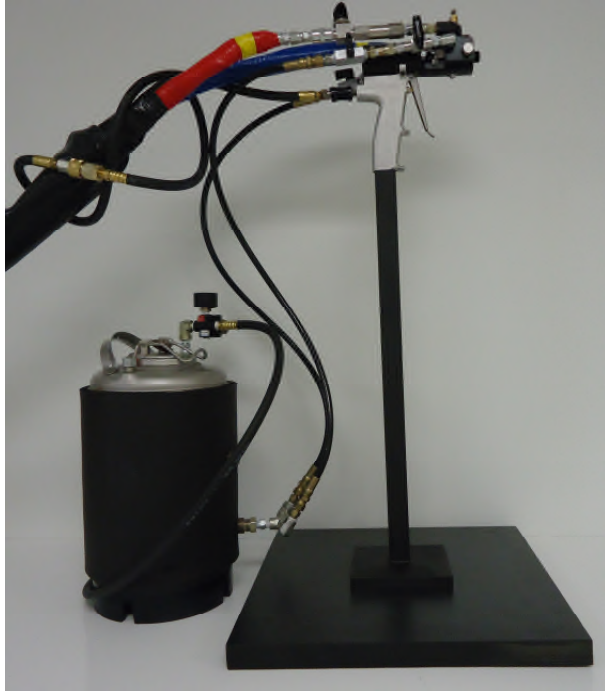




**POLYURETHANE
MACHINERY
CORPORATION**



SP-1
**SOLVENT PURGE
GUN**
Manual

Ref. # MN-04003

January 21, 2014

Polyurethane Machinery Corp.
Headquarters: 1 Komo Drive, Lakewood NJ
08701
Manufacturing: 2 Komo Drive, Lakewood, NJ
08701
Phone: 732-415-4400 Fax: 732-364-4025
<http://www.polymac-usa.com>



Before installing the SP-1 Solvent Purge Gun and start-up, carefully read all the technical and safety documentation included in this manual. Pay special attention to the information in order to know and understand the operation and the conditions of use of the SP-1 Solvent Purge Gun. All of the information is aimed at improving user safety and avoiding possible breakdowns from the incorrect use of the SP-1 Solvent Purge Gun.



SP-1 MANUAL

TABLE OF CONTENTS

WARRANTY.....	3
SAFETY AND HANDLING.....	5
SAFETY WARNINGS.....	6
GENERAL DESCRIPTION.....	7
SP-3 FLUSH KIT.....	8
INSTALLATION AND START UP.....	9
SET UP.....	9
DAILY START UP.....	10
DAILY SHUT DOWN/FLUSHING PROCEDURE.....	11
CLEANING PROCEDURE.....	12
SERVICING PROCEDURE.....	13
AIR PISTON O-RING AND CUP SEAL REPLACEMENT.....	15
TRIGGER VALVE O-RING REPLACEMENT.....	17
TROUBLE SHOOTING.....	18
GUN OPERATION.....	19
GUN FLUSH VALVE ASSEMBLY.....	20
OPTIONAL FLUSH BLOCK.....	21
“A” SIDE FILTER ASSEMBLY.....	22
SP-1 EXPLODED VIEW.....	23
SP-1 HANDLE EXPLODED VIEW.....	24
SPARE PARTS LISTING.....	25



SP-1 MANUAL

WARRANTY

Polyurethane Machinery Corporation (hereinafter “PMC) provides this Limited Warranty (hereinafter “Warranty”) to the original purchaser (hereinafter “Customer”) covering this equipment and the original PMC manufactured accessories delivered with the equipment (hereinafter “Product”) against defect in material or workmanship of the Product (hereinafter “Defect” or “Defective”) for a period of one (1) year from the date of first purchase as shown on the original PMC invoice (hereinafter “Warranty Period”).

If during the Warranty Period under normal use, the Product is suspected by Customer to be Defective in material or workmanship, it is the Customer’s responsibility to contact PMC and return the Product to PMC as directed by PMC, freight prepaid. If PMC determines that the Product is Defect and that such Defect is covered by this Warranty, PMC will credit Customer for the reasonable freight charges incurred by Customer in returning the Defective Product to PMC, and PMC (or its authorized agent) will, at PMC’s option, repair or replace the Product, subject to the following:

Original Invoice: The original invoice must be kept as proof of the date of first sale and the Product serial number. The Warranty does not cover any Product if the Original Invoice appears to have been modified or altered, or when the serial number on the Product appears to have been altered or defaced.

Product Maintenance: It is the Customer’s responsibility to maintain the Product properly. See your maintenance schedule and owner’s manual for details. The Warranty does not cover an improperly maintained Product.

Non-PMC Components and Accessories: Non-PMC manufactured components and accessories that are used in the operation of the Product are not covered by this Warranty. Such components and accessories shall be subject to the warranty offered to the Customer, if any, by the original manufacturer of such component or accessory.

Other Warranty Exclusions: The Warranty does not cover any Product that PMC determines has been damaged or fails to operate properly due to misuse, negligence, abuse, carelessness, neglect, or accident. By way of example only, this includes:

- Normal wear and tear.
- Improper or unauthorized installation, repair, alteration, adjustment or modification of the Product.
- Use of heating devices, pumping equipment, dispensers, or other parts or accessories with the Product that have not been approved or manufactured by PMC.
- Failure to follow the operating instructions and recommendations provided by PMC.
- Cosmetic damage.
- Fire, flood, “acts of God”, or other contingencies beyond the control of PMC.



SP-1 MANUAL

WARRANTY (cont.)

THE WARRANTY DESCRIBED HEREIN IS THE EXCLUSIVE REMEDY FOR THE CUSTOMER AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, AND THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND ALL OTHER WARRANTIES ARE HEREBY DISCLAIMED. TO THE FULLEST EXTENT PERMITTED BY LAW, PMC SHALL NOT BE RESPONSIBLE, WHETHER BASED IN CONTRACT, TORT (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE), WARRANTY OR ANY OTHER LEGAL OR EQUITABLE GROUNDS, FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, LOST PROFITS, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES, WHETHER TO PERSON OR PROPERTY, ARISING FROM OR RELATING TO THE PRODUCT, EVEN IF PMC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES.

Non-Warranty Service by PMC: If PMC determines that the suspected Defect of the Product is not covered by this Warranty, disposition of the Product will be made pursuant to the terms and conditions of PMC's written estimate on a time and materials basis.

Continuing Warranty for Products Repaired or Replaced under Warranty: Following the repair or replacement of a Product covered by the Warranty, such Product will continue to be subject to the original Warranty for the remainder of original Warranty Period or for three (3) months from the repair or replacement date, whichever is longer.

No Rights Implied: Nothing in the sale, lease or rental of any Product by PMC shall be construed to grant any right, interest or license in or under any patent, trademark, copyright, trade secret or other proprietary right or material owned by anyone; nor does PMC encourage the infringement of same.

