

925 STACKER BAR



ORTHMAN MANUFACTURING INCORPORATED

orthman.com

925
STACKER BAR

OPERATOR'S MANUAL



ORTHMAN
MANUFACTURING
INCORPORATED

75765 ROAD 435
LEXINGTON, NE 68850

orthman.com

STILL THE STRONGEST



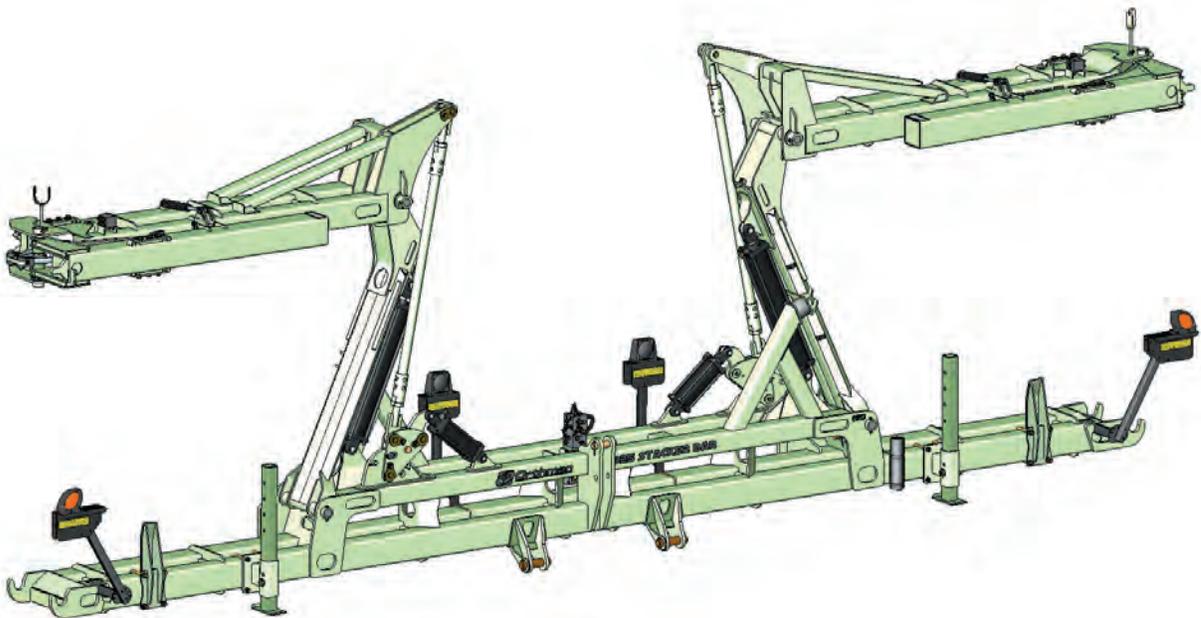
925 SERIES TOOLBAR

The Orthman 925 stacking toolbar is the largest 3-point mounted toolbar in the Orthman stacker bar line reaching working widths of 45'-58'. Folding outer wings have been added to the classic stack fold geometry to reach wider working widths than ever before while maintaining manageable transport dimensions. A category 4N welded hitch, double-bar center section, wide lined-bored hinges, and heavy duty Orthman design provide a toolbar capable of years of service in the field.

This manual is considered to be an integral component of the 925 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 925 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 implement, minimize downtime, and maximize field efficiency. This manual should accompany the implement if it is ever to be sold.

We would like to thank you for placing your confidence in Orthman Mfg., Inc. Your 925 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.





INTRODUCTION

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 parts will 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.



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Orthman provides this manual without warranty of any kind, expressed or implied. This manual reflects the product at the time of publication. All information within is based upon current information on the publication date. Orthman assumes no responsibility for damages incurred due to the use of the illustrations, information, and specifications within this publication.



TABLE OF CONTENTS

INTRODUCTION

General Information	1-1
Warranty Information.....	1-2
Table of Contents	1-3, 1-4

IMPORTANT SAFETY INFORMATION

Safety Alert Symbol.....	2-1
Be Aware of Signal Words	2-1
Shutdown and Storage.....	2-1
For Your Protection.....	2-2
Equipment Safety Guidelines.....	2-2
Safe Transport	2-3
Warning and Safety Lights	2-3
Safe Operation	2-4
No Riders.....	2-4
Practice Safe Maintenance	2-5, 2-6
Prepare For Emergencies	2-6
Anhydrous Ammonia (Liquid Fertilizer)	2-7
Safety Never Hurts.....	2-7
Safety Decals / Orthman Decals	2-8
Safety Decals On Front Fold Outer Wings.....	2-9
Safety Decals On Vertical Fold Outer Wings.....	2-10
Safety Lights - Rear View Of Toolbar	2-11

MAJOR COMPONENTS

Major Components 1	3-1
Major Components 2 - Front Fold.....	3-2
Major Components 3 - Vertical Fold.....	3-3

PREPARATION AND SETUP

Preparing The Toolbar	4-1
Implement To Tractor Connection.....	4-1
Outer Wing Fold	4-2
Outer Wing Latch.....	4-3
Vertical Fold Outer Wing	4-4
Leveling The Wings	4-5
Straightening The Front Fold Outer Wings.....	4-6, 4-7
Leveling Vertical Fold Outer Wings.....	4-8
Plumbing The Toolbar	4-9, 4-10, 4-11

**INTRODUCTION****TABLE OF CONTENTS (CONTINUED)****PREPARATION AND SETUP (CONTINUED)**

Gullwing Kit	4-12
Plumbing The Gull Wing Kit	4-13, 4-14
Row Unit Mounts	4-15
Lift-assist-wheel Mounts	4-16
Semi-mounted Operation With Lift Assist Wheels.....	4-17

FIELD SETTINGS

Fixed Wings	5-1
Gullwing Kit	5-2, 5-3, 5-4

TROUBLESHOOTING

Toolbar Does Not Operate At Proper Height	6-1
Toolbar Does Not Operate Parallel With Ground	6-1
Toolbar Does Not Fold Correctly	6-2
Toolbar Wings Are Not Level Or Not Straight	6-2

PARTS IDENTIFICATION

Hitch	7-1
Center.....	7-2, 7-3
Mid Wing.....	7-4
Outer Wing (Front Fold).....	7-5, 7-6
Vertical Fold Outer Wing	7-7
Gull Wing	7-8
Gull Wing - Hydraulic Layout	7-9
Front Fold Outer Wing Hydraulic Layout.....	7-10
Vertical Fold Outer Wing Hydraulic Layout	7-11
Internal Cylinder.....	7-12
Cylinder Breakdown.....	7-13
Accessories.....	7-14
Safety Lights Assembly.....	7-15
Lights And Cables Assembly.....	7-16

MAINTENANCE

Practice Safe Maintenance	8-1, 8-2
Lubrication	8-2, 8-3
Implement Inspection.....	8-4
Implement Storage	8-4
Torque Specifications	8-5
Notes	8-6



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 implement to the ground, place tractor in park, turn off engine, and remove key.

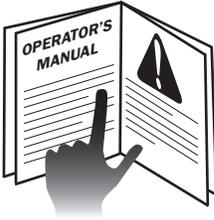
**USE BAR STANDS AND CYLINDER STOPS TO SUPPORT THE IMPLEMENT.**

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.



SAFETY INFORMATION

CAUTION



FOR YOUR PROTECTION

READ AND UNDERSTAND THE ENTIRE CONTENT OF THIS MANUAL BEFORE OPERATING OR SERVICING IMPLEMENT. Read and understand all operator manuals for the machinery used in conjunction with the lift assist wheels.

- Carefully **READ ALL SAFETY DECALS** in this manual as well as on the implement. Keep 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 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 implement to avoid injury.



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 implement near power lines.

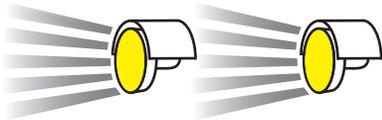
- Know implement transport height and gross weight. Avoid overhead obstructions not allowing your transport height. Do not use bridges rated below implement gross weight.
- Make sure a slow moving vehicle (SMV) placard is mounted to the implement and is easily visible to other motorists.
- Make allowances for implement size when transporting. Sudden braking can cause a towed load to swerve and/or rollover. Never use independent braking with implement in tow as loss of control and/or rollover can result. Reduce speed if towed implement is not equipped with brakes.
- Do not coast. Always keep 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

CAUTION

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



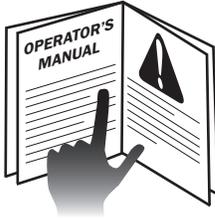
- Make sure all warning, safety lights, and turning signals are working and clean. Use safety lighting when using public roads day and night. Replace missing or damaged lights immediately. Comply with state and local laws governing implement safety lighting.



SAFETY INFORMATION

SAFE OPERATION

CAUTION



READ AND UNDERSTAND THE ENTIRE CONTENT OF THIS MANUAL BEFORE OPERATING OR SERVICING IMPLEMENT. Implement is to be operated by qualified personnel only. Never let children operate 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 implement near power lines.

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



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



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

NO RIDERS



NEVER ALLOW RIDERS ON 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.



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 implement.

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



USE BAR STANDS AND CYLINDER STOPS 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.



AVOID ENTANGLEMENT. Never lubricate or service implement in motion. Keep away from power driven parts when in motion. Disengage power sources prior to maintaining 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 implement. Injury or death can result from being trapped between the tractor and implement.



Escaping pressurized hydraulic fluid can penetrate skin, resulting in injury or death. Relieve hydraulic system pressure before connecting or disconnecting 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.



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.



SAFETY INFORMATION

**⚠ ANHYDROUS AMMONIA
LIQUID FERTILIZER**



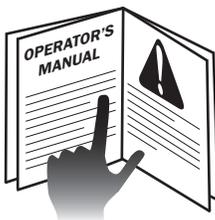
ANHYDROUS AMMONIA (NH₃) AND LIQUID FERTILIZER APPEARS HARMLESS. DIRECT EXPOSURE TO NH₃ OR LIQUID FERTILIZER IS EXTREMELY DANGEROUS AND CAN RESULT IN INJURY AND/OR DEATH.

- Keep a clean supply of water readily accessible in case of exposure to NH₃ or liquid fertilizer.
- Wear protective goggles and gloves when working with NH₃ or liquid fertilizer. Be sure all persons involved in the operation are properly trained concerning the dangers and precautions involved in the application of NH₃ or liquid fertilizer.
- If you choose to apply NH₃ or liquid fertilizer, it is advisable to consult documented information regarding safe handling and application of NH₃ 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

CAUTION



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

- Understand all implement functions.
- Never stand between tractor and implement when connecting or disconnecting implement.
- Be aware of all surroundings before moving implement.
- Operate implement from operator's seat only.
- Never mount or dismount a moving tractor.
- Never leave engine running when implement is unattended.
- Keep away from power driven parts when in motion.
- Make sure all personnel are clear before lowering implement to the ground.



SAFETY INFORMATION

SAFETY DECALS

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

DANGER

WARNING

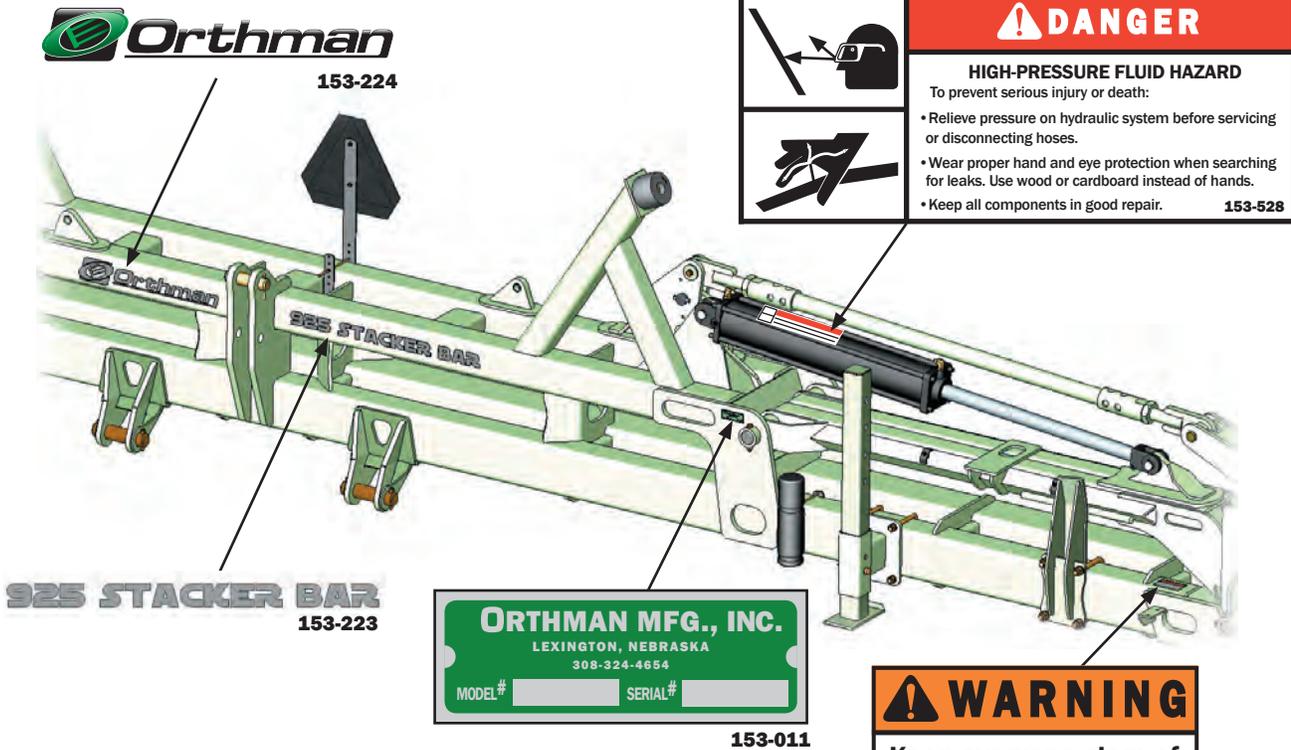
CAUTION

Carefully **READ ALL SAFETY DECALS** in this manual as well as on the implement. Keep 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 area where decal is to be placed and attach decal void of bubbles. Refer to this safety information section for proper decal placement. Decal illustrations below pertain to the 925 Stacker Bar.

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.



DANGER

HIGH-PRESSURE FLUID HAZARD

- To prevent serious injury or death:
- Relieve pressure on hydraulic system before servicing or disconnecting hoses.
 - Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
 - Keep all components in good repair.

153-528

WARNING

Keep everyone clear of machine when folding or unfolding wings.

153-402



IMPORTANT

Equipment operators should understand the enclosed manual before operating this equipment. Replacement manual, call 308-324-4654

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153-101

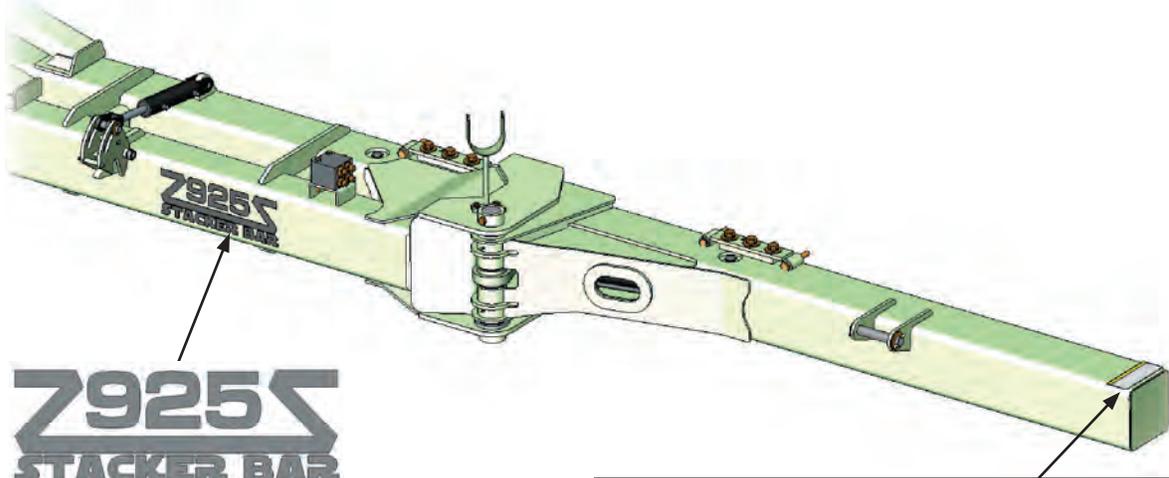
(manual enclosure)





SAFETY INFORMATION

SAFETY DECALS ON FRONT FOLD OUTER WINGS



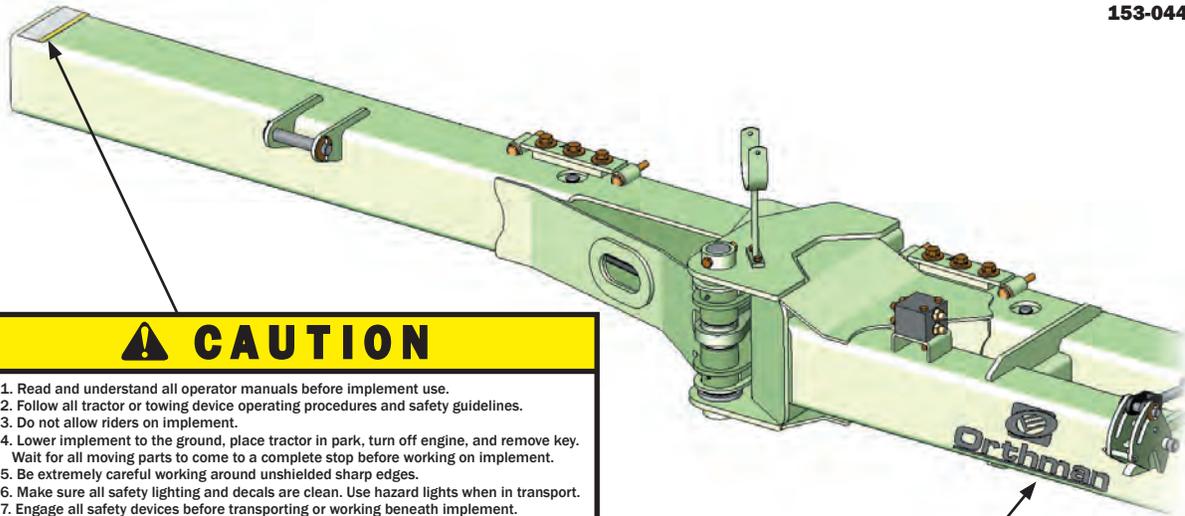
7925S
STACKER BAR
153-222

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.

153-044

153-044



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.

153-044

153-044


Orthman
153-000



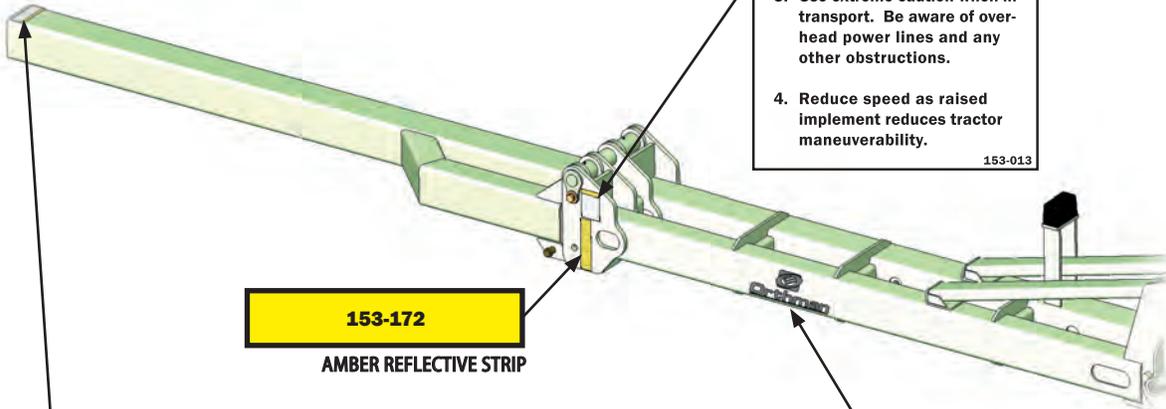
SAFETY INFORMATION

SAFETY DECALS ON VERTICAL FOLD OUTER WINGS

WARNING

1. Stay clear of wing sections when raising and lowering.
2. Engage all transport locking devices prior to transport. (see operator's manual)
3. Use extreme caution when in transport. Be aware of overhead power lines and any other obstructions.
4. Reduce speed as raised implement reduces tractor maneuverability.

