About This Manual
Thank you for selecting Hernon's Sureshot 3500 Controller for your application. The Sureshot 3500 Controller was developed with your needs in mind. Your Sureshot 3500 Controller has been calibrated and tested to ensure optimal performance and long life.

To ensure safe and trouble-free operation, please review the procedures and warnings contained in this manual before setting up or operating your Sureshot 3500 Controller. While safety is paramount, proper handling and operation of Sureshot 3500 Controller will also serve to produce quality product yield.

If you have any problems or concerns, please contact Hernon Technical Support at (407) 322-4000. Trained Hernon professionals are standing by to serve you.
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Unpacking and Inspection

Carefully remove the contents from the boxes and check for damage. Hernon is not responsible for damage from shipping – all claims for shipping damage should be made with carrier.

Check all boxes for contents and document any serial numbers for further reference. You may wish to retain original shipping cartons in case you need to repackage any item for return.

If you observe or experience any problem with your equipment, notify Hernon Customer Support, your authorized distributor, or your Hernon representative immediately.  
NOTE: REPORT ANY SHORTAGE TO HERNON CUSTOMER SERVICE  
Phone: (407) 322-4000 Fax: (407) 321-9700 Email: sales@hernon.com

Before continuing with unpacking and installation, please read the following chapters of this manual for safety recommendations and installation, running, and troubleshooting instructions.

⚠️ WARNING! Always observe safety requirements!
Safety
For safe and successful operation of the Autobonder 2101, read these instructions completely. If the instructions are not observed, the manufacturer can assume no responsibility. Be sure to retain this manual for future reference.

If chemical products are not properly handled, damage to health can result.

- Observe general safety regulations for the handling of chemicals.
- Observe manufacturer’s instructions.
- When working with pressurized air, wear protective glasses.

While under warranty, the Autobonder 2101 may be repaired only by an authorized Hernon service representative. Request a material safety data sheet for the HERNON® product used.
GENERAL
The Sureshot 3500 Controller is a control unit for the semi-automatic dispense of sealant through the Sureshot 3500 Jetting Device. It utilizes a pressurized reservoir and an electronic timer to accurately control dispense volume, and is activated with the included foot pedal switch. Device allows control through included PLC, an External I/O Port, and/or manual control with a footswitch.

The Sureshot 3500 Controller is available in both single-valve and dual-valve configurations:

<table>
<thead>
<tr>
<th>Part Number Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
</tr>
<tr>
<td>Single-Valve Controller</td>
</tr>
<tr>
<td>Dual-Valve Controller</td>
</tr>
</tbody>
</table>

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>110-058 / 110-059</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Requirements</td>
<td>90-265VAC, 50-60Hz</td>
</tr>
<tr>
<td>Shutter mode Activation</td>
<td>Foot switch, PLC, or External I/O Connection</td>
</tr>
<tr>
<td>I/O Port</td>
<td>9 pin CPC</td>
</tr>
<tr>
<td>Signals (PLC Integration)</td>
<td>Inputs: Cycle Start, Stop Outputs: LED ON, Shutter mode OPEN, FAULT</td>
</tr>
<tr>
<td>Cooling</td>
<td>Filtered, dual-fan arrangement</td>
</tr>
<tr>
<td>Housing Dimensions</td>
<td>13.375“W x 7”H X 9.625”D</td>
</tr>
<tr>
<td>System Warranty</td>
<td>1 year from purchase</td>
</tr>
<tr>
<td>Air</td>
<td>Dry filtered shop air, maximum 100psi (for reservoir only)</td>
</tr>
</tbody>
</table>
**System “Kit” Components:**

A Sureshot 3500 Kit can be ordered with the following components:

![System components](image)

