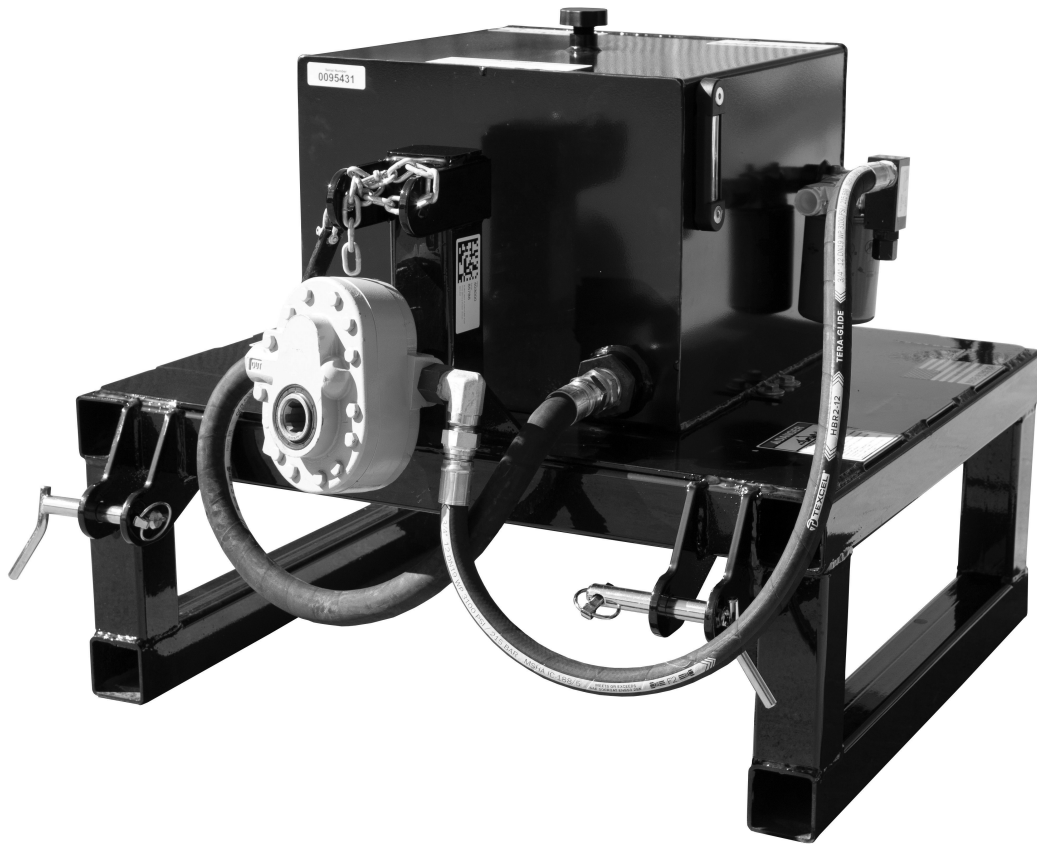


AUX PTO PUMP

Operation and Maintenance Manual



*Register your
WARRANTY
within 30 days
of purchase*



BD-092

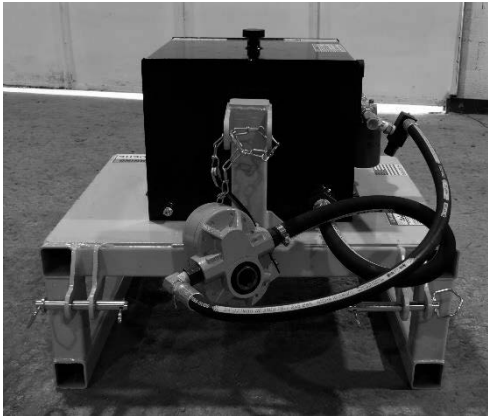
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2. INTRODUCTION

2.1 Welcome



Standard Configuration of the Hydraulic Reservoir System

Congratulations on your choice of a **Blue Diamond AUX PTO Pump**. This equipment has been designed and manufactured to meet the needs of discerning users.

The Blue Diamond Pump was designed to use with the Blue Diamond offset mower.

Many features incorporated into this unit are the result of suggestions made by customers like you. Read this manual carefully to learn how to operate the AUX PTO Pump safely and how to set up and maintain it to provide maximum efficiency.

The AUX PTO Pump was designed specifically to use with the Blue Diamond Offset Mower and is not intended for any other use.

The system uses a PTO motor to power the AUX PTO Pump. At 540 RPM, the Pump provides 11.4 GPM of fluid to the mower.

By following the operating instructions in conjunction with a good maintenance program, your Blue Diamond AUX PTO Pump will provide many years of trouble-free service.

2.2 Safe Operation

Safe, efficient, and trouble-free operation of your hydraulic reservoir system requires that you, and anyone else who will be using or maintaining the unit, read and understand the information contained within the Owner's Manual.

Use this manual for frequent reference and to pass on to new operators or owners.

WARNING



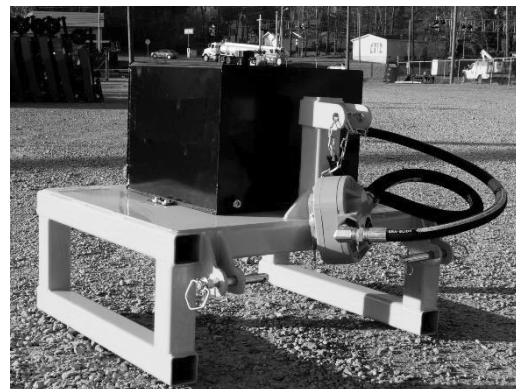
Read And Understand Manual

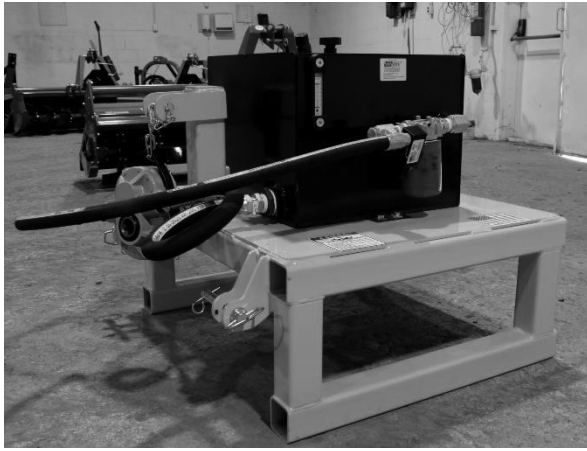
To prevent personal injury or even death, be sure you read and understand all of the instructions in this manual and other related OEM equipment manuals! The AUX PTO Pump, if not used and maintained properly, can be dangerous to users unfamiliar with its operation. Do not allow operating, maintaining, adjusting, or cleaning of this system until the user has read this manual and has developed ^a thorough understanding of the safety precautions and functions of the unit.

This AUX PTO Pump is designed specifically for the purpose of using it with the Blue Diamond Offset Mower. **DO NOT** modify or use this system for any application other than that for which it was designed.

2.3 Intended Usage

Do not use this AUX PTO Pump for any other purpose than its intended use; powering the Blue Diamond Front End Offset Mower.





This unit WILL NOT work on a 1000 RPM PTO.

⚠ CAUTION

Using the AUX PTO Pump without the pressure relief valve will void the warranty and have the potential to cause damage to the offset mower and reservoir system.

2.4 Owner/Operator Manual Storage

Always store the Owner/Operator manual and other operating materials in the document storage tube located to the back of the reservoir tank.



2.5 Operator Orientation

The directions left, right, front, and rear, as mentioned throughout this manual, are as seen from the tractor operator's seat and facing in the direction of travel.

