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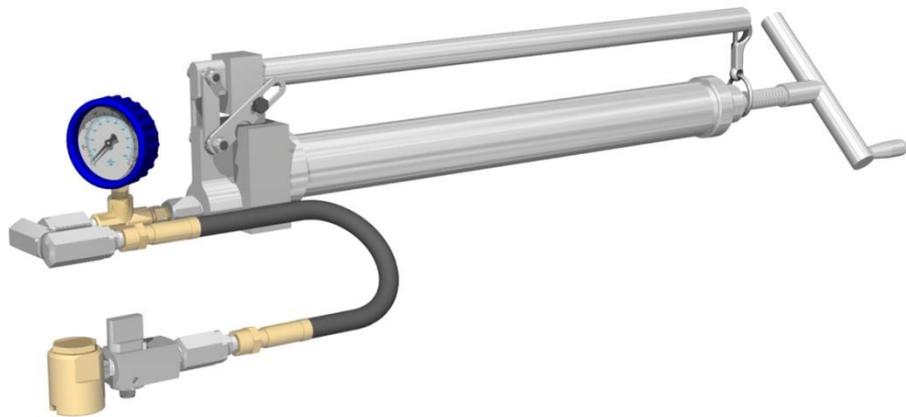
Owner's Manual - Original Instructions



Doc. No. 100005

Rev 0

# Sealweld SuperGun®



By Sealweld Corporation

This document is for the purpose of the Sealweld SuperGun® operation only and is not considered a guide for valve maintenance. We are pleased to offer a valve maintenance program “ValvePro®” and 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 the ValvePro® procedures or if you know of any successful procedures you would like to share, please contact us at:

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## **The information in this manual is intended as a guide only.**

Read our Disclaimer on page 29.

Always consult the valve manufacturers recommended maintenance procedures.

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**MADE IN CANADA**  
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# Introduction

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## The Sealweld SuperGun® Pump

### SAFETY EXPLANATIONS

Two safety symbols are used to identify where any action or lack of action can cause personal injury. It is very important that the user reads and understands the use of these symbols.

-  **DANGER!** – Danger is used only when an action or lack of action will cause serious human injury or death.
-  **WARNING!** – Warning is used when an action or lack of action can lead to a serious injury.
- IMPORTANT!** – Important is used when an action or lack of action can cause equipment failure, either over a long period of time or immediately.

The SuperGun is a screw-primed hand-held manual injection pump that can generate up to 15,000psi (1034 bar), if required. The SuperGun was developed by correcting design deficiencies in the older styles of screw primed pumps.

The field replaceable piston cartridge cuts repair costs by over 75% compared to similar equipment. 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 oz. (470 ml) cartridge. Several other enhancements were added to make the SuperGun more durable, easy to carry and pump faster. The SuperGun will discharge approximately 1 oz. (30 ml) of product with every 25 strokes of the handle, making it the valve technicians favourite pump for routine topping-up procedures when only small quantities of product is required.

Features include:

- Locking handle to prevent damage occurring to the SuperGun.
- Easy to handle, very portable.
- Crank-priming action makes manual injection simple.
- Generates up to 15,000psi (1034 bar) when required.
- Easily reloads with cartridge, bag or stick type products.
- Holds up to 16 ounces (470ml) of product.
- Discharges approximately one ounce (30ml) of product easily with every 25 strokes.
- Easy to read High Pressure Gauge.
- Buttonhead Coupler quickly connects and disconnects to fittings.
- Extra heavy duty construction design for rugged field use.

The SuperGun ships with an 18 inch (46 cm) long hose, buttonhead coupler and high pressure gauge. It is ready to load and use right out of the box. The working principle is simple; turn the crank in to prime the SuperGun, the

handle is stroked and the piston pushes the product out through the hose assembly. Continue stroking the handle and the pressure will continue to increase. After 50 to 75 strokes of the handle you will need to turn the Primer Rod Crank #12 to inject more product.

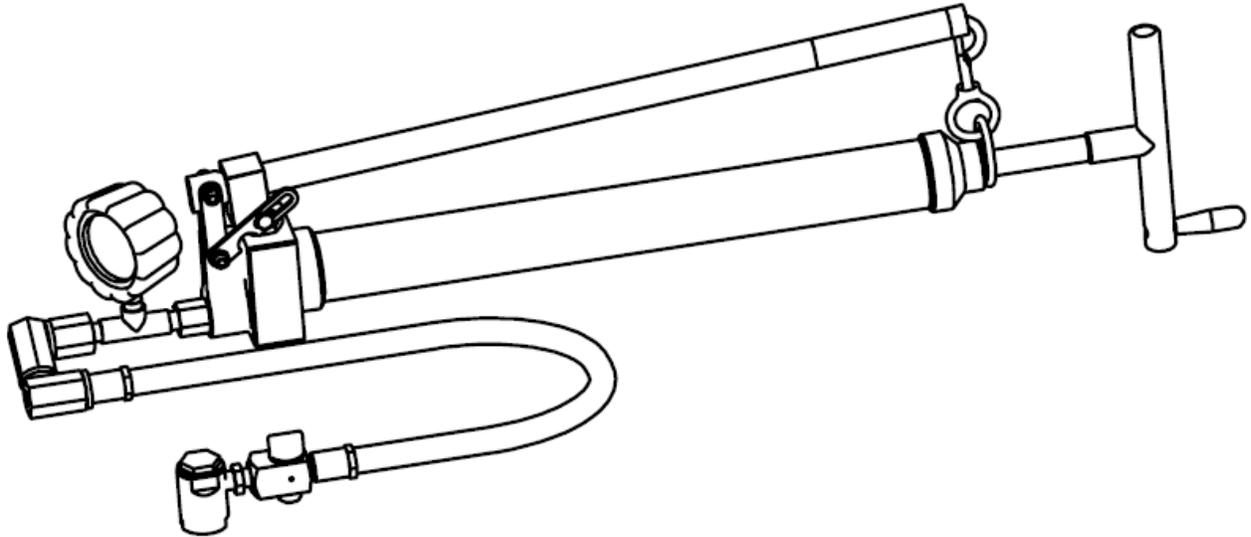
Once the valve line pressure is exceeded product will begin to flow into the valve. When a sufficient quantity of product has been injected the SuperGun may be removed by opening the release valve then slipping off the giant buttonhead coupler from the buttonhead fitting.

** WARNING - READ THIS MANUAL THOROUGHLY BEFORE OPERATING**

*Refer to the illustration on page 23 for all references to part numbers in this manual.*

# Technical Data

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The Supergun, when empty, weighs about 18.5 lbs (8.4 kg) and is therefore very portable. It measures about 33 inches (84cm) with the crank turned all the way in. It can be loaded with 12 ounce or 16 ounce cartridges from an EZ-loader, and it also pumps 'K' sticks, Gun-Packs and all types of bulk lubricants/sealants. The screw-primed design makes it easy to keep track of how much product remains in the barrel. The piston can generate up to 15,000 PSI (1000 bar), but only a small volume of product is pressurized at a time. The SuperGun comes with an 18inch (46 cm) high pressure hose assembly with a 15,000PSI gauge. The pump discharges approximately 1 ounce (30ml) of sealant per 25 strokes.

# Safety Considerations

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## SuperGun Specific Safety Considerations

### WARNING!

- Sealweld Products are designed for industrial use only and the SuperGun should only be used by a **Certified Valve Technician** who is familiar with the working principals, mechanical limitations & working pressures of the valve being serviced. When working with pressurized valves and pipelines use extreme caution and do not take risks or short cuts. Always have a proper size stabbing valve ready in case of a valve fitting failure.
- The SuperGun has no internal relief functionality and the amount of pressure it can generate can be very dangerous. Under normal working condition most valves can be serviced with a pressure below 4,000psi (276 bar). Occasionally you may be required to generate a pressure up to 10,000psi (690 bar). It is very rare that more than 10,000psi (690 bar) is required to service a valve. You must approach it as **extremely dangerous** when doing so.
- When working with valves in a toxic or low O<sub>2</sub> deficient environment, **ALWAYS** wear a self contained breathing apparatus and have backup safety watch standing by. Use extreme caution before opening a body vent fitting.
- **ALWAYS** consult the Valve Manufactures manual prior to commencing work on any valve. Do not exceed working pressure of valve when filling the body cavity. **NOTE:** Keep injection pressure below 4000 psi (276 bar) on cast iron or semi steel valves.
- Never hit the Giant Buttonhead Coupler #13H with hammer or other object to connect or disconnect the coupler from a fitting. Doing so may result in damaging or breaking the fitting which could cause serious personal injury or death.
- In the event where the valve being serviced internal checks fail it will be very difficult or impossible to remove Giant Buttonhead Coupler #13H. Ensure that you have all the proper tools, procedures and product readily available should this problem arise.
- **NEVER** operate a pump without a properly functioning pressure gauge or if the gauge shows signs of over pressurization or is in poor operating condition. Use **EXTREME CAUTION** when generating 10,000psi (690 bar) or more.
- **ALWAYS** leave the Release Valve #13G in the closed position to prevent sealant from escaping when the SuperGun is not in use. See “*Storing the SuperGun*” on page 21.
- Do not use a pump if it has been damaged. Use a mild solvent & clean cloth to keep the SuperGun in clean operating condition.
- **NEVER** carry the SuperGun by its Handle #5 unless it has been latched and secured.
- Hydraulic pressure created inside the valve with a high pressure pump can stretch bolts on bolted plug valve and cause leakage. Should this occur, release pressure by opening Release Valve #13G. The flange should sit back down and leakage should stop.

