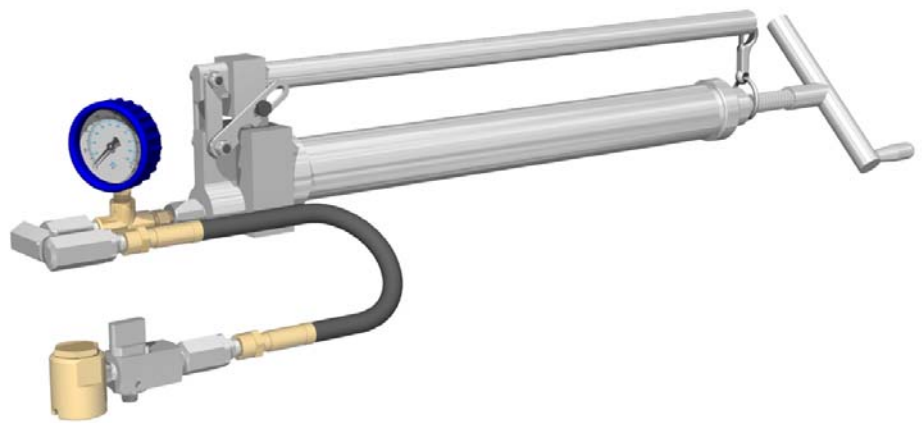


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Owner's Manual

# Sealweld® SuperGun®



By Sealweld Corporation

We trust you will find the lessons detailed in this program useful when maintaining the valves at your facility.  
Should you have any questions regarding any of these procedures, or if you know of any successful procedures you would like to share, please contact us at:

### **Sealweld Corporation**

# 106, 4116-64 Ave. S.E., Calgary, Alberta, Canada T2C 2B3  
Telephone: 1-403-236-0043 Fax: 1-403-236-5487  
TOLL FREE 1-800-661-8465 in North America  
Email: [info@sealweld.com](mailto:info@sealweld.com)  
Web Site: [www.sealweld.com](http://www.sealweld.com)

### **Sealweld (USA), Inc.**

6450 Skyview drive, Houston, Texas, USA 77041  
Telephone: 1-713-466-7373 Fax: 1-713-466-7778  
TOLL FREE 1-800-624-4301 in North America  
Email: [info@sealweld.com](mailto:info@sealweld.com)  
Web Site: [www.sealweld.com](http://www.sealweld.com)

### **ValvePro® Technical Support**

Telephone: 1-403-236-0043 Fax: 1-403-236-5487  
Email: [support@valvepro.com](mailto:support@valvepro.com)  
Web Site: [www.valvepro.com](http://www.valvepro.com)

The information in this handbook is intended as a guide only.  
Always consult the valve manufacturers recommended maintenance procedures.  
No warranty is written or implied.

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# Contents

<b>Read This First</b>	<b>1</b>
Screw-Primed Hand-Held Sealant Injection Gun.....	1
<b>Safety Considerations</b>	<b>3</b>
SuperGun® Safety Considerations .....	3
<b>Loading Instructions</b>	<b>5</b>
How to Load a Sealweld® SuperGun® .....	5
To Begin Loading.....	5
To Load From a Cartridge.....	5
Barrel Capacity .....	7
Discharge Capacity.....	7
<b>Operating Instructions</b>	<b>9</b>
How to Operate a Sealweld® SuperGun® .....	9
Model S-3 Operating and Maintenance Procedures .....	9
<b>Troubleshooting Hints</b>	<b>11</b>
Minor Repairs to the Sealweld® SuperGun® .....	11
To Replace Leather Cup.....	11
To Replace Piston Head Cartridge .....	12
Check Valve Problems.....	13
Head / Barrel Gasket .....	13
<b>Parts List</b>	<b>15</b>
How to Order SuperGun® Parts .....	15
<b>Warranty Information</b>	<b>19</b>
Sealweld® SuperGun® Warranty.....	19
Contact Information.....	20
Sealweld Corporation – Canada.....	20
Sealweld (USA), Inc. ....	20
ValvePro® Technical Support.....	20