153-013



153-172
AMBER REFLECTIVE STRIP

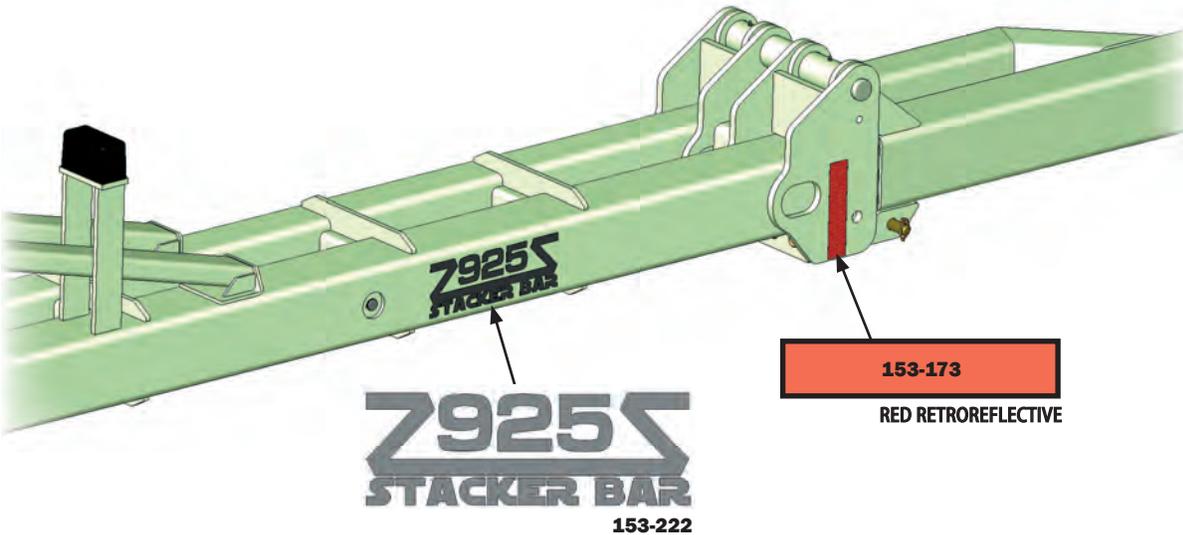


CAUTION

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.

153-044

153-044



153-173
RED RETROREFLECTIVE

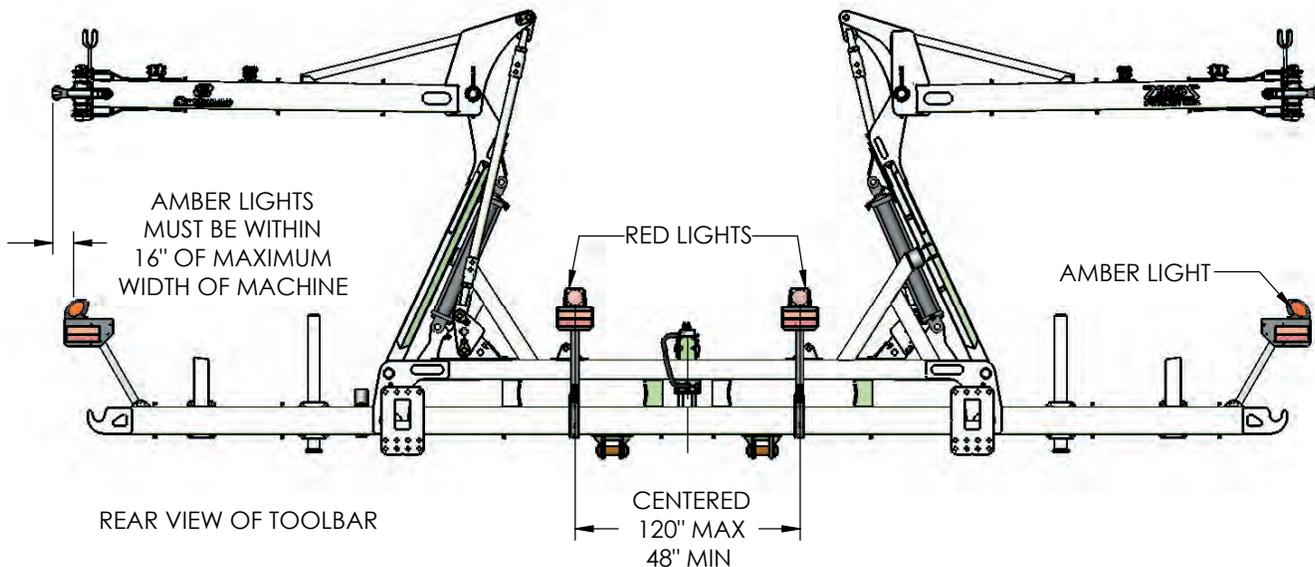
7925
STACKER BAR
153-222





SAFETY INFORMATION

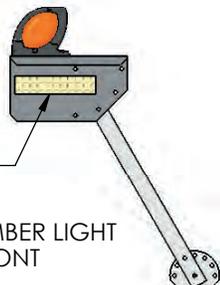
SAFETY LIGHTS - REAR VIEW OF TOOLBAR



AMBER LIGHTS ARE TWO SIDED VISIBLE FROM FRONT AND REAR

153-172 AMBER RETROREFLECTIVE

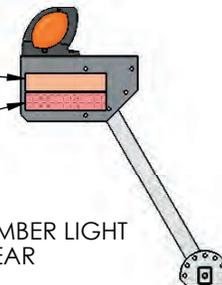
AMBER LIGHT FRONT



153-171 ORANGE FLOURESCENT NON-REFLECTIVE

153-173 RED RETROREFLECTIVE

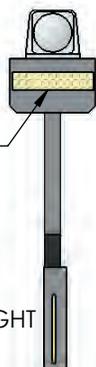
AMBER LIGHT REAR



RED LIGHTS ARE ONE SIDED MUST BE VISIBLE FROM THE REAR

153-172 AMBER RETROREFLECTIVE

RED LIGHT FRONT

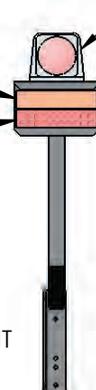


153-171 ORANGE FLOURESCENT NON-REFLECTIVE

153-173 RED RETROREFLECTIVE

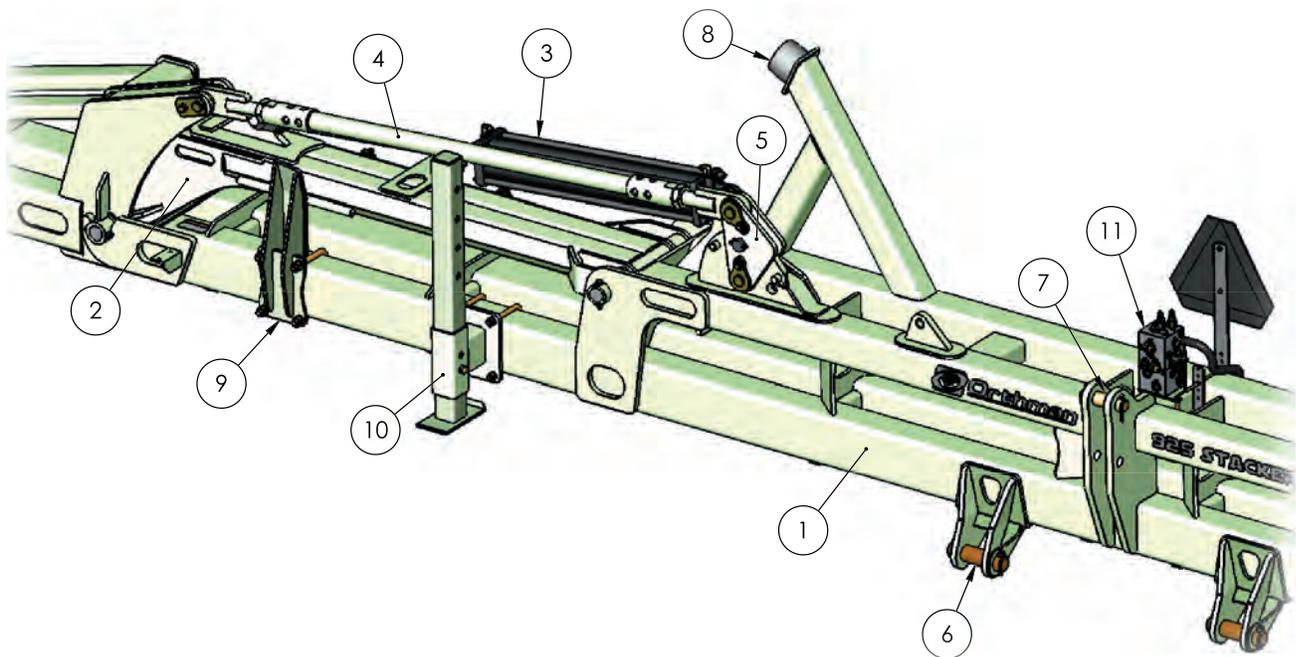
RED LENS VISIBLE TO REAR

RED LIGHT REAR





MAJOR COMPONENTS 1

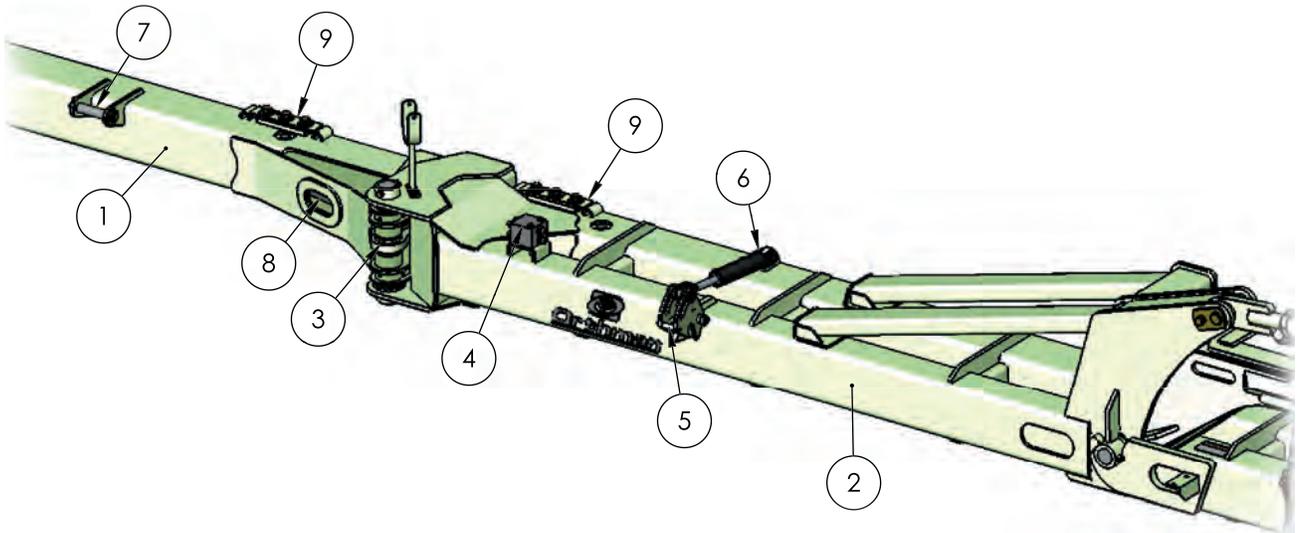


1. Center Section
2. Swing Truss
3. Stack Cylinder
4. Strut
5. Float Links (2)
6. Lower Hitch Pins (2)
7. Third Point Hitch Pin
8. Swing Truss Stop Bumper
9. Swing Truss Guide
10. Bar Stand
11. Fold Control Manifold (optional)



MAJOR COMPONENTS

MAJOR COMPONENTS 2 - FRONT FOLD

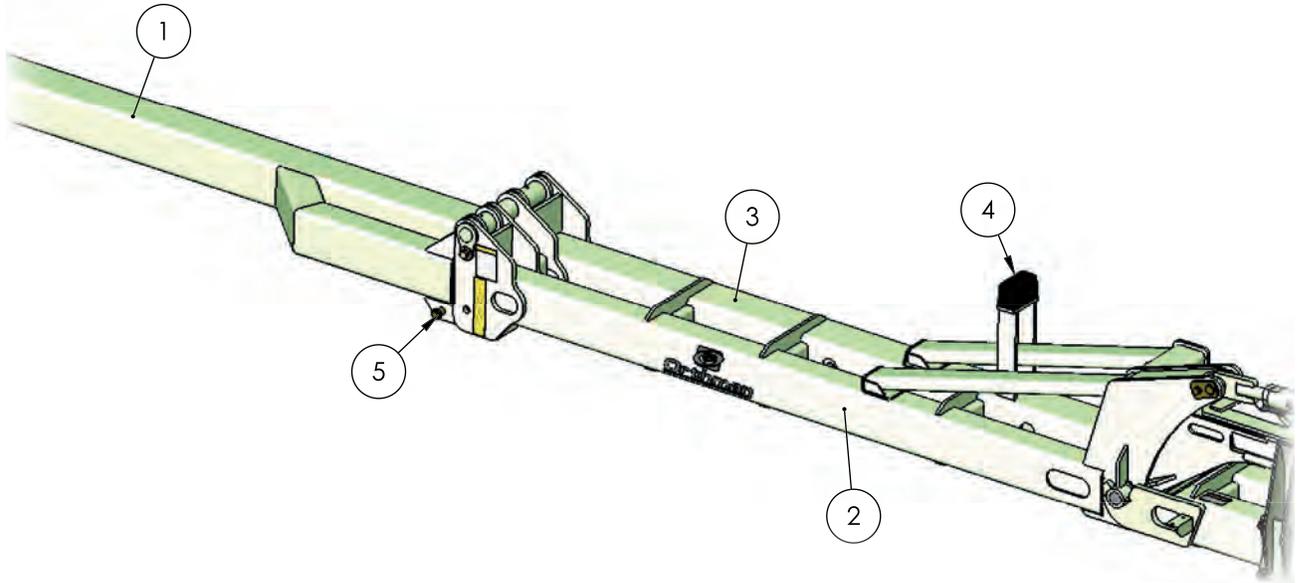


1. Outer Wing
2. Midwing
3. Intermediate Hinge
4. Outer Wing Manifold
5. Outer Wing Latch Assembly
6. Outer Wing Latch Cylinder
7. Outer Wing Latch Pin
8. Outer Wing Fold Cylinders (2)
9. Row Unit Mount Assemblies (4)



MAJOR COMPONENTS

MAJOR COMPONENTS 3 - VERTICAL FOLD



1. Outer Wing
2. Midwing
3. Outer Wing Fold Cylinder (internal)
4. Outer Wing Rest Bumper
5. Outer Wing Lock Pin (in storage)



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 TOOLBAR UNTIL YOU HAVE READ THE FOLLOWING PAGES.

PREPARING THE TOOLBAR

- Ensure 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. (pg.2-7)
- Make sure tractor hydraulic system is in working order. Orthman 925 series tool bar hydraulic systems are designed for a 3000 psi system.
- Make sure that hydraulic tips and outlets are free of foreign material. Foreign material can ruin hydraulic components resulting in adverse toolbar operation.

Three plumbing options - see plumbing section.

CAUTION! It is not recommended to stack the toolbar without folding the outer wings.

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

- Attach hydraulic hoses to tractor according to cab preferences.
- DO NOT FOLD TOOLBAR BEFORE REMOVING LOCKING PINS.**

Before each use, check all hardware for wear and proper torque (pg. 8 - 5). Replace damaged or missing hardware with hardware of an identical grade to restore implement to original specifications.



IMPLEMENT TO TRACTOR CONNECTION

The 925 Stacker Bar has a category 4N 3-point hitch. Special pins are available for category 3. Contact the Orthman service department for details.

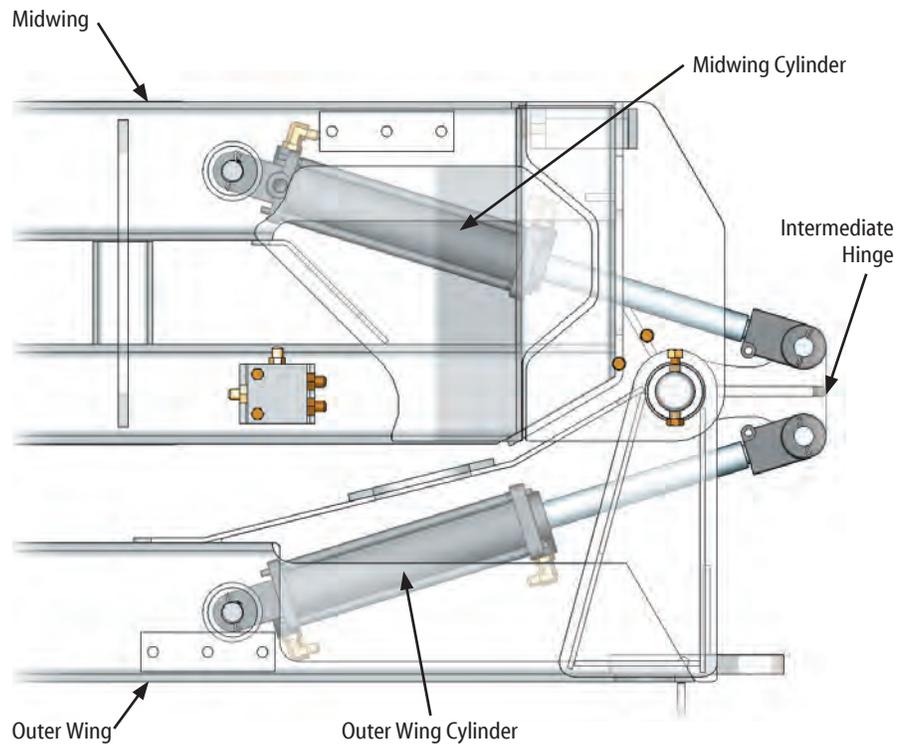
AVOID CRUSHING. Do not stand between tractor and implement when connecting or disconnecting implement. Injury or death can result from being trapped between the tractor and implement.

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

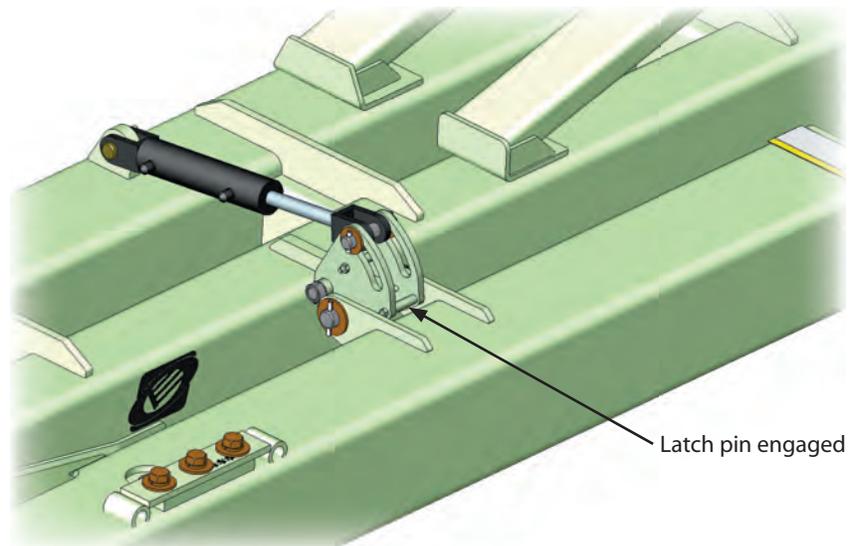
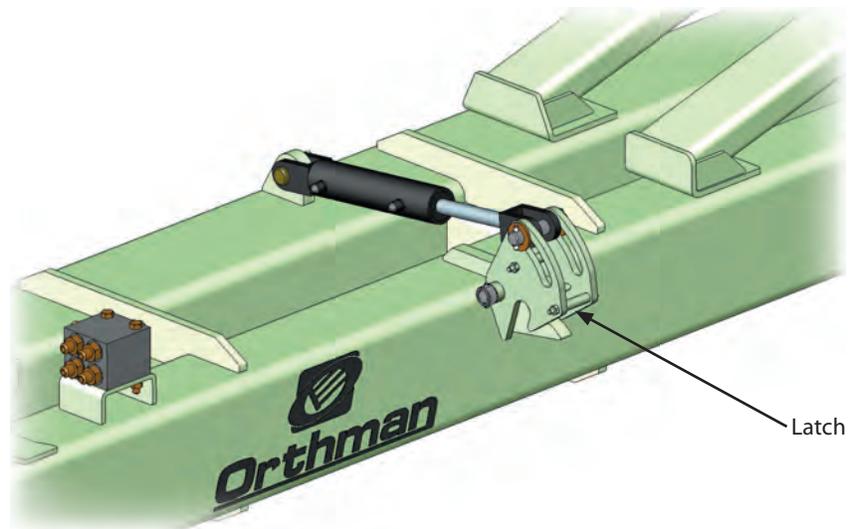
**PREPARATION AND SETUP****OUTER WING FOLD**

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.



