

AGRISHIELD

SD FRONT-MOUNTED VINEYARD FRAME

OWNER'S & OPERATORS MANUAL



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TO OUR CUSTOMERS:

Thank you for choosing AGRISHIELD. We are proud to deliver to you equipment of the highest quality. Regularly performed preventative maintenance will keep your equipment in the best working order possible. Please take the time to review this manual and understand the maintenance and operation before using your equipment.

WARRANTY

AGRISHIELD warrants each new piece of equipment and parts manufactured by it to be free of defects in material and workmanship under normal use and service. The obligation of AGRISHIELD shall be limited to replacing any part which shall, within 1 year (1 season) after delivery to the original purchaser, be returned to AGRISHIELD with transportation charges prepaid and which an examination by AGRISHIELD discloses defective. This warranty does not obligate AGRISHIELD to bear the cost of labor, travel time or hauling in connection with the replacement or repair of the defective parts and in no event will be liable for consequential damages including but not limited to loss of crop, rental or substitute equipment or other commercial loss.

No warranties or representations made by persons other than representatives of AGRISHIELD expressly authorized in writing to do so shall be valid and binding upon AGRISHIELD. No dealer shall be authorized to bind AGRISHIELD in this respect.

AGRISHIELD makes no warranty with respect to component parts not manufactured by AGRISHIELD. This warranty shall not apply to any equipment which has been altered in any way outside of manufacturer's factory, or which has been subject to misuse, neglect or accident.

This warranty is expressly in lieu of all other warranties and representations, expressed, implied, or statutory, including warranties of merchantability and fitness for a particular use, and all other liabilities or obligations on the part of AGRISHIELD, foreseeable or not.

USERS'S RESPONSIBILITY

It is the responsibility of the user to read the Operator's Manual and understand the safe and correct operating procedures as pertains to the operation of the product and to lubricate and maintain the product according to the maintenance schedule in the Operator's Manual.

WARRANTY SERVICE

Warranty service may be obtained through and authorized dealer or AGRISHIELD service facility. Write or call: AGRISHIELD, 7507 N Podesta Ln, Linden, CA 95236, telephone (209) 662-5063.

CONTENTS

A. SAFETY INSTRUCTIONS.....	4
B. SPECIFICATIONS.....	5
C. FRAME INSTALLATION & REMOVAL	6
D. ARM INSTALLATION & REMOVAL	9
E. CONTROLS AND VALVES.....	11
F. OPERATING PROCEDURES	12
G. MAINTENANCE PROCEDURES AND SCHEDULES.....	13
E. TROUBLESHOOTING.....	14

A. SAFETY INSTRUCTIONS

IMPORTANT SAFETY NOTICE

Improper practices or carelessness can cause bodily injury or death.

Always instruct the operator in proper operating procedures. The operator must read and understand all safety instructions in the Owner's and Operator's Manual and those placed on the equipment.

SAFETY INSTRUCTIONS

- 1. Warning: Use of the multi-purpose frame can result in projectiles in the direction of the operator. For this reason, it is recommended to install the frame on tractors with an enclosed cabin. In the absence of an enclosed cabin, proper eye protection is required for safe operation.**
- 2. Warning: Make sure all personnel are clear of the frame prior to starting the tractor engine or motors.**
- 3. Warning: Stop tractor engine prior to making any manual adjustments or performing any service work on the frame.**
- 4. Warning: Stop tractor engine prior to clearing material from moving components on the implements.**
- 5. Warning: Always wear protective eye goggles when checking for hydraulic leaks. Do not check hydraulic lines for leaks with your hands. High pressure oil leaking through a small hole will penetrate the skin. This will cause serious bodily injury or death.**
- 6. Caution: Always replace safety labels and signs if they become illegible.**

B. SPECIFICATIONS

Length	3'
Width	8' – 12' vine rows (standard) 6' – 8' vine rows (narrow)
Height	5'
Weight	400 lbs
Hydraulic Oil	Hydraulic oil used in tractor or power pack