**Figure 1- Sureshot 3500 system, with components labelled.**

<table>
<thead>
<tr>
<th>Component:</th>
<th>Part Number:</th>
<th>Item No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sureshot 3500 Jetting Device</td>
<td>110-046</td>
<td>1</td>
</tr>
<tr>
<td>R125 Reservoir</td>
<td>110-100</td>
<td>2</td>
</tr>
<tr>
<td>1/8” OD x .080 ID x &lt;60” LG (black) Sealant Supply Tube</td>
<td>101-035</td>
<td>3</td>
</tr>
<tr>
<td>Sureshot 3500 Controller</td>
<td>110-058/059</td>
<td>4</td>
</tr>
<tr>
<td>Sureshot 3500 Dispense 3 Wire Communication Cable</td>
<td>102-043</td>
<td>5</td>
</tr>
<tr>
<td>6-40 12 Micron Inline Filter</td>
<td>107-015</td>
<td>6</td>
</tr>
<tr>
<td>Sureshot 3500 Dispense Jet Needle Guard</td>
<td>106-022</td>
<td>7</td>
</tr>
<tr>
<td>10 Micron Filter</td>
<td>109-056</td>
<td>8</td>
</tr>
<tr>
<td>6-40 .085 Barbed Tube Fitting</td>
<td>109-054</td>
<td>9</td>
</tr>
<tr>
<td>1/8” Dual Ear Clamp</td>
<td>109-054</td>
<td>10</td>
</tr>
<tr>
<td>0-30 PSI Precision Regulator</td>
<td>110-090</td>
<td>11</td>
</tr>
<tr>
<td>316 S.S. 1/8” Through Tube x 1/4” NPT Male</td>
<td>101-055</td>
<td>12</td>
</tr>
<tr>
<td>316 S.S. 2pc. Ferrule Set 1/8” ID</td>
<td>109-061</td>
<td>13</td>
</tr>
<tr>
<td>Power Cable</td>
<td>102-025</td>
<td>-</td>
</tr>
<tr>
<td>Foot Switch</td>
<td>110-009</td>
<td>-</td>
</tr>
</tbody>
</table>
R125 Reservoir
The R125 is a pressurized material reservoir for Hernon products. Contained in this section are the recommended procedures for setting up and maintaining various aspects of the R125 Pressure Reservoir. Strict adherence to these procedures will ensure safe and smooth operation and maximum sealant life.

R125 Tube Installation
1. Assemble the ¼” NPT dispense tubing / compression connector into the pressure reservoir lid. For initial assembly convenience the ¼” NPT threads on the tubing connector should be prepared with pre-applied pipe sealant.
2. Assemble tubing through the nut and the back / front parts of the compression ferrule assembly as detailed below.
3. Insert the tubing assembly end into the male ¼” NPT connector body and loosely screw the nut onto the connector body.
4. Place the reservoir cap on the reservoir and push tubing through thermocoupler until the tube touches the bottom of the reservoir then retract the tubing about ¼” from the bottom.
5. Lightly tighten the nut on the ¼” NPT connector body to lock and seal dispense feed tubing and ferrule. Pull on the tube to verify ferrule is holding the tube. NOTE: Over tightening ferrule can close soft dispense tube.
6. Trimming the end of this tube at an angle will assure uninhibited liquid flow in case tube end contacts liquid container.
7. Connect the dispense end of the tube as required to a normally closed SS4000.

![Figure 2 - R125 components and spare parts](image)
R125 Fill/Refilling Set-Up Procedure

Note: For compatibility purposes, avoid placing sealant in reservoir without some sort of isolation barrier. Hernon recommends the use of reservoir liners (see replacement parts list) or placement of original sealant container directly in reservoir. Do not place liquid directly into Reservoir or wet internal surfaces.

1. Ensure pressure regulator is set for zero (0) PSI. Pull locked regulator knob out to unlock knob and turn counter clockwise to relieve air pressure to zero (0) PSI.
2. Turn clamp ring star nut counter clockwise and loosen clamp ring T-bolt. Once sufficiently loose the T-bolt can be turned 90 degrees and free clamp tie. Open clamp band slightly and lower ring just below cap clamp area.
3. Remove cap from pressure vessel using the handle on top and carefully set it aside.
4. Put liquid container inside pressure reservoir or use polyethylene bag as a liner (107-013) and fill liquid to be dispense into bag lined reservoir. Do not pour liquid directly into pressure vessel. This can contaminate the Reservoir.
5. Insure that the O-ring stays in the groove of the cover. A light film of vacuum grease periodically wiped on the O-ring will prevent adhesives and sealants from adhering to the sealing surfaces. NOTE: Use only a small amount of vacuum grease on sealing surfaces. Excessive grease may migrate and contaminate dispense liquid.
6. Install cover on the pressure reservoir making sure to direct dispense tube end into container with dispense sealant.
7. Engage the reservoir cap clamp ring into clamp position, lock in T-bolt and tighten clamp as required for seal.
8. Connect dry filtered air supply to reservoir regulator input (¼” NPT) / quick disconnect.
R125 Start-Up Pressurize Procedure
1. Pull 0-30psi pressure regulator knob out slightly and turn clockwise to increase air pressure. Air input to regulator should never exceed 100 PSI. Listen for possible air leaks and or any signs of dispense liquid / fluid leaking for connections. Start with lowest pressure and gradually increase as required.