2.6 Serial Number Location

The serial number decal is located on the upper left-hand side of the reservoir tank beside the sight glass.



Model Number _____

Serial Number _____

2.7 Product Improvements

Because Blue Diamond Attachments, maintains an ongoing program of product improvement, we reserve the right to make improvements in design or changes in specifications without incurring any obligation to install them on units previously sold.

2.8 Disposal of Equipment at End of Useful Life

The Blue Diamond Attachments, AUX PTO Pump has been designed for the specific purpose of powering the offset mower. When this unit is no longer capable of doing its designed purpose, it should be dismantled and scrapped. Do not use any materials or components from this unit for any other purpose.

2.9 Unanswered Questions

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or: Blue Diamond Attachments.

3. Safety

3.1 General

Safety of the operator and bystanders is one of the main concerns in designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling the equipment.

Most work-related accidents are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. As you assemble, operate, or maintain the hydraulic reservoir system (unit), you must be alert to potential hazards. You should also have the necessary training, skills, and tools to perform any assembly or maintenance procedures.

Improper operation and maintenance of this unit could result in a dangerous situation that could cause injury or death.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or:

Blue Diamond Attachments

Email: Info@bluediamondattachments.com

WARNING



Do not assemble, operate, or maintain the unit until you read and understand the information contained in this manual.



Safety precautions and warnings are provided in this manual and on the unit. If these hazard warnings are not heeded, bodily injury or death could occur to you or to other persons.

Blue Diamond Attachments, cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this manual and on the unit are, therefore, not all-inclusive. If a method of assembly, operation, or maintenance not specifically recommended by us is used, you must satisfy yourself that it is safe for you and for others. You should also ensure that the unit will not be damaged or be made unsafe by the methods that you choose.

The information, specifications, and illustrations in this manual are based on the information that was available at the time this material was written and can change at any time without notice.

3.2 Safety Alert Symbols



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

This manual contains DANGERS, SAFETY INSTRUCTIONS, CAUTIONS, IMPORTANT NOTICES, and NOTES which must be followed to prevent the possibility of improper service, damage to the equipment, personal injury, or death. The following keywords call the readers' attention to potential hazards.

Hazards are identified by the "Safety Alert Symbol" and followed by a signal word such as "DANGER", "WARNING", or "CAUTION".

DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE

Indicates that equipment or property damage can result if instructions are not followed.

SAFETY INSTRUCTIONS

Safety instructions (or equivalent) signs indicate specific safety-related instructions or procedures.

Note: Contains additional information important to a procedure.

3.3 Safety Icon Nomenclature

Pictorial icons signal a type of hazard and warn of personal protection issues, prohibited actions, and hazard avoidance.

3.3.1 Personal Protection/ Important Information








-  Read the manual
-  Maintenance procedure
-  Damaged hazard label
-  Eye protection
-  Fire extinguisher
-  First aid kit
-  Hand protection
-  Head protection
-  Hearing protection
-  Inspect equipment
-  OEM parts only
-  Protective shoes
-  Remove key
-  Set parking brake
-  Stop engine
-  Think safety
-  Transmission in park
-  Stop engine
-  Use proper support
-  Use proper tools


















-  Use two people when lifting heavy objects
-  Visibility
-  Rollover protection
-  Wear seat belt
-  Weight rating
-  Chemical flushing kit

3.3.2 Prohibited Actions

-  Do not alter or modify
-  Use proper tools
-  Do not weld
-  No alcohol
-  No drugs
-  No smoking
-  No young children
-  No riders

3.3.3 Hazard Avoidance

-    Crush hazard
-  Crush hazard (chock wheels)
-  Crush hazard (foot)
-  Defective or broken part
-  Entanglement hazard

-  Explosive force hazard
-  Explosive separation hazard
-  Fall hazard
-  Fire Hazard
-  Cutter blade contact hazard (hand)
-  Cutter blade contact hazard (foot)
-  Lifting hazard
-  Cutting hazard
-  Pinch point hazard
-  Projectile hazard
-  Rollover protection
-  Safety alert symbol
-  Safety shields
-  Sharp object hazard
-  Slipping Injury
-  Tire pressure
-  Tripping injury

3.4 General Safety Instruction

The owner/operator is responsible for the SAFE use and maintenance of the AUX PTO Pump. Make sure anyone who is operating, maintaining, or working around the unit is familiar with the operating and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be used while using the unit.

In addition to the design features of the unit including safety signs, accident prevention is dependent upon the awareness, concern, prudence, and proper training of the people involved in the operation, maintenance, and storage of the unit.

In addition to this safety section, refer also to safety messages and instructions in each of the appropriate sections of the manual.

These general safety instructions apply to the overall use and maintenance of the AUX PTO Pump.

More specific instructions on safety are found in the operation, maintenance, and storage sections of this manual. Refer to these sections before performing any of these tasks.

WARNING

Failure to comply with the following safety instructions can and will result in serious injury and possibly even death if they are not understood and followed.



Read and Understand Manual

To prevent personal injury or even death, be sure you read and understand all of the instructions in

this manual and other related OEM equipment manuals! The Blue Diamond AUX PTO Pump, if not used and maintained properly, can be dangerous to users unfamiliar with its operation. Do not allow operating, maintaining, adjusting, or cleaning of this unit until the user has read this manual and has developed a thorough understanding of the safety precautions and functions of the unit.

This pump is designed for the specific purpose of cutting grass, weeds, and light brush. DO NOT modify or use this unit for any application other than that for which it was designed.

This unit maintained or operated improperly, or by untrained personnel, can be dangerous; exposing the user and/or bystanders to possible serious injury or death.

WARNING



Provide User with Literature

Blue Diamond hydraulic reservoir system owners must provide operator instructions to anyone using the unit before use, and at least thereafter. Refer to "3.6 OSHA Training Requirements" on page 11.



Stay Clear

Clear the area of people, especially small children, before using the reservoir system. Under no circumstances should young children be allowed to work with or around the unit.



Impaired User Hazard

Do not attempt to assemble, operate, or maintain this unit under the influence of drugs or alcohol. Consult your doctor before using this unit while taking prescription medications.



Crush Hazard

Do not allow anyone to ride on the tractor or the reservoir system. Falling or crushing hazards can result in severe injuries or death.



Falling Hazard

Do not allow riders on the hitch, tractor, or hydraulic reservoir system at any time. Falling can result in severe injuries or death.



No Unauthorized Modifications

Do not modify the reservoir system or safety devices. Do not weld on the unit. Unauthorized modifications may impair its function and safety. Personal injury or death can result from unauthorized modifications.

If the AUX PTO Pump has been altered in any way from the original design, Blue Diamond does not accept any liability for injury or warranty.



Damaged Parts Hazard

Do not use the AUX PTO Pump if any parts are damaged. If the unit has a defect, immediately stop using it and remedy the problem before continuing.



Entanglement Hazard

Always disengage the PTO Pump and turn off the tractor before checking fluid level. Do not engage the tractor PTO when unhooking and hooking up the pump to the PTO shaft. Do not stand near the PTO while rotating.

CAUTION

The following safety instructions are provided to help prevent potential injury. Not following these instructions may lead to injury.

Personal Protection Equipment

When using this pump, wear appropriate personal protective equipment. This list may include, but is not limited to:



- Protective shoes with slip resistant soles
- Protective goggles, glasses, or face shield
- Protective clothing and gloves
- Safety vest (when operating near roads)
- Hearing protection

Ear Protection

Wear suitable ear protection during prolonged exposure to excessive noise.


Hearing Loss

Prolonged Exposure To Loud Noise May Cause Permanent Hearing Loss!