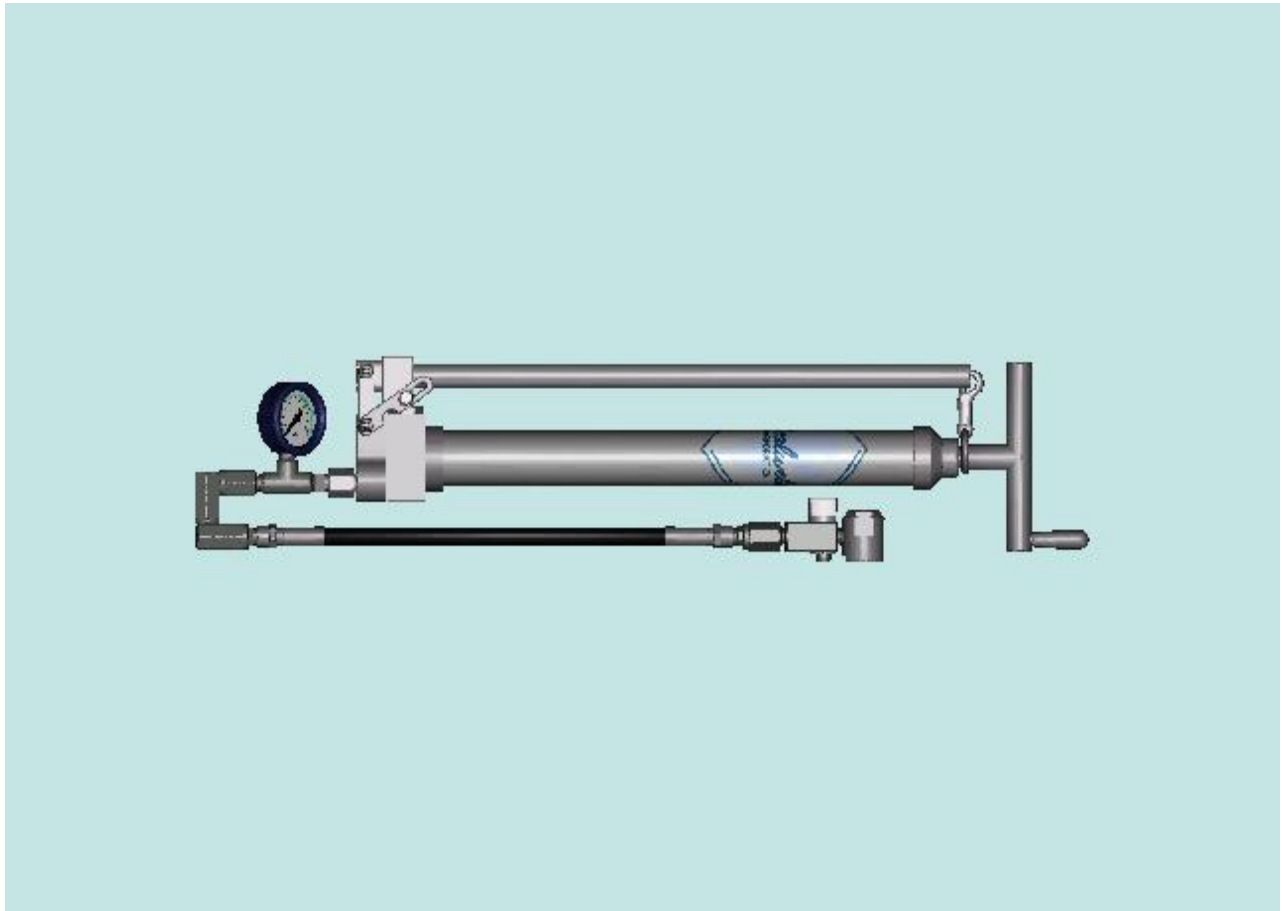
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# Read This First

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## Screw-Primed Hand-Held Sealant Injection Gun

The SuperGun® is a screw-primed hand-held manual sealant injection pump that can generate up to 15,000 PSI, if required. The SuperGun® was developed in an effort to correct design deficiencies in the older styles of screw-primed guns.



The piston head cartridge is an added feature that simplifies field repairs and can cut repair costs by over 75%. The sealant barrel was enlarged 33% so that fewer refills would be required and so that it would hold the contents of a regular (16) sixteen ounce grease gun cartridge. Several other enhancements were added to make the gun more durable, easy to carry and pump faster. The SuperGun® will discharge one ounce of lubricant/ sealant with every 25 strokes of the handle, making it the valve technicians favorite gun for routine topping off procedures when only small quantities of lubricant/ sealant are required.

The SuperGun® has been designed to withstand the rigors of field use and every gun is tested prior to shipment. The SuperGun® is designed to generate 15,000 PSI so always use and read the gauge provided.

