

MacroFlex



HVLP PAINT SPRAY SYSTEM



User's Manual

Detach III Snozzle Model SN-3100

Smith Eastern Corporation

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Compliance • Quality • Performance • Reliability

**Please Read This Owner's Manual *BEFORE*
Using Your MacroFlex Paint Spray Gun**

DO NOT OPERATE THIS EQUIPMENT WITHOUT USING PROPER PERSONAL SAFETY EQUIPMENT INCLUDING RESPIRATOR, GOGGLES AND SAFETY CLOTHING. OBSERVE ALL PRECAUTIONS RELATED TO SPRAYING.

WARNING

THIS EQUIPMENT IS OPERATED USING PRESSURIZED AIR. ALWAYS DISCONNECT SPRAY GUN FROM AIR AND FLUID HOSES AND DEPRESSURIZE SYSTEM PRIOR TO ANY MAINTENANCE OR DISASSEMBLY PROCEDURE.

WARRANTY

Smith Eastern Corporation warrants to the Purchaser that the MacroFlex Paint Spray Gun Model SN-3100 is free from defects in material or workmanship under normal use and service for a period of twelve (12) months from the date of receipt by the Purchaser. Should any failure appear during this period, Smith Eastern shall, if given prompt written notice by the Purchaser, correct such nonconformity by repair or replacement of the nonconforming part, F.O.B. Smith Eastern's repair facility. Repair parts are warranted for ninety (90) days from the date of shipment, but repairs or replacements to original equipment shall not renew or extend the warranty period of such equipment.

Smith Eastern reserves the right to limit this warranty in cases of misuse or abuse. Any modifications to spray guns or recommended procedures will void the warranty.

The foregoing warranty is exclusive and in lieu of other warranties of quality or performance, expressed, implied or statutory, including any warranties of merchantability or of fitness for a particular purpose.

AirVerter® MacroFlex Spray Gun

EQUIPMENT REQUIREMENTS

Air Compressor

Air compressors used with AirVerter® Spray Guns must be able to HOLD a minimum of 40 PSI while spraying. **Note:** Position a pressure gauge in the air hose nearest the spray gun to be assured of the PSI required to satisfactorily spray your coating.

High Pressure Air Hose

1. Air hose lengths up to 50 feet **MUST** have an I.D. of 3/8" including fittings.
2. Air hose lengths greater than 50 feet **MUST** have an I.D. of 1/2" including fittings.

Pressure Pot or Diaphragm Pump

The Snuzzle **must** be used with a remote pressure pot. Be certain to follow manufacturer's instructions.

ATTACHING THE SNOZZLE EXTENSION TO A DETACH™ III SPRAY GUN

Before spraying, the Detach™ III Spray Gun must be converted to a Snuzzle by the following steps:

1. Remove the Pressure Hose Stem (DT-005) and replace it with the Socket Head Cap Screw (DT-004) found in your parts kit.
2. Remove the Air Cap Retaining Ring (AV-101), Air Cap (AV-189).
3. Remove the Fluid Nozzle (DT-3006) from the Fluid Tube (DT-3402) and replace it with the Needle Seat (MF-3006) and Pressure Hose Stem (DT-005). Connect the Fluid Tube (SN-040-T) to the Pressure Hose Stem (DT-005).
4. Place the Anti-Friction Washer (MF-003) with the larger ID in the Air Cap Retaining Ring (AV-101).
5. Place the other Anti-Friction Washer (MF-003) into the Air Cap Retaining Ring (AV-101).
6. Place the Snuzzle Adapter Collar (SN-101) and Snuzzle Atomizing Air Tube (SN-102) into the Air Cap Retaining Ring (AV-101).
7. Insert the Fluid Tube (SN-040-T) into the Snuzzle Atomizing Air Tube (SN-102) and attach the Air Cap Retaining Ring (AV-101) to the Spray Head Housing (DT-3403).
8. Connect the MacroFlex Fluid Tube (SN-040-T) on to the selected spray head
9. Attach spray head to the front of the Snuzzle Atomizing Air Tube (SN-102).
10. Attach an air supply hose to the fitting (AV-220A) at the base of the gun handle.
11. Attach the fluid hose from your pressure pot to the Fluid Fitting (DT-3113) on the gun and tighten.