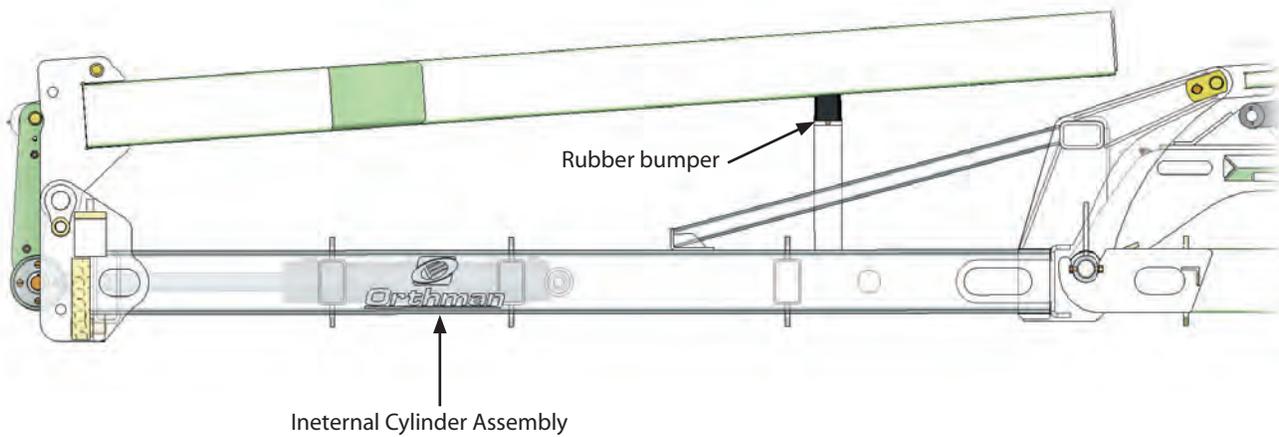
**PREPARATION AND SETUP****OUTER WING LATCH**

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 will rotate open and then close 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****VERTICAL FOLD OUTER WING**

The outer wings on a vertical fold outer wing toolbar fold over to 175°. The outer wing fold mechanism is the same cylinder assembly used on Orthman 1500 and 1550 folding toolbars. In the fold state the wing rests on a rubber bumper.





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. The levelness of the wings should also be checked over the life of the toolbar to ensure proper performance.

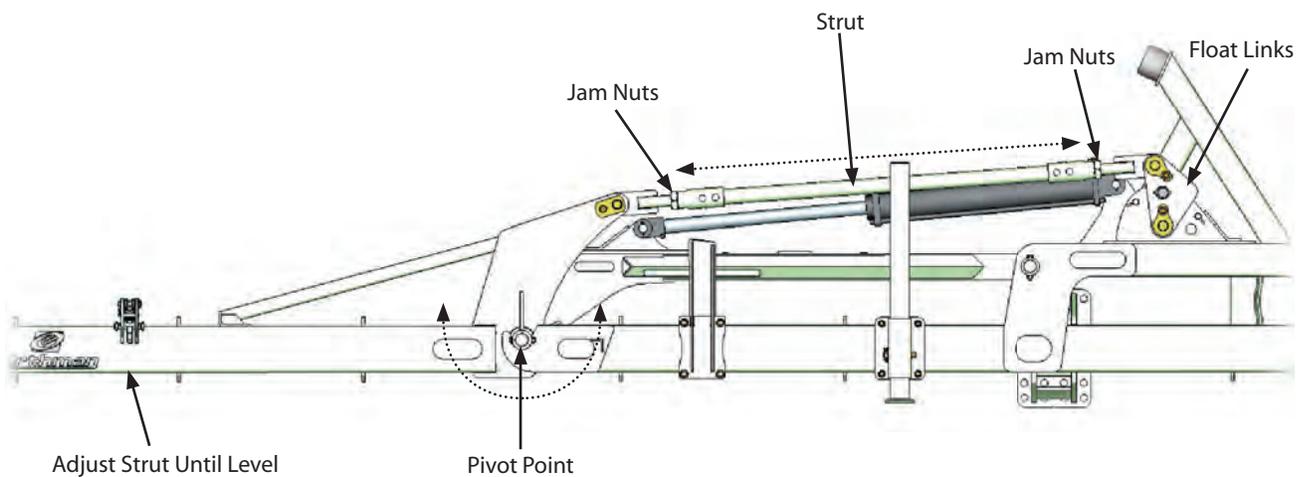
Tools:

- 2 3/4" wrench
- 2 1/2" wrench
- Level (s)

Begin with the float links pinned rigid (either a fixed wing or flexible wing toolbar). Park the toolbar on a level surface 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.

Loosen the jam nuts on each end of the strut and turn the center portion of the strut to adjust the wings. The wings will pivot up and down about the hinge point between the wing and the swing truss.

Place the level on the top of the rear tube on the midwing and adjust the strut until the levelness of the midwing matches the reference taken from the center section. Repeat the procedure for both wings. When both wings have been leveled re-tighten the jam nuts on each end of the strut.





PREPARATION AND SETUP

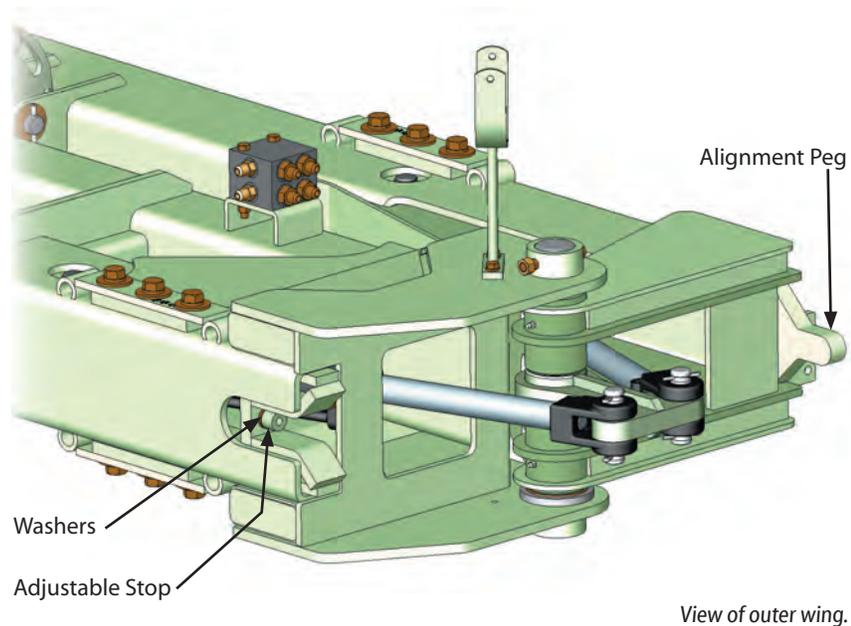
STRAIGHTENING THE FRONT FOLD OUTER WINGS

The front folding outer wings can be adjusted to ensure 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. The position of this stop can be altered to align the outer wings correctly.

Tools:

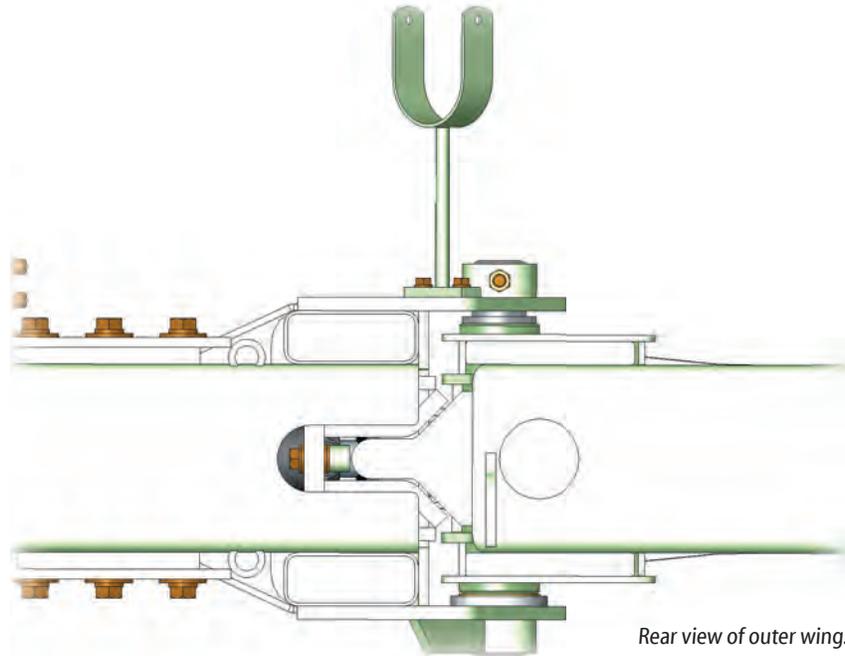
- $\frac{3}{4}$ " wrench
- Level

Begin by unfolding the outer wing as far as it will go. Lay the level on the back face of the midwing across the outer wing hinge. Using the back face of the midwing as a reference, determine if the outer wing is correctly aligned.





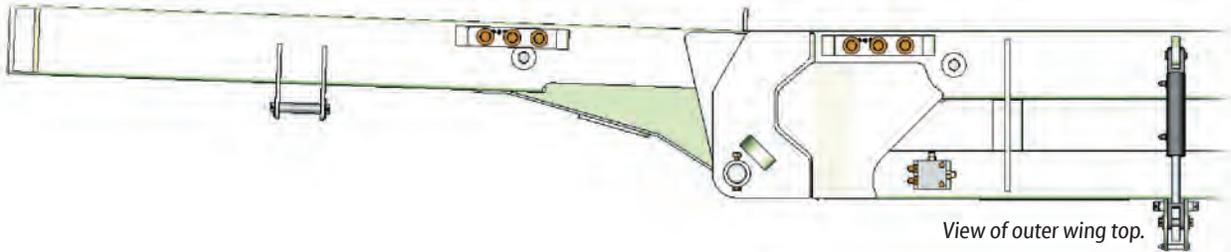
PREPARATION AND SETUP



Rear view of outer wing.

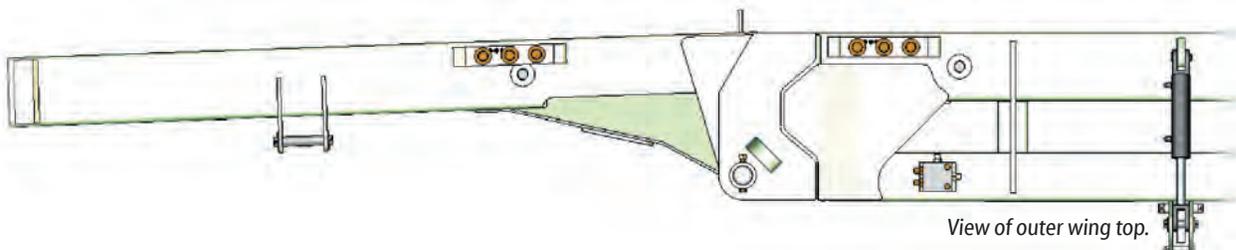
The adjustable stop is comprised of a tapped stop and a series of spacer washers.

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



View of outer wing top.

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



View of outer wing top.

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



PREPARATION AND SETUP

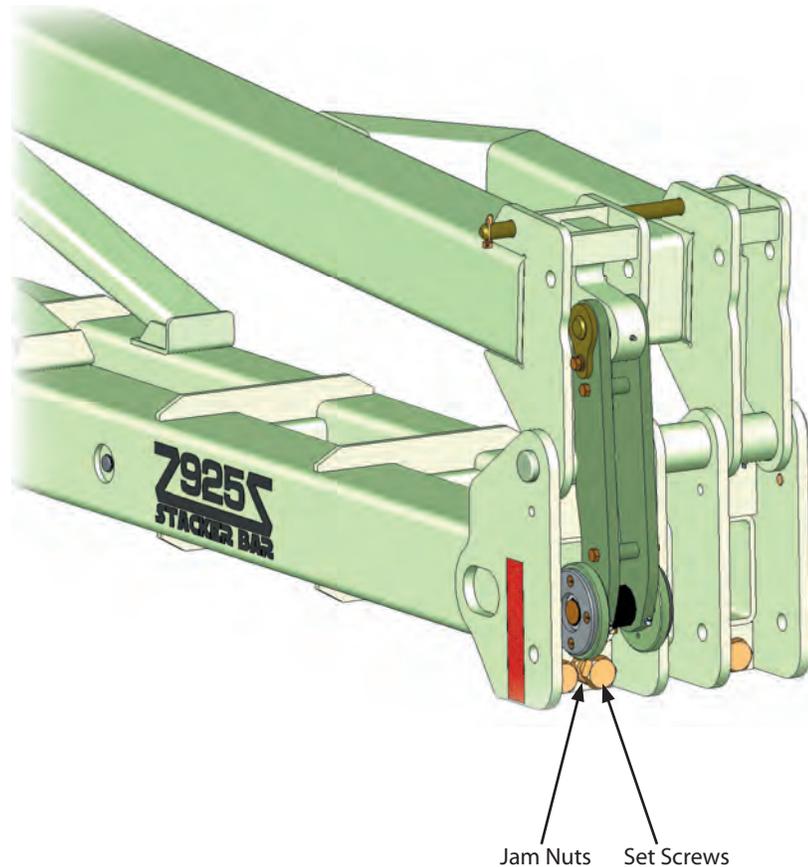
LEVELING VERTICAL FOLD OUTER WINGS

Tools:

- 1 7/8" wrench
- Level

The midwings must be leveled by the procedure described on page 4-5 before leveling the outer wings. Three set screws serve as down stops for the outer wing. These can be adjusted to alter the unfolded position of the outer wing.

Park the toolbar on a level surface and fully unfold both outer wings. Begin by measuring the levelness of the rear toolbar of the midwing; this will be the reference point. Loosen the jam nuts and turn the set screws in or out to correct the angle of the outer wing. Once it matches the reference from the midwing retighten the jam nuts and repeat the procedure for the other outer wing.



Jam Nuts Set Screws



PREPARATION AND SETUP

PLUMBING THE TOOLBAR

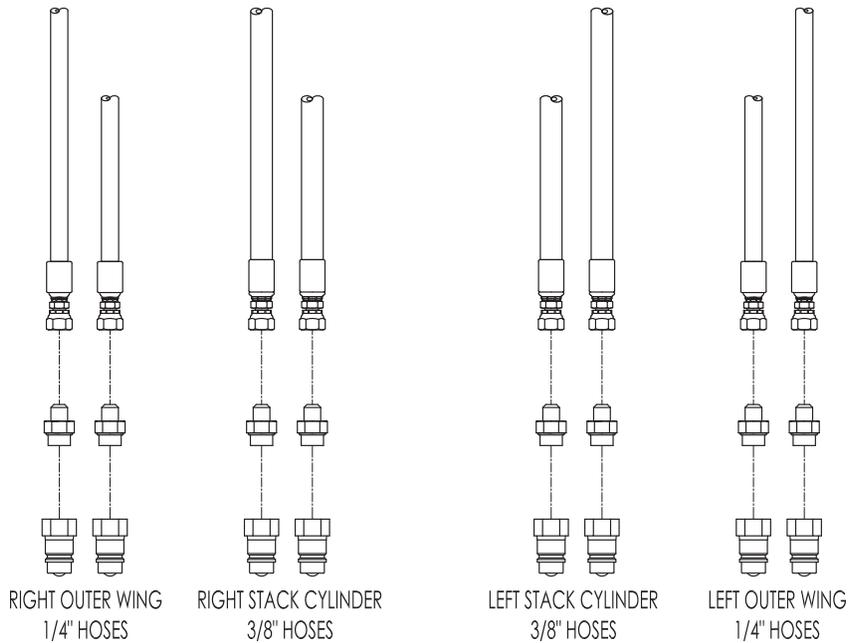
There are three options for controlling the wings on a 925 Stacker Bar

Option #1 Manual fold

This is the standard plumbing setup for a 925 Stacker Bar. When set up in this manner each fold function of the toolbar is plumbed separately and can be controlled independently. This plumbing option will require 4 tractor SCV remotes to operate the toolbar.



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





PREPARATION AND SETUP

PLUMBING THE TOOLBAR

There are three options for controlling the wings on a 925 Stacker Bar

Option #2 Tee package

The outer wings can be teed together for simultaneous outer fold and the stack cylinders can be teed together for simultaneous stack fold. This arrangement requires 2 tractor SCV remotes. Contact the Orthman service department for details.

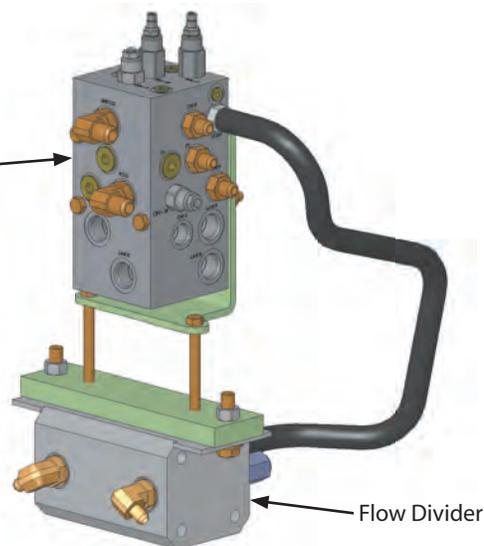
Option #3 Fold control manifold

A manifold is available for controlling the toolbar fold from 1 SCV. The manifold automatically sequences the outer wings and stack fold. A flow divider is also included to keep the stacking wings balanced.

The fold control manifold contains components that regulate oil flow 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. The valves can be adjusted to change the fold performance of the toolbar. See page 4-11.



Fold Control
Manifold



Manifold connections.

The ports on the manifold should be connected with the hoses as follows:

1. FOLD: FOLD SUPPLY HOSE FROM TRACTOR
2. UNFOLD: UNFOLD SUPPLY HOSE FROM TRACTOR
3. OWR: OUTER WING RETURN HOSE ON BOTH RIGHT AND LEFT
4. OWP: OUTER WING PRESSURE HOSE ON BOTH RIGHT AND LEFT
5. ST DIV: SHORT HOSE CONNECTING MANIFOLD TO GEAR DIVIDER INPUT
6. P1: RIGHT STACK CYLINDER BASE END
7. P2: LEFT STACK CYLINDER BASE END
8. R3 AND R4: PLUGGED
9. GEAR DIVIDER OUTPUTS: ONE TO EACH STACK CYLINDER ROD END



PREPARATION AND SETUP

PLUMBING THE TOOLBAR (CONTINUED)

If the 925 Stacker Bar is equipped with LAW and/or a gullwing kit they can be connected through the bottom ports on the fold control manifold:

1. LAW P (FRONT): LIFT-ASSIST-WHEEL PRESSURE SUPPLY HOSE FROM TRACTOR
2. LAW R (FRONT): LIFT-ASSIST-WHEEL RETURN HOSE FROM TRACTOR
3. LAW P (SIDES): LAW CYLINDERS BASE ENDS
4. LAW R (SIDES): LAW CYLINDERS ROD ENDS
5. GW R: GULLWING CYLINDERS ROD ENDS

If either the LAW or gullwing kit is absent the corresponding manifold ports must be plugged.



Adjusting the fold control manifold. For best results when adjusting the valves the wing row units should have all attachments and be fully loaded.

It is recommended to 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 for the wings to move.

To adjust the counter balance valves first loosen the jam nut on the top of the cartridge; the set screw can then be adjusted with a hex-head wrench. Be very careful adjusting the cartridges as the full adjustment range is three full turns of the set screw. Counter-clockwise 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 outer wings move too quickly when folding past center or the stacking wings fall on to the rests too rapidly "CBV - F" should be adjusted CCW in ¼ turn increments until satisfactory fold motion is achieved.

The counter balance valve labeled "CBV - UF" controls the unfold sequence. If the un-stacking wings move down too quickly "CBV - UF" should be adjusted CCW in ¼ turn increments until satisfactory fold motion is achieved.

To alter the fold timing the sequence valves should be adjusted. To adjust the sequence valves first loosen the jam nut on the top of the cartridge; the set screw can then be adjusted with a hex-head wrench. Be very careful adjusting the cartridges as a small turn can have a significant affect. Clockwise adjustment of the sequence valve will increase the delay between fold functions; counter-clockwise adjustment will reduce 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 "SEQ - F" should be adjusted CW in ¼ turn increments 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 "SEQ - UF" should be adjusted CW in ¼ turn increments to increase the delay.