- Light valve lubricants, cleaners or liquid products can become a **dangerous** projectile in the event of a hose or fitting failure while under high pressure.
- Be very **CAREFUL** to keep fingers and hand away from the vent hole on the side of the Release Valve #13G when opening. A short stream of sealant can shoot out at extremely high pressure.
- **Do not remove labels.** Maintain labels and nameplates on this product. These carry important information.

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## Personal Safety

### **WARNING!**

**Stay alert.** Do not use the SuperGun while tired or under the influence of alcohol, drugs or medications.

**Dress properly.** Always wear approved Personal Protective Equipment (PPE). Do not wear loose clothing or jewellery. Contain long hair. Keep your hair, clothing and gloves away from moving parts.

**At all times,** keep proper footing and balance, maintain a firm grip when using any sealant pump, and do not over-reach.

**Maintain a safe working environment.** Keep a clean work site. Ensure that you have proper lighting and that you have completed a Job Hazard Assessment (JHA). Ensure that you have the proper work permits and that your fellow workers are aware of the procedures and scope of work that you are about to perform.

**ALWAYS** turn off your vehicle and work well down wind of all sources of spark or ignition.

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## High Pressure Hose

### **WARNING!**

Use only Sealweld Corporation replacement parts and hoses.

**NEVER** carry the SuperGun by the Hose Assembly #13.

Hose life is reduced by factors that include:

- **Environment** - Temperature extremes, UV light, chemicals, ozone, etc. will degrade the rubber used in hydraulic hoses.
- **Abrasion and Cuts** - Wear against other hoses or objects will wear off the outer cover and lead to corrosion of the reinforcing mesh.
- **Extreme Pressure Fluctuations** - Pressure surges above the hose working pressure will damage hose components.
- **Improper Length/Routing** - Excessive bending of the high pressure hose causes high stresses in the hoses components that may also reduce pressure capacity (avoid multi-plane bending, small bend radii, tension in hose, etc.). Hose life can be reduced by 90% when subject to these type of stresses.

# Operating Instructions

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## Release Valve Fundamentals

The Release Valve #13G supplies a means of releasing pressure in the Giant Buttonhead Coupler #13H so it can be easily detached from a buttonhead fitting. It has three positions used in its operation, **Opened**, **Vented** and **Closed**.

- When **Opened**, the Release Valve knob is in alignment with the Hose Assembly #13 and product can be pumped through the Giant Buttonhead Coupler #13H and into the valve.
- When **Vented**, it is at a 90° angle to the Hose Assembly #13. Product cannot be pumped and any product under pressure in the Giant Buttonhead Coupler #13H will be allowed to escape through the Release Valve #13G vent hole.
- When **Closed**, the knob is at a 45° angle to the Hose Assembly #13. Product cannot be pumped into the valve or escape through the Release Valve #13G vent hole. Set the Release Valve #13G in this position when the SuperGun is not in use.

 **WARNING!** Be very **CAREFUL** to keep fingers and hands away from the vent hole on the side of the Release Valve #13G when operating this valve. Product can shoot out at extremely high pressure and may cause injuries.

 **DANGER!** When venting the Release Valve #13G, in the event the Giant Buttonhead fitting's internal check valve fails, product will continuously dispense through the vent hole and eventually pipeline product will follow. Ensure that you have all the proper tools, procedures & product readily available should this problem arise.

**NOTE:** Depending on the product being pumped and the ambient temperature, the use of a wrench may be required to ease the operation of the Release Valve #13G.

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## How to Operate a SuperGun

The SuperGun operator should be familiar with the working principals and the mechanical limitations of the pipeline valve being serviced.

Before operating the SuperGun, read and remember the “*Simple Rules*” listed on page 13 in the “*Care and Maintenance*” section of this manual.

**IMPORTANT!** Be sure you have read and understand the “*Safety Considerations*” section of this manual before operating this pump.

**NOTE:** If at any time you feel the SuperGun is not operating as expected see “*Troubleshooting*” on page 27.

To operate the SuperGun:

1. The SuperGun must first be loaded. See “*How to Load a SuperGun*” on page 9.
2. Prime the SuperGun.

- To prime the SuperGun, turn the Primer Rod Crank #12 clockwise until it becomes difficult to turn.
  - **IMPORTANT!** *Over-tightening the Primer Rod Crank #12 can damage and/or collapse the Primer Rod Assembly #9.*
3. Inspect the Giant Buttonhead Coupler #13H for damage and contaminants. Clean using a mild solvent and a clean cloth if required before attaching to a fitting.
  4. Set the Release Valve #13G in its opened position.
  5. Attach the Giant Buttonhead Coupler #13H to a buttonhead fitting on the valve being serviced.
    - **IMPORTANT!** *ALWAYS follow the valve manufacturer's recommendations and instructions when servicing each type of valve.*
    -  **WARNING!** *Always inspect the buttonhead fitting before attaching the Giant Buttonhead Coupler #13H and keep a watchful eye out for dangerous two piece buttonhead fittings. Ensure that you have all the proper tools, procedures & product readily available should a problem arise.*
  6. Release the Handle #5 from the Handle Clasp #11.
  7. Lift the Handle #5 up until it reaches its full height.
    - Allowing the Handle #5 to rest a second while at its full height allows more product to enter the piston cavity.
  8. Pull the Handle #5 all the way down. Steps 7 and 8 together make one stroke.
    - When fully primed, the SuperGun will operate for 50 to 75 strokes before additional priming is required. However, as the number of strokes increase the longer it will take for the piston cavity to fill. For this reason it is common practice to prime the SuperGun every 25 to 50 strokes.
    - Many operators will rest the Head #6 on the pipeline or the valve to ease in the operation of the SuperGun.
  9. By stroking the Handle #5, product gets injected into the valve and pressure will begin to build. It could require 10 to 15 full strokes before the pressure begins to show on the High Pressure Gauge Assembly #13C. As you stroke monitor the injection pressure.
    - **NOTICE:** *Once you become familiar with reading the gauge properly you will be able to judge when sealant begins to enter the valve. Consult "The Digital HANDBOOK of Valve Lubrication & Maintenance" for more information on Pressure Gauge Reading Techniques.*
    - Watch for signs of leakage between the Giant Buttonhead Coupler and the valve fitting, once a positive seal is achieved gauge pressure will begin to climb.
  10. Once the required amount of product has been injected into the valve, slide the Giant Buttonhead Coupler #13H off the fitting.
    - To slide the Giant Buttonhead Coupler #13H hold the Hose Assembly #13 near the coupler, tilt down at slight angle and push off. Do not use excessive force.
    - Under normal conditions the Giant Buttonhead Coupler #13H can be removed relatively easily as the pressure on the High Pressure Gauge Assembly #13C drops and returns to a near zero reading. Occasionally additional force is required, place one hand over the Giant Buttonhead Coupler #13H and press down as you slide it off. Be careful not to use excessive force.
  11. If the Giant Buttonhead Coupler #13H is difficult to remove from a fitting, turn the Release Valve #13G to the **Vented** Position.
    - Be very careful to keep fingers and hand away from the vent hole on the side of the Release Valve #13G when opening. Product will shoot out the vent hole at extremely high pressure.