OPERATING INSTRUCTIONS

1. The Model SN-3100 MacroFlex Spray Gun operates with the trigger controlling both the air and the fluid flow.
2. **Too much pressure will create unnecessary overspray!**

Before Spraying

1. Follow the *Air and Paint Management Guidelines* listed on the following page.
2. Before paint is poured into the cup or diaphragm pump, **make certain paint is properly mixed**. This is particularly true when mixing multi-component paints. Use a paint shaker, rotary mixer, or paint paddle to achieve a homogeneous mixture. (*Hint: Split your paint into two parts; the top will be lighter and the bottom will be heavier. Completely stir the bottom half of the paint and slowly add small amounts of the top half into the heavier bottom.*)
3. **Strain your paint to remove impurities**. Use a cone strainer or a 100-mesh nylon bag or equivalent strainer.
4. **Thin your paint** according to the manufacturer's specifications.
5. With gun disconnected from air and fluid sources, pull trigger to move the needle out of the nozzle.

Spraying

1. Air pressure forces paint from the paint container into the fluid chamber of the gun and out through the nozzle where the flow of atomizing air breaks the paint stream into tiny particles, creating the spray.
 - a. Needle position controls the amount of paint flowing through the fluid nozzle.
 - b. Trigger action controls needle position.
 - c. The Fluid Control Knob at the rear of the spray gun controls trigger action. Turning the knob to the right will reduce the fluid flow, turning it to the left increases the flow.
2. If you are having problems with the operation of your paint gun, check the Trouble Shooting Guide at the end of the manual for possible causes and solutions.

AirVerter® MacroFlex Spray Gun

AIR AND PAINT MANAGEMENT GUIDELINES

Approximate PSI	Application
Thin Coatings ZAHN #2 Test: 16 to 22 seconds Minimum 40 PSI compressor pressure	Machines and implements, small parts, plant maintenance, controlled production work, work in enclosed areas with poor ventilation, priming.
Thin to Medium Coatings ZAHN #2 Test: 22 to 30 seconds 40 to 60 PSI compressor pressure	Dual gun work for all of the above listed applications – will support up to 50' of 3/8" ID hose for each gun. Also for higher production levels of all of the above.
High Solid Coatings ZAHN #3 Test: 37 + seconds 50 to 70 PSI compressor pressure	Marine epoxies, marine enamels, high production steelwork, high production with conveyer lines, large surfaces with thinner viscosity material, latex on wood or metal.
80% Solids Coatings 60 to 80 PSI compressor pressure	Ultra high production levels on extremely large surfaces; un-thinned epoxies, enamels, latex, urethane.

WARNING

Gun must be de-pressurized prior to any maintenance or disassembly procedure. Disconnect all air and fluid hoses prior to performing any maintenance operation.

CLEANING

Cleaning the MacroFlex Spray Gun

The Detach III™ gun is the only spray gun that allows you to clean the fluid section of the gun without immersing the entire gun in solvent

1. Unscrew the Connector Stud (DT-015)
2. Pull the Spray Head Housing (DT-3403) forward away from the Gun Handle (DT-3300)
3. Wipe the needle and handle clean with solvent and a clean soft cloth
4. Remove the Pattern Control Ring (AV-101) and Snozzle Adapter/Atomizing Air Tube Assembly (SN-101/SN-102). Take care not to lose the Anti-Friction Washers (MF-003)
5. Remove the Macro-Flex Fluid Tubing (SN-040-T) from the Pressure Hose Stem (DT-005)
6. Remove the Needle Seat (MF-3006) and Pressure Hose Stem (DT-005) from the Fluid Tube (DT-3402) and clean thoroughly with brushes
7. Place the Spray Head into a container of solvent
8. Use round brush to clean Needle Packings (BCR-043)
9. Inspect to make certain that all paint residue has been removed
10. Wipe all parts dry with clean cloth and reassemble