Exclusive Warranty: This writing is the final, complete, and exclusive expression of the Warranty covering the Product. Any statements made by PMC, its employees or agents that differ from the terms of this Warranty shall have no effect. It is expressly understood that Customer's acceptance of this Warranty, by performance or otherwise, is upon and subject solely to the terms and conditions hereof, and any additional or different terms and conditions proposed or expressed by Customer or anyone, whether in writing or otherwise, are null and void unless specifically agreed to in writing by an Officer of PMC.



SP-1 MANUAL

SAFETY AND HANDLING

This chapter contains important information on the safety handling and use of your PMC SP-1 Solvent Purge Gun.



Before installing the PMC SP-1 Solvent Purge Gun and starting-up, carefully read all the technical and safety documentation included in this manual. Pay Special attention to the information to know and understand the operation and the conditions of use of the PMC SP-1 Solvent Purge Gun. All of the information is aimed at enhancing the User Safety and avoiding possible breakdowns derived from the incorrect use of the PMC SP-1 Solvent Purge Gun.

WARNING! Presents information to alert of a situation that might cause serious injuries if the instructions are not followed.

CAUTION! Presents information that indicates how to avoid damage to the unit or how to avoid a situation that could cause minor injuries.

NOTE! Is relevant information of a procedure being carried out.

Careful study of this manual will enable the operator to know the characteristics of the PMC SP-1 Solvent Purge Gun and the operating procedures. By following the instructions and recommendations contained herein, you will reduce the potential risk of accidents in the installation, use or maintenance of the PMC SP-1 Solvent Purge Gun; you will provide a better opportunity for incident-free operation for a longer time, greater output and the possibility of detecting and resolving problems fast and simply.

Keep this Manual for future consultation of useful information at all times. If you lose this manual, ask for a new copy from your PMC Service Center, directly contact PMC or on line at our web site (www.polymac-usa.com).

To ensure proper and safe operation of this equipment it is necessary to understand and follow the instructions in this manual.

Certain safety precautions must be taken when the equipment discussed in this manual is operated or serviced. Sever bodily injury or damage to the equipment and property may result if the instructions and precautions listed throughout the manual are not followed.

There should be no assumption made that the safety measures and instructions contained in this manual are all inclusive, and that other safety measure may not be required for specific use or application.

The following safety guidelines are applicable to the safe and efficient use of the PMC SP-1 Solvent Purge Gun.



SP-1 MANUAL

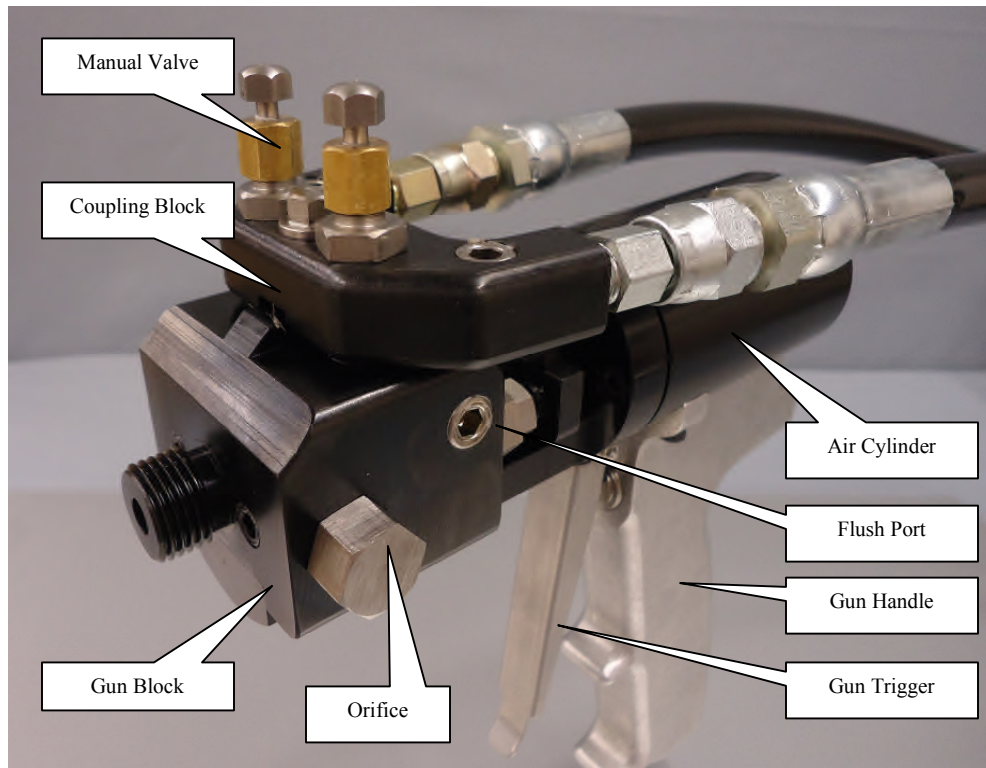
 WARNING	
	ELECTRIC SHOCK HAZARD <ul style="list-style-type: none">• Never cut or puncture a hose cover.• Disconnect power source before servicing.• Install according to local electric code.• Service by a qualified electrician only.• Connect to grounded power source. Do not expose to rain. Store indoors.
	TOXIC FLUID OR FUMES HAZARD <ul style="list-style-type: none">• Read MSDS's to know the specific hazards of the fluids you are using and for handling instructions.• Always wear protective equipment, including respirator, as recommended by fluid and solvent manufacturer.
 	SKIN INJECTION HAZARD <p>High pressure spray or leaks can inject fluid into your body.</p> <ul style="list-style-type: none">• Keep clear of spray tips and leaks.• Engage trigger lock when not spraying.• Follow the pressure relief procedure in the manual before servicing, cleaning or removing parts.• Do not exceed the maximum working pressure of the lowest rated component.• In case of skin injection, seek immediate SURGICAL TREATMENT.
	HOT SURFACE AND MATERIAL <p>To reduce the risk of burns:</p> <ul style="list-style-type: none">• Wear protective clothing when near heater.
	FIRE & EXPLOSION HAZARD <p>Solvent and paint fumes can explode or ignite.</p> <ul style="list-style-type: none">• Use equipment only in well ventilated areas.• Eliminate all ignition sources.• Ground all equipment in work area.
	READ INSTRUCTION MANUAL <p>FAILURE TO FOLLOW THIS WARNING CAN RESULT IN SERIOUS INJURY, AMPUTATION OR DEATH</p>



SP-1 MANUAL

GENERAL DESCRIPTION

SP-1 SOLVENT PURGE GUN



Manual Valves- Controls the flow of material to the gun.

Coupling Block - Allows the removal of the SP-1 without exposing the chemicals in the system to the environment.

Gun Block – Part of the SP-1 where the two chemicals come together and the mixing takes place.

Orifice – Controls the flow and back pressures of the two chemicals.

Air Cylinder – Controls the off and on flow of the chemicals to the mixing area of the gun block.

