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# W & A

## FOLDING LEVEL BANDER

No. 3628 & 3632

# OPERATOR'S MANUAL

TO THE OWNER:

Congratulations on your purchase of a new W & A Top Leveling Folding Level Bander. 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 Level Bander 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: \_\_\_\_\_ Serial 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](http://www.wamfgco.com)

# SAFETY

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



THIS SYMBOL MEANS

**-ATTENTION!**

**-BECOME ALERT!**

**-YOUR SAFETY IS INVOLVED!**

## SIGNAL WORDS:

The signal words DANGER, WARNING and CAUTION are used with the safety messages in this manual and with each safety sign. They are defined as follows:

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

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

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

- Safety of the operator and bystanders is one of the main concerns in designing and developing our products. 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 you, or for you, follow them.



If you have any questions not answered in this manual, require additional copies or the manual is damaged, please contact your dealer or W & A Manufacturing Company, P. O. Box 5238, Pine Bluff, Arkansas 71611. (Telephone) 870-534-7420, (FAX) 870-534-1318. Manuals can also be found at [www.wamfgco.com](http://www.wamfgco.com)



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 Safety Requirements!



## GENERAL SAFETY REQUIREMENTS



- Before operating your W & A Folding Level Bander, 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.
- Never operate the machine under the influence of alcohol or drugs, or while you are otherwise impaired.
- This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**
- Clear the area of people, especially children, before starting unit.
- Do not allow anyone to ride on any part of the equipment for any reason.
- If safety signs are missing, unreadable, or damaged, they should be replaced. See list of safety signs. Keep safety signs clean and legible. Do not paint over safety signs.
- 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.
- Unauthorized modifications to the machine may impair the function and/or safety and affect machine life. Make NO unauthorized modifications. 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.*
- Lower wings, unit and front & rear parking stands and relieve hydraulic pressure before servicing, unplugging, adjusting, leaving, or storing machine.
- Raised equipment can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.
- Do not read, eat, drink, talk or text or use a mobile phone while using this equipment.
- Review the safety instructions with all users annually.



## TRANSPORTING



- Comply with all federal, state, and local laws for implement transport on public roads.
- Watch for obstructions overhead and to side while transporting.
- Travel speed should be such that you maintain complete control and machine stability at all times.
- Make sure that the brake pedal latch is engaged. You must lock brake pedals together for road travel.
- Slow down and signal before turning. Pull over to allow faster traffic to pass.
- 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. Electrocution 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 and appropriate lighting to meet local regulations. Avoid transporting at night or low light conditions.



## OPERATIONS



- 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 children, before starting the unit.
- Do not allow anyone to stand between tractor and implement when hitching.
- Do not operate hydraulic wings and/or arms until you are sure all bystanders are clear of area.
- Coulter, disk and marker blades are sharp. Use extreme care when adjusting or servicing. Keep hands and feet from beneath blades.



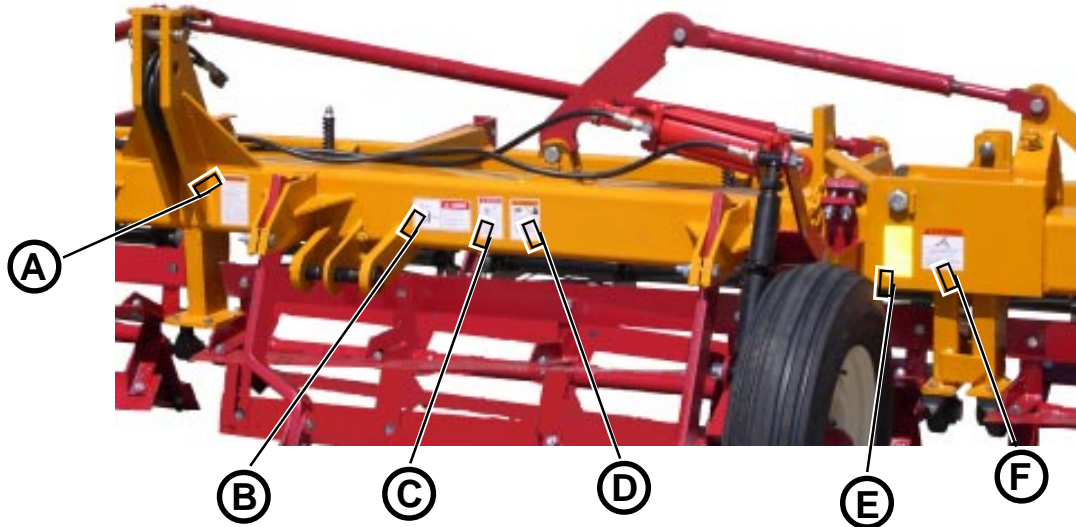
## SERVICE / MAINTENANCE



- 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. Never use a jack to support the implement.
- 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.
- After servicing, be sure all tools, parts and service equipment are removed.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.

# SAFETY SIGNS

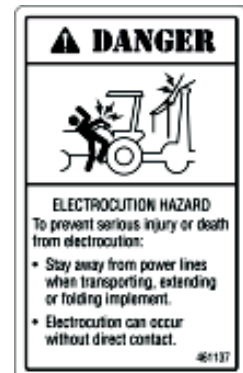
- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs are available from your dealer or W & A Manufacturing Company.



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



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



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



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



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

# 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.



E. **Amber Reflectors** -

Also located at both front ends of center section and at front ends of wings. Total of six required.  
Sign Number 461200

G. **Red Reflectors** -

Located on rear of rolling basket frames. Total of six required.  
Sign Number 461201



# LUBRICATION & MAINTENANCE



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

## DAILY OR AFTER 10 HOURS OF OPERATION:

Grease reel bearings. Grease grease rolling basket bearings and grease pivot bolt on reel frame wings.

Check that all bolts, fasteners and keepers are in place and secure.

## PERIODICALLY:

Thoroughly clean and inspect your machine. 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 hinge assemblies and grease reel and rolling basket bearings before storing implement for an extended period of time.

Review safety instructions with all operators annually.



*Be Extra Cautious  
around Moving Machinery!*

# ADJUSTMENTS & OPERATION



Lower Wings and Machine or Block Mechanically Before Servicing, Adjusting or Leaving Machine.