Sureshot 3500 Jetting Device
The SureShot 3500 series dispense valve system accurately controls the application of approved ammunition sealant.

- Compact weight and size
- Non-contact dispensing
- Up to 400 parts per minute capability

![Valve dimensions](image)

**Figure 4- Valve dimensions.**

Low Level Sensor (Optional)
Low level sensor is used to detect a sealant low-level condition. This can be then be programmed into an existing PLC to indicate as required. Low level indication is provided via a specialized sensor. The sensor and holder have been design for use with Hernon standard one liter containers. Smaller containers can be used, however, the user must make sure that the container of fluid is positioned against (touching) the sensor housing. Refer to the R125 manual on pages 8-10, or call Hernon for any further questions.
Assembly and Set-Up

**SS3500 Controller Set-Up**
1. Connect power cord to front of unit and plug into a grounded wall outlet.
2. Connect the foot switch to the connection in the front of the unit.
3. Connect Sureshot 3500 Jetting Device to Ports V-1 or V-2

![Figure 5- Sureshot 3500 Controller front face](image)

**Sureshot 3500 Jetting Device Set-Up**

**Assembling Barbed Tubing**
1. Purchased along with these units will be 1/8” OD x 0.080” ID Black tubing (Hernon recommends no longer than 60 inches) Along with (2) 6-40 x .85 barbed fittings, and (1) two sided ear clamp.

![Barbed Tubing](image)

2. Slide two sided ear clamp onto tubing as shown.
3. Insert barb into tubing fully.

4. Slide Ear clamp over barb and clamp tight with a pair of pincers. NOTE to not get pincers to close to the barb or tubing, risk of collapsing barbed fitting. USE CATION.

5. Blow air through tube to assure if the barbed fitting has not collapsed.
6. Leave second barb off until tubing is pushed through 1/8” Thermocouple and inside reservoir. Do not use an ear clamp on the Barb inside the reservoir, will contaminate sealant. Reference Page 12 for specifics on thermocouple.
7. When screwing barb onto the SS3500 Valve, ensure that the 10 micron filter is attached.

**IMPORTANT**
Regular wire cutters or side clippers will not do the job correctly and runs a risk of leaking and inhibiting the operation of the SS3500 Jetting System. Hernon please refer to Part Number 106-130 provided by Hernon to properly secure ear clamps.
Connections
The SS3500 valve should be assembled as follows:

1. Screw the 10-micron filter (6) into the SS3500 valve body (1).
2. Screw assembled barbed fitting (5, 9, & 10) into the 10-micron filter (6).
3. Attach the jet needle guard (7), if applicable.

Set-Up
1. Plug SS3500 3-Pin Cable into the SS3500 Controller V1 or V2 Ports (depending on single or dual model).
2. Fasten the Material input 6-40 x .85 barded tubing fitting with fitting and dual ear clamp installed onto the SS3500. (Check interconnect for specific orientation)
3. Ensure that R125 Reservoir is sealed and has all air lines connected. Refer to R125 guidelines on page 8-10.