Flush Port – Ports are used in conjunction with the flush valve kit to flush the chemicals from the SP-1 without removing the gun from the coupling block.

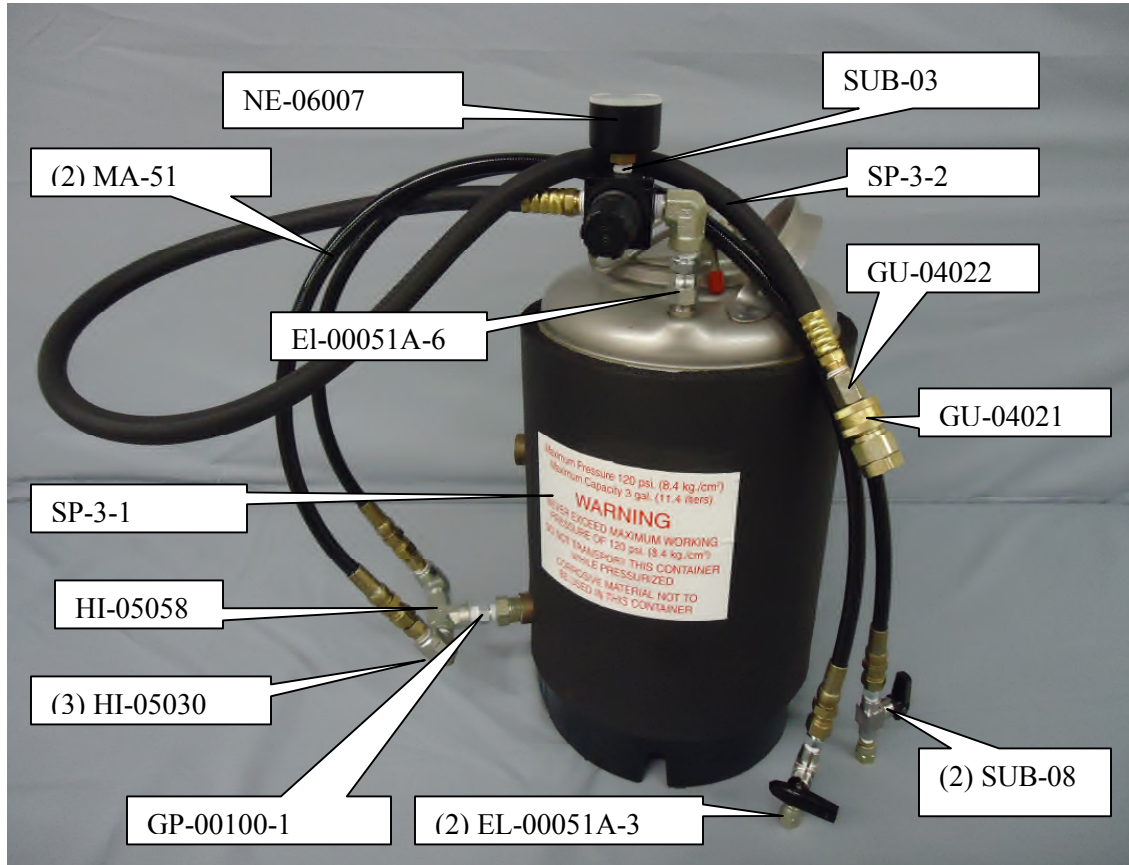
Gun Handle – Used to hold and direct the mixed chemical to a substrate.

Gun Trigger – Controls the opening and closing for the dispensing mode.



SP-1 MANUAL

SP-3 FLUSH KIT



PART NUMBER	DESCRIPTION	QTY
MA-51	Hose, solvent	2
EL-00051A-6	Fitting	1
SP-3-1	Tank, solvent	1
HI-05058	Tee, 1/4"	1
HI-05030	Elbow, 1/4"	3
GP-00100-1	Nipple, hex 1/4"	1
EL-00051A-3	Fitting	2
SUB-08	Valve, 1/8"	2
GU-04021	Disconnect, female	1
GU-04022	Disconnect, male	1
SP-3-2	Hose, air	1
SUB-03	Regulator, air	1
SP-3-3	Safety, blow off (not shown)	1
OR-00049A	O ring, lid (not shown)	1
NE-06007	Pressure Gauge	1



SP-1 MANUAL

INSTALLATION AND START-UP

CAUTION! *When working with the PMC SP-1 Solvent Purge Gun or performing maintenance work, wear suitable safety protection in accordance with the recommendations and specifications provide by the product supplier.*

SET UP

- 1) Install the female quick-disconnect fitting onto the Air Supply Hose located on the 10' heated Whip.
- 2) Verify that the "A" filter assembly is installed on the "A" side heated whip.
- 3) Attach the coupling block to the heated whip, make sure that the manual valves are in the closed position (to close turn them clockwise).
- 4) Using the 5/16" Spintite, connect the coupling block to the Gun Block using the Coupling Block Screw provided.
- 5) Attach the air slide valve and air hose and male disconnect to the air inlet of the SP-1.
- 6) Check the Proportioning Unit for proper hose temperature, heater temperature and pressure.
- 7) Open both manual valves using the 5/16" Spintite. Turn each Manual Valve at least three full turns counterclockwise.
- 8) Check for any Leakage and correct as required.
- 9) Install Probe Mixer (not supplied) to the front of the gun.



SP-1 MANUAL

DAILY START-UP

CAUTION! *Before attempting the following procedures, make sure the gun is attached to the coupling block and air hoses, the proportioning unit is at the desired temperature and pressure and the system is ready for operation.*

- 1) Connect the Gun Air Hose to the quick disconnect fitting on the 10' Heated Whip.
- 2) Open the air slide valve.
- 3) Open both Manual Valves using the 5/16" Spintite. Turn each Manual Valve at least three full turns counterclockwise.
- 4) Check for any Leakage and correct as required.
- 5) Install Probe Mixer (not supplied) to the front of the gun.
- 6) Check the Proportioning Unit for proper hose temperature, heater temperature and pressure. Refer to the Classic machine manual start up section.



SP-1 MANUAL

DAILY SHUT DOWN/FLUSHING PROCEDURE

CAUTION! When servicing or operating the PMC SP-1 Solvent Purge Gun, sufficient protective clothing must be worn to prevent prolonged skin contact with the chemicals or solvents used in or with the gun. Always wear approved Safety Glasses or Goggles, Gloves and Respiratory equipment when servicing or operating the PMC SP-1 Solvent Purge Gun. For mid or end of day service see the Cleaning Procedure section of this manual.

WARNING! As an additional safety precaution the air line has a quick disconnect air coupling. Disconnect the air line when transporting the gun with the chemical hoses connected. A slide valve is also provided to disable the air from the SP-1.

The Gun Block must be thoroughly cleaned with Gun Cleaner before removing any of its components. In this way, the residue left from the two components will be completely diluted with Gun Cleaner and will not react with one another when the Gun Block components are removed.

- 1) Close both Manual Valves using the 5/16" Spintite. Turn each valve fully clockwise.