A manual fold toolbar can be upgraded to use the fold manifold. The tips and adaptors must be removed from the hoses and the hoses then connected to the appropriate ports on the manifold. The hose from the rod end of each stack cylinder is connected to the output of the gear divider.

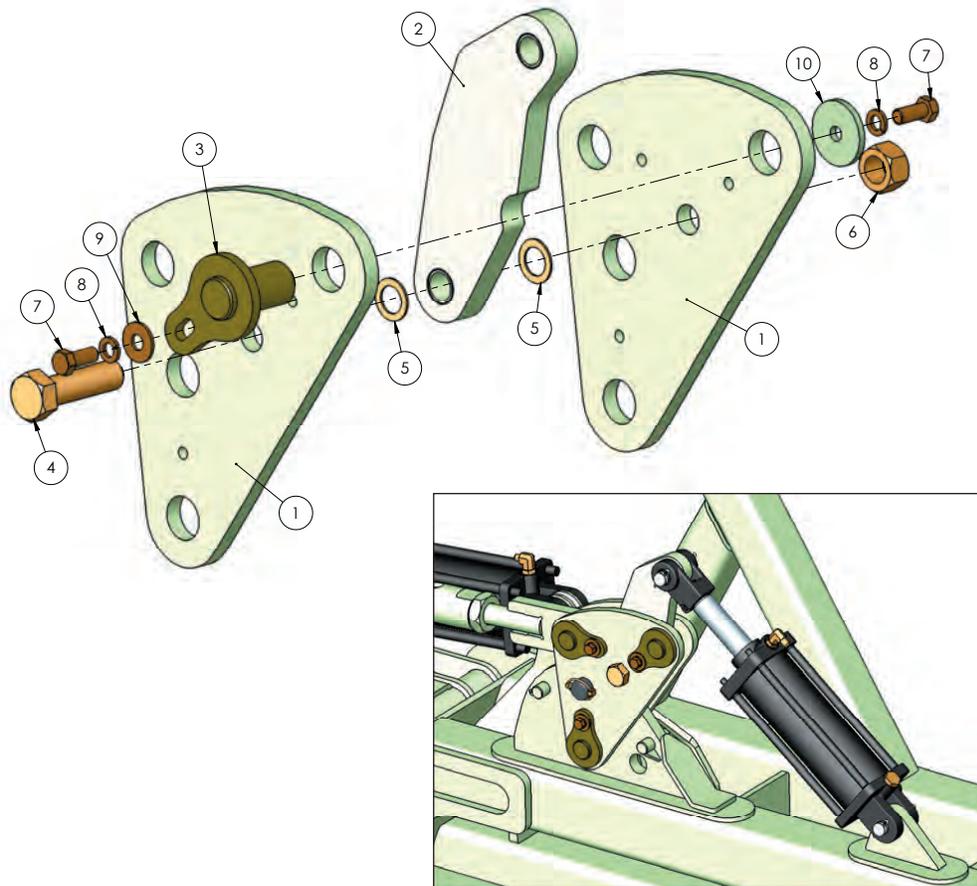


PREPARATION AND SETUP

GULLWING KIT

A gullwing kit is available for the 925 Stacker Bar. With the addition of the gullwing kit the toolbar wings will be able to flex up and down over varying field conditions and be tipped up for added clearance during end row turns.

The gull wing kit can be added to any fixed wing 925 Stacker Bar. The wings may need to be leveled after installing the gullwing kit. See page 4-5.



GULLWING PARTS

- | | | |
|-----|---------|---|
| 1. | 321-301 | FLOAT LINK PLATE |
| 2. | 321-302 | CYLINDER LINK (with 134-034 bushings installed) |
| 3. | 351-076 | FLOAT LINK PIN |
| 4. | 100-303 | 1" X 3 1/2" GRADE 8 HEX BOLT |
| 5. | 134-013 | WEAR WASHER |
| 6. | 102-162 | 1" LOCK NUT |
| 7. | 100-115 | 1/2" X 1 1/4" GRADE 5 HEX BOLT |
| 8. | 108-020 | 1/2" LOCK WASHER |
| 9. | 108-009 | 1/2" FLAT WASHER |
| 10. | 333-737 | PIN HEAD |



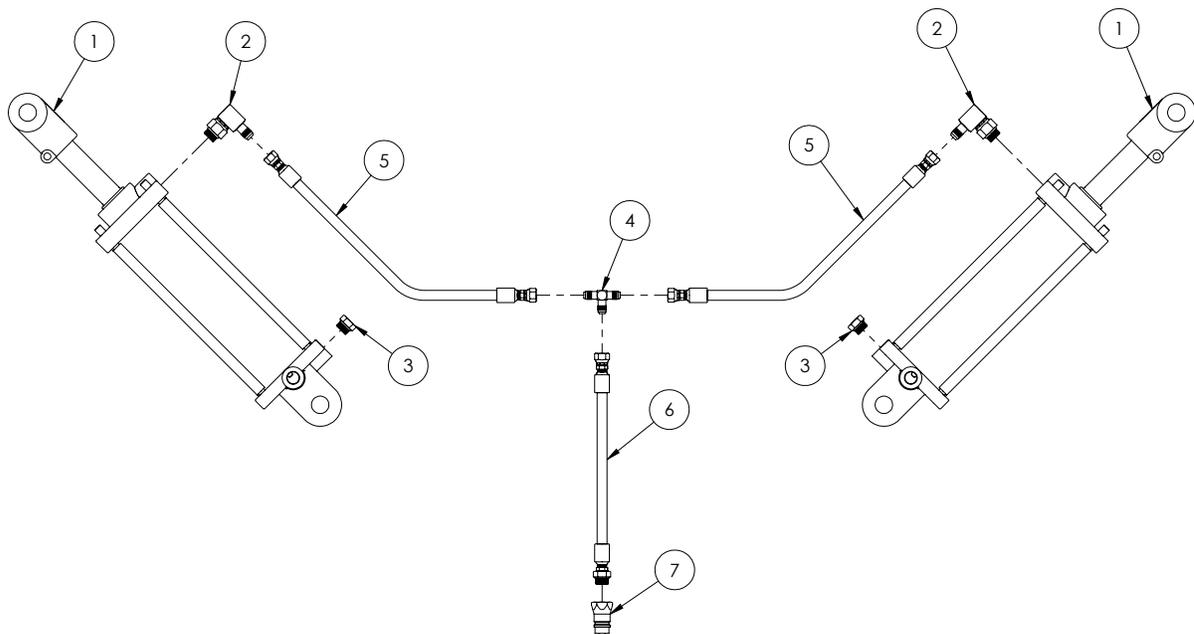
PREPARATION AND SETUP

PLUMBING THE GULL WING KIT



The gullwing cylinders are plumbed single-acting. The supply 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 transport position.

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



HYDRAULIC LAYOUT

- | | | |
|----|---------|--|
| 1. | 194-401 | CYLINDER (4 X 10 3000PSI TIE-ROD WITH SPLIT RINGS) |
| 2. | 198-064 | ELBOW (3/4MB X 9/16MJ 90 DEG) |
| 3. | 194-233 | BREATHER (3/4MB) |
| 4. | 198-203 | TEE (9/16MJ X 9/16MJ X 9/16MJ) |
| 5. | 196-233 | HOSE 3/8" (9/16FJX X 9/16FJX X 66") |
| 6. | 196-254 | HOSE 3/8" (9/16FJX X 3/4MB X 60") |
| 7. | 140-092 | TIP (ISO TRACTOR) |
| 8. | 152-712 | DUSTCAP FOR TIP (GREEN - NOT SHOWN) |

It is recommended that the gull wing kit be plumbed into a separate tractor hydraulic remote outlet. When plumbed this way the kit can be engaged with the hydraulic remote lever when turning around. When operating in field conditions where flex up and down is desired, the remote lever should be placed in the float position. When operating in field conditions where only flex up is desired, the remote lever can be placed in the neutral position.



PREPARATION AND SETUP

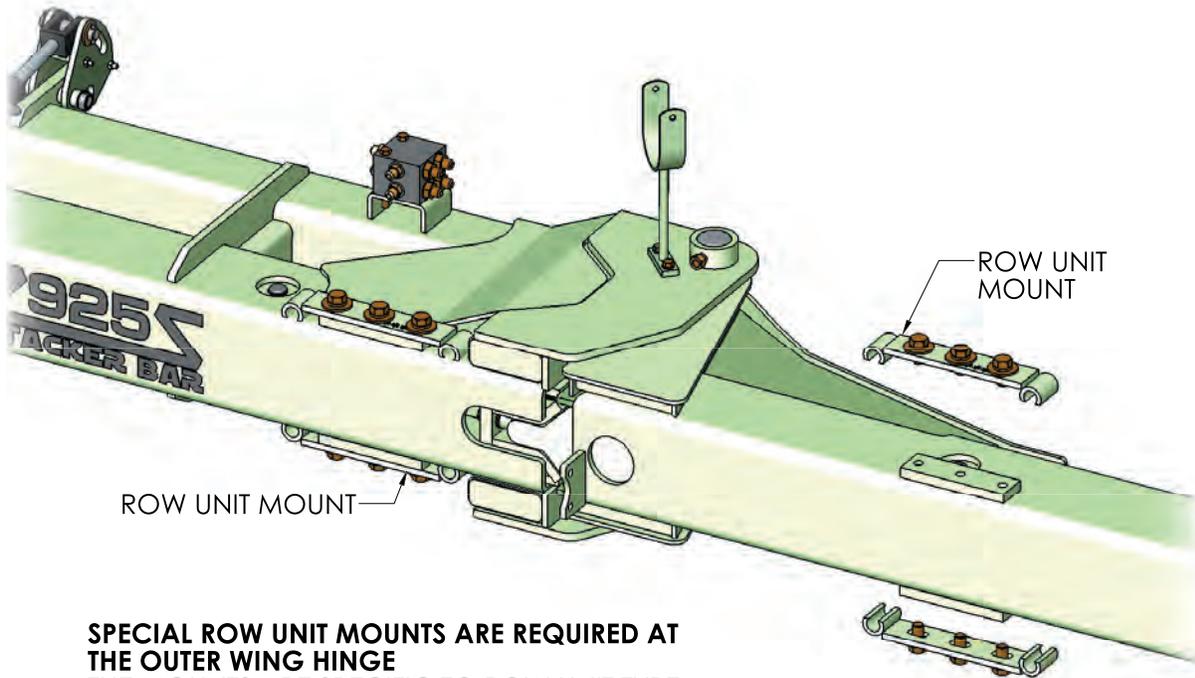
PLUMBING THE GULL WING KIT (CONTINUED)

Another option is connecting the gull wing kit with the lift assist wheels if LAW are plumbed into a hydraulic remote. (If the LAW are plumbed into the tractor three-point hitch (rock shaft tap) then see third option below.) This will cause the gull wing kit to lift the wings at the same time that the LAW are raised. If plumbed in this manner the hydraulics must be in the float position during field operation for proper performance of the toolbar. If the 925 Stacker Bar is equipped with a fold control manifold the gullwing and LAW functions can be tied together using the bottom ports on the manifold. See the fold control manifold section for details.

A third option is connecting the gull wing kit with the tractor three point hitch (rock shaft tap). Please follow all tractor manufacturer's instructions for installing and working with the rock shaft tap. Also note that some tractor manufacturers may NOT recommend using a rock shaft tap. Please note that Orthman Manufacturing will NOT be responsible for any damages or problems that may occur if using a rock shaft tap.



ROW UNIT MOUNTS



SPECIAL ROW UNIT MOUNTS ARE REQUIRED AT THE OUTER WING HINGE

THE MOUNTS ARE SPECIFIC TO ROW UNIT TYPE
THEY ARE BOLTED DOWN TO TAPPED PADS ON THE TOP
AND BOTTOM OF THE MID AND OUTER WINGS
MOUNTS ARE DESIGNED FOR A SPECIAL JOHN DEERE BOLT, SHOWN BELOW

ROW UNIT MOUNTS ARE SPECIFIC TO ROW UNIT TYPE
EACH PACKAGE CONTAINS EIGHT (8) ASSEMBLIES FOR
A COMPLETE TOOLBAR
EACH MOUNT HAS A STAMP SIGNIFYING ITS INTENDED ROW UNIT

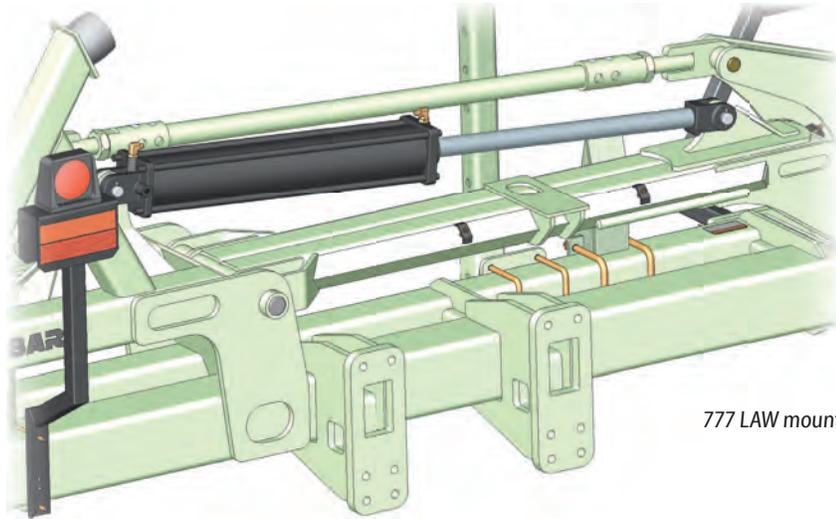
ROW UNIT	PACKAGE	STAMP
JOHN DEERE STANDARD	321-545	JD
JOHN DEERE NARROW	321-546	JDN
CASE/NEW HOLLAND	321-547	CNH



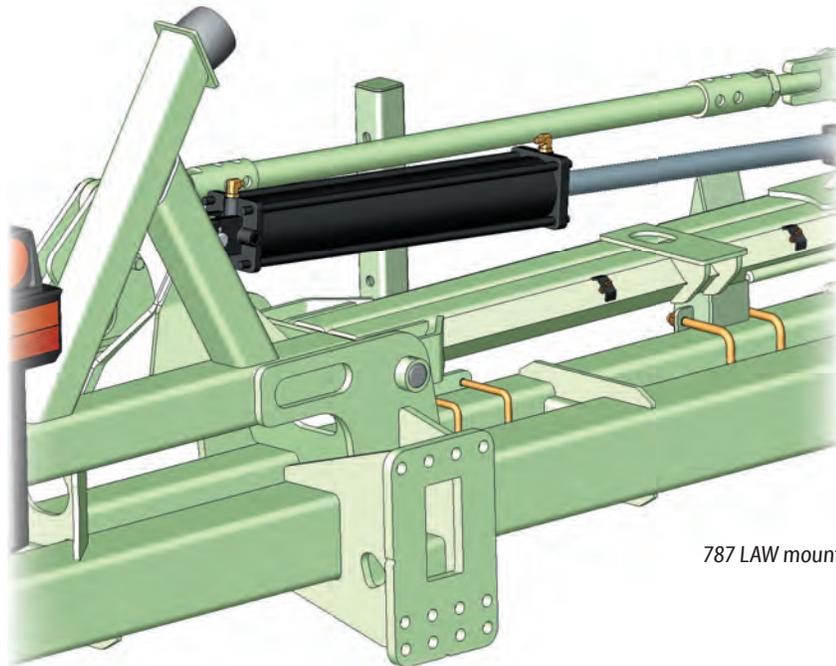
"DOGHOUSE BOLT"
ORTHMAN # 100-467
JOHN DEERE # A48215
TWO PER MOUNT ASSEMBLY

**PREPARATION AND SETUP****LIFT-ASSIST-WHEEL MOUNTS**

925 Stacker Bars come equipped with welded mounts for Orthman LAW. 925 Stacker Bars on cultivator row spacing have 777 LAW mounts welded to the center section. 925 planter bars have 787 mounts on the center section. Consult your LAW operator's manual for information on mounting and plumbing lift-assist-wheels.



777 LAW mount



787 LAW mount

**PREPARATION AND SETUP*****SEMI-MOUNTED OPERATION WITH LIFT ASSIST WHEELS***

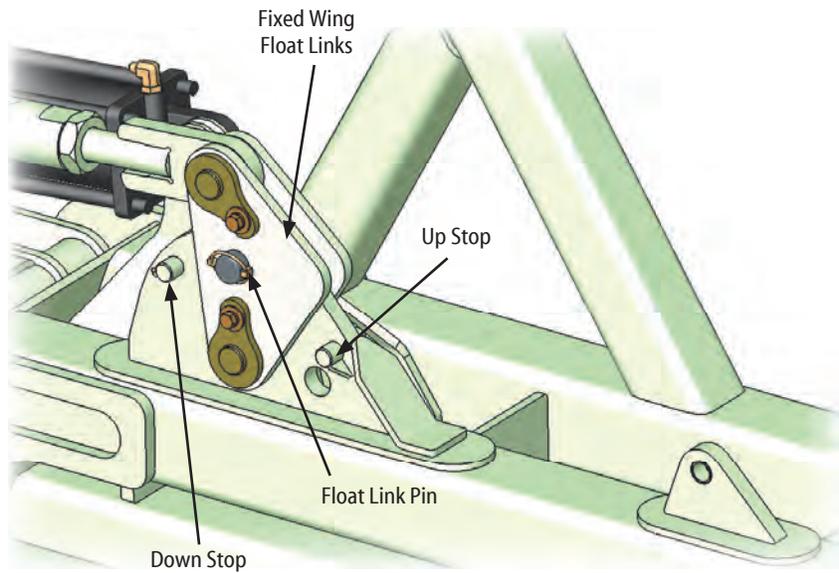
When using a Lift Assist Wheel the Stacker Bar must run in a semi-mounted setup (top link disconnected) unless an accumulator or other means of protection for the tractor top link has been included. The reason for this is if the rear tractor tires go through a ditch or hole, the tractor top link or hitch mast can be crushed as the rear of the tractor tips backwards while the implement stays stationary. Refer to Lift Assist Wheel manufacturers instructions for more information.

If using a quick-hitch semi-mounted operation, it is recommended that the operator shorten the third link on the tractor to tip the top of the quick hitch towards the tractor. This is to allow the Stacker Bar to have the greatest range of motion possible for crossing ditches or other uneven terrain. Do NOT shorten top link enough to allow the Stacker Bar to come into contact with the tractor cab should the Stacker Bar tip forward.



FIXED WINGS

A fixed wing 925 Stacker Bar is shown. The fixed wing float links have no provisions for controlling wing float. The float link pin should remain in place or the wings will droop when the toolbar is lifted for an end-turn.





FIELD SETTINGS

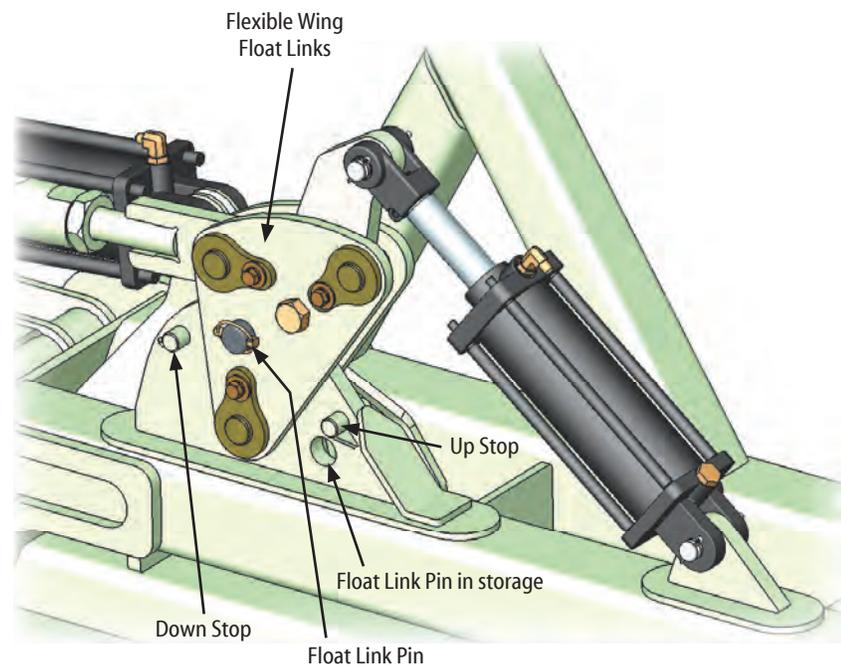
GULLWING KIT

The 925 gullwing kit provides flexibility to the wings of the toolbar for covering uneven field terrain. The toolbar will flex in three sections: a rigid center section; right and left wings.