Dispense System Start Up / Purge
1. Insert one liter container of Hernon Ammunition Sealant into the reservoir. **Do not pour the sealant directly into the reservoir.**
2. Remove liter container cap and remove foil seal. Care should be taken that liter of sealant is not contaminated with any foreign materials, debris, dust, foil, etc. The liter container cap may be stored inside the reservoir beside the liter jug for future recapping.
3. Close the reservoir cover and clamp. **Note: Please see reservoir manual for proper reservoir operating procedures.**
4. Adjust the precision regulator as required. It is recommended to begin at 10-15psi.
5. Place a sealant compatible receptacle below the Sureshot 3500 needle.
6. Press the purge button on the Sureshot 3500 controller until sealant flows from the needle. Purge approximately 5-10 ml of sealant through the valve. This verifies any contaminants are rinsed clear of system.
7. Verify dispense valve settings are correct for application, and test valve.
8. System is ready for normal operation.
Operations Guidelines
To energize system, turn the power switch ON; PLC should begin to function. This can be confirmed by viewing PLC screen initialization.

PLC Navigation/Menus
Upon startup the PLC screen will display the following image. All PLC menu navigation is accomplished via the touch screen controls. Use the ESC button to return to the main menu.

System Status
- “READY”: The Sureshot 3500 is ready to dispense.
- “NOT READY”: The dispense cycle is in progress.

Part Counter
Each dispense cycle will be counted via the Part Counter. The count can be reset back to zero via the Reset key on screen.

NOTE: Reset Button needs to be held to reset part counter.

Dispense Setup Menu
There are two adjustable parameters (Dispense Volume and Dispense Delay), and two functions (Trigger Dispense and Trigger Purge) under the dispense setup menu:

Dispense Volume
Dispense volume is adjusted primarily by controlling how long the SS3500 valve stays open, in units of milliseconds. Touch the box next to the text to change the value with an onscreen number pad. ESC cancels operation; key in new time and press the Return/Enter Arrow sets new value as the new preset and returns the user to the previous dispense screen.

Dispense Delay
The amount of time the machine will wait to dispense after triggered, unit of measurement is also in milliseconds. Dispense delay only applies when used with an external trigger. The Foot Switch will have no delay, regardless of setting. Touch the box next to the text to change the value with an onscreen number pad. ESC cancels operation; the Return/Enter Arrow sets new value as the new preset.
Triger Dispense
Trigger Dispense button signals the SS3500 for one dispense run at the pre-set time, this has the same effect as pressing the footswitch except that the part counter is NOT recorded for that instance.

Trigger Purge
Purge button will hold the valve open as long as the button is pressed.

NOTE: Both Jet 1 and 2 have independent settings for Volume, Delay, Manual Trigger Dispense, and Manual Trigger Purge.

Diagnostic Menu:
This Menu is here to view system status of input devices. Identifies I/O logic.

System Setup Menu (Single Board):
Touching the prompt box will change the mode. The current active mode will be displayed.

Local/Remote Mode:
Toggles between Local control through the PLC, and control through an External I/O system.

Footswitch:
Toggles whether the foot switch activates one jet, both jets, or is totally disabled. Disabling the foot switch is useful for when the Control Box is being run with an External I/O signal.

Part Sensor:
Toggles Part Sensor between Enabled and Disabled. The sensor detects when a part is ready to be dispensed on, its purpose when enabled is to determine if a part is in its proper location or not. On the Dual Board model (#110-059), there is a separate menu for the Jet 2 part sensor.

External I/O Signals
The Sureshot 3500 Controller is equipped with a 9 pin connector that provides interface between the Sureshot 3500 Controller and a PLC (or similar factory control equipment). The following tables show inputs and outputs, their properties, and how to use them. All inputs are PNP type (ON when +24VDC is present).

Please contact Hernon technical support for assistance in integrating the Sureshot 3500 Controller with external control systems.

Single Board Signals

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Input/Output</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>INPUT</td>
<td>Remote Disable, Allows machine to be disabled remotely through an External I/O Signal</td>
</tr>
<tr>
<td>2</td>
<td>COMMON</td>
<td>COMMON</td>
</tr>
<tr>
<td>3</td>
<td>INPUT</td>
<td>Part Sensor, Counts how many times the trigger has been activated.</td>
</tr>
<tr>
<td>4</td>
<td>INPUT</td>
<td>Remote Trigger, Allows complete control of trigger settings from an External I/O Signal, intended to be controlled by a PLC</td>
</tr>
<tr>
<td>5</td>
<td>INPUT</td>
<td>Remote Purge, Allows the ability to purge the system while connected to an External I/O Signal, Intended to be controlled by a PLC</td>
</tr>
</tbody>
</table>
Dual Board Signals