11. Remove the Snozzle Spray Head assembly from the Atomizing Air Tube (SN-102) and clean thoroughly. Replace Macro-Flex Fluid Tube (SN-040-T) as needed

12. Reattach Snozzle Spray Head assembly to the Atomizing Air Tube (SN-102)

13. Reconnect the Macro-Flex Fluid Tube (SN-040-T) to the Pressure Hose Stem (DT-005). Make sure to replace the inner Anti-Friction Washer (MF-003) to it's location between the Spray Head Housing (DT-3403) and the Adapter Collar (SN-101)

14. Connect the Snozzle Adapter/Atomizing Air Tube Assembly (SN-101/SN-102) to the Spray Head. Housing (DT-3403)

15. When reattaching the Spray Head Housing (DT-3403) to the Gun Handle (DT-3300), first carefully insert the needle into the needle packing and gently push the Gun Handle onto the Spray Head

16. Tighten the Connector Stud (DT-015) assembly

If using a gun cleaner place the Spray Head in the cleaner and cycle. Then follow instructions above making sure all parts are clean and dry before re-assembly.

SPRAY GUN PERFORMANCE IS DIRECTLY RELATED TO HOW WELL THE GUN IS CLEANED AFTER USE

Cleaning Ancillary Equipment

If using a 2-Quart Cup, be sure to clean all paint residue from the cup, with particular attention to the gasket and cup lip. (*Hint: Periodically turning the gasket over prolongs gasket life.*)

