 3 Pin Only
22	302-592	Cat. 3 Pin	2	1-7/16” x 10-7/8”
23	104-036	Lynch Pin	2	7/16” x 2” HD
24	104-102	Roll Pin	2	1/2” x 2-1/2”
25	303-840	Tube	2	7” x 7” Bar Stand
26	303-846	Pin	2	7” x 7” Bar Stand
27	104-065	Lynch Pin	2	5/16” x 1-11/16”

PARTS

CENTER



PARTS

CENTER

Key	Part #	Description	Qty.	Comments
1.		CENTER		Call Orthman dealer for replacement
2a	321-926	SWING TRUSS	1	Right, Includes #3-4
2b	321-927	SWING TRUSS	1	Left, Includes #3-4
3.	134-094	SPLIT BUSHING	4	2 1/2" X 2" X 3"
4.	134-044	SPLIT BUSHING	4	1 1/2" X 1 1/4 X 1"
5.	134-030	SPLIT BUSHING	1	1 7/8" X 1 1/2" X 1"
6.	321-275	PIN	1	2" X 21 1/2"
7.	321-380	PIN	1	2" X 21 15/16"
8.	100-222	BOLT	2	1/2"-13 X 3 1/2", Grade 5
9.	102-028	LOCK NUT	8	1/2"-13, Grade 2
10.	100-118	BOLT	6	1/2"-13 X 2", Grade 5
11.	108-003	FLAT WASHER	1	3/4"
12.	100-075	BOLT	1	3/4"-10 X 2 1/2", Grade 8
13a	321-388	WING GUIDE	2	Right
13b	321-389	WING GUIDE	2	Left
14.	315-028	U-BOLT	2	3/4" 5" X 7" Bar
15.	102-009	HEX NUT	2	3/4"-10, Grade 5
16.	108-022	LOCK WASHER	2	3/4"
17.	134-043	BUSHING	2	2" X 3" X .080"
18.	321-976	FLOAT PLATE	2	UPDATED FOR MY13 - EARLIER
19.	321-977	GULLWING LINK	1	Includes #20
20.	134-034	SPLIT BUSHING	2	1 1/4" X 1" X 1"
21.	134-013	BUSHING	2	1 1/2" X 1" X 14 Ga.
22.	134-041	BUSHING	2	2 1/4" X 1 1/2" X 14 Ga.
23.	351-076	PIN	2	1 1/2" X 3 1/16"
24.	108-009	FLAT WASHER	4	1/2"
25.	108-020	LOCK WASHER	6	1/2"
26.	100-115	BOLT	6	1/2"-13 X 1 1/4", Grade 5
27.	333-737	PIN HEAD	2	1/2"
28.	100-303	BOLT	1	1"-8 X 3 1/2", Grade 8
29.	102-162	LOCK NUT	1	1"-8, Grade 2
30.	321-277	PIN	2	1 1/2" X 4"
31.	104-036	LYNCH PIN	2	7/16" X 2" HD
32.	104-005	ROLL PIN	2	1/2" X 2 1/2" HD
33.	321-278	PIN	1	1 1/2" X 6 1/8"
34.	108-021	LOCK WASHER	1	5/8"
35.	100-130	BOLT	1	5/8"-11 X 1 1/4", Grade 5
36a	194-425	CYLINDER	1	4 1/2" X 24 Tie Rod, Includes #37-38
36b	194-556	SEAL KIT	1	Repair Kit for 194-425
37.	104-096	PIN	2	1 1/4" X 4 3/16"
38.	104-028	COTTER PIN	8	3/16" X 1 1/2"
39.	198-089	ELBOW	2	3/4"-16MB - 3/4"-16MJ - 90°
40.	321-971	TUG ASSEMBLY	1	Auxiliary Cylinder, Includes #4

