

W & A

150° FOLDING TOOL BAR

OPERATOR'S MANUAL

TO THE OWNER:

Congratulations on your purchase of a new W & A 150° Folding Tool Bar. Your selection is an indication of your awareness of the need for intensive engineering, research, design, durability and dependability that has gone into its production.

Be sure to read all the instructions in this manual before placing the machine in use. Safety precautions along with adjustments should be learned and also taught to anyone who operates the machine. Remember, an implement which is properly maintained, adjusted, and safely operated saves time, labor and money.

After the operating season, thoroughly clean your folding tool bar and inspect it. Preventive maintenance pays dividends. Your dealer has original equipment parts which assure proper fit and best performance.

Thank you for purchasing this W & A product.

For Your Convenience, Please Fill In The Following:

Model: _____ No: _____

Dealer Name: _____ Date Purchased: _____



Quality Products from

W & A MANUFACTURING COMPANY

P.O. Box 5238, Pine Bluff, Arkansas 71611

Phone: (870) 534-7420

Fax: (800) 336-1318

Website: www.wamfgco.com

IMPORTANT **SAFETY INSTRUCTIONS**



This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury or death. Follow the recommended precautions!

SI NO LEE INGLES, PIDA AYUDA A AIGUIEN QUE SI LO LEA PARA QUE LE TRADUZCA LAS MEDIDAS DE SEGURIDAD.

SAFETY PRECAUTIONS

- Safety of the operator and bystanders is one of the main concerns in designing and developing an implement. However, every year accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this manual. To avoid personal injury or death, study the following precautions and insist those working with your, or for you, follow them.
- Before operating your 150° Folding Tool Bar, thoroughly read and understand your operator's manual. If you do not understand any portion of the operator's manual, contact your dealer or W & A Manufacturing Company immediately.
- Train all new personnel and review instructions annually with existing workers. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Under no circumstances should children be allowed to operate this equipment.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- Clear the area of people, especially small children, before starting unit.
- Do not allow riders at any time.
- Place all controls in neutral, stop tractor engine, set park brake, and wait for all moving parts to stop before service, adjusting, repairing or unplugging.
- If safety signs are missing, illegible, or damaged, they should be replaced. See list of safety signs. Keep safety signs clean and legible.

- Furnish this manual to the new owner if the machine is sold.
- Inspect machine daily for worn parts, hydraulic leaks, frayed hoses, and make necessary repairs. Tighten all bolts and make sure all fasteners are in place.
- Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **DON'T TRY IT.**
- Un-authorized modifications to the machine may impair the function and/or safety and affect machine life. Make NO un-authorized modifications. DO NOT REMOVE NOR MODIFY orifice fittings found in hydraulic cylinders.
- Never stand between implement and tractor when hitching. Extreme care should be used to prevent injury to the hands or fingers. *Stop tractor engine and set brake before installing hitch pins.*
- Lower wings and machine before servicing, adjusting, leaving, or storing machine.

SAFETY TRAINING

- Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.
- In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance and storage of this implement.
- It has been said, "The best safety device is an informed, careful operator." We ask you to be that kind of an operator. It's the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Accidents can be avoided.
- Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual of your tractor, before assembly or operating, to acquaint yourself with the machines. If this machine is used by any person other than yourself, or is loaned or rented, it is the 150° Folding Tool Bar owner's responsibility to make certain that the operator, prior to operating:
 1. Reads and understands the operator's manual.
 2. Is instructed in safe and proper use.

- Know your controls and how to stop tractor, engine, and implement quickly in an emergency. Read this manual and the one provided with your tractor.
- Train all new personnel and review instructions frequently with existing workers. Be certain only properly trained and physically able person will operate the tool. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.