1. Make all adjustments on a flat level service.
2. Folding Models, lower wings and adjust to parallel with center bar. This is done by adjusting turnbuckle or folding linkage. Detail #12
3. Set root roter sweep to desired working depth and secure. Detail #9
4. Adjust to level, rear support frame using turnbuckle brace rods. Detail #11
5. Adjust rolling basket to insure that front and rear baskets are operating at depth desired. Detail #5
6. Adjust tension spring assembly on rolling basket arm to desired pressure. Detail #7
7. Models with gauge wheels, set wheels to allow machine to work at desired depth.
8. This machine is designed to operate at a speed of no more than 7 miles per hour. To insure long machine life **DO NOT OPERATE AT FASTER SPEED.**
9. Never attempt to turn with machine in down or working position.

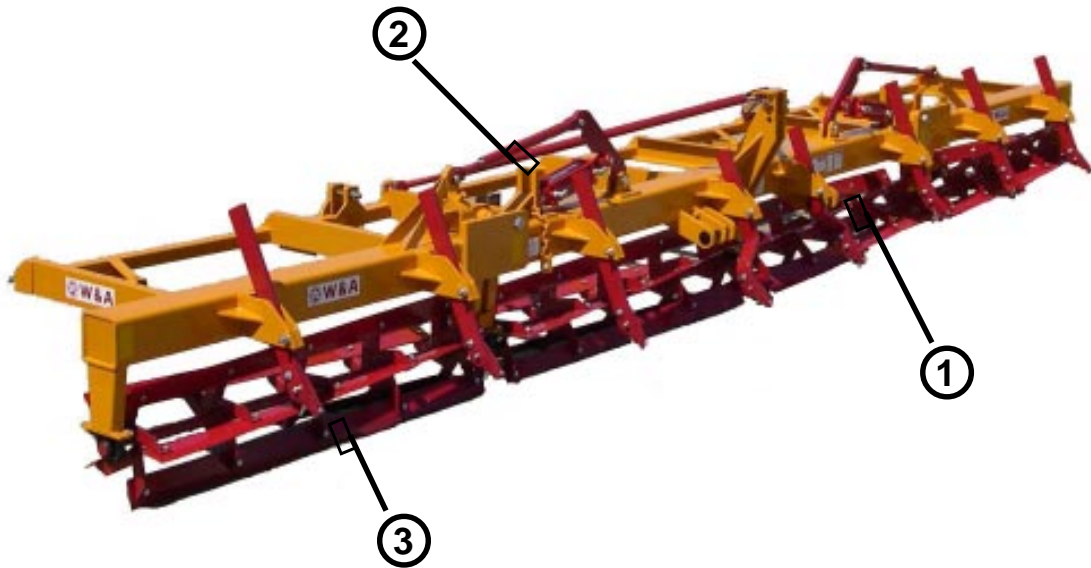


When transporting folding models, wing transport safety pin which is found near the end of each folding cylinder on a chain, must be installed with klik pin provided. Detail #13

# ASSEMBLY



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



1. Mount main frame to 3 point hitch of tractor. Detail #1
2. Folding models, attach wing frames to main frame using 1¼" pivot bolt at front hinge point and 1" pivot bolt at rear hinge point. Detail #2
3. Attach reel assembly to reel frame using 5/8 x 2½" hex bolts, flat washers and lock nuts furnished. Position reel and secure using lock collar. Grease fittings point to rear of machine. Detail #3

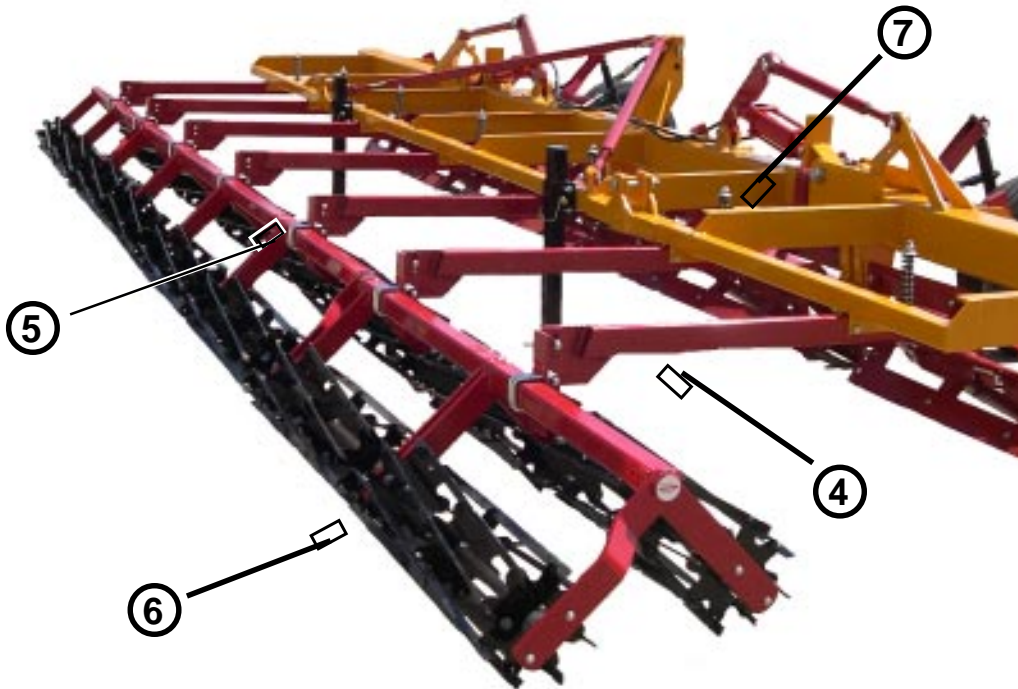


WHEN TRANSPORTING FOLDING MODELS, WING TRANSPORT SAFETY PIN WHICH IS FOUND NEAR THE END OF EACH FOLDING CYLINDER ON A CHAIN MUST BE INSTALLED WITH KLIK PIN PROVIDED. DETAIL #13



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

4. Attach rolling basket arms using 1/2 x 3" hex bolts and lock nut provided. Detail #4
5. Attach rolling basket assembly to rolling basket arm using 1/2 x 2 1/2 x 4" U-bolt provided. Insure that direction of travel is correct as indicated by arrow on end of rolling basket frame. Detail #5 & #6
6. Mount rolling basket tension spring using 5/8 x 8" hex bolt, cup washer and lock nut furnished. Detail #7