-  **WARNING!** *In the event that the product continuously dispenses through the vent hole, close the Release Valve #13G immediately as pipeline product is sure to follow. Ensure that you have all the proper tools, procedures & product readily available should this problem arise.*

12. Repeat this procedure as required for each valve to be serviced.

- When the SuperGun is not in use always relieve the internal pressure by turning the Primer Rod Crank #12 counter-clockwise at least three turns and set the Release Valve #13G to the closed position to prevent product from escaping.
- Always connect the Handle #5 to the Handle Clasp #11 when carrying or storing/stowing the SuperGun.

# Loading Instructions

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## How to Load a SuperGun

**⚠ WARNING!** *Before attempting to load the SuperGun, ensure that all pressure has been released.*

One of the many advantages of a screw-primed sealant injection pump is the ability to know how much sealant is remaining in the barrel. When empty the Primer Rod Crank #12 will be screwed all the way in and there will be no threads left showing between the End Cap #10 and the Primer Rod Crank #12.

The SuperGun can be loaded from either a cartridge or bag. It can also be loaded with a stick type product. It is designed to hold up to 16 ounces (470 ml) in the Sealant Barrel #8.

*All Loading instructions are based on the Giant Buttonhead Coupler #13H being detached from a buttonhead fitting, all pressure in the Hose Assembly #13 has been relieved and Sealant Barrel #8 is empty.*

### Prepare for Loading

1. Turn the Primer Rod Crank #12 counter-clockwise at least three full turns to relieve any compression on Primer Rod Assembly #9.
2. Look at the High Pressure Gauge Assembly #13C to make sure pressure is at zero.
3. Unscrew the Sealant Barrel #8 from the Head #6.
4. Place the head assembly in a clean, dry place to avoid any contamination.
  - Periodically turn the Primer Rod Crank #12 counter-clockwise all the way out until it stops. Do not use excessive pressure. Inspect the threads on the Primer Rod Crank #12 for signs of product. If product is found it indicates the Primer Rod Assembly #9 is leaking. See "Primer Rod Assembly Removal and Repair" on page 15.
5. Turn the Primer Rod Crank #12 clockwise until there is no threads left showing between the End Cap #10 and the Primer Rod Crank #12 or until any remaining product is flush with the end of Sealant Barrel #8.
  - If you are changing products:
    - i. Scoop out any remaining product from the Sealant Barrel #8 and the Head #6. Use caution to avoid damaging the Leather Cup #9D and the Barrel Gasket #7.
    - ii. Clean off any remaining product using a mild solvent and a clean cloth.

The SuperGun is now prepared for loading.

*Follow the instructions on the following pages for the type of product you intend to load.*

## To Load a Cartridge

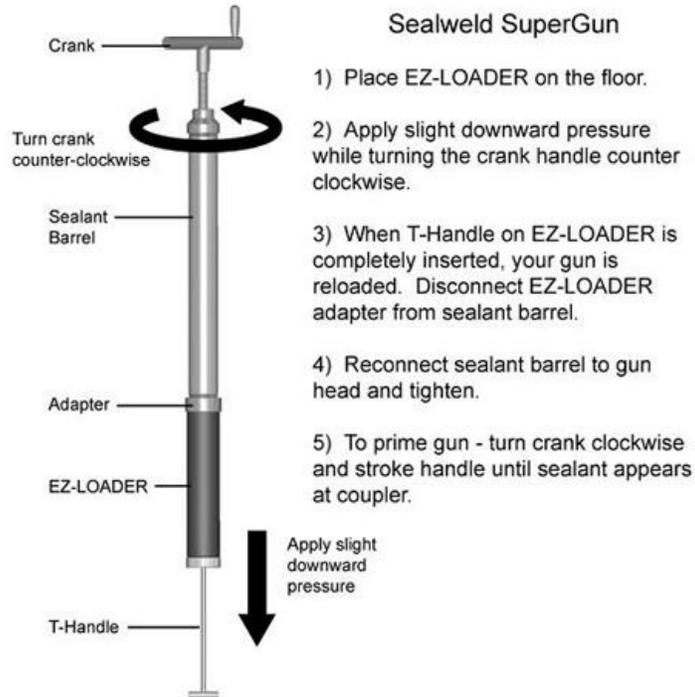
The use of cartridge type lubricant, sealants and cleaners has been found to greatly reduce the risk of product contamination and trapped air in any pump. The SuperGun can be loaded with or without the use of the Sealweld EZ-LOADER®. The EZ-LOADER was designed to make loading of cartridges quick and easy.

### With an EZ-LOADER

*The SuperGun must be prepared for loading as previously instructed.*

Follow these EZ-LOADER instructions:

1. Remove the Adapter Ring from the EZ-LOADER, pull the T-handle back and then push it forward to remove an empty cartridge that may have been left inside the EZ-LOADER.
2. With the T-handle fully inserted in the EZ-LOADER. Remove the cap from the product cartridge and then slide this opened end over the plunger inside the EZ-LOADER.
3. Push the cartridge in; as the cartridge enters the T-handle will push out. Or you can pull cartridge into EZ-LOADER with T-handle.
4. When the cartridge is fully inserted, pull the pull-tab off the bottom of the cartridge.
5. Re-attach and tighten the Adapter Ring onto the EZ-LOADER.
6. Attach the EZ-LOADER and Adapter to the Sealant Barrel #8 but leave the threads loose. Gently push the EZ-LOADER T-handle forward until contact is made between the product and Piston Assembly #9; this forces any trapped air to escape through loose threads.
7. Firmly tighten the EZ-LOADER assembly to the Sealant Barrel #8.
8. Set the EZ-LOADER T-handle on the floor with the Primer Rod Crank #12 end of the SuperGun pointing up. Make sure the rod on the EZ-LOADER is properly aligned so it can slide in and does not bend.
9. Lightly push down on the body of the SuperGun and screw the Primer Rod Crank #12 counter-clockwise. The T-handle on the EZ-LOADER should slide in as the SuperGun slides down. This action will transfer the product from the EZ-LOADER into the Sealant Barrel #8.
10. When the T-handle on the EZ-LOADER is fully inserted, the product has been transferred into Sealant Barrel #8.
11. Unscrew the EZ-LOADER and Adapter from the Sealant Barrel #8.
  - Remember to remove the empty cartridge from the EZ-LOADER as soon as you have finished reloading.
12. To make sure that there is no air trapped at the end of the Sealant Barrel #8; push the product forward by turning the Primer Rod Crank #12 clockwise until the product slightly protrudes out of the Sealant Barrel #8.
13. Replace and hand tighten the head assembly onto Sealant Barrel #8.
14. To prime the SuperGun, turn the Primer Rod Crank #12 clockwise until it becomes difficult to turn.
  - **IMPORTANT!** *Over tightening the Primer Rod Crank #12 can damage and/or collapse the Primer Rod Assembly #9.*
  - If the product is being changed, place the Giant Buttonhead Coupler #13H into a container or on a cloth and stroke the Handle #5 until the new product is seen extruding from the Giant Buttonhead Coupler #13H. This will take approximately 50 strokes.



*The image above contains an Ngrain model with an animation showing the EZ-LOADER procedure.*

15. Wipe any excess product from the outside of the SuperGun with a mild solvent and a clean cloth.

The SuperGun is now ready for use.

## Without an EZ-LOADER

*The SuperGun must be prepared for loading as previously instructed.*

Follow these instructions:

1. Screw the Primer Rod Crank #12 so any remaining product, or the Leather Cup #9D, is slightly protruding out of the Sealant Barrel #8.
2. Remove the plastic cap from the cartridge and place the opened end of cartridge over the OUTSIDE of Sealant Barrel #8 (the Sealant Barrel #8 goes inside the cartridge).
3. Slowly slide and spin the cartridge over the Sealant Barrel #8, to allow any trapped air to escape, until contact is made between the product in the cartridge and the Leather Cup #9D.
4. Place the end of the cartridge flat on the floor in an upright position with the Primer Rod Crank #12 of SuperGun pointing up.
5. While gently pushing downward on the SuperGun turn the Primer Rod Crank #12 counter-clockwise. As the crank is turned the cartridge will slide along the outside of the barrel and the product will slide into the Sealant Barrel #8.
6. Feel the outside of the cartridge for the top of the Sealant Barrel #8 to judge when the barrel is full.
7. Remove the pull tab from the end of the cartridge and slide the empty cartridge off the Sealant Barrel #8. It should come off quite easily, if not it may help if you turn or spin it as you slide it.
8. A light film of product will remain on the outside and on the threads of the Sealant Barrel #8. Use a mild solvent and a clean cloth and wipe the SuperGun clean. Take care not to contaminate the product.