SP-1 MANUAL

DAILY SHUT DOWN/FLUSHING PROCEDURE (cont)

2) Flush the Gun.

- a) Remove the safety nuts from the SP-1 flush valves.
- b) Connect the hoses from the SP-3 flush can to the SP-1 Flushing Valves.
- c) Make sure that the SP-3 flush can has enough gun cleaner in it's container to flush the SP-1 gun.
- d) Pressurize the SP-3 flush can to 80 psi.
- e) Turn the valves on the SP-3 flush can and the SP-1 flush valves to the flow position.
- f) Hold the Gun over an open container.
- g) With the air supply connected to the SP-1 gun and the manual valves closed pull the trigger to purge the chemical from the SP-1 gun.
- h) Allow the solvent to flow for approximately 10-15 seconds to remove any remaining chemical.
- i) Relieve the air pressure in the SP-3 flush can by pulling the ring up on the over pressure safety valve located on the SP-3 flush can cover.
- j) Pull the trigger to relive all pressure from the SP-1 gun and SP-3 flush can
- k) Close the valve on the SP-3 flush can hoses and the SP-1 flushing valves and disconnect the hoses.
- l) Install the safety nuts on the two SP-1 flush valve fittings on the gun.

3) Clean as required- See the Cleaning Procedure section of the manual.

CLEANING PROCEDURE

The Gun Block must be thoroughly cleaned with Gun Cleaner before removing any of its components. In this way, the residue left form the two components will be completely diluted with Gun Cleaner and will not react with one another when the Gun Block components are removed.

This procedure makes use of the SP-3 three gallon Gun Service Kit and is the recommended procedure for the following reasons:

- a) The cleaning is more efficient and uses less Gun Cleaner.
- b) The gun does not have to be disassembled.
- c) It can be used as a quick and efficient end of the day procedure.



SP-1 MANUAL

SERVICING PROCEDURE

WARNING! Properly ground all equipment involved in the cleaning operation to avoid static sparking which could result in fire or explosion. Do not clean on or near foamed or coated surfaces.

CAUTION! When servicing or operating the PMC SP-1 Solvent Purge Gun, sufficient protective clothing must be worn to prevent prolonged skin contact with the chemicals or solvents used in or with the gun. Always wear approved Safety Glasses or Goggles, Gloves and Respiratory equipment when servicing or operating the PMC SP-1 Solvent Purge Gun.

CAUTION! Disconnect the Coupling Block and airline before servicing the gun. In addition, be sure to flush the “Gun Block Components” with the Gun Service Kit prior to removal for servicing as they are exposed to the chemical.

- 1) Close both Manual Valves using the 5/16” Spintite. Turn each Manual Valve fully clockwise.
- 2) Flush the SP-1 - Attach the SP-3 Gun Service Kit. See Flushing Procedures Section of Manual.
- 3) Remove the Probe Mixer Assembly (not supplied) from the Gun Block. Service the assembly as required.
- 4) Remove the Gun Block Screw.
- 5) Remove the Gun Block by pulling the Gun Block up and away from the Gun. Be sure to retain the Yoke, which connects the Valving Rods to the Piston Shaft.
- 6) Remove and service the Orifices:
 - a) Remove the “A” Iso and the “R” Polyol Orifices from the Gun Block.
 - b) Place the Orifices in Gun Cleaner. Remove them from the cleaner and remove any residual chemical with a Brass Brush and/or Clean out Drill. Blow the parts dry with air and replace the O-rings if needed. Inspect the orifices for damage or wear and replace them if damaged.
- 7) Remove the Coupling Block Gasket/Check Valves from the Gun Block. Place the parts in Gun Cleaner. Remove them from the cleaner and remove any residual chemical with a Brass Brush. Blow the parts dry with air, inspect and replace if needed.



SP-1 MANUAL

- 8) Remove the Valving Rod Assemblies from the Gun Block and inspect the tip of each Valving Rod for excessive wear. If wear is detected replace the Valving Rod and the Valving Rod Seat located in the Gun Block. If no wear is visible proceed to step # 11
- 9) Replace the Valving Rods as follows:
 - a) Hold the Valving Rod Assembly and loosen the Packing Nut.
 - b) Gently pull the Valving rod from the packing Nut and discard if damaged.
 - c) Remove the Packing Nut from the Housing.
 - d) Through the threaded end of the Housing the Seat is visible. With a Punch and Ball-Peen Hammer gently tap on the Seat Packing until the Packing Washer and Packing Seat come free from the Housing. Discard the Packing if necessary.
 - e) Install the New Packing Washer Seat in the Housing in the same order they were removed.
 - f) Thread the Packing Nut into the Housing.
 - g) Gently slid the new Valving Rod into the Packing Nut until it seats.
- 10) Replace the Valving Rod Seats as follows:
 - a) Remove the Pipe Plug in line with the Valving Rod Seat being removed.
 - b) Place the Gun Block on a hard surface. The Valving Rod Seat is visible through the opening previously occupied by the Pipe Plug. Using the Punch and Ball-Peen Hammer gently tap on the seat until it comes free from the Gun Block. Discard the Valving Rod Seat.
 - c) Using a Punch and Ball-Peen Hammer gently tap the new Valving Rod Seat in place until it properly seats with the Gun Block.
- 11) Clean the Gun Block before reassembly using the appropriate Brass Brushes, Clean out Drills, etc. and remove any residual chemical. Use Cotton Swabs and Gun Cleaner if necessary. When finished, coat the thread and the mating surfaces of the Gun Block, Gun Block Bracket and Gun with Air cylinder Lube. Do not get any grease in the chemical ports located in the Gun Block, Gun Block Bracket, and Gun with Air Cylinder Lube. Do not get any grease in the chemical ports located in the Gun Block as this could interfere with chemical flow.
- 12) Insert the Orifices into the Gun Block, the "A" side is identified with a Notch on the head and the "R" side is plain.
- 13) Insert the Valving Rod Assembly into the Gun Block and tighten it in place.
- 14) Adjust and tighten the Packing Nut.
- 15) Re-install the "A" Iso and "R" Polyol Coupling Block Gasket/Check Valve.
- 16) Re-install the Yoke over the end of the Piston Shaft.
- 17) Re-install the Gun Block and align the ends of the Valving Rods with the Yoke. Push the Gun Block in towards the Air Cylinder until the Alignment Pin seats itself in the recess on



SP-1 MANUAL

the Gun Block Mount.

- 18) Re-install the Gun Block Mounting Screw.
- 19) Install the Probe Mixer Assembly (not supplied) on the front of the Gun Block by turning it Clockwise.
- 20) Perform the Start Up Procedure.