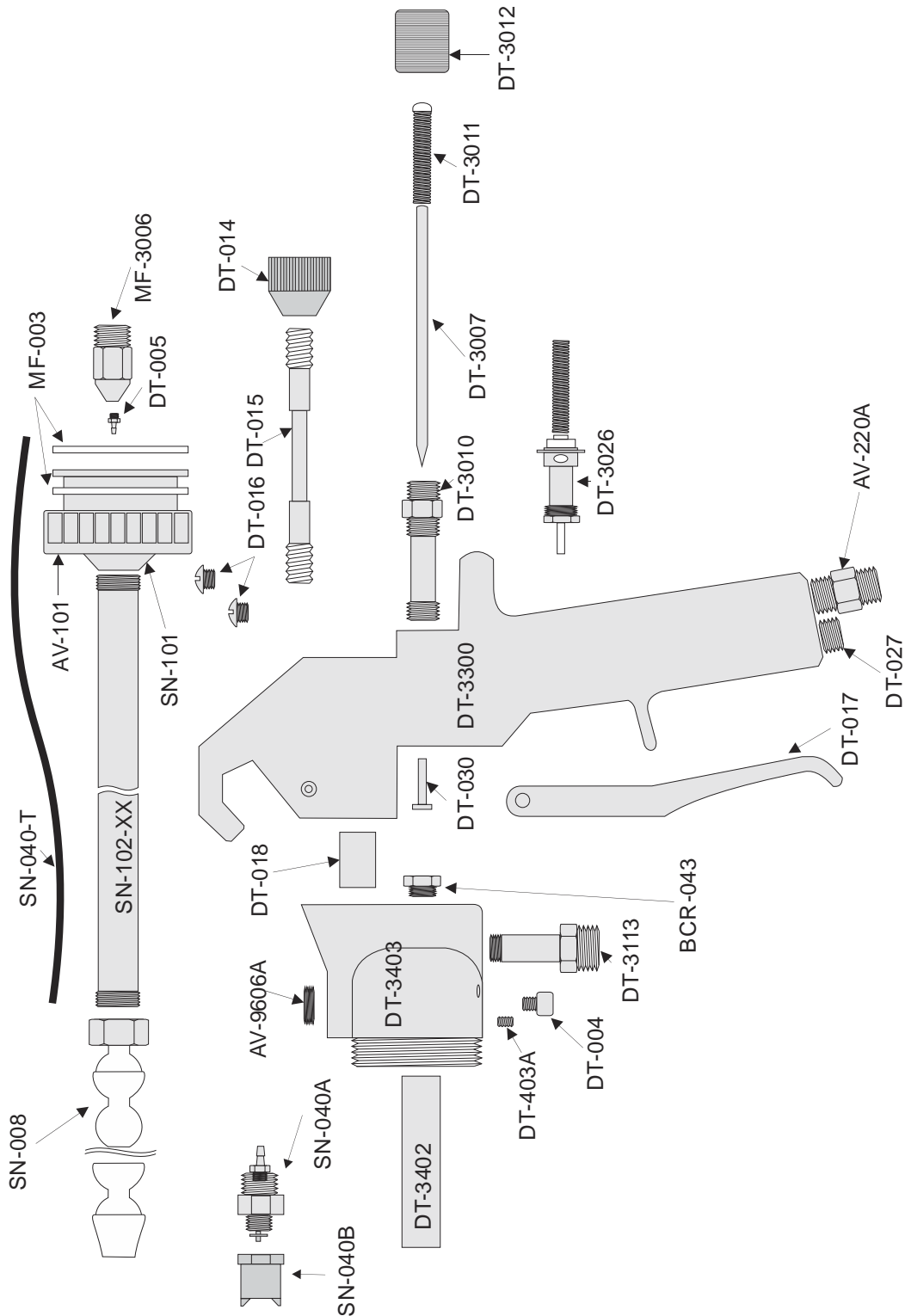
Lubricate

1. Use Vaseline or a non-silicone grease to lubricate the gun.
2. Lubricate all threaded connections for ease of maintenance.
3. Lubricate the Needle only where it passes through the needle packings.
4. **DO NOT** allow lubricant to get into the Fluid Tube, Nozzle, Air Cap, or interior of the paint chamber (areas where paint may come in contact with lubricant).

Wear Items

Replace the O-Rings in the spray head assembly when they become worn, or broken. Different O-Ring materials respond differently to various solvents. If you are having trouble with your O-Rings because of dissolving in solvents, please call us at 1-800-937-4857 or e-mail to info@airverter.com to assist you in finding an appropriate O-Ring for your application.

**MacroFlex PAINT SPRAY GUN
MODEL SN-3100
ILLUSTRATED PARTS BREAKDOWN**



AirVerter® MacroFlex Spray Gun

MacroFlex PAINT SPRAY GUN MODEL SN-3100 PARTS LIST

Part#	NSN	Description
AV-101*	4940-01-353-8802	Pattern Control Ring
AV-220A	-	Male Nipple, ¼" NPT – ¼" Ball
AV-9606A	4940-01-439-9986	Pattern Control Valve Plug
BCR-043	4940-01-457-3991	Needle Packing Cartridge
DT-004	4940-01-457-3985	Socket Head Cap Screw
DT-005	4730-01-457-4171	Pressure Hose Stem
DT-014	4940-01-457-4033	Connector Stud Knob
DT-015	4940-01-457-4034	Connector Stud
DT-016	4940-01-457-3964	Trigger Screws
DT-017	4940-01-457-3981	Trigger
DT-018	4940-01-457-3969	Atomizer Air Connector
DT-027	4940-01-457-1955	Plug, Low Pressure Channel
DT-030	4940-01-457-1959	Needle Guide Sleeve
DT-3007*	4940-01-502-3009	Fluid Needle
DT-3010	4940-01-457-4001	Fluid Needle Guide
DT-3011	4940-01-457-4008	Needle Tension Spring
DT-3012	4940-01-457-4012	Fluid Control Knob
DT-3026	4940-01-457-1953	Air Control Valve
DT-3113	4940-01-467-7195	Fluid Fitting
DT-3300	4940-01-457-1940	Gun Handle
DT-3402	4940-01-467-7198	Fluid Tube
DT-3403	4940-01-467-7141	Spray Head Housing
DT-403A	-	Set Screw
MF-003*	4940-01-457-3944	Anti-Friction Washers (pair –1 large ID and 1 small ID)
MF-3006	-	Needle Seat
SN-040-T	-	Macro-Flex Fluid Tubing
SN-101*	4940-01-457-3447	Snuzzle Gun Adapter
SN-102-XX*	Note 1	Snuzzle Atomizing Air Tube