9. Turn the Primer Rod Crank #12 clockwise until product slightly protrudes out the end of the Sealant Barrel #8. This helps to keep trapped air to a minimum.
10. Replace and hand tighten the head assembly onto Sealant Barrel #8.
11. To prime the SuperGun, turn the Primer Rod Crank #12 clockwise until it becomes difficult to turn.
  - **CAUTION:** *over tightening the Primer Rod Crank #12 can damage and/or collapse the Primer Rod Assembly #9.*
  - If the product is being changed, place the Giant Buttonhead Coupler #13H into a container or on a cloth and stroke the Handle #5 until the new product is seen extruding from the Giant Buttonhead Coupler #13H. This will take approximately 50 strokes.
12. Wipe any excess product from the outside of the SuperGun with a mild solvent and a clean cloth.

The SuperGun is now ready for use.

## To Load a Bag or Stick Type Product

*The SuperGun must be prepared for loading as previously instructed.*

Follow these instructions:

1. Screw the Primer Rod Crank #12 counter-clockwise so the Leather Cup #9D is in the Sealant Barrel #8 deep enough to insert a stick or bag type product fully.
  - If you are using a product in a plastic bag, 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 product is squeezed into the Sealant Barrel #8.
  - If you are using a product wrapped with plastic, paper or a similar material, remove the wrapping and scribe a groove along its length to allow trapped air to escape out before inserting the product into the Sealant Barrel #8.
  - **CAUTION:** *Never leave the plastic bag or other foreign material in the barrel of a sealant injection pump. Serious injury or valve shut down may be caused by plastic being pumped into the buttonhead fitting or the valve sealant glands.*
2. Turn the Primer Rod Crank #12 clockwise until product slightly protrudes out the end of the Sealant Barrel #8. This helps to keep trapped air to a minimum.
3. Replace and hand tighten the head assembly onto Sealant Barrel #8.
4. To prime the SuperGun, turn the Primer Rod Crank #12 clockwise until it becomes difficult to turn.
  - **CAUTION:** *over tightening the Primer Rod Crank #12 can damage and/or collapse the Primer Rod Assembly #9.*
  - If the product is being changed, place the Giant Buttonhead Coupler #13H into a container or on a cloth and stroke the Handle #5 until the new product is seen extruding from the Giant Buttonhead Coupler #13H. This will take approximately fifty (50) strokes.
5. Wipe any excess product from the outside of the SuperGun with a mild solvent and a clean cloth.

The SuperGun is now ready for use.

# Care and Maintenance

By following these four easy steps the SuperGun will operate for many years without requiring any further maintenance.

1. Carefully follow all operating instructions and the *Simple Rules* provided below.
2. Keep all threaded connections tight.
3. Use a mild solvent or penetrating fluid and a clean lint free cloth to keep the SuperGun clean.
4. Replace or repair any leaking or failed components.
  - See “*Troubleshooting*” on page 27.

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## Simple Rules

**IMPORTANT!** Following these simple rules we help increase the life of the SuperGun.

1. **NEVER** carry the SuperGun by the Handle #5 unless it is secured by the Handle Clasp #11.
  - Carrying the SuperGun by the Handle #5 without it being secured will result in the Piston Cartridge Assembly #4 and/or the Linkage Assembly #3 bending. The degree of the bend will affect the force required to stroke the Handle #5. If bent badly enough the SuperGun will not operate as expected, or not at all, and will require replacing the Piston Cartridge Assembly #4 and Linkage Assembly #3.
2. **NEVER** pull sideways or twist the SuperGun by the Handle #5.
  - This will also damage the Piston Cartridge Assembly #4 and the Linkage Assembly #3.
3. **ALWAYS** keep the SuperGun in clean operating condition using a mild solvent and a link free cloth.
  - Dirt, sand or other debris can easily attach to products left on the outside of the SuperGun. Handling of a dirty SuperGun will result in the contamination of product while reloading. Injecting contaminated product into valves can cause serious damage to the internal valve components.
  - If debris is allowed to build-up on the SuperGun, the smooth operation will deteriorate and over time will cause damage.
4. **Protect** the High Pressure Gauge Assembly #13C.
  - **NEVER** use a high pressure injection pump without a properly working pressure gauge. The SuperGun can produce extreme pressures very quickly. It is imperative you know what injection pressure your producing at **ALL** times.
  - The High Pressure Gauge Assembly #13C can easily be damaged if struck by objects. Use care when operating and moving the SuperGun. Never remove the rubber protective guard from the gauge.
  - Store/stow the SuperGun in a safe place where it will be protected.
5. **ALWAYS** leave the Release Valve #13G in its **CLOSED** position when not in use.
  - See “*Release Valve Fundamentals*” on page 6.

6. **NEVER** strike the Giant Buttonhead Coupler #13H with a hammer or other object to connect or disconnect it from a fitting.
  - This can easily result damage to the fitting or coupler which could cause serious property and personal injury.
7. **ALWAYS** check that the Giant Buttonhead Coupler #13H is clean before attaching to a fitting.
  - Dirt, sand or other debris can easily contaminate sealants and lubricants causing serious damage to a valve when injected.
8. **ALWAYS** ensure pressure is relieved BEFORE detaching the Giant Buttonhead Coupler #13H from the valve.
  - Relieving the pressure will allow the Giant Buttonhead Coupler #13H to slide easily off the fitting. If the Giant Buttonhead Coupler #13H is hard to remove and pressure does not relieve it indicate an internal check in the fitting has failed.
9. **Keep the SuperGun fully loaded** with your standard sealant before storing in order to be prepared for emergency valve sealing operations should a crisis arise.
10. **When not in use relieve primer pressure.** This can be accomplished by turning the Priming Rod Crank #12 counter-clockwise at least three turns.
11. **NEVER** leave valve cleaners, flushers or solvents in the SuperGun when not in use. The Leather Cup #9D can deteriorate or be damaged with lengthy exposure. Clean the SuperGun thoroughly, inside and out, after using these products.

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## SuperGun Maintenance

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 product appears on the threads of the Primer Rod Crank #12. Generally speaking the Leather Cup #9D should be replaced annually, more frequently if using valve cleaners, flushers or solvents on a regular basis. Replace High Pressure Gauge Assembly #13C, Hose Assembly #13 parts and Piston Cartridge Assembly #4 as necessary.

**IMPORTANT!** For the best results and instructional purposes follow these procedures in a shop environment. All instructions are based on the Giant Buttonhead Coupler #13H being detached from a buttonhead fitting, all pressure in the SuperGun Hose Assembly #13 has been relieved and the Sealant Barrel #8 is empty.

Have a vise or pipe vise available and a clean area prepared where you can place parts as they are removed. Use soft jaws or a cloth to protect the SuperGun from damage caused by a vise.

**IMPORTANT!** Use care when using a vise or pipe vise in the following procedures. Over tightening these vises can damage or distort parts and result in additional costly repairs. Tighten only enough to secure the SuperGun or part in the vise.

### Check Valve Repair and Replacement

The most common reason for check valve failure is foreign material getting trapped in the Check Valve Spring #1A or in the ball seat. Remove all foreign materials as they are detected.

1. Set the Release Valve #13G to its Opened position. Check the High Pressure Gauge Assembly #13C to be sure all hose pressure is relieved from the SuperGun.
2. Screw the Primer Rod Crank #12 counter-clockwise at least three full turns to release internal pressure on the Primer Rod Assembly #9.
3. Place the SuperGun vertically into a pipe vise with the Primer Rod Crank #12 end pointing down.

4. Using two wrenches detach the Hose Assembly #13 from the Flow Wolf Check Valve Nut #1.
5. Using a wrench, loosen the Flow Wolf Nut #1 enough to unscrew by hand and remove the Flow Wolf Nut #1.
  - The Check Valve Spring #1A and/or Ball #2 could remain in the Flow Wolf Nut #1 or left in check valve cavity.
6. Carefully using a pointed instrument to remove the Check Valve Spring #1A and Ball #2, Use care not to cause damage to the check valve cavity or seat.
  - Alternatively if the Spring #1A and Ball #2 remain in the check valve cavity, stroke Handle #5 slowly and catch them as they are extruded out with the product.
7. Clean and inspect the Flow Wolf Nut #1 inside and out, as well as the Check Valve Spring #1A and Ball #2 using a mild solvent and a clean cloth.
  - Replace any damaged part.
8. Clean out the check valve cavity in the Head #6 using a mild solvent and a clean lint free cloth and inspect the ball seat for damage.
  - If damaged is detected in check valve cavity or on the ball seat, the Head #6 may require replacing.
9. Place a small amount of sealant product onto Ball #2 and insert it into the check valve cavity in the Head #6. Use a small instrument and gently push the Ball #2 into the ball seat
  - Sealant is only used to help hold the Ball #2 and Spring #1A in place and can be omitted if desired.
10. Place a small amount of sealant product onto Spring #1A and insert it into the Flow Wolf Nut #1.
11. Screw on and tighten the Flow Wolf Nut #1.
12. Attach the SuperGun Hose Assembly #13 to the Flow Wolf Check Valve Nut #1.
  - Use two wrenches, one on the Adapter #13A and one to hold the Flow Wolf Check Valve Nut #1.
13. Remove the SuperGun from the vise.