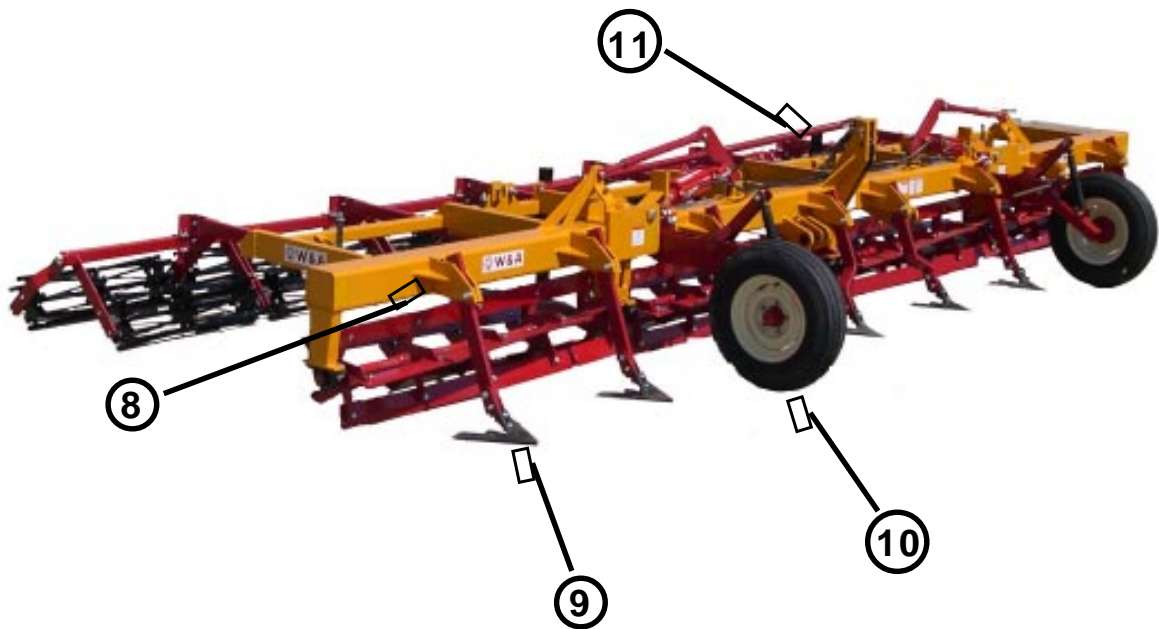


THIS MACHINE MAKES A LARGE ARC WHILE TURNING. TO PREVENT DAMAGE TO THE MACHINE CAUSED BY STRIKING OBJECTS WHILE TURNING, REDUCE GROUND SPEED OF TRACTOR AND ALLOW AMPLE TURNING SPACE.



LOWER WINGS AND MACHINE OR BLOCK MECHANICALLY BEFORE SERVICING, ADJUSTING OR LEAVING MACHINE.

7. Attach root roter shank into bracket on reel frame using 3/4 x 3" hex bolts, lock washer, and hex nut provided. Straight shanks install all locations except 2 center positions which require a right hand and left hand shank which offsets hitch. Detail #8



8. Attach 16" sweeps to friction trip foot with plow bolts and nuts provided. Detail #9
9. Attach gauge wheel assembly to reel frame at proper location using 5/8 x 3 1/2" Gr. 5 hex bolt, lock washer and hex nut furnished. Note: 1 pair required on 6 and 8 row models and 2 pair required on 12 row model. Detail #10
10. Attach turnbuckle brace rods to hitch mast and to back of main frame using pins and keepers furnished. Adjust to insure machine is level while in working position. Detail #11



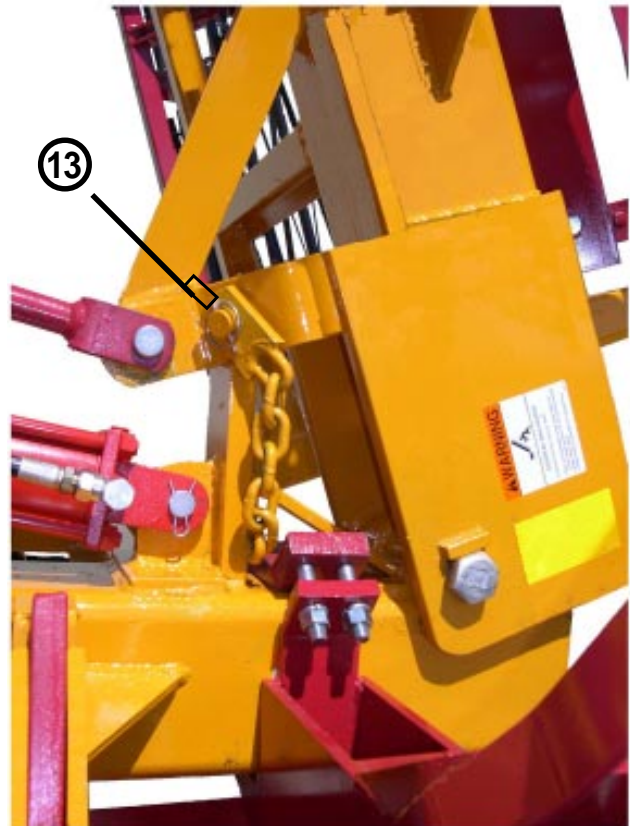
EXTREME CARE SHOULD BE USED WHEN HITCHING THE IMPLEMENT TO THE TRACTOR TO PREVENT INJURY TO HANDS OR FINGERS.



DO NOT ALLOW RIDERS ON THE IMPLEMENT AT ANY TIME.