The 925 Stacker Bar will be shipped with the wings pinned in the fixed position. In order to use the gullwing kit the float link pin should be removed and placed in the storage position. It is necessary to have the gullwing cylinders installed and connected to hydraulic control for proper function of the gullwing kit.

During field operation the SCV connected to the gullwing kit should be 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 wings and protect the gullwing cylinders from undue loading.

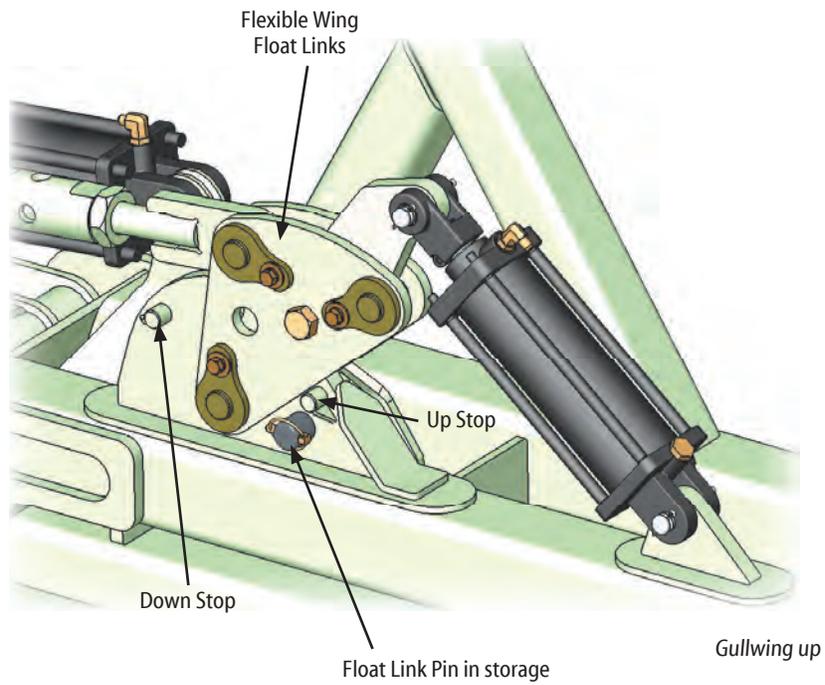
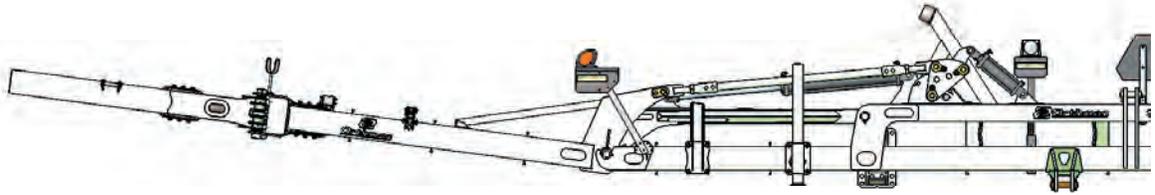
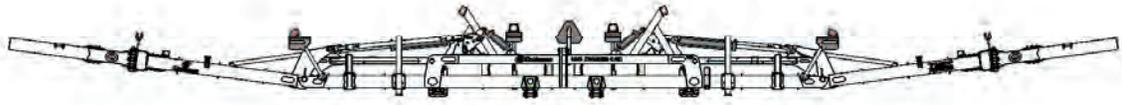
During an end-turn the gullwing SCV can be engaged to tip the wings up for additional clearance.





GULLWING KIT (CONTINUED)

Gullwing up

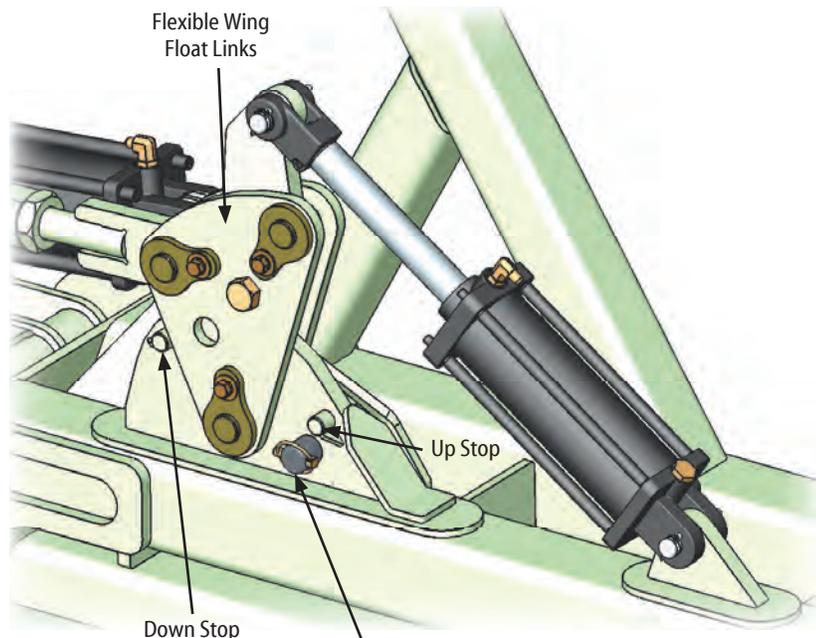
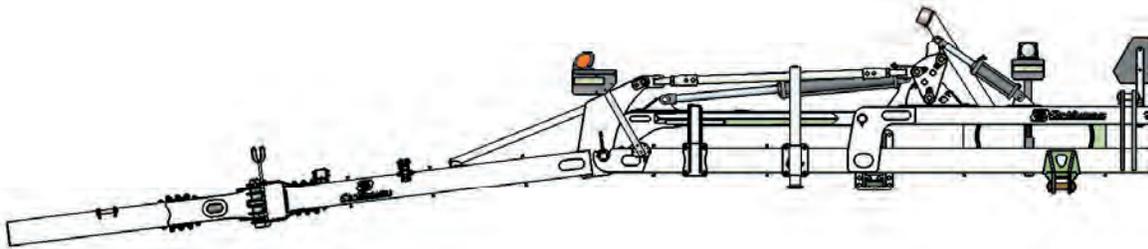
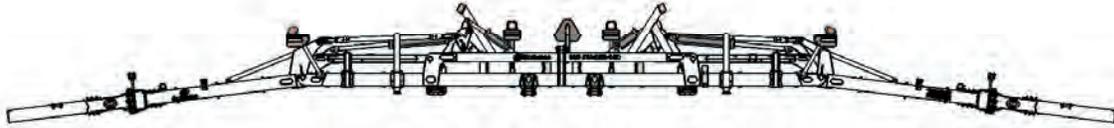




FIELD SETTINGS

GULLWING KIT (CONTINUED)

Gullwing – Float Down



Gullwing – Float Down



TROUBLESHOOTING



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

USE BAR STANDS TO SUPPORT THE IMPLEMENT. Park 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. Remove buildup of grease, oil, or debris prior to adjusting rolling basket down pressure.

⚠ DANGER

HIGH-PRESSURE FLUID HAZARD
To prevent serious injury or death:

- Relieve pressure on hydraulic system before servicing or disconnecting hoses.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

153-528



PROBLEM:

Toolbar does not operate at proper height.

SOLUTION:

Completely raise toolbar gauge wheels. Have an assistant pull the tractor and implement slowly forward in the field position. As the implement travels forward, manipulate tractor hitch height from the cab of the tractor until recommended operating height is achieved. Stop tractor and physically measure toolbar height. If toolbar is not to correct operation height repeat procedure.

Once correct toolbar height is established, lower toolbar gauge wheels to ground surface, if equipped, or set lower hitch stop on the tractor. These settings will provide a consistent toolbar height when in operation.

PROBLEM:

Toolbar does not operate parallel with ground.

SOLUTIONS:

1. Fully Mounted - Presuming correct toolbar height has been achieved, lengthen (tip back) or shorten (tip forward) the tractor third link until toolbar is parallel with ground surface. Tractor hitch height may have to be manipulated in order to lengthen or shorten third link. Make sure the implement is in the field position when adjusting the toolbar to operate parallel with ground surface.

Make adjustments to the tractor lower hitch stop, third link, and toolbar gauge wheels, if equipped, until the toolbar operates at the correct height and orientation.

2. Semi-mounted with LAW - Make sure the toolbar is in the field position and at the correct operating height. Adjust Lift-Assist-Wheel down stops or cylinder blocks until toolbar is parallel with ground surface. See your Lift-Assist-Wheel operator's manual for details.



TROUBLESHOOTING

TROUBLESHOOTING



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

USE BAR STANDS TO SUPPORT THE IMPLEMENT. Park 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. Remove buildup of grease, oil, or debris prior to adjusting rolling basket down pressure.

⚠ DANGER

HIGH-PRESSURE FLUID HAZARD
To prevent serious injury or death:

- Relieve pressure on hydraulic system before servicing or disconnecting hoses.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

153-528

**PROBLEM:**

Toolbar does not fold correctly.

SOLUTION:

1. Hydraulic tips installed incorrectly in tractor SCV
2. Lock pins are installed
3. Fold control manifold is not adjusted correctly. Refer to page 4-11.
4. Wings are overloaded
5. Tractor hydraulic pressure is insufficient
6. Cylinder seals are bad

PROBLEM:

Toolbar wings are not level or not straight.

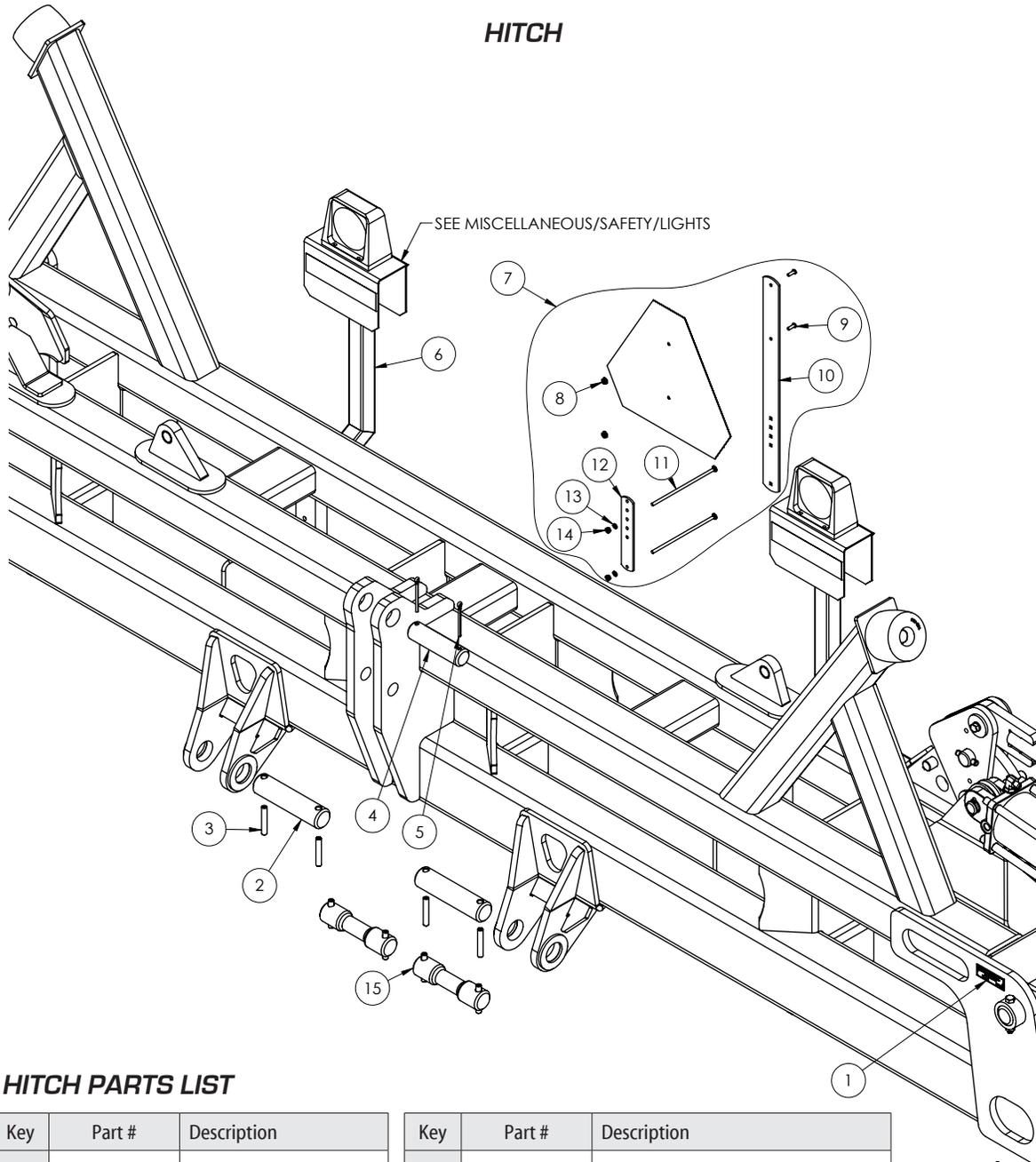
SOLUTION:

See sections in manual for procedures to level and straighten the wings, pages 4-5 to 4-8.



PARTS IDENTIFICATION

HITCH



HITCH PARTS LIST

Key	Part #	Description
1	153-011	Serial Tag
2	321-494	Lower hitch pin - Cat 4
3	104-091	Roll pin 1/2" X 3"
4	321-498	Top hitch pin - Cat 4
5	104-184	Cotter pin 1/4" X 3"
6	303-908	Rear light mount
7	635-413	SMV
8	102-085	Lock nut 1/4"-20

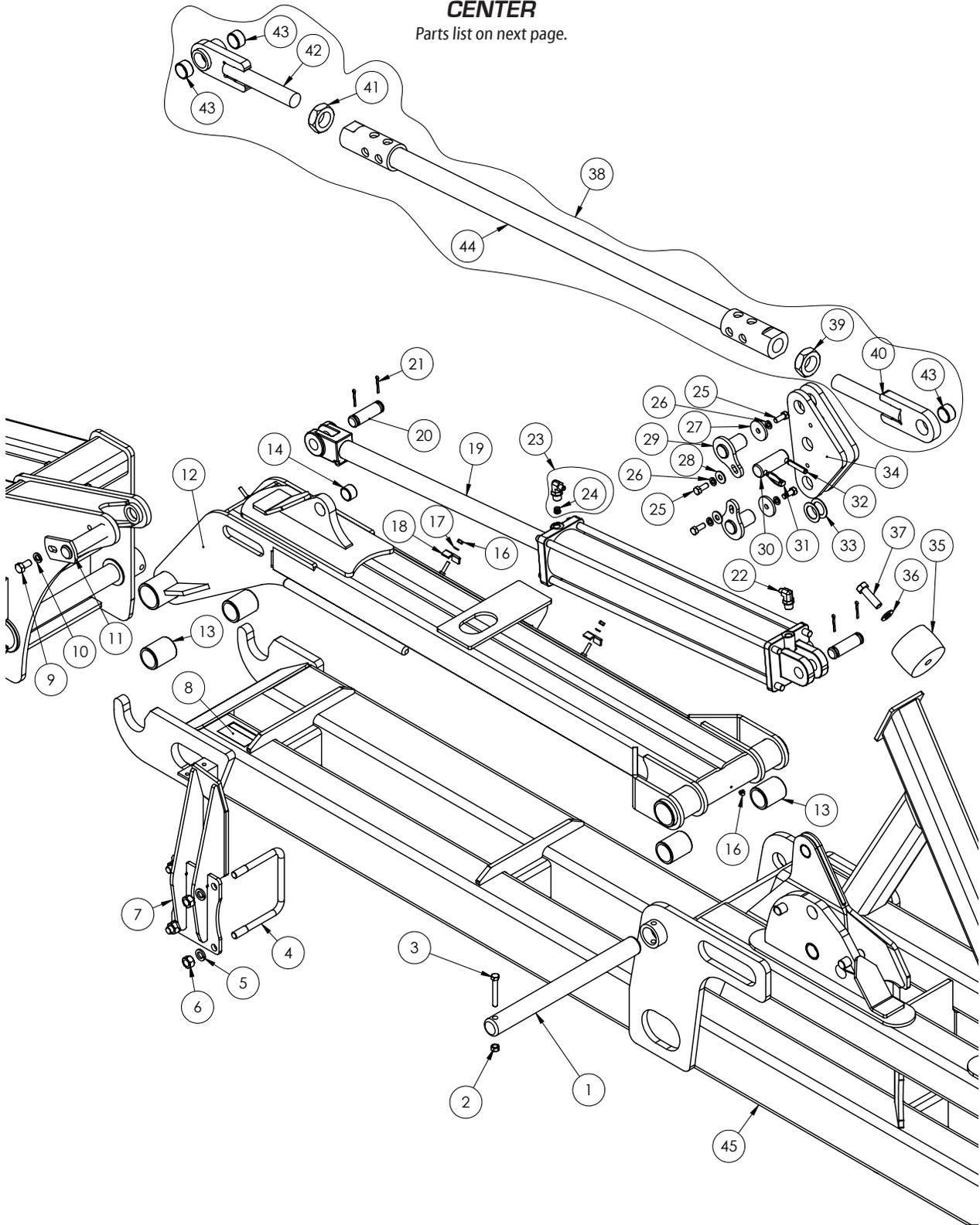
Key	Part #	Description
9	106-077	Round head screw 1/4"-20 X 3/4"
10	385-183	SMV Bracket
11	100-575	Carriage bolt 1/4"-20 X 8", Grade 2
12	333-499	SMV Bracket strap
13	108-027	Lock washer 1/4"
14	102-002	Hex nut 1/4"-20, Grade 5
15	321-526	Lower hitch pin - Cat 3



PARTS IDENTIFICATION

CENTER

Parts list on next page.





