

A-FMHF130814-3 3-WAY SELECTOR VALVE

Turn your Hydraulic Pump unit into multi functional pumping unit with a 3-Way Selector valve.



OWNER'S MANUAL

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Warranty Conditions

Warranty Coverage:

Primary Mover, Inc., herein referred to as Primary Mover, undertakes to replace or repair any part of a Primary Mover Hydraulic and Electric Accessories where damage has been proven to be caused by defects in material or workmanship.

This Warranty is valid for a period of one year for all hydraulic components and attachments and for a period of 1 year for all other electric components from date of the original retail sale. Parts replaced or repaired under the terms of this Warranty are guaranteed only until the original warranty expires.

It is further understood and agreed that the defect should be immediately reported to the Selling Dealer. The Selling Dealer will generally perform Warranty repairs or replacements and the Purchaser shall deliver the Primary Mover Hydraulic and Electric Accessories to the Dealer's place of business for repair. In the event Purchaser is located more than 75 miles from the Selling Dealer, any Primary Mover Dealer authorized to sell and service Primary Mover Products may perform the repair at its dealership.

The obligation from Primary Mover to the Purchaser under this Warranty is limited to the repair or replacement of defective parts by an authorized Primary Mover dealer. Repair or replacement in accordance with this Warranty shall constitute fulfillment of all liabilities of Primary Mover and the Selling Dealer in respect to Primary Mover Hydraulic and Electric Accessories.

There are no warranties beyond those which expressly appear herein. Any implied warranty of merchantability or fitness for a particular purpose is specifically excluded here form. Warranty Provisions:

Primary Mover's liability under this Warranty is subject to the observance by the Purchaser of the following provisions:

- The purchaser shall at all times in the operation of any Primary Mover Product, use those brands and grades of lubricating oils, lubricants or fuel and spare parts officially approved by Primary Mover.

- The Primary Mover Hydraulic and Electric Accessories shall have been used in accordance with the procedures specified in the Operator's Manual. This Warranty does not extend to damage resulting from misapplication, abuse, misuse, failure to perform maintenance, negligence, fire, accidents or changes or faulty mounting carried out by the Purchaser. When making a Warranty exchange of parts, the Purchaser shall compensate Primary Mover for the time that the parts have been used if they have been exposed to extreme wear.

- Compensation is not paid for physical harm, deadlock, resulting damages or other losses.

- To obtain warranty service, the Purchaser must (1) report the product defect to an authorized Primary Mover dealer and request repair within the applicable warranty term and (2) present evidence of purchase or date of original use.

- The Warranty shall be void if the Primary Mover Hydraulic and Electric Accessories has been altered or repaired outside of a Primary Mover dealership in a manner which, in sole judgment of Primary Mover, affects its performance, stability or reliability.

- The customer shall be responsible for transportation expenses for the Primary Mover Hydraulic and Electric Accessories to the dealership or travel of dealer personnel to customer location for Warranty repair. The customer shall also pay any premium for overtime labor requested by the customer.

- Temporary repairs or additional costs due to the work being performed after normal working hours will not be compensated.

- The above warranty is in lieu of all other warranties on Primary Mover's behalf and neither party assumes any other liability in connection with Primary Mover's Products.

- Any dispute arising between Primary Mover and the Purchaser concerning the liability of Primary Mover under this warranty shall be subject to the laws of the State of Texas.

Right to Make Design and Product Changes:

Primary Mover reserves the right to make changes in the design and other changes in its Primary Mover Products at any time without incurring any obligation with respect to any product previously ordered, sold or shipped.

PREFACE

GENERAL COMMENTS

Congratulations on the purchase of your new attachment! This product was carefully designed and manufactured to give you many years of dependable service. Only minor maintenance (such as cleaning and lubricating) is required to keep it in top working condition. Be sure to observe all maintenance procedures and safety precautions in this manual and on any safety decals located on the product and on any equipment on which the attachment is mounted.

This manual has been designed to help you do a better and safer job. Read this manual carefully and become familiar with its contents.

WARNING! Never let anyone operate this unit without reading the "Safety

Alway

Precautions" and "Operating Instructions" sections of this manual. Always choose hard, level ground to park the vehicle on and set the brake so the unit cannot roll.

Unless noted otherwise, right and left sides are determined from the operator's control position when facing the attachment.

NOTE: The illustrations and data used in this manual were current (according to the information available to us) at the time of printing, however, we reserve the right to redesign and change the attachment as may be necessary without notification.