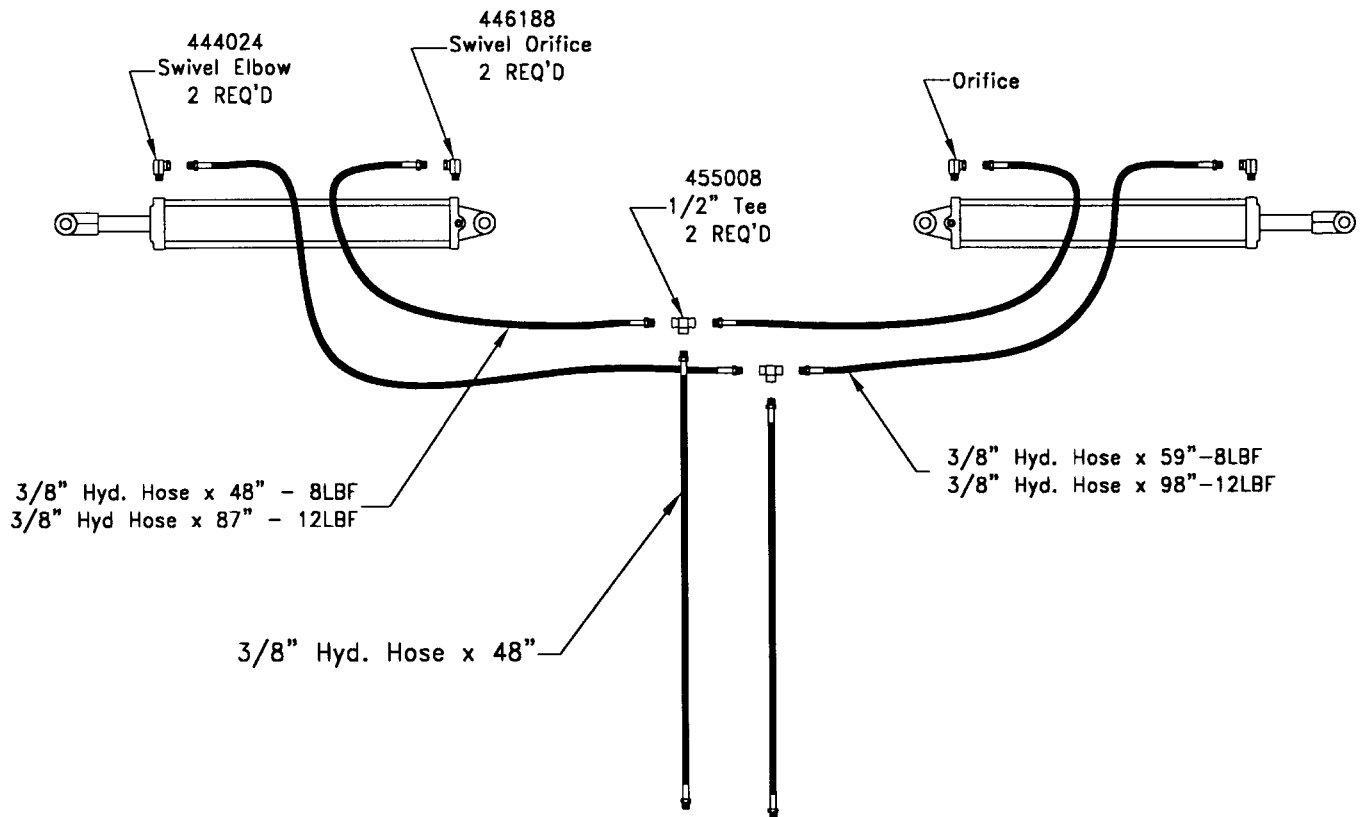


11. Folding models require installation of hydraulic cylinder attaching bracket. Be sure large cut out is near reel frame. Attach cylinder and adjusting arm using bolts and pins furnished. Adjust arm allows wing to work at same depth as center. Detail #12



WHEN TRANSPORTING FOLDING MODELS, WING TRANSPORT SAFETY PIN WHICH IS FOUND NEAR THE END OF EACH FOLDING CYLINDER ON A CHAIN MUST BE INSTALLED WITH KLIK PIN PROVIDED. DETAIL #13

12. Install hydraulic hoses and fittings as shown in the diagram found below:



BE SURE 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 TIGHT AND COMPONENTS ARE IN GOOD CONDITION. NEVER USE YOUR HAND TO CHECK FOR SUSPECTED LEAKS UNDER PRESSURE. USE A PIECE OF CARDBOARD OR WOOD FOR THIS PURPOSE. **IF INJURED BY LEAKING FLUID, SEEK EMERGENCY MEDICAL ATTENTION 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 MACHINE DAMAGE.

# 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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# W & A

## 150° FOLDING

### 3 POINT LEVEL BANDER

NO. 3631

# OPERATOR'S MANUAL

TO THE OWNER:

Congratulations on your purchase of a new W & A 150° Folding Level Bander . 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 machine 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.

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

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

- Safety of the operator and bystanders is one of the main concerns in designing and developing our products. 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 you, or for you, follow them.



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- Raised equipment can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.
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## OPERATIONS



- 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.
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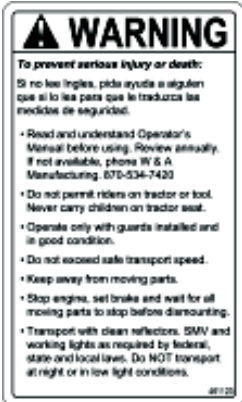
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- Before working on this machine stop the tractor, set the brakes, disengage the PTO and power drive, shut off the engine and remove the ignition key.
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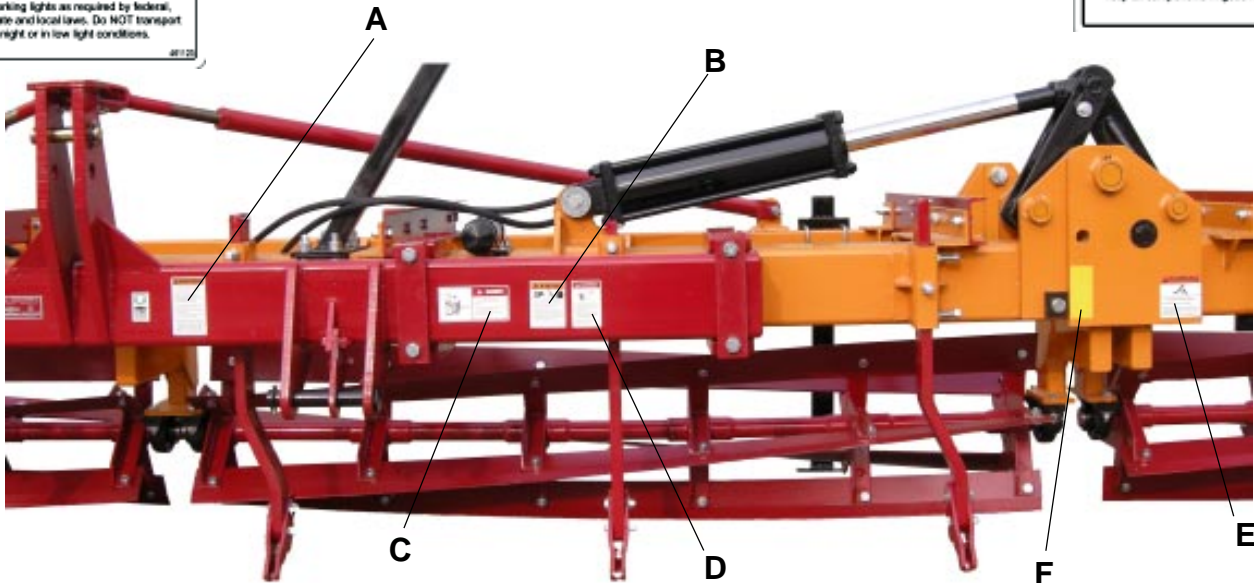
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- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs are available from your dealer or W & A Manufacturing Company.