TRANSPORTING

- Comply with all federal, state, and local laws for implement transport on public roads.
- Watch for obstructions overhead and to side while transporting.
- Do not drive at speeds over 20 MPH (33 kph). Always drive at a reasonable speed to maintain control for the situation at hand.
- When descending steep grades select a sufficiently low gear to maintain proper control with minimum braking. Do not “Free Wheel”. Always keep the tractor in gear.
- Never transport machine unless hydraulic systems are completely charged with hydraulic oil and transport safety locks are engaged.
- Raised wings can contact electric utility lines and overhead obstructions. Severe shock, injury, or death can result. Electrocutation can occur without direct contact. Drive carefully. Measure overall transport height and be sure of clearance.
- When transporting on a road or highway, use adequate warning symbols, reflectors, and SMV (slow moving vehicle) emblem as required. Do not transport at night or low light conditions.

OPERATIONS

- The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators must read and understand this entire manual, paying particular attention to safety and operating instructions prior to using. If there is something in this manual you do not understand, ask your supervisor, your dealer, or phone W&A Manufacturing Company (870-534-7420) to have it explained to you.

- Most accidents occur because of neglect or carelessness. Keep all helpers and bystanders at least a hundred feet from an operating implement. Only properly trained people should operate this machine.
- Never start or operate machine unless sitting on tractor seat.
- Always make sure hydraulic system is fully charged with oil before use. Failure to bleed the system of all air can cause folded wings or entire machine to drop suddenly.
- Make sure front of tractor is properly weighted for safe steering control and operation.
- Clear the area of people, especially small children, before starting the unit.
- Do not reach or place yourself under equipment until it is blocked securely.
- Do not allow riders on the Folding Tool Bar or tractor at any time. There is no safe place for any riders.
- Do not operate hydraulic wings and/or arms until you are sure all bystanders are clear of area.
- Sweeps and marker blades are sharp. Use extreme care when adjusting or servicing. Keep hands and feet from beneath sweeps and blades.

SERVICE/MAINTENANCE

- Before working on this machine stop the tractor, set the brakes, disengage the PTO and power drive, shut off the engine and remove the ignition key.
- Securely block machine when working on or under it. To prevent injury in case of hydraulic failure or inadvertent lowering by another person, unfold wings and arms and securely block.
- Always use the proper tools or equipment for the job.
- Properly tighten all hardware.
- Relieve pressure from hydraulic system before servicing or disconnecting from tractor.
- Inspect all hydraulic hoses and components to be sure they are in good condition and that all connections are tight.

- Escaping hydraulic oil under pressure can produce enough force to penetrate the skin, causing serious personal injury or infection. Before applying pressure to the system, be sure all connections are tight and that lines, pipes, and hoses are not damaged. Before disconnecting lines, be sure to relieve all pressure. Hydraulic oil escaping from a very small hole can be almost invisible. Wear proper eye and hand protection and use a piece of cardboard or wood - not your hands - to search for suspected leaks. If injured by escaping hydraulic oil, **seek emergency medical attention immediately.** Serious infection or reaction can develop if proper medical treatment is not administered immediately.
- When remote cylinders are connected to the hydraulic system, cycle the control lever about three times to remove air from the cylinder and hoses. With air in the system, raised equipment can drop accidentally and cause personal injury or damage.
- Never use machine until all guards and safety devices are securely in place.

STORAGE

- Lower wings and machine before servicing or storing machine.
- Extend parking stands and lock pin in place before lowing machine.
- Following operation, or when unhooking the implement, stop the tractor, set the brakes, disengage the PTO, shut off the engine and remove the ignition key.
- Store the unit in an area away from human activity.
- Do not allow children to play on or around the stored unit.



UNDERSTAND THAT YOUR SAFETY AND THE SAFETY OF OTHER PERSONS IS MEASURED BY HOW YOU SERVICE AND OPERATE THIS MACHINE.



LEARN ALL SAFETY RULES FOR THIS 150° FOLDING TOOL BAR AND TEACH THEM TO ANYONE WHO MIGHT OPERATE IT.