Note 1: NSNs for each length (12, 18 & 24 inch) are available. Call 1-800-937-4857

* Parts included in SN-3000A-XX

AirVerter® MacroFlex Spray Gun

SN-3227 High Wear Kit

Part #	NSN	Description	Qty
BCR-043	4940-01-489-5986	Needle Packing Cartridge	2
DT-005	4730-01-457-4171	Pressure Hose Stem	2
DT-030	4940-01-457-1959	Needle Guide Sleeve	1
DT-3011	4940-01-457-4008	Needle Tension Spring	1
MF-003	4940-01-457-3944	Anti-Friction Washer (pair)	1
SN-040-T		Macro-Flex Fluid Tubing	1

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AirVerter® MacroFlex Spray Gun

SN-3225 Snozzle Bench Parts Kit

Part#	NSN	Description	Qty
AV-101	4940-01-353-8802	Pattern Control Ring	1
BCR-043	4940-01-457-3991	Needle Packing Cartridge	2
DT-004	4940-01-457-3985	Socket Head Cap Screw	2
DT-005	4730-01-457-4171	Pressure Hose Stem	2
DT-016	4940-01-457-3964	Trigger Screws	1
DT-030	4940-01-457-1959	Needle Guide Sleeve	2
DT-3007*	4940-01-502-3009	Fluid Needle	1
DT-3011	4940-01-457-4008	Needle Tension Spring	1
MF-003*	4940-01-457-3944	Anti-Friction Washers (pair –1 large ID and 1 small ID)	2
MF-3006		Needle Seat	
SN-040-T		Macro-Flex Fluid Tubing	1

**MacroFlex PAINT SPRAY GUN
MODEL SN-3100
TROUBLESHOOTING GUIDE**

Problem	Probable Cause	Remedy
Paint will not flow	<ol style="list-style-type: none"> 1. Blockage in fluid nozzle 2. Loss of air pressure in cup 3. Loose fluid nozzle 4. Fluid Hose loose, damaged or clogged 5. Coating is too thick 6. Loose Needle Packing 	<ol style="list-style-type: none"> 1. Clean or replace; strain paint 2. Search for air leaks and check cup gasket 3. Tighten 4. Tighten, replace or clean; strain paint 5. Thin the coating 6. Replace packing
Inconsistent Spray Pattern (Spits and Sputters)	<ol style="list-style-type: none"> 1. Running out of paint 2. Loose fluid tube 3. Loss of fluid pressure 4. Loose needle packing 	<ol style="list-style-type: none"> 1. Fill cup or pot, but never the top ¼ 2. Tighten 3. Search for air leaks or blockages 4. Replace packing
Leakage at Front of Gun	<ol style="list-style-type: none"> 1. Damaged fluid needle 2. Dirty fluid nozzle 3. Impurities in paint 4. Loose Needle Seat 5. Fluid adjustment screwed all the way out 6. Needle not firmly seated in the nozzle 7. Packing too tight 	<ol style="list-style-type: none"> 1. Replace 2. Clean 3. Strain paint 4. Tighten 5. Rotate Fluid Control Knob (DT-3012) on rear of gun clockwise 6. Check for nozzle obstruction 7. Replace Packing
Distorted Spray Pattern	<ol style="list-style-type: none"> 1. Dirty or damaged air cap 2. Dirty or damaged fluid nozzle or needle 3. Fluid nozzle partially clogged 4. Fluid nozzle not centered with air cap 	<ol style="list-style-type: none"> 1. Clean or replace 2. Clean or replace 3. Clean 4. Replace air cap

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