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Input/Output</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COMMON</td>
<td>COMMON</td>
</tr>
<tr>
<td>2</td>
<td>V+</td>
<td>V+</td>
</tr>
<tr>
<td>3</td>
<td>INPUT</td>
<td>Remote Disable, Allows machine to be disabled remotely through an External I/O Signal.</td>
</tr>
<tr>
<td>4</td>
<td>INPUT</td>
<td>Part Sensor Valve 1, Counts how many times the trigger has been activate for Valve 1. Intended to be plugged into a sensor. If it is desired to have valves fire at the same time make a jumper from ports 4 to 7.</td>
</tr>
<tr>
<td>5</td>
<td>INPUT</td>
<td>Remote Trigger Valve 1, Allows complete control of trigger settings from an External I/O Signal for Valve 1. Intended to be controlled by a PLC.</td>
</tr>
<tr>
<td>6</td>
<td>INPUT</td>
<td>Remote Purge Valve 1, Allows the ability to purge the system while connected to an External I/O Signal for Valve 1.</td>
</tr>
<tr>
<td>7</td>
<td>INPUT</td>
<td>Part Sensor Valve 2, Counts how many times the trigger has been activate for Valve 2. Intended to be plugged into a sensor. If it is desired to have valves fire at the same time make a jumper from ports 4 to 7.</td>
</tr>
<tr>
<td>8</td>
<td>INPUT</td>
<td>Remote Trigger Valve 2, Allows complete control of trigger settings from an External I/O Signal for Valve 2. Intended to be controlled by a PLC.</td>
</tr>
<tr>
<td>9</td>
<td>INPUT</td>
<td>Remote Purge Valve 2, Allows the ability to purge the system while connected to an External I/O Signal for Valve 2.</td>
</tr>
</tbody>
</table>

Jetting Device Maintenance – As Required
Valves are permanently assembled and cannot be repaired. Follow maintenance guidelines to prevent permanent valve damage.

IMPORTANT NOTES FOR FLUSHING SYSTEM:

- Flush Sureshot 3500 with 96-99.9% isopropyl alcohol ONLY. Isopropyl Alcohol of other percentage may not clear system adequately enough and may cause irreversible valve damage.
- SS3500 Jetting System should be flushed if it is to remain idle for more than 7 days.
- When handling sealant, wear 8 mil Nitrile Gloves for safety.
- Filters need to be cleaned periodically to ensure debris-free sealant is flowing through the system. Care must be taken to protect these filters when cleaning miscellaneous debris from filter media.

System Flush Procedure
1. Remove the liter of ammunition sealant from inside the R125.
2. Care should be taken to insure open liter of sealant remains clear of debris, dust and contamination. Clean and replace the original cap on the liter of sealant for storage.
3. Remove the 10 micron filter at the end of feed tube which resides inside the R125. (6-40 Threaded Connection)
4. Place a container of clean alcohol inside the reservoir.
5. Set reservoir air pressure to 10-15psi.
6. Press Purge button on the 3500 Controller until the sealant clears and clear alcohol begins to dispense from needle (est. 3-5 Minutes). In addition to constant purge, press the “Dispense Trigger” button on the PLC 20-30 times. This causes the valve to activate on and off allowing alcohol to clear out lodged sealant material out of the jetting system.
7. Purge alcohol into a small cup and verify the alcohol is clear with no discoloration. If the alcohol is discolored, repeat step 6.
8. Purge air to remove all isopropyl alcohol from the system. Hold a dry object underneath the SS3500 valve to verify there is no more wetness. In addition to constant purge, press the “Dispense Trigger” button on the PLC several times. This helps clear alcohol from hidden cavities inside the valve.
9. **IMPORTANT** Repeat steps 6-8 to ensure all sealant has been cleared.

**Filter Cleaning**
Over time, the inline filter fitted on the Sureshot 3500 Jetting System may become clogged. Although cleaning is possible, great care must be taken.

**Filter Cleaning Procedures**
1. Fill a polypropylene cup with Isopropyl Alcohol.
2. Immerse filter in the Alcohol.
3. Move the filter, allowing the alcohol to flow freely through it. This breaks up the material inside evenly throughout the filter.
4. When the filter is clean remove the filter and run pressurized air through it carefully, care should be taken to protect filter media.
5. Repeat steps 1-4 to ensure the filter is cleared of debris.