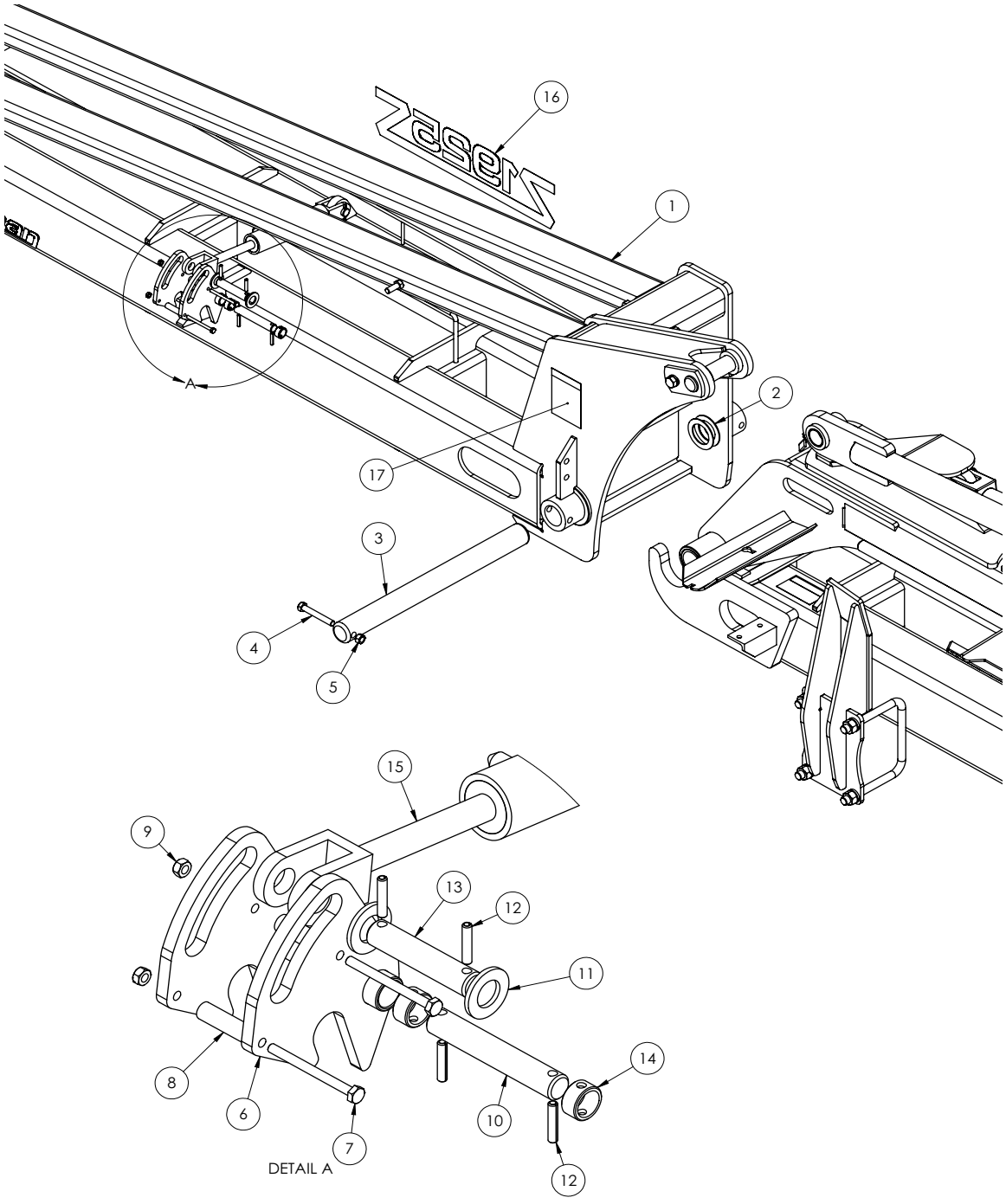
PARTS

CENTER

41a	194-266	CYLINDER	1	5" X 30" Tie-Rod 3000, Includes #37-38
41b	194-210	SEAL KIT	1	Repair Kit for 194-266
42.	198-246	ELBOW	2	7/8"-14MB - 3/4"-16MJ - 90°
43.	321-899	STRUT	1	Main Strut, End to End 88.13"
44.	321-898	TUBE	1	Strut Tube
45.	321-087	NUT	1	2"-4 1/2 RH Mechanical Lock
46.	321-895	END	1	Strut End, Includes #47
47.	134-017	SPLIT BUSHING	1	1 3/4" X 1 1/2 X 1"
48.	100-111	BOLT	1	3/8"-16 X 2 1/4", Grade 5
49.	102-027	LOCK NUT	1	3/8"-16, Grade 2
50.	152-588	DAMPER	1	Swing Truss Stop
51a	321-890	STEEL HYD. LINE	1	Right Rod End
51b	321-892	STEEL HYD. LINE	1	Left Rod End
52a	321-889	STEEL HYD. LINE	1	Right Base End
52b	321-891	STEEL HYD. LINE	1	Left Base End