---

*READ THIS MANUAL COMPLETELY BEFORE OPERATING THE GUN*

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# Safety Considerations

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## SuperGun® Safety Considerations

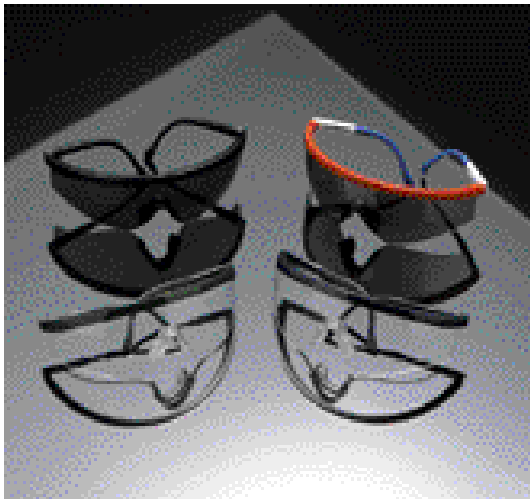
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*ALWAYS read and follow the valve manufacturer's recommendations before servicing a pressurized valve.*

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*ALWAYS be aware of the amount of energy this pump will generate and the mechanical limitations of the valve you are servicing.*

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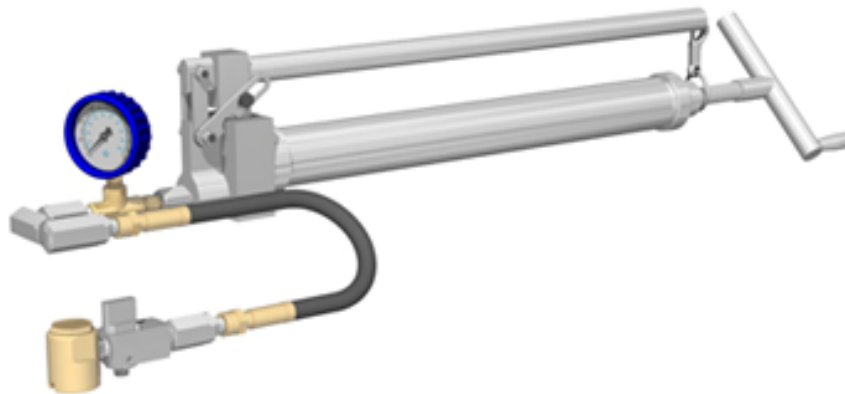
*ALWAYS wear eye protection when operating the SuperGun®.*

---

ALWAYS read and use the 15,000 PSI gauge provided, refer to Chapter 2 of *The Digital HANDBOOK of Valve Lubrication & Maintenance* for more information on Injection Gauge Reading Techniques. Once you become familiar with the guns operation you should be able to judge when a seal is being achieved by reading the gauge. Occasionally, the sealant channels will become restricted or even plugged and pressures of 10,000 PSI or higher will be required to displace the old dried sealant. When using the more viscous sealants and especially in cold weather, higher pressures will be required just to push the sealant out of the sealant hose assembly. As long as the gauge is dropping this is more accurately described as resistance to

flow instead of accumulated pressure. Occasionally sealant will enter the gauges bourdon tube and the gauge will fail to return to (0 PSI) zero. If this occurs make sure all sources of pressure have been eliminated then remove gauge and replace. To ensure longer service life for gauges, before replacing gauge, dig a quantity of sealant out of the tee # 13B. Fill the cavity with a lightweight hydraulic fluid before replacing gauge # 13C.

## Sealweld® SuperGun Screw Primed Sealant Injection Pump



Generates up to 15,000 psi  
Discharge 1 ounce / 25 strokes of the handle  
Barrel holds up to 16 ounces of sealant  
Reload with cartridge, gun pack, J or K stick sealant  
Features replaceable piston cartridge, handle latch, T-handle crank  
Extra heavy duty construction, designed for rugged field use

---

*15,000 PSI - MAXIMUM DISCHARGE*

*25 STROKES = 1 Ounce of Sealant*

*ALWAYS secure handle to prevent bending & breaking piston.*

*ALWAYS keep the high-pressure gauge clean & in working order.*

---

### Refill with:

- SuperGun Cartridge
- Hydraulic Gun Cartridge
- "J" or "K" size stick sealant
- Gun-Pak Bag: strip-out bag

# Loading Instructions

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## How to Load a Sealweld® SuperGun®

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*BEFORE attempting the loading procedure, take the following steps to ensure that all pressure has been released.*

---

- Turn the crank handle counter clockwise.
- Turn the hose assembly relief valve to a right angle 2-3 times to bleed all pressure from the hose.

### To Begin Loading

- Relieve any internal gun pressure by turning the valve at the end of the hose assembly. Do not place your finger over the vent hole. Look at the gauge to make sure pressure is (0 PSI) zero.
- Detach the Coupler at end of hose from the buttonhead fitting on the valve.
- Unscrew the barrel from the head of the gun.

### To Load From a Cartridge

One of the many advantages of a screw-primed sealant injection gun is the ability to know how much sealant is remaining in the barrel. When empty there will only be a few threads left showing between the end cap and the primer rod crank.