A. WARNING - Operator's Manual Sign Number 461123



B. WARNING - High pressure Fluid Hazard Sign Number 461113



C. DANGER - Crushing Hazard Sign Number 461138



D. DANGER - Electrocutation Hazard Sign Number 461137



E. WARNING - Overhead Wing Hazard Sign Number 461135

F. Amber Reflectors - Also located at both front ends of center section and at front ends of wings. Total of six required. Sign Number 461200.

N/I. Red Reflectors - Located on rear of basket frames. Total of six required. Sign Number 461201

# LUBRICATION & MAINTENANCE



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

## DAILY OR AFTER 10 HOURS OF OPERATION:

Grease all hinge assemblies and top leveling arm pins. Grease reel bearings and rolling basket bearings.

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

## PERIODICALLY:

Thoroughly clean and inspect your machine. 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 hinge assemblies and top leveling arm pin and grease reel bearings and rolling basket bearings before storing implement for an extended period of time.

Review safety instructions with all operators annually.



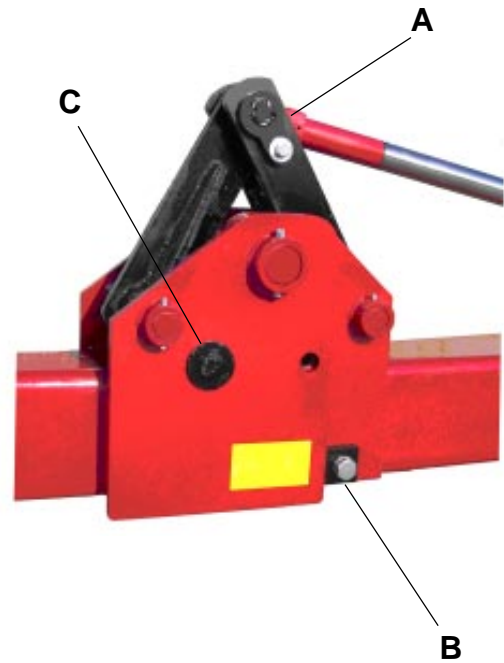
*Be Extra Cautious  
around Moving Machinery!*

# 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. When remote cylinders are connected to the hydraulic System, cycle the control lever about three times to remove air from cylinders and hoses. With air in the system, raised equipment can drop accidentally and cause personal injury or damage. **IMPORTANT:** Orifice size is correct for safe operation of Folding Level Bander. Do not drill nor remove orifice.
4. Set root roter sweeps to desired working depth and secure.
5. Adjust rolling basket to insure that front and rear baskets are operating at depth desired.
6. Adjust tension spring assembly on rolling basket arm to desired pressure.
7. Set gauge wheels to allow machine to work at desired depth.
8. This machine is designed to operate at a speed of no more than 7 miles per hour. To insure long machine life, **DO NOT OPERATE AT FASTER SPEED.**
9. Wing Lock Pin (C) can be used to lock down wings if desired. Always remove Wing Lock Pins before folding unit.
10. Never attempt to turn with implement in down or working position.
11. Lower wings and parking stands before lowering unit to unhook tractor.



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



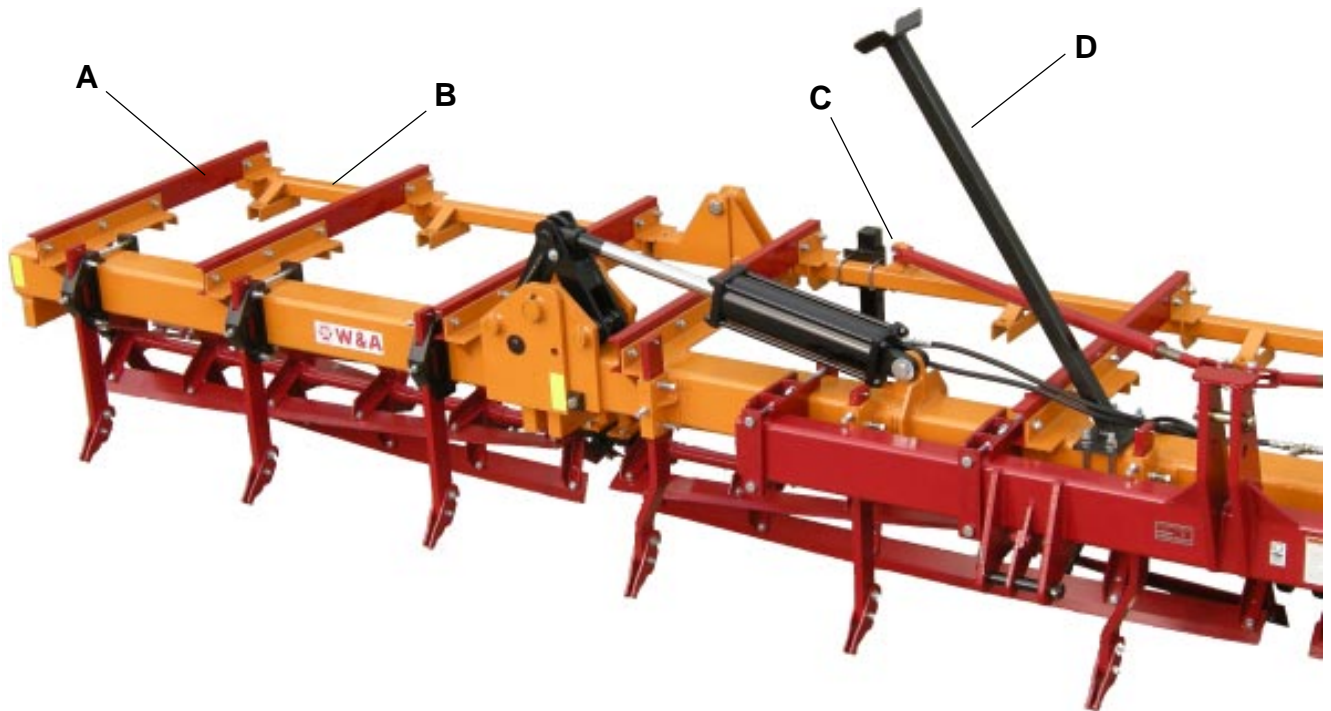
**DO NOT LOWER** wings until you are first sure that nobody is standing under or near tool bar.