**Unit Maintenance**

**Electrical Maintenance**

**Changing the Fuse**
1. Take small flathead screwdriver and pry at the bottom of the power input connection. This will reveal the Fuse Compartment.
2. Replace the fuse in the Fuse Housing then press firmly back into the Fuse Compartment.

**Pneumatic Interconnect Maintenance**

**Changing the Ferrule**
8. Assemble the Swagelok Compression Fitting dispense tubing / compression connector into the pressure reservoir lid. For initial assembly convenience the Swagelok Compression Fitting threads on the tubing connector have been prepared with pre-applied pipe sealant for this connection.
9. Assemble tubing through the nut and the back / front parts of the compression ferrule assembly as detailed below.
10. Insert the tubing assembly end into the male Swagelok Compression Fitting connector body and loosely screw the nut onto the connector body.
11. Place the reservoir cap on the reservoir and push tubing through fitting until the tube touches the bottom of the reservoir then retract the tubing about ¼” from the bottom.
12. Lightly tighten the nut on the Swagelok Compression Fitting connector body to lock and seal dispense feed tubing. Pull on the tube to verify ferrule is holding the tube. **NOTE:** Over tightening ferrule can close or cut off soft or thin dispense tube.
13. Trimming the end of this tube at an angle will assure uninhibited liquid flow in case tube end contacts liquid container.
14. Connect the dispense end of the tube as required to a normally closed dispense valve or equal as required.
Important Notes on Sealants

SIX basic conditions cause the sealant to change from a liquid to a gel and or hardened / cured state:

1. Sealant exposure to ultra violet light. This is why the sealant is packaged in a UV light blocking container and dispensed through black UV light blocking tubing. High intensity UV light gels, hardens or cures the sealant faster than lower levels of UV light. Examples of High levels of UV light are industrial UV curing lamps, direct or indirect sun light from windows or transparent roof panels often found in factories. Typical fluorescent light bulbs have medium to low levels of UV light. Direct sun light from a window may gel or cure the sealant in seconds and fluorescent lights may gel or cure the sealant in hours or days. The Sureshot 3500 dispense valve has a very small orifice to jet the sealant as required. Care should be taken shield the dispense valve tip (orifice) from UV light. This can be done with yellow or green transparent plastic vinyl. In some cases the dispense valve is covered with aluminum foil when the machine is not being used. Note: aluminum foil must not touch the Sureshot 3500 dispense needle tip (exposure to metal ion – condition # 2)

2. Sealant exposure to Metal / metal ion. The sealant has been designed to gel/harden/cure in between bullet and cartridge interfaces. In the cartridge case mouth the sealant reacts with the metal ion of the cartridge and the bullet. The metal ion and sealant reaction begins immediately after application and sealant gel will begin after 90 seconds. Full cure results in 24 hours after apply. Note: if the container of sealant or sealant in transfer to the dispense valve has been exposed to metal and or metal dust the sealant will begin to gel and or cure. Micro gelling of sealant material can be difficult to see. One method used to see micro gelation is to filter the liquid with a 10 micron filter. The Sureshot 3500 dispense valve has small orifice’s that can clog with micro gelation.

3. Sealant exposure to heat. Store the sealant in a cool dry location. Note: if sealant is stored at elevated temperatures the sealant may gel and cure.

4. Absence of Oxygen. The sealant requires oxygen to remain liquid. Sealant that remains in small or tight areas such as the spaces inside the Sureshot 3500 can begin to gel and cure over time. Hernon recommends the sealant must be flushed out of the Sureshot 3500 dispense valve/system if the valve is to remain idle or not in use more than 7 days.

5. Contamination from water, dust/debris and or any foreign material can cause the sealant to gel or not function as intended. The sealant container should have a protective cap in place when not in use. If there is any question to the pristine state of the sealant, it should not be used.