- Turn the primer rod crank counter clockwise (3) three full turns to relieve spring compression. Unscrew the barrel from the head assembly. Place the head assembly in a clean dry place to prevent dirt, sand or other contaminants from entering the sealant chamber.
- The Sealweld® EZ-LOADER is a special loading device has been developed to facilitate quicker and easier loading from cartridges. Refer to the EZ-LOADER instructions on page 6 of this manual. If you do not have an EZ-LOADER the sealant barrel can be refilled from cartridge by simply removing the cap from the cartridge and following these instructions:
  - ❖ With the head removed from the sealant barrel and the piston cup at the top of the barrel, slide the cartridge OVER THE OUTSIDE of the sealant barrel.
  - ❖ Place the bottom of the cartridge on the floor or other flat surface.
  - ❖ While gently pushing downward turn the primer rod crank handle counter clockwise. As the crank is turned the cartridge will slip along the barrel leaving the contents of the cartridge inside the sealant barrel.

- ❖ Feel the outside of the cartridge for the top of the sealant barrel to judge when the barrel is full. To remove the empty cartridge simply pull the tab off the end of the cartridge and slide the empty sleeve off the sealant barrel.
- ❖ A light film of sealant will remain on the outside of the sealant barrel. Take a solvent rag and wipe the excess sealant from the barrel to keep the gun in clean condition.
- Once the barrel is loaded turn the crank until sealant is visible at the top of the barrel to keep trapped air to a minimum. Then thread barrel to head assembly. Crank the primer rod crank clockwise to prime the pump and begin stroking the handle to generate pressure.

## With an EZ-LOADER:



Follow these EZ-LOADER instructions:

Make sure PISTON CUPS in the SuperGun® barrel are at the outward end of the sealant barrel with the T-handle screwed all the way in.

- Remove the Adapter Ring from the EZ-LOADER, remove the empty cartridge from inside the EZ-LOADER by pulling the T-handle back, then pushing forward.
- Remove CAP from the cartridge of sealant and the place opened end of the cartridge into the EZ-LOADER, as the cartridge enters the T-handle will push out. Or you can Pull cartridge into EZ-LOADER with T handle.
- When the cartridge is fully inserted, pull the pull-tab off the bottom of the cartridge.

- Screw the Adapter Ring onto the EZ-LOADER.
- Screw the EZ-LOADER onto the sealant barrel, be careful not to trap air.
- Set the EZ-LOADER T-handle on the floor with the T-handle on the SuperGun® pointing up. Make sure the rod on the EZ-LOADER is properly aligned so it can slide in.
- Turn the T-handle on the SuperGun® counter clockwise while pushing down gently on the assembly. The T-handle on the EZ-LOADER should slide in as the T-handle on the SuperGun® screws out, this transfers the sealant from the EZ-LOADER to the SuperGun®.
- When the T-handle on the EZ-LOADER is fully inserted, the barrel is full of sealant.
- Unscrew the EZ-LOADER from the barrel.
- Remember to remove the empty cartridge from the EZ-LOADER as soon as you have finished reloading.
- Screw the T-handle on the SuperGun® in, this pushes the sealant in the barrel out, make sure that there is no trapped air at the end of barrel before screwing the barrel into the head.
- Thread the barrel on to the head of the SuperGun®.
- Turn the T-handle on the SuperGun® clockwise to push the sealant into the head and prime the pump. Turn the handle until it becomes hard to turn. This will compress a spring in the tail assembly that keeps the pumped primed.
- Stroke the handle to discharge sealant under pressure. Watch the pressure gauge to determine the amount of pressure being generated.
- After 20 to 30 strokes of the handle the T-handle will need to be cranked in again. Continue the procedure of pumping and priming until the T-handle is screwed all the way in, then reload as previously described.

## Barrel Capacity

The SuperGun® has been designed to reload from a standard sized (16) sixteen ounce grease gun cartridge. It can also reload from the shorter (12) twelve ounce cartridge.

Unwind the primer rod crank # 12, far enough to insert the sealant stick or bag fully. Crank the handle forward, until the stick or bag is even with the top of barrel # 8.

**CAUTION:** Never leave the plastic bag in the barrel of the sealant injection gun. Serious injury or valve shut down may be caused by plastic being pumped into the hose assembly or sealant fitting.

If you are using sealant in a plastic bag, remove the bag from the barrel. Cut one end of the bag off, insert the open end into the barrel. Hold the bag with one hand and pull the bag through your thumb and finger, so that the sealant is squeezed into the barrel.

## Discharge Capacity

The standard SuperGun® piston cartridge assembly is designed to generate 15,000 PSI. Each stroke of the handle will discharge 1/20th of an ounce or (1) one ounce every 25 handle strokes. This compares with 1/25th ounce discharge volume with other screw prime guns and 1/50th ounce discharge with hand-held hydraulic guns.