# ASSEMBLY



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



1. Mount reel frame assembly to three point hitch of appropriately sized tractor and park on a flat level surface. Connect hydraulic hoses to tractor remotes.
2. Install connecting Channels (A) to frame angles with 5/8" x 1 1/2" hex bolts, lock washers and hex nuts.
3. Attach rear basket frame assembly (B) to connecting channels using 5/8" x 1 1/2" hex bolts, lock washers and hex nuts. (Leg brackets should be towards the front of the machine.) Grease hinge bolts.
4. Install rear parking stands (C) near ends of center section of basket frame using 1/2" U-bolts, nuts and washers provided.



5. Attach Basket Legs (E) to basket carrying frame with  $\frac{1}{2}$ " x 3" bolts and lock nuts. NOTE: These bolts serve as pivot points for baskets and should not be over tightened.
6. Put the  $\frac{5}{8}$ " x 8" bolt (F) through the  $\frac{5}{8}$ " concave washer and the 7" coil compression spring and then insert through the hole in the attaching bracket on the basket carrying frames. Secure to basket leg with  $\frac{5}{8}$ " lock nut.
7. Locate center of rear basket carrying frame and install rolling basket assemblies (G) to basket arms using  $\frac{1}{2}$ " x  $2\frac{1}{2}$ " x 4" U-bolts provided. Insure that direction of travel is correct as indicated by arrow on end of rolling basket frame (H). Frames should overlap and touch adjacent frame.
8. Attach 16" sweeps to friction trip foot with plow bolts and nuts provided.

9. Attach gauge wheel assemblies to reel frame at proper locations to run in middles using 5/8" x 4" Grade 5 hex bolts, lock washers and nuts provided.
10. Inspect factory installed 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 **SEEK MEDICAL ATTENTION 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.

11. Place Wing Stands (D) on Center Reel Frame close to mast bridge using U-bolts provided. Do not tighten. Carefully fold wings of machine. Move wing stands until they contact wings and tighten U-bolts. Note: Eight Row Wing Stands mount on most bridge using bolts and backing plates provided.



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

## SAFETY FIRST



# 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.



*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](http://www.wamfgco.com)

# W & A

## 12 ROW @ 30" 150° FOLDING BUSTER & BUSTER CRUMBLER LEVEL BANDER

### NOS. 3664 & 3684

# OPERATOR'S MANUAL

TO THE OWNER:

Congratulations on your purchase of a new W & A 150° Folding Buster or Buster Crumbler Level Bander. 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 Level Bander 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: \_\_\_\_\_ Serial No. \_\_\_\_\_

Dealer Name: \_\_\_\_\_ Date Purchased: \_\_\_\_\_



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# SAFETY

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



THIS SYMBOL MEANS

**-ATTENTION!**

**-BECOME ALERT!**

**-YOUR SAFETY IS INVOLVED!**

## SIGNAL WORDS:

The signal words DANGER, WARNING and CAUTION are used with the safety messages in this manual and with each safety sign. They are defined as follows:

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

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

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

- Safety of the operator and bystanders is one of the main concerns in designing and developing our products. 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 you, or for you, follow them.



If you have any questions not answered in this manual, require additional copies or the manual is damaged, please contact your dealer or W & A Manufacturing Company, P. O. Box 5238, Pine Bluff, Arkansas 71611. (Telephone) 870-534-7420, (FAX) 870-534-1318. Manuals can also be found at [www.wamfgco.com](http://www.wamfgco.com)



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 Safety Requirements!



## GENERAL SAFETY REQUIREMENTS



- Before operating your 150° Folding Buster or Buster/Crumbler Level Bander, 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.
- Never operate the machine under the influence of alcohol or drugs, or while you are otherwise impaired.
- This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. **Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.**
- Clear the area of people, especially children, before starting unit.
- Do not allow anyone to ride on any part of the equipment for any reason.
- If safety signs are missing, unreadable, or damaged, they should be replaced. See list of safety signs. Keep safety signs clean and legible. Do not paint over safety signs.
- 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.
- Unauthorized modifications to the machine may impair the function and/or safety and affect machine life. Make NO unauthorized modifications. 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.*
- Lower wings, unit and rear parking stands and relieve hydraulic pressure before servicing, unplugging, adjusting, leaving, or storing machine.
- Raised equipment can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.
- Do not read, eat, drink, talk or text or use a mobile phone while using this equipment.
- Review the safety instructions with all users annually.



# 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. Its 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



- Comply with all federal, state, and local laws for implement transport on public roads.
- Watch for obstructions overhead and to side while transporting.
- Travel speed should be such that you maintain complete control and machine stability at all times.
- Make sure that the brake pedal latch is engaged. You must lock brake pedals together for road travel.
- Slow down and signal before turning. Pull over to allow faster traffic to pass.
- 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 and appropriate lighting to meet local regulations. Avoid transporting at night or low light conditions.