PARTS

INNER WING



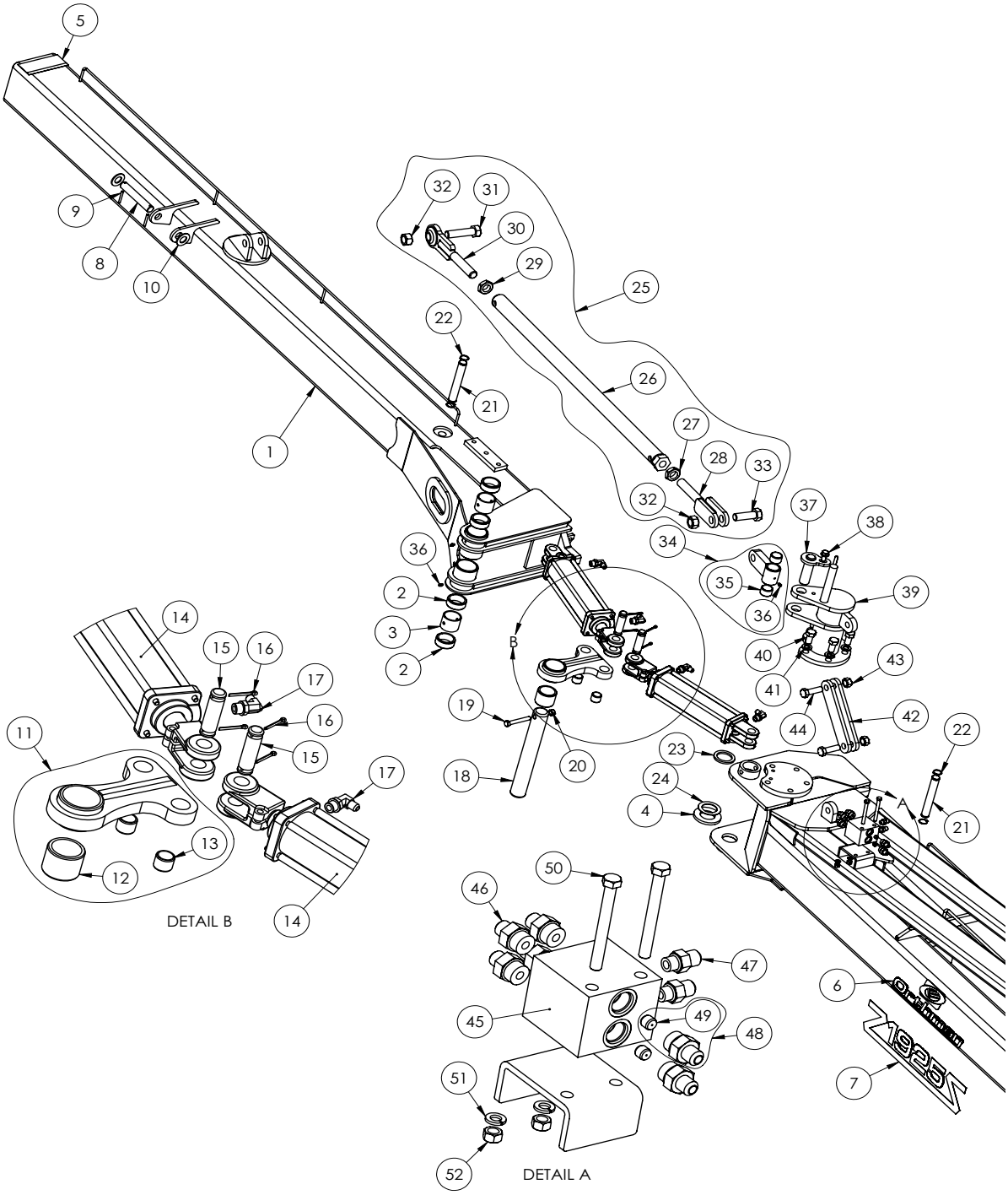
PARTS

INNER WING

Key	Part Number	Description	Quantity	Comments
1		Midwing		Call Orthman dealer for replacement
2	134-043	Bushing	2	2” x 2” x .080” thick
3	321-380	Pin	1	2” x 21-15/16”
4	100-222	Bolt	1	1/2” -13 x 3-1/2”, Grade 5
5	102-028	Lock Nut	1	1/2” -13, Grade 2
6	321-531	Latch	2	1925 Outer Wing Lock
7	100-321	Bolt	2	1/4” -20 x 3”
8	321-534	Bushing	2	Latch Spacer
9	102-023	Lock Nut	2	1/4” -20, Grade 2
10	321-535	Pin	1	3/4” x 4-1/2”
11	108-003	Flat Washer	2	3/4”
12	104-118	Roll Pin	4	1/4” x 1-1/4”
13	321-537	Pin	1	3/4” x 3-9/16”
14	321-536	Collar	2	Latch Pivot Pin
15	194-403	Cylinder	1	1-1/2” x 4”
15A	104-193	Pin	1	3/4” x 2”
15B	104-024	Cotter Pin	1	5/32” x 1-1/4”
16	153-232	Decal	1	1925 Stacker, Black
17	153-013	Decal	1	Clear When Fold, Warning