AIR PISTON O-RING AND CUP SEAL REPLACEMENT

CAUTION! *Disconnect the chemical hoses and airline before servicing the gun. In addition be sure to flush the “Gun Block Component” with the Gun Service Kit prior to removal for servicing as they are exposed to the chemical.*

- 1) Close Both Manual Valves - using the Spintite. Turn each Manual Valve fully clockwise.
- 2) Remove the Gun from the Coupling Block - Remove the Coupling Block Mounting Screw. Separate the gun from the Coupling Block. Using a rag and Gun Cleaner, wipe clean the face of the Coupling Block to prevent material build-up.
- 3) Clean the Gun - See the Cleaning Procedure section of this manual.
- 4) Disconnect the air supply form the gun.
- 5) Remove the Gun Block Screw.
- 6) Remove the Gun Block - Pull the Gun Block off the Gun Block Mount. Be sure to retain the Yoke.
- 7) Remove the rear clamp - Remove the socket head screw that connects the Air Cylinder to the Handle.
- 8) Remove the Retaining Ring – Using retaining ring pliers remove the retainer ring that holds the end cap in place.
- 9) Remove the End Cap Assembly - Pull the End Cap Assembly until it comes free from the Air Cylinder. Be sure to retain the Piston Spring located inside of the Air cylinder for future use.

NOTE! *Removing the End Cap will require some additional force since the O-ring is tightly compressed in this configuration.*



SP-1 MANUAL

AIR PISTON O-RING AND CUP SEAL REPLACEMENT (cont)

- 10) Inspect the End Cap O-ring - If necessary remove it and install a new O-ring after lightly coating it with Air Cylinder Lube.
- 11) Remove the Piston/shaft assembly – The piston is visible from the rear of the air cylinder. Using pliers take hold of the head of the screw on the back side of the piston and pull the piston out of the cylinder. Inspect the o-ring for damage and replace it if required. Install the new o-ring after applying Air Cylinder lube.
- 12) Replace seal cup – If air is leaking around the piston rod remove and replace the Cup Seal located in the front of the air cylinder. Make sure the cup is facing toward the air cylinder.
- 13) Reinstall the piston assembly into the air cylinder – Insert the Piston Assembly into the Air Cylinder. Be careful not to damage the cup seal in the front face of the Air Cylinder as the shaft passes through it.
- 14) Reinstall the End Cap Assembly and Piston Spring – Insert the Piston Spring in the recessed on the backside of the piston than insert the End Cap into the Air Cylinder. Press the End Cap down until it moves past the undercut groove in the Air Cylinder. Reinstall the Retainer ring.
- 15) Reconnect the Gun Block to the Gun Block Bracket – Place the Yoke over Valving Rod ends. Reconnect the Gun Block to the Gun Block Bracket making sure that the Yoke properly engages the Piston Rod. Install the Gun Block Mounting Screw.



SP-1 MANUAL

Trigger Valve O-Ring Replacement

- 1) Close both Manual Valves – Turn each manual valve clockwise.
- 2) Remove the Gun from the Coupling Block - Remove the Coupling Block Mounting Screw. Separate the gun from the Coupling Block. Using a rag and Gun Cleaner, wipe clean the face of the Coupling Block to prevent material build-up.
- 3) Disconnect the air supply - Remove the air hose from the back of the SP-1.
- 4) Remove the trigger lever – Remove the screw and locknut that hold the trigger in place.
- 5) Remove the retainer nut – This is the hex shaped nut that surrounds the brass spool valve.
- 6) Remove the valve spool – Take hold of the spool valve and pull it out of the gun handle. Be careful not to lose the spring housed inside the end of the spool. Replace the O-Rings and apply a thin coat of Air Cylinder lube to the O-Rings.
- 7) Remove the valve liner – Inside the air inlet of the Sp-1 is a pipe plug (where the air hose is attached). Remove the pipe plug and with a pin punch tap out the spring retainer and valve liner.
- 8) Remove and replace the O-Rings - Apply a thin coat of Air Cylinder lube to the O-Rings.
- 9) Reinstall the Spring Retainer/Valve liner.
- 10) Reinstall the spring and valve spool.
- 11) Reinstall the retainer nut.
- 12) Reinstall the trigger.
- 13) Reinstall the pipe plug.



SP-1 MANUAL

TROUBLE SHOOTING

	POSSIBLE CAUSE	SOLUTION
Material leaks from the front of the gun when it is in the off position	1- Replace valving rod seat(s) 2- Replace valving rod(s)	OPEN, see pages 14, 24
Material does not dispense when Gun is triggered	1- Manual Valve CLOSED 2- Orifices plugged 3- Check Valve plugged	OPEN, see page 13
Material spray pressure imbalance	1- Inlet Orifices plugged 2- Material temperatures not as recommended by material supplier	Clean, see page 13
Excessive hard stream from the SP-1	Material temperatures and/or pour pressures not as recommended by material supplier	Adjust, see Proportioner Operating Manual
SP-1 opens and closes slowly	1- Check Air pressure 2- Service the trigger valve assembly 3- Service the Air Cylinder	Clean, see pages 15, 16, 23, 24
Steady air leakage from Handle	Air Cylinder O-rings damaged Trigger Valve O-rings damaged	Replace, see pages 15, 16, 23, 24

NOTE! After troubleshooting SP-1 Gun and performing solution, ensure Proportioner operation is correct.



SP-1 MANUAL

GUN OPERATION

TRIGGERED ON

Directs the flow of air to the front of the air cylinder piston, this pulls the Valving Rods rearward allowing the material at temperature and pressure to be atomized as it flows through the orifices and into the mixing area of the SP-1 gun.