6. Sureshot 3500 dispense valves should only be used with recommended Hernon ammunition sealants. Sealants and adhesives/chemistries from other manufacturers can cause permanent irreversible damage to the Sureshot 3500 dispense system.
The following list details cases Hernon has observed with ammunition sealant clogging:

1. Ultraviolet light cures the sealant on the valve dispense tip which can cause clogging. Check for windows. Sunlight has medium to high levels of ultraviolet light. If direct, indirect sunlight or excessive UV light contacts the sealant at the Sureshot 3500 dispense valve needle point the sealant in the needle will cure and permanently clog and disable normal valve/system function.

2. Sealant gelling and or curing in Sureshot 3500 dispense with heat and or time in excess of 7 days. Sealant that is allowed to gel or cure in valve permanently clogs and disables normal valve/system function.

3. Do not use sealant material which has expired passed the manufacturers date. Expired sealant can clog dispensing systems and should be discarded.

4. Do not insert anything into the Sureshot 3500 dispense orifice. Probing with foreign object can cause permanent irreversible damage to the valve system.
Frequently Asked Questions

Q) My Sureshot 3500 Controller will not turn on.
   A. Check the power cord connection.
   B. Check Fuse (check page 10)

Q) My foot switch is not operating.
   A. Check the connection of the foot switch into the unit.

Q) How do I ensure a secure connection from a reservoir to the SS3500.
   A. Please refer to Maintenance portion of this manual under Changing The Ferrule

Q) What is optimal operating pressure for the Sureshot 3500 Jetting Device?
   A. Depending on material you are dispensing the operating pressure is different.
      a. For 59621 pressure ratings are from 8 PSI (0.552 BAR) minimum to 35 PSI (2.413 BAR) maximum. With 10 PSI (.689 BAR) Optimum

Q) My Precision Regulator is bleeding small amounts of air; is it broken?
   A. No, Precision regulators are designed to relieve excess incoming air to keep the outgoing air at a consistent pressure that the operator has set.

Q) How do I safely change the material within my reservoir?
   A. First step is to depressurize the entire system. After that simply open the reservoir and remove the material bottle. Once a new bottle of solution is installed, simply seal off the reservoir and repressurize the system. After this has been done, the system will be ready for use again.

Q) What do I clean/purge my Sureshot 3500 Valves with?
   A. Clean the Sureshot 3500 with and only with Isopropyl Alcohol, anything else could harm device.

Spare Parts

<table>
<thead>
<tr>
<th>Item:</th>
<th>Part Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sureshot 3500 Jetting Device</td>
<td>110-046</td>
</tr>
<tr>
<td>R125 Reservoir</td>
<td>110-100</td>
</tr>
<tr>
<td>1/8&quot; OD x .080 ID x &lt;60&quot; LG (black) Sealant Supply Tube</td>
<td>101-035</td>
</tr>
<tr>
<td>Sureshot 3500 Controller</td>
<td>110-058/059</td>
</tr>
<tr>
<td>Sureshot 3500 Dispense 3 Wire Communication Cable (10ft)</td>
<td>102-043</td>
</tr>
<tr>
<td>6-40 12 Micron Inline Filter</td>
<td>107-015</td>
</tr>
<tr>
<td>Sureshot 3500 Dispense Jet Needle Guard</td>
<td>106-022</td>
</tr>
<tr>
<td>10 Micron Filter</td>
<td>109-056</td>
</tr>
<tr>
<td>6-40 .085 Barbed Tube Fitting</td>
<td>109-054</td>
</tr>
<tr>
<td>1/8&quot; Dual Ear Clamp</td>
<td>109-054</td>
</tr>
<tr>
<td>0-30 PSI Precision Regulator</td>
<td>110-090</td>
</tr>
<tr>
<td>316 S.S. 1/8” Through Tube x 1/4” NPT Male</td>
<td>101-055</td>
</tr>
<tr>
<td>316 S.S. 2pc. Ferrule Set 1/8&quot; ID</td>
<td>109-061</td>
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<tr>
<td>Power Cable</td>
<td>102-025</td>
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<tr>
<td>Foot Switch</td>
<td>110-009</td>
</tr>
<tr>
<td>1/8&quot; Tubing Ferrules for Swagelok Fitting</td>
<td>101-087</td>
</tr>
</tbody>
</table>
**Warranty**

**CAUTION!**

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**Warning:** This valve is non-repairable if improperly maintained after assembly.

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