The SuperGun is now ready to use.

## **Primer Rod Assembly Removal and Repair**

The following procedures will instruct how to completely disassemble and reassemble the Primer Rod Crank #12 and the Piston Assembly #9 from the SuperGun.

**To disassemble** the Primer Rod Assembly, follow these steps:

### **Removing the Head Assembly**

1. Have a vise and/or pipe vise available, a shallow container and a clean area prepared where you can place parts as they are removed.
2. Set the Release Valve #13G to its Opened position. Check the High Pressure Gauge Assembly #13C to be sure all hose pressure is relieved from the SuperGun.
3. Turn the Primer Rod Crank #12 counter-clockwise at least three full turns to release internal pressure on the Primer Rod Assembly #9.
4. Carefully place the SuperGun into a vise by the Head #6 and disconnect the Handle Clasp #11.
5. Remove the Sealant Barrel #8 from the Head #6.
  - A pipe wrench or chain wrench may be required to loosen the Sealant Barrel #8.
6. Remove the head assembly from the vise and place in the clean area.

### **Removing the Primer Rod Assembly**

7. Place the Sealant Barrel #8 into the vise and unscrew the End Cap #10. As the End Cap #10 disconnects, pull the Primer Rod Crank #12 out of the Sealant Barrel #8 and place onto a clean workbench. This can also be achieved using two pipe wrenches.
  - Inspect the Primer Rod Crank #12 threads for signs of product. Product on the end of Primer Rod Crank indicates a worn or damaged Leather Cup #9D that will need to be replaced.

8. Remove the Sealant Barrel #8 from the vise and place in the clean area.

#### **Detach the Piston Assembly**

9. Using two wrenches detach the Piston Assembly #9 from the Primer Rod Crank #12 by unscrewing the Shaft Body Nut #9H from Shaft End Nut #9J.
10. Place the Piston Assembly #9 in the clean area.

#### **Remove and Inspect the Shaft Bearings**

11. Using two wrenches loosen the connection between the Shaft End Nut #9J and the Rod Nut #9L.
  - Place the Primer Rod Crank #12 with the Shaft End Nut #9J over the shallow container to catch the bearings should they fall out.
12. Unscrew Shaft End Nut #9J from Rod Nut #9L and slowly separate to allow bearings #9I and #9K to fall into container then slide the Rod Nut #9L off the Primer Rod Crank #12. Place the Shaft End Nut #9J and Rod Nut #9L into the shallow container.
  - Use extreme care not to lose the bearings as you separate the parts.
  - If the bearings #9I and #9K do not fall out carefully use a pointed instrument to dig them out.
  - Inspect the bearings for damage and wear and replace if required.

#### **Remove the Cap and Clasp**

13. Screw the End Cap #10 completely down the Primer Rod Crank #12 and slide the End Cap #10 and the Handle Clasp and Ring #11 off the Primer Rod Crank #12. Place the Primer Rod Crank #12, End Cap #10 and Handle Clasp and Ring #11 in the clean area.

#### **Disassemble the Piston Assembly**

14. Place the Piston Assembly #9 into the vise by the Shaft Body Nut #9H with the Leather Cup #9D pointing up.
15. Place a flat screw driver up into the Shaft Body Nut #9H and align to fit into the slot of the Shaft #9G.
  - The Shaft #9G is slotted for a flat screw driver at one end. This slotted end is inside the Shaft Body Nut #9H.
16. While holding the screw driver up with one hand, use a wrench to remove the End Nut #9A.
17. Once the End Nut #9A is off, lift off the Bonded Seal #9B, the Small Cup Washer #9C, the Leather Cup #9D, the Large Cup Washer #9E and the Spring #9F and place into the shallow container.
18. Lower the screw driver and slide the Shaft #9G out of the Shaft Body Nut #9H and place it into the shallow container.
19. Remove the Shaft Body Nut #9H from the vise and place it into the shallow container.

#### **Clean and Inspect all Parts**

20. Using a soft brush, a clean cloth and mild solvent, clean all parts in the shallow container and in the clean area.
21. Inspect all parts for wear and damage and replace as required. Measure the length of Spring #9F. It should measure approximately two inches (5 cm). If not, it has collapsed and needs to be replaced.

**To reassemble** the Primer Rod Assembly, follow these steps:

### **Reassemble the Piston Assembly**

1. Insert the Small Cup Washer #9C into a new Leather Cup #9D.
2. Place the Shaft Body Nut #9H into the vise with the threaded female end down.
3. With the Shaft #9G place a flat screw driver into the screw driver slot and slide it up into the Shaft Body Nut #9H holding it in place with the screw driver.
4. Place the Spring #9F over the Shaft #9G and centered it onto the Shaft Body Nut #9H.
5. Place the Large Cup Washer #9E onto the Shaft #9G.
6. Place the Leather Cup #9D and Small Cup Washer #9C together over the Shaft #9G.
7. Place a new Bonded Seal #9B over the Shaft #9G and screw on the End Nut #9A and tighten.
8. Place the Piston Assembly #9 into the clean area.

### **Attach the Clasp and Cap**

9. Place the Primer Rod Crank #12 onto the workbench and place the Handle Clasp Ring over the end Primer Rod Crank #12 and slide the Handle Clasp and Ring #11 to the far end.
10. Place the End Cap #10 narrow end first over the end of the Primer Rod Crank #12 and screw it onto the Primer Rod Crank #12 leaving about 5 inches (13 cm) of threads remaining between the End Cap #10 and the Primer Rod Crank #12 T-handle.

### **Attach the Shaft End Nut and Bearings**

11. Place the Rod Nut #9L, threaded end outwards, over the end of the Primer Rod Crank #12 and slide it down the shaft about three 3 inches (7.5cm).
12. Apply a thin coat of bearing grease over the bearing grove at the end of the Primer Rod Crank #12 and leave a small dab of grease on the tip of the Primer Rod Crank #12.
13. Place Rod Bearing #9K into the small dab of grease at the tip of the Primer Rod Crank #12.
  - Of the three bearings the Rod Bearing #9K is the largest and it should stick to the end of the Primer Rod Crank #12 without falling off. If it does fall off, apply a slightly larger amount of bearing grease and try again until it remains in place.
14. Place the Shaft End Nut #9J over the end of the Primer Rod Crank #12 with the larger threaded end first and slide over the Rod Bearing #9K so the Rod Bearing #9K is inside the Shaft End Nut #9J.
  - The Rod Bearing #9K should bottom out and be all the way into the Shaft End Nut #9J.
15. Place a small dab of bearing grease into each of the holes in the side of Shaft End Nut #9J then insert a Shaft Bearing #9I into each hole.
  - The Shaft Bearings #9I should slide inside the Shaft End Nut #9J and rest in the bearing grove at the end of Primer Rod Crank #12.
16. Slide the Rod Nut #9L over the Shaft Bearings #9I and screw the Rod Nut #9L to the Shaft End Nut #9J and tighten.
  - Be sure the Shaft Bearings #9I remains in place as the Rod Nut #9L threads over the holes.

### **Attach the Piston Assembly**

17. Place the Sealant Barrel #8 into the vise.
18. Push the Piston Assembly #9, with the Shaft Body Nut #9H end in first, into the head assembly end of the Sealant Barrel #8 until the Leather Cup #9D is flush with the end of the Sealant Barrel #8.
  - The head assembly end of the Sealant Barrel #8 is the end of the barrel with the most threads.