BEFORE OPERATION

The primary responsibility for safety with this equipment falls to the operator. Make sure the equipment is operated only by trained individuals that have read and understand this manual. If there is any portion of this manual or function you do not understand, contact your local authorized dealer or the manufacturer.

SAFETY ALERT SYMBOL



This is the "Safety Alert Symbol" used by this industry. This symbol is used to warn of possible injury. Be sure to read all warnings carefully. They are included for your safety and for the safety of others working with you.

SERVICE

When servicing your product, remember to use only manufacturer replacement parts. Substitute parts may not meet the standards required for safe, dependable operation.

To facilitate parts ordering, you need the model and serial number of your unit. This information may be obtained from the identification Plate located on the product.

The parts department needs this information to insure that you receive the correct parts for your specific model.

SAFETY STATEMENTS



THIS SYMBOL BY ITSELF OR WITH A WARNING WORD THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY OR THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.

- A DANGER THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH WILL RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.
- WARNING THIS SIGNAL WORD IS USED WHERE SERIOUS INJURY OR DEATH COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.
- A CAUTION THIS SIGNAL WORD IS USED WHERE MINOR INJURY COULD RESULT IF THE INSTRUCTIONS ARE NOT FOLLOWED PROPERLY.
 - NOTICE NOTICE INDICATES A PROPERTY DAMAGE MESSAGE.

GENERAL SAFETY PRECAUTIONS

WARNING!



READ MANUAL PRIOR TO INSTALLATION

Improper installation, operation, or maintenance of this equipment could result in serious injury or death. Operators and maintenance personnel should read this manual, as well as all manuals related to this equipment and the prime mover thoroughly before beginning installation, operation, or maintenance. FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND THE PRIME MOVER'S MANUAL(S).



READ AND UNDERSTAND ALL SAFETY STATEMENTS

Read all safety decals and safety statements in all manuals prior to operating or working on this equipment. Know and obey all OSHA regulations, local laws, and other professional guidelines for your operation. Know and follow good work practices when assembling, maintaining, repairing, mounting, removing, or operating this equipment.

KNOW YOUR EQUIPMENT

Know your equipment's capabilities, dimensions, and operations before operating. Visually inspect your equipment before you start, and never operate equipment that is not in proper working order with all safety devices intact. Check all hardware to ensure it is tight. Make certain that all locking pins, latches, and connection devices are properly installed and secured. Remove and replace any damaged, fatigued, or excessively worn parts. Make certain all safety decals are in place and are legible. Keep decals clean, and replace them if they become worn or hard to read.



PROTECT AGAINST FLYING DEBRIS

Always wear proper safety glasses, goggles, or a face shield when driving pins in or out, or when any operation causes dust, flying debris, or any other hazardous material.



LOWER OR SUPPORT RAISED EQUIPMENT



Do not work under raised booms without supporting them. Do not use support material made of concrete blocks, logs, buckets, barrels, or any other material that could suddenly collapse or shift positions. Make sure support material is solid, not decayed, warped, twisted, or tapered. Lower booms to be ground level or on blocks. Lower booms and attachments are to the ground before leaving the cab or operator's station.

WARNING!



USE CARE WITH HYDRAULIC FLUID PRESSURE Hydraulic fluid under pressure can penetrate the skin and cause serious injury or death. Hydraulic leaks under pressure may not be visible. Before connecting or disconnecting hydraulic hoses, read your prime mover's operator's manual for detailed instructions on connecting and disconnecting hydraulic hoses or fittings.

- Keep unprotected body parts, such as face, eyes, and arms as far away as
 possible from a suspected leak. Flesh injected with hydraulic fluid may develop
 gangrene or other permanent disabilities.
- If injured by injected fluid, see a doctor at once. If your doctor is not familiar with this type of injury, ask him to research it immediately to determine proper treatment.
- Wear safety glasses, protective clothing, and use a piece of cardboard or wood when searching for hydraulic leaks. DO NOT USE YOUR HANDS! SEE ILLUSTRATION.



GENEAL SAFETY PRECAUTIONS

WARNING! DO NOT MODIFY MACHINE OR ATTACHMENTS

modifications must be authorized in writing by the manufacturer.



Modifications may weaken the integrity of the attachment and may impair the function, safety, life, and performance of the attachment. When making repairs, use only the manufacturer's genuine parts, following authorized instructions. Other parts may be substandard in fit and quality. Never modify any ROPS (Roll Over Protection

WARNING!



Structure) or FOPS (Falling Object Protective Structure) equipment or device. Any

- Work on a level surface in a well-lit area. Use properly grounded electrical outlets and tools.
- Use the correct tools for the job at hand. Make sure they are in good condition for the task required.
- Wear the protective equipment specified by the tool manufacturer.



SAFELY OPERATE EQUIPMENT

Do not operate equipment until you are completely trained by a qualified operator in how to use the controls, know its capabilities, dimensions, and all safety requirements. See your machine's manual for these instructions.

- . Keep all step plates, grab bars, pedals, and controls free of dirt, grease, debris, and oil.
- . Never allow anyone to be around the equipment when it is operating.
- Do not allow riders on the attachment or the prime mover.
- . Do not operate the equipment from anywhere other than the correct operator's position
- Never leave equipment unattended with the engine running or with this attachment in a raised position.
- Do not alter or remove any safety feature from the prime mover or this attachment
- Know your work site safety rules as well as traffic rules and flow. When in doubt on any safety issue, contact your supervisor or safety coordinator for an explanation

EQUIPMENT SAFETY PRECAUTIONS

WARNING!





Observe overhead electrical and other utility lines. Be sure equipment will clear them. When digging, call your local utilities for location of buried utility lines, gas, water, and sewer, as well as any other hazard you may encounter.

WARNING!



EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA DUST ALONG WITH OTHER HAZARDOUS DUSTS MAY CAUSE SERIOUS OR FATAL RESPIRATORY DISEASE.

It is recommended to use dust suppression, dust collection and if necessary personal protective equipment during the operation of any attachment that may cause high levels of dust.

WARNING!

REMOVE PAINT BEFORE WELDING OR HEATING



Hazardous fumes/dust can be generated when paint is heated by welding, soldering or using a torch. Do the all work outside or in a well-ventilated area and dispose of paint and solvent properly. Remove paint before welding or heating.

When sanding or grinding paint, avoid breathing the dust. Wear an approved respirator. If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating

MAINTENANCE AND SERVICE

GENERAL INFORMATION

Regular maintenance is the key to long equipment life and safe operation. Maintenance requirements have been reduced to an absolute minimum. However, it is very important that these maintenance functions be performed as described below.

EVERY 8 HOURS OF OPERATION

Grease all swivel points (ram and base end of all cylinders) thoroughly. Excessive wear and even mechanical damage to pins and cylinders can result from inadequate lubrication. Use multi-purpose grease.

Lubricate all grease fittings with multi-purpose grease. For grease locations, refer to the diagram in the lubrication section of this manual.

EVERY 40 HOURS OF OPERATION

Check hydraulic reservoir fluid level. If oil is low, check all lines, fittings, and control valve for signs of leakage.

IMPORTANT: Hydraulic fluid level should be checked with backhoe in transport position.

WARNING! Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury.



DO NOT use your hand to check for leaks. Use a piece of cardboard or paper to search for leaks.

Stop engine and relieve pressure before connecting or disconnecting lines. Tighten all connections before starting engine or pressurizing lines. If any hydraulic/diesel fluid is injected into the skin, obtain medical attention immediately or gangrene or other serious injury will result.

CARDBOARD . HYDRAULIC HOSE OR FITTING MAGNIFYING GLASS

Physically check all pins, bushings, cotter pins, nuts, etc., for signs of wear or loose fit. Tighten as required, replacing where necessary. (Bolts and pins may vibrate loose during operation.) Clean equipment of all dirt, oil, and excess grease. This will assist you in making visual inspections and help avoid overlooking worn or damaged components.

TROUBLE SHOTING

PROBLEM	POSSIBLE CAUSE	REMEDY
Oil heating	Dirty oil	Drain and refill oil, replace filter
	Partially plugged inlet filter	Clean filter element
	Control valve held open too long	Return control to neutral position when not in use
	Relief valve set too low	Set valve correctly
	Oil too light in hot weather	Use recommended oil
	Engine running too fast	Reduce throttle
	Damaged oil lines	Replace damaged lines
	Poor operating technique causing excessive oil flow over relief valve	Learn smooth operating methods
External leakage	Damaged O-rings on valve Repair control valve Spools	Repair control valve
	Cylinder seals damaged	Repair cylinder
	Broken oil lines	Replace hose and check for leaks
Cylinder malfunctioning	Oil leaking past packing or seals	Replace packing or seals
	Faulty relief valve	Clean or replace
Electric function reversed	Electric cables inputted incorrectly to valve	Reverse cables to valve



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