PARTS

OUTER WING



PARTS

OUTER WING PARTS LIST

Key	Part Number	Description	Quantity	Comments
1	321-451	Outer Wing	1	Includes #2-3, 36 Call Orthman dealer
2	134-102	Split Bushing	4	2-1/2” x 2” x 1”
3	321-509	Spacer	2	Wing Hinge Bushing
4	120-177	Thrust Bearing	1	2.002” x 3.595” x .375”
5	153-044	Decal	1	Important: No Riders/Lower to the Ground
6	153-000	Decal	1	Orthman Trademark
7	153-232	Decal	1	1925 Stacker, Black
8	321-472	Pin	1	1” x 6-1/8”
9	104-013	Roll Pin	2	1/4” x 2”
10	108-004	Washer	2	1”
11	321-475	Hinge	1	1925 Intermediate Includes #12-13
12	134-098	Split Bushing	1	2-1/2” x 2” x 2”
13	134-034	Split Bushing	2	1-1/4” x 1” x 1”
14A	194-502	Cylinder	2	3” x 10” Tie-Rod 300, Includes #15-16
14B	194-038	Seal Kit	2	Repair
15	104-071	Cylinder Pin	2	1” x 3-3/4”
16	104-028	Cotter Pin	4	3/16” x 1-1/2”
17	198-064	Elbow	4	3/4” -16MB - 9/16” -18MJ 90°
18	321-479	Pin	1	2” x 14-3/4”
19	100-222	Bolt	1	1/2” -13 x 3-1/2, Grade 5
20	102-028	Lock Nut	1	1/2” -13, Grade 2
21	301-500	Pin Shaft	2	1” x 6.825”
22	104-053	Snap Ring	4	1”
23	321-484	Spacer	1	1925 Outer Wing Hinge
24	134-043	Bushing	1	2” x 3” x .080”
25	321-992	Strut	1	Outer Wing Strug, End-to-End 61.5”, Includes #26-30
26	321-993	Tube	1	Outer Wing Strut Tube
27	102-061	Jam Nut	1	1-1/8” -7 RH, Grade 2
28	321-995	Clevis	1	Outer Wing Strut
29	102-071	Jam Nut	1	1-1/8” -7 LH, Grade 2
30	321-997	Swivel	1	Outer Wing Strut
31	100-517	Bolt	1	1” -8 x 4”
32	102-162	Lock Nut	2	1” -8, Grade 2
33	100-192	Bolt	1	1” -8 x 3”
34	321-989	Pivot	1	Outer Wing Brace, Includes #35-36
35	134-044	Split Bushing	2	1-1/2” x 1-1/4” x 1”
36	110-001	Grease Fitting	2	1/4” -28, Straight
37	321-989	Pin	1	1-1/4” x 4”