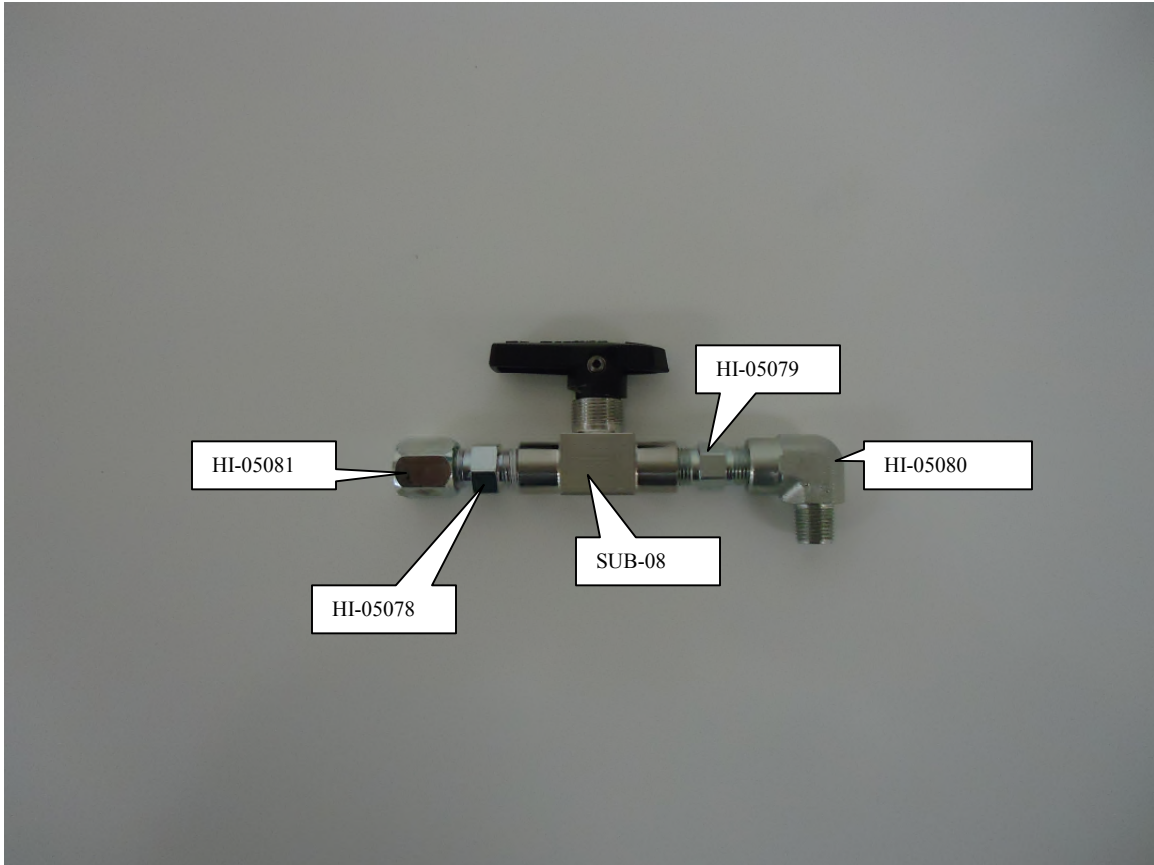
TRIGGERED OFF

Directs the flow of air to the rear of the air cylinder piston and pushes the Valving Rods forward cutting off the flow of the two chemicals to the mixing area of the SP-1 gun.



SP-1 MANUAL

KT-05027 GUN FLUSH VALVE ASSEMBLY



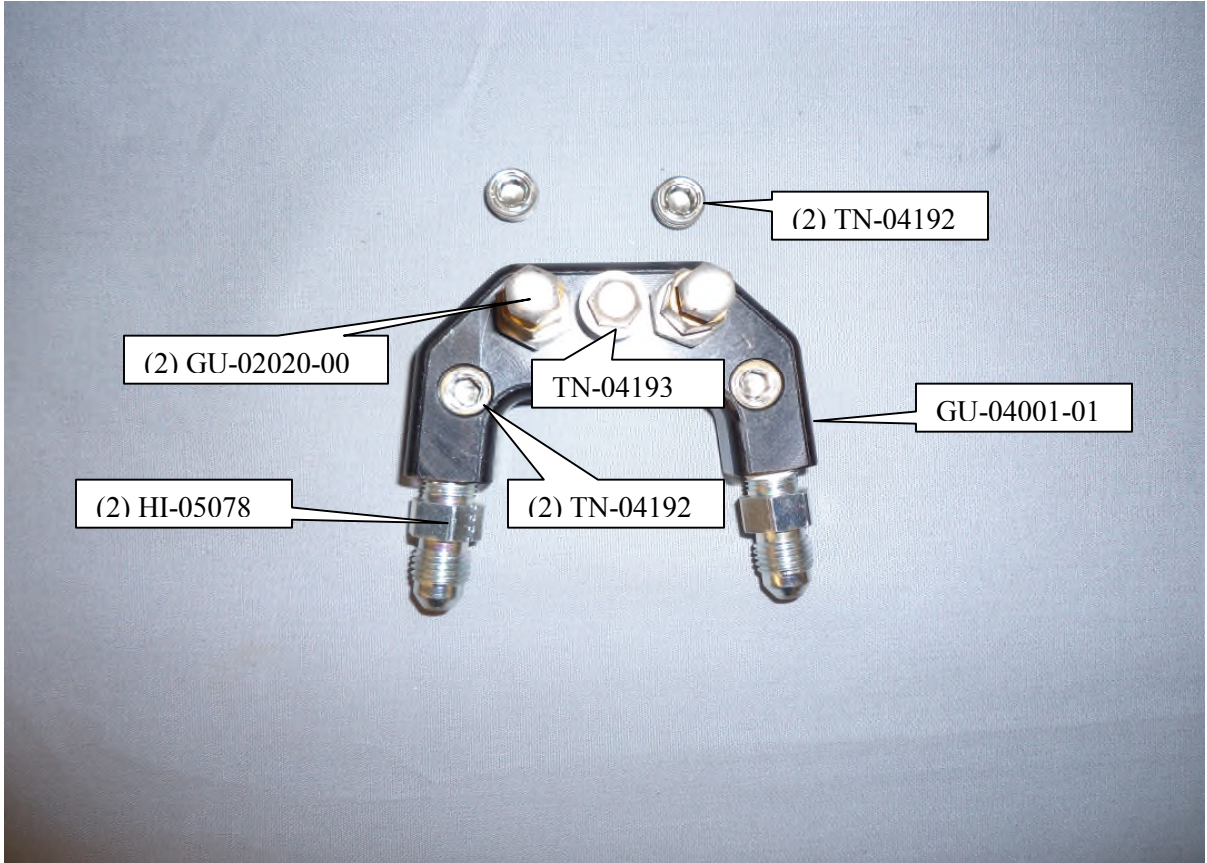
Part Number	Description	Qty
SUB-08	Valve	2
HI-05078	Fitting, 1/8"x#4 JIC	2
HI-05079	Nipple, 1/8"	2
HI-05080	Elbow, 1/8" MXF	2
HI-05081	Cap, #4 JIC	2