Working environments with noise-producing equipment can cause partial to permanent hearing loss. We recommend using hearing protection any time noise levels exceed 80 decibels (dB). Noise levels over 85 dB, on a long-term basis, can cause severe hearing loss. Noise levels over 90 dB over a period of time can cause permanent and even total hearing loss.

Hearing loss from loud noise is cumulative over a lifetime without hope of natural recovery.

Crush Hazard

 The tractor should be equipped with a Roll Over Protective Structure (ROPS) and a seat belt. A crushing hazard can occur if the driver is ejected from the seat while the tractor is in motion. Fasten the seat belt whenever the tractor is moving.

Fire Extinguisher

Have a fire extinguisher available for use should the need arise and know how to use it. Always keep a fire extinguisher rated "ABC" nearby.

High Pressure Fluids

Relieve the pressure before disconnecting hydraulic lines or performing work on the system. Ensure all hydraulic fluid connections are tight. Check all hoses and lines to make sure they are in good position before applying pressure to the system.

SAFETY INSTRUCTIONS

The following safety instructions are provided to help prevent injury or limit equipment damage.

Safety Signs



Replace any missing or hard-to-read safety signs or instructional labels. Use care when washing or cleaning the

AUX PTO Pump.

Replacement safety sign locations and part numbers are provided in this manual and are available from an authorized dealer parts department or the factory.



First Aid Kit

Have a first aid kit available for use should the need arise and know how to use it.

Hand Protection



Do not touch the exterior of the reservoir. It can become hot during operation.



Think SAFETY!

Work SAFELY!

3.5 Training

Anyone who will be using and/or maintaining the AUX PTO Pump must read, clearly understand, and follow ALL safety, operation, and maintenance information presented in this manual, other related OEM manuals, and the safety signs.

If you do not understand any information in this manual, see your dealer or contact Blue Diamond Attachments, LLC before proceeding.

Do not use or allow anyone else to use this reservoir system until all information has been reviewed. Annually review this manual before the season start-up.

Make periodic reviews of SAFETY and OPERATION of the AUX PTO Pump a standard practice. An untrained operator is not qualified to use this AUX PTO Pump.

3.6 OSHA Training Requirements

The following training requirements have been taken from Title 29, Code of Federal Regulations Part 1928.57 (a) (6). www.osha.gov.

Operator instructions. At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee who operates an agricultural tractor and implements in the safe operating practices and servicing of equipment with which they are or will be involved, and of any other practices dictated by the work environment.

3.7 Federal Laws and Regulations

IMPORTANT FEDERAL LAWS AND REGULATIONS CONCERNING EMPLOYERS, EMPLOYEES AND OPERATORS

This sections is intended to explain in broad terms the concept and effect of the following federal laws and regulations. It is not intended as a legal interpretation of the laws and should not be considered as such.

U.S. PUBLIC LAW 91-596 (The Williams-Steiger Occupational Safety and Health Act of 1970) OSHA

This Act Seeks:

" ... to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources ... "

DUTIES

Sec. 5(a) Each Employer -

- (1) shall furnish to each of its employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to its employees.
- (2) shall comply with occupational safety and health standards promulgated under this Act.
 - (b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his or her own actions and conduct.

OSHA Regulations

Current OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved." These will include (but are not limited to) instructions to:

Keep all guards in place when the machine is in operation;

Permit no riders on equipment;

Stop engine, disconnect the power source, and wait for all machine movement to stop before servicing, adjusting, cleaning, or unclogging the equipment, except where the machine must be running to be properly serviced or maintained, in which case the employer shall instruct employees as to all steps and procedures which are necessary to safely service or maintain equipment.

Make sure no one is within 300 feet of machinery before starting the engine, engaging power, or operating the machine.

EMPLOYEE TRACTOR OPERATING INSTRUCTIONS:

1. Securely fasten your seat belt if the tractor has a ROPS.
2. Where possible, avoid operating the tractor near ditches, embankments, and holes.
3. Reduce speed when turning, crossing slopes, and on rough, slick, or muddy surfaces.
4. Stay off slopes too steep for safe operation.
5. Watch where you are going, especially at row ends, on roads, and around trees.
6. Do not permit others to ride.
7. Operate the tractor smoothly - no jerky turns, starts, or stops.
8. Hitch only to the drawbar and hitch points recommended by tractor manufacturers.
9. When tractor is stopped, set brakes securely and use park lock if available.

Child Labor Under 16 Years Old

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102).

3.8 Sign-Off Form

Blue Diamond follows the general Safety Standards specified by the Farm Equipment Manufacturers Association (FEMA), and the American National Standards Institute (ANSI). Anyone who will be using and/or maintaining the hydraulic reservoir system must read and clearly understand ALL safety, operation and maintenance information presented in this manual.

Do not use or allow anyone else to use this reservoir system until all information has been reviewed. Annually review this manual before the season start-up.

Make periodic reviews of SAFETY and OPERATION of the reservoir system a standard practice. An untrained operator is not qualified to use this unit.

This sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in this Operator's Manual and Parts Book and have been instructed in the operation of the equipment.

Sign-Off Form		
Date	User's Signature	Owner's Signature

3.9 Operation Safety

Refer to the Operation section for safety recommendations related to using the reservoir system. All applicable safety recommendations in other sections should also be followed.

3.10 Transporting Safety

Refer to the Transporting section for safety recommendations related to transporting the reservoir system. All applicable safety recommendations in other sections should also be followed.



3.11 Storage Safety

Refer to the Storage section for safety recommendations related to storing the reservoir system. All applicable safety recommendations in other sections should also be followed.

3.12 Maintenance Safety

Refer to the Service and Maintenance section for safety recommendations related to maintaining the reservoir system. All applicable safety recommendations in other sections should also be followed.

4. SAFETY SIGNS AND INSTRUCTIONAL LABELS

4.1 General Information

The types of safety signs (hazard labels) and instructional labels, along with their locations on the equipment, are shown in the following illustrations. Good safety practices require that you familiarize yourself with the various safety signs, the type of warning, and the area or particular operation related to that area that requires your SAFETY AWARENESS.



Think SAFETY!

Work SAFELY!

Pay close attention to the safety signs and instructional labels attached to the tractor and the reservoir system. Duplicate safety signs, which are attached to the reservoir system, can also be found in this section. If the hydraulic reservoir system is missing a label or one is unreadable, replace the label before using the unit.

SAFETY
INSTRUCTIONS



Safety Signs and Instructional Labels

1. Keep safety signs or instructional labels clean and legible at all times. Use a clean, damp cloth to clean safety decals.

2. Replace any missing or hard-to-read safety signs or instructional labels.

3. Use care when washing or cleaning the equipment not to remove or damage the labels. When using a pressure washer to clean the unit, avoid spraying too close to decals; high-pressure water can enter through very small scratches or under edges of decals causing them to peel or come off.

4. Locations for the labels and replacement part numbers are shown in this section.

5. Replacement parts must have replacement labels attached during installation and/or before the reservoir system is used.