19. Using the end of a non metal, wood or plastic stick centered over the End Nut #9A, push the Piston Assembly #9 into the Sealant Barrel until the Shaft Body Nut #9H protrudes out the other end enough to get a wrench securely on the wrench flats.
  - Be careful not to push the Leather Cup #9D completely out the end of the Sealant Barrel #8.
20. Remove the Sealant Barrel #8 from the vise and place it with the Primer Rod Crank #12 onto the workbench.
21. Place a small amount of Loctite® thread sealant on the threads of Shaft End Nut #9J.
22. Connect and tighten the Shaft End Nut #9J to the Shaft Body Nut #9H using two wrenches.
23. Push the Primer Rod Crank #12 into the Sealant Barrel and attach and tighten the End Cap #10.
  - The SuperGun is now at the stage where it is prepared for loading.

### **Attach the Head Assembly**

24. Carefully place the head assembly into the vise.
25. Remove, the Barrel Gasket #7 from the barrel cavity of the Head #6. Clean and inspect and if required replace it.
26. Clean out any remaining product from the barrel cavity of the Head #6 and insert the Barrel Gasket #7.
  - Be sure that the Barrel Gasket #7 is sitting flat and is tight against the Head #6.
27. Attach and hand tighten the Sealant Barrel #8 to the Head #6.
28. Turn the Primer Rod Crank #12 clockwise until it is threaded completely into Sealant Barrel #8.

The SuperGun is now ready to use.

## **Piston Cartridge Assembly Replacement**

A worn pump piston assembly can be detected while stroking the Handle #5, it travels partially down then you feel the force of the product. The more it travels without any force indicates the more it is worn. The more it is worn the longer it will take to service a valve. It is highly recommended that the assembly be replaced if the Handle #5 can travel more than half its swing before feeling the pressure of product.

The Piston Cartridge Assembly #4 is a uniquely matched set and should not be separated and interchanged with other piston cartridges.

To remove the Piston Cartridge follow these instructions:

1. Have a clean area prepared where you can place parts as they are removed.
2. Open Release Valve #13G; check the High Pressure Gauge Assembly #13C to make sure all hose pressure is relieved from the SuperGun.
3. Turn the Primer Rod Crank #12 counter-clockwise at least three full turns to release internal pressure on the Primer Rod Assembly #9.
4. Screw the SuperGun into a vise by the Head #6 with the Handle #5 up.
5. Remove the Fulcrum Bolt #3F and Nylock Nut #3D.
6. Release the Handle Clasp #11 from the Handle #5 and flip the Handle #5 over the Head #6 and out of the way.
7. Place and hold a wrench onto the wrench flats on the bottom of the Piston Cartridge Assembly #4 and remove the top Body Nut #4A using a second wrench.
8. Remove the Piston Cartridge Assembly #4 through the bottom of the Head #6 and discard.

- Using a rubber hammer, strike on the top of Piston Cartridge #4 and it will pop out the bottom.

To Install a New Piston Cartridge follow these instructions:

1. Remove the Body Nut #4A from the new Piston Cartridge Assembly #4.
2. Rub a thin layer of mineral oil or light lubricant over the outside of the Piston Cartridge Assembly #4 to coat the O-Rings.
3. Insert the Piston Cartridge Assembly #4 up into the Head #6 and attach and tighten the Body Nut #4A.
  - The bottom of the Piston Cartridge Assembly #4 should align flush with the bottom of the Head #6.
4. Flip the Handle #5 back over to its normal position.
5. Align the hole at the top of the Piston Cartridge Assembly #4 with the hole in Handle #5 and align the slot in the Fulcrum Link #3E and insert the Fulcrum Bolt #3F.
6. Attach the Nylock Nut #3D and tighten.
7. Attach the Handle Clasp #11 to the Handle #5.

The SuperGun is now ready to use.

## Hose Assembly Replacement

It is highly recommended the Extra High Pressure Hose #13E be replaced every 3 years and chances are the other hose components are worn and need replacing as well.

Use only Sealweld high-pressure replacement hoses, components and parts.

To remove the Hose Assembly #13 follow these instructions.

1. Have a clean area prepared where you can place parts as they are removed.
2. Set the Release Valve #13G to its Opened position.
3. Check the High Pressure Gauge Assembly #13C to make sure all hose pressure is relieved from the SuperGun.
4. Screw the Primer Rod Crank #12 counter-clockwise at least three full turns to release internal pressure on the Primer Rod Assembly #9.
5. Remove the SuperGun Hose Assembly #13 from the Flow Wolf Check Valve Nut #1.
  - Using two wrenches detach the Hose Assembly #13 from the Flow Wolf Check Valve Nut #1 by unscrewing the Adapter #13A from the Flow Wolf Check Valve Nut #1.
  - If you are not replacing the entire Hose Assembly #13 remove and replace hose components as required. Always use two wrenches when replacing hose components.
6. Attach and tighten the new Hose Assembly #13 to the Flow Wolf Check Valve Nut #1 again using two wrenches.

The SuperGun is now ready to use.

## Linkage Repair and Replacement

Over a long period of time the Linkage Assembly #3 can wear causing the Handle #5 to operate sloppy. Linkage Assembly parts can also be bent through mishandling or careless use. The Linkage Assembly Kit #R-SG-17 contains all the replacement parts you will need to extend the service life of the SuperGun.

To disassemble the Linkage Assembly #3, follow these steps:

1. Have a clean area prepared where you can place parts as they are removed.

2. Open Release Valve #13G; check the High Pressure Gauge Assembly #13C to make sure all hose pressure is relieved from the SuperGun.
3. Place the SuperGun into a vise by the Sealant Barrel #8 with the Handle #5 up and the Fulcrum Link #3E facing towards you.
  - **IMPORTANT!** Over tightening the vise can damage or distort the Sealant Barrel #8. Tighten only enough to secure the SuperGun.
4. Turn the Primer Rod Crank #12 counter-clockwise at least three full turns to release internal pressure on the Primer Rod Assembly #9.
5. Detach the Handle Clasp #11 from the Handle #5.
6. Using two wrenches detach the Nylock Nut #3D from the Head Pin #3C and slide the Head Pin #3C out of the assembly.
7. Using two (2) wrenches detach one of the Nylock Nut #3D from the Handle Pin #3B. While holding the Handle #5 with one hand slide or pull out the Handle Pin #3B and the remaining attached Nylock Nut #3D.
8. Place the Handle #5 in the clean area.
9. Place a wrench on the wrench flats provided on the Fulcrum Bolt #3F located between the Fulcrum Link #3E and the Harness Link #3A and remove the Nylock Nuts #3D on the outside of the Fulcrum Link #3E.
  - Note the positioning of the Fulcrum Link #3E. It contains a notch on the lower side to allow room for the Head #6.
10. Remove the Fulcrum Link #3E.
11. Place a wrench on the wrench flats provided on the Fulcrum Bolt #3F and remove the Nylock Nuts #3D from the other end of the Fulcrum Bolt #3F.
12. Hold the Harness Links #3A and remove the Fulcrum Bolt #3F.
13. If you are not installing a new Linkage Assembly Kit #R-SG-17, inspect and replace any worn parts as required.
  - If the Harness Links #3A or the Fulcrum Link #3E has been bent, use a hammer and anvil to straighten.

To reassemble the Linkage Assembly #3, follow these steps:

- **NOTE:** These instructions are based on the installation of a Linkage Assembly Repair Kit #R-SG-17
1. With the SuperGun still in the vise as described in the disassembly instructions, slide the longer end of Fulcrum Bolt #3F into a hole in one of the Harness Links #3A.
  2. With the shorter end of Fulcrum Bolt #3F and the Harness Link #3A facing you slide the Fulcrum Bolt #3F into the hole in Head #6.
  3. With the second Harness Link #3A, slide the hole over the far end of Fulcrum Bolt #3F.
  4. With the shorter end of Fulcrum Bolt #3F slide the Fulcrum Link #3E bolt hole over the Fulcrum Bolt #3F.
    - Note the positioning of the Fulcrum Link #3E. It contains a notch on the lower side to allow room for the Head #6.
  5. Using two wrenches place one wrench on the wrench flats provided on the Fulcrum Bolt #3F located between the Fulcrum Link #3E and the Harness Link #3A and attach and tighten a Nylock Nut #3D to each end of the Fulcrum Bolt #3F.

- Do not over tighten. All the pins and bolts are design so the Nylock Nuts #3D can be tighten to the thread ends. They are also design so the pins or bolts protrude slightly out the ends of the Nylock Nuts #3D.
6. Place the Handle #5 over the SuperGun and position the two Harness Links #3A so the Handle Bushing #3G is in-between the Handle Pin #3B holes and slide in the Handle Pin #3B.
  7. Attach and tighten a Nylock Nut #3D to both ends of the Handle Pin #3B.
  8. Adjust the Handle #5 over the Piston Cartridge #4 so the Head Pin #3C holes are aligned. Place the Head Pin #3C through the slot in the Fulcrum Link #3E then slide completely through the Handle #5 and Piston Cartridge #4.
  9. Using two (2) wrenches hold the Head Pin #3C by the wrench flats provided and attach and tighten a Nylock Nut #3D.
  10. Attach the Handle Clasp #11 to the Handle #5.
  11. Remove the SuperGun from the vise.