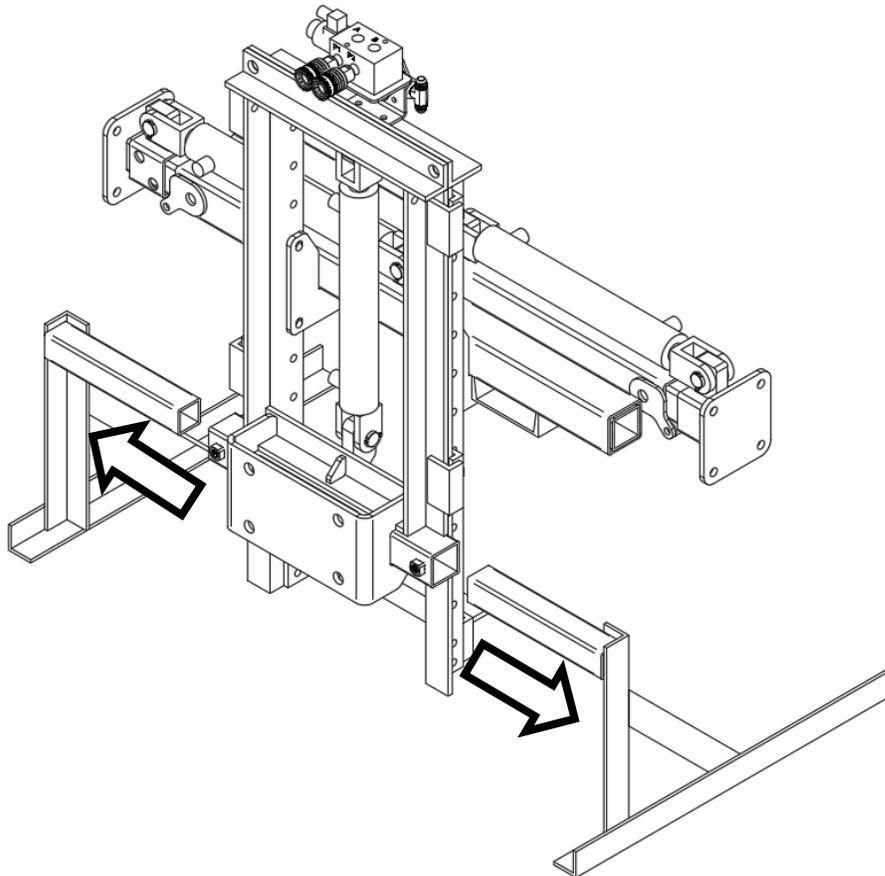
HYDRAULIC REQUIREMENTS:

- 1. Open center hydraulic system**
- 2. Max flow: 12 GPM @ 2500 psi**

C. FRAME INSTALLATION & REMOVAL

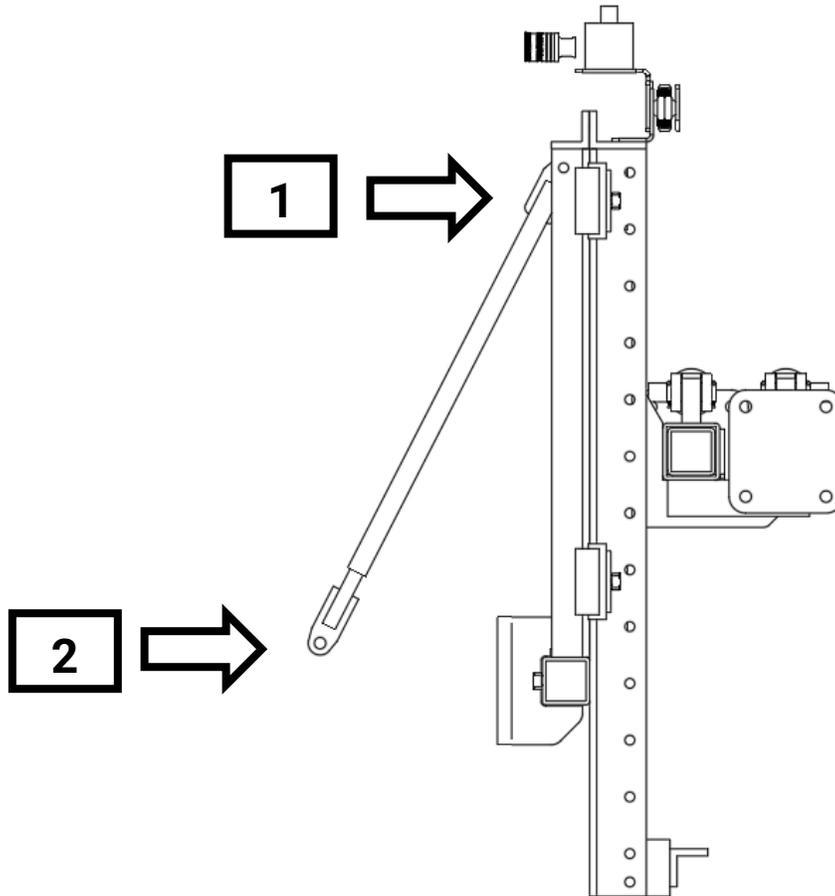
INSTALLATION

1. If installed, remove factory weight bracket from tractor.
2. Install the mounting bracket using the existing holes on the front of the tractor to bolt into.
3. With a forklift, lift the frame using the forklift receiver tubes on the underside of the carriage and remove the stands by loosening the set screws at the bottom of the mast.



4. Move the frame into position so that the bolt holes on the frame align with the matching set on the tractor bracket. Bolt the frame and bracket together using the included hardware.

5. Bolt the top end of the stay arms (1) into the holes at the top of the frame's mast. Insert the bottom end of the arms (2) and connect to a suitable location on the frame of your tractor. Weld the arms in place.



6. Route your hydraulic hoses from the auxiliary ports on your tractor to the top of the frame and connect to the frame at the quick-connects. Secure all hoses to ensure they are clear of any moving or heat-generating parts that would damage them during operation.
7. Prior to first use, slowly cycle both the vertical and horizontal adjustment cylinders and ensure that no hoses are pulled tight or get caught on any potential snag points. If necessary, make adjustments using the built-in hose clamps and/or cable ties. After first use, shut off the tractor and replace any hydraulic oil that was used to initially fill the machine.

REMOVAL

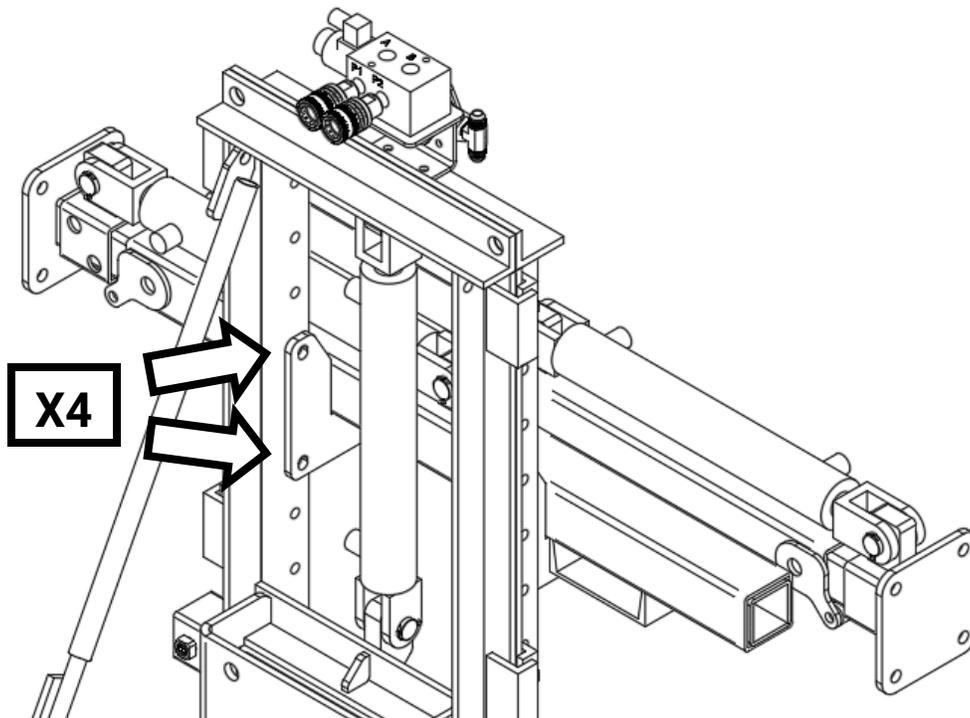
- 1. Using the tractor remote valves, lower the vertical cylinder on the frame into its lowest position and retract the horizontal cylinders (if installed) into their narrowest position. Shut off the tractor and release any remaining pressure in the lines using the remote valve levers.**
- 2. Disconnect the hydraulic hoses from the frame and set aside. If keeping the hoses installed on the tractor, secure the ends in a safe location.**
- 3. Drive a forklift into the fork pockets on the bottom of the frame and raise the forks to support the weight of the frame.**
- 4. Remove the stay arms between the top of the mast and tractor frame.**
- 5. Remove the 4 bolts securing the mast of the machine to the mounting bracket.**
- 6. Slowly back out with the forklift and replace the stands into the receiver tube on the bottom of the mast, securing using the set screws.**
- 7. If desired, replace the tractor's factory weight bracket and store the mounting bracket with the unit.**

D. ARM INSTALLATION & REMOVAL

The multi-purpose frame can be used for a variety of applications through the removal of one set of arms and installation of another.

ARM CHANGE PROCEDURE

1. Shut off the tractor and release any remaining pressure from the hydraulic system with the tractor remote valve levers.
2. With an oil tray in place to catch any spillage, disconnect the primary pressure, return, crossover (from one side of the frame to the other), and case drain (if applicable) hoses from the motors.
3. Remove the four bolts connecting the arm to the end of the telescoping tube on the carriage. Set the bolts aside.
4. (If new arms being installed require a different height). Use a forklift to support the carriage from below. Remove the 4 bolts securing the horizontal section of the carriage to the vertical section. Raise or lower the horizontal section on the vertical section to the appropriate height for the arms being installed.



- 5. Re-secure the horizontal and vertical sections of the carriage using the bolts removed in step 4.**
- 6. Attach the new arms using the four bolts removed in step 3.**
- 7. Re-connect the motors, ensuring that enough slack is present to fully extend the horizontal cylinders (if installed).**
- 8. Start the tractor and confirm that the motors are spinning in the desired direction and that no leaks are present.**
- 9. Shut off the tractor and replace any hydraulic oil lost in the change. Properly dispose of all waste oil.**

E. CONTROLS AND VALVES

STANDARD CONTROLS

The implement hydraulics are powered by the tractor's auxiliary hydraulic ports and controlled by the tractor's remote levers.

HYDRAULIC WIDTH PACKAGE (if installed)

The implement hydraulics are powered by the tractor's auxiliary hydraulic ports and controlled using the tractor's remote levers. To toggle between the height and width adjustments, press the button included with the wiring harness. By default, operation of the tractor lever without the button pressed will adjust the width, and with the button pressed will adjust the height.

PTO HYDRAULIC POWER PACK (if using)

The implement motor hydraulics are powered by the PTO power pack and can be controlled using the valve included with the power pack.

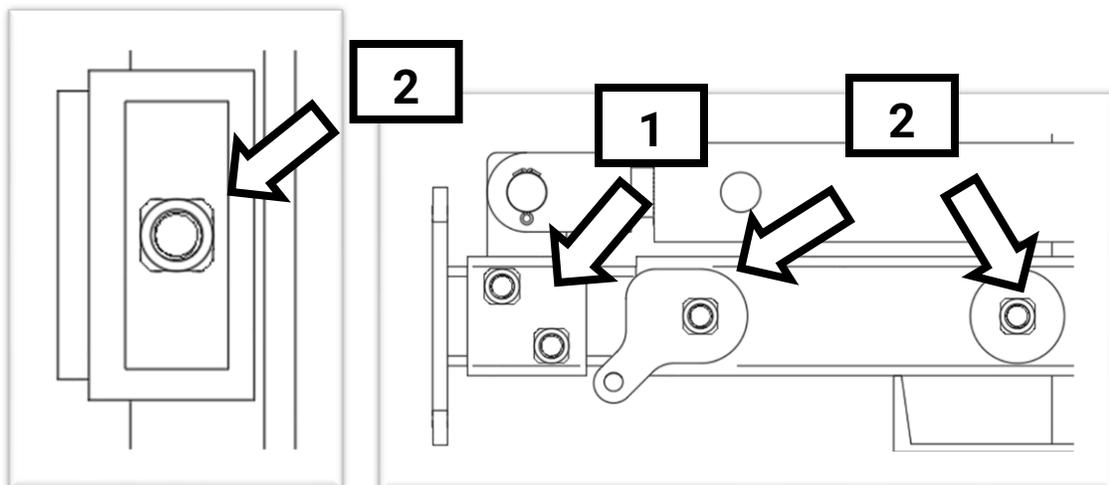
F. OPERATING PROCEDURES

Do not allow anyone to operate the multi-purpose frame who has not been properly trained in its safe operation.

WARNING: Stop the tractor engine before making any adjustments to the frame or its attachments.

Prior to operation the following items must be checked and/or adjusted to obtain maximum performance and avoid necessary wear and stoppages:

1. Check and adjust the manual width setting into a position using the included bolts (1) such that use of the hydraulic width adjustment (if installed) allows the operator to make the desired adjustments while running. For manually-adjusted width units, use the bolts on the carriage to secure the arms in the desired position.
2. Cycle all cylinders and ensure that no excess play between sliding components is present. If excess play is present, incrementally tighten the take-up set screws (2) and lock in place using the included nuts.
3. Check hydraulic system for leaks and proper connections



VERTICAL CARRIAGE

HORIZONTAL CARRIAGE

G. MAINTENANCE PROCEDURES AND SCHEDULES

DAILY MAINTENANCE:

1. Check the general condition of the frame for hydraulic leaks, loose bolts, worn or damaged parts.
2. Check the wear status of consumable items on all attachments. Replace as needed.
3. Replace all worn, damaged or illegible labels.

YEARLY MAINTENANCE:

1. Check and repair worn or damaged parts.
2. Inspect the wear status of low friction plastic pads on all sliding surfaces. Replace as needed.
3. Replace all worn, damaged or illegible labels.

STORAGE OFF SEASON:

1. Wash and clean frame.
2. For long-term storage, lower the vertical cylinder and retract the horizontal cylinders.

E. TROUBLESHOOTING

The following is a list of problems that may occur, and some possible causes and remedies. If the solution to a problem is not apparent, contact your AGRISHIELD dealer or AGRISHIELD directly.

Warning: Do not check for hydraulic leaks with your hands. The high pressure in these lines will penetrate the skin and cause serious personal injury.

<i>Problem</i>	<i>Cause</i>	<i>Action</i>
Vertical cylinder hose quick-connections are difficult to insert into tractor ports	Excessive weight on the vertical cylinder causing one of the hoses to be pressurized.	Once unit is mounted, remove weight from the vertical cylinder using a forklift. This will remove the pressure from the line. To avoid this issue, lower the vertical cylinder completely before disconnecting the hydraulic lines.