An optional oversized piston cartridge assembly is available for servicing gate valves, which require large volumes of grease. The oversized piston part number R-SG-02LP will discharge 1/12th ounce per stroke or (1) one ounce of grease every (12) twelve handle strokes. Maximum discharge pressure with the oversized piston is only 8,000 PSI.

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# Operating Instructions

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## How to Operate a Sealweld® SuperGun®

### Model S-3 Operating and Maintenance Procedures

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*Read ALL instructions BEFORE operating the SuperGun®*

---

With barrel loaded and primed you may begin to discharge sealant by stroking the handle.

Attach buttonhead coupler # 13H to the sealant injection fitting on the valve being serviced. If the coupler does not match the fitting it may be necessary to change couplers or install an adapter. Contact Sealweld® in either Calgary or Houston or any of our many distributors for parts.

Open the release valve # 13G and begin pumping.

Watch for signs of leakage between the coupler and the valve fitting, once a positive seal is achieved gauge pressure will begin to climb. Once the sealant exceeds line pressure, sealant will begin to enter the valve sealant channels. With each stroke, gauge pressure will increase and fall slowly. As a seal is obtained, gauge pressure will remain stable or drop very slowly.

If a seal is not being obtained it may be required to:

- Inject Sealweld® Valve Cleaner Plus and repeat injecting sealant
- Switch to a heavier sealant

Refer to The Digital Handbook of Valve Lubrication & Maintenance or contact Sealweld® in either Calgary or Houston for more specific recommendations on proper use and application of our valve sealants, lubricants and cleaners. Gather the following information before calling; the valve type, size, type of service, sealant type and any available valve history.

When finished servicing the valve quit pumping and remove the coupler from the valves sealant injection fitting. Occasionally the coupler will appear stuck or frozen to the sealant injection fitting. Should this occur simply turn release valve # 13G 90° degrees to relieve pressure. Be very careful to keep fingers and hand away from the vent hole on the side of the release valve when closing and opening. A short stream of sealant will come shooting out at extremely high pressure. The coupler should now slip off the sealant fitting quite easily, if not turn the release valve back and forth a few times. In order to relieve gauge pressure turn the release valve back to the open position. Leave the release valve in the closed position to prevent sealant from escaping when the gun is not in use.

When valve servicing is complete and before storing pump always relieve barrel pressure. This can be accomplished by opening the release valve and turning the priming crank counter clockwise 3 turns. Always keep the gun in a clean condition. Keep the barrel loaded with your standard sealant before storing in order to be prepared for emergency valve sealing operations should a crisis arise.

Always secure the handle with handle clasp # 11 before carrying the gun to the next valve. The most common reason for piston # 4 failure is by carrying the gun by an unsecured handle.

# Troubleshooting Hints

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## Minor Repairs to the Sealweld® SuperGun®

The SuperGun® is completely field repairable with common tools. The leather cup # 9D is the most common part to wear out. You can judge if the cup is worn if sealant appears on the threads of the screw prime rod crank. Generally speaking the leather cup should be replaced annually, more frequently if using valve cleaner on a regular basis. Replace gauge, sealant hose parts and piston head cartridge as necessary.