NOTE! KIT INCLUDES ONE EACH FOR THE “A” & “R” SIDE OF THE GUN



SP-1 MANUAL

SP-3-4 OPTIONAL FLUSH BLOCK

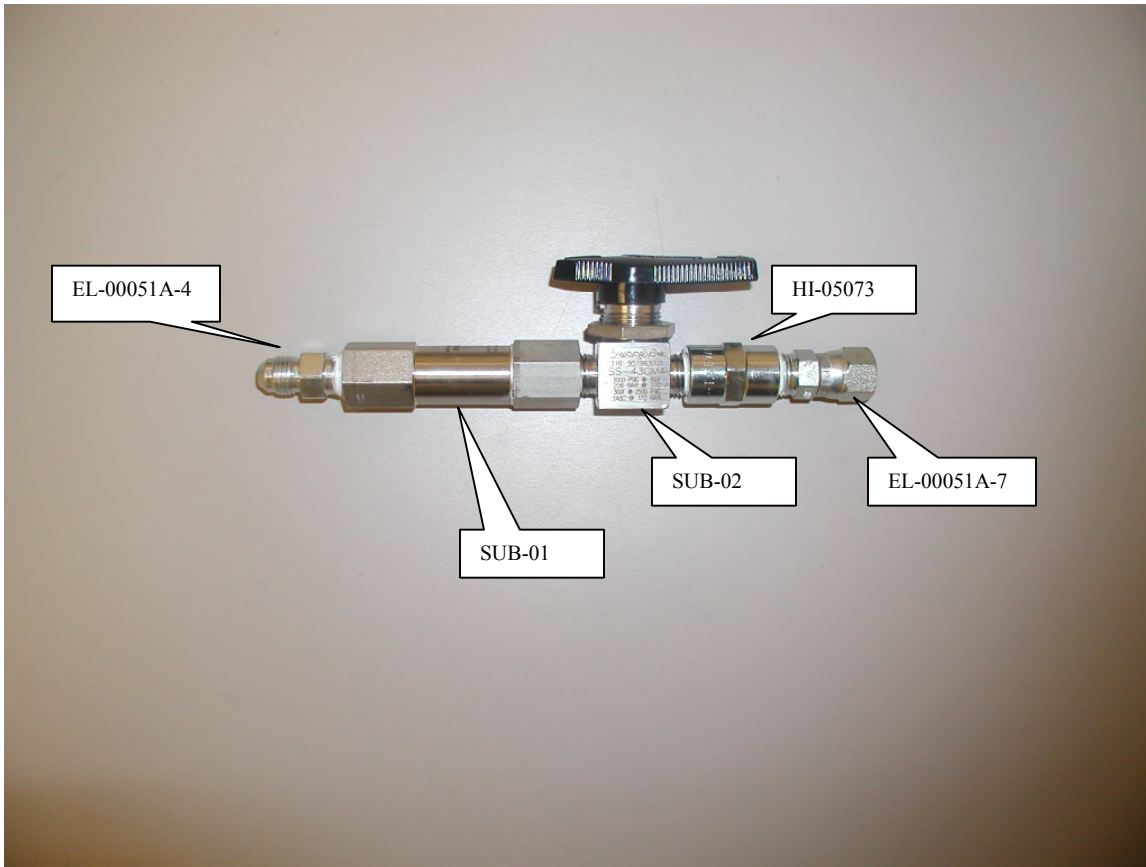


Part Number	Description	Qty
GU-02020-00	Manual Valve	2
HI-05078	Fitting	2
TN-04192	Plug, pipe	2
GU-04001-01	Block, coupling	1
TN-04193	Screw, mounting	1



SP-1 MANUAL

“A” SIDE FILTER ASSEMBLY

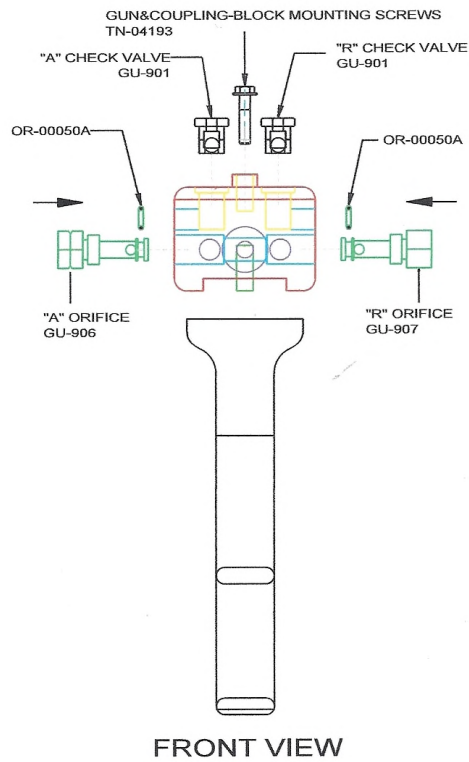
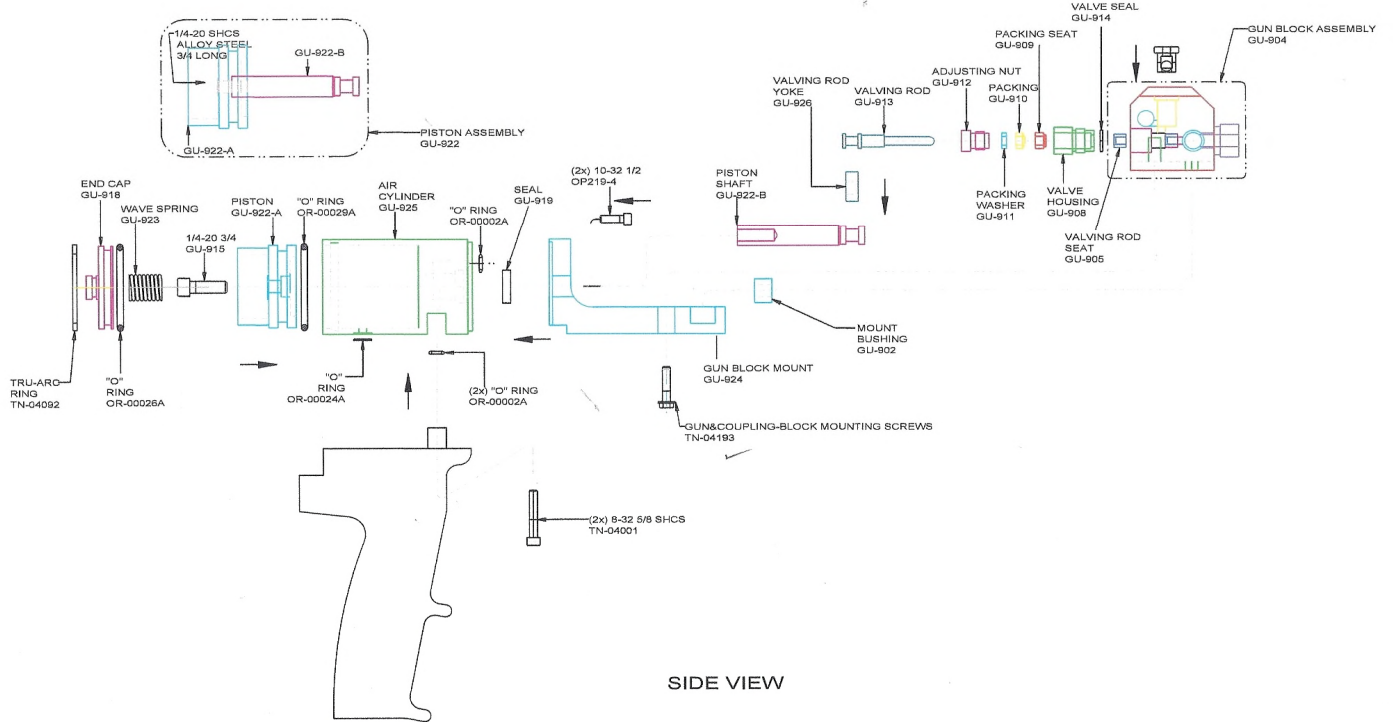


Part Number	Description	Qty
SUB-01	Filter Assembly	1
SUB-01-1	Screen replacement – not shown	1
SUB-02	Shut off valve	1
HI-05073	Adapter	1
EL-00051A-4	Fitting ¼ x #5 JIC Male	1
EL-00051A-7	Fitting ¼ x #5 JIC Female	1