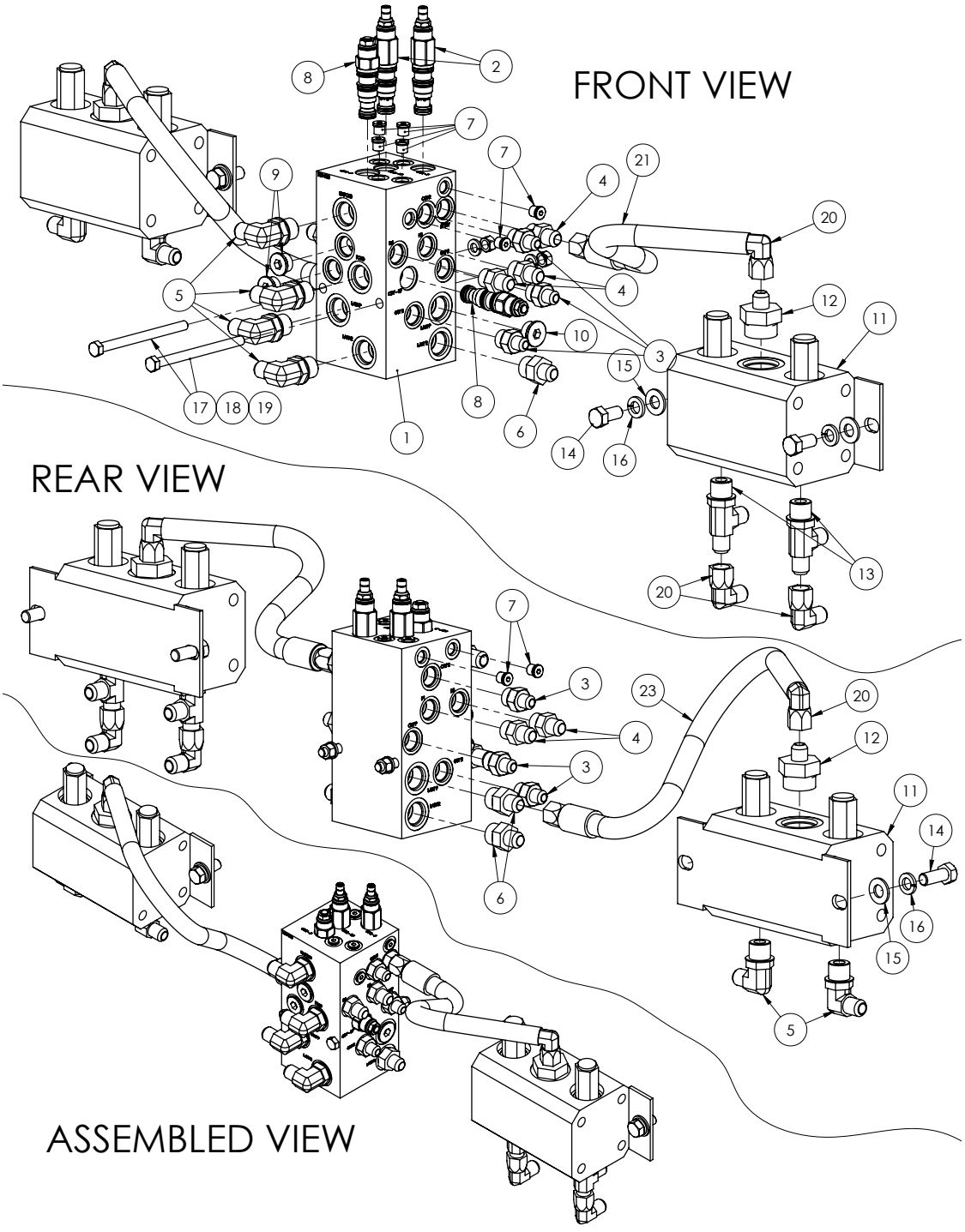
PARTS

OUTER WING PARTS LIST

Key	Part Number	Description	Quantity	Comments
38	100-305	Flange Bolt	1	1/2” -13 x 1”, Grade 8
39A	321-980	Tower, right	1	Wing Brace, right side
39B	321-981	Tower, left	1	Wing Brace, left side
40	100-206	Bolt	5	3/4” -10 x 1-1/2, Grade 5
41	108-022	Lock Washer	5	3/4”
42	321-986	Strap	2	Tie Back Strap
43	102-031	Lock Nut	2	3/4” -10, Grade 2
44	100-158	Bolt	2	3/4” -10 x 2-1/2”, Grade 5
45	321-510	Manifold	1	1925 Outer Wing, Includes #48-52
46	198-078	Adaptor	4	3/4” -16MB - 9/16” -18MJ
47	198-031	Adaptor	2	9/16” -18MB - 9/16” -18MJ
48	340-519	Adaptor	2	3/4” -16MB - 9/16” MJ, Includes #51
49	340-059	Restrictor	2	7/16” -20 x 3/8”
50	100-211	Bolt	2	3/8” -16 x 3-1/2”, Grade 5
51	108-018	Lock Washer	2	3/8”
52	102-005	Nut	2	3/8” -16, Grade 2