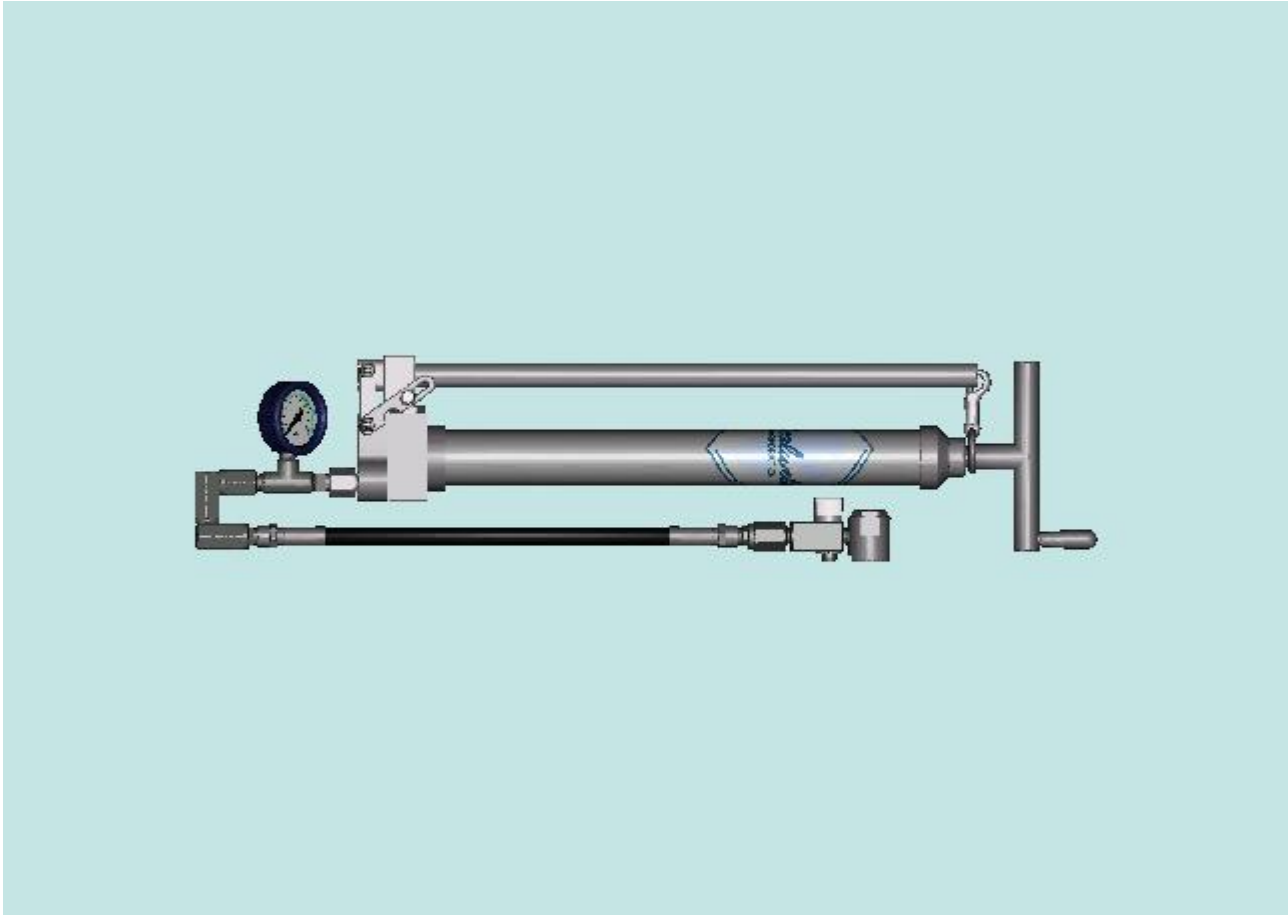
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*It is always a good idea to have all pumps and hose assemblies inspected and serviced at least once a year.*

---

### To Replace Leather Cup

- Empty the sealant from the sealant barrel, remove barrel # 8 from head # 6 then remove the primer crank assembly # 12 from barrel # 8 by unscrewing end cap # 10.
- Clean the piston cup and associated parts then disassemble by:
  - a) Unscrew holding rod nut # 9L and shaft end nut # 19J. Be careful not to lose # 9I & # 9K bearings.
  - b) Unscrew the shaft body nut # 9H from # 9J and look inside for the screw driver slot.
  - c) Attach a wrench to end nut # 9A and a screwdriver to the other end. Remove nut and replace leather cup, the cup should face toward the head of the pump.
- **To reassemble:** reverse the procedure. Tighten all threaded connections before placing assembly back into barrel.
- Be careful when inserting the leather cup back into the barrel. Make sure the leather cup is not damaged as the cup enters the barrel.
- Tighten end cap # 10 onto sealant barrel.



## To Replace Piston Head Cartridge

- Relieve all sources of pressure.
- Detach fulcrum bolt # 3F and remove. Swing the handle assembly # 5 out of the way.
- Remove body nut # 4A from the piston cartridge assembly.
- Push the piston cartridge assembly out of the head. You may need to tap the piston head gently with a small hammer and a screw driver.
- Replace the piston head cartridge. Make sure the intake and discharge holes are properly aligned. The intake hole is located in the center of the assembly and should face down or toward the barrel. The discharge hole is located toward the end of the assembly and should face up or toward the sealant hose assembly.
- Be careful not to nick or damage the O-rings on the piston cartridge assembly.
- Make sure the piston cartridge assembly is fully inserted and is fitted into the slot in the head.
- Tighten body nut # 4A.
- Carefully replace and tighten fulcrum bolt # 3F. **DO NOT APPLY EXCESS TORQUE** or the piston head will shear off when you stroke the handle. The fit should be snug, but not too tight. The nylock nut provided will prevent the nut from backing off.