PARTS IDENTIFICATION

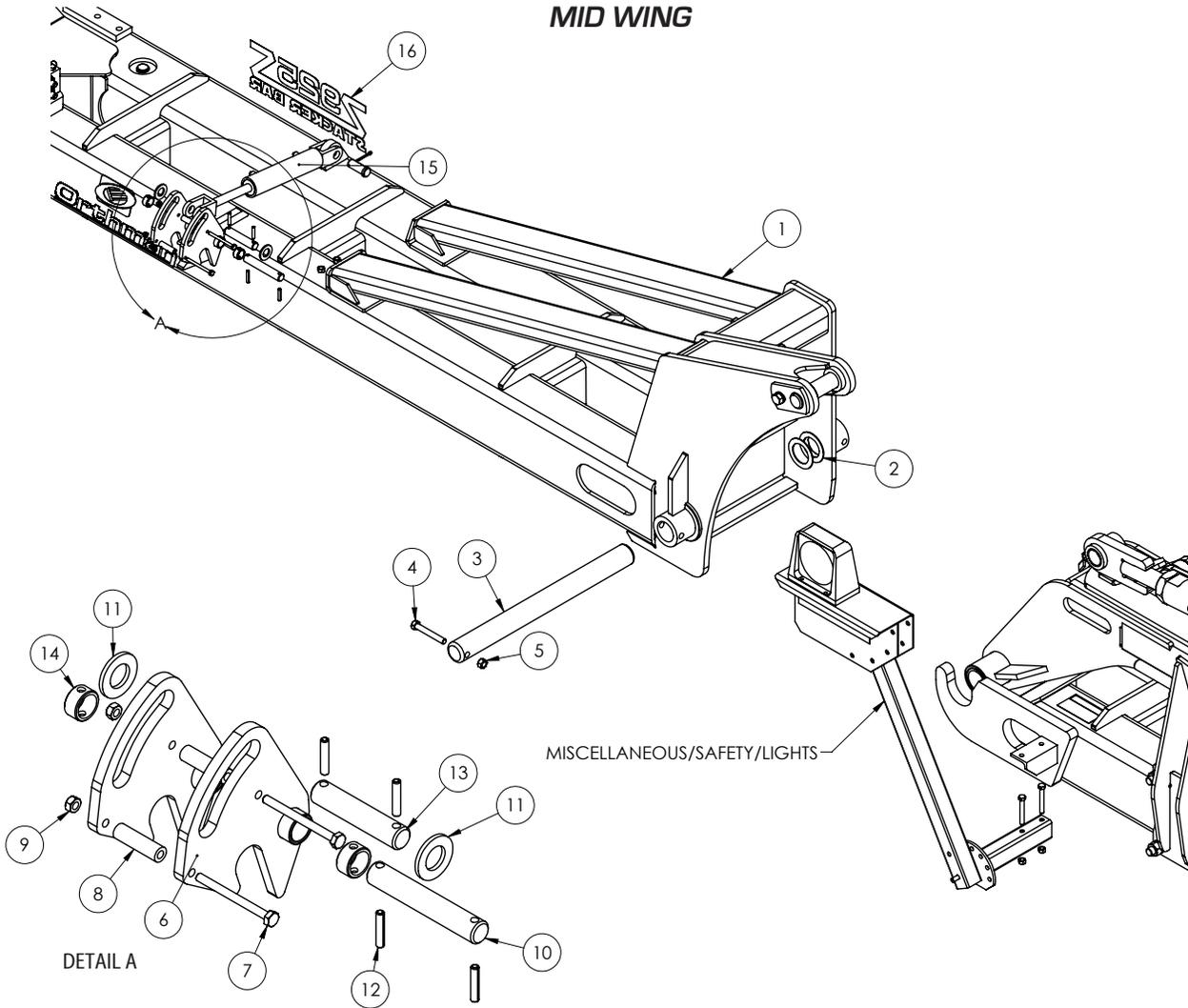
CENTER PARTS LIST (diagram on page 7-2)

Key	Part #	Description	Key	Part #	Description
1	321-275	Swing truss pin	24	198-299	Restrictor plug
2	102-028	Lock nut 1/2"-13, Grade 2	25	100-115	Hex bolt 1/2"-13 X 1 1/4, Grade 5
3	100-222	Hex bolt 1/2"-13 x 3 1/2, Grade 5	26	108-020	Lock washer 1/2"
4	315-028	U-bolt 3/4"-10, 5 X 7 Bar	27	333-737	Pin cap
5	108-022	Lock washer 3/4"	28	108-009	Flat washer 1/2"
6	102-009	Hex nut 3/4" - 10, Grade 5	29	351-076	Float link pin
7a	321-388	Swing truss guide - Right	30	321-277	Float link center pin
7b	321-387	Swing truss guide - Left	31	104-036	Lynch pin 7/16" X 2"
8	153-402	Warning Decal	32	104-005	Roll pin 1/2" X 2 1/2"
9	100-130	Hex bolt 5/8"-11 X 1 1/4, Grade 5	33	134-041	Wear washer
10	108-021	Lock washer 5/8"	34	321-299	Float link - Fixed wings
11	321-278	Strut pin	35	152-588	Swing truss stop bumper
12a	321-226	Swing Truss (includes 13, 14, & 16)	36	108-003	Flat washer 3/4"
12b	321-830	Swing Truss (includes 13, 14, & 16)	37	100-075	Hex bolt 3/4"-10 X 2 1/2", Grade 8
13	134-094	Split bushing	38a	321-265	Strut Assembly - 82.00"
14	134-044	Split bushing	38b	321-831	Strut Assembly - 88.50"
15	110-008	Grease fitting	39	102-312	Jam nut 1 3/4"-5 LH, Grade 2
16	102-004	Hex nut 5/16"-18, Grade 2	40	321-270	Turnbuckle end - LH (includes 43)
17	108-017	Lock washer 5/16"	41	102-311	Jam nut 1 3/4"-5 RH, Grade 2
18	318-460	Hose strap	42	321-272	Turnbuckle end - RH (includes 2X 43)
19	194-266	Cylinder 5 X 30 (includes 20 & 21)	43	134-017	Split bushing
20	104-096	Cylinder pin 1 1/4" X 4 3/16"	44a	321-266	Strut Tube - 63.63"
21	104-028	Cotter pin 3/16" X 1 1/2"	44b	321-832	Strut Tube - 70.13"
22	198-080	Elbow 7/8 MORB x 9/16"-18 JIC	45		Center Section
23	198-298	Elbow 7/8 MORB x 9/16"-18 JIC w/restrictor			



PARTS IDENTIFICATION

MID WING



MID WING PARTS LIST

Key	Part #	Description
1	Midwing	Call Orthman Dealer
2	134-043	Bushing
3	321-380	Midwing pin
4	100-222	Hex bolt 1/2"-13 X 3 1/2", Grade 5
5	102-028	Lock nut 1/2"-13
6	321-531	Out wing transport latch
7	100-321	Hex bolt 1/4"-20 X 3"
8	321-534	Latch spacer
9	102-023	Lock nut 1/4"-20

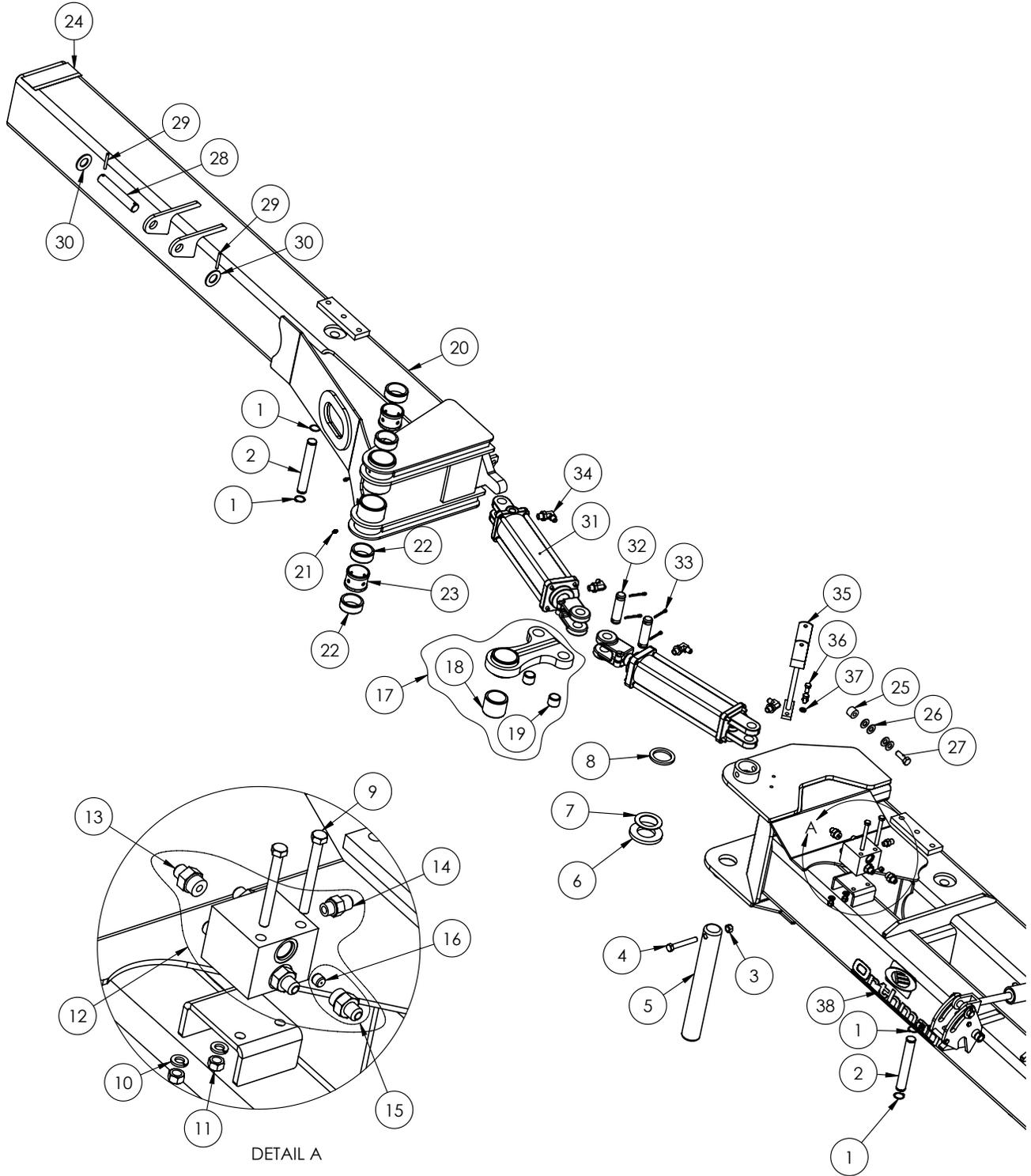
Key	Part #	Description
10	321-535	Outer wing latch pin
11	108-003	Flat washer 3/4"
12	104-118	Roll pin 1/4" X 1 1/4"
13	321-537	Outer wing latch cylinder pin
14	321-536	Collar
15	194-403	Cylinder 1 1/2" X 4"
15a	104-193	Cylinder pin 3/4" X 2"
15b	104-024	Cotter pin 5/32" X 1 1/4"
16	153-222	925 Stacker Bar Decal





OUTER WING (FRONT FOLD)

Parts list on next page.





PARTS IDENTIFICATION

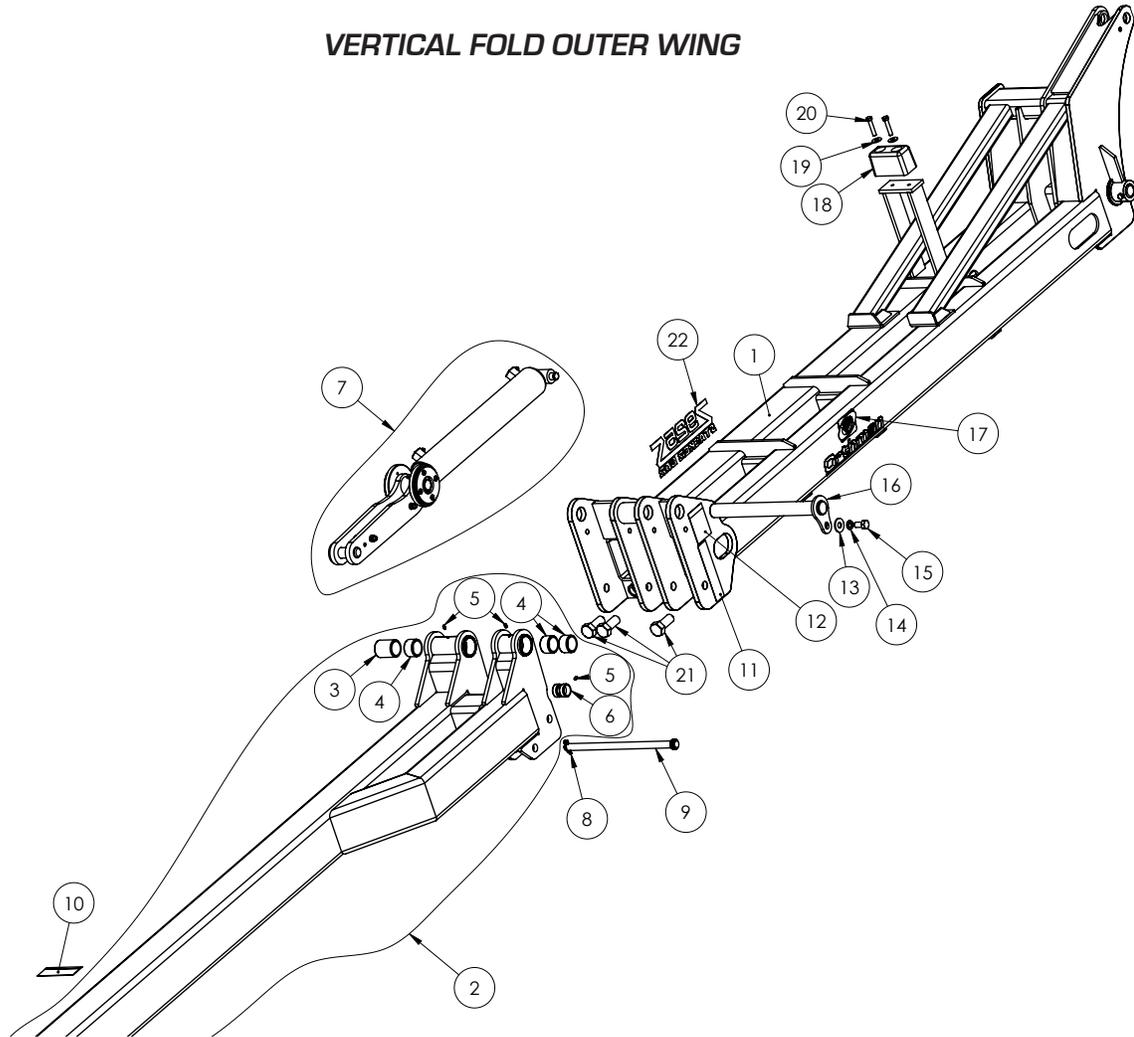
OUTER WING (FRONT FOLD) PARTS LIST (diagram on page 7-5)

Key	Part #	Description	Key	Part #	Description
1	104-053	Snap ring 1"	20	321-451	Outer wing
2	301-500	Pin	21	110-001	Grease fitting
3	102-028	Lock nut 1/2"-13	22	134-102	Split bushing
4	100-222	Hex bolt 1/2"-13 X 3 1/2", Grade 5	23	321-509	Spacer
5	321-479	Outer wing pin	24	153-044	Safety decal
6	120-177	Thrust bearing	25	342-421	Outer wing stop
7	134-043	Bushing	26	108-001	Flat washer 1/2"
8	321-484	Spacer	27	100-116	Hexbolt 1/2"-13X1 1/2", Grade 5
9	100-211	Hex bolt 3/8"-16 X 3 1/2", Grade 5	28	321-472	Outer wing latch pin
10	108-018	Lock washer 3/8"	29	104-013	Roll pin 1/4" X 2"
11	102-005	Hex nut 3/8"-16	30	108-004	Flat washer 1"
12	321-510	Outer wing manifold assembly	31	194-502	Cylinder 3" X 10" (includes 32 & 33)
13	198-078	Adaptor 3/4"-16MB - 9/16"-18MJ	32	104-071	Cylinder pin
14	198-031	Adaptor 9/16"-18MB - 9/16"-18MJ	33	104-028	Cotter pin 3/16" X 1 1/2"
15	340-519	Adaptor 3/4"-18MB X 9/16"-18MJ Includes #16	34	198-064	Elbow 3/4"-16MB-9/16"-18MJ 90°
16	340-059	Restrictor 7/16"-20 X 3/8" drilled	35	343-044	Air hose bracket
17	321-475	Intermediate Hinge (includes 18 & 19)	36	100-105	Hex bolt 3/8"-16 X 3/4", Grade 5
18	134-098	Split Bushing	37	108-018	Lock washer 3/8"
19	134-034	Split Bushing	38	153-000	Orthman Decal



PARTS IDENTIFICATION

VERTICAL FOLD OUTER WING



VERTICAL FOLD OUTER WING PARTS LIST

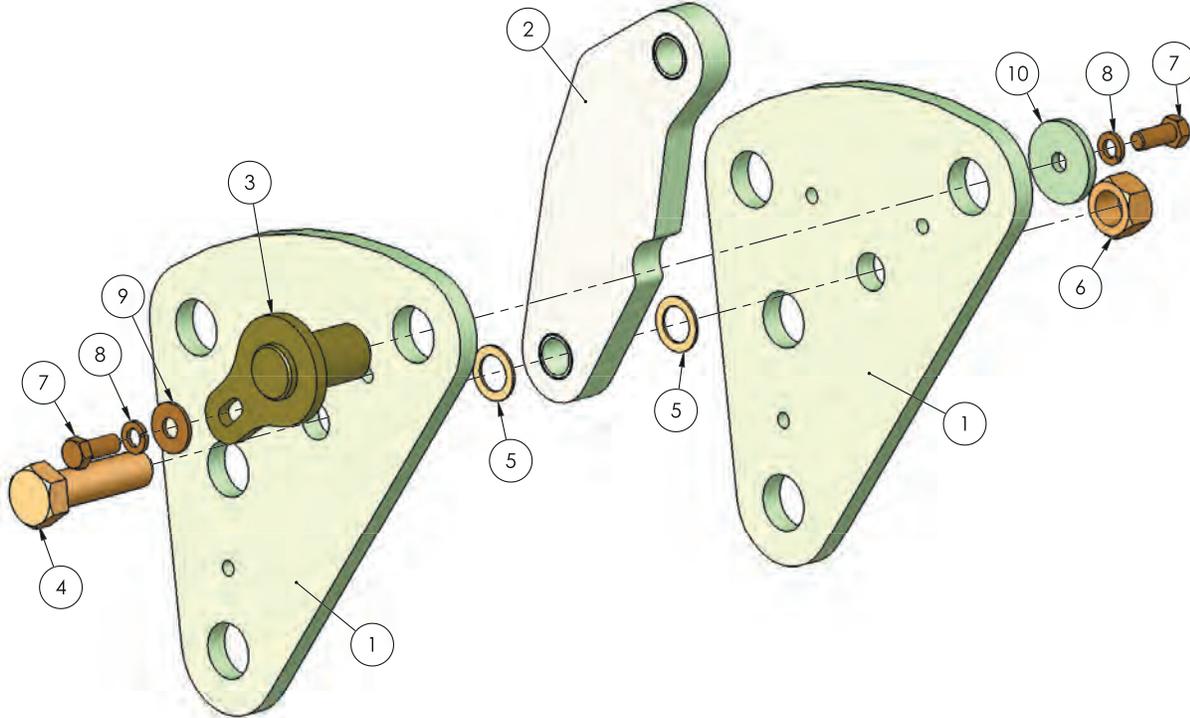
Key	Part #	Description
1	321-205	Midwing - Right
2	321-310	Outer Wing - Right
3	134-094	Split Bushing
4	134-097	Split Bushing
5	110-001	Grease Fitting
6	134-040	Split Bushing
7	341-169	Internal Cylinder Assembly
8	104-065	Linch Pin 5/16" X 1 11/16"
9	321-319	Outer wing lock pin
10	153-044	Decal Important (No Riders/Lower to Ground)
11	153-172	Decal Amber Retroreflective

Key	Part #	Description
12	153-013	Decal Warning
13	108-011	Flat Washer 3/4"
14	108-022	Lock Washer 3/4"
15	100-206	Hex bolt 3/4"-10 X 1 1/2", Grade 5
16	321-317	Outer wing hinge pin
17	153-000	Decal Orthman Trademark
18	152-027	Dock Bumper
19	108-009	Flat Washer 1/2"
20	100-120	Hex bolt 1/2"-13 x 2 1/2", Grade 5
21	100-471	Hex bolt 1 1/4"-12 X 3", Grade 8
22	153-222	Decal 925 Stacker



PARTS IDENTIFICATION

GULL WING

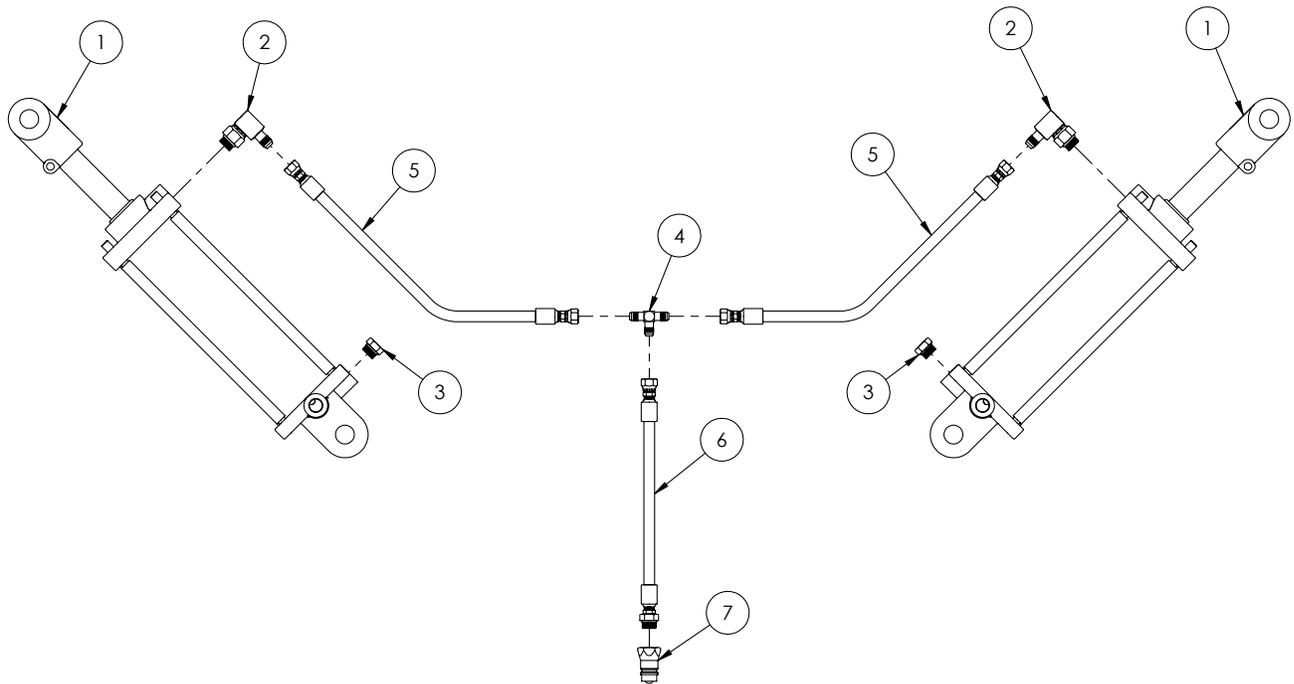


GULL WING PARTS LIST

Key	Part #	Description
1	321-301	Float Link Plate
2	321-302	Cylinder Link (With 134-034 Bushings Installed)
3	351-076	Float Link Pin
4	100-303	1" X 3 1/2" Grade 8 Hex Bolt
5	134-013	Wear Washer
6	102-162	1" Lock Nut
7	100-115	1/2" X 1 1/4" Grade 5 Hex Bolt
8	108-020	1/2" Lock Washer
9	108-009	1/2" Flat Washer
10	333-737	Pin Head