PARTS

HYDRAULICS



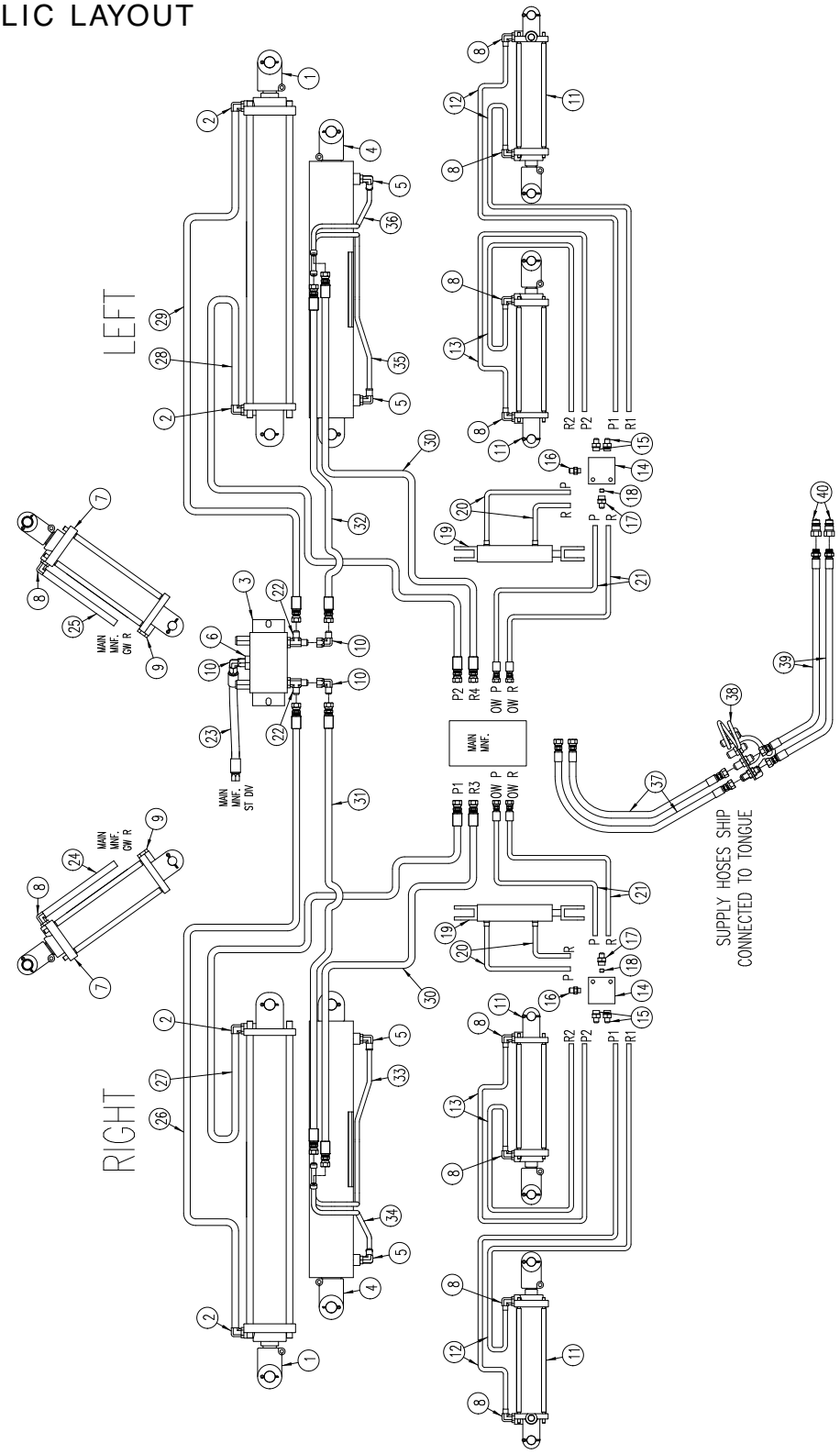
PARTS

HYDRAULICS

Key	Key2	Part #	Description	Qty.	Comments
1.		180-310	MANIFOLD	1	
2.		180-311	VALVE	2	Sequence
3.		198-078	ADAPTOR	6	3/4"-16MB - 9/16"-18MJ
4.		198-128	ADAPTOR	5	3/4"-16MB - 3/4"-16MJ
5.		198-246	ELBOW	6	7/8"-14MB - 3/4"-16MJ 90°
6.		198-109	ADAPTOR	3	7/8"-14MB - 3/4"-16MJ
7.		198-156	PLUG	8	7/16" Hollow Hex
8.		180-312	VALVE	2	Counter Balance
9.		198-210	PLUG	2	3/4"-16MB Hollow Hex
10.		198-034	PLUG	1	7/8"-14MB Hollow Hex
11.		180-289	GEAR DIVIDER	2	Flow Divider
12.		198-289	ADAPTOR	2	1 5/16"-12MB - 3/4"-16MJ
13.		198-312	TEE	2	7/8-14MB - 3/4-16MJ - 3/4-16FJ
14.		100-114	BOLT	4	1/2"-13 X 1 1/4", Grade 5
15.		108-001	FLAT WASHER	4	1/2"
16.		108-020	LOCK WASHER	4	1/2"
17.		100-272	BOLT	2	3/8"-16 X 5"
18.		108-018	LOCK WASHER	2	3/8"
19.		102-005	NUT	2	3/8"-16, Grade 2
20.		198-301	ELBOW	4	3/4"-16MJ - 3/4"FJX 90°
21.		196-469	HOSE	2	1/2" X 16", 3/4"FJX X 3/4"FJX