## OPERATIONS



- 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 children, before starting the unit.
- Do not allow anyone to stand between tractor and implement when hitching.
- Do not operate hydraulic wings and/or arms until you are sure all bystanders are clear of area.
- Coulter, disk and marker blades are sharp. Use extreme care when adjusting or servicing. Keep hands and feet from beneath blades.



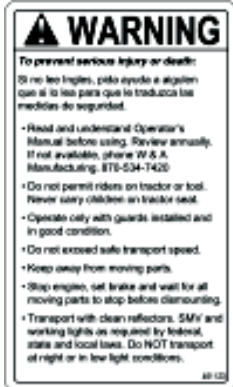
# SERVICE/MAINTENANCE



- 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. Never use a jack to support the implement.
- 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.
- After servicing, be sure all tools, parts and service equipment are removed.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use.
- If equipment has been altered in any way from original design, the manufacturer does not accept any liability for injury or warranty.

# SAFETY SIGNS

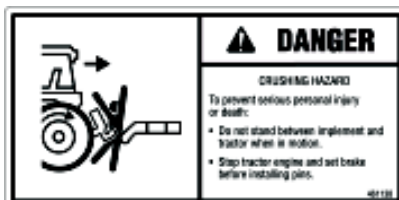
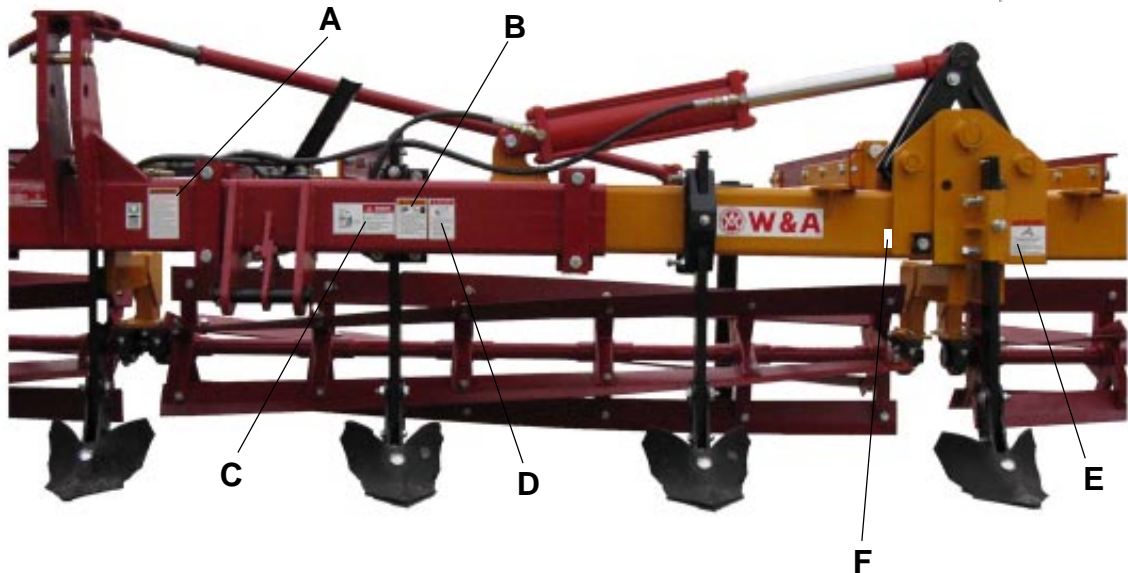
- Keep safety signs clean and legible at all times.
- Replace safety signs that are missing or have become illegible.
- Replaced parts that displayed a safety sign should also display the current sign.
- Safety signs are available from your dealer or W & A Manufacturing Company.



A. WARNING - Operator's Manual Sign Number 461123



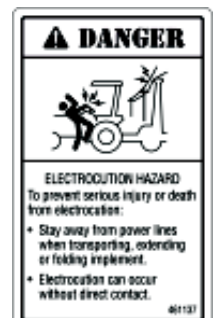
B. WARNING - High pressure Fluid Hazard Sign Number 461113



C. DANGER - Crushing Hazard Sign Number 461138



D. DANGER - Electrocutation Hazard Sign Number 461137



E. WARNING - Overhead Wing Hazard Sign Number 461135

F. Amber Reflectors - Also located at both front ends of front ends of wings. Total of four required. Sign Number 461200.

N/I. Red Reflectors - Located on rear of basket frames. Total of six required. Sign Number 461201

# LUBRICATION & MAINTENANCE



Lower Wings, Unit and Rear Parking Stands Before Servicing, Adjusting or Leaving Unit.

## DAILY OR AFTER 10 HOURS OF OPERATION:

Grease all hinge pins and folding arms. Grease reel and basket bearings.

Check that all bolts are tight and check that all fasteners and keepers are in place and secure. Special attention should be given to roll pins securing wing pivot pins and bolts securing cylinder lock pins.

## PERIODICALLY:

Thoroughly clean and inspect your machine. 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 hinge pins, folding arm pins, following arms, reel and basket bearings, and grease gauge wheel cranks and bearings before storing implement for an extended period of time.

Review safety instructions with all operators annually.



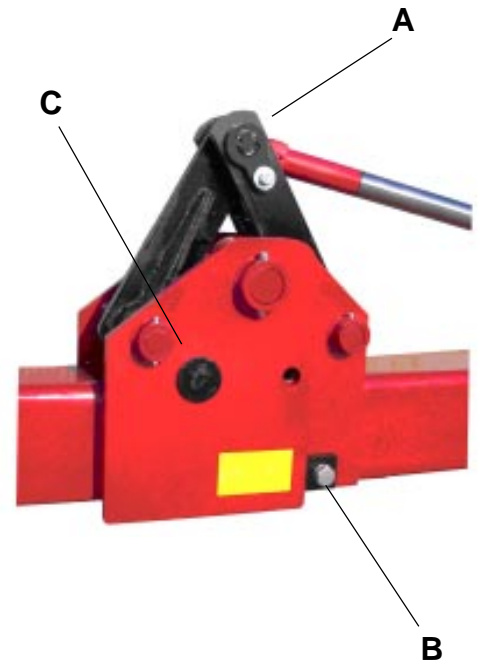
*Be Extra Cautious  
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# ADJUSTMENTS & OPERATION



