



Pressure Washer Pump - RSV 4G40D

User Manual

[Revision 1.0 February 2020]

READ THIS MANUAL CAREFULLY BEFORE USE – FAILURE TO DO SO MAY RESULT IN INJURY, PROPERTY DAMAGE AND MAY VOID WARRANTY. • KEEP THIS MANUAL FOR FUTURE REFERENCE. • Products covered by this manual may vary in appearance, assembly, inclusions, specifications, description and packaging.

Safety

Safety messages are designed to alert you to possible dangers or hazards that could cause death, injury or equipment or property damage if not understood or followed. Safety messages have the following symbols:



You **WILL** be KILLED or SERIOUSLY INJURED if you do not follow instructions.



You **CAN** be KILLED or SERIOUSLY INJURED if you do not follow instructions.



You **CAN** be INJURED if you do not follow instructions or equipment damage may occur.

It is vital that you read and understand this user manual before using the product, including safety warnings, and any assembly and operating instructions. Keep the manual for future reference.

Safety precautions and recommendations detailed here must be fully understood and followed to reduce the risk of injury, fire, explosion, electrical hazard, and/or property damage.

Safety information presented here is generic in nature – some advice may not be applicable to every product. The term "equipment" refers to the product, be it electrical mains powered, battery powered or combustion engine powered.

- **Before Use** - If you are not familiar with the safe operation/handling of the equipment or are in any way unsure of any aspect of suitability or correct use for your application, you should complete training conducted by a person or organization qualified in safe use and operation of this equipment, including fuel/electrical handling and safety.
- Do NOT operate the equipment in flammable or explosive environments, such as in the presence of flammable liquids, gases or dust. The equipment may create sparks or heat that may ignite flammable substances.
- Keep clear of moving parts.
- Equipment may be a potential source of electric shock or injury if misused.
- Do NOT operate the equipment if it is damaged, malfunctioning or is in an excessively worn state.
- Do NOT allow others to use the equipment unless they have read this manual and are adequately trained.
- Keep packaging away from children - risk of suffocation! Operators must use the equipment correctly. When using the equipment, consider conditions and pay due care to persons and property.

General Work Area Safety

- Work areas should be clean and well lit.
- Do not operate the equipment if bystanders, animals etc are within operating range of the equipment or the general work area.
- If devices are provided for connecting dust extraction / collection facilities, ensure these are connected and used properly. Dust collection can reduce dust-related hazards.

General Personal Safety

- Wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect from eye and ear injury, poisoning, burns, cutting and crush injuries. Protective equipment such as safety goggles, respirators, non-slip safety footwear, hard hat, hearing protection etc should be used for appropriate equipment / conditions. Other people nearby should also wear appropriate personal protective equipment. Do not wear loose clothing or jewellery, which can be caught in moving parts. Keep hair and clothing away from the equipment.
- Stay alert and use common sense when operating the equipment. Do not over-reach. Always maintain secure footing and balance.
- Do not use the equipment if tired or under the influence of drugs, alcohol or medication.
- This equipment is not intended for use by persons with reduced physical, sensory or mental capabilities.

General Fuel Safety

- Petrol/fuel/gasoline is extremely flammable – keep clear of naked flames or other ignition sources.
- Do not spill fuel. If you spill fuel, wipe it off the equipment immediately – if fuel gets on your clothing, change clothing.
- Do NOT smoke near fuel or when refuelling.
- Always shut off the engine before refuelling.
- Do NOT refuel a hot engine.
- Open the fuel cap carefully to allow any pressure build-up in the tank to release slowly.
- Always refuel in well ventilated areas.
- Always check for fuel leakage. If fuel leakage is found, do not start or run the engine until all leaks are fixed.

General Carbon-Monoxide Safety

- Using a combustion engine indoors **CAN KILL IN MINUTES**. Engine exhaust contains carbon-monoxide – a poison you cannot smell or see.
- Use combustion engines OUTSIDE only, and far away from windows, doors and vents.

General Equipment Use and Care

- The equipment is designed for domestic use only.
- Handle the equipment safely and carefully.
- Before use, inspect the equipment for misalignment or binding of moving parts, loose components, damage or any other condition that may affect its operation. If damaged, have the equipment repaired by an authorised service centre or technician before use.
- Prevent unintentional starting of the equipment - ensure equipment and power switches are in the OFF position before connecting or moving equipment. Do not carry equipment with hands or fingers touching any controls. Remove any tools or other items that are not a part of the equipment from it before starting or switching on.
- Do not force the equipment. Use the correct equipment for your application. Equipment will perform better and be safer when used within its design and usage parameters.
- Use the equipment and accessories etc. in accordance with these instructions, considering working conditions and the work to be performed. Using the equipment for operations different from those intended could result in hazardous situations.
- Always keep equipment components (engines, hoses, handles, controls, frames, housings, guards etc) and accessories (cutting tools, nozzles, bits etc) properly maintained. Keep the equipment clean and, where applicable, properly lubricated.
- Store the equipment out of reach of children or untrained persons. To avoid burns or fire hazards, let the equipment cool completely before transporting or storing. Never place or store the equipment near flammable materials, combustible gases or liquids etc.
- The equipment is not weather-proof, and should not be stored in direct sunlight, at high ambient temperatures or locations that are damp or humid.
- Do not clean equipment with solvents, flammable liquids or harsh abrasives.
- For specific equipment safety use and care, see Equipment Safety.

Pressure Washer Pump - RSV 4G40D

General Electrical Safety	General Electrical Safety	General Service Information
<ul style="list-style-type: none"> Inspect electrical equipment, extension cords, power bars, and electrical fittings for damage or wear before each use. Repair or replace damaged equipment immediately. Ensure all power sources conform to equipment voltage requirements and are disconnected before connecting or disconnecting equipment. When wiring electrically powered equipment, follow all electrical and safety codes. Wherever possible, use a residual current device (RCD). High voltage / high current power lines may be present. Use extreme caution to avoid contact or interference with power lines. Electrical shock can be fatal. 	<ul style="list-style-type: none"> Electrically grounded equipment must have an approved cord and plug and be connected to a grounded electrical outlet. Do NOT bypass the ON/OFF switch and operate equipment by connecting and disconnecting the electrical cord. Do NOT use equipment that has exposed wiring, damaged switches, covers or guards. Do NOT use electrical equipment in wet conditions or in damp locations. Do NOT use electrical cords to lift, move or carry equipment. Do NOT coil or knot electrical cords, and ensure electrical cords are not trip hazards. 	<ul style="list-style-type: none"> The equipment must be serviced or repaired at authorised service centres by qualified personnel only. Replacement parts must be original equipment manufacturer (OEM) to ensure equipment safety is maintained. Do NOT attempt any maintenance or repair work not described in this manual. After use, the equipment and components may still be hot – allow the equipment to cool and disconnect spark plugs and/or electrical power sources and/or batteries from it before adjusting, changing accessories or performing repair or maintenance. Do NOT adjust while the equipment is running. Perform service related activities in suitable conditions, such as a workshop. Replace worn, damaged or missing warning/safety labels immediately.

Pressure Washer Pump Safety





















- The pump is designed to pump non-flammable or non-explosive fluids. These pumps are intended to pump clean filtered water only.
- Do not operate in or around an explosive environment.
- Always wear safety glasses or goggles and appropriate clothing.
- Do not alter the pump from the manufacturers design.
- Do not allow children to operate the pump.
- Never point the high-pressure discharge at a person, any part of the body or animals.
- Do not operate gasoline engines in a confined area; always have adequate ventilation.
- Do not exceed the pump specifications in speed or pressure.
- Maximum water temperature is 140°F.
- All positive displacement plunger pumps must have a safety relief valve installed on the discharge side of the pump, this valve could be either an unloader or regulator and must be of adequate flow and pressure for the pump.
- Adequate protective guards must cover all moving parts. Perform routine maintenance on the pump and components.
- Use only components that are rated for the flow and pressure of the pump, this would include hose, fittings, safety valves, spray guns etc.

Electrical Safety for Pressure Washer Pumps

- Your power supply must conform to the system requirements.
- The motor must be grounded. Use GFCI plugs and receivers.
- Do not handle the pump/motor with wet hands.
- Only use power cords that are in good condition.
- Never pull the unit by the power cord.
- Never spray or clean the unit with water
- Failure to follow these warnings may result in personal injury or damage to property.**

Safety Symbols

The product may have safety warning labels attached to it, explained below. Understand the symbols on your product and their meanings. If any stickers become unreadable, unattached etc., replace them.

 <p>Flammable Material Hazard Flammable liquids, gases or substances etc may present. Avoid ignition sources and open flames. Danger of fire.</p>	 <p>Read User Manual Read and fully understand product safety warnings, operation, procedures etc before using the product.</p>	 <p>Use Hand Protection Wear appropriate hand protection and take due care as the product or use of the product may present hand hazards.</p>	 <p>Carbon-Monoxide Hazard Do not use the product in confined areas or without adequate ventilation. Carbon-monoxide poisoning can be fatal.</p>
 <p>Electrocution / Electrical Shock Hazard High voltage or high current electricity may be present or required by the product. Take due care when handling electrical products, cables, plugs and leads. Electrical shock can be fatal.</p>	 <p>Toxic Fumes / Dust Hazard Using the product or by-products from use may produce fumes, smoke or particles that could be harmful if inhaled. Wear appropriate breathing protection and have adequate ventilation.</p>	 <p>Explosive Material Hazard Combustible liquids, gases or substances etc may be present. Avoid ignition sources and open flames. Danger of explosion.</p>	 <p>Cutting / Amputation Hazard The product may have blades, edges or mechanical devices that can cause severe cut injury to fingers, limbs etc. Take due care when handling and using the product.</p>
 <p>Crush Hazard The product may have blades, edges or mechanical devices that can cause severe crush injury to fingers, limbs etc. Take due care when handling and using the product.</p>	 <p>Single Operator Only The product must be operated by a single person only. More than one person operating the product may introduce additional hazards.</p>	 <p>Use Face Protection Wear appropriate full-face protection and take due care as the product or use of the product may present face and eye hazards.</p>	 <p>Use Foot Protection Wear appropriate foot protection and take due care as the product or use of the product may present foot hazards.</p>
 <p>Use Eye / Ear / Head Protection Wear appropriate eye and / or ear and / or head protection and take due care as the product or use of the product may present eye, hearing and head hazards.</p>	 <p>Running Hazard Do not run on or near the product as doing so may present a fall hazard.</p>	 <p>Diving Hazard Do not dive into the product as doing so may present a neck / head injury hazard.</p>	 <p>Adult Supervision Required Always supervise children and other users of a product to prevent drowning or injury.</p>
 <p>Skin Penetration / Puncture Hazard The product may produce pressure, emit liquids or objects that can cause severe injury to fingers, limbs, blood etc. Take due care when handling and using the product.</p>	 <p>Hot Surface Hazard Be aware that the product may produce high temperatures and hot surfaces that can cause burn injuries.</p>	 <p>Flying Debris Hazard Be aware that the product or use of the product may present hazards produced by flying debris. Wear appropriate clothing and protective devices.</p>	 <p>Moving Parts Hazard Be aware that the product contains or uses mechanical devices that move or rotate. Always wait for moving parts to stop fully before handling the product, adjusting, maintenance etc.</p>

 <p>Carbon-Monoxide Hazard Do not use the product in confined areas or without adequate ventilation. Carbon-monoxide poisoning can be fatal.</p>	 <p>Pull Hazard Be aware that the product contains or uses mechanical devices that can pull in objects and can cause severe injury to fingers, limbs etc. Take due care when handling and using the product.</p>	 <p>Slope / Fall Injury Hazard Be aware that using the product on sloping surfaces or in slippery conditions may present additional dangers from falls and contact with blades, moving parts, hot surfaces etc.</p>	 <p>"Slam Dunk" Warning Do NOT attempt "slam dunk" manoeuvres as this may result in severe injury due to falling, product breakage or collapse etc.</p>
 <p>Electrocution / Electrical Shock Hazard - Outdoor High voltage or high current electricity may be present or required by the product. Do NOT use in rain, damp or wet conditions. Electrical shock can be fatal.</p>	 <p>Electrocution / Electrical Shock Hazard - Disconnect High voltage or high current electricity may be present or required by the product. Always disconnect the product from the electrical supply before handling the product, adjusting, maintenance etc.</p>	 <p>Power Line Electrocution Hazard High voltage / high current power lines may be present. Use extreme caution to avoid contact or interference with power lines. Electrical shock can be fatal.</p>	 <p>"Kick-Back" Hazard High level of "kick-back" hazard that can cause the machine to suddenly rotate towards operator. Kick-back injury can be fatal.</p>
 <p>Winch Operator Position Hazard Do NOT stand between winch and load. Do NOT use winch to move people.</p>	 <p>Winch Lift Hazard Do NOT LIFT load vertically. Use machine to PULL only.</p>	 <p>Cable Hazard Ensure that load bearing cable is not kinked or knotted.</p>	 <p>Winch Cable Hazard Ensure that there is a minimum number of cable coils on winching mechanism.</p>
 <p>Winch Hook Hazard Carry hook to load – do NOT throw or run.</p>	 <p>Flash / Blinding Hazard Wear appropriate eye protection for welding. Direct exposure to weld arcs may cause permanent eye injury.</p>	 <p>Laser Hazard Laser may be in use – do NOT look directly at laser or allow others to.</p>	

Table of Contents

Safety	2
Safety Symbols	4
Installation	7
Direct Drive Gasoline Pumps	7
Winter or Long Time Storage	7
Service Pumps	8
Servicing the Valves	8
Discharge Valve Removal	8
Discharge Valve Assembly	8
Servicing the Packings/Seals and Inlet Valves	9
Disassembly	9
Assembly	11
Inlet Valve Removal	12
Inlet Valve Assembly	13
Pump Head to Drive End Installation.....	13
Oil Change	13
Servicing the Built-in Unloader and Check Valve	14
Check Valve Removal	14
Check Valve Assembly	14
Unloader Removal	15
Unloader Assembly Removal	15
Unloader Assembly.....	15
Unloader Adjusting Instructions	16
Troubleshooting	17
Specifications	18

Installation

Direct Drive Gasoline Pumps

1. Install the shaft key into the keyway and apply a light coating of anti-seize on the engine shaft. (See Figure 1 below).
2. Align the two keyways and push the pump completely onto the engine.
3. Install all four (4) bolts and tighten evenly.
4. Remove the red shipping oil cap and install the black crankcase vent cap. (See Figure 2 below)
5. Install the appropriate unloader valve and other accessories.
6. Install the appropriate water inlet and discharge fittings.
7. Connect the water supply hose and high-pressure discharge hose/spray gun.
8. Turn on the water supply.
9. Open the spray gun to purge the system of any air.
10. Start the engine.
11. Adjust the engine speed and unloader valve.

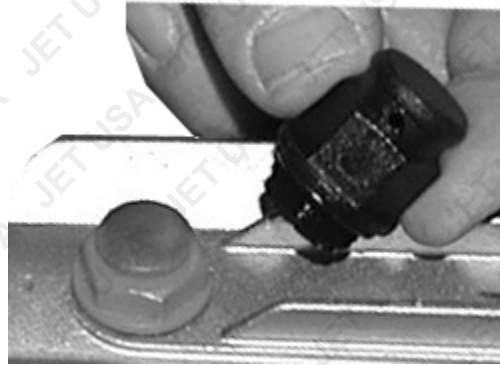
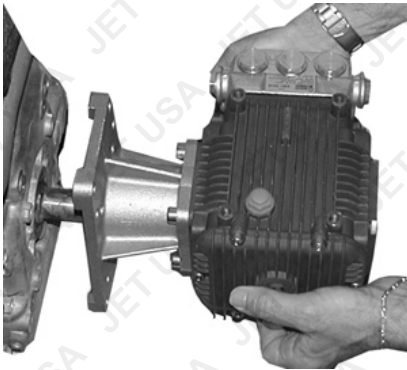


Figure 3 (left) and Figure 4 (right)

Winter or Long Time Storage

1. Drain all the water out of the pump.
2. Run a 50% solution of a RV or non-toxic/biodegradable antifreeze through the pump.
3. Flush the pump with fresh water before the next use.
4. In freezing conditions failure to do this may cause internal pump damage.
5. For long periods of storage in non-freezing areas the solution will keep the seals and O-rings lubricated.

Service Pumps

Servicing the Valves

The inlet and discharge valves in this series pumps are all the same. The valves are located under the six 19mm hex plugs. The inlet valves are located on the inside portion of the head under the seal assemblies and the discharge valves are located on the top row of the pump head.

Tools required: #8-32x" machine screw and diagonal pliers, screwdriver, 19mm socket, ratchet, and torque wrench.

Discharge Valve Removal

1. Remove the valve cap. (See Figure 5)
2. Inspect the valve cap O-ring for any damage, replace if necessary.
3. Screw the machine screw into the hole on top of the valve cage (approx. 1/8"). Using the diagonal pliers grasp the screw at the lowest reachable point. Using the pump head as a base, push down on the pliers, the valve will lift out. (See Figure 6)
4. Use a small probe to move the poppet up and down to assure that the valve is functioning properly, and that no debris is stuck in the valve. (See Figure 7)
5. Inspect the valve O-ring for any damage, replace if necessary.



Figure 5



Figure 6



Figure 7

Discharge Valve Assembly

1. Insert the valve assembly squarely into the port pushing it into place with a deep well socket (you will feel the valve assembly seat). (See Figure 8)
2. Install the valve cap and torque to the proper specification. (See Figure 9)



Figure 8

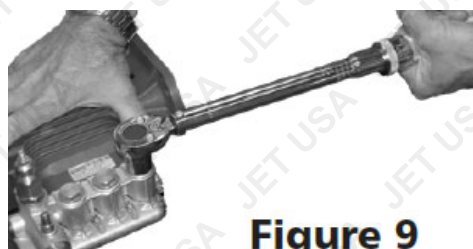


Figure 9

Servicing the Packings/Seals and Inlet Valves

To access the water seals and inlet valves for inspection or replacement, you will first need to remove the head of the pump.

Tools required: 5mm hex socket, ratchet, (2) long screwdrivers, channel lock pliers, mechanics pick and torque wrench.

Disassembly

1. First remove the eight 5mm head bolts. (See Figure 10)

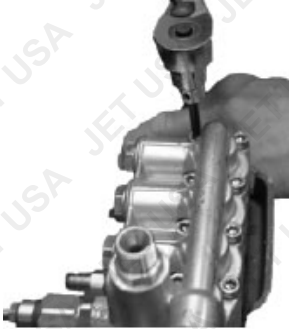


Figure 10

2. Place the screwdrivers as shown between the head and crankcase of the pump, lifting one up and the other down. The head should start to lift off the plungers. (See Figure 11)



Figure 11

3. When you remove the head you may notice that some of the water seals have stayed on the plungers and some in the head. To remove the seals from the plungers simple turn the assemblies and pull off. (See Figure 12)



Figure 12

Pressure Washer Pump - RSV 4G40D

4. If the seal assemblies are in the head use the channel lock pliers to grab the seal retainer on the outside ring, twist the retainer in either direction (this is done to free the retainer O-ring which is stuck to the manifold) and lift out. (See Figure 13)



Figure 13

5. With your finger pull out the white re-stop ring. (See Figure 14)



Figure 14

6. With your finger pull the high-pressure seal and head ring out of the head. (See Figure 15)



Figure 15

7. The low-pressure seal is in the brass seal retainer. Using the mechanics pick, go in between the seal and retainer and pull the seal toward the center and pull outwards. (See Figure 16)



Figure 16

8. Remove the seal retainer O-ring with the mechanics pick. (See Figure 17)



Figure 17

Assembly

1. Install the plastic head ring into the head (the flat side is on the bottom). (See Figure 18)



Figure 18

2. Install the high-pressure seal. Place the seal so the open "V" portion is toward the head ring. You need to place the seal at an angle and pull and push to work the seal into position with your fingers (do not use any tools you may damage the seal). Make sure the seal is totally seated against the head ring. (See Figure 19 & 20)



Figure 19



Figure 20

3. Place the white re-stop ring so it mates to the top of the high-pressure seal (Make sure it is squarely seated). (See Figure 21)



Figure 21

Pressure Washer Pump - RSV 4G40D

4. Installing the low-pressure seal, you want the open side of the seal to be pointed toward the water side of the head (toward the high-pressure seal) and the flat side toward the drive end of the pump.

Place the seal into the gland at an angle, with your finger push the exposed side of the seal towards the center and work the seal into position. After the seal is in the gland you can work it into it proper position.. (See Figure 22)



Figure 22

5. Install the retainer O-ring. (See Figure 23)



Figure 23

6. Squarely seat the retainer into the head and push with even pressure until it snaps into position. (See Figure 24)



Figure 24

Inlet Valve Removal

1. Remove the valve cap.
2. Inspect the valve cap O-ring for any damage, replace if necessary.
3. Screw the machine screw into the hole on top of the valve cage (approx. 1/8"). Using the diagonal pliers grasp the screw at the lowest reachable point. Using the pump head as a base, push down on the pliers, the valve will lift out.
4. Use a small probe to move the poppet up and down to assure that the valve is functioning properly, and that no debris is stuck in the valve.
5. Inspect the valve O-ring for any damage, replace if necessary.

Inlet Valve Assembly

1. Insert the valve assembly squarely into the port pushing it into place with a deep well socket (you will feel the valve assembly seat).
2. Install the valve cap and torque to the proper specification.

Pump Head to Drive End Installation

1. Turn the crankshaft to align the plungers as shown. (See Figure 25)



Figure 25

2. Place the head evenly onto the plungers and push it until it makes contact with the drive end of the pump. (See Figure 26)



Figure 26

3. Torque the head bolt as shown in the tightening sequence diagram. (See Figure 27 & 28)



Figure 27

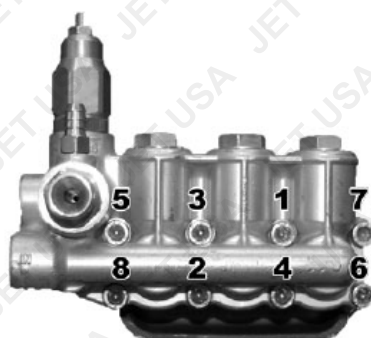


Figure 28

Oil Change

Change oil after first 50 hours of use. Then every 500 hours. Refer to parts breakdown for oil type.

Servicing the Built-in Unloader and Check Valve

These parts are serviced as assembled kits.

Tools required: 3/8" drive ratchet, 19mm deep well socket, medium strength thread locker, needle nose pliers.

Check Valve Removal

Remove the chemical injector discharge nipple. Use the needle nose pliers to lift out the check valve. (See Figure 29)



Figure 29

Check Valve Assembly

1. Place the check valve into the discharge outlet with the pointed side going in first (NOTE: older model pumps have springs that go into the hollow portion of the valve, newer models do not have springs.) (See Figure 30)



Figure 30

2. Inspect the O-rings on the injection nipple, if damaged replace. Place small amount of thread locker on the thread and tighten. (See Figure 31)



Figure 31

Unloader Removal

Tools required: 3/8" ratchet, 22mm deep well socket, crescent wrench, small hammer, 6mm x approximately 8mm or longer, medium strength thread locker.

Unloader Assembly Removal

1. Using the 22mm socket rotate the pressure adjusting cap so both set of hexes are aligned. Use screw to remove the complete unloader assembly. (See Figure 32)



Figure 32

2. Screw the 6mm bolt into the unloader piston seat, grab the bolt with the crescent wrench just under the head. Using the hammer tap the bottom of the wrench. The seat will pop out. (See Figure 33)



Figure 33

Unloader Assembly

1. Piston seat installation screw the new seat onto the bolt (NOTE: the flat side is the bottom). Push squarely into the unloader base and tap into place with the hammer. (Remove the bolt) (See Figures 34 & 35)



Figure 34



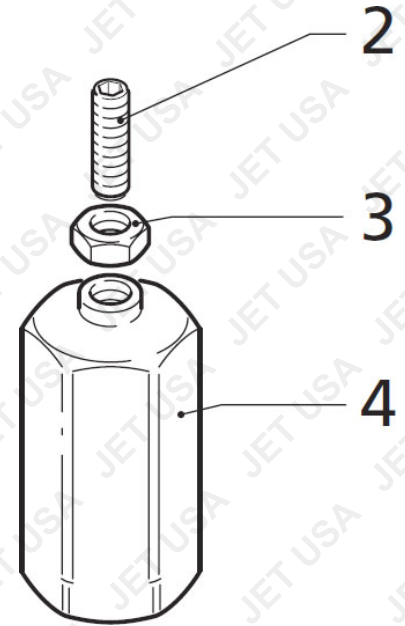
Figure 35

2. Place a small amount of thread locker on the unloader cartridge threads and screw into the base and tighten.

Unloader Adjusting Instructions

Follow these easy steps to adjust the pressure:

1. Loosen nut (pos. #3) with 10mm wrench.
2. Turn brass (pos. #4) clockwise until it stops.
3. Start pump, watch pressure gauge and turn (pos. #2) using 3mm hex clockwise until recommended/rated pressure is obtained. Line pressure will be approximately 200 psi less than actual head pressure. DO NOT set line pressure to rated.
4. Release trigger and make sure there is minimal spike (200-300 psi) (Repeat this step two or three times).
5. Tighten nut (pos. #3) down against (pos. #4).



Troubleshooting

Symptom	Possible Cause(s)	Corrective Action
Oil leak between crankcase and pumping section	Worn rod oil seals	Replace crankcase piston rod seals
Frequent or premature failure of the packing	1 Cracked, damaged or worn plunger	1 Replace plungers
	2 Overpressure to inlet manifold	2 Reduce inlet pressure
	3 Material in the fluid being pumped	3 Install proper filtration on pump inlet plumbing
	4 Excessive pressure and/or temperature of fluid being pumped	4 Check pressures and fluid inlet temperature; be sure they are within specified range
	5 Running pump dry	5 Do not run pump without water
Pump runs but produces no flow	Pump is not primed	Flood suction then restart pump
Pump fails to prime	Air is trapped inside pump	Disconnect discharge hose from pump. Flood suction hose, restart pump and run pump until all air has been evacuated
Pump loses prime, chattering noise, pressure fluctuates	1 Air leak in suction hose or inlet	1 Remove suction line and inspect it for a loose liner or debris lodged in hose. Avoid all unnecessary bends. Do not kink hose
	2 Clogged suction strainer	2 Clean strainer
Low pressure at nozzle	1 Unloader valve is by-passing	1 Make sure unloader is adjusted properly and by-pass seat is not leaking
	2 Incorrect or worn nozzle	2 Make sure nozzle is matched to the flow and pressure of the pump. If the nozzle is worn, replace
	3 Worn packing or valves	3 Replace packing or valves
Pressure gauge fluctuates	1 Valves worn or blocked by foreign bodies	1 Clean or replace valves
	2 Packing worn	2 Replace packing
Low pressure	1 Worn nozzle	1 Replace with nozzle of proper size
	2 Belt slippage	2 Tighten or replace with correct belt
	3 Air leak in inlet plumbing	3 Disassemble, reseal and reassemble
	4 Relief valve stuck, partially plugged or improperly adjusted valve seat worn	4 Clean and adjust relief valve; check for worn or dirty valve seats
	5 Worn packing. Abrasive in pumped in cavitation. Inadequate water	5 Install proper filter suction at inlet manifold must be limited to lifting less than 20 feet of water or 8.5 psi vacuum
	6 Worn inlet, discharge valve blocked or dirty	6 Replace inlet and discharge valve

Symptom	Possible Cause(s)	Corrective Action
Pump runs extremely rough, pressure very low	1 Inlet restrictions and/or air leaks.	1 Clean out foreign material
	2 Stuck inlet or discharge valve	2 Replace worn valves
Water leakage from under manifold	Worn packing or cracked plunger	Install new packing or plunger
Slight leak, oil leaking in the area of crankshaft	1 Worn crankshaft seal or improperly installed oil seal O-ring	1 Remove oil seal retainer and replace damaged O-ring and/or seals
	2 Bad bearing	2 Replace bearing
Excessive play in the end of the crankshaft pulley	Worn main bearing from excessive tension on drive belt	Replace crankcase bearing and/or tension drive belt
Water in crankcase	1 Humid air condensing into water inside the crankcase	1 Change oil intervals
	2 Worn packing and/or cracked plunger	2 Replace packing. Replace plunger
Loud knocking noise in pump	1 Cavitation or sucking air	1 Check water supply is turned on
	2 Pulley loose on crankshaft	2 Check key and tighten set screw
	3 Broken or worn bearing	3 Replace bearing

Specifications

Max Flow	15.1L/min
Max Pressure	275Bar / 4000psi
Max RPM	3400
Shaft Diameter	1" Hollow
Max. Fluid Temp.	60° C
Inlet Port	3/4" Female Garden Hose
Outlet Port	3/8" Female Quick Connect
Oil capacity	470mL



Some experts believe that the incorrect or prolonged use of almost any product may cause serious injury or death. To help reduce your risk of serious injury or death, refer to the information below. For more information, see www.datastreamserver.com/safety

- Consult all documentation, packaging and product labelling before use. Note that some products feature documentation available online. It is recommended to print and retain the documentation.
- Before each use, check the product for loose/broken/damaged/missing parts, wear or leaks (if applicable). Never use a product with loose/broken/damaged/missing parts, wear or leaks.
- Products must be inspected and serviced (if applicable) by a qualified technician every 6 months. This is based on average residential use by persons of average size and strength, and on a property of average metropolitan size. Use beyond these recommendations may require more frequent inspections/servicing.
- Ensure that all users of the product have completed a suitable industry recognised training course before being allowed access to the product.
- The product has been supplied by a general merchandise retailer that may not be familiar with your specific application or description of application. Be sure to attain third-party approval from a qualified specialist for your application before use, regardless of any assurances from the retailer or its representatives.
- This product is not intended for use where fail-safe operation is required. As with any product (for example, automobile, computer, toaster), there is the possibility of technical issues that may require the repair or replacement of parts, or the product itself. If the possibility of such failure and the associated time it may take to rectify could in any way inconvenience the user, business or employee, or financially affect the user, business or employee, then the product is not suitable for your requirements. This product is not intended for use where incorrect operation or a failure of any kind, including but not limited to, a condition requiring product return, replacement, parts replacement or service by a technician may cause financial loss, loss of employee time or an inconvenience requiring compensation.
- If this product has been purchased in error when considering the information presented here, contact the retailer directly for details of their returns policy, if required.