PARTS

HYDRAULIC LAYOUT



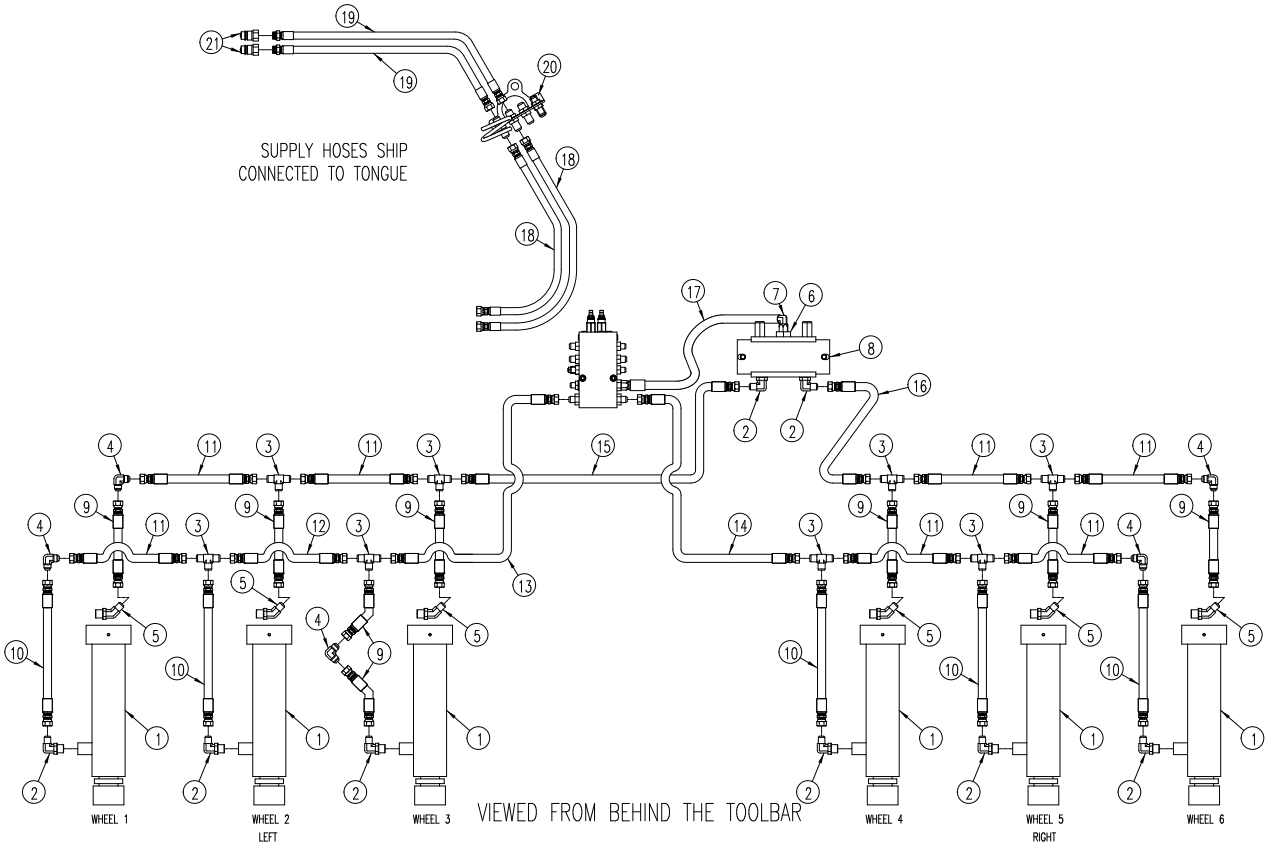
PARTS

HYDRAULIC LAYOUT PARTS

Key	Key2	Part #	Description
1.		194-266	Cylinder 5" x 30" tie-rod
2.		198-246	Elbow 7/8 MORB x 3/4 MJ
3.		180-289	Gear Divider
4.		194-425	Cylinder 4 1/2 x 24" welded
5.		198-089	Elbow 3/4 MORB x 3/4 MJ
6.		198-289	Adaptor1 5/16MORB x 3/4MJ
7.		194-401	Cylinder 4" x 10" tie-rod W/ split rings
8.		198-064	Elbow 3/4 MORB x 9/16 MJ
9.		194-233	Breather 3/4 MORB
10.		198-301	Elbow 3/4FJX x 3/4MJ
11.		194-502	Cylinder 3" x 10"
12.		Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX
13.		Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX
14.		180-283	Hydraulic manifold block
15.		198-078	Adaptor 3/4 MORB x 9/16 MJ
16.		198-031	Adaptor 9/16 MORB x 9/16 MJ
17.		340-520	Adaptor 3/4 MORB x 9/16 MJ - tapped
18.		340-059	Restrictor screw 7/16"-20 x 3/8
19.		194-403	Cylinder 1 1/2 x 4"
20.		Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX
21.		Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX
22.		198-312	Tee 7/8 MORB x 3/4MJ x 3/4MJ
23.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
24.		Hose	3/8 Hydraulic hose - 9/16 FJX x 9/16 FJX
25.		Hose	3/8 Hydraulic hose - 9/16 FJX x 9/16 FJX
26.		Hose	3/8 Hydraulic hose - 3/4 FJX x 3/4 FJX
27.		Hose	3/8 Hydraulic hose - 3/4 FJX x 3/4 FJX
28.		Hose	3/8 Hydraulic hose - 3/4 FJX x 3/4 FJX
29.		Hose	3/8 Hydraulic hose - 3/4 FJX x 3/4 FJX
30.		Hose	3/8 Hydraulic hose - 3/4 FJX x 3/4 FJX
31.		Hose	3/8 Hydraulic hose - 3/4 FJX x 3/4 FJX
32.		Hose	3/8 Hydraulic hose - 3/4 FJX x 3/4 FJX
33.		321-889	Steel Hydraulic line - 3/4 FJX x 3/4 FJX
34.		321-890	Steel Hydraulic line - 3/4 FJX x 3/4 FJX
35.		321-891	Steel Hydraulic line - 3/4 FJX x 3/4 FJX
36.		321-892	Steel Hydraulic line - 3/4 FJX x 3/4 FJX
37.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
38.		366-926	Bulkhead assembly
39.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 MORB
40.		140-092	ISO Tip