PARTS IDENTIFICATION

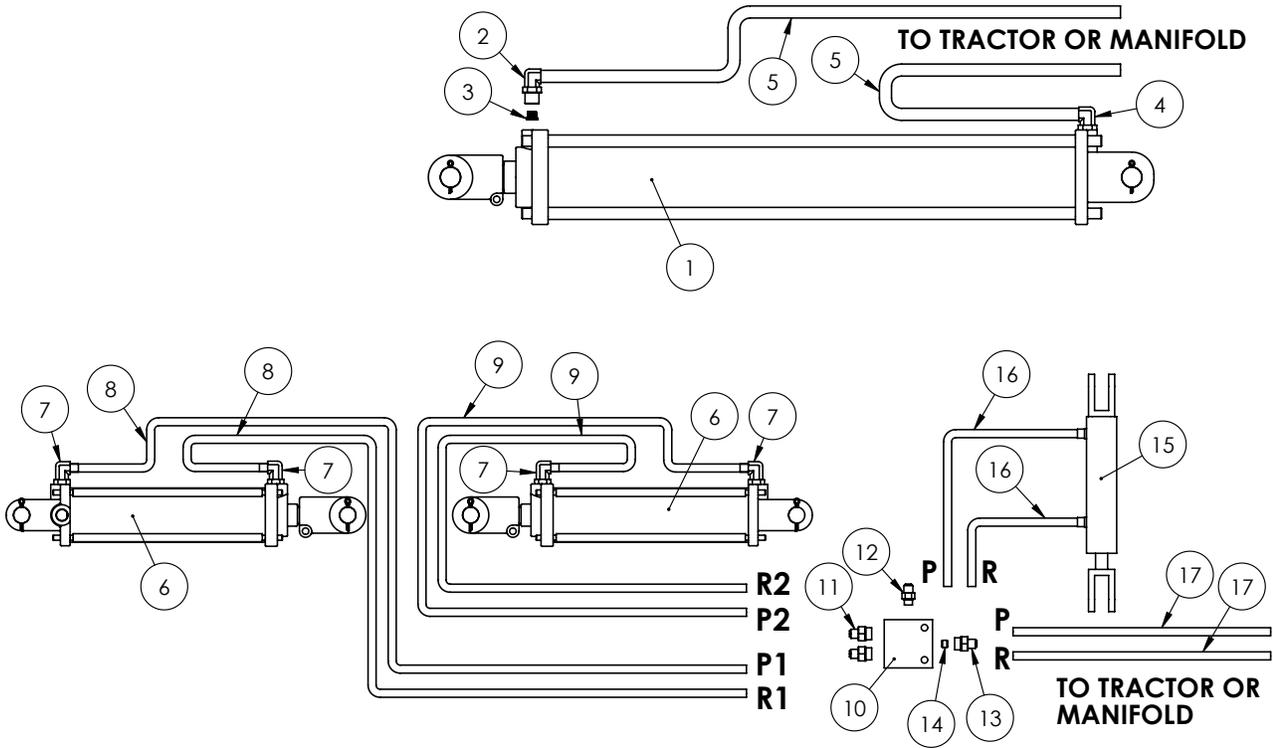
GULL WING - HYDRAULIC LAYOUT**GULL WING - HYDRAULIC LAYOUT PARTS LIST**

Key	Part #	Description
1	194-401	Cylinder (4 X 10 3000psi Tie-rod With Split Rings)
2	198-064	Elbow (3/4mb X 9/16mj 90 Deg)
3	194-233	Breather (3/4mb)
4	198-203	Tee (9/16mj X 9/16mj X 9/16mj)
5	196-233	Hose 3/8" (9/16fjx X 9/16fjx X 66")
6	196-254	Hose 3/8" (9/16fjx X 3/4mb X 60")
7	140-092	Tip (Iso Tractor)
8	152-712	Dustcap For Tip (Green - Not Shown)



PARTS IDENTIFICATION

FRONT FOLD OUTER WING HYDRAULIC LAYOUT



FRONT FOLD OUTER WING HYDRAULIC LAYOUT PARTS LIST

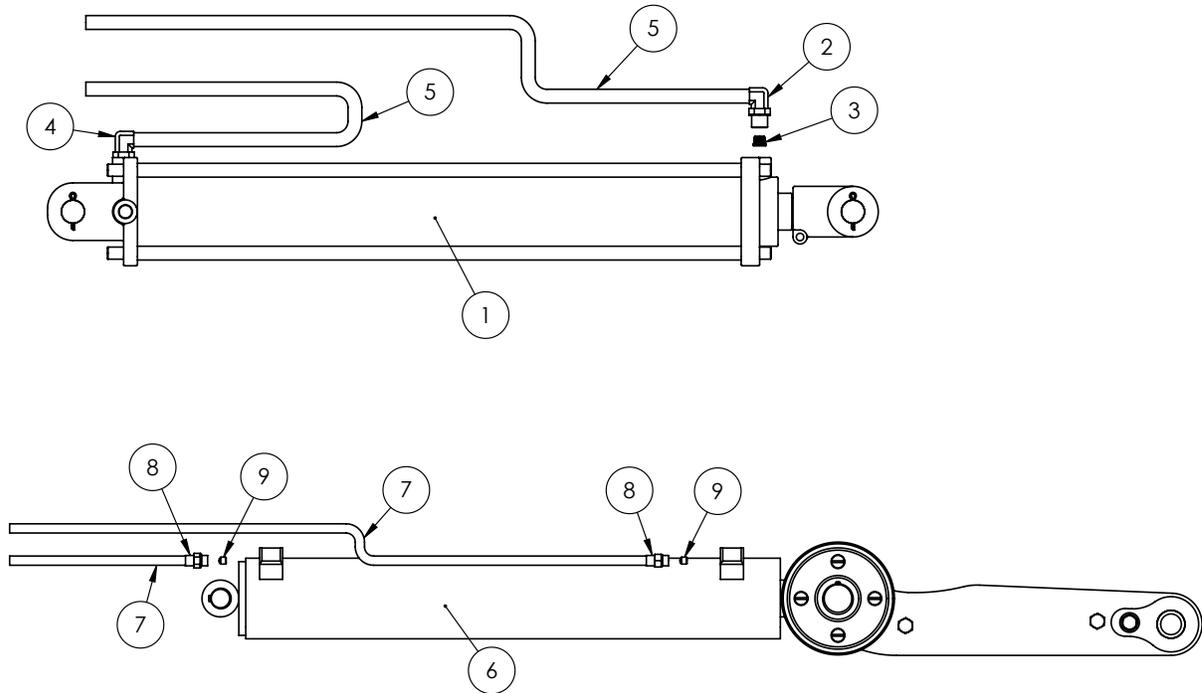
Key	Part #	Description
1	194-266	Cylinder 5" x 30"
2	198-298	Elbow 7/8 MORB x 9/16 MJ - tapped
3	198-299	Restrictor plug
4	198-080	Elbow 7/8 MORB x 9/16 MJ
5	Hose	3/8 Hydraulic hose - 9/16 FJX x 9/16 FJX
6	194-000	Cylinder 3" x 10"
7	198-064	Elbow 3/4 MORB x 9/16 MJ
8	Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX
9	Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX

Key	Part #	Description
10	180-283	Hydraulic manifold block
11	198-078	Adaptor 3/4 MORB x 9/16 MJ
12	198-031	Adaptor 9/16 MORB x 9/16 MJ
13	340-520	Adaptor 3/4 MORB x 9/16 MJ - tapped
14	340-059	Restrictor screw 7/16"-20 x 3/8
15	194-403	Cylinder 1 1/2 x 4"
16	Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX
17	Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX



PARTS IDENTIFICATION

VERTICAL FOLD OUTER WING HYDRAULIC LAYOUT



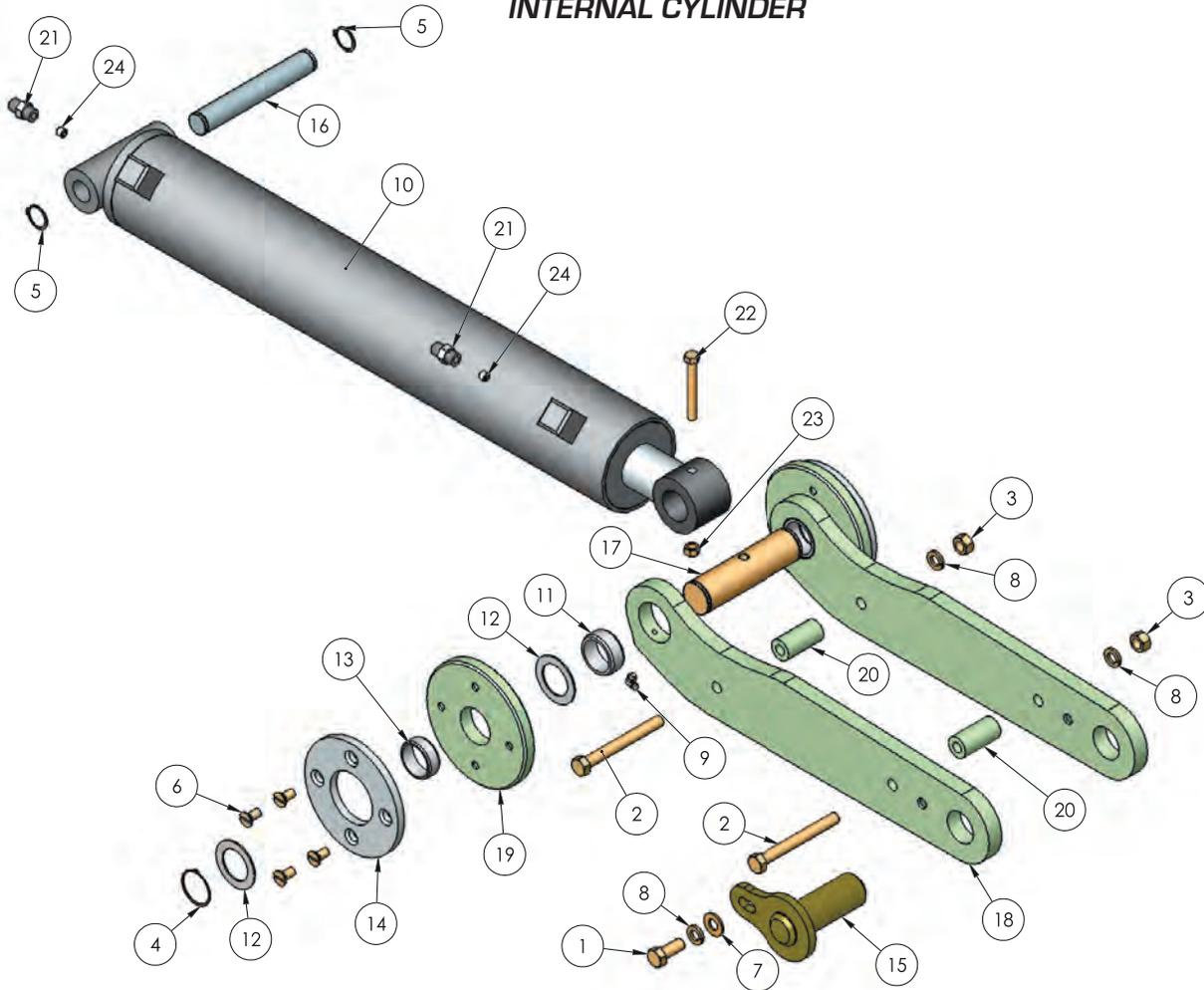
VERTICAL FOLD OUTER WING HYDRAULIC LAYOUT PARTS LIST

Key	Part #	Description
1	194-266	Cylinder 5" x 30"
2	198-298	Elbow 7/8 MORB x 9/16"-18 JIC - tapped
3	198-299	Restrictor plug
4	198-080	Elbow 7/8 MORB x 9/16"-18 JIC
5	Hose	3/8 Hydraulic hose - 9/16 FJX x 9/16 FJX
6	Assem	Internal cylinder assembly
7	Hose	1/4 Hydraulic hose - 9/16 FJX x 9/16 FJX
8	340-078	Adaptor 9/16-18MB - 9/16-MJ - tapped
9	340-057	Restrictor 3/8 x 3/8



PARTS IDENTIFICATION

INTERNAL CYLINDER



INTERNAL CYLINDER PARTS LIST

Key	Part #	Description
1	100-115	Bolt 1/2" x 1 1/4", Grade 5
2	100-125	Bolt 1/2" x 4 1/4", Grade 5
3	102-007	Hex Nut 1/2"
4	104-052	Snap Ring 1 1/2"
5	104-053	Snap Ring 1"
6	106-107	Screw 3/8" x 3/4"
7	108-001	Flat Washer 1/2"
8	108-020	Lock Washer 1/2"
9	110-008	Grease Fitting 1/4" 90 deg.
10	194-499	Cylinder 4" x 24"
11	134-040	Bushing 1.875" x 1.5" x .75"
12	134-041	Bushing 2.25" OD x 1.5" ID

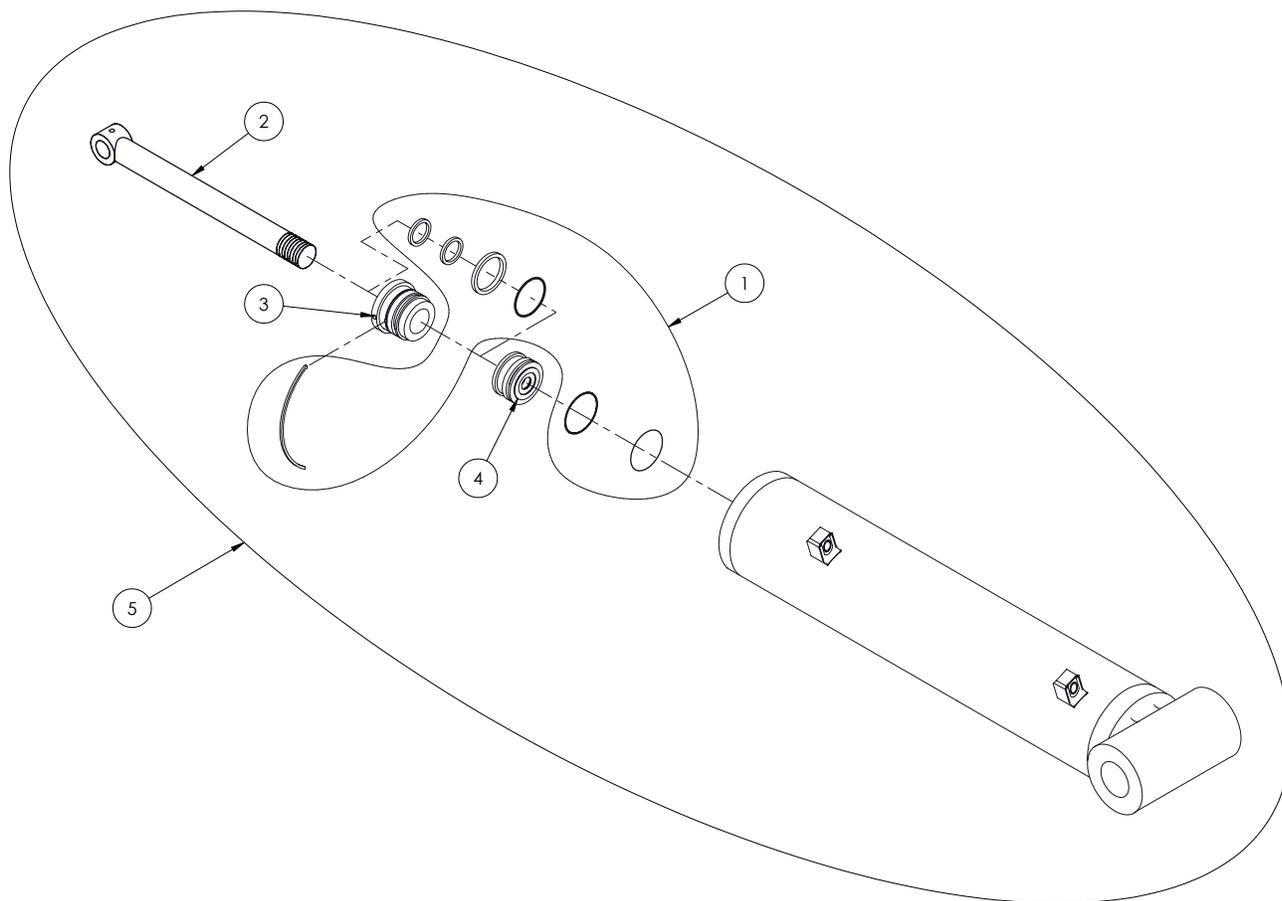
Key	Part #	Description
13	134-047	Bushing 1.75" x .5" x .625"
14	301-512	Friction Plate
15	98145.451	98145.451
16	301-500	Cylinder Pin 3/8" wall tube
17	301-948	Pin 3/8" wall tube
18	301-503	Connecting Strap
19	301-511	Guide Wheel
20	317-714	Spacer Bushing
21	340-078	Adaptor 9/16 MB x 9/16 MJ
22	100-098	Bolt 3/8" x 3", Grade 5
23	102-027	Lock Nut 3/8"
24	340-057	Restrictor





PARTS IDENTIFICATION

CYLINDER BREAKDOWN



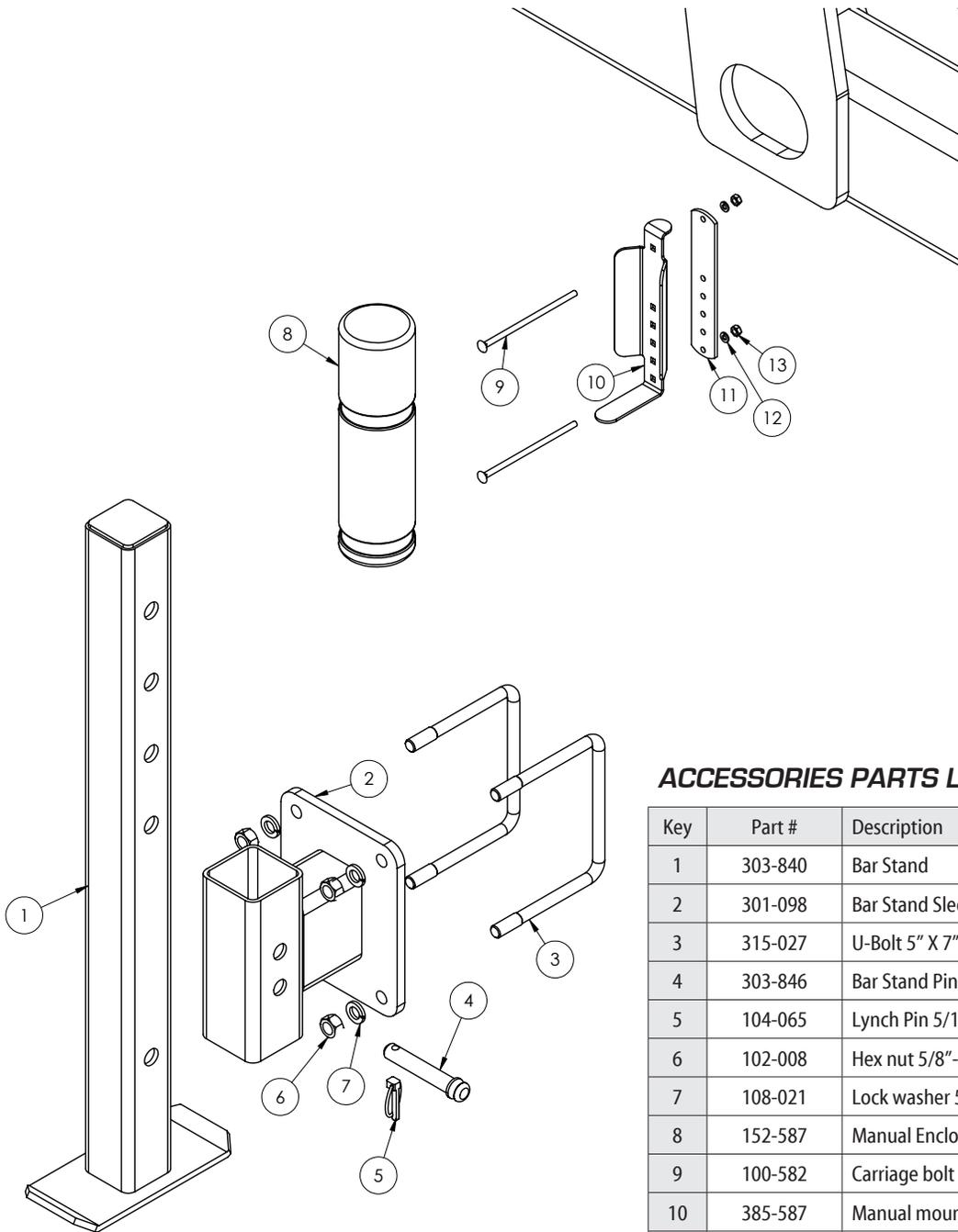
CYLINDER PARTS LIST

Key	Part #	Description
1	194-440	Seal Package
2	194-406	Rod
3	194-288	Gland
4	194-293	Piston
5	194-499	Cylinder 4" x 24"



PARTS IDENTIFICATION

ACCESSORIES



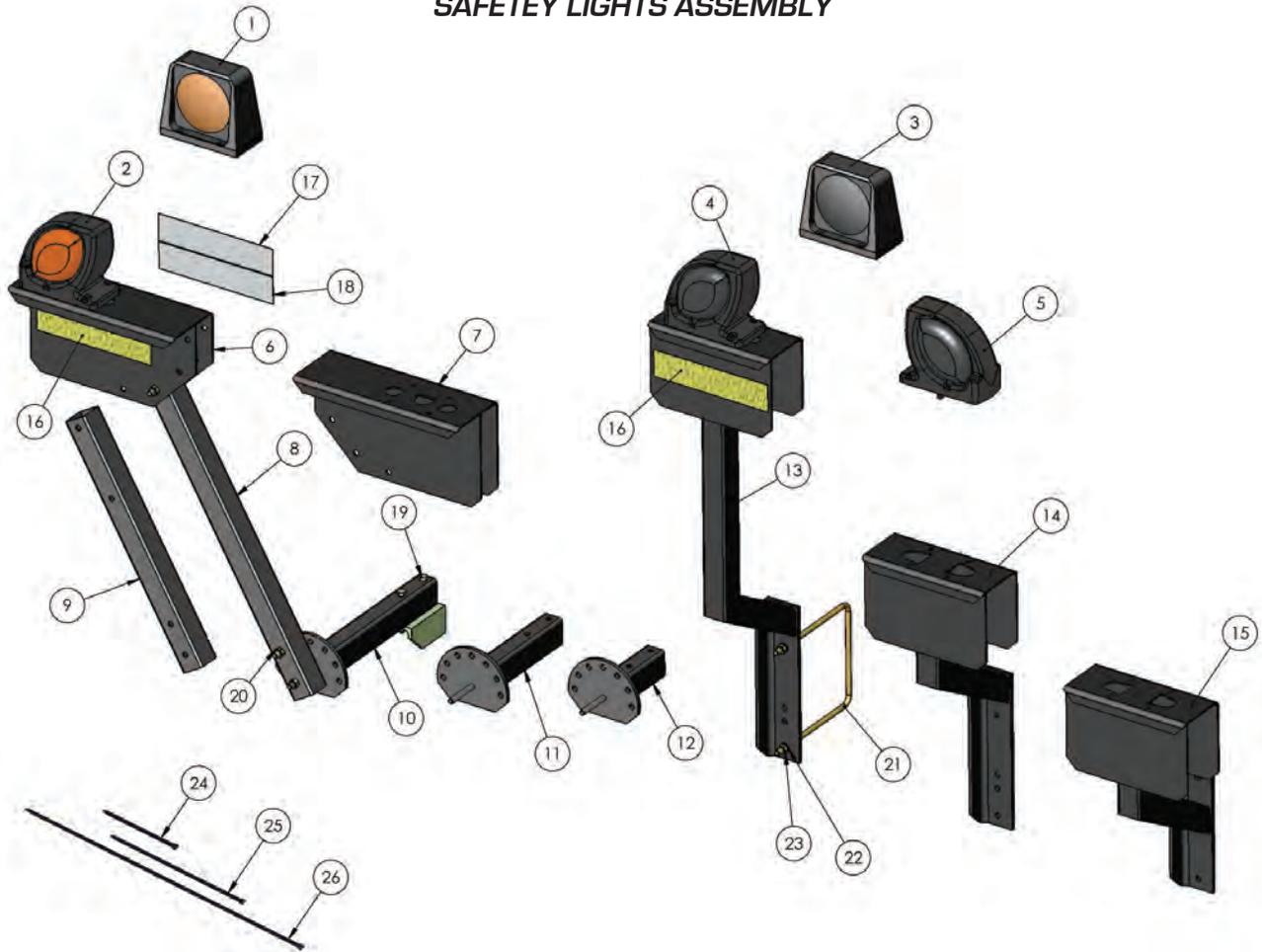
ACCESSORIES PARTS LIST

Key	Part #	Description
1	303-840	Bar Stand
2	301-098	Bar Stand Sleeve
3	315-027	U-Bolt 5" X 7" Bar
4	303-846	Bar Stand Pin
5	104-065	Lynch Pin 5/16" X 1 11/16"
6	102-008	Hex nut 5/8"-11, Grade 5
7	108-021	Lock washer 5/8"
8	152-587	Manual Enclosure Tube
9	100-582	Carriage bolt 1/4"-20 X 6", Grade 2
10	385-587	Manual mount tube bracket
11	333-499	Manual mount bracket strap
12	108-027	Lock washer 1/4"
13	102-002	Hex nut 1/4"-20, Grade 5



PARTS IDENTIFICATION

SAFETEY LIGHTS ASSEMBLY



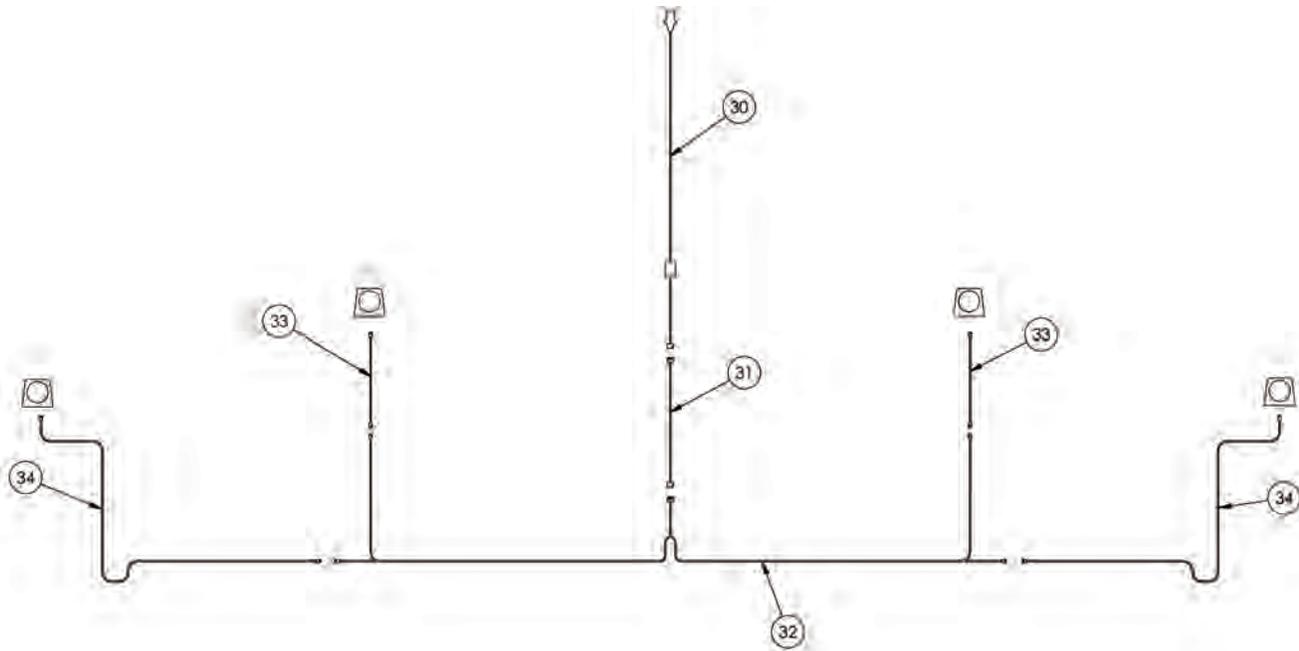
SAFETEY LIGHTS ASSEMBLY PARTS LIST

Key	Part #	Description	Key	Part #	Description
1	152-875	Amber Flashing Light (Wesbar Brand)	15	355-065	Light Bracket (9 1/4" tall)
2	152-950	Amber Flashing Light (Cobo Brand)	16	153-172	Amber Retroreflective (yellow decal)
3	152-874	Red Tail Light (Wesbar Brand)	17	153-173	Red Retroreflective (red decal)
4	152-951	Red Tail Light Right (Cobo Brand) (image shown with red lense to rear)	18	153-171	Orange Florescent decal
5	152-952	Red Tail Light Left (Cobo Brand) (image show with red lense to rear)	19	100-113	3/8 x 2 3/4 Grade 5 Hex Bolt (used on all bolted connections)
6	301-567	Adjustable Light Bracket Right (sometimes used on left for some products)	20	102-056	3/8 Nylon Lock Nut (used on all connections except for u-bolts)
7	301-568	Adjustable Light Bracket Left (sometimes used on right for some products)	21	315-026	U-Bolt 3/8 (7" x 7" toolbar)
8	301-563	Adjustable Light Arm (28 1/4" long)	21	315-025	U-Bolt 3/8 (5" x 7" toolbar)
9	301-035	Adjustable Light Arm (18 1/4" long)	22	108-018	3/8 Lock Washer
10	321-713	Adjustable Light Mount (13 1/4" long)	23	102-005	3/8 Grade 2 Hex Nut
11	301-562	Adjustalbe Light Mount (9 1/8" long)	24	152-021	7" Cable Tie
12	301-037	Adjustable Light Mount (5 3/4" long)	25	152-024	13" Cable Tie
13	301-574	Center Light Bracket (26 1/2" tall from bar to light mounts) (decals not included)	26	152-023	28" Cable Tie
14	301-573	Center Light Bracket (14 1/4" tall)	26	152-055	12" Cable Tie (not shown)



PARTS IDENTIFICATION

LIGHTS AND CABLES ASSEMBLY



LIGHTS AND CABLES ASSEMBLY PARTS LIST

Key	Part #	Description
30	154-629	Module Cable 84" (Wesbar Brand)
	154-682	Module Cable 192" (Wesbar Brand)
	154-829	Front Module Harness 84" (Cobo Brand)
	154-832	7 Pin Protective Boot (Cobo Brand) (not shown)
	154-834	Replacement Module (Cobo Brand) (not shown)
31	154-833	Front Harness Extension 10 foot
32	154-630	Wishbone Light Cable 74" (Wesbar Brand)
	154-830	Rear Wishbone Harness 74" (Cobo Brand)
33	154-655	Red Light Extension Cable 13 foot (Wesbar Brand)
	154-855	Red Light Extension Cable 13 foot (Cobo Brand)
34	154-631	Amber Light Extension Cable 13 foot (Wesbar Brand)
	154-831	Amber Light Extension Cable 13 foot (Cobo Brand)
		601-995 Ag Light Package for 925 Stacker Bars (lights, cables, brackets, decals, etc.)154-629



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 implement.

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



USE BAR STANDS AND CYLINDER STOPS 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.



AVOID ENTANGLEMENT. Never lubricate or service implement in motion. Keep away from power driven parts when in motion. Disengage power sources prior to maintaining 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 implement. Injury or death can result from being trapped between the tractor and implement.



Escaping pressurized hydraulic fluid can penetrate skin, resulting in injury or death. Relieve hydraulic system pressure before connecting or disconnecting 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.



MAINTENANCE

⚠ PRACTICE SAFE MAINTENANCE



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.

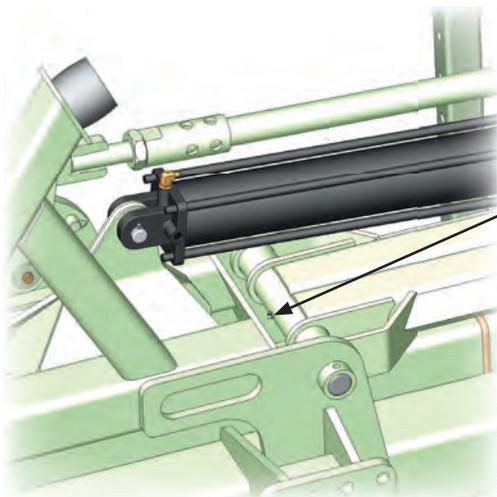


LUBRICATION

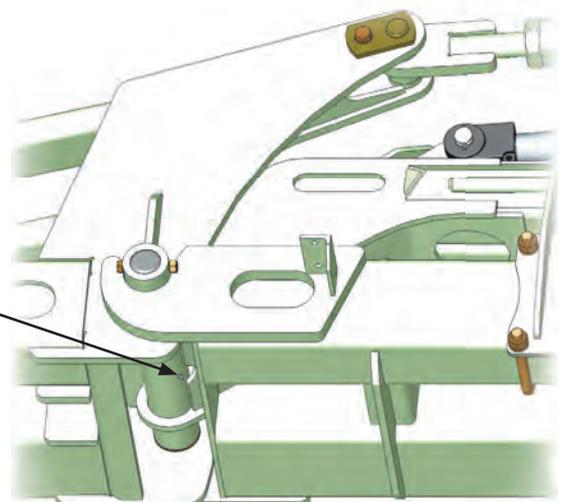
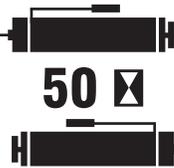
Grease all zerks per 925 toolbar.

- Front Fold Outer Wing: 8 zerks
- Vertical Outer Wing: 14 zerks

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



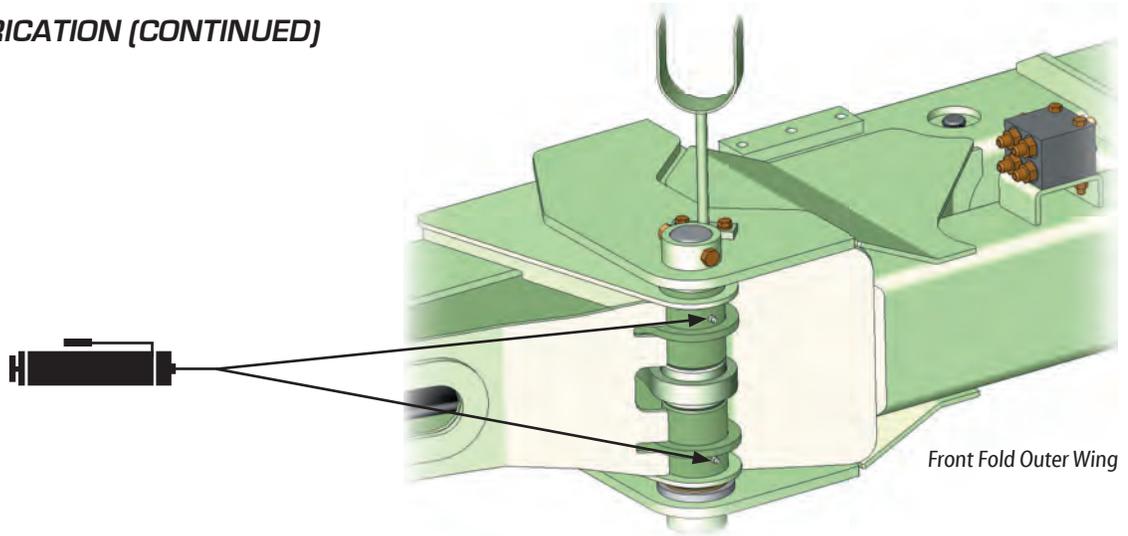
Swing Truss



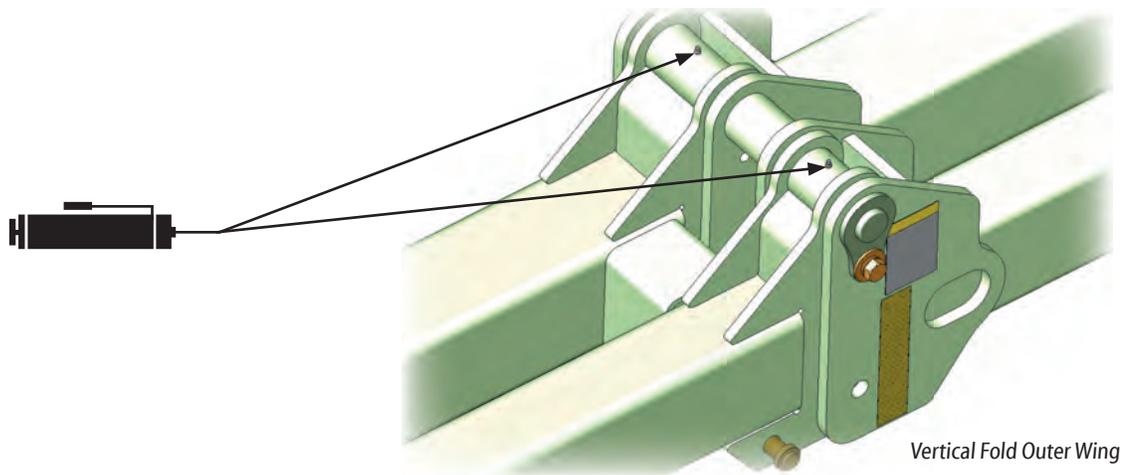
Swing Truss



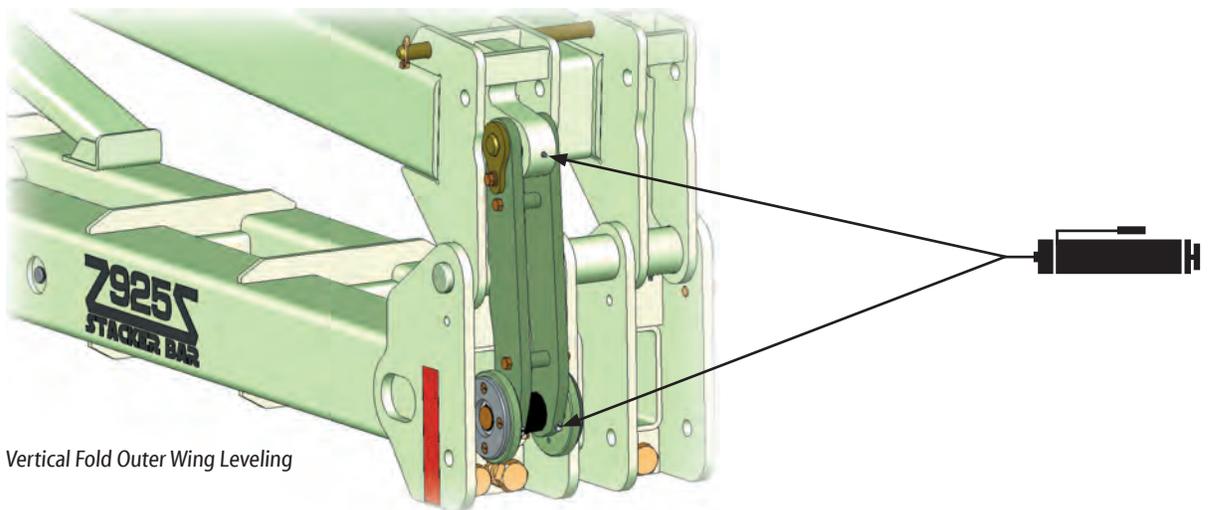
LUBRICATION (CONTINUED)



Front Fold Outer Wing



Vertical Fold Outer Wing



Vertical Fold Outer Wing Leveling



MAINTENANCE

IMPLEMENT INSPECTION



When replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore 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 proper torque. (pg. 8-5)



Before each use, check hardware for wear and proper torque. (pg. 8-5) Replace damaged or missing hardware with hardware of an identical grade to restore 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 to operating 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. (pg. 2-8 to 2-11)

Grease all zerks regardless of hourly interval prior to storage. (pg. 8-2 to 8-3)



Check all hardware according to torque specifications prior to storage. (pg. 8-5)

Replace all worn or damaged parts prior to storage.



Store inside if possible. Storing implement inside will prolong the life of the 925 Stacker Bar components.

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



TORQUE SPECIFICATIONS

Recommended dry bolt torque

SAE GRADE 5

Bolt Size	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	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