6. Labels are available from your authorized dealer at no charge.

4.2 How to Install Replacement Safety Signs

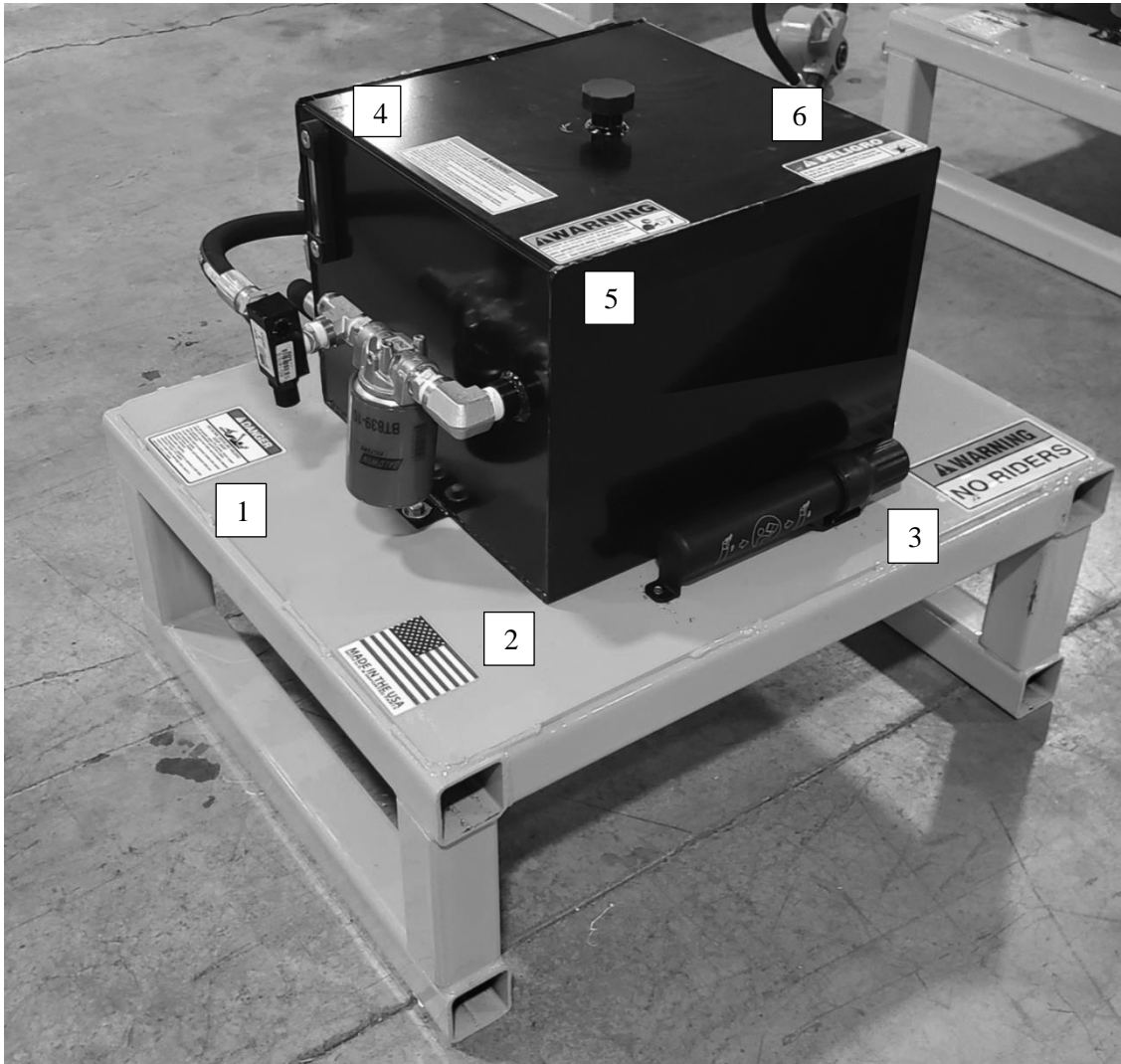
1. Clean and dry the installation area.

Note: Do not install the signs if the temperature is below 50°F (10°C).

2. Determine the exact position before you remove the backing paper.
3. Remove the backing paper.
4. Align the sign over the specified area and carefully press the sign to the part/frame.

Note: Small air pockets can be pierced with a pin and smoothed out using the piece of backing paper.

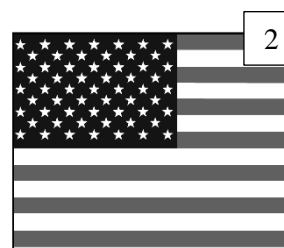
4.3 Safety Signs



5

⚠ WARNING

Use paper or cardboard to check for leaks. NEVER USE YOUR HAND. If oil penetrates skin, gangrene or other serious injury could occur. GET IMMEDIATE MEDICAL ATTENTION. See Operator's manual.



3

⚠ WARNING

NO RIDERS

Serial Number

0037751

1

⚠ DANGER

**ROTATING DRIVELINE HAZARD
KEEP AWAY**

- Do not operate unless PTO guards, tractor master shield and implement guards are in place.
- PTO guards must turn freely and be properly attached and maintained.
- U-joint yokes must be securely locked onto tractor and implement shafts.
- Be sure tractor drawbar and implement hitch are adjusted correctly.
- Grease shaft regularly.
- This implement is designed to operate at 540 RPM maximum tractor PTO speed.
- Failure to heed these warnings may result in personal injury or death.

6

⚠ PELIGRO

Si No Lee Ingles, Pida Ayuda a Alguien Que si Lo Lea Para Que le Traduzca las Medidas de Seguridad.

LEA EL INSTRUCTIVO
READ MANUAL

4

⚠ WARNING

Never remove the hydraulic fill cap while in operation. Hot oil can escape causing severe burns. Allow the hydraulic system to cool completely before removing the hydraulic cap. Do not touch the exterior of the reservoir. It can become hot during operation. Relieve system pressure before changing or adjusting hydraulic system components. Ensure all components in the hydraulic system are appropriately sized and rated for the application. Check the hydraulic system (hoses, tubing, clamps/fittings, pump and cylinder) carefully before each use. Do not operate the hydraulic system or its attachments with frayed, kinked, cracked or damaged hydraulic hoses, fittings or tubing. Do not attempt to add more hydraulic fluid during operation to extend the hydraulic capacity. READ and UNDERSTAND the Owner's Manual completely before using the Hydraulic Reservoir. Use only in accordance with the Owner's Manual instructions. Replace this label if damaged or destroyed. Consult Owner's Manual for ordering instructions.

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5. Operation

5.1 Operating Safety

WARNING

Crush Hazard



The tractor should be equipped with a Roll Over Protective Structure (ROPS) and a seat belt. A crushing hazard can occur if the driver is ejected from the seat while the tractor is in motion. Fasten the seat belt whenever the tractor is moving.



Roll Away Hazard

Before leaving the tractor seat, make sure the engine is stopped, the transmission is placed in park, the key is removed, and the parking brake is set.



The weight of the tractor, plus the reservoir system if it rolls onto a person, can cause serious crushing injury or death.



Stay Clear

Clear the work area of all unnecessary people and obstructions to prevent personal injury.



Entanglement hazard

To avoid serious injury or death, ensure PTO is off while hooking up the Hydraulic Reservoir system. Make sure the safety chain is not in the area of the PTO Pump.



Think Safety

To avoid serious injury or death, do not use the hydraulic reservoir system to push or carry objects.



Think Safety

Never remove the hydraulic fill cap during operation. Hot oil can escape causing severe burns. Allow hydraulic system to cool completely before removing hydraulic oil fill cap.



Think Safety

Ensure hydraulic hoses are properly routed with no kinks or twists. If the hydraulic lines become pinched, kinked, or blocked they can burst leaking hydraulic fluid and could cause serious injury or death.

SAFETY INSTRUCTIONS

The following safety instructions are provided to help prevent injury or limit equipment damage.

Train Unfamiliar Users



It is the Reservoir system owner's responsibility to make sure any person using the unit, especially if it is loaned or rented, has been thoroughly trained on its proper and safe use.

Train all new users and review instructions annually with existing users.

Be certain only physically-able persons will use the reservoir system.

Users who have not read and understood all operating and safety instructions are not qualified to use the reservoir system.

