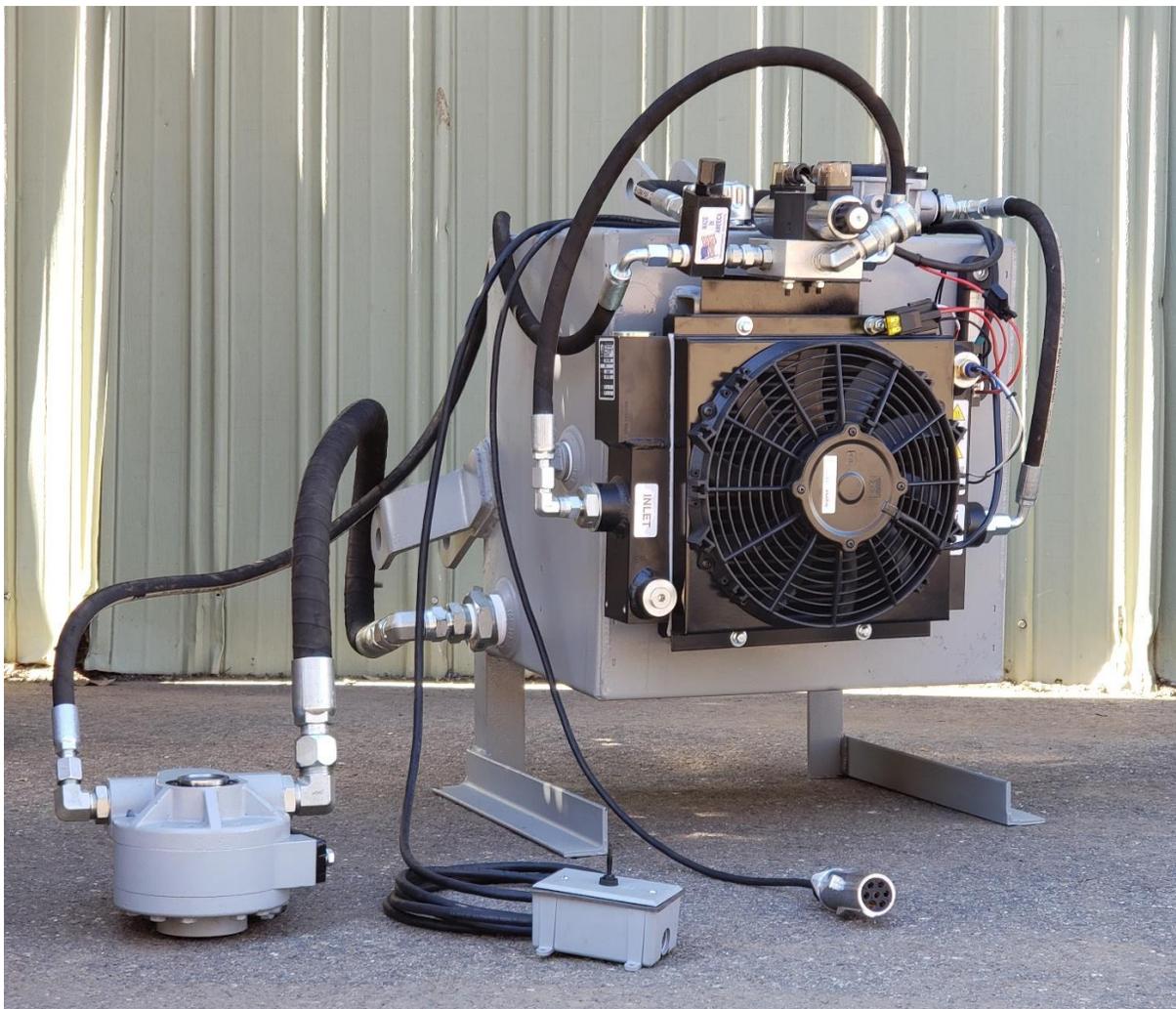


# **AGRISHIELD**

## **PTO HYDRAULIC POWER PACK OWNER'S & OPERATORS MANUAL**



**Phone: (209) 662-5063**

**Email: [Sales@AgrishieldLLC.com](mailto:Sales@AgrishieldLLC.com)**

## **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.

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## **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: Make sure all personnel are clear of the unit prior to starting the tractor engine or motors.**
- 2. Warning: Stop tractor engine prior to making any adjustments or performing any service work on the unit.**
- 3. Warning: Stop tractor engine prior to clearing material from moving components on the unit.**
- 4. 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.**
- 5. Caution: Always replace safety labels and signs if they become illegible.**

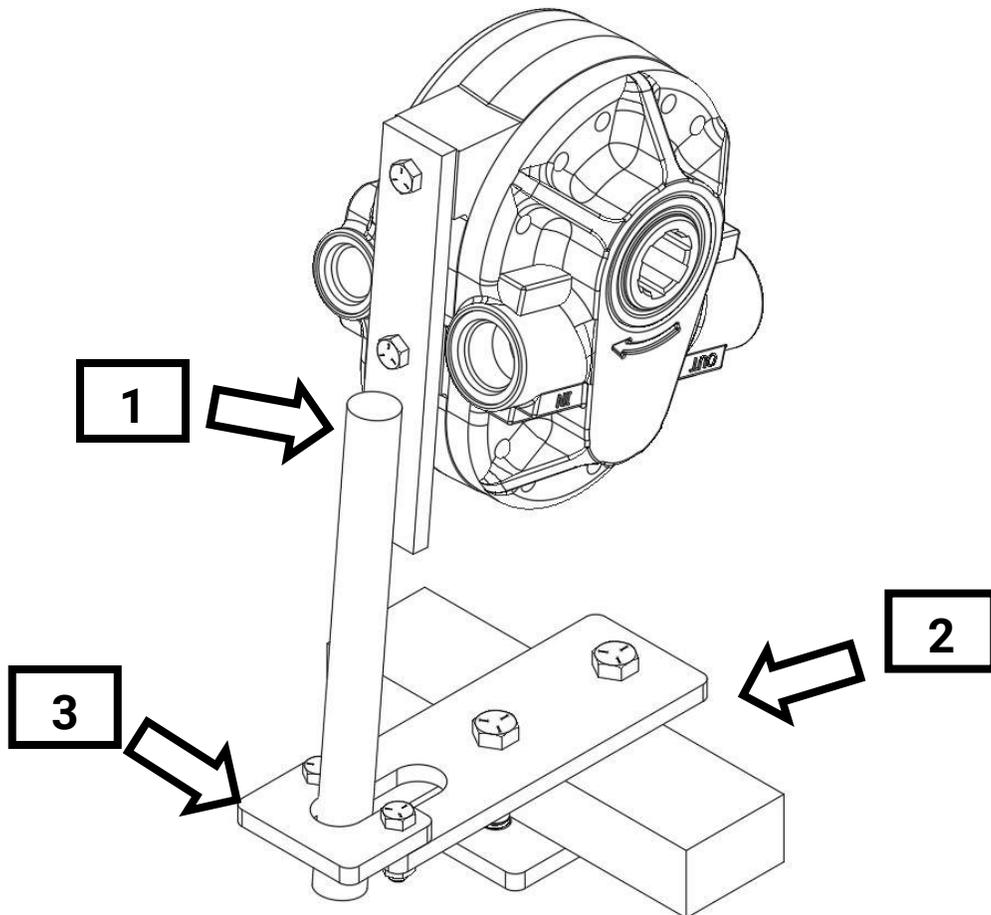
## B. SPECIFICATIONS

<b>Length</b>	<b>28"</b>
<b>Width</b>	<b>28"</b>
<b>Height</b>	<b>30"</b>
<b>Approximate Weight (empty)</b>	<b>200 lbs</b>
<b>Approximate Weight (filled)</b>	<b>400 lbs</b>
<b>Reservoir Capacity</b>	<b>25 gal</b>
<b>Rated Pump Flow Rate</b>	<b>16.6 GPM</b>
<b>Rated Pump Pressure</b>	<b>2,500 psi</b>
<b>Rated PTO Input Speed</b>	<b>540 RPM</b>
<b>Minimum PTO Input Power @ Rated Output</b>	<b>27</b>
<b>Tractor Mount</b>	<b>Category II</b>
<b>Filter Type</b>	<b>In-tank 10 micron</b>

## C. INSTALLATION

### INSTALLATION

1. Mount the tank to the tractor 3-point arms. For category I tractors, use appropriately sized bushings to adapt to the correct pin diameters.
2. Slide the PTO pump fully onto the tractor PTO shaft ensuring there is at least 3" of engagement. If the PTO shield prevents proper engagement, it may need to be removed. Ensure that the pump torque arm (1) is pointed downward towards the drawbar.
3. Bolt the drawbar clamping plates (2) to the drawbar with the pump torque arm in the open end of the clamping plate. Constrain the torque arm by bolting the locking plate (3) onto the open end of the clamping plate. Properly secure all hardware so that the torque arm will resist the rotation of the PTO.



4. Make sure that the suction and pressure hoses to the pump are secure and clear of any potential snags. Tighten all fittings in place, being sure to minimize

any twist in the hoses to minimize wear. Fitting angles can vary based on hose routing and distance from the tractor.

**IMPORTANT:** The suction hose should be tightened at a downward angle to prevent air in the inlet starving the pump of oil. Always raise the tank fully before operating the pump. Oil starvation can lead to pump damage.

5. Insert the 7-way round wiring harness into the receptacle on the tractor, using cable ties to route the wire clear of any potential snags. Route the switch box to the tractor cab and mount in the desired location, again using cable ties to route the wire. Connect the 2-pin and 3-pin connectors on the switch box harness to the corresponding connectors on the unit. Turn the tractor ignition to the accessory position and turn the switch both forward and back, checking to make sure that the control valve solenoids are actuating. The solenoid connectors have a red LED that will illuminate, and an audible click should be able to be heard.
6. (Before first use) fill the tank with the correct grade of NEW hydraulic oil until the oil level is centered in the sight gauge on the right side of the tank. The tank capacity is 25 gallons, but additional fluid may be needed to fill hoses and implement components.
7. Start the tractor and engage the PTO drive at low engine speed to check for leaks and flush the system. Fluid will cycle through the control valve and back to the tank. After warm-up, run the system at the rated PTO speed for at least 15 minutes to flush any contamination.

## **OIL GRADE SELECTION**

Use the proper oil grade for the weather conditions anticipated.

### **Cold: -20°F to 40°F**

Use ISO 32 (10W) hydraulic fluid (full synthetic recommended).  
Alternatively, 10W-30 motor oil or ATF can be used.

**Important:** In cold weather, always preheat the oil in the tank with a magnetic tank heater to prevent pump cavitation. Run the PTO pump at low speed for at least 15 minutes to warm the system up before running under load.

### **Warm: 40°F to 100°F**

Use ISO 32 (10W) or greater.

## **D. CONTROLS AND VALVES**

**NOTE:** The system pressure relief valve is set by the factory at 1,500 psi and is adjustable up to 2,500 psi.

### **STANDARD CONTROLS**

- 1. The power unit comes standard with a single-spool 12V operated directional control valve to allow for forward/reverse flow. Fluid flow directionality is controlled using the included switch box mounted on the tractor.**
- 2. The unit comes standard with a 12V oil cooler with built-in temperature switch. The cooling fan will turn on automatically when the hydraulic fluid temperature is at or above 115°F and will be off otherwise. The LED light on the switch box will indicate when the fan is on.**

## E. OPERATING PROCEDURES

**Do not allow anyone to operate the power unit who has not been properly trained in its safe operation.**

**WARNING:** Stop the tractor engine before making any adjustments to the unit.

**DO the following to maintain performance:**

- Monitor the system for leaks
- Periodically check the system temperature to ensure proper cooling.
- Keep the cooler free of dirt and debris to maximize cooling capacity

**AVOID the following:**

- Prolonged stalling of the implement
- Operating at maximum power for extended periods of time
- Operating the power unit with a low oil level

**NOTE:** If the oil cooler is observed to be running continuously, special care should be taken to ensure that the system temperature remains within safe operating range.

The maximum oil temperature is 180°F.

Continued operation above this temperature can reduce oil viscosity and lead to system damage and eventual failure.

## **F. MAINTENANCE PROCEDURES AND SCHEDULES**

**WARNING:** Lower the unit to rest on the ground, disengage the PTO, shut

### **DAILY MAINTENANCE:**

1. Check the general condition of the unit for hydraulic leaks, loose bolts, worn or damaged parts.
2. Check the condition of the oil cooler. Make sure the cooler is clean and clear of debris. To clean, flush the cooler fins with clean water or blow them out with compressed air.
3. Replace all worn, damaged or illegible labels.

### **YEARLY MAINTENANCE:**

1. Check and repair worn or damaged parts.
2. Replace all worn, damaged or illegible labels.

### **OIL FILTER CHANGE INTERVALS:**

The filter element should be replaced after 50 hours of operation or after 1 year, whichever comes first. Thereafter, the filter element should be replaced every 250 hours of operation or every 3 years. More frequent filter changes may be required depending on operating conditions.

### **OIL CHANGE INTERVALS:**

Change the unit's hydraulic oil every 250 hours or every 3 years, whichever comes first. More frequent changes may be required based on operating conditions.

The magnetic drain plug is located on the bottom of the tank. Properly clean the plug and apply new Teflon tape to the threads before re-tightening the plug after the old oil is drained. Check for leaks after the new oil has been added.