SP-1 MANUAL

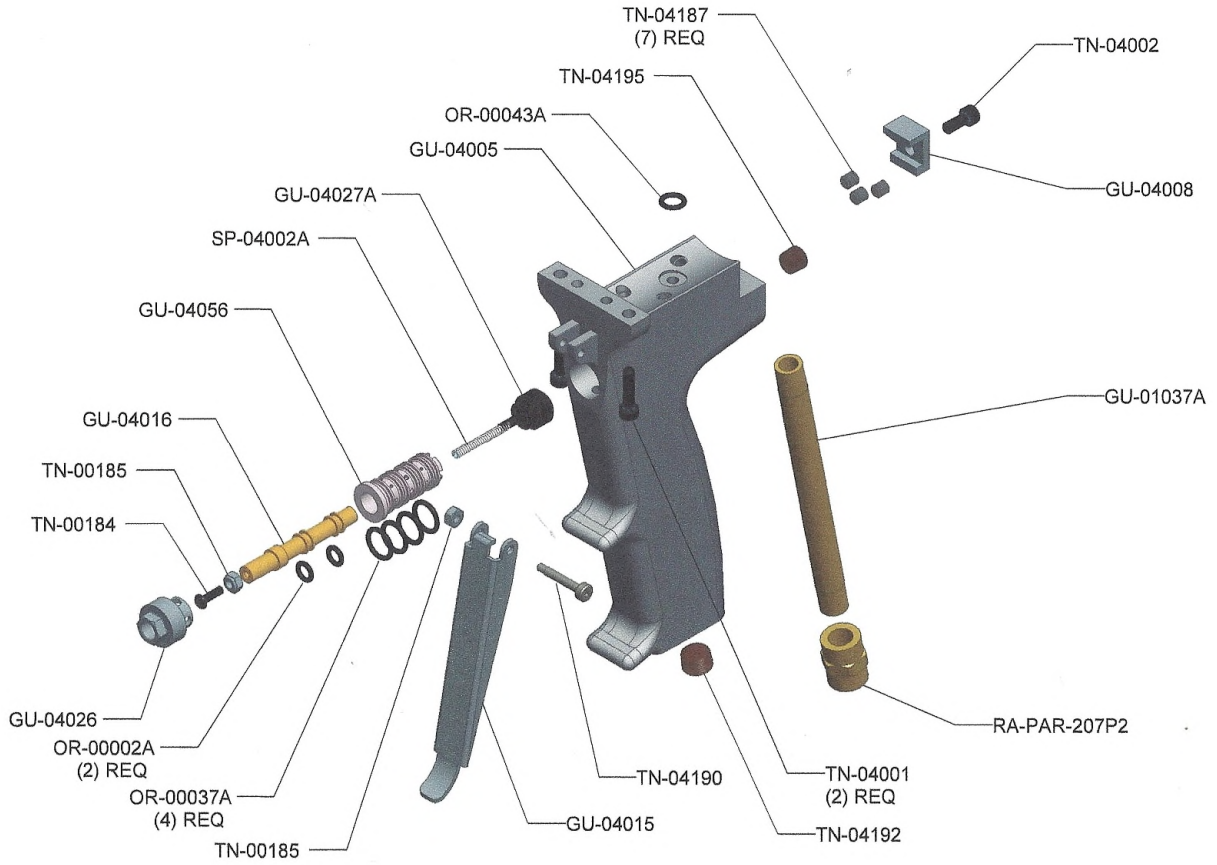
SP-1 Exploded View





SP-1 MANUAL

SP-1 Handle Exploded View





SP-1 MANUAL

SPARE PARTS LISTING

PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
GU-901	A & R Check Valves	TL-04001	5/16 Spintite; Nut Driver
GU-902	Mounting Bushing	GP-00101	Double Ended Pin Vise
GU-904	Gun Block Assembly	GU-04019	Air Hose
GU-905	Valving Rod Seat	GU-04021	Quick Disconnect; Female
GU-906	"A" Orifice	GU-04022	Quick Disconnect; Male
GU-906X	"A" Orifice Blank	GU-04020	Slide Valve
GU-907	"R" Orifice	GP-LUBEGREASE	Lubriplate Grease
GU-907X	"R" Orifice Blank	MN-04003	Manual
GU-908	Valve Housing	SUB-08	Valve
GU-909	Packing Seat	HI-05078	Fitting; 1/8"x#4 JIC
GU-910	Packing	HI-05079	Nipple; 1/8"
GU-911	Packing Washer	HI-05080	Elbow; 1/8" M x F
GU-912	Adjusting Nut	HI-05081	Cap, #4 JIC
GU-913	Valving Rod	GU-02020-00	Manual Valve
GU-915	SHCS; 1/4-20x3/4	TN-04192	Plug; Pipe
GU-918	End Cap	GU-04001-01	Block; Coupling
GU-919	U-Cup Seal	TN-04193	Screw; Mounting
GU-922	Piston Assembly	MA-51	Hose; Solvent
GU-923	Wave Spring	EL-00051A-6	Fitting
GU-924	Gun Block Mount	SP-3-1	Tank; Solvent
GU-925	Air Cylinder	HI-05058	Tee; 1/4"
GU-926	Valving Rod Yoke	GP-00100-1	Nipple; Hex, 1/4"
GU-04005	Gun Handle and Screws	EL-00051A-3	Fitting
GU-04015	Trigger Handle	SUB-08	Valve; 1/8"
GU-04016	Spool Valve	SP-3-2	Hose; Air
GU-04026	Retaining Nut	SUB-03	Regulator, Air
GU-04027A	Spring Seat W/Pin	SP-3-3	Safety Blow Off
GU-04056	Valve Liner	OR-00049A	O-Ring Lid
OR-00002A	O-Ring; #008 Viton	NE-06007	Pressure Gauge
OR-00024A	O-Ring; #10 Viton	SP-2	Ratio Coupling Block
OR-00026A	O-Ring; #129 Viton	EL-00051A-4	1/4 x #5 JIC Male Ftg
OR-00029A	O-Ring; #222 Viton	SUB-01	In Line Filter
OR-00037A	O-Ring; #011 Viton	SUB-02	In Line Filter Shut Off Valve
OR-00043A	O-Ring; 70-75 #010 Viton	EL-00051A-7	1/4 x #5 JIC Female Swivel Ftg
OR-00050A	O-Ring; #009 Viton		
SP-04002A	Spring; Valve		
TN-00184	M3x3/8 BHCS		
TN-00185	M3 Stop Nut		
TN-04001	SHCS; 8-32x5/8		
TN-04002	Screw; Cylinder Mounting Clamp		
TN-04092	Tru-Arc Ring		
TN-04187	SHCS; 10-32x3/16 Port Plug		
TN-04192	Pipe Plug		
TN-04193	Gun+Coupling Block Mtg Screw		
TN-04196	Hose Clamp		