Untrained users expose themselves and bystanders to possible serious injury or death.

If the elderly are assisting with the work, their physical limitations need to be recognized and accommodated.

Never allow children to operate equipment.

5.2 Work Area Safety

SAFETY INSTRUCTIONS

The following safety instructions are provided to help prevent injury or limit equipment damage.

Never operate the unit in darkness or foggy conditions where you cannot clearly see at least 300 feet in front and to the sides of the tractor and reservoir system.

Make sure that you can clearly see and identify passersby, steep slopes, ditches, drop-offs, overhead obstructions, power lines, debris, and foreign objects. If you are unable to clearly see these type of items, stop operating the hydraulic reservoir system.

Do not operate the AUX PTO Pump, or drive the tractor into material that is burning, or areas that recently burnt and may contain hot embers. Burning material, sparks, and coals could be thrown from the AUX PTO Pump to areas of vegetation that might ignite.

**SAFETY
INSTRUCTIONS**

The following safety instructions are provided to help prevent injury or limit equipment damage.

Carry a fire extinguisher on the tractor at all times to extinguish possible fires encountered.

Do not operate the reservoir system on a tractor with an under-frame exhaust.

Before turning, slightly raise the unit off the ground.

After the pump is hydraulically disengaged, the motor can free-wheel for several minutes. Stay clear of the shaft until it comes to complete stop.

Stay alert and watch for trees, low hanging limbs, power lines, and other overhead obstacles as well as solid ground objects.

Do not use the hydraulic reservoir system to push objects.

5.3 Tractor Requirements

⚠ WARNING



Tractor Owner/Operator Manual

Always refer to the tractor owner's manual to ensure compatibility and maximum safety.

The tractor used to operate the reservoir system must have the power capacity to lift and move the unit.

Minimum 15 HP required to run the Hydraulic Reservoir System.

Operating the reservoir system with a tractor that does not meet the following requirements may cause tractor or reservoir system damage and be a potential danger to the operator and passersby.

NOTICE

Some tractors are available with multispeed PTO. Ensure your tractor's PTO is set to 540 RPM to prevent damage to the implement.

⚠ CAUTION

Do not operate the AUX PTO Pump while it is unhooked from the tractor's 3-point hitch. This unit could become unstable if not properly attached to a tractor during operation

Always review the "controls" section of the tractor operator's manual to be familiar with the location, settings, and function of the tractor controls. Be familiar with all controls before using this equipment.

- Approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Tractor Safety Devices; Slow Moving Vehicle (SMV) emblem, lighting.

5.4 Attaching to Tractor

Use caution when connecting the reservoir system to the tractor. The reservoir system should be securely resting at ground level or setting on blocks. Keep hands and feet from under the unit and clear of pinch points between the tractor hitch arms and reservoir system hitch pins.

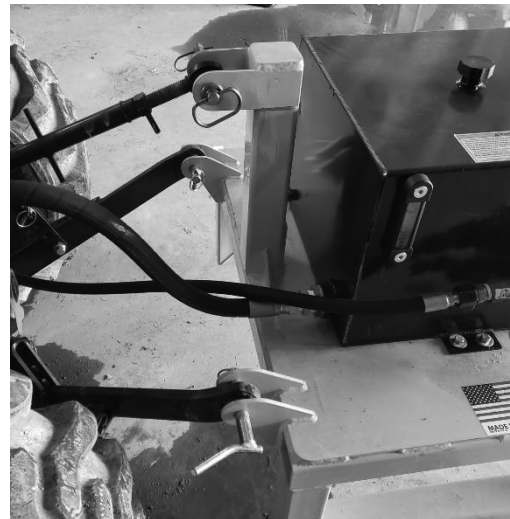
⚠ WARNING



Crush Hazard

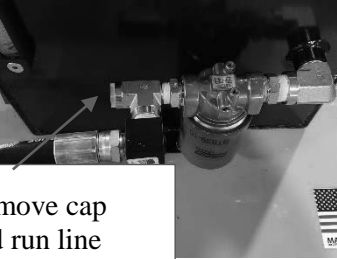
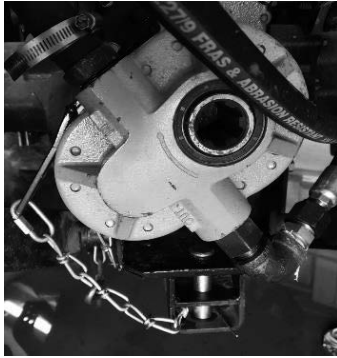
Crush hazard between tractor and reservoir system. Do not allow anyone to stand between the tractor and implement during hook-up operations.

1. Slowly back the tractor to the AUX PTO Pump and align the lower lift arm hitch holes with the lug holes on the reservoir using the tractor's 3-point hydraulic controls.
2. Engage the tractor's parking brake and shut the tractor engine off. Remove the key before dismounting from the tractor.
3. With the lower hitch arms on the tractor aligned and positioned between the lug holes on the reservoir, insert the lower 3-point hitch pins through the lug holes on the reservoir. Secure the pins with lynch pins.
4. Connect top center link on the tractor to the top center link mounting holes on the reservoir system using the top link pin and hairpin cotter.





Remove plug and run line to implement



Remove cap and run line from implement to "T".

5. Connect the line from the pressure relief valve to the implement. This is the pressure line.

6. Slide the spline bore of the hydraulic pump onto the tractor PTO shaft.

7. Wrap chain around a non-moving stable component to the left of the bar on the pump. Ensure the angle of the chain torque bar is at approx. 90° as shown. **DO NOT attach the chain to hydraulic hoses.**

8. Hook the clip in one of the chain links to keep the chain from coming loose.

9. Check the chain, clip, eye bolt, and torque bar to make sure they are secured and in place. Tighten any bolts or nuts and adjust the chain if they are loose.

10. Connect the return side from the implement to the "T" behind the pressure relief valve at the reservoir.

11. Return to the tractor and slowly operate the rear hydraulic lift up and down to check for clearance. Ensure the drawbar and tires do not interfere. Move the drawbar if there is clearance issues. Raise the Pump to 3-4 inches off the ground.

12. Place a level from the left side to the right side of the pump. Manually adjust the lower lift arms to level the AUX PTO Pump.

13. Place the level from the front to the rear of the hydraulic tank. Adjust the length of the top center link to level the reservoir.

The hose MUST be 5/8 inch diameter. DO NOT use smaller or larger diameter hoses.

5.5 Fill Hydraulic Reservoir

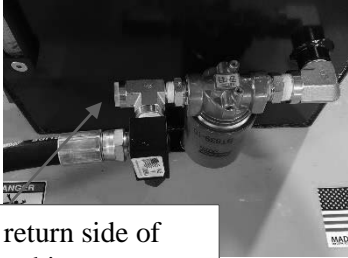
This unit is shipped without hydraulic fluid.

1. Make sure the unit is setting level and setting stable on a hard surface. Ensure all fittings and drain plug are screwed in tight.
2. Clean off all dirt and debris from around the fill cap.
3. Remove the fill cap and add 20 gallons of hydraulic fluid to the empty hydraulic reservoir. Do not let any dust or debris contaminate the fluid.
4. Ensure the hydraulic fluid is between low and high in the sight glass. Replace filler cap.



5.6 Detaching from Tractor

1. Park tractor on a hard level surface. Lower 3-Point arms down until the unit is supported by the ground.
2. Unhook the safety chain, and remove the pump from the PTO shaft. Do not place the pump on the ground. Set the unit on a board or block to prolong life of the pump.



Remove return side of hose from this port.