The SuperGun is now ready to use.

## Pressure Gauge Replacement

Occasionally sealant will enter the High Pressure Gauge Assembly #13C bourdon tube and the gauge will fail to return to zero. If this occurs, the High Pressure Gauge Assembly 13C needs to be replaced. Follow these instructions.

1. Have a clean area prepared where you can place parts as they are removed.
2. Disconnect the SuperGun from the valve.
3. Open Release Valve #13G; check the High Pressure Gauge Assembly #13C to make sure all hose pressure is relieved from the SuperGun.
4. Screw the Primer Rod Crank #12 counter-clockwise at least three full turns to release internal pressure on Primer Rod Assembly #9.
5. Using a proper fitting wrench and remove the High Pressure Gauge Assembly #13C from the High-pressure TEE #13B.
6. Dig a large quantity of product out of the High-pressure TEE #13B to form a cavity.
7. Fill the cavity with a light weight hydraulic fluid.
8. Attach and tighten a new High Pressure Gauge Assembly #13C to the High-pressure Tee #13B.

The SuperGun is now ready to use.

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## Storing the SuperGun

The SuperGun requires very little preparation before storing.

To store the SuperGun follow these instructions.

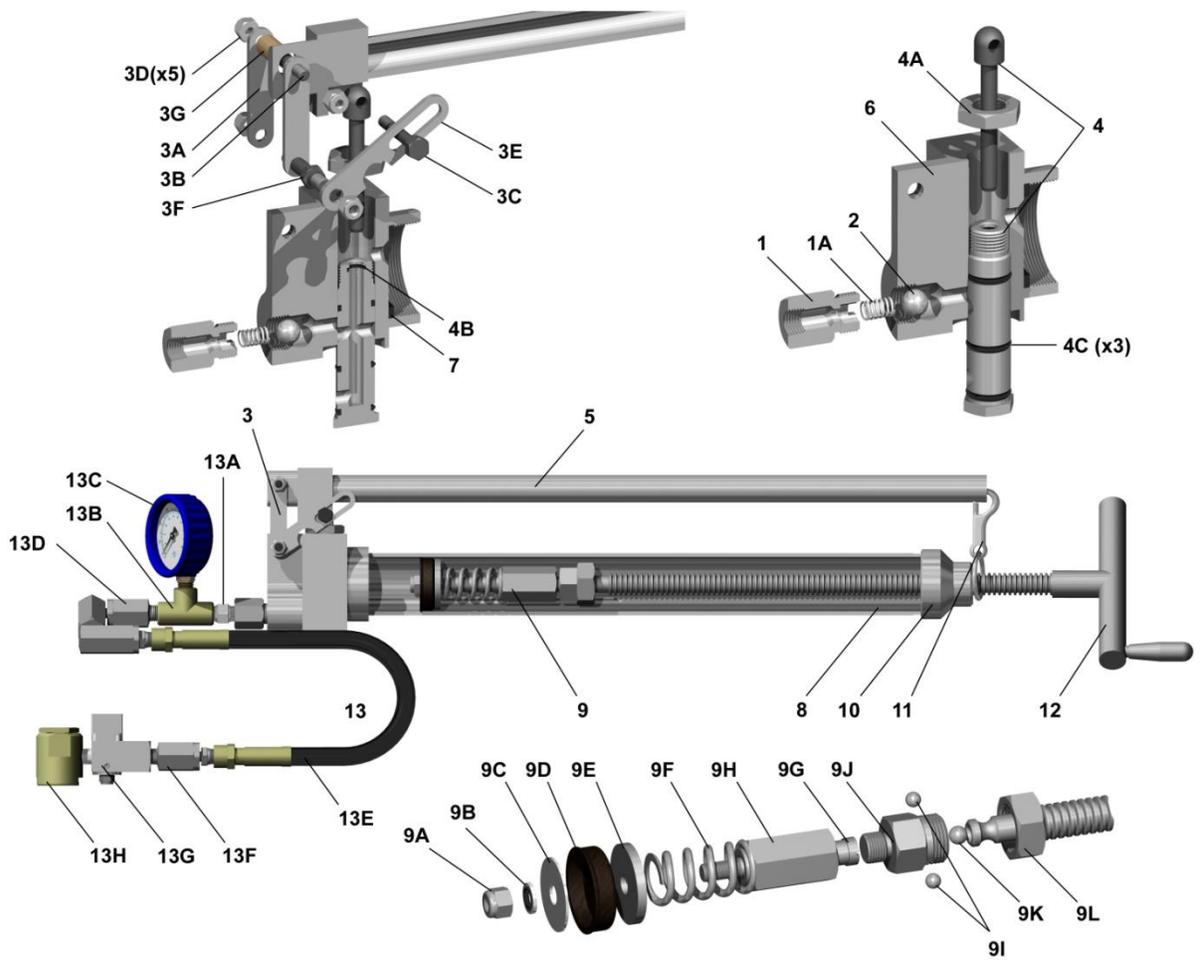
1. Detach the Giant Buttonhead Coupler #13H from the fitting on the valve.
  - **IMPORTANT!** *Always relieve any internal pressure by setting the Release Valve #13G to its **Vented** position before detaching the giant buttonhead coupler #13H from the fitting on a valve.*
2. Set the Release Valve #13G to its **Closed** position.
  - See page 6 “*Release Valve Fundamentals*” for Release Valve #13G positions.

3. Turn the Primer Rod Crank #12 counter-clockwise at least three full turns to relieve internal pressure on the Primer Rod Assembly #9.
4. Connect the Handle #5 to the Handle Clasp #11.
5. Clean off any product or contaminants such as sand or dirt from the SuperGun and the Giant Buttonhead Coupler #13H.
  - ***NOTE:** Some operators have been known to place an old glove or a plastic bag over the Giant Buttonhead Coupler #13H before storing to reduce contamination.*

The SuperGun is now ready for storage.

# Parts Guide

## Parts Illustration



## Parts List

Sealweld SuperGun® - Complete		G-SGUN-C	
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
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

13	SuperGun Pump Hose Assembly - Complete	H-S-HOSE	
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
<b>Optional Accessories</b>			
	Oversized Piston Assembly	R-SG-02LP	1
	Plastic Carrying Case	B-PC-SG	1

## How to Order SuperGun Parts

Parts can be identified by referring to the illustration number. You can then cross reference the illustration number with the part number using the Parts List provided above. Ordering parts by the part number is the best way to ensure satisfaction.

### Repair Kits

Sealweld SuperGun® Repair Kit		R-SG-KIT
This kit contains all the replacement parts you will need to extend the service life of the SuperGun.		
Illustration #	Description	Qty. Req'd
4	Piston Cartridge Assembly	1
4B	Piston O-ring	1
4C	Piston Body O-ring	3
7	Barrel Gasket	1
9B	Stato Seal - 3/8"	1
9D	Leather Cup	1
9F	Spring	1

Linkage Assembly Repair Kit		R-SG-17
This kit contains all the parts you will need to replace the Linkage Assembly #3 on the SuperGun.		
Illustration #	Description	Qty. Req'd
3A	Harness Links	2
3B	Handle Pin	1
3C	Head Pin	1
3D	Nylock Nuts	5

<b>Linkage Assembly Repair Kit</b>		<b>R-SG-17</b>
This kit contains all the parts you will need to replace the Linkage Assembly #3 on the SuperGun.		
<b>Illustration #</b>	<b>Description</b>	<b>Qty. Req'd</b>
3E	Fulcrum Link	1
3F	Fulcrum Bolt	1
3G	Handle Bushing	1

<b>Primer Rod Assembly Repair Kit</b>		<b>R-SG-19</b>
This kit contains all the parts you will need to replace the Sealant Barrel #8 internal moving parts in the SuperGun.		
<b>Illustration #</b>	<b>Description</b>	<b>Qty. Req'd</b>
9A	End Nut	1
9B	Bonded Seal - 3/8"	1
9C	Small Cup Washer	1
9D	Leather Cup	1
9E	Large Cup Washer	1
9F	Spring	1
9G	Shaft	1
9H	Shaft Body Nut	1
9I	Shaft Bearings – 5/16" Diameter	2
9J	Shaft End Nut	1
9K	Rod Bearing – 3/8" Diameter	1
9L	Rod Nut	1
12	Primer Rod Crank	1

<b>Test Fitting</b>		<b>R-F-TEST</b>
This blank buttonhead fitting is used to perform the test procedure found in the Trouble shooting section of this manual.		
<b>Illustration #</b>	<b>Description</b>	<b>Qty. Req'd</b>
	Sealweld Sealant Pump Test Fitting	1

# Troubleshooting

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## Troubleshooting the SuperGun

Your Sealweld SuperGun® pump has been factory pre-tested using the testing procedure below and is ready to use right out of the box. It is not necessary to test a brand new SuperGun however the SuperGun should be tested periodically to assure all parts are working BEFORE working on a valve under pressure.