Lower Wings, Unit and Rear Parking Stands 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. When remote cylinders are connected to the hydraulic System, cycle the control lever about three times to remove air from cylinders and hoses. With air in the system, raised equipment can drop accidentally and cause personal injury or damage. **IMPORTANT:** Orifice size is correct for safe operation of Folding Level Bander. Do not drill nor remove orifice.
4. Busters are set at the factory 2” below reels. If beds are too high, raise busters, or if too low, lower busters. Adjust busters in 1/2” increments. Small adjustments produce larger results. Busters should run flat, not pointed down or pointed up.
5. Adjust tension spring assemblies on basket legs to give sufficient down pressure to firm the soil as desired.
6. Set gauge wheels to allow machine to work at desired depth.
7. This machine is designed to operate at a speed of no more than 7 miles per hour. To insure long machine life, **DO NOT OPERATE AT FASTER SPEED.**
8. Wing Lock Pin (C) can be used to lock down wings if desired. Always remove Wing Lock Pins before folding unit.
9. Never attempt to turn with implement in down or working position.
10. Lower wings and parking stands before lowering unit to unhook tractor.



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

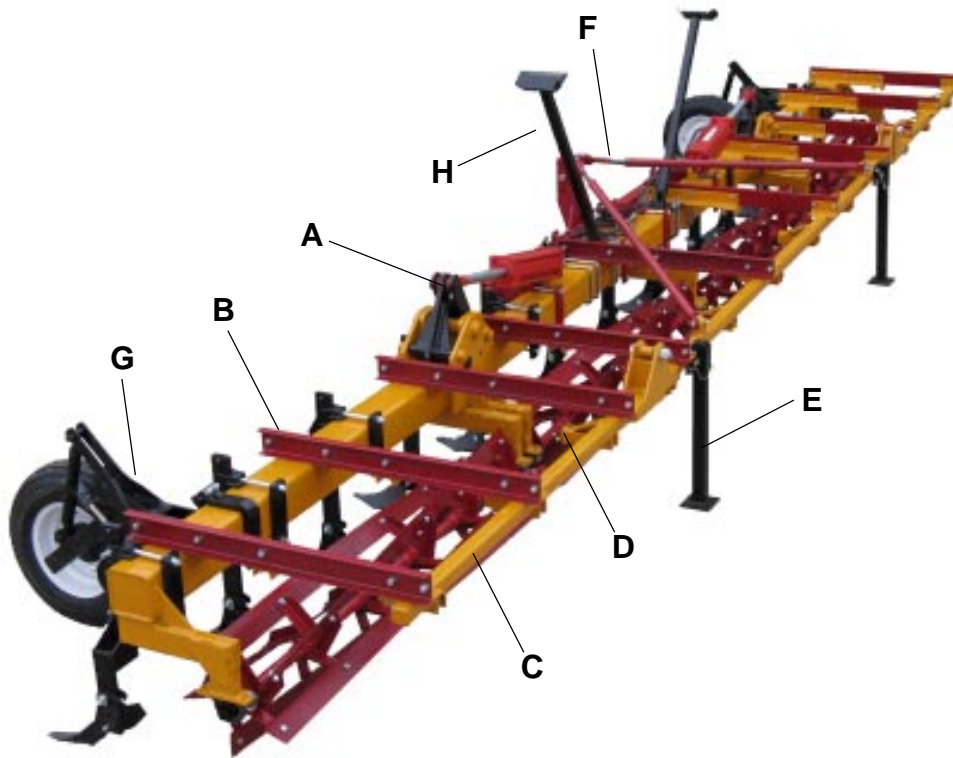


**DO NOT LOWER** wings until you are first sure that nobody is standing under or near tool bar.

# ASSEMBLY



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



1. Mount center section to three point hitch of appropriately sized tractor and park on a flat level surface. Connect hydraulic hoses to tractor remotes and extend both cylinder rods.
2. Grease 2" pivot pins found in wings.
3. Keeping wing level, align wing pivot hole with hole in center section and install 2" pivot pin. Be sure end of pivot pin with  $\frac{1}{2}$ " hole matches hole in wing collar, and secure pin with  $\frac{1}{2}$ " roll pin provided.
4. Partially remove Cylinder Lock Pin (A) from cylinder clevis and Follow Arm. Align wing Folding Arm with cylinder clevis and Follow Arm and secure with  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " bolt, flat washer, and lock washer provided.
5. Using same method, install other wing.
6. Level wings by adjusting cylinder clevis and/or Stop Blocks. (See instructions on page 8)
7. Install Channels (B) to center and wing reel frame angles with  $\frac{5}{8}$ " x  $1\frac{1}{2}$ " hex bolts and lock nuts.

8. Attach Rear Basket Frame Assembly (C) to connecting channels using 5/8" x 1½" hex bolts and lock nuts. [Leg brackets (D) should be towards the front of the machine.] Grease hinge bolts.
9. Locate Parking Stands (E) at ends of Center Basket Frame just inside of leg brackets. Attach with U-bolts provided.
10. Adjust and install Brace Rod Assemblies (F) from rear of hitch center mast to ears on rear basket frame.
11. Install Rolling Basket Arms into leg brackets (D) using ½" x 3" hex bolts and lock nut provided.
12. Attach Rolling Basket Assemblies to Rolling Basket Arms using ½" x 2½" x 4" U-bolts provided. Begin at center of machine with one assembly on both sides of center line. Frames should touch end to end.
13. Mount rolling basket tension springs using 5/8" x 8" hex bolts, cup washers and lock nuts furnished.
14. Attach gauge wheel assemblies (G) to reel frame at proper location to run in middles using 5/8" x 4" Grade 5 hex bolts, lock washers and nut provided.
15. Retighten all factory installed bolts and check that all fasteners and keepers are in place and secure.
16. Inspect factory installed 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 **SEEK MEDICAL ATTENTION 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.

17. Locate and loosely attach Brace Rods (H) to center reel frame just inside middle channels. Attach hoses to tractor hydraulics and fold unit. Adjust location of Brace Rods until they are snug against wing reel frames. Tighten nuts.

# WARRANTY

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- (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.
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