PARTS

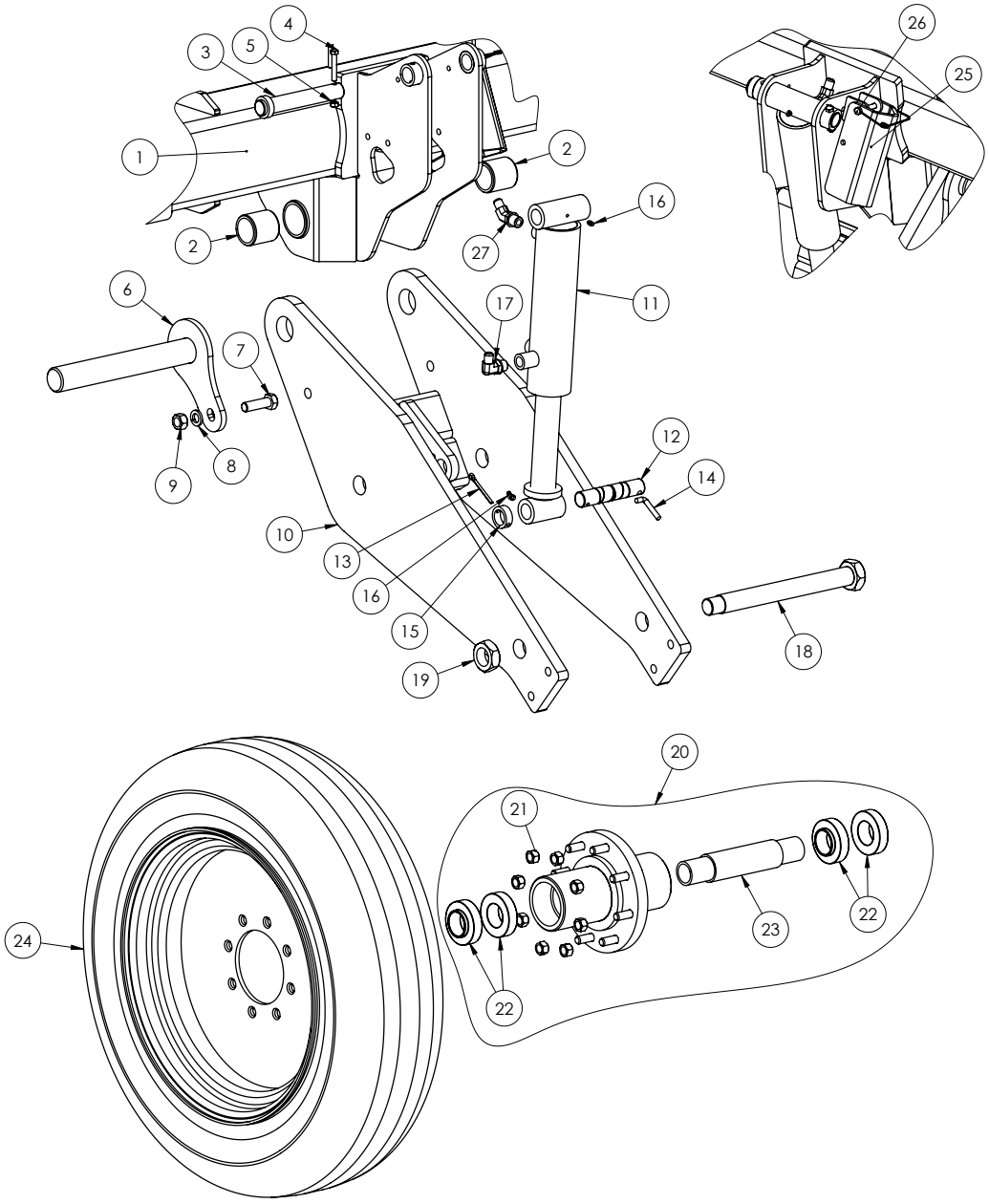
LAW HYDRAULIC LAYOUT



Key	Key2	Part #	Description
1.		194-417	Cylinder 3" x 8" welded
2.		198-246	Elbow 7/8 MORB x 3/4 MJ
3.		198-173	Tee 3/4MJ x 3/4MJ x 3/4MJ
4.		198-285	Elbow 3/4MJ x 3/4MJ
5.		198-309	Elbow 7/8 MORB x 3/4 MJ - 45 DEG
6.		198-289	Adaptor1 5/16MORB x 3/4MJ
7.		198-301	Elbow 3/4FJX x 3/4MJ
8.		180-289	Gear Divider
9.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
10.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
11.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
12.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
13.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
14.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
15.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
16.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
17.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
18.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
19.		Hose	1/2 Hydraulic hose - 3/4 FJX x 3/4 FJX
20.		366-926	Bulkhead assembly
21.		140-092	ISO Tip

PARTS

WHEEL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PARTS

WHEEL PARTS

Key	Key2	Part #	Description	Qty.	Comments
1.			CENTER	1	Call Orthman dealer for replacement,
2.		134-066	SPLIT BUSHING	2	2 1/2" X 2" X 2 1/2"
3.		343-342	PIN	1	1 1/4" X 8 1/4"
4.		100-111	BOLT	1	3/8"-16 X 2 1/4", Grade 5
5.		102-027	LOCK NUT	1	3/8"-16, Grade 2
6.		343-064	PIN	1	2" X 14 13/16"
7.		100-158	BOLT	1	3/4"-10 X 2 1/2", Grade 5
8.		108-022	LOCK WASHER	1	3/4"
9.		102-009	NUT	1	3/4"-10, Grade 5
10.		343-053	FORK	1	
11.		194-417	CYLINDER	1	3" X 8" Welded
12.		343-062	PIN	1	GREASE RELIEF ADDED FOR MY13 -
13.		104-022	COTTER PIN	1	1/4" X 2 1/2"
14.		390-070	LOCKING PIN	1	
15.		301-793	COLLAR	1	1 3/4" X 1 1/4" PLATED
16.		110-002	GREASE ZERK	2	1/4"-28, 45 DEG
17.		198-246	ELBOW	1	7/8"-14MB - 3/4"-16MJ 90°
18.		343-068	AXLE BOLT	1	Fork Axle
19.		102-232	NUT	1	1 1/2"-6, RH, Grade 2
20.		343-065	HUB ASSEMBLY	1	Includes #21-23
21.		102-093	WHEEL NUT	8	5/8"-18, Grade 2
22.		120-058	BALL BEARING	4	1 15/16" X 3.543"
23.		343-079	SPACER	1	Double Bearing Hub
24.		192-040	TIRE & RIM	1	
24.	a	190-090	TIRE ONLY	1	225/70R-22.5 Recap 16 PLY
24.	b	190-091	RIM ONLY	1	22.5 X 8.25 8-8-6 6000 Lbs.
25.		321-181	SAFETY STOP	1	Cylinder Safety Stop
26.		104-183	PIN	1	Safety Pin
27.		198-309	ELBOW	1	7/8"-14MB - 3/4"-16MJ 45°

NOTES