The following test procedure has been developed to be used strictly on a SuperGun. Performing this test on a similar style pump may result in damage to the equipment or cause personal injury.

This test requires a Sealweld Sealant Pump Test Fitting; See “*Repair Kits*” on page 25. Use the Release Valve #13G to relieve pressure as required.

If you are not comfortable in performing this test or if it does not resolve a problem you are experiencing with the SuperGun, contact a Sealweld service center near you.

### Testing the SuperGun

 **WARNING!** Be sure you have read and understand the “*Safety Considerations*” section of this manual before testing the SuperGun.

**BEFORE TESTING** disconnect the Giant Buttonhead Coupler #13H if attached to a valve fitting. Load the SuperGun with a heavy valve sealant product such as Sealweld’s Total-Lube #911. **DO NOT USE** light valve lubricants, cleaners, flushers or liquid products to perform this test. Lighter products can shoot out at extremely high pressure should an equipment failure occur.

- During the reloading procedure, and once the head assembly has been removed, turn the Primer Rod Crank #12 counter-clockwise until it stops. Do not use excessive pressure. Inspect the threads on the Primer Rod Crank #12 for signs of product. If product is found it indicates the Primer Rod Assembly #9 is leaking. See “*Primer Rod Assembly Removal and Repair*” on page 15.

Monitor the High Pressure Gauge Assembly #13C and keep the pressure below 10,000 psi (690 bar) throughout this test. Generating pressures above 10,000 psi (690 bar) creates a dangerous situation and should be avoided. Always **USE EXTREME CAUTION** when exceeding 10,000 psi (690 bar).

 **WARNING!** Be very careful to keep fingers and hands away from the vent hole on the side of the Release Valve #13G when operating this valve. A short stream of sealant can shoot out at extremely high pressure, direct the sealant into a container or a rag when opening the Release Valve #13G.

Test the SuperGun by follow these instructions:

1. Check that the High Pressure Gauge Assembly #13C reads zero.
  - If the High Pressure Gauge Assembly #13C does not return to a zero (0) reading open the Release Valve #13G to insure there is no pressure in the Hose Assembly #13. If the High Pressure Gauge Assembly #13C still does not return to a zero (0) reading indicates product has entered the High Pressure Gauge Assembly #13C bourdon tube. See “*Pressure Gauge Replacement*” on page 21.

2. Prime the SuperGun by turning the Primer Rod Crank #12 clockwise until it becomes difficult to turn. Do not over tighten.
  - If Primer Rod Crank #12 does not become difficult to turn it could indicate the Primer Rod Assembly #9 is damaged. See *“Primer Rod Assembly Removal and Repair”* on page 15.
  - **CAUTION:** *over tightening the Primer Rod Crank #12 can damage and/or collapse the Primer Rod Assembly #9.*
3. Set the Release Valve #13G to its Opened position and disconnect the Handle Clasp #11 to release the Handle #5.
4. Visually inspect the Linkage Assembly #3 for any bent or damaged parts and excessive play.
  - Lift the Handle #5 up until it reaches its full height. Examining how far the Handle #5 can move up and down without the piston rod moving. Excessive movement indicated the Linkage Assembly #3 is badly worn and requires replacing. When factory tested there is no noticeable play in the linkage. See *“Linkage Repair and Replacement”* on page 19.
5. Stroke the Handle #5 several times to check if sealant gets pumped out through the Giant Buttonhead Coupler #13H. 25 strokes should pump approximately one ounce (30 ml) of sealant.
  - A stroke is defined by lifting the Handle #5 up until it reaches its full height. Wait one or two seconds then pulling the Handle #5 all the way down.
  - **NOTE:** *Place the Giant Buttonhead Coupler #13H into a container or on a rag to catch sealant as it is pumped out.*
  - If sealant stops dispensing after only a few strokes it indicates a problem with the Primer Rod Assembly #9. See *“Primer Rod Assembly Removal and Repair”* on page 15.
  - If only a small amount of sealant is dispensed with each stroke and 25 strokes dispenses less than one ounce (30 ml) of sealant indicates the Piston Cartridge Assembly #4 is badly worn. See *“Piston Cartridge Assembly Replacement”* on page 18.
6. Attach the Giant Buttonhead Coupler #13H to the Sealweld Sealant Pump Test Fitting.
7. Stroke the Handle #5 one time while monitoring the High Pressure Gauge Assembly #13C. Keep the pressure below 3,000psi (207 bar).
  - The High Pressure Gauge Assembly #13C should show the pressure building. It may require a second (2<sup>nd</sup>) stroke before the High Pressure Gauge Assembly #13C indicator moves. **DO NOT** stroke Handle #5 a third time. If the High Pressure Gauge Assembly #13C shows no pressure:
    - i. Check if sealant is leaking around the Giant Buttonhead Coupler #13H. If so remove and re-attach the Giant Buttonhead Coupler #13H. Repeat step 7. If the Giant Buttonhead Coupler #13H continues to leak it needs replacing. See *“Hose Assembly Replacement”* on page 19.
    - ii. Check Hose Assembly #13 for leaks. If a leak in the Hose Assembly #13 is detected you might be able to stop the leak by tightening any loose threaded connections. If not, see *“Hose Assembly Replacement”* on page 19.
    - iii. Check if sealant is leaking around the top or bottom of the Piston Cartridge #4. If a leak is detected, see *“Piston Cartridge Assembly Replacement”* on page 18.
    - iv. Carefully set the Release Valve #13G to the Vented position. If sealant is dispensed through the vent hole it indicated the High Pressure Gauge Assembly #13C has failed. See *“Pressure Gauge Replacement”* on page 21.
  - If the Handle #5 tries to spring back or lift up on its own, or if the pressure gauge indicator increases on the down stroke then decreases on the up stroke, it indicates the FLOW WOLF Check Valve #1A has failed. See *“Check Valve Repair and Replacement”* on page 14.

8. Monitor the High Pressure Gauge Assembly #13C. It should retain and hold at a steady pressure. If the pressure indicator slowly drops it indicates a leak. If no leaks can be seen externally on the SuperGun the likely cause is the FLOW WOLF Check Valve #1A has failed. See *“Check Valve Repair and Replacement”* on page 14.
9. Stroke the Handle #5 while monitoring the High Pressure Gauge Assembly #13C. Repeat step 8 with the pressure at approximately 6,500psi (448 bar) then again at 10,000psi (690 bar).
10. Set the Release Valve #13G to the Vented position to relieve any internal hose pressure and detach the Giant Buttonhead Coupler #13H from the test fitting.
11. Attach the Handle Clasp #11 to Handle #5 and turn the Primer Rod Crank #12 counter-clockwise at least three full turns to relieve internal pressure.

This completes the test. If you made it through all 11 steps without incident your SuperGun is in perfect working condition.

# Warranty

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## SuperGun Warranty

Sealweld Corporation 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 packing's, 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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## Disclaimer

The information contained within this manual is solely advisory.

You are responsible for understanding the information. You should not rely on this information as absolute. If you do act upon the suggestions contained in this manual, you are responsible for yourself and your actions.

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## EC Declaration of Conformity

As defined by the provisions of the *EC Machinery Directive 2006/42/EC, Annex II A*

We declare that the type and design of:

### **Sealweld SuperGun**

As supplied, are in conformity with the following relevant provisions:

Machinery Safety Directive	2006/42/EC
EN_ISO 12100-1	Basic concepts, general principles for design – Part 1
EN_ISO 12100-2	Basic concepts, general principles for design – Part 2

Manufacturer:  
Sealweld Corporation - Canada

Distributor Europe:  
Multimetaal Maintenance B.V.

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Signature

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