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***NOTE:** Design modifications to increase the strength of the piston head have created certain alignment problems with earlier versions of the SuperGun®. Should you realize alignment problems return the complete gun to Sealweld® for a refit or call Sealweld® for advice on correcting the problem.*

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## **Check Valve Problems**

Occasionally the check valve ball # 2 will fail to seat properly thus preventing the gun from building pressure. This problem is usually identified when the handle begins to pop up between strokes. Should this occur the following steps should be taken:

- Remove all sources of pressure.
- Attach a wrench to check valve # 1 and unthread.
- Clean the ball # 2, check valve spring #1A and the check valve chamber thoroughly. Inspect the ball seat for damage or signs of build-up.
- Replace the ball, spring and thread the check valve nut back into head. Apply a small amount of Loctite # 242 to the threads on the check valve nut before assembling to prevent leakage. Be careful not to get any Loctite inside check valve chamber or on the ball.

## **Head / Barrel Gasket**

A gasket is provided to help eliminate leakage from between the barrel and head assembly when using light grease. This gasket may need to be replaced occasionally, order part number R-SG-07A Gasket.

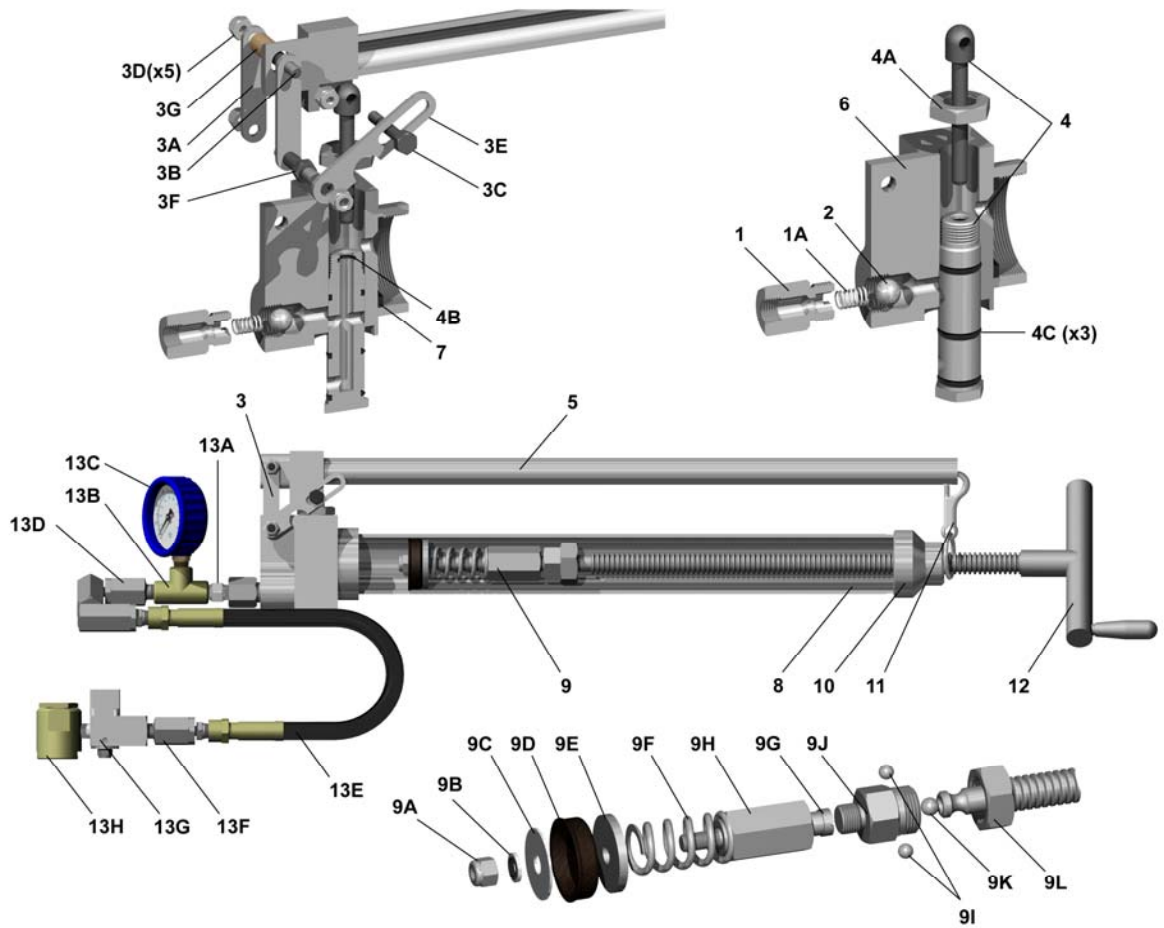
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# Parts List