Remove line to implement

3. Unhook the return side from the "T" and coil on implement.
4. Unhook hydraulic hoses from the pressure side of the pressure relief valve and coil on implement.
5. Unhook the 3point hitch from the tractor. Install the hitch pins, lynch pins, and cotters in the reservoir system for storage
6. Check to make sure the unit, hoses, and area is clear and won't become snagged by the tractor as it moves forward. Move the tractor away from the system.

5.7 Reservoir Checklist

Efficient and safe operation of the reservoir system requires that every user read and understand the operational instructions and all related safety instructions outlined in this manual. This Initial Setup Checklist is provided for the user/ owner. It is important for both personal safety and to maintain the mechanical condition of the unit that this checklist is followed.

1. Although there are no operational restrictions on the reservoir system when used for the first time, it is recommended that the following mechanical items be checked:
 - After 1/2 hour of operation: Tighten all fasteners if necessary, and check the oil level in the reservoir.
 - a. After 10 hours of operation: Go to the normal servicing and maintenance schedule, as defined in the Maintenance Section.
2. Before each use of the reservoir system, the following areas should be checked.

Reservoir Checklist Before Each Use	
✓	Task
	Initially, retighten the bolts, nuts, and clamps as well as checking for leaks and fluid level after 15 minutes of initial use and again at 30 minutes. Recheck again before the next use.
	Make sure the system is positively attached to the tractor.
	Use only an appropriately sized tractor. Refer to "5.3 Tractor Requirements" on pg. 18.
	Make sure the hydraulic hose is properly attached to the tractor.
	Make sure all safety shields and guards are properly installed.
	Inspect the overall reservoir unit for potential problems or damage. Do not use the reservoir unit if it needs repairs of any type.

6. Transporting

6.1 Transporting Safety (Road)

WARNING

The following safety instructions can and will result in serious injury and possibly even death if they are not understood and followed.



Tractor Owner/Operator Manual

Always refer to the tractor owner's manual to determine its compatibility and maximum safety.

Operating the Tractor



Before attaching the reservoir system to the tractor, be familiar with its controls and how to stop it quickly in the event of an emergency. Read and understand this manual and the one provided with your tractor before transporting the unit.



Fall and Crush Hazard

Do not allow riders on the reservoir system or tractor.



Maximum Transporting Speed

Do not exceed 20 MPH when transporting the reservoir system. Slow down for corners and rough terrain.



Visibility

Clean reflectors, SMV or SIS sign, and lights before towing. Make sure all the lights and reflectors required by highway and transport authorities are in place and can be seen clearly by all overtaking and oncoming traffic.



Regulations

Make sure all local, state, and federal regulations, regarding the transport of equipment on public roads and highways, are met. Check with the local authorities regarding transporting the reservoir system on public roads. Obey all applicable laws and regulations.



Rollover Protection

The tractor should be equipped with a Roll Over Protective Structure (ROPS) and a seat belt.

SAFETY INSTRUCTIONS

The following safety instructions are provided to help prevent injury or limit equipment damage.



Drive Safely

Be a safe and courteous driver. Anticipate what other drivers will do and drive accordingly.



Allow Extra Distance

Apply brakes early. Leave extra distance between your vehicle and the one(s) ahead to provide adequate stopping space. Extra distance will be required to stop the vehicle.



Clear Vision

Remove all objects from the area that would prevent clear vision of the complete work area or would present an obstacle when moving the reservoir system.



Hitch Attachment

Be sure the reservoir system is securely attached to the tractor and in good operating condition before using.



Working Taillights

Make sure lights on the tractor are working properly.



Additional Lighting

For reservoir systems without lights, install additional lights on the rear of the tractor to safeguard against rear-end collisions. Daybreak and dusk are particularly dangerous and rear pilot vehicles are recommended. Reservoir systems without lights should be transported on public roads only during daylight hours.



Hazard Flashers

Use hazard flashers on the tractor when transporting unless prohibited by law.



Right-of-Way

When traveling below the posted speed limit, keep to the right and yield the right-of-way to allow faster traffic to pass.

7. Storage

7.1 Storage Safety

At the end of the season, the reservoir system should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary downtime at the beginning of the next season.

CAUTION

Personal Injury Hazard



Store the reservoir system in an area away from human activity. To prevent the possibility of serious injury, do not permit children to play on or around the stored unit.



Crush Hazard

Always set the reservoir system on safety stands or on blocks for storage.

NOTICE

To prevent damage to the reservoir system, store it in a dry, level area.

7.2 Placing In Storage

1. Remove all entangled vegetation.
2. Thoroughly wash the reservoir system with a pressure washer or water hose to remove all grease, dirt, mud, or debris.
3. Select an area that is dry, level, and free of debris (inside a building is ideal). Move the reservoir system to its storage area.
4. Replace all damaged or missing decals.
5. Follow all detaching from tractor instructions when disconnecting tractor from the reservoir system.
6. Touch up all paint nicks and scratches to prevent rusting.

7.3 Removing From Storage

When removing the reservoir system from storage, follow this procedure:

1. Attach the reservoir system to the tractor 3 point hitch.
2. Raise the unit up off the blocks.
3. Before placing the reservoir system back into service, replace any worn or defective parts and perform the Pre-Operation Checklist.

8. Service and Maintenance

8.1 Maintenance Safety

WARNING

Failure to comply with the following safety instructions can and will result in serious injury and possibly even death.

Personal Protection Equipment



Wear close fitting and belted clothing to avoid getting caught in moving parts. Wear personal protection equipment (PPE), which may include hard hat, safety glasses, safety shoes, gloves, etc. appropriate for the work site and working conditions.

Damaged Parts Hazard



Do not use the reservoir system if any parts are damaged. If the unit is believed to have a defect which could cause it to work improperly, immediately stop using it and remedy the problem before continuing.



No Unauthorized Modifications

Do not modify the reservoir system or safety devices. Do not weld on the unit. Unauthorized modifications may impair its function and safety and will void the warranty.

If the reservoir system has been altered in any way from the original design, the manufacturer does not accept any liability for injury or warranty.



Crush Hazard

Always set the reservoir system on safety stands or on the ground when performing maintenance.



Good Working Condition

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts.



Replacement Parts

If replacement parts are necessary, genuine factory replacement parts must be used to restore the unit to its original specifications. Blue Diamond will not accept responsibility for damages as a result of the use of unapproved parts.



Safety Shields and Devices

When completing a maintenance or service function, make sure all safety shields and devices are installed before placing the reservoir system in service.



Hand Safety

Never check for leaks with your hand.

Leaks can be located by holding a piece of cardboard or wood (at least 2 feet long) with your hand at one end and passing the other end over the suspected area (wear eye protection). Look for discoloration of the cardboard or wood. Hydraulic fluid escaping through a pinhole sized opening can burn or puncture skin, resulting in wounds that could cause blood poisoning, infection, disability, gangrene, amputation, or death.

If injured by escaping fluid, no matter how small the wound is, see a doctor at once. A typical injection may be a small wound that does not look serious. However, severe infection or reaction can result if proper medical treatment is not administered immediately by a doctor who is familiar with injection injuries.

SAFETY INSTRUCTIONS

The following safety instructions are provided to help prevent injury or limit equipment damage.



Safety Equipment

A fire extinguisher and first aid kit should be readily accessible while performing maintenance on this equipment.



Clean Work Area

Do not leave tools lying around the work area. Follow good shop practices. Keep service area clean and dry. Be sure electrical outlets and tools are properly grounded. Use adequate light.



Use the Right Tools

Use the correct tools, jacks, hoists or other tools that have the capacity for the job.



Proper Support

Use certified safety stands rated to support the load when working beneath the reservoir system, or performing repairs, service, or maintenance.