SAFETY SIGNS

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



A. **WARNING** -
Operator's Manual
Sign Number 461123



B. **DANGER** -
Crushing Hazard
Sign Number 461138



C. **WARNING** -
High pressure Fluid Hazard
Sign Number 461113



D. **DANGER** -
Electrocution Hazard
Sign Number 461137

E. **AMBER REFLECTORS** -
Also located at front ends
of wings. Total of four
required.
Sign Number 461200

N/I. **RED REFLECTORS** -
Located on rear of bar.
On hinges and ends of wings.
Total of four required.
Sign Number 461201



F. **WARNING** -
Overhead Wing Hazard
Sign Number 461135

LUBRICATION & MAINTENANCE



Lower Wings and Unit Before Servicing, Adjusting or Leaving Unit.

DAILY OR AFTER 10 HOURS OF OPERATION:

Grease wing pivot, folding arms and following arms.

Check that all fasteners and keepers are in place and secure. Special attention should be given to roll pins securing wing pivot pins, folding arms and following arms.

PERIODICALLY:

Thoroughly clean and inspect your Folding Tool Bar. Tighten all bolts as needed and check that all fasteners and keepers are in place and secure.



Be sure all hydraulic connections are tight and hoses are not worn or damaged. Hydraulic oil leaking under pressure can penetrate the skin and cause infection or other injury.

TO PREVENT PERSONAL INJURY:

Relieve all pressure before disconnecting lines. Before applying pressure, make sure all connections are tight and in good condition. Never use your hand to check for suspected leaks under pressure. Wear proper eye and hand protection and use a piece of cardboard or wood for this purpose. If injured by leaking fluid, SEEK EMERGENCY MEDICAL ATTENTION IMMEDIATELY.

Check cylinder pins and hitch pins for wear and replace as required.

Grease all bearings and hinge assemblies before storing implement for an extended period of time. Apply heavy grease to extended cylinder rods for rust protection.

Review safety instructions with all operators annually.



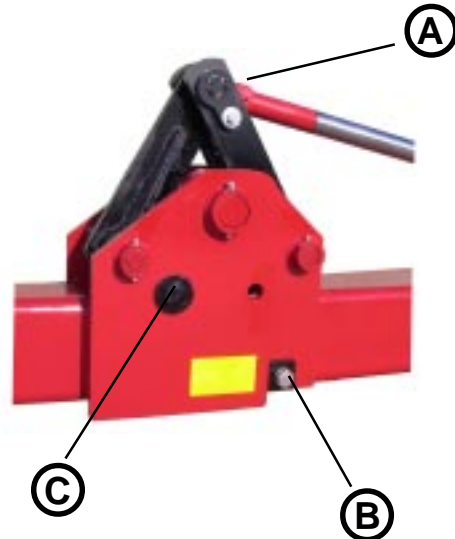
*Be Extra Cautious
around Moving Machinery!*

ADJUSTMENTS & OPERATION



Lower Wings and Unit Before Servicing, Adjusting, or Leaving Unit.

1. Make all adjustments on a flat level service.
2. Level wings by adjusting clevis (A) on cylinders. Large adjustments can be made by changing contact side of "stop blocks" (B). There are three different positions on each block. Be sure that all four blocks are set the same.
3. Gauge wheels should be set to allow tool to work at the desired depth and remain level.
4. When remote cylinders are connected to the hydraulic system, cycle the control lever about three times to remove air from the cylinder and hoses. With air in the system, raised equipment can drop accidentally and cause personal injury or damage.
IMPORTANT: Orifice hole size is correct for safe operation of Folding Tool Bar. Do not drill nor remove orifice. *Warranty is void if orifices are modified or removed.*
5. Never attempt to turn with implement in down or working position.
6. Lower wings before lowering unit to unhook tractor. Lower parking stands if used with attached implements.
7. Wing Lock Pin (C) can be used to lock down wings when desired. Always remove Wing Lock Pins before folding unit.



Install proper ballast on front of tractor to insure safe and proper steering at all times.



DO NOT LOWER wings until you are first sure that nobody is standing under or near tool bar.

WARRANTY

W & A Manufacturing Company warrants all products manufactured and sold by it to be free of defects in material and workmanship and to perform as represented, subject to the following conditions

- (A) Warranty applies only if installed and operated according to instructions.
- (B) Written authorization must be obtained prior to return of material for inspection. Material is to be returned prepaid.
- (C) Warranty does not apply to labor for parts replacement, nor does it apply to damage by accident, abuse, misuse or failure caused by not operating according to instructions.
- (D) Warranty is void if changes are made in the product in the field by other than a W & A representative or by instructions from the factory.

W & A Manufacturing Company reserves the right at any time to make changes in the design, materials and/or specifications of any of its products without thereby becoming liable to make similar changes in equipment previously manufactured.

Written authorization must be obtained prior to the return of any equipment purchased from W&A Manufacturing Company. No penalties will be charged if equipment had been placed on display by a W & A representative or if reasons for return are errors or faults of W & A Manufacturing Company. If return is for the benefit of the customer and the equipment is returned by prepaid freight in a new, unused and resalable condition, credit (based on original purchase price) will be issued less a 10% fee for restocking and other handling expenses.

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SAFETY PRECAUTIONS

- Safety of the operator and bystanders is one of the main concerns in designing and developing our equipment. However, every year accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this manual. To avoid personal injury or death, study the following precautions and insist those working with your, or for you, follow them.
- Before operating your Folding Tool Bar, thoroughly read and understand your operator's manual. If you do not understand any portion of the operator's manual, contact your dealer or W & A Manufacturing Company immediately.
- Train all new personnel and review instructions annually with existing workers. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Under no circumstances should children be allowed to operate this equipment.
- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- Clear the area of people, especially children, before starting unit.
- Do not allow riders at any time.
- Place all controls in neutral, stop tractor engine, set park brake, and wait for all moving parts to stop before service, adjusting, or repairing.

- If safety signs are missing, illegible, or damaged, they must be replaced. See list of safety signs. Keep safety signs clean and legible.
- This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with farm machinery and trained in this equipment's operations. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.
- Furnish this manual to the new owner if the machine is sold.
- Use a tractor equipped with a Roll Over Protective System (ROPS).
- Inspect machine daily for worn parts, leaks, and make necessary repairs. Tighten all bolts and make sure all fasteners are in place.
- Never exceed the limits of a piece of machinery.. If its ability to do a job, or to do so safely, is in question - **DON'T TRY IT.**
- Do not modify the equipment in any way. Unauthorized modifications result in serious injury or death and may impair the function and life of the equipment. **DO NOT REMOVE** orifice fittings from hydraulic cylinders.
- Never stand between implement and tractor when hitching. Extreme care should be used to prevent injury to the hands or fingers. *Stop tractor engine and set brake before installing hitch pins.*
- Unfold wings and lower machine before servicing, adjusting, leaving, or storing.

SAFETY TRAINING

- Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.
- In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance and storage of this implement.
- It has been said, "The best safety device is an informed, careful operator." We ask you to be that kind of an operator. It's the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. Accidents can be avoided.

- Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual of your tractor, before assembly or operating, to acquaint yourself with the machines. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to operating:
 1. Reads and understands the operator's manual.
 2. Is instructed in safe and proper use.
- Know your controls and how to stop tractor, engine, and implement quickly in an emergency. Read this manual and the one provided with your tractor.
- Train all new personnel and review instructions frequently with existing workers. Be certain only properly trained and physically able person will operate the implement. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.

TRANSPORTING

- Never transport machine unless hydraulic systems are completely charged with hydraulic oil and transport safety locks are engaged.
- When transporting folding tool bar, safety chains located near each hinge, must be installed on wing clevis pins and secured with a klik pin.
- Raised wings can contact electric utility lines and overhead obstructions. Severe shock, injury, or death can result. Electrocutation can occur without direct contact. Drive carefully. Measure transport height and be sure of clearance.
- Comply with all federal, state, and local laws for implement transport on public roads.
- At all times, when driving the tractor and equipment on the road or highway under 20 mph (32 kph) use flashing amber warning lights and a slow moving vehicle (SMA) identification emblem. Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
- Plan your route to avoid heavy traffic.
- Do not drink and drive.
- Turn curves or go up and down hills at a low speed and at a gradual steering angle. Make certain that at least 20% of the tractors weight is on the front wheels to maintain safe steerage. Slow down on rough or uneven surfaces.
- Never allow riders on either tractor or implement.

OPERATIONS

- The use of all equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators must read and understand this entire manual, paying particular attention to safety and operating instructions prior to using. If there is something in this manual you do not understand, ask your supervisor, your dealer, or phone W&A Manufacturing Company (870-534-7420) to have it explained to you.
- Most accidents occur because of neglect or carelessness. Keep all helpers and bystanders at least a hundred feet from operating equipment. Only properly trained people should operate this machine.
- Always make sure hydraulic system is fully charged with oil before use. Failure to bleed the system of all air can cause folded wings or entire machine to drop suddenly.
- Make sure front of tractor is properly weighted for safe steering control and operation.
- Do not operate hydraulic wing and/or arms until you are sure all bystanders are clear of area.
- Always remove wing safety chains before attempting to unfold wings. Failure to do so may cause damage to the tool bar.
- Clear the area of people, especially children, before starting unit.
- Stop the tractor immediately upon striking an obstruction. Turn the engine off, remove key, inspect and repair any damage before resuming operation.
- Stay alert for uneven terrain, rocks and roots in the terrain and other hidden hazards.
- Keep away from drop-offs and hazards that could cause roll over.

SAFETY FIRST



SERVICE/MAINTENANCE

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Before working on this machine stop the tractor, set the brakes, disengage the PTO and power drives, shut off the engine and remove the ignition key.
- Securely block machine when working on or under it. To prevent injury in case of hydraulic failure or inadvertent lowering by another person, unfold wings and arms and securely block.
- Relieve pressure from hydraulic system before servicing or disconnecting from tractor.
- Inspect all hydraulic hoses and components to be sure they are in good condition and that all connections are tight.
- Escaping hydraulic oil under pressure can produce enough force to penetrate the skin, causing serious personal injury or infection. Before applying pressure to the system, be sure all connections are tight and that lines, pipes, and hoses are not damaged. Before disconnecting lines, be sure to relieve all pressure. Hydraulic oil escaping from a very small hole can be almost invisible. Wear proper eye and hand protection and use a piece of cardboard or wood – not your hands – to search for suspected leaks. If injured by escaping hydraulic oil, **seek emergency medical attention immediately.** Serious infection or reaction can develop if proper medical treatment is not administered immediately.
- Periodically tighten all bolts and nuts and check that all cotter pins are properly installed to ensure unit is in a safe condition.
- When completing a maintenance or service function, make sure all safety shields and guards are installed before placing unit in service.
- Always use the proper tools or equipment for the job.
- After servicing, be sure all tools, parts and service equipment are removed from the machine.
- Do not allow debris, grease or oil to build up on any part of the machine.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your implement to original specifications. W&A Manufacturing Company will not be responsible for injuries or damages caused by the use of unapproved parts and/or accessories.
- Never use machine until all guards and safety devices are securely in place.



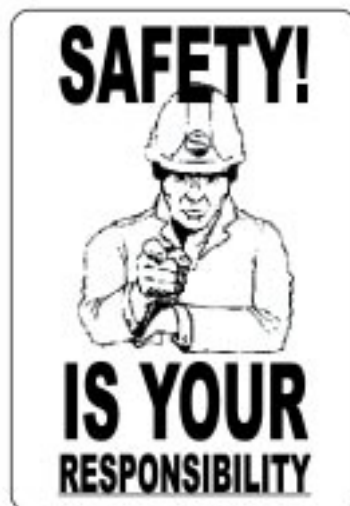
**SAFETY FIRST --
PROCEED CAREFULLY
AND WITH CAUTION**

STORAGE

- Following operation, or when unhooking the implement, stop the tractor, set the brakes, disengage the PTO, shut off the engine and remove the ignition keys.
- Unfold wings and lower unit before placing unit in storage.
- Clean and inspect the machine for worn parts, frayed or leaking hoses, and make necessary repairs before placing unit in storage.
- Store the unit in an area away from human activity.
- Do not allow children to play on or around the stored unit.

SAFETY SIGNS

- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs are available from your dealer or W & A Manufacturing Company. Phone (870) 534-7420.

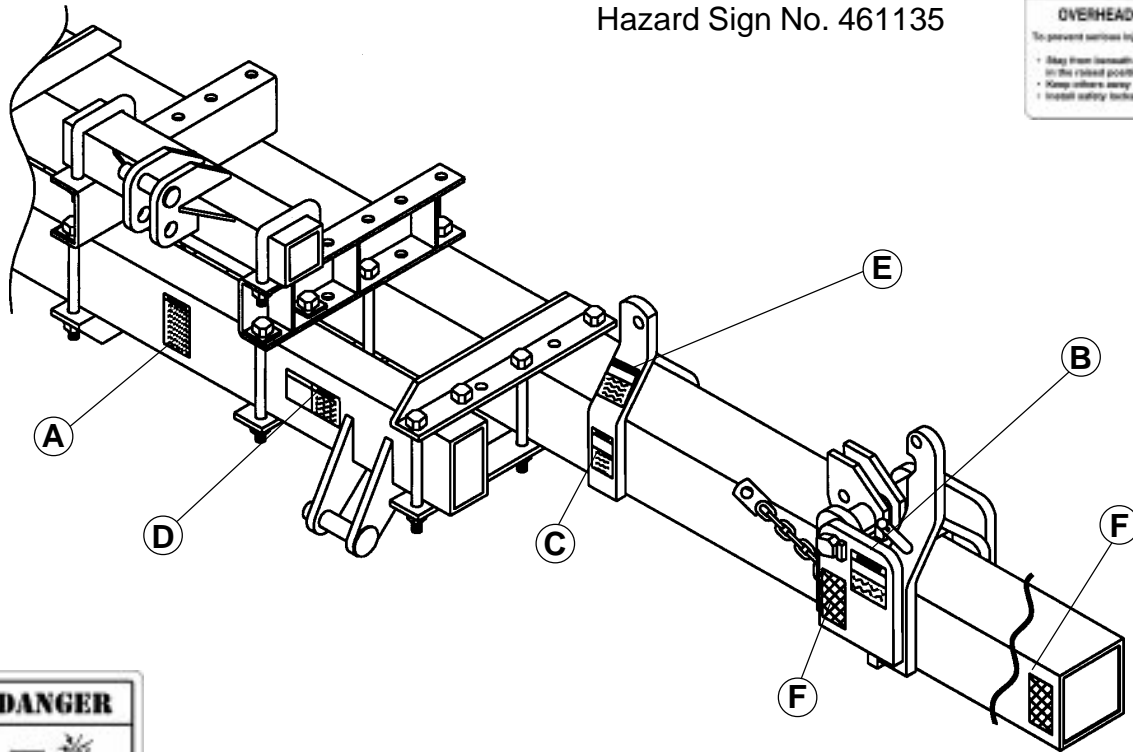




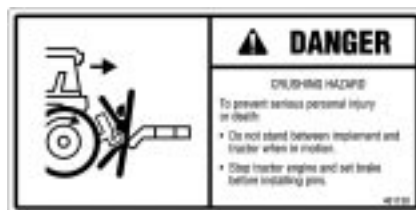
A. WARNING - Operators Manual
Sign Number 461123



B. WARNING – Overhead Wing
Hazard Sign No. 461135



C. WARNING – Electrocutation Hazard
Sign Number 461137



D. DANGER - Crushing Hazard
Sign Number 461138

E. WARNING - High Pressure Fluid
Hazard Sign Number 461113



F. Amber Reflectors. Sign Number 461200 are located at both ends of front side of center section and wings.

N/I. Red Reflectors. Sign Number 461201 are located at both ends of rear side of center section and wings.

LUBRICATION & MAINTENANCE



Lower Wings and Unit Before Servicing, Adjusting or Leaving Unit.

DAILY OR AFTER 10 HOURS OF OPERATION:

Retighten all bolts and check that all fasteners and keepers are in place and secure. Special attention should be given to wing pivot bolts.

Grease wing pivot bolts.

PERIODICALLY:

Thoroughly clean and inspect your folding tool bar. Tighten all bolts as needed and check that all fasteners and keepers are in place and secure.

Be sure all hydraulic connections are tight and hoses are not worn or damaged. Hydraulic oil leaking under pressure can penetrate the skin and cause infection or other injury.

TO PREVENT PERSONAL INJURY:

Relieve all pressure before disconnecting lines. Before applying pressure, make sure all connections are tight and in good condition. Never use your hand to check for suspected leaks under pressure. Wear proper eye and hand protection and use a piece of cardboard or wood for this purpose. If injured by leaking fluid, SEE YOUR DOCTOR IMMEDIATELY.

Check cylinder pins and hitch pins for wear and replace as required.

Grease all bearings before storing implement for an extended period of time. Apply heavy grease to extended cylinder rods for rust protection.

Review safety instructions with all operators annually.



*Be Extra Cautious
around Moving Machinery!*

ADJUSTMENTS & OPERATION



Lower Wings and Unit Before Servicing, Adjusting, or Leaving Unit.

1. Make all adjustments on a flat level service.
2. Adjust wings to parallel with center section using set screws at the bottom of each end of the center section. Detail No. 1.
3. Adjust yoke clevis on each hydraulic cylinder rod so that locking arm snaps and almost touches the wing anchor lug when the cylinder is fully extended. Detail No. 2. This over-center mechanical lock keeps the wings locked down when the implement is in use. When the arm goes over-center and locks, there is a snapping sound. After several hours of use, this procedure may need to be repeated to assure proper locking.
4. Gauge wheels should be set to allow tool to work at desired depth.
5. Never attempt to turn with implement in down or working position.



Install proper ballast on front of tractor to insure safe and proper steering at all times.



When transporting folding tool bar, safety lock chains found near the end of each folding cylinder, must be installed on wing pins with klik pins provided. Detail No. 4. **IMPORTANT:** Always remove these safety lock chains before attempting to unfold the wings. Failure to do so will cause damage to the tool bar. Replace safety lock chain No.301361 if missing or inoperable. **DO NOT LOWER** wings until you are first sure that nobody is standing under or near tool bar.



ASSEMBLY



EXTREME CARE SHOULD BE USED DURING ASSEMBLY TO PREVENT INJURY TO HANDS, FINGERS AND FEET.



1. Support center section in a manner to support wings and hold in place using a large C clamp. This should be done on a flat level surface.
2. Attach wings to the center section using 1-1/4" pivot bolts and nuts provided. Tighten bolts until side plates of wings touch the center section. Lock into place with jam nut. For proper operation the pivots bolts must remain tight at all times.
3. On disk bedder bars the Category 3 Standard and Quick Hitch is installed at the factory. It is in the closest to the tractor position. If more clearance between the bar and tractor is desired, move the hitch components to the rear set of bolt holes. On bars to be used with cultivators, the hitch is shipped unassembled. Install the hitch at this time.

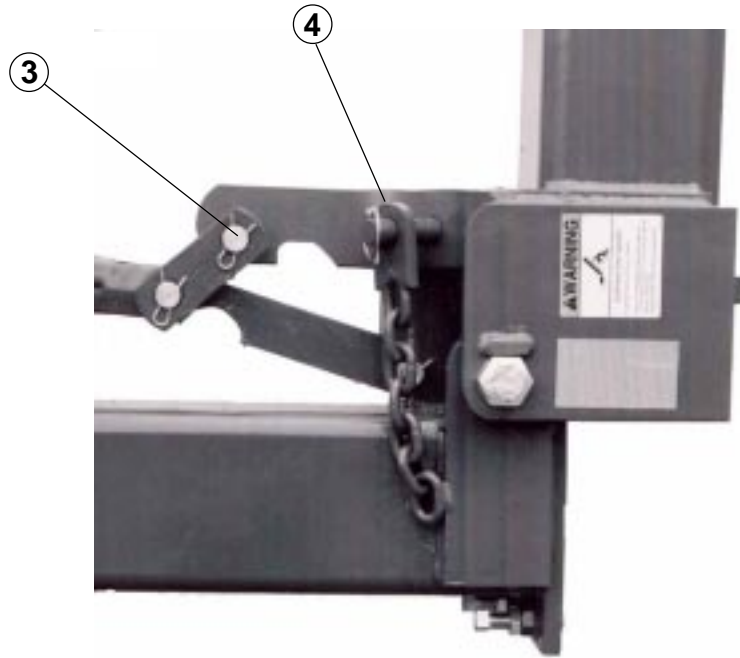


INSTALL PROPER BALLAST ON FRONT OF TRACTOR INSURE SAFE AND PROPER STEERING AT ALL TIMES.



EXTREME CARE SHOULD BE USED WHEN HITCHING BAR TO TRACTOR TO PREVENT INJURY TO HANDS OR FINGERS. DO NOT STAND BETWEEN THE TOOL BAR AND TRACTOR WHEN IT IS IN MOTION. STOP TRACTOR ENGINE AND SET BRAKE BEFORE INSTALLING PINS.

4. The hydraulic cylinders are shipped in place on the center section. Manually extend each cylinder and pin lock plates on each side of wing anchor lug using pins and spacers provided. Detail No. 3.
5. Connect two 51" hydraulic hoses together using a 1/2" tee. Attach ends to corresponding ports of cylinders. Follow the same procedure to assemble the 70" hydraulic hoses. The 48" hydraulic hoses are attached to the remaining tee openings and to the tractor hydraulics.



Be sure that all hydraulic connections are tight and that hoses are not damaged. Hydraulic oil leaking under pressure can penetrate the skin and cause infection or other injury. **TO PREVENT PERSONAL INJURY;** Relieve all pressure before disconnecting lines. Before applying pressure make sure all connections are in good condition. **NEVER USE YOUR HAND** to check for suspected leaks under pressure. Wear proper eye and hand protection, and use a piece of cardboard or wood for this purpose. If injured by leaking fluids see your doctor **IMMEDIATELY**.



When remote cylinders are connected to the hydraulic system, cycle the control lever about three times to remove air from the cylinder & hoses. With air in the system, raised equipment can drop accidentally and cause personal injury or damage.



When transporting folding tool bar, safety pins found near the end of each folding cylinder on a pin, must be installed with klik pin provided. Detail No. 4.

IMPORTANT: Always remove these safety lock chains before attempting to unfold the wings. Failure to do so will cause damage to the tool bar. Replace safety chain No. 301361 if missing or inoperable.

WARRANTY

W & A Manufacturing Company warrants all products manufactured and sold by it to be free of defects in material and workmanship and to perform as represented, subject to the following conditions

- (A) Warranty applies only if installed and operated according to instructions.
- (B) Written authorization must be obtained prior to return of material for inspection. Material is to be returned prepaid.
- (C) Warranty does not apply to labor for parts replacement, nor does it apply to damage by accident, abuse, misuse or failure caused by not operating according to instructions.
- (D) Warranty is void if changes are made in the product in the field by other than a W & A representative or by instructions from the factory.

W & A Manufacturing Company reserves the right at any time to make changes in the design, materials and/or specifications of any of its products without thereby becoming liable to make similar changes in equipment previously manufactured.

Written authorization must be obtained prior to the return of any equipment purchased from W&A Manufacturing Company. No penalties will be charged if equipment had been placed on display by a W & A representative or if reasons for return are errors or faults of W & A Manufacturing Company. If return is for the benefit of the customer and the equipment is returned by prepaid freight in a new, unused and resalable condition, credit (based on original purchase price) will be issued less a 10% fee for restocking and other handling expenses.