## How to Order SuperGun® Parts

Illustration #	Description	Order Part #	Qty. Req'd
1	FLOW WOLF® Check Valve Nut	R-SG-16	1
1A	Check Valve Spring	R-SG-01A	1
2	Ball - 1/2"	R-SG-16A	1
3	Linkage Assembly	R-SG-17	1
3A	Harness Links	R-SG-17A	2
3B	Handle Pin	R-SG-17B1	1
3C	Head Pin	R-SG-17B3	1
3D	NyLock Nuts	R-SG-17C	5
3E	Fulcrum Link	R-SG-18A	1
3F	Fulcrum Bolt	R-SG-18B	1
3G	Handle Bushing	R-SG-03A	1
4	Piston Cartridge Assembly	R-SG-02	1
4A	Body Nut	R-SG-02C	1
4B	Piston O-Ring - Nitrile	R-SG-02D	1
4C	Piston Body O-Rings - Nitrile	R-SG-02E	3
5	Handle	R-SG-03	1
6	Head - Bare	R-SG-01	1
7	Barrel Gasket	R-SG-07A	1
8	Sealant Barrel	R-SG-07	1
9	Primer Rod Assembly	R-SG-19	1
9A	End Nut	R-SG-19A	1
9B	Bonded Seal - 3/8"	R-SG-19B2	1
9C	Small Cup Washer	R-SG-19C	1
9D	Leather Cup	R-SG-19D	1
9E	Large Cup Washer	R-SG-19E	1
9F	Spring	R-SG-19F	1

<b>Illustration #</b>	<b>Description</b>	<b>Order Part #</b>	<b>Qty. Req'd</b>
9G	Shaft	R-SG-19G	1
9H	Shaft Body Nut	R-SG-19H	1
9I	Shaft Bearings – 5/16" Diameter	R-SG-19I	2
9J	Shaft End Nut	R-SG-19J	1
9K	Rod Bearing – 3/8" Diameter	R-SG-06B	1
9L	Rod Nut	R-SG-06C	1
10	End Cap	R-SG-05	1
11	Handle Clasp and Ring	R-SG-04	1
12	Primer Rod Crank	R-SG-06A	1
X	Oversized Piston Assembly	R-SG-02LP	1
	SuperGun Pump Hose Assembly - Complete	H-S-HOSE	1
13A	Adapter – 1/4" Male X 1/4" Male	H-AD-4M4M	1
13B	High Pressure TEE 1/4" F X 1/4" F X 1/4" F	H-T-444	1
13C	High Pressure Gauge Assembly - 15,000 PSI	H-GD-01C	1
13D	'Z' Swivel 1/4" Male X 1/2" - 27 Male	H-SV-Z1	1
13E	Extra High Pressure Hose - 18"	H-HS-18XHP	1
13F	Straight Swivel 1/4" Male X 1/2"-27 Male	H-SV-ST1	1
13G	Release Valve 1/4" Male X 1/4" Female	H-RVAB	1
13H	Sealweld Giant Buttonhead Coupler	H-CPSG-2	1



Refer to the illustration number to identify parts. Ordering parts by part number is the best way to ensure satisfaction.

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# Warranty Information

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## Sealweld® SuperGun® Warranty

Sealweld® warrants its products only against defects in materials and workmanship.

Sealweld Corporation's liability and customer's exclusive remedy under this warranty extends for a period of one (1) year from the date of Sealweld Corporation's shipment and is expressly limited to repayment of purchase price, repair or replacement, at Sealweld Corporation's option, during said period, upon proof satisfactory to Sealweld® and upon customers returning and prepaying all charges on such products to factory or warehouse designated by Sealweld®. Warranty excludes normal wear items such as packings, seals and filters. Also excluded is equipment subject to corrosion, contamination, negligence, accident, or units, which have been altered in any way.

This Warranty is made expressly in lieu of all other warranties, express, implied or statutory, with respect to quality, merchantability, or fitness for a particular purpose.

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## Contact Information

### Sealweld Corporation – Canada

# 106, 4116 – 64 Ave. S.E.

Calgary, Alberta

CANADA T2C 2B3

TOLL FREE 1-800-661-8465

PHONE 1-403-236-0043

FAX 1-403-236-5487

EMAIL [info@sealweld.com](mailto:info@sealweld.com)

URL <http://www.sealweld.com>



### Sealweld (USA), Inc.

6450 Skyview Drive

Houston, Texas

USA 77041

TOLL FREE 1-800-624-4301

PHONE 1-713-466-7373

FAX 1-713-466-7778

EMAIL [info@sealweld.com](mailto:info@sealweld.com)

URL <http://www.sealweld.com>



### ValvePro® Technical Support

TOLL FREE 1-800-661-8465

PHONE 1-403-236-0043

FAX 1-403-236-5487

EMAIL [support@valvepro.com](mailto:support@valvepro.com)

URL <http://www.valvepro.com>