Before working underneath the reservoir system place it on a minimum of four jack stands, with a load rating of at least 1000 lbs. each. Make sure the jack stands are stable and the reservoir system is approximately level. Test the stability of the unit before working underneath.

If the reservoir system is attached to the tractor, set the brakes, remove the key, chock the tractor wheels, and block the reservoir system before working underneath.

8.2 Hydraulic Fluid Maintenance

One of the most important items to prevent problems is ensuring that the hydraulic oil reservoir is free of dirt and other containments.

8.2.1 Check Fluid Level

Check the fluid level every 8 hours of operation or if a spill or leak has occurred.

DO NOT attempt to add more hydraulic fluid during operation to extend the Hydraulic capacity.

1. Level Hydraulic Reservoir System.
2. Clean dirt and containments around the fill cap.
3. Remove the filler cap.
4. Add Hydraulic Fluid to the reservoir until the fluid reaches between the low and high in the sight glass.
5. Put the filler cap back on.

8.2.2 Replace Filter Element

Replace the filter element after every 75 hours of operation or if contamination occurs.

1. Place a drip pan under the filter to catch spilled hydraulic fluid.
2. Unscrew filter element and drain the hydraulic fluid from the filter.
3. Clean the filter head.
4. Replace oil filter with a conventional 10-micron filter and O-ring. Coat O-ring with clean hydraulic fluid.
5. Hand tighten filter. Tighten by turning filter an additional 7/8 of a turn.

8.3 Service Record

The period recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication or oil changes.

Copy this page to continue record.

8.2.3 Change Hydraulic Fluid

Change hydraulic fluid every 150 operating hours or every 2 years of service, whichever comes first.

1. Unbolt reservoir and slide forward.
2. Place a container with the ability to hold 20 gallons under the drain plug.
3. Remove the drain plug and filler cap.
4. Allow the hydraulic fluid to drain from the unit completely, and then replace the drain plug.
5. Slide Reservoir back and bolt reservoir back in place.
6. Fill the reservoir with 20 gallons of hydraulic fluid and replace the fill cap.

8.4 Welding Repairs



Before performing any type of welding repair to the reservoir system, contact Blue Diamond for approval. Repair welding must be done with care and with procedures that may be beyond the capabilities of the ordinary welder.



WARNING

Personal Injury Hazard

Repairs or modifications to the reservoir system can result in serious injury or death should these repairs fail.



NOTICE

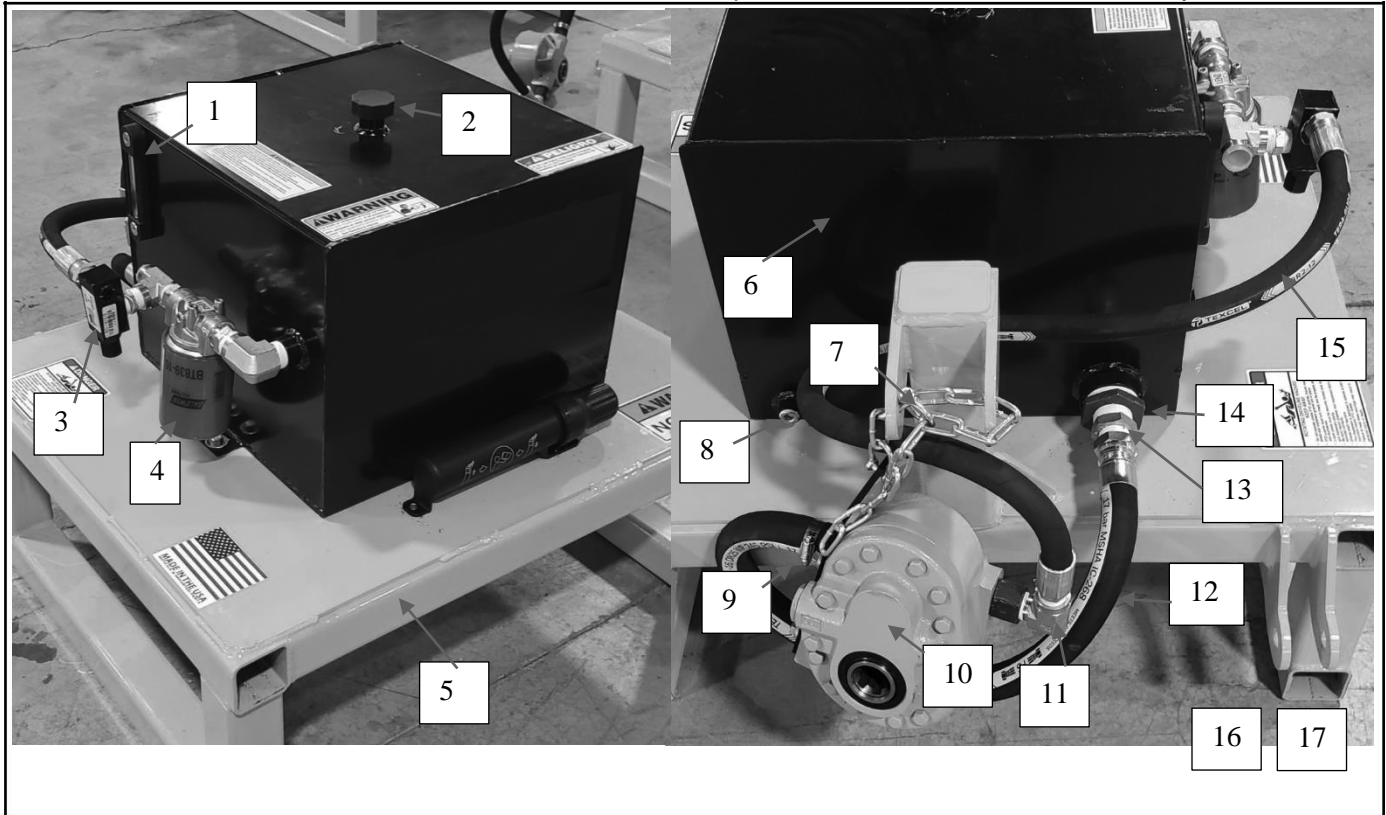
Anyone performing a welding repair should be certified in accordance with the American Welding Society (AWS) standards.

Serviced by	Hours and											
Every 8 Hours												
Make sure fasteners and clamps are properly tightened.												
Make sure all retainer clips and cotter pins are in place.												
Check Fluid Level, and check for leaks												
Inspect labels and hoses for damage												
Every 75 Hours												
Replace Filter Element												
Every 150 Hours												
Change Hydraulic Fluid												
Check unit, motor, and hoses for damage.												
Wash the reservoir system.												
Fill in any nicks in the paint												

9. Parts

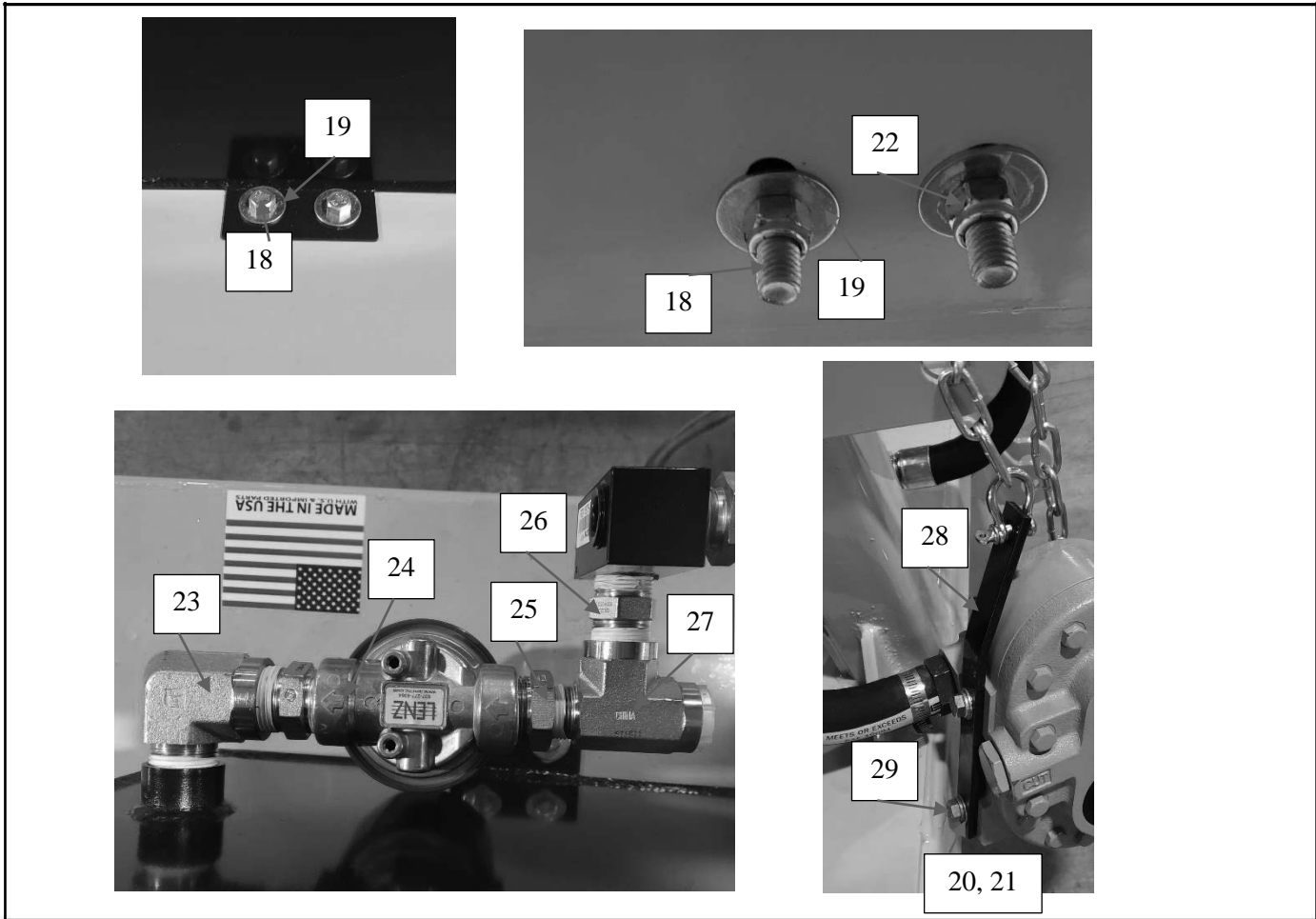
Replacement parts are available from your authorized Dealer Parts Department.

The following pages contain a list of serviceable parts for the Blue Diamond reservoir system.



AUX PTO PUMP

ITEM	PART NUMBER	DESCRIPTION	QTY
1	502702	Sight Glass	1
2	503800	Breather Cap	1
3	502704	Relief Valve	1
4	502706	10 Micron Return Line Filter	1
5	502708	Frame Assembly	1
6	502710	Reservoir Tank	1
7	502712	14" Safety Chain with Shackle	1
8	502714	Magnetic Drain Plug	1
9	502716	Worm Gear Clamp	1
10	502718	Pump	1
11	502720	3/4" NPTM to 3/4" NPTF 90 Degree Elbow	1
12	502722	1" x 36" Hose w/ 1" NPTM Swivel on One End, and Open the Other End	1
13	502724	1.25" NPTM to 1" NPTF Adapter	1
14	502726	2" NPTM to 1.25" NPTF Wire Strainer	1
15	502728	3/4" x 48" Hose w/ 3/4" NPTM Swivel - 3/4" NPTM Fixed Ends	1
16	503310	Lynch Pin	2
17	502730	Lift Pin Cat. #1 Handle Type.	2



AUX PTO PUMP (cont.)

ITEM	PART NUMBER	DESCRIPTION	QTY
18	502732	7/16" - 14 x 1.5" Bolt	4
19	502734	7/16" Flat Washer	8
20	502736	3/8" Lock Washer	2
21	502738	3/8" Flat Washer	2
22	502740	7/16" - 14 Lock Nut	4
23	502742	1" NPTM 90 Degree Elbow	1
24	502744	1" NPT Hydraulic Filter Head	1
25	502746	1" NPTM to 3/4" NPTF Adapter	1
26	502748	3/4" NPTM to NPTF Adapter	1
27	502750	3/4" NPTM x 3/4" NPTF x 3/4" NPTF Tee	1
28	502752	Torque Bar	1
29	502754	3/8" - 16 x 1.25"	2



MANUFACTURER'S LIMITED WARRANTY

BLUE DIAMOND ATTACHMENTS, a manufacturer of quality attachments, warrants new BLUE DIAMOND ATTACHMENTS products and/or attachments at the time of delivery to the original purchaser, to be free from defects in material and workmanship when properly set up and operated in accordance with the recommendations set forth by BLUE DIAMOND ATTACHMENTS, LLC.

BLUE DIAMOND ATTACHMENTS liability for any defect with respect to accepted goods shall be limited to repairing the goods at a BLUE DIAMOND ATTACHMENTS designated location or at an authorized dealer location, or replacing them, as BLUE DIAMOND ATTACHMENTS shall elect. The above shall be in accordance with BLUE DIAMOND ATTACHMENTS warranty adjustment policies. BLUE DIAMOND ATTACHMENTS obligation shall terminate twelve (12) months for the AUX PTO Pump kit after the delivery of the goods to original purchaser.

This warranty shall not apply to any machine or attachment which shall have been repaired or altered outside the BLUE DIAMOND ATTACHMENTS factory or authorized BLUE DIAMOND ATTACHMENTS dealership or in any way so as in BLUE DIAMOND ATTACHMENTS judgment, to affect its stability or reliability, nor which has been subject to misuse, negligence or accident beyond the Company recommended machine rated capacity.

WARRANTY CLAIM

To submit a warranty claim, a return authorization from BLUE DIAMOND ATTACHMENTS must be obtained. The failed part may then be returned. Tampering with the failed part may void the warranty. This warranty does not include freight or delivery charges incurred when returning machinery for servicing. Dealer mileage, service calls, and pickup/delivery charges are the customers' responsibility.

EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, BLUE DIAMOND ATTACHMENTS makes no representation or warranty of any kind, expressed or implied, AND MAKES NO WARRANTY OF MERCHANTABILITY IN RESPECT TO ITS MACHINERY AND/OR ATTACHMENTS ARE FIT FOR ANY PARTICULAR PURPOSE. BLUE DIAMOND ATTACHMENTS shall not be liable for incidental or consequential damages for any breach or warranty, including but not limited to inconvenience, rental of replacement equipment, loss of profits or other commercial loss. Upon purchase, the buyer assumes all liability for all personal injury and property resulting from the handling, possession, or use of the goods by the buyer.

No agent, employee, or representative of BLUE DIAMOND ATTACHMENTS has any authority to bind BLUE DIAMOND ATTACHMENTS to any affirmation, representation, or warranty concerning its machinery and/or attachments except as specifically set forth herein.

This warranty policy supersedes any previous documents.

NOTE: Blue Diamond Attachments is a trademark of BLUE DIAMOND ATTACHMENTS, LLC.



QUALITY | DEPENDABILITY